

HUNTING • SHOOTING • ADVENTURE

# Guns

*Finest in the Firearms Field*

**YOU CAN  
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**EXCITING  
NEW CONTEST**

(See Page 18)

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**MAKE YOUR OWN KENTUCKY RIFLE**

**How to Photo File Your Guns**

**Basics of Gun Bedding**

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**FAVORITE GUN COVERS  
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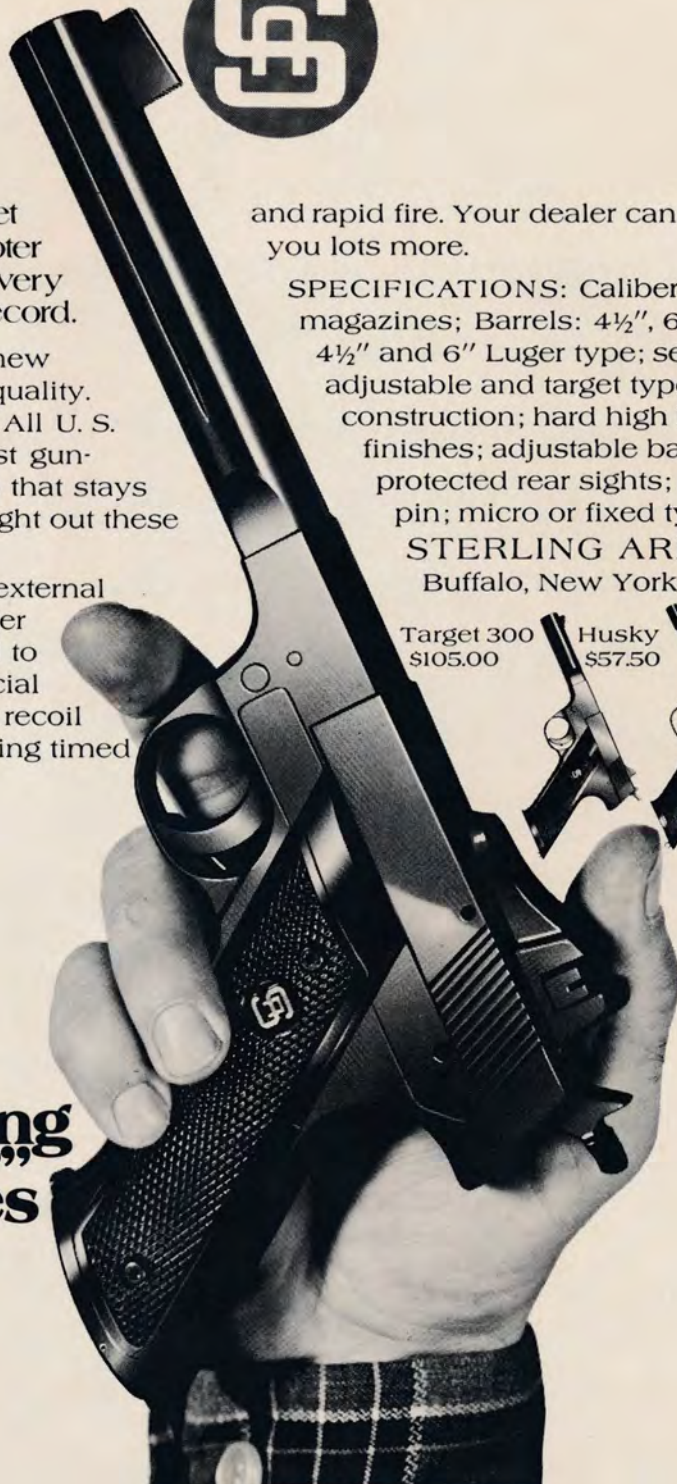
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**\$29<sup>95</sup>** POSTPAID

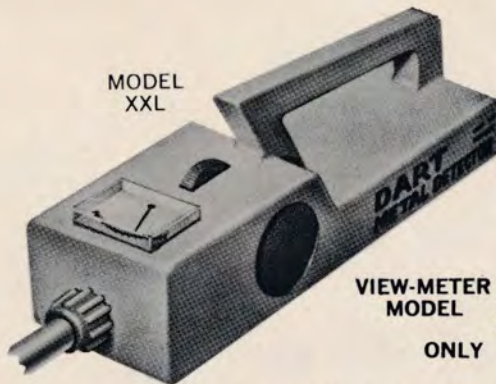
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The all new Dart power-coil will effec-  
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larger objects that are buried deeper.

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\$12<sup>95</sup>  
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# TRIGGER TALK

In view of the letters we received about the "no-name" advertisement which appeared in our January issue, let's set the record straight.

The ad was made up by members of the firearms industry and inserted not as an advertisement, but as a public service message. The reason for the ad was twofold. First, many gun dealers were concerned about the drop in firearms sales, and they blamed a lot of it on consumer misunderstanding of the Gun Control Act of 1968. Secondly, it was meant, not as a complete rundown on what the federal law says, but as an urging for those who have misunderstood the working of the law. And if you don't think that there are many shooters who honestly believe that they are no longer permitted to purchase a firearm, then think again.

As far as our reason for accepting the ad, we had hoped that if it did nothing else, it might get some of the less knowledgeable shooters into their local gun shop to find out just what they can and cannot do under the law.

\* \* \*

Next month we begin our big push to have the 1968 GCA repealed. Look for this issue—and participate in our campaign.

Also next month, in response to many reader requests, we will publish a complete list of the winners of our monthly "Win a Free Gun" contests from the beginning up to date.

\* \* \*

Look out TV manufacturers. A Menlo Park, California man was arrested after he hit his wife on the head with a portable TV set; and he was booked for "assault with a deadly weapon." Put that in your sub-committee Senator Dodd!

\* \* \*

ITEM: In 1967, almost 19,000 firearms were reported stolen in New York; only 155 were recovered from criminals arrested in New York.

## THE COVER

GUNS staffer, Bob Mandel, is now antique arms chief for Abercrombie & Fitch, but as the photo shows, he does spend some time outside of the antique gun department. Photo by Bob Dienthal.

MARCH, 1970

Vol. XVI, No. 0-03

George E. von Rosen  
Publisher

# Guns

FINEST IN THE FIREARMS FIELD

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# Mr. Gun Owner— Right now is your minute of decision.

Ask yourself this question: "Shouldn't I support NRA as vigorously as NRA supports my shooting interests?"

As a gun owner, you know that the best shooting is enjoyed by gunners who know how to shoot accurately and handle their guns safely, and that the best hunting is made possible by good conservation and good game management practices. And as a shooting enthusiast, you are certainly aware that in the name of "gun control" there are some well-intentioned but ill-informed people who are anxious to erode the gunning and hunting privileges that you enjoy today.

**For 99 years, the National Rifle Association has consistently promoted better education in shooting skills and firearms safety, better conservation, better game management, the development of better gun-sports equipment and the protection of shooters' privileges.**

These were the basic aims of NRA's founders, and they remain to this day, the basic aims of this national, non-profit organization.

All the other benefits that NRA offers its membership—warm, good fellowship, friendly competitive tournament shoots, awards for hunters, firearms information and many, many others—are simply the evolutionary by-products of nearly a century devoted to serving the best interests of America's responsible gun owners.

## You need NRA—and NRA needs you!

Never before in history has the threat to the rights and privileges of responsible gun owners been so great as today! Never before have *you*, as a responsible gun owner, needed NRA's efforts to preserve and protect your shooting interests as today! And never before has NRA needed *your* active, cooperative support as today!

NRA's responsibilities to you as a shooting enthusiast are never ending, and must be maintained on a *continuing basis*. To achieve this, NRA has set a goal of one new member every minute, around the clock and around the calendar. Let's start our march to this goal by signing *you* up for NRA membership—right this minute!

# NRA has to win it— one new member every minute!



**Here are a few of the dozen or more benefits you'll enjoy as an NRA member:** An annual subscription to "The American Rifleman," the illustrated monthly magazine that entertains and educates more than a million sportsmen-readers • Prompt answers by experts to all your firearms questions • Firearms safety courses from which over 3 million shooters have benefited • Hunting information in the form of bulletins on gun laws, hunting dates, game availability, shooting preserves • Low cost gun and personal accident insurance • National, regional and local recreational shooting tournaments • Annual awards for hunters in all categories • The brand, spanning new directory of qualified and approved hunting guides, outfitters and hunting camp operators in North America—and *much, much more!*

So, Mr. Sportsman—if you *really care* about preserving—now and *in the future*—the shooting privileges and freedoms you enjoy today, you owe it to yourself to join and support NRA—the big, strong, long-established organization that, in cooperation with many other leading organizations, is so effectively fighting to maintain these freedoms for you!

**FILL OUT, CLIP AND MAIL YOUR NRA MEMBERSHIP APPLICATION NOW. (SEND NO MONEY—NRA WILL BILL YOU LATER, IF YOU WISH)**



## National Rifle Association

1600 Rhode Island Ave., N.W.  
Washington, D.C. 20036

### National Rifle Association

1030C

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\$6 Enclosed

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**... IT'S YOURS! (AND WE THANK YOU.)**

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What does all this mean to you? First, we must be building these guns right. A slew of orders tells us more and more gunners are discovering the thrills this great air rifle adds to indoor/outdoor uses. Also, we predict another jump in demand in the days ahead. Don't take chances. See your dealer soon. Be sure of getting the model you want. 3 calibers at moderate price: Model 340 Cal. BB — Model 342 Cal. 22 Pellet — Model 347 Cal. 177 Pellet.

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PUSH-PULL SAFETY ON TOP OF STOCK BEHIND BREWSTER.



## CROSSFIRE

### For the .600 shooters

I have been unable to reach Mr. Wm. Etheridge of Wilson, N.C., whose question appeared in the Sept. '69 issue concerning .600 Nitro Express ammo. The last information I had on the .600 was that it had been selling at \$4.00 per round, then it was removed from sale as it had become collector's stuff. You might have to pay \$10.00 each for them now. I have a .600 Westley Richards and I did get a supply of .577 brass. I had planned to make some "adapters" of a steel collar and flange to adapt the .577 brass to the .600 and fire form a few cases to fit the .600 chamber.

Montana Custom Loads, 408 S. Bozeman Ave., Bozeman, Montana made up some ammo for me but I haven't gotten around to firing them yet. The owner there has a .600 rifle and has been shooting it at jackrabbits. He says it kills them too! I would suggest you write them and see what they can do for you.

John R. Buhmiller  
Kalispell, Montana

newsletters, articles, reprints, advertising copy, correspondence, etc. I would be happy to return any such materials after use if desired or to pay the cost of having them reproduced.

Norman Lederer  
Dept. of History  
La. State Univ.  
Baton Rouge, La. 70803

### Dis-believers, behold!

I see by the October ('69) Crossfire that a Mr. Robinson doesn't believe there is such a person as "Nameer Jawdat". Fair enough, I don't believe there is such a place as "Organ" (N. Mexico). Not on a map, anyway, a doctor's chart is different. But both he and Mr. Williams, whom I always read with enjoyment, and



of course Mr. Meyer, all wrote appreciative and much appreciated letters, so more power to them. I hope to continue to please, and am enclosing my latest picture, to convince the most hardened skeptic of my existence.

Nameer Ali Jawdat  
Rome, Italy

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### Help!

I am writing a dissertation on the commemoration of the Centennial of the Civil War under the direction of Prof. T. Harry Williams at Louisiana State University. Since many of your readers, I know, were participants in the various activities connected with the commemoration, I am writing this letter to you to ask a favor. I wonder if you be so kind as to place a notice in your publication containing my request for any information that your readers could supply me with concerning the Civil War Centennial, whether it be national, state or local Civil War Centennial Commissions, North-South Skirmish Association activities, battle re-enactments, local commemorations, etc. I can use all types of centennial materials—brochures, pamphlets, reports, minutes,

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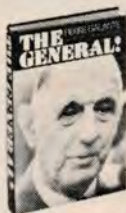
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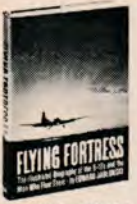
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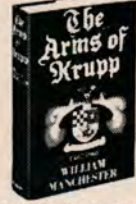
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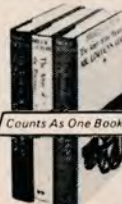
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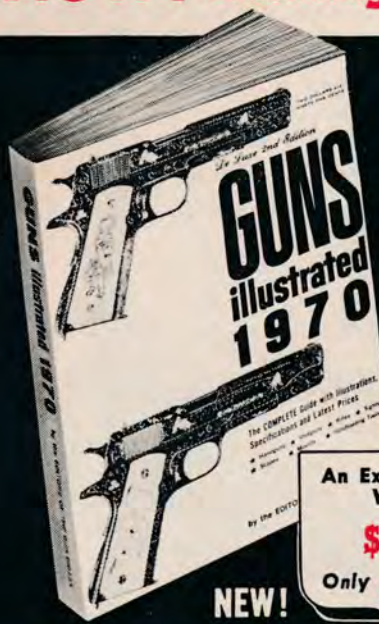
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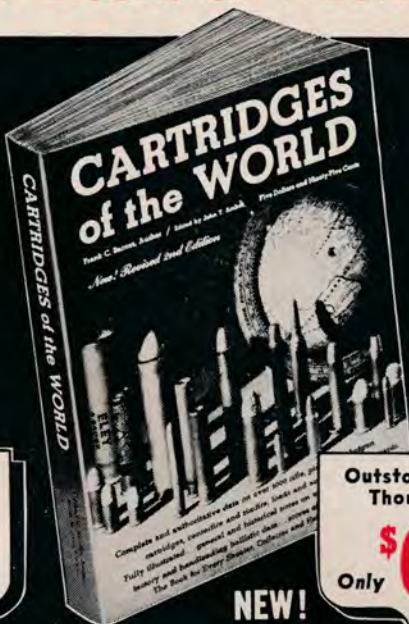
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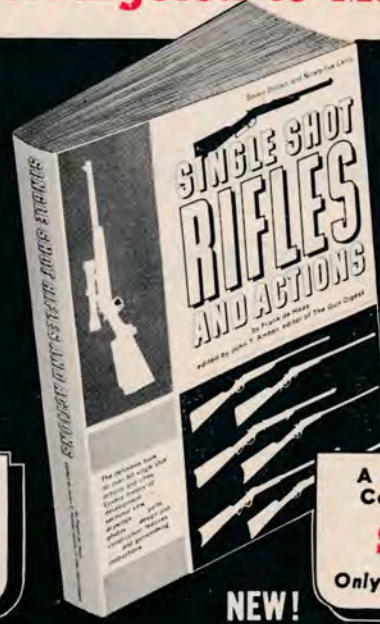
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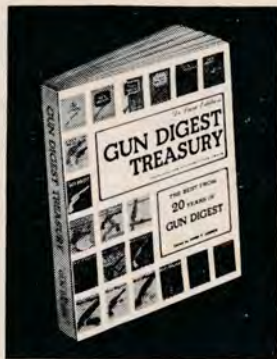


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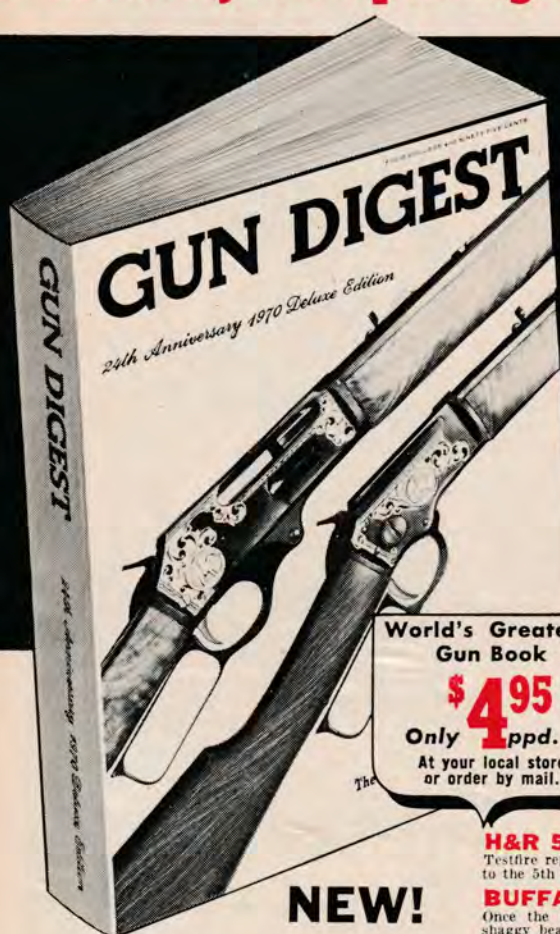
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**LOADING THE OLD ONES . . . and some not so old** by Ken Waters  
The advent of smokeless powders caused a number of good rifles to become decorative trimmings for the den rather than fulfilling their original function. Ken Waters tells how some of these wall-hangers can become serviceable by handloading your own ammunition, some to the point of surpassing original ballistics. Then, too, modern powders can be used to up-date some of the earlier smokeless loads for better performance. Like a doctor, Waters gives new life to some old-timers.

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**THE STAG AT EVE . . .** by John T. Amber  
What does a vacationing gun editor do? You guessed it! Related here is an exciting story about deer stalking in the Scottish highlands by John T. Amber.

**KILLING POWER CONTROVERSY** by Jack O'Connor  
A man of great experience can be accepted as an authority. One of these men, well known to the world's readers, is Jack O'Connor. He can tell stories of how he shot his second Greater Kudu (or was it the third?) and many, many other species. Here, then, is a summation of O'Connor's experience in the field as he tries to help the reader toward a solution of his own. We'll all rightly agree with Jack that it's not so much the size of the bullet you put into an animal as where you put it—and it's better to be over-gunned than not.

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## IT'S NOT HOW LONG YOU MAKE IT . . .

by Warren Page  
To paraphrase a popular commercial may sound like a stunt to get on the bandwagon, but the truth (about rifle barrels) must out. A few years ago, long barrels were considered a must for greatest accuracy; but the current crop of bench rest rifle makers and top shooters in that difficult game will now tell you otherwise. Today, these competition shooters want fatter, stiffer, shorter (if they're to meet NBRSA weight rules) barrels.

## THE MARLIN: ONE OF AMERICA'S GREAT GUN MAKERS

by Pete Kuhlhoff  
Pictured on the covers of the 24th Gun Digest are two of Marlin's latest firearms. The Marlin Firearms Co., long considered one of this country's leading gunmakers, has had a fascinating and exciting history. Here are the facts and anecdotes of yesteryear, recalled to light and brought up to date by Pete Kuhlhoff.

## PLUS FOREIGN GUNS REVIEW 1969-1970

—by R. A. Steindler; U. S. RIFLE AND SHOTGUN REVIEW 1969-1970—by Col. Charles Askins; HANDGUN REVIEW 1969-1970—by Dean Grennell; HANDLOADING REVIEW—by Major George C. Nonte, Jr.; SCOPES AND MOUNTS REVIEW—by Bob Bell; AMERICAN BULLETED CARTRIDGES—by Ken Waters; SHOOTER'S SHOWCASE 1969-1970 Departments: U. S. HANDGUNS • U. S. RIFLES • U. S. SHOTGUNS • FOREIGN ARMS IN AMERICA • PELLET GUNS • CHOKES • BRAKES • AMMUNITION TABLES • SCOPES & MOUNTS • METALLIC SIGHTS • ARMS ASSOCIATIONS • ARMS LIBRARY • SHOOTING PUBLICATIONS • GLOSSARY FOR GUNNERS • DIRECTORY OF THE ARMS TRADE • New! Where-To-Buy-It Directory of Over Five Thousand Gun Stores, Gunsmiths

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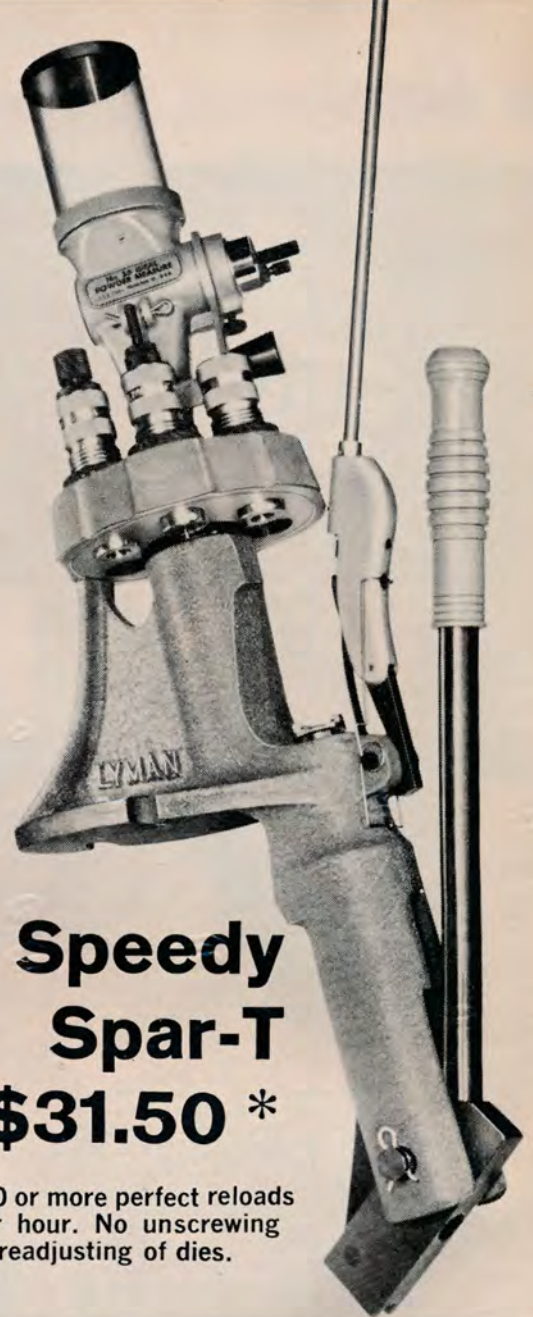
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## HANDLOADING BENCH

By MAJ. GEO. C. NONTE

THIS HAPPENS TO BE a bit off the subject of handloading, but it is certainly of considerable interest to those of us who fancy handguns in one way or another. And, if appearances don't deceive me, a mighty substantial percentage of this Nation's hull-stuffers own and shoot one or several handguns. I recently had occasion to ship a New Service Colt Revolver off to Randall Enterprises, Hialeah, Florida. This company does a fine job of applying a tough Teflon finish to guns. Packaged and labeled properly, the gun weighed a hair over three pounds. And, for years, I'd been shipping similar handgun packages via REA Express almost anywhere in the country for \$3-\$4, never more. When the billing arrived, I nearly strangled on my morning Cafe' Royale; \$11.05! Thinking the bill simply in error, I queried the Chicago REA Express Office, asking for a correction. I was informed in no uncertain terms that all handguns would be accepted only under the tariff providing for hand receipting over the entire routing and that the charges for which I had been billed were in accordance with that tariff. In short, from all appearances, REA Express is deliberately applying the highest possible rate to discourage movement of handguns. Perhaps, this company can't refuse to carry them, but it can make the job prohibitively expensive—which achieves the same result. Let's say you have a gun worth \$50 to \$60 and it needs \$10 to \$15 worth of factory work; your total repair bill, including transportation, can easily run to \$35 to \$40. This wouldn't be quite so bad if other means of transportation was available to everyone. But, in many areas, REA is the only carrier by which an individual not possessed of a Federal Dealer's License can legally ship a handgun to factory or gunsmith. My personal opinion of this latest action by REA Express should be abundantly clear by now.

• • •

Have you ever gotten in the midst

of loading a substantial quantity of light handgun loads, only to be stopped abruptly by the powder measure creaking to a stop; caused by fine powder granules working in between drum and housing? I have, plenty of times. Up until about 10 years ago, this always required disassembling the measure, then carefully scrubbing caked and ground-in powder (usually Bullseye) from both drum and housing with steel wool. In extreme cases, the job sometimes took 15 minutes or longer, and always seemed to occur when I was in a rush to finish loading and get on to something else.

I had used finely-divided graphite to lubricate the drum to stretch the periods between cleaning. One day when the measure hopper was just about to run dry and the binding was becoming rather bad, I simply dumped the rest of the powder out and poured an ounce or so of graphite in its place. After throwing a couple dozen charges of graphite back into its container, the measure worked quite smoothly. The rest of the graphite was dumped out and the hopper refilled with powder. The first few charges were thrown back in the powder can, slightly contaminated by graphite, of course, and loading proceeded. Since then, I've always run a bit of graphite through the measure before filling it with fine-kernel powders, and also whenever measure operation becomes uncomfortably stiff. It's simpler if you develop a routine for it. Put just enough powder in the measure to last until stiffness usually occurs; throw the last few powder charges back into the can; run the graphite through; then replenish with powder and continue. Other dry lubricants such as mica flakes might work as well; but since nearly all powders already carry a thin coating of graphite applied after manufacture, I prefer to stick with it. I don't like the idea of adding a completely foreign material.

Incidentally, with one exception, virt-

*(Continued on page 14)*

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# OUR MAN IN WASHINGTON



By CARL WOLFF

## THE BENNETT AMENDMENT PASSES

The Bennett ammunition amendment is now law. No longer must the purchasers of certain types of ammunition and component parts be required to furnish the dealer with social security numbers and drivers license numbers.

By "certain types of ammunition and component parts," it is meant that which can be used only in a rifle or shotgun. If the ammunition or component part can be used in both a rifle or handgun, nothing has changed. No other provision of the Gun Control Act of 1968 has changed. Purchasers are still required to prove they are 18 years of age if they buy long gun ammunition or component parts. If the purchase is interchangeable between rifles and handguns, such as .22 caliber rimfire ammunition, it must be recorded per the requirements of a handgun ammunition purchase.

The amendment by Senator Wallace Bennett (R.-Utah) was intended to stop the recordkeeping requirements of all long gun ammunition and components, rifles and shotguns. Before the measure reached the Senate, it was pointed out that some ammunition would fire in hand-held and shoulder-fired firearms.

The .22 caliber was singled out by the anti-gun forces of Dodd and Ken-

nedy as not only fitting the rimfire rifle, but also the so-called "Saturday night special" revolvers.

Senator Bennett was forced to amend his amendment before the Democratic Policy Committee (the committee which brings legislation up for consideration by the Senate) would call up the legislation for passage or rejection. Bennett agreed to remove .22 caliber ammunition and later agreed to remove ammunition and component parts presently interchangeable between rifles and handguns.

No information was offered on how many misusers of handguns did reloading, but Bennett agreed to the amendment and the measure passed by more than a three-to-one majority. Information was presented that all of the ammunition recordkeeping requirements were of no use in catching those who misuse firearms.

Later, Senator Dodd released figures showing that about one-third of the sales of handgun ammunition at certain Maryland dealers outside the District of Columbia were to persons with criminal records. However, to this date, no legal action has been taken against these criminals for violation of the 1968 Gun Control Act.

In other words, the Internal Revenue

Service is requiring dealers to compile information but the information is not being used to remove the criminals from the streets!

Many observers, including this GUNS contributor, thought Bennett always had the votes to put through his amendment unchanged. And he did, but he did not have the support of the Democratic leadership, Senate Majority Leader Mike Mansfield (D-Mont.), and maybe more important, the real leader of the Democrats, Senator Edward Kennedy (D.-Mass.). As a matter of fact, there is little to support the belief that he had the unqualified support of the Minority Leadership including Hugh Scott (R.-Penna.), who publicly touts pro-gun views.

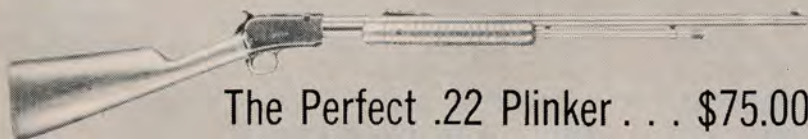
The thing that really made Bennett cautious was that the House, too, had to pass the measure before it became law. Senator Kennedy informed Mr. Bennett from the floor of the Senate that if he did not allow the measure to be referred to the Dodd Delinquency Subcommittee (of which Kennedy is a member), when the measure reached the House, Emanuel Celler (D.-N.Y.) would do everything in his power to block the measure from becoming law.

Because of the way the measure was written, Mr. Celler's Judiciary Committee was not involved so the bill could not be killed in committee. When the bill passed the Senate, however, Celler did manage to block its consideration by the House for more than two weeks.

Mr. Celler was able to do this, this observer believes, because Chairman of the Ways and Means Committee (the committee that could play havoc with the bill), Wilbur Mills (D.-Ark.) wants to be the next Speaker of the House and needs Mr. Celler's support. Readers may recall, it was during this time that it was disclosed that the present Speaker of the House, John McCormack's staff had been doing some influence peddling behind the Speaker's back. (Helping people influence government officials.)

This influence peddling behind the Speaker's back is a sure sign the old boy (age 72) is losing his grip. With Celler's support, Wilbur Mills could be the Speaker next Congress. Once the ammunition amendment reached the House floor it passed by even a larger majority than it did in the Senate.

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## HANDLOADING BENCH

(Continued from page 11)

ually every powder measure I've tried will eventually load up with fine-kernel powders, especially Bulls-eye. The one exception is the Hollywood measure. I attribute this to the fact that the drum is tapered; chrome-plated and finish-ground; then lapped into perfect contact in a similarly tapered seat in the housing. Those of you who've never given the Hollywood measure a try should do so. It's priced somewhat above most other makes, but it does have an enviable reputation for accuracy and is extremely smooth in operation.

• • •

Just had a long letter session with George Spence, Steele, Missouri, the fellow I often recommend as a solution to hard-to-get ammunition problems. George has a knack for being able to make up safe, usable ammunition in almost any odd-ball caliber you can imagine. For those who have access to a small lathe and collets, he's come up with a simple way of converting 7.65mm Mannlicher surplus military ammunition so it functions well in the French M1935 series 7.65mm pistols. Bullet and case diameters are correct, but the extractor groove is too shallow and the case is too long. Yet, overall cartridge length is okay. George deepens the extractor cut with a formed tool bit, then reverses the cartridge in the collet and with a shave tool bit, peels the excess case length off right over the bullet. After these two operations, the cartridge feeds and chambers fine in the French guns, though it is less powerfully loaded than French ammunition. If you want boxer-type cases, then the best bet is to turn down the head and shorten .32 S&W Long brass.

• • •

We've just done some shooting with the latest Hornady bullet; a 185-grain jacketed hollow point in .45 ACP caliber. It's a very nicely made, flat base bullet and, consequently, both point and bearing surface are rather short. When seated so most of the bearing surface is inside the case—necessary to secure adequate bullet pull—overall cartridge length is less than standard. Nevertheless, cartridges so loaded have fed without difficulty in the two guns and several different magazines we've used with it thus far. Without exceeding safe pressures, this bullet can be driven as fast as 1000 fps in auto pistols. In

.45AR and .45 Colt revolvers, it can be driven a good bit faster.

Joyce Hornady advises us that best overall results with this bullet in .45ACP cases have been obtained with W-W (Olin) 230-P ball powder. Thus far, we've received the following loading data from Hornady, though we haven't had an opportunity to try every one listed.

Colt Government Model; 5" Barrel, 1 in 16" Twist.

Cases: Remington — Primers: Federal 150

### 45 ACP

185 Grain Hollow Point (.452) Seat-Depth .200"

#### VELOCITY

POWDER	700	800	900	1000
	fps	fps	fps	fps
Bullseye	4.4 gr.	5.1 gr.	5.8 gr.	6.5 gr.
230P	4.7 gr.	5.2 gr.	5.7 gr.	6.2 gr.
Red Dot	5.2 gr.	5.6 gr.	6.1 gr.	6.5 gr.
P 5066	5.3 gr.	5.7 gr.	6.2 gr.	6.7 gr.
Unique	6.6 gr.	7.1 gr.	7.6 gr.	
Herco	7.1 gr.	7.7 gr.	8.3 gr.	

Safe loading procedures should be employed at all times. MAXIMUM loads should be approached with CAUTION: No liability is implied or assumed for results obtained through the use of this information.

The addition of this number to the Hornady line makes it very complete insofar as jacketed expanding handgun bullets are concerned. It now includes a 158- and 125-grain .357"; 115-grain 9mm (.355"); 240-grain .44 (.430") and the new .45. Those intended primarily for revolver use are cannellured to permit a good, solid crimp.

• • •

Incidentally, those of you who habitually use heavy handloads in the .45 Automatic can benefit from the recoil buffer sold by Gil Hebard Guns, Knoxville, Illinois. This unit replaces the standard recoil spring guide without alteration of the gun. A movable plunger backed up by a heavy coil spring takes some of the jolt out of the big .45. It also slows down the slide slightly before it slams against the stop in the receiver, so should reduce wear and tear on the gun, even with standard loads.





# POINT BLANK

By COL. CHARLES ASKINS

I HAD BELIEVED when I journeyed off to Spain for a 4-year sojourn that I was pretty hot stuff as a wing-shot. I hit everything I hunted and did it with few misses. I was ready to cross shooting irons with the best of them. Or so I thought.

The Spaniards took the conceit out of me. For four long and exceedingly busy seasons, a legal shooting time that stretched from July of one year until March of the next, these Old World worthies made me look like an ordinary run-of-mill marksman. Regardless of where I gunned, whether in Andalucia hard by the Guadalquivir, or thru that endless steppe which Don Quijote called LaMancha, or maybe along the flank of the Ebro, there would inevitably turn up some Castellian who could pin my ears back.

We shot pigeons, too. At the Tiro de Pichon de Madrid, the most poosh club on the peninsula. The annual kill is 50-60,000 birds and our matches ran 4 afternoons weekly nine months of every powder-choked year. Live bird shooting is the very epitome of the wing gunning art. Skeet and trap, as we play the games, are for boys, the man's sport is the trap-sprung pigeon.

The Spaniard is a good marksman because he shoots a lot. Waiting out the beaters on a partridge drive one day, I walked over to the adjoining post and asked the Duque de Algeciras how many shots he reckoned it took to really get in top wing shooting form.

"I commence on the Scottish moors in August for grouse," he said in reply to my question. "Then I come away home for the Egyptian quail migration and after that we get into the partridge which we are shooting today. I feel I must shoot five thousand cartridges before I am really ready for the chukars."

The duke was one of the steadiest aerial gunners I have ever seen in action. He would drop a partridge with either barrel, hand the gun to his loader, accept a second gun and account for two more birds from the same flighting.

Spain for the wingshot offers chukar partridge, ducks, doves, snipe, curlew, Egyptian quail, geese, bustard, and the world's largest grouse, the auerhahn. This bird attains a weight of 14 pounds and is so difficult as to be classed as big game. Rabbits are so common as to be regarded as vermin.

On the four-footed side there is a remarkable abundance. There is the great red stag, and the tiny cousin of his, the diminutive roebuck. As well, there is the ibex, that exceedingly rare and much sought after goat. The ibex is native of the Gredos Mountains of central Spain. There is the chamois in the Pyrenees, and scattered from the Basque country of northernmost Spain to the Mediterranean you will find some of the biggest wild boar on the continent. There remain a few bears in the Austurias and it is rumored not all the wolves are gone.

The game is the property of the land owner and not of the state. If the haciendado wants to sell the shooting rights and those sports-men who buy those rights want to shoot a thousand chukars every day it is perfectly legal. The game is looked upon as simply another crop like pigs and cattle and domestic poultry. It is harvested by leasing the gunning rights. It is a system that has worked well for generations.

The Spaniards shoot their own guns. These are all doubles. A repeating shotgun is taboo. The smoothbores are for the most part side-by-side doubles with an increasingly large number of over/unders being used. The most of them are 12 guage. The 16 is sometimes seen and the 20 seldom if ever. There is a manufacture of shotshells but these are loaded locally. That is to say you go into a sporting goods store and order your cartridges there. These are loaded in a back room and you can specify the powder charge and the shot load. The country produces about 2/3 of all the cork in the world. With this abundance quite naturally wadding is made largely of cork. Now it happens

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that cork makes mighty poor wads for shotgun shells. It isn't resilient enough, is too unyielding and hard and for this reason it does not expand as it should to fill the gun bore and thus provide good obturation. As a result of this the performance of the local cartridge is pretty ordinary. Spain also produces a considerable supply of mercury. Primers are the old type filled with fulminate of mercury. This stuff is highly corrosive and I have seen many a shotgun ruined in the tubes because of long firing of mercuric primers.

• • •

Laminated gun stocks have a lot to offer. More than anything else is consistency. The stock simply will not warp, change, torque or swell. The most knowledgeable of our shooting clan are the benchresters. These bucks make a tremendously intensive study of the performance of the gun stock. They have turned to the laminated butt and find it the most steadfast of any.

The layered stock is made by sawing good stock wood like walnut, myrtle, maple and other dense wood, into sheets that may range as thin as 1/28" or be as broad as 7/16", and these are then turned at 90 degrees to each other, treated with a phenol-resorcinol adhesive which is waterproof, clamped together under about 350 pounds of pressure and then placed in an oven at 220 degrees F. and left there until completely dry.

The beauty of such a stock is that it is completely resistant to wetting. Because the ply is cut so thin and there is this waterproofing between each layer the water simply cannot enter. Because the laminates are turned 90 degrees to each other if the moisture strikes a soft spot in the wood it cannot penetrate because a second soft spot in the next layer will not line up with the first.

What isn't appreciated is that fine stock wood like selected walnut is filled with cavities, these range from one-fifth to fully one-half the wood, by volume. All these cavities are always filled with either air or water. There is a continual movement of this air and water within the wood. If you would like to make a check on this just carefully weigh your stock during a dry spell of weather and then weigh it after you have had a week or two of rains. The wood does not have to be put out in the weather. You'll be amazed at the differences in weight with the gun resting in the cabinet!

When a stock picks up a high mois-

ture content it tends to swell and this then changes the bedding. And along with shifts in bedding will also come changes in zero. The laminated stock is free of these troubles. It cannot shift and change with variations in the humidity and once you get a rifle in good zero you may be assured it will hold that zero if the stock is one of the new many-layered jobs.

### 8 x 68 Magnum

A magnum cartridge that has escaped the notice of American shooting men is the 8x68 mm. The cartridge is loaded by RWS (Rheinisch-Westfälische-Sprengstoff) of West Germany and is imported by Stoeger Arms Corporation. The 8x68 is not a new development, as it was introduced about 1940 and may have been developed originally by Von Hofe. While the much better known 8x57 mm, the military round, has a power range about like the 30'06, the 8x68 is in the class with the .300 Magnums. It boots a 187 grain H-Mantle bullet to 3280 fps MV from a 26-inch barrel. The case has about the size and powder capacity of the 300 magnums. However it has no belted head. The 6.5x68 mm, another powerhouse, and likewise pretty generally unknown, is made up by necking down this casing.

With an old style Model 70 action which I had Barber convert to left-hand, I installed an Ackley barrel of 23 inches length and medium weight. It was the first 8x68 Ackley had ever made up. Fajen finished a handsome stock in his Regent design to complete the gun. Velocity checks with the factory load indicated I had lost an average of 87 fps in reducing the barrel length to twenty-three inches. Ten shots showed an average MV of 3198 feet per second. Accuracy with the RWS H-Mantle 187-gr. bullet was good. The H-Mantle design is somewhat like that of the Nosler partition bullet. There is a bulkhead midway of the bullet which does not quite come completely together as does the Nosler. Jackets are of mild steel covered with a cupro-nickel wash. The bullet is a softpoint with a copper windshield.

The 8x68 when turned on Kodiak bear proved a real killer. Tried later on Polar bears it was likewise just as devastating. A 10-ft. brown bear required three shots, any one of which would have proven fatal. The Polar, an 11-footer, died from a single 187-gr. through the shoulders.

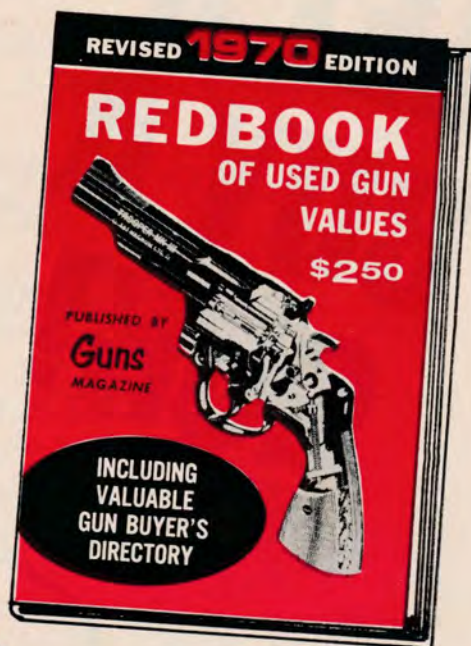




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GUNS Magazine

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**LET'S  
BUY A  
GUN!**

**Under the new Federal Gun Control Act buying a gun is tougher than it was—but it's not impossible. If you buy a new gun now, you could get it for nothing!**



**S**ITTING in their plush offices, anti-gun legislators are leaning back in their chairs and smiling as they read over the reports of the latest firearms sales figures. They read that gun sales throughout the nation are decreasing; that dealers—those who remain in business—are reducing their inventories; that ammunition sales are dropping. Why shouldn't they smile, the shooters and hunters have played right into their hands. Yes, the legislators are reducing guns sales, and they are doing it by fear and innuendo. Untold hundreds of potential gun buyers are being scared off by the GCA of 1968.

We have always felt that the Gun Control Act of 1968 was worthless in its aim to reduce crime. We feel that many of its prohibitions are part of the Act for only one reason; and that is to confuse and intimidate the law abiding citizen. It is becoming more and more apparent that nothing in the GCA of 1968 has stopped or even slowed down the incidence of


crime, but it sure has put the brakes on legitimate gun sales.


Why do the anti-gun legislators feel so good about this? Because in their feeble brain they hold the idea that if there are fewer guns around, there will be less crime. Even our village idiot knows that there will be less crime only if there are less criminals around. There is little doubt that we will continue to be harassed until someone in Washington realizes that we need a criminal control law; not a gun control law.

However, we have the GCA '68, and because we are law-abiding folks, we must either obey it or give up our guns. This does not mean that we should give up the fight for repeal of the law, only that as long as it is the law, we should obey it.

Does this mean that you'll have a tough time buying a gun? If you are a convicted criminal or under indictment, a drug addict, an alcoholic, or

under the legal age, it is supposed to be impossible. If you are clean, then you should have little or no trouble. True, you won't be able to order a gun from a mail order house, you won't be able to buy from an out of state dealer (unless you live in a state which permits sales to persons of contiguous states), and you will have to go through a bit more red tape. But you can buy a gun!

We would like to see those anti-gun legislators lose that smirking smile, and feel that one way of accomplishing this is to get the gun sales rising again. We have set aside the days from February and March as our "Let's Buy A Gun" days, and have devised a contest for those who purchase new sporting arms during that period. If you buy a gun, send us a description (see sample below) and the selling price, including any attached accessories (sling, scope, mounts, receiver sights, choke devices, etc.) and we'll put your name in our contest box. If your name is selected, GUNS Magazine will refund the *complete* purchase price to you. The person selected will be required to furnish proof of purchase, and this must be dated from February 1 to March 31. Only new gun purchases made from a licensed gun shop or sporting goods store are eligible. 

Form 4473 Part I (Rev. June 1969) Department of the Treasury Internal Revenue Service Alcohol, Tobacco and Firearms Division			<b>Firearms Transaction Record</b> Intra-State Over-the-Counter	Transferor transaction number
<b>Notice:</b> Under 18 U.S.C. Chapter 44 and Title VII of Public Law 90-351, 18 U.S.C. Appendix 1201-1203, as amended, firearms may not be sold to or received by certain persons. The following information and certification are designed so that a person licensed under Chapter 44 may determine if he may lawfully sell or otherwise dispose of a firearm to the person identified in Section A, and to alert the transferee (buyer) of certain restrictions on the receipt and possession of firearms.				
<b>Section A—Statement of Transferee or Buyer</b>				
1. Transferee's (buyer's) name (last, first, middle) (Mr., Mrs., Miss)	2. Height	3. Weight	4. Race	
5. Address (number, street, city, state, Zip code)	6. Date of birth	7. Place of birth		
I certify that: (1) I am neither under indictment for, nor have I been convicted of, a crime punishable by imprisonment for a term exceeding one year; (2) I am not a fugitive from justice; (3) I am not an unlawful user of, or addicted to, marijuana or a depressant, stimulant or narcotic drug; (4) I have not been adjudicated mentally defective and I have never been committed to a mental institution; (5) I have not been discharged from the Armed Forces under dishonorable conditions; (6) I am not an alien illegally in the United States; and (7) I am not a person who, having been a citizen of the United States, has renounced his citizenship.				
Transferee's (buyer's) signature		Date		
<b>Section B—Statement of Transferor or Seller</b>				
The person described in Section A, is known to me <input type="checkbox"/> , or has identified himself to me <input type="checkbox"/> in the following manner:				
8. Type of identification (driver's license, etc.)		9. Number on identification		
On the basis of: (1) the statements in Section A; (2) the verification of identity noted in Section B; and (3) the information in the current list of Published Ordinances, it is my belief that it is not unlawful for me to sell, deliver, or otherwise dispose of the firearm described below to the person identified in Section A.				
10. Type (pistol, rifle, etc.)	11. Model	12. Caliber or gauge	13. Serial number	
14. Manufacturer (and importer, if any)				
15. Transferor's (seller's) signature		16. Transferor's title	17. Transaction date	
Department of the Treasury—Internal Revenue Service				Form 4473 Part I (Rev. 6-69)

Purchasers must fill out Form 4473 for intra-state transactions. There is also an inter-state form.



## WIN A FREE GUN with GUNS Magazine's "LET'S BUY A GUN" Sweepstakes

When you buy a sporting firearm during the "Let's Buy a Gun" contest period (February 1—March 31) you are eligible to win back your entire purchase price. To enter the sweepstakes, simply send a plain post-card with the required information (see sample) to GUNS Magazine. The lucky winner of the contest will receive a check for the full purchase price of his gun and any accessories bought during the contest period. So go out today and buy a new shooting package. Then send an entry to GUNS. You can win a FREE gun. (void where prohibited)

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Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Make & Model of Firearm \_\_\_\_\_

Price of Gun \_\_\_\_\_

Date Purchased \_\_\_\_\_

Total Price of Gun & Accessories \_\_\_\_\_

Winner required to provide proof of purchase.



**HOW TO FILE  
AND PHOTOGRAPH  
YOUR GUNS**  
**BY CLARENCE MASSEY**

ALL YOU NEED TO KEEP AN ACCURATE  
RECORD OF YOUR COLLECTION IS A  
BASIC KNOWLEDGE OF PHOTOGRAPHY  
AND A SIMPLE FILE SYSTEM

**I**N THE DAYS of the "Honest Injun" and his simple tepee, a fellow could latch the entrance to his humble hut with a symbolic rawhide thong and go blithely on his way, knowing that all his family possessions would still be there upon his return. Unfortunately, however, in these turbulent days of riots, civil disobedience and rampant disregard for law across our nation, a man's treasured possessions are no safer than the strength of the locks on the doors and windows of his home.

This is especially true if today's citizen owns a valued collection of antique firearms or other prized possessions with a constant and substantial value. In spite of well locked and barricaded homes, private gun collections are stolen all too frequently, as is the stock of retail firearms dealers. Indeed, more rifles and shotguns are "lifted" from open gun racks at gun clubs and shooting matches while the owner's attention is directed elsewhere, than ever before. However, when one considers the gentle "wrist slapping" and careful coddling of law breakers that has been so prevalent in recent court decisions, such an outbreak of lawlessness should be expected by even the most apathetic citizen.

All too often, the unfortunate owner of the stolen guns hasn't more than a hazy memory to guide him in his description of the missing firearms when making a police report or when submitting an insurance claim. He can usually supply the make, model and perhaps the serial numbers of the missing firearms but that is about the extent of his positive identification.

The prudent gun owner should keep a comprehensive and detailed record of each and every one of his firearms, especially if they are rare and valued antique collector's items. An avid collector would be wise to set up a permanent card file for his collection. A single card should be assigned to each gun and all pertinent data pertaining to that particular weapon should be typed thereon. Furthermore, this card should be attached to a small envelope containing several sharp, detailed photographs showing all identifying marks and the general condition of the firearm.

Each card should be numbered and recorded on a master file index card. The index card would list the general type of the firearm and would indicate the file card number pertaining to that particular gun. In using the file system, the owner would merely consult the index card, find the type of firearm he is looking for, note the file card number and pull that card from the file.

The numbered file card would list all pertinent data on that one firearm. For example, the file card could list the manufacturer, the date of manufacturing, the model and caliber, type of action, serial number, date of acquisition, it's general condition, approximate value and detailed notes about any identifying marks on the piece. Needless to say, notes about the gun should be updated from time to time as it's value changes or if you are shooting it, when evidence of wear is noticeable.

This may sound like a rather involved record keeping procedure but like many other endeavors, it is simple to do after you have set it up. It can be most valuable to you if you should have to make a police report on stolen guns or if you should make an insurance claim. Any insurance claims adjuster would welcome such complete and irrefutable evidence as to the exact condition and value of the insured items. This is particularly true regarding antique items that are no longer manufactured and whose

value depends to a great extent upon the condition of the article at the time of it's loss.

Another point to consider is the sad plight of recently widowed housewives when they suddenly become the owners of a valuable gun collection, about which they know next to nothing. Without a complete record of their value, she is quite likely to sell them at a price far below their true market worth.

The ancient proverb that, "one picture is worth a thousand words" still holds, especially when those "thousand words" are hesitantly drawn from a hazy verbal recollection of the firearm. So it behooves the gun collector to include sparkling, clear photographs to go along with his file card record of his gun collection.

Unfortunately, it is in the acquisition of good, clear photographs that the average gun collector is apt to flounder about in his record keeping. Ordinary "snapshots" of treasured guns are just not good enough for identification purposes. In spite of "just point & shoot" instructions so widely advertised for some cameras, it just isn't that simple! Snapshots made with cheap automatic cameras fail miserably when you want detailed close-ups to include in the record of your gun collection. You must obtain a reasonably good camera with a critically sharp lens.

This does not mean that you must purchase an expensive camera. Since a large part of the high price of cameras is to pay for automatic features and/or fast lenses, you can limit your camera expenditure considerably by eliminating these plush features. Basically all you need in a camera for close-up photography of your guns is a good quality lens (not a fast lens), the ability to focus at close range (either through a close-up lens attachment slipped over the lens or an extension tube), a tripod or camera clamp to hold your camera rigid and a viewer or ground glass to eliminate the parallax problem. The shutter is not important except to be certain that it has a "time & bulb" setting. Actually, I have made hundreds of time exposures indoors without any shutter at all. I merely slipped the lens cap off and on the lens to start and stop the time exposure.

With a good clear photograph, proof marks are visible as well as any other identifying marks or scratches.

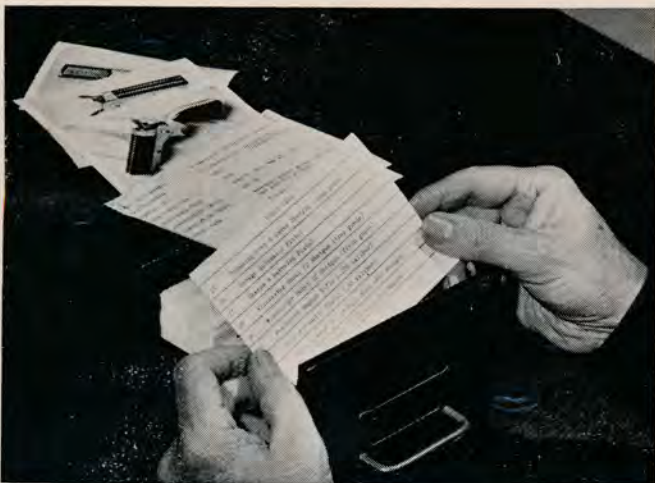


Add an ordinary amateur photo-flood reflector on an extension cord, a couple of large white cards, the desire to experiment and learn and you are well on your way to making finely detailed photographs of your gun collection. Equipped thusly, you can use a couple of professional photographic lighting techniques and surprise yourself with the excellent results.

For example, one of the oldest "tricks" of the professional photographer is aptly termed, "painting with light." This is a relatively simple lighting technique that is actually nothing more or less than making an exposure on your film while you move the light source around the subject during a prolonged time exposure. As you will quickly realize if you think about it for a moment, every light casts a shadow and this shadow shows in the finished photograph. Sometimes this is good and other times it is very detrimental to the final print. A good example would be a heavy shadow around the dark edge of a firearm. Such a shadow would cause the piece to blend into the background wherever the shadow matched the tone of the metal or wood in the firearm.

However, if the photographer uses only one light, and if he moves this light continually during the exposure... presto! the heavy shadow is eliminated! If he stops the movement during the exposure, a shadow edge will immediately begin to build up. If he stops the light six times during the exposure, he will have six separate shadows! So the photographer must move the light slowly

Below left: shadows were left to separate gun from the background. Below right: each card has photos of the gun with it. Bottom: the master card index will refer you to proper corresponding file card by its number.



and steadily during the entire exposure.

Since the photographer is using only one light, he must be sure to move the light so that all areas of the firearms are adequately illuminated. This generally means that he must hold and move the light from each side of the camera. This will take a bit of practice but the final result more than justifies the time and film spent in making a few test shots.

It should be noted also that when you calculate your exposure, whether it be by an exposure meter or otherwise, consideration should be given to the fact that when you are using only one light, it necessarily lights only one side of the subject at a time. Therefore, you must compute your exposure for that side and remember that you must also move the light to the other side and give the same exposure again for the second side.

For example, suppose you should find that with your one light four feet from the subject, the correct exposure is four seconds at  $f/22$ . Therefore, you will expose for four seconds while constantly moving the light. Then you will close the shutter (carefully, without jarring the camera), or you can switch the light off and leave the shutter open if the room is darkened beforehand; carefully walk around to the other side of the camera, open the shutter or switch on the light again and expose for another four seconds while moving the light constantly. Sound tricky? It really isn't difficult at all if you are careful and know exactly what you are going to do before you start the procedure. If you should happen to have an audience, I can guarantee that they will be impressed and somewhat mystified by your profound photographic knowledge... if your photographs turn out well!

Because the light falling on your subject is constantly moving, its effectiveness on any given area is lessened from what it would be if your light was stationary during the entire exposure. Therefore, in computing the exposure it is advisable to add about fifty percent to your normal exposure calculations. However, a few test exposures will quickly point you in the right direction better than any calculation. Incidentally, with today's high speed films, it is generally better to substitute a 60 or 100 watt bulb in place of the powerful photoflood bulb in your reflector. Otherwise your exposures will become too short to enable you to manipulate your light effectively during the short exposure time.

In the photography of guns, another point to consider is the glaring highlights that will sometimes reflect into the lens from a shiny receiver or a polished wood stock. To check on this, it is a good idea to have someone move the light around from the position that you intend to use it while you watch the reflections with your eye very close to the camera lens. In this manner you will be able to see the hot reflections as they occur and can eliminate that light position from your light movement.

Another lighting method often used when a soft, diffused lighting is needed, is to put a piece of white cardboard close to the firearm and on the opposite side from your single light sources. A card about 11"x14" would be ample for photographing a revolver, for example. This white card will reflect light back onto the subject from your light and help to fill in heavy shadows. Here again, the single light source should be moved about during the exposure but would remain on one side of the camera instead of being used on both sides.

The photographer of guns can (Continued on page 62)

# THE P-38 BULL BARREL & SIGHT

By JAN DE VRIES GEERTSEMA



One of the problems facing the P-38 shooter is that of getting better accuracy out of the gun. For the target buff, the P-38 has never been one of the "greats" in competition partly because the weapon was never really intended for that purpose. It was developed in the mid-1930's and finally adopted in 1938 as the official German sidearm. Rather than trying to alter the trigger mechanism for better accuracy, my attack on the problem was to alter the barrel primarily to improve accuracy. As it turned out, the conversion also enhanced the already pleasing lines of the gun.


As can be noticed from the photographs, I fitted my pistol with what may be termed a "bull" barrel. To accomplish this conversion, which to my knowledge has never been done before, the barrel was made heavier simply by screwing and securing another larger barrel over the original after it was threaded and re-shaped.

This conversion adds more weight in front resulting in a steadier hold. I borrowed the idea from a friend of mine, a Mr. Wilhelm Klotz, who made his 9 mm Luger completely "jam-free" by having a heavier barrel made to his specifications in Switzerland some year ago.

I use both my P-38 and Walther PP in .22 caliber for combat training and exhibition work. Recently while giving a demonstration in front of an army audience of more

than 500 people at Heidelberg (Republic of South Africa) I realized that I would have to be able to adjust the sights on my two Walthers to compensate for changing conditions. On arriving home, I paid a visit to our local gunsmith, a Mr. J. Sankowfki, a master craftsman whose idea it was to fit the adjustable sight the way it was done. Anyone familiar with the slide of the P-38 will realize that it was impossible to remove the fixed sight and to inlet an adjustable sight in its place due to the cartridge indicator and the position of the firing pin. To solve this problem, the original sight was left in place and a groove was filed right through it so that an Astra adjustable sight would fit very tightly into this groove and be secured by a small screw. Since the conversion was completed, I have tested the gun thoroughly and it seems to work very satisfactorily.

If I had a strong affection for Walther pistols before, and I consider Walther to be the best and most modern of all semi-automatic pistols in the world today, they have now most certainly become my most prized possessions.

In a letter from Carl Walther, they said, "If Guns Magazine is going to write about your modified P-38 pistol, we would very much appreciate it if it would be mentioned at the same time that these modifications cannot be done in our factory and that these are your own modifications." 

# MAKE ME A MERKEL

Last time I checked, I had 17 shotguns, ranging from a pair of 410's to a standard 10 bore. With these various and sundry scatterguns, I manage to get in something like 40 days of shotgunning per season.

Since I was first bitten by the shooting bug, I've owned well over 400 guns, mostly smoothbores, therefore, it is nothing but reasonable that my scattergun collection includes some pretty fair shooting irons. Included among the guns in my rack are an L. C. Smith Crown Grade 12, a trio of Browning Superposed's ranging from 12 magnum to a 28, a Winchester 21, a J. P. Sauer and Son, several Winchester pumps, and a few others. However, my pride and joy is a Merkel 16 gauge over-under.

The name of Gebruder Merkel is not one exactly in common household usage in the United States, however this venerable old German firm has been turning out beautifully-crafted firearms, mostly shotguns, for many many years, and in Germany the name of Merkel is as revered as is that of Purdey in staid old England.

Before going any further, let's take a long, hard look at the Merkel over-under in general. For those of you who haven't seen a Merkel, this vertical double is currently made in a variety of styles ranging from the 200E—an ejector gun featuring a moderate amount of

Unknown to many, the Merkel is one of the few smoothbores that can rightfully be called "*einmalich*" (the best).

By B.R. HUGHES



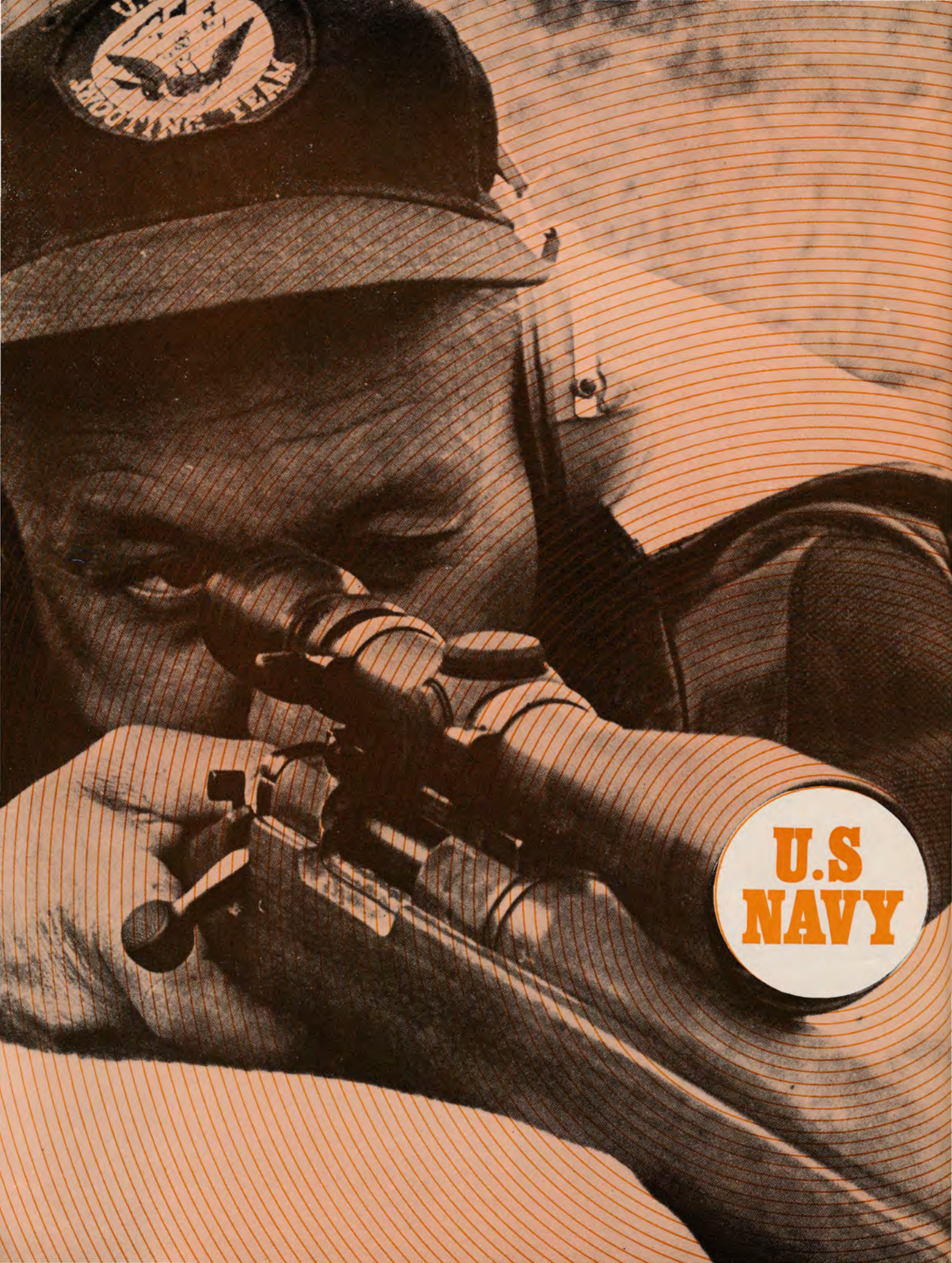


well-executed Arabesque engraving—up through the 303E—a shotgun so exquisitely engraved and finished that it has to be seen to be believed. The Merkels are all made on box lock actions with Kersten double cross-bolt and two underlugs. The higher grades appear to be sidelocks, but these are actually dummy plates. The frame is scalloped where it joins the stock. Generally, Merkels have double triggers—the forward one hinged—but selective single triggers are available. Either solid or ventilated ribs are found on all grades.

Price-wise, a Merkel over-under is not a cheap gun. When and if you can find a new 200E for sale, the price will usually begin at \$500. As the quality and quantity of engraving increases, the prices go up, up, up. However, insofar as workmanship and materials are concerned, the 200E is just as much a top grade gun as the gorgeous 303E. There just isn't any such thing as second-rate work where a Merkel is concerned.

The reason that Merkels were *(Continued on page 66)*





**U.S  
NAVY**

**P**ICK EIGHT Navymen—all champions in their field, put them in one unit, and you have a unique command called Small Arms Training Unit (SATU).

The Navy's only unit of this type is in San Diego and it requires two-fold duty of the men assigned. First responsibility is to the students who come to SATU for a four-week course to qualify as Small Arms Marksman Instructors (SAMI) for the Navy.

Secondary is that of shooting as a team in competitive matches up to the national level and test firing weapons before combat use.

The students now at SATU are the first to be sent for training under orders from the Bureau of Naval Personnel. "This is a huge step toward properly spreading our training throughout the fleets", according to Commander Charles E. Tate, officer in charge of SATU. Previous classes were under verbal orders of their command.

Men graduating from the present and future classes will be sent to larger ships and stations or to Naval District Headquarters. Some will be in charge of rifle and pistol ranges and others will be the SAMI for their district coaching teams in competitive shooting.

The instructors at SATU are all distinguished marksmen. Some titles held are California State Pistol Champion (current), National Team Match Championship for service rifle (current), and numerous regional championships.

Training Navymen and shooting small arms is only part of the SATU operation. The machine shop (Match Conditioning Unit) at SATU provides 200 new and 2,000

reconditioned weapons annually for Navy Shooting Teams. These new units are received from the factory in rough-cut condition. The Match Conditioning Unit then refines each barrel to fit a given stock. This constitutes a fairly accurate weapon which is then test fired and sent back to the Match Conditioning Unit for final adjustments.

When each weapon is proved accurate it is shipped either to Navy Shooting Teams or to the Navy's SEAL units for combat use.

The Match Conditioning Unit at SATU is operated by five civil service employees. "One of our functions is experimenting with varying the bore size of weapons to improve accuracy", according to Charles L. Frazier who heads the shop. Frazier set up this segment of SATU in 1950 under the direction of the Bureau of Naval Weapons.

Ammunition make up used in marksman type shooting is an important factor in controlling a target pattern. SATU maintains an ammunition reloading shop which experiments with various makes ammunition to find maximum accuracy for an individual weapon.

Reloading ammunition reduces operating cost and provides any size projectile-case combination needed for a weapon with an altered bore size.

With the combination of hand loaded ammunition and a weapon free of mechanical fault the only error on target is that of the human error of the shooter. The instructors at SATU are working with students every day to minimize this error for anyone who uses small arms in the Navy.



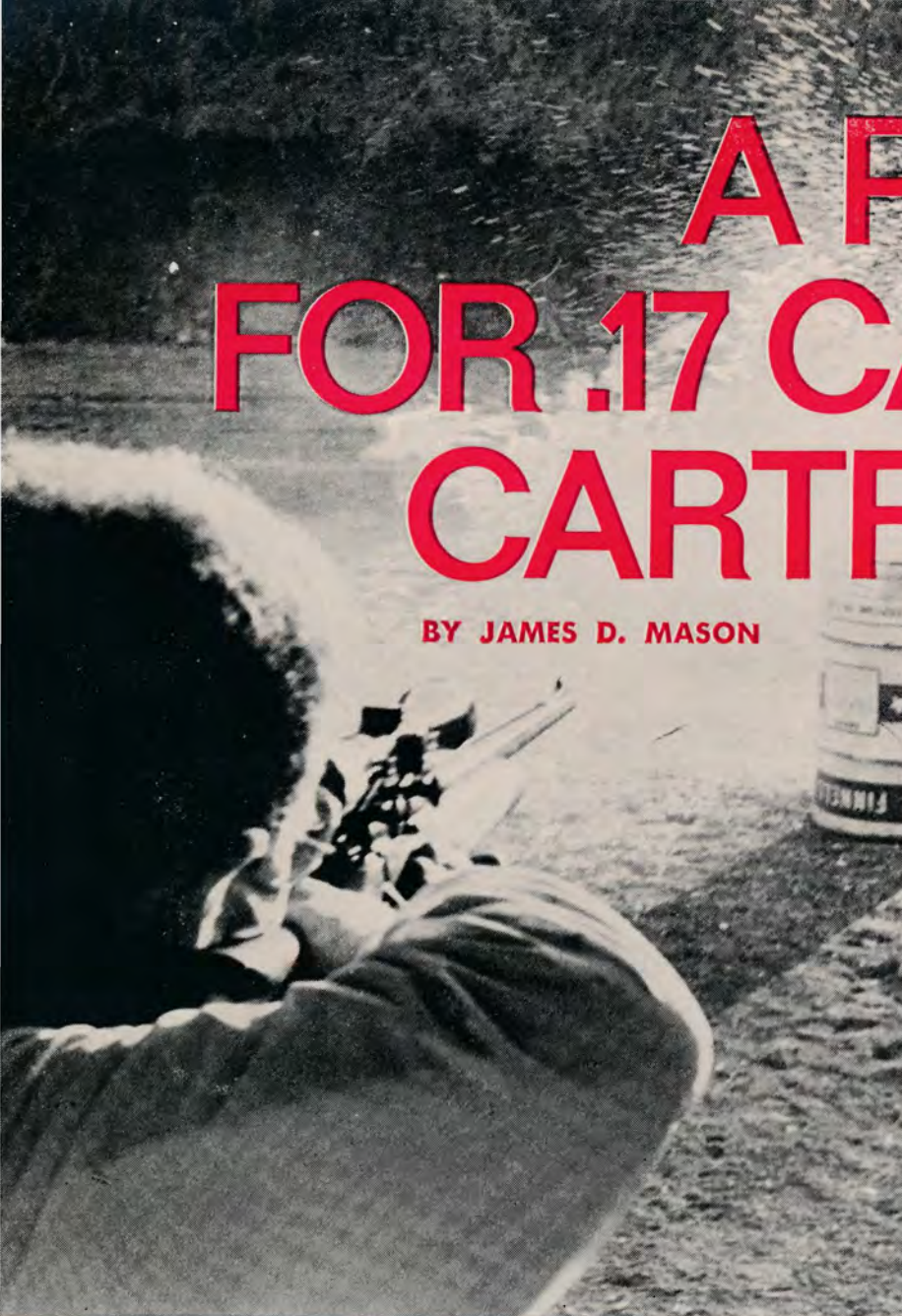
# SMALL ARMS

# TRAINING UNIT



# A PRIMER FOR .17 CALIBER CARTRIDGES

BY JAMES D. MASON



ONE OF THE hottest "new" items in rifle shooting is the subcaliber .17 bores. It has had brief spurts of popularity a couple of times in the past, only to die out for lack of support. This most recent wave of acceptance seems to be quite different in nature, however. Reloaders' demand for bullets in this caliber is up sharply. Leading gun writers make glowing predictions about the .17's future. More gunsmithing and manufacturing firms are now offering services, accessories, and components for .17 caliber shooting.

Growing numbers of shooters are becoming interested in the subcaliber bores and want information about these wildcats before making commitments for rifles and equipment. Shooters have varying needs and desires and choices of equipment should be made rationally in this regard, and after careful study.

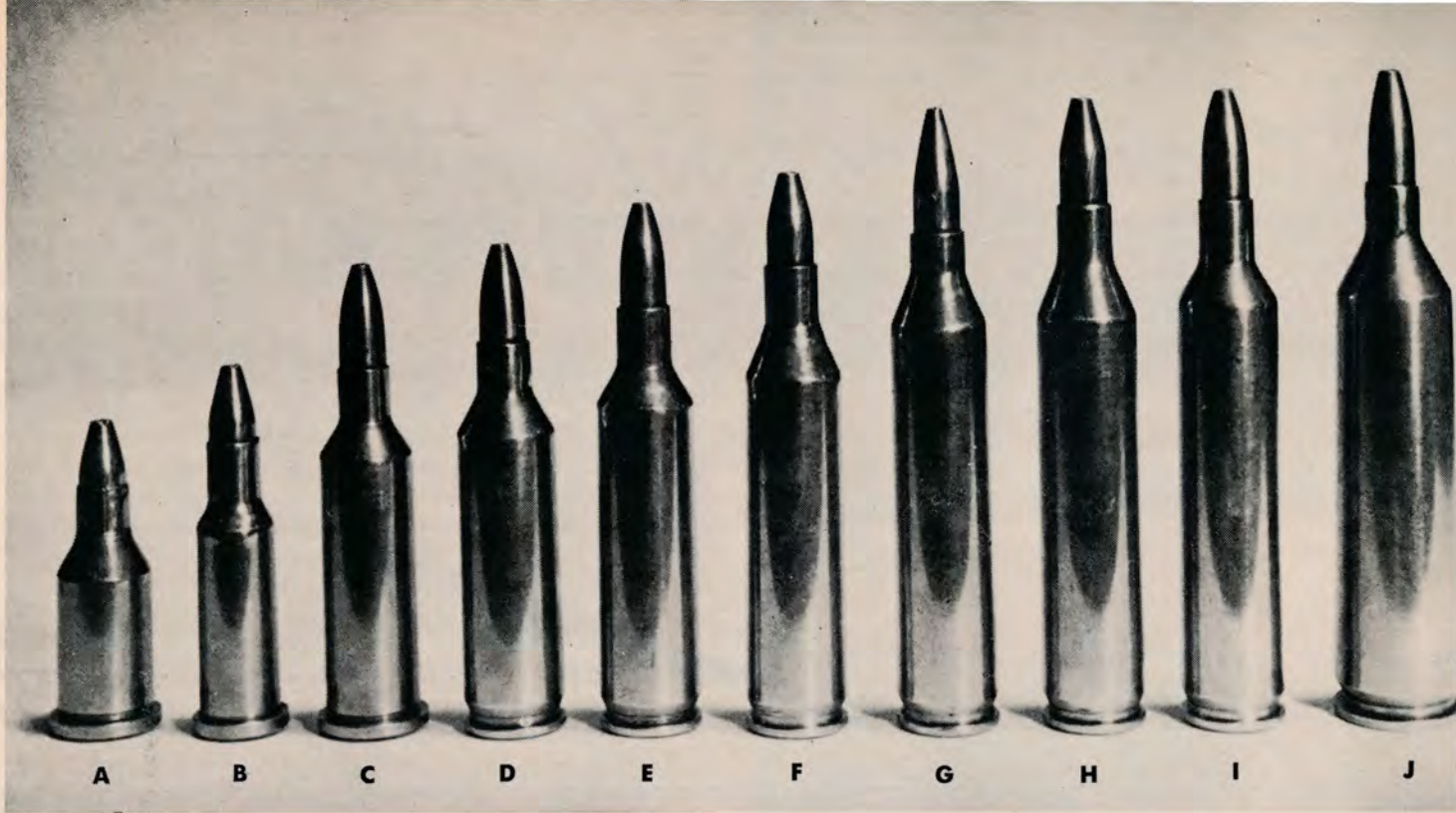
While the merits of new cartridges can be examined individually by different writers, usually a reader does not get a chance to see a related family of cartridges com-

paratively analyzed. The .17 caliber cartridges offer an opportunity for such a broad scale comparison, and it is the purpose of this article to examine a spectrum of .17 caliber designs to illustrate the possibilities and limitations of this fascinating "family."

For a better understanding of these subcaliber cartridges, it is necessary to explore ballistic characteristics and loading data for a representative span of .17 caliber designs. All of these are wildcats at present, but who knows what tomorrow will bring?

Following from left to right in the "family portrait" group photo (top, facing page) consider each separate cartridge to get a broad look at the array of .17 wildcats currently available.

The smallest .17's are of the most recent design. The .17 Bumblebee and a .17 Hummingbird are developments of bullet-maker Lee Baker and Frank Hemsted. Designed for use with the lightest weight .17 caliber bullets, these two cartridges perform spectacularly for their size (see



**COMPARATIVE  
CARTRIDGE PERFORMANCE**

CARTRIDGE	POWDER/WEIGHT	BULLET	VELOCITY
.17 Bumblebee	HERCO/ 5.3 gr.	13.2 gr.	3205*fs
.17 Hummingbird	AL-8 / 5.5	18.5	2604*
.17 A&M	2400 /11.0	25	3800
.17 Ackley Bee	4227 /12.0	25	3846
.17 Mach IV	4198 /17.0	25	3785
.17 Javelina	3031 /18.5	25	3845
.17/.222	R11 /19.0	25	3750
.17/.223	3031 /20.0	25	3707
	3031 /23.0	25	4067
.17/.222 Magnum	4350 /27.0	25	4000
	4320 /25.0	25	4125
.17/.22-.250	4320 /33.0	25	4200
	4350 /37.0	25	4220

\*Fired from 10" barrel.

The cartridges above are explained fully in the text. Specifications are listed in the table at left. They are listed downward, alphabetically. Below is a wide variety of bullet weights available from 18.5 grains through the heavy 30 grain. The 25 grain is standard.



ballistic data.) Both are nearly identical in regard to case capacity and performance, and data for the one is interchangeable with the other. The Bumblebee is a .218 Bee case necked and shortened; the Hummingbird is based on .22 Hornet brass. These cases are well-adapted for use in custom barreled handguns or short, compact rifles with barrels of 16-18 inches. Their use with light-weight bullets restricts effective range, but fits nicely into shooting situations on small game out to 100-125 yards. There are probably more varmints shot within this range than all other ranges combined.

The next cartridge is the .17 A&M. This case is made by necking down the .218 Bee and setting the neck back to form a 33 degree shoulder. It is chambered on suitable actions by the A&M Rifle Company, Prescott, Arizona. Ballistic data illustrates the potency of this efficient round. The .17 A&M and similar designs are among the easiest to load of all the .17's. (This cartridge is very similar to the .17 Ackley Bee, which was one of the first .17's to be

designed.)

The .17 Mach IV is formed from .221 Remington Fireball brass with the neck set back to form a 30 degree shoulder. This design feature makes the neck length adequately long while not setting back the shoulder dimension. IMR 4198 is one of the best powders for this cartridge; the design is very efficient, handling bullets from 18 to 25 grains with good performance. The cartridge was originated by the O'Brien Rifle Company and has been made on the Sako L461 action, which is adaptable to all .17 wildcats based on the .222 Remington case.

Next is the design the author considers to be the classical .17 cartridge. The .17 Javelina, designed and chambered by the A&M Rifle Company, represents an excellent balance between case capacity and bore diameter. It shoots groups with 25 grain bullets more consistently than any .17 the author has seen. The particular shape and case capacity were derived empirically from extensive testing. While it may not handle lighter bullets (Continued on page 63)

# BUILD A KENTUCKY RIFLE

## HOW TO

Desirable for the beginner as well as the expert, this kit offers hours of building fun, good looks—and shooting enjoyment.

By JAMES D. CARMICHEL



UPON ENCOUNTERING a dedicated shooter one may be reasonably certain that he is a do-it-yourselfer. If he happens to be a black powder burner you can be absolutely sure of it. Just what causes a muzzle loading fan to become an avid do-it-yourselfer is open to some discussion. Perhaps we can find a clue in America's history: The founding fathers, it seems, were determined that their personal weapons were like no others. Today's front loader fan seems to be equally determined that his pride and joy is equally distinctive.

Another and perhaps more likely reason for the great popularity of do-it-yourself muzzle loaders is the fun and fascination of target shooting, hunting with or simply looking at a firearm you've made yourself.

To be sure, the construction of a muzzle loading rifle is not a simple task. In addition to a fair amount of wood and metal working skill, a certain artistic flair is required if one's efforts are to bear fruit. Unfortunately the most hopeful of ambitions frequently go awry for a lack of skill with tools, less than an artist's touch, or both. Fortunately this does not mean that such persons are forever forbidden the joys and pride of building a beautiful and accurate Kentucky rifle—far from it.

The truth of the matter is that with the flint and percussion rifle kits now available from Dixie Gun Works, Union City, Tennessee, even the beginner can turn out a strikingly handsome and highly shootable muzzle loading rifle on his first effort.

In addition to eliminating the difficult and time consuming elements of building a Kentucky rifle the Dixie kits are so engineered that the finished rifle does not look at all like an assembled mass of look-alike parts but, rather, a highly individualized arm which reflects the builder's ideas on structure, line, proportion, decoration and finish. This factor makes the Dixie kits desirable for the accomplished riflesmith as well as the beginner.

A well known maker of reproduction Kentucky rifles pointed out that by using the Dixie kits he was able to cut his working time nearly in half yet the kits left so much freedom for individual styling that no two of his rifles were ever alike. In addition to this, he pointed out, the cost of the kits is no more

than the total cost of the parts he would need to buy anyway.

My do it yourself adventure with the Dixie kits involved the popular New Dixie Percussion Rifle which sells for \$70.90 featuring a pre-shaped maple stock, brass accessories, highly polished 40", 8-groove barrel (40 cal.) and smooth functioning percussion lock (fig. 1). This kit differs from the more expensive Deluxe kits mainly in that it does not include patchbore, cheekpiece inlay, nose cap, side inlays and barrel pin escutcheons.

Even less expensive kits, the Plinker Series can be had for as little as \$34.50 but do not feature the pre-shaped and in-letted stock. The stock being band sawed to profile shape only.

### ***Beginning Work***

The  $\frac{13}{16}$ " barrel fits into the pre-cut channel with no cutting, no scraping and no gaps. In short, the fit is perfect. About two inches of channel at the breech end must be finished by hand but this represents no problem at all. One needs only to continue the straight lines of the barrel channel back through the unfinished portion and remove the wood with a straight edged chisel.

The breech tang can be precisely inleted by simply placing the barrel in the channel with the tang in position over the grip or "wrist" of the stock (fig. 2). Enough of the barrel will remain in the channel to insure perfect alignment so all you need to do is scribe the outline of the tang, cut to depth and the job is done.

Now you are ready to move on to the only part of the entire rifle making operation which may be considered somewhat tricky—inletting the lock. Actually it isn't too tricky at that, just take enough time to get the preliminary layout correctly aligned and you'll save yourself considerable aggravation later.

The vertical placement of the lock represents no problem whatsoever because the top edge of the lock follows the top line of the forearm. The lateral positioning, however, must be exact because the hammer must hit the nipple squarely.

For layout purposes use a centerpunch to mark a spot midway across the right outer barrel flat at a point  $\frac{3}{4}$ " forward of the rear of the barrel. Later you will use this punchmark to drill the hole for the drum but for the present it will do service for positioning the lock. Simply hold the drum and nipple assembly in relative position by hand and "eyeball" the lock into proper position by arranging it so that the arc of the hammer nose coincides with the axis of the nipple. This is made easier by removing all lock parts from the lock plate except the hammer and the tumbler. The lock will thus lay nearly flat and quite close to the stock so that accurate "eyeball" alignment of hammer and nipple will present no problem provided you are reasonably sober. Now remove hammer and tumbler and you are ready to continue.

The lock plate, as it comes with the kit is of a pleasing traditional shape but you may wish to reshape, as I did, to a more distinctive outline. There is sufficient metal for fairly extensive reshaping but don't get carried away and file away so much metal that parts of the mechanism will extend beyond the plate profile when you reassemble the lock. This will cause embarrassment and no end of difficulty. Also be sure and file a slight inward bevel on the edges. This will facilitate inletting as well as making the lock easier to remove once it is tightly inletted.

Begin inletting by holding the lock plate in the exact position and tracing the outline with a scribe or sharp pencil (fig. 3). Deepen the outline by tapping straight and appropriately curved chisels into the line to a depth of about  $\frac{1}{8}$ " (fig. 4). For the sake of a hairline fit it is a good idea to keep the out-



Fig. 1: The New Percussion Rifle Kit as it comes from Dixie.

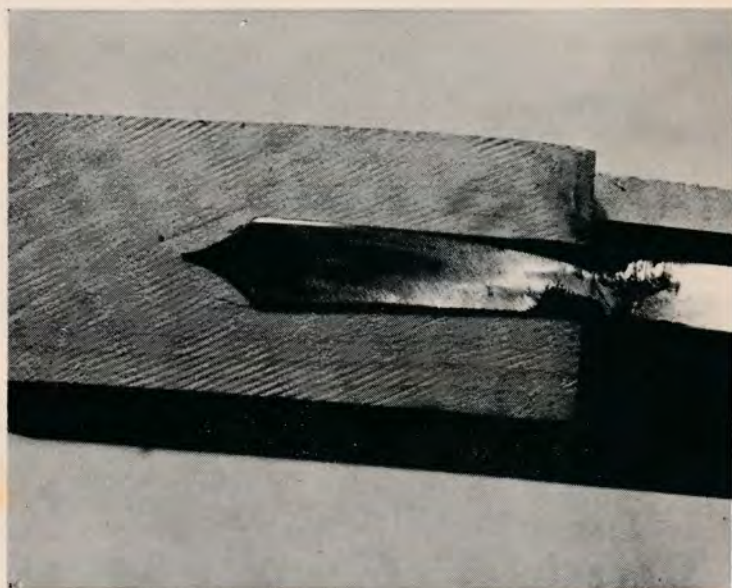


Fig. 2: Inletting the tang into the stock.



Fig. 3: Begin inletting the lock plate by tracing outline



Fig. 4: Deepen outline with wood chisels.

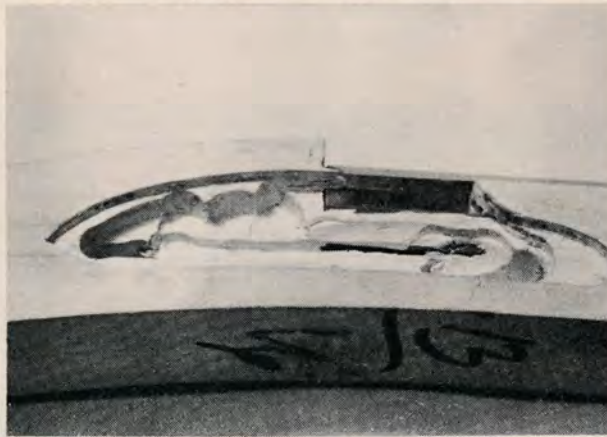


Fig. 5: Cut out recesses for the lock parts.



Fig. 6: Fitting the butt plate.



Fig. 7: Blending cheek-piece with rasp.

line cuts slightly inside the scribed outline. This will allow you to speedily remove the wood from the lock area without fear of gouging where you shouldn't. As you are inletting the lockplate you will have cause to appreciate the fact that the Dixie stock is so precisely pre-shaped that the lock contacts the side flat of the barrel exactly when the plate is flush with the surface of the wood! Before this happens, however, you will find it necessary to do a bit of careful cutting and scraping along the edges of the lock plate recess. That is, you'd better be careful if you want a close, tight fit.

When the plate is inletted flush reassemble the complete mechanism and begin cutting the various recesses for the various parts. One school of thought on this is to simply dig out one big space into which the mechanism or "guts" will fit. This is quick and easy but it is nearly as easy to inlet specific areas to receive the variously shaped parts of the lock (fig. 5). This method is preferred because it doesn't weaken the stock so much as does the "dig out" technique and is a hell of a lot more satisfactory to the craftsman who takes pride in his work. Too, it doesn't take a lot of fancy tools.

With the barrel and lock in place you'll want to do a bit of stock shaping. Proper shaping is the key to an attractive graceful Kentucky rifle and it is in this respect that many otherwise well made rifles come up lacking. While it is certainly not impossible to louse up a shaping job on the Dixie kit it is highly unlikely for the simple reason that much of the bulk has already been removed thus allowing the workman to concentrate on the final form. Too, the forearm of the Dixie Kentucky Rifle Kit is completely finished to shape thus freeing us from that arduous task.

The first step in shaping the butt portion of the stock is fitting the buttplate. There is no exception to this rule because the buttplate establishes the cross section dimension from which further shaping proceeds. If you own or have access to a band-saw the sharply curving buttplate can be fitted with little effort. Otherwise you'll just have to rasp it out the old fashioned way. A good bit of time and effort can be saved by using a fairly wide ( $\frac{3}{4}$ " or so) forstner or paddle bit in an electric drill. Just drill overlapping holes along the buttplate line and you'll get rid of a lot of surplus wood. Smooth with a rasp and you are ready for a final, close fit (fig. 6). The cast brass buttplates are fairly rough at best with rather rounded edges and corners that should be sharp. Square up the end corners and the buttplate will be easier to fit and look a lot better when the job is done.

The brass buttplate is held in place by two one inch brass, flat head wood screws, one down through the top tang of the buttplate and the other about three quarters of the way down

Fig. 8: Shaping the lock molding adds to beauty.





the rear curve. Countersink the holes so that screwheads will pull up flush.

With the buttplate in place the terminal points of the comb and "shin" (underside of butt) are established. The top line should curve gracefully forward to the nose of the comb and the shin line curves gently upward until it relaxes into the straight line of the forearm. The graceful top and bottom butt lines of the semi-shaped Dixie stock are hard to improve on and actually one needs only to alter them enough to meet the top and bottom edges of the buttplate. This requires very little cutting but it is important that these top and bottom surfaces be cut *flat*. Later the comb will be rounded but at this point it is important to keep them flat for the sake of drawing various reference lines.

The lower edge of a Kentucky rifle's buttstock, unlike the modern rifle, is cut flat and level with the flat surface continuing undiminished from the buttplate to the triggerguard. This unique feature is one of the most characteristic elements of the Kentucky rifle and therefore considerable care must be taken to insure that it is properly formed. This flat "shin" was as much as an inch wide on early eighteenth century flint-lock rifles but by the percussion era had been reduced to as little as half an inch. The bottom edge of the buttplate furnished with my Dixie Kentucky rifle kit measured  $\frac{5}{8}$ " and is highly authentic for the percussion period. This, of course, meant that a  $\frac{5}{8}$ " wide flat surface had to extend from the "toe" (bottom of buttplate) through the trigger guard area. Since the shin is already flat all one needs to do is draw a pair of straight lines  $\frac{5}{8}$ " apart from the corners of the buttplate up through the underside of the grip and lock area. These lines will be a reference for further shaping. Another line, drawn from the top center of the buttplate to the breech tang, establishes the centerline of the comb.

With the buttplate and guidelines to serve as references even the beginner should have little difficulty in achieving a fine graceful shape. The pre-shaped cheekpiece has an excellent shape as it comes so all one needs to do here is blend the front and rear ends into the grip and rear of the butt with a shallow concave slope. The rounded side of a half-round rasp is the tool for this (fig. 7).

Another highly characteristic feature of the Kentucky rifle is the stock molding around the lock. If properly shaped this molding adds considerable style and grace to the long rifle. The outline of the molding generally follows the profile of the lock so a simple way to get the molding started right is to draw a border around the lockplate as shown in the illustration (fig. 8). One then needs only to reduce the wood around this line so that the molding shapes (*Continued on page 68*)

Fig. 13: Inlet ramrod pipes and pin in place.

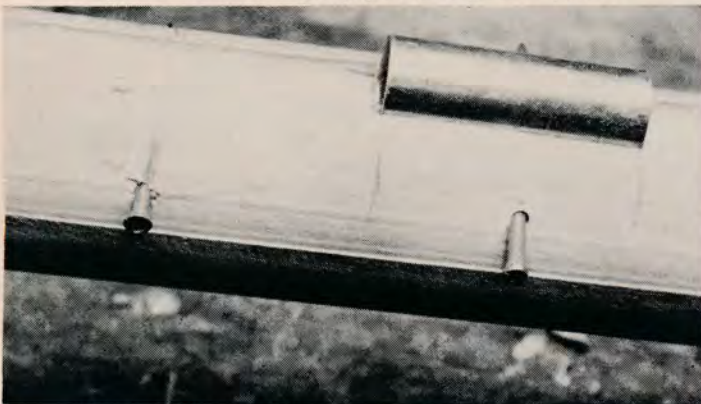


Fig. 9: Locate trigger plate position.



Fig. 10: Trigger guard needs to be polished.



Fig. 11: Inlet front "ears" of trigger guard.



Fig. 12: Inlet rear "ears" of a trigger guard.

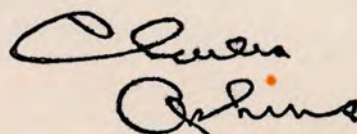


10  
GAUGE  
R.I.P.

**T**HE TEN GAUGE Magnum is a wildfowler's gun, and on ducks and geese, most especially the latter, it is an extremely deadly fusee. The magnum cartridge with its two full ounces of shot, driven along by something better than five drams equivalent of powder makes for a long range and very lethal load. The only fly in the ointment is that bag limits are so restricted that to get a specialized gun like the big 10 is questionable these days. Does the shooter really need it?

In Spain, along the Guadalquivir River, which flows in the southern part of the country through what is called Andalucia, is some of the best goose shooting in all of Europe. Below Sevilla are a long series of marshes where the birds winter. There are no bag limits, and as the game trades back and forth from feeding grounds to the marshlands, the 10 gauge comes into its own. During four powder-flecked years that I lived in Espana I shot water fowl, both ducks and geese, aplenty. After a coupe of years I had the AyA Gun Company, Aguirre and Aranzabal, make a 10 bore for me. It was intended exclusively for the gunning along the great southern river.

After I quit Spain and returned to this country I ac-



By **CHARLES ASKINS**



quired another 10. This was a Belgian-made Neumann, a splendid shotgun and a smoothbore that I shot a lot in Mexico. On my departure from Spain, I put in an order with Austin Aranzabal, the president of the AyA Company to make for me a 10 gauge over-under for the 3½-inch magnum shell.

The AyA Co. does not manufacture anything bigger than the twelve. The 10 of mine would be custom made from buttplate to muzzle. The company makes a series of over-unders on the Merkel action. This is a sturdy German-type action, with a multiplicity of locks, strong enough



The author's 10 gauge over/under magnum, the only one ever made by AyA.

to handle any shotshell—including the 10 gauge magnum. The action is a 12 gauge design and to adapt it to the larger 10 would mean that a special receiver would have to be forged and machined. The work took three and a half-years, and this is the only 10 gauge over-under ever made by Aquirre and Aranzabal.

I had the big super 10 made especially for the goose concentration at the foot of South America. In the Tierra del Fuego. Here there is a gathering of the honker clan that runs into the millions, the country is a grassland and there are numerous sheep ranches. The game comes in such vast numbers as to seriously damage the sheep pasturage. The ranch owners welcome the shooter with open arms. I wanted the mighty over-under to try it on these vast flightings.

Along with these modern 10 bores, I have two venerable numbers. One of these is a Westley Richards, with outside hammers and laminated barrels. I picked it up one chilly December night from beneath a very dead contrabandista who had it charged with Winchester High Speed, No. 5 shot. Both barrels were charged and both hammers eared back to full cock. He had died before he could set off either tube. A fortunate circumstance as I was standing only nine steps off the muzzle. The second 10 is a Remington, also with outside hammers, it is the 1882 model first made in that year and last manufactured in 1910. It has damascus barrels, and like the Westley Richards is hardly safe to shoot with modern loads. Both guns have 27/8" chambers—which is somewhat unusual, for ten gauges before the turn of the century had no standard chamber length—chambers might be 25/8", 23/4", 27/8", 3", 31/8", 31/4" and 31 1/2 inches. It was not until after World War I that the manufacturers settled on a chamber length of 27/8 inches for the standard loading and 31 1/2 inches for the magnum. The 10, once upon a time, was made to weights of 7 1/2 and 8 pounds and shot loads of 3 1/2 drams of powder and 1 1/4 ounces of shot. Such guns were extensively used for upland game; especially prairie chickens, sage grouse and to lesser extent quail and doves. While the gun was a ten bore the charge was no more than we use in the 12 these days. The big bore patterned the small shot very well and was a real killer. Oftimes chamber lengths ran shorter than the customary 27/8 inches, and these shorter chambers—usually 25/8 or 23/4 inches—handled the lighter loadings very efficiently. Recoil was mild and this was a mark in favor of the big gun.

Winchester sold a 10 gauge double gun, made in Eng-

land, in 1879. This gun came in five grades and among the better models was a high class firearm. It had, as was customary in that day, laminated barrels. In 1887, the company came along with its own 10 bore. This was the Model 1887, lever action. It was chambered for the 27/8" shell and had a magazine that held five shells. Barrel lengths were 30, 32 and 20 inches; the latter was for the police, stage coach guards, bank messengers, the railway express. This shotgun was supplanted by the Model 1901 which was essentially the same lever action except it was beefed up to handle smokeless powder loads. It was chambered for the 27/8" shell, held five cartridges, and only one barrel length, 32 inches, full choke.

The Model 1901 was manufactured until 1920 and then dropped. It was never made in the 12 gauge for it was felt it would then be competing with the Model 97 pump gun. Winchester has never made a 10 since. I knew an old ex-market hunter named George Cobb, who had been a confirmed user of the Winchester .01. My dad, who watched him perform, said that Cobb oftimes had three ducks falling from a single flock with the old lever action. He reloaded for the gun and used brass cases. In later years my old man was shooting an '01 model and managed to get it a bit too hot-charged and not only wrecked the action but also took the tip off a finger.

Since the Winchester there has been little activity among the makers on the score of the big 10. My dad had a Fox, made by the original Ansley Fox Co. of Philadelphia, which was chambered for the big load. It was an 80% gun and handled No. 2's better than any other shot size. The barrels were 32 inches and the gun weighed 11 pounds. Ithaca sometimes made 10 gauge on special order and so, too, did outfits like Parker, L. C. Smith, Hunter and Baker. But the demand was small and the manufacture was custom work.

Directly after World War II there was some importation of super 10 magnums made for the 3 1/2" shell. These shotguns were made in Belgium and Spain and were high quality firearms. Besides the big custom-built AyA over-under, I have another by this leading Spanish maker in a side-by-side double. It weighs only 9 1/2 pounds and kicks too unpleasantly to be much fun. The Neumann, previously mentioned, weighs 11 pounds and this is a more nearly correct heft.

The recoil of the 9 1/2 lb. AyA with the 2-oz. load in the 3 1/2-inch case is more than 60 ft. lbs. and this gets pretty punishing if you run through (Continued on page 58)



Running pattern tests at long range with the 10 gauge magnum. This testing also included penetration tests.



In field tests of the big bores on the silhouette of a goose, the 10 bore outranged the 12 by small margin.

# Guns Color Gallery

**O**n the following pages we have reproduced seven of our past covers in beautiful four color prints, suitable for framing. Ranging from hunting rifles to sport pistols to war production handguns, our readers chose these as among the best from the past.



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On page 37 (facing page) is the cover of our August '68 issue depicting a Colt .45 Auto, serial number 1217. It is gold inlaid and engraved by Alvin White and has a steer, calf and rattlesnake motif, plus a bucking bronco on the top of the slide. The relief chiselled steer's head overlay is on select walnut grips, also by White. Note the fine scroll gold inlay borders and the excellent detail rendered to the figures on the slide. This gun is from the R.Q. Sutherland collection. Photography by Richard Millard.

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The October '69 cover featured J. Henry FitzGerald's .38 Special Colt Single Action flat-top made especially for him by the workmen at Colt's. Note the extra long grip and the special sights. This gun, serial #154334, once belonged to the famous Colt man and was used in many an exhibition. It has been said of many men that "He was a legend in his own time." Among pistol shooters of pre-WWII vintage, Fitz was a legend in his own time in two fields; one for his shooting and one for his artistry with tools for making fine guns shoot better.

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On page 39 is the Polish Vis (Radom) that graced our April '69 cover in nickel plated splendor. Originally these guns were not nicked, but were, in fact, blued. This one was plated by the owner. Sometimes called the "Polish Browning", this gun was taken from a Browning design. When Hitler's troops stormed through the gates of the Radom Wall, capturing the city of Radom, Poland, they came into first contact with large stores of these weapons. Eventually this weapon was mass-produced by the Germans using forced labor in occupied Poland and was issued to German troops as a sub-standard weapon. Many specimens were brought back to this country by returning soldiers who had captured them from the Germans.

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On page 49, the cover gun from the May '69 issue is shown. It is a magnificent Browning Field Grade over-under shotgun and it uses two separate artists to make it what it is. The engraving was done in Japan by the engravers of REI Engraving, Park Forest, Illinois. The thumbhole stock, a work of art in itself, was made up by Reinhart Fajen of Warsaw, Missouri of his fine grade of choice walnut. The photo was taken by Harry C. Knode of Dallas, Texas.

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Appearing on our January '69 cover (page 41) is a matched pair of English flintlock pistols; locks are stamped "Gill." The barrels and furniture are made of brass. Note the scroll inlay work in the stocks above the cocks, as well as the ivory ramrod tips. These guns show some wear but have been excellently preserved throughout the years. The safety catches are positioned behind the cocks and are the bolt type. The guns are from the collection of Nathan L. Swayze and photography is by Dr. R. L. Moore.

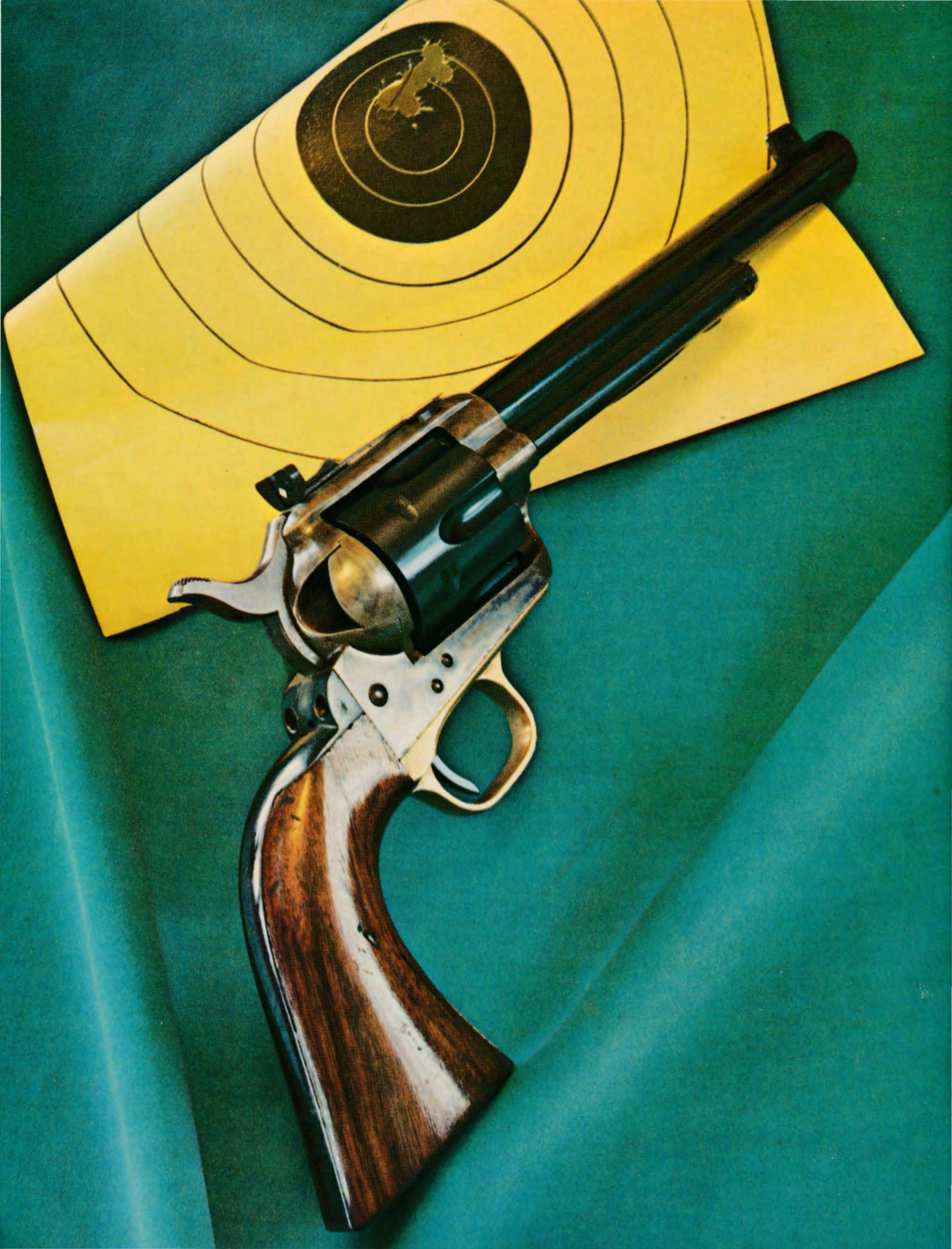
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Coming from our July '69 cover (page 42) is this beautiful custom rifle made up by our Gunsmithing Editor, Bill Schumaker. The gun is in 7mm Remington Magnum using an Ackley left hand action, Douglas Premium barrel, and a Fajen semi-inletted stock. The scope is a Leupold on Conetrol Custom mounts. This gun is an excellent shooter as well as a good looker. A handsome left hander, and a handsome color shot, also by Schumaker.

---

Page 43 carries a copy of our November '68 cover, a Colt Woodsman, .22 caliber long rifle pistol. This is nothing spectacular, but a lot of shooters probably started their powder burning with one of these guns. Colt started manufacture of this fine handgun in 1933 and is still making them in a basically unchanged model. The photographer, Edward McKin was right on target with this shot.



















**EARLY ATTEMPTS  
AT  
REPEATING RIFLES**

---

**BY J. FRED HEBBON**



Right: Louis Weinbrenner  
and his unpatented rifle  
of the pill-lock design.



**E**ARLY GUNSMITHS were continuously endeavoring to improve the single shot flint-lock rifle. The flint-lock was an efficient and dependable weapon, although the time required to reload the gun put it at a decided disadvantage. My paternal and maternal ancestors being gunsmiths, tried to improve on this gun.

My father's forefathers were named Latham, who originally settled in Rhode Island. According to the Rhode Island Historical Society records there was a Robert Latham in Smithville and a William Latham in Johnston. My ancestors were from Johnston.

Latham made guns before and during the Revolution. After the Revolution there was only a small market for guns in Johnston, because of large quantities of weapons that were captured from the British, which flooded the Rhode Island area.

The Lathams had no sons but a daughter who married a man by the name of Mater. They moved from Rhode Island somewhere around the 1830 to 1840's. Mike Mater, or Ole Mike as he was known, was a descendant of this union. He is alleged to have settled in Chippewa, Ontario, Canada in the late 1940's but the earliest documentary evidence of his presence is September 4, 1859, when he applied for Canadian Patent #880 for a new sporting gun. Also there is in existence a gun which has what may be the date 1852 stamped on the barrel.

Most of the guns made by Mater have a serial number stamped on the barrel. The one dated 1852 has the number 12 placed between N. Mater and Chippewa, while the rest have it incorporated in other ways with his name, or stamped behind the rear sight. Most of his guns also have included in the barrel markings the fact that the gun was patented, although from the outward appearance on most there is very little connection between the gun and his first patent, #880, or his second #2427.

Mater was not by any standards an excellent workman. His guns are in some cases quite well designed, but in others they are so poorly designed it seems impossible that they could have been made by a gunsmith. About the

1850's Mater lost an eye when one of his guns exploded. In 1872 he is recorded as having a gunsmith and shingle business, and in 1879 he is called a coal-oil dealer. His son John is listed as a gunsmith.

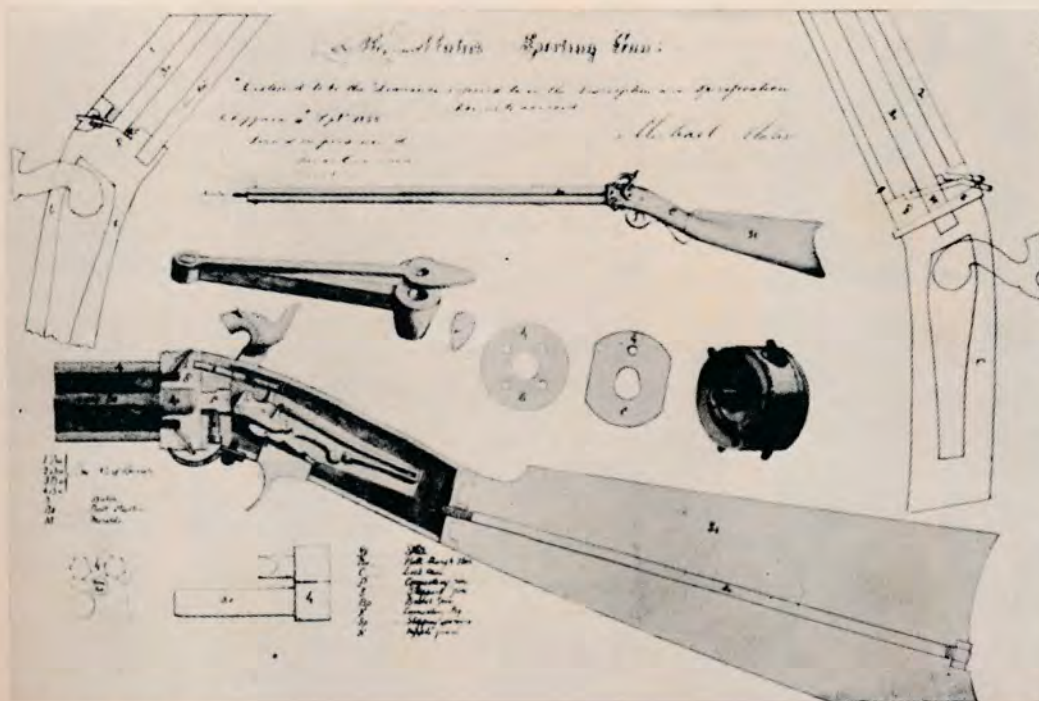
Mike Mater had three children. Two sons and a daughter. John Edwin at a much later date moved to Northern Michigan. The other son who's name I have forgotten moved to Cleveland, Ohio. The daughter's name was Louisa and was my father's mother.

Mater tried to develop a multi-firing gun. On September 4, 1858 he applied for a patent (Canadian Patent #880) which gave a choice of one, two, three or four barrels. On September 3, 1868 he applied for another patent (Canadian Patent #2427) which was for a breech loading gun.

My mother's grandfather was Louis Weinbrenner. He



Mater family circa 1879 apparently at Niagara Falls.



Mater's Canadian patent #880 depicting a sporting arm that appears to be quite different from the gun in the author's possession. Called in the patent "Mr. Mater's Sporting Gun," this one is a double barrel gun. A bullet mould and the horizontal magazine are pictured in the patent.

Left: the author holding the pill-lock rifle designed by Weinbrenner. The rifle was quite dangerous to fire as it had the tendency to fire multiple charges at one time and fired in all directions. Author did not test fire the rifle. One person did and was seriously hurt.



was born at Rhine Priesson, Germany, about 1828, and served his apprenticeship at Westphalia. When he emigrated to Canada in the late 1840's he settled at Chippewa, where he was employed by Mike Mater. In due course, he married Mater's cook, and shortly afterwards he purchased the Cooper Shop, where he set up his own business in competition with Mater.

Part of the shop which Weinbrenner owned at a later date is still standing. It is a one and a half story frame building, about eighteen by twenty-three feet. The front of the building had two windows and a side door, but now has sliding doors and is used for a garage. There are windows on the sides and a remaining end with a side entrance. The inside of the building has been lathed and plastered on the outer walls and ceiling. One partition which may be original remains, separating the front quarter of the building from the shop. There is a trap door at the rear to provide access to the attic which may have been floored. Some time ago a large wooden gun was hanging over the front of the building, but it has been lost. The size of the shop was reduced a number of years ago, allegedly by about one half. The shop and house was moved back in from the street about 1922, and it is impossible to say how much was removed.

Weinbrenner manufactured saws, tools and of course firearms, although he never had apprentices or employees. It is known that he was continually buying tools, much to the chagrin of his wife, but none of these have been found.

Louis Weinbrenner never placed his full name on a gun. The only markings are his initials combined with Chippewa, C. W. It is difficult to believe that he never had a stamp for his name, but this appears to be the case. He was an excellent craftsman, both in wood and metal, but apparently he found it cheaper to purchase many of a gun's component parts from a supply house in Buffalo, N. Y. On a typical buying trip, he would leave Chippewa at 3 A.M. walk fifteen or so miles to Fort Erie, cross the Niagara River on the ferry, purchase his supplies and return home the same day-walking. It is not known exactly what he would purchase on such a trip but it would not take many rough barrel-blanks to make quite a load. In later years Weinbrenner purchased his parts from Salem Le Valley's at 189 Main Street in Buffalo.

Louis Weinbrenner died in 1898, and is buried in the cemetery at Germantown in the Niagara Peninsula.

Weinbrenner left several guns and part of this collection is now in my possession, along with his single barrel gun. Other guns of the collection are a flint-lock musket with the date 1719 engraved in gold on the barrel. This gun was picked up in the Plains of Abraham at Quebec after the defeat of the French by the British. Two Tower Muskets, which were the standard British Army weapons used in the American Revolution, and also in Canada. One of the Tower Muskets is a long gun, the type issued to the British Infantry, while the other is a short gun used by mounted troops.

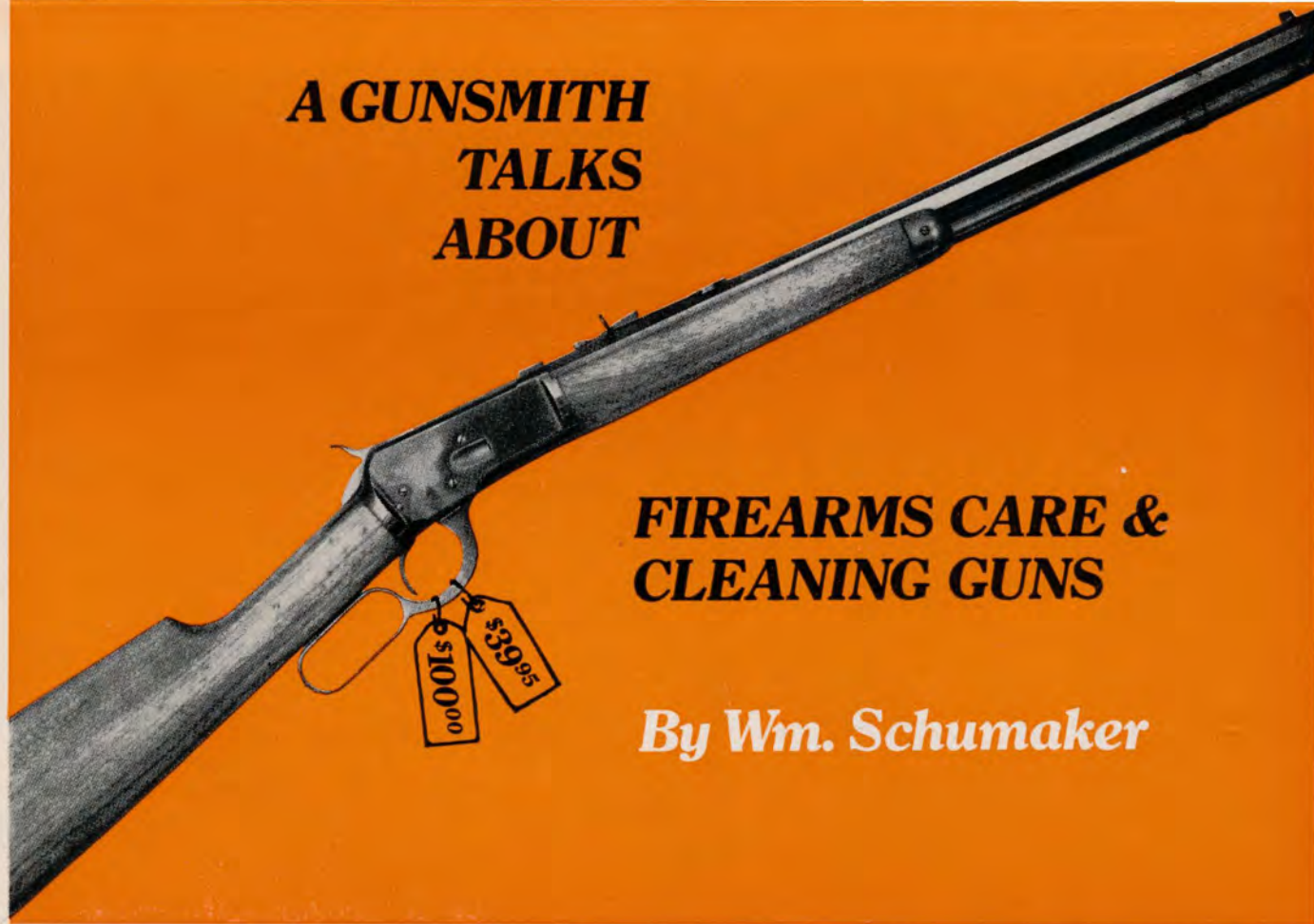
There is some mystery concerning Weinbrenner's repeating rifle. Two of these rifles were started but only

*(Continued on page 52)*

# A GUNSMITH TALKS ABOUT

## FIREARMS CARE & CLEANING GUNS

By Wm. Schumaker



**M**ARKET VALUE of used firearms is, to a large extent, dependent upon the type of care and cleaning that has been given them since they left the factory. The fact that a gun may be nearly new is almost meaningless if the barrel is badly rusted and pitted from cleaning neglect, and its metal and wood surfaces are marred from rough treatment.

When it is realized that used and abused guns re-sell at 50% or less of original cost, and even then, turn-over is often slow, the value of good gun care becomes very apparent. Many gun purchasers refrain from investing money in what is often referred to as "beat-up wrecks." Rather than take the increased chances of contending with malfunctions, replacing parts and

paying gunsmithing bills, while still carrying a sad-looking piece, the fellows just hold off until they can afford a new one.

A \$3 cleaning kit and the application of enough elbow grease to use it after each time the gun is fired or carried, is therefore one of the most profitable investments gun owners can make. Forget all that free advice about "it's no longer necessary to clean your guns." Neglect after firing one shot is just as bad as not cleaning the barrel after shooting several boxes of ammunition.

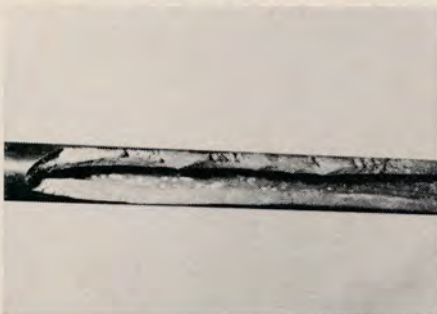
Why? First, let's realize center fire rifle ammunition uses a copper jacketed un-lubricated bullet. A thin "smear" of copper is left on the inside surface of the barrel by the bullet's rapid passage through it. This is perfectly normal,

as long as the barrel is cleaned and the gun owner makes sure it is not allowed to build up. However copper corrodes rapidly. Make an easy test to prove this to yourself. Drop a few 1¢ copper coins into the damp lawn grass. A few days later note the green oxidation taking place. The copper smear within a barrel will do the same thing. In damp weather and rapid temperature changes which induce metal sweating when a cold rifle is brought into a warm house, this copper corroding is accelerated and the barrel steel responds by rusting. I have inspected countless gun barrels, months and even years after they were fired without a follow-up cleaning. Viewing the muzzle end reveals a combination of (Continued on page 71)

The best method to clean a barrel.



Ruptured barrel from heavy fouling.



Childish carving lowers the value.



**HOW TO**

# **IMPROVE ACCURACY WITH GLASS BEDDING**

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100 YARDS  
.740"

3RD.  
SIGHT IN

2ND.  
SIGHT IN

1ST.  
SIGHT IN



MAR. 8, '69

**BY JON R. LUNDRA**



**A**CCURACY is a relative thing. The average lever action .30-30 that will shoot three MOA is a rare bird. On the other hand, an over-the-counter heavy barreled varmintier had better punch minute of angle groups or the manufacturer is going to have one unhappy customer! Accuracy is really the sum of many things, the various combinations of which can stagger the imagination. To experiment with all the possible combinations of powders, primers, bullet weights, seating depths, etc. is enough to keep you busy for a long, long time. To eliminate even one of these factors will, in the long run, save many hours at the loading and shooting benches.

Of all the contributing factors to rifle accuracy, there is probably none more important than bedding. Unless we can be absolutely sure there are no high or low spots in the barrel channel or receiver area inducing varying pressure relationships between metal and wood, all our experimental loading work will have been for nought.

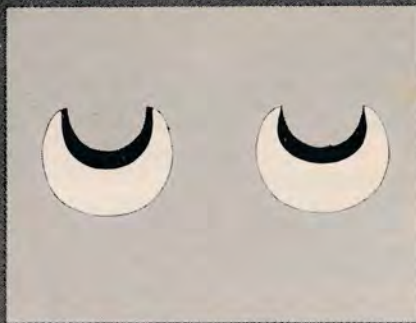
In the past decade or so the use of fiberglass bedding as a means of insuring a precise fit between barreled action and stock has come into widespread use. One has only to look to the bench-rest shooters to discover that most use and prefer glass bedded stocks. Also, Remington glass beds their Model 660 Magnum rifles and you can be sure they're not about to risk their reputation on an unproven concept.

Until just a few years ago the only way to inlet a stock consisted of using plenty of prussian blue and innumerable trial fittings. No matter how careful you were you still couldn't be sure that a sour-shooting musket wasn't the fault of improper bedding. There was always that twinge of doubt. Today, with the modern glass bedding kits now on the market, the average gun hobbist can achieve a fit between barreled action and stock that no gunsmith could hope to duplicate in wood alone—and with a minimum of skill.

This is not to say that glass bedding is a shortcut to or a substitute for good workmanship. As is always the case, there are good jobs and there are poor ones. Sure, there are many so-called "stock-makers" around who use fiberglass to cover up sloppy work but, as we shall see, a proper job leaves no trace of fiberglass on the finished rifle to offend the purist. To achieve this, there are several fine points relative to the glass bedding process not mentioned in the kit instructions, the knowledge and execution of which will mean the difference between an average job and a superior one.

There's nothing really mystic about glass bedding. It's simply an epoxy resin which, when mixed with a catalyst, hardens to form a substance of tremendous strength having a shrinkage factor of less than one per cent. The entire process is analogous to pushing a nickel into a chunk of soft clay to get an impression of Mr. Jefferson. The only difference is that, unlike clay, fiberglass hardens to retain the impression with absolute fidelity thus giving a perfect bedding surface for all contact points.

Although it is true that some bolt action rifles shoot best with fully-bedded barrels, some with free-floating barrels, and still others seem to prefer just an inch or so of pressure (*Continued on page 73*)

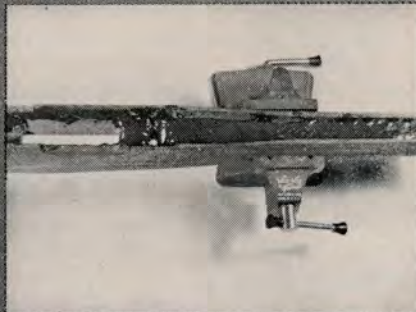


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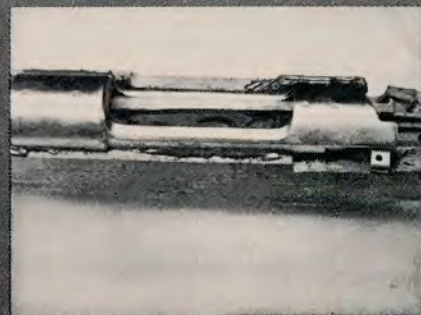
2,



3,



4,



5,



1. Front view of fore-end. Left is a result of hogging out wood. Right is undercut inletting.
2. Pouring the mixed compound.
3. Proper placement of the compound. Stock ready for barreled action.
4. Action in place, note extruded glass.
5. A few of the glass bedding kits available.



# PULL!

By DICK MILLER

**I**F LOW EIGHT ON THE SKEET scares you witless, take heart! Most of the veteran skeet gunners will tell you that low eight is the easiest shot on the field, which really doesn't make the beginning skeet shooter feel any better about missing that shot. But, let the record show that some of the most experienced skeet gunners in the game sometimes get a hang-up on station eight low house.

For example, I was reminiscing at Phoenix during the 1969 ISU World Championship warm-up with one of the country's real veteran skeet shooters, George Young, who complained bitterly that if he hadn't missed five of the eight shots at low eight, he would have been second or third in the championships instead of ninth. George broke 185 of the 200 international-style targets. Five more birds would have thrown him into a shoot-off for third place with the charming senorita from Mexico, Nuria Ortiz, who was the darling of the whole week's shooting. And, George is no Johnny-come-lately. We were recalling that we both shot in the NSSA championships at Dallas in 1951, and he was anything but a beginner then.

Every shooter with whom I talked at Phoenix was working hard on the international targets, and still missing birds. George Luebke, of Trius Trap fame, a veteran shooter and one of the game's real gentlemen, reported sadly that his best score at Phoenix was lower than his worst score at the San Antonio try-outs. I had a long chat in his car one day with Bob Rodale, one of the world's top skeet competitors, and a keen student of the game, who, even as he was wearing a "Low gun is more fun" button, admitted that the international version of skeet is a tough game, and requires more of the competitor than our domestic version. Much of the time, in domestic skeet, if you can develop a smooth swing, and get in the groove, long strings of broken targets come easily. Not so in international skeet. Each new field, each day, and often each target is a new challenge, and you have to work at breaking them.

Because international targets are more difficult, and a greater challenge, it is a pleasure to pass on a commentary on our college age young people, in a somewhat different vein than much we read and hear today. International trap, with the full 15-trap layout, was on the program for the first national collegiate clay target championships (reported earlier in this column). Unfortunately, the rampaging Mississippi river filled the pits, and it was not possible to shoot this program. Mike Tipa told me in Phoenix that existing traps were modified to approximate the more difficult angles of international trap, and the collegiate shooters signed en masse for the event. One of the colleges represented even sent a shooter to the world championship rehearsals in Phoenix. All of the collegians dug the more difficult targets.

As I said earlier, the darling of the whole program at Phoenix, and an obvious favorite of the gallery, was charming Miss Nuria Ortiz of Mexico, who took third in the championship skeet event, with a score of 190x200.

Some eyebrows were raised when it was learned that Senorita Ortiz was in Phoenix unchaperoned, which is quite a departure from custom for a young lady of her station in her home country. But, there need have been no fears on this score. It was obvious that Nuria was chaperoned not only by the entire Mexican delegation, but by all the rest of the Latin American contingent, and by the shooters in general.

It occurs to me that the only time I saw her talking with someone alone was at the cocktail party in her honor at the Westward Ho Hotel. And, from the other side of the ballroom, the subject of this conversation, with one of the world's great young shooters, Bob Schuehle, was obviously skeet angles, and skeet angles only.

Mini-skirted Miss Ortiz reminds one of another great feminine skeet champion, Carola Mandel, in her skill, beauty, and charm. Many of the spectators were commenting on how easy Nuria made breaking the targets look.

She stands perfectly erect, with none of the exaggerated crouches so common to many skeeters, and brings her O&U gun from the low position with blinding speed in a very fluid, easy motion. She placed 15th in the Olympics at Mexico City, and seems destined for a great career in international shooting.

One of Uncle Sam's finest, Tony Rosetti, a Biloxi, Mississippi boy whose family home miraculously escaped much of the hurricane damage, took the gold medal in skeet for the U.S. at Phoenix, with 193x200. The gold, silver, and bronze medal in skeet went right down to the final wire. Rosetti cinched the gold medal when he dropped only one target in his last 25. Aso Taro, from Japan, finished strong with a perfect 25 on the final field for his 191x200 and silver medal, edging Nuria Ortiz by one target.

Uncle Sam captured both the gold and silver in International Trap, when Air Force sergeants Tom Garrigus and Terry Howard ground out scores of 193 and 192, respectively. German Karl Underberg's 189 was good for third place.

NRA officials are hoping that at least twice as many shooters from the United States sharpen their shooting eyes on international targets, enter the preliminary try-outs, and try for medals at Phoenix in October during the World ISU Championships, also at the NRA International Championships at Phoenix in July. And, as Col. Jim Crossman reminded the gallery at the medal presentations last October, competitors planning to shoot in July at Phoenix should bring warm weather clothing.

Canada's great clay target gunner (who was having his problems in Phoenix) Harry Willsie, told me that Canada has some plans for international events during 1970, and I'll be passing these on as they are firmed up.

I would like to personally urge every reader to visit the 1970 World Championships during October at Phoenix. Whether or not you have ever fired at a target, you will enjoy seeing the world's best shooters "do their thing". And, you will, like me, feel a lot better about the future of the world when you see the comradeship displayed by the contestants, whether they be from iron curtain countries or from the free world. If all people in the world could mingle and learn to know each other as do the contestants in the sports shooting games, there would be none of the other kind of shooting events.

• • •

Ed Bronish of Hampton, N. J. is

again International Skeet Champion of New Jersey, marking up 95x100 in the low gun, fast bird game championship at Wayside Gun Club, Wayside, N. J. He was the first and 1966 International Champion of New Jersey when he broke 93x100 birds. Again, in 1967, he repeated with 94x100 to top the State Championship flight. Last year Aldy Williams of Rancocas won a shoot off with Don Beddige of Bloomsbury to win the 1968 Championship with Ed Bronish third by one target.

Ed Bronish said at the close of the shoot "This is my last shoot and last championship. I am going to devote more time to my family and do a little hunting and fishing on the side. Since Grouse Ridge Gun Club, practically in my back yard, closed up last May it has been difficult to practice on good fast international targets. It meant traveling an hour or more either to Rural Sportsman at Trexlerstown, Pa., where Olympic shooter Bob Rodale practices, or come down to the Jersey Shore here at Wayside where the transplanted Grouse Ridge International Shooting Club proposes to install the fast trap field necessary to train international skeet shooters. As Bob Rodale said, and in my experience, unless we shoot at targets traveling a flat path for a full 75 yards we are lost when we meet the international skeet shooters from other countries. The 60 yard regular skeet target is not enough."

Bronish and Beddige teamed up to win the two-man team championship for the third year in a row with 186x200.


Bill Buff of Rumson out ran Bob Last of Glen Rock for Runner Up when both shooters broke 93x100. L. Thill of Burlington posted a 82 for fourth place and last year's Runner Up Beddige placed fifth with 91. Medals for the next five places went to Aldy Williams 90x100, Frank Decolator of North Brunswick 87x100, H. Drozdowski of Mahwah 87x100, Paul Hamby of North Brunswick 85x100 and Ray Stas of Metuchen 85x100.

• • •

Grouse Ridge International Shooting Club has established a new home range at Wayside Gun Club, Wayside, (Ocean Township, Monmouth County) New Jersey after the closing of Grouse Ridge Gun Club (Winchester Franchise), Clinton, N.J. Anyone interested in INTERNATIONAL SKEET may get more details of membership from Paul Hamby, 476 Taylor Place, North Brunswick, N. J. 08902. Telephone 201-297-3700.

• • •

The New Jersey State Skeet Association Annual Meeting was held in Hightstown on October 10, 1969. Paul Collins of Collingswood was re-elected President, Frank X. Decolator of North Brunswick, elected Vice President and Carol Severs of Cranford re-elected Secretary-Treasurer.

Nominated to run for the one vacancy for New Jersey Director of the National Skeet Shooting Association were Ted Genola, Sr., of Elberon, John Dalessio of Penns Grove and Tony Russo of Mickleton. Election will be by mail ballot next spring conducted by National Headquarters. 

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**EARLY REPEATER**

(Continued from page 46)

one was completed. The rifle in my possession is the completed gun. It was rumored he was working on it at the time of his death. This last part hardly seems possible, but if true it means that Weinbrenner was about fifty years behind the times. The pattern for this weapon was allegedly given to him by an Indian from either Port Robinson or Quebec. Supposedly, this Indian manufactured the pilot model and Weinbrenner was to make the finished sales promotion model. This is the first half of the story which has built up around these guns. The second half of the story is when he was testing gun number one, it apparently discharged a number of chambers in succession, and over the years the story changed until Weinbrenner was thought to have been working on a revolutionary machine gun.

Family legend has it that one of the men working on the gun was killed while testing it and that is the reason no further development was made. I have not tried to disprove this legend by loading or firing the gun. It is my opinion that with the hole on top of the drum a good deal of the force from the explosion would escape through it and possibly blind the man firing it.

The finished rifle is of the horizontal drum type. There are two hoppers, or containers, on the top of a stationary metal plate. A drum about four inches in diameter rotates below this plate. The smaller of the two hoppers holds round pellets or pills of a detonating compound. The larger holds black powder. The round lead balls are inserted into a tube in the stock and are under spring pressure. A small housing at the base of the stock contains the spring. The stock is an open frame and was not designed to be covered with wood. A ratchet arrangement connects the trigger and hammer to the drum which rotates the drum counterclockwise.

The loading is accomplished by rotating the drum until a chamber comes under the small hopper. A pellet falls from the hopper into a small indentation in the top of the drum. As the drum continues to rotate a lead ball is forced into the chamber from the tube in the stock. The chamber has a small shoulder so the ball will go only a predetermined distance into the chamber. As the drum continues to rotate the large hopper fills the remaining space in the chamber with

black powder. The chamber cannot be loaded with powder until the ball is in place.

The gun is now ready to fire. The hammer is a solid two prong unit with the larger of the two prongs in the rear. When the hammer is released by the trigger the longer of the two prongs falls into a hole in the drum. This lines up the drum with the barrel and also holds the drum stationary during the firing. The shorter of the two prongs struck the pellet causing a spark that discharges the gun. Once the gun has been fired the trigger is pulled and the cycle is repeated.

The two hoppers and tube for the balls is estimated to hold about thirty rounds. The main weakness of this gun in that there is no positive way to hold the ball in the chamber. The slightest jar would cause the ball to drop and the powder to run out.

It is my belief this gun was developed by Weinbrenner in his early years. A craftsman like him would surely have known about metallic cartridges that were well developed during the end of his career or at least the cap which had been in existence for some time before that.

The barrel is octagonal in shape and I checked it with a micrometer. The sides of the barrel are only about one thousandth of an inch difference in thickness, which is amazing considering the tools at their disposal at that time.

The Mater family discontinued making guns about 1890 because of the death of Michael Mater and John Mater's departure for Michigan. The shop, with all the equipment, was left in the custody of my father. About 1895 the shop caught fire and all the equipment destroyed. My father was a young man at the time and did not have the money or experience to rebuild.

Weinbrenner continued to make guns until about 1920. However, Charles Weinbrenner continued the business after his father's death. The flood of inexpensive guns after World War One forced him to close. The cost of a double barrel shotgun made by Weinbrenner sold for about \$120, while a Winchester or Remington sold for less than fifty dollars.

I am grateful to Mr. S. James Gooding, author of *The Canadian Gunsmiths 1608 - 1900*, who gave me permission to include parts of his book in this article.

# Panel of Experts

## ANNOUNCING!!!

### NEW GUNS "SPEED SERVICE" QUESTION POLICY

Effective immediately, GUNS Magazine readers will have available a new concept in question and answer services. This improved "Speed Service" will get you the answer you need—fast—when you need it, and from any of our enlarged Panel of Experts. Readers will now direct their question to the appropriate member of our panel, and they will receive their answer by return mail. This new service will function properly only if you, the reader, will follow a few simple rules:

1. Each question should be sent directly to the panel member best suited to solve your problem. Mail questions directly to the expert at the address shown below.
2. Each question—only one question per letter, please—must be accompanied by a self-addressed stamped envelope and \$1.00.
3. You will receive the answer to your question directly from the expert. Our panel will select the most interesting questions for publication in this column, but you don't have to wait for the magazine to get your answer.
4. Letters with questions which do not have \$1.00 will be disregarded; those without a self-addressed envelope will be answered in the magazine, and not directly.

We have enlarged the staff of our Panel of Experts to give you the best possible service on your questions. Remember, write directly to the expert at the address below—do not send questions to GUNS Magazine—and be sure to include the \$1.00 and the self addressed envelope.

- Robert Mandel—Antique Arms  
8142 N. Lawndale, Dept. Q, Skokie, Ill. 60076
- Shelley Braverman—Modern Arms; Forensic ballistics  
Dept. Q, Athens, New York 12015
- William Schumaker—Gunsmithing  
208 W. Fifth, Dept. Q, Colville, Washington 99114
- Les Bowman—Hunting  
P.O. Box 410, Dept. Q, Cody, Wyoming 82414
- Maj. George C. Nonte—Handloading  
P.O. Box 3302, Dept. Q, Peoria, Illinois 61614
- George E. Virgines—Fast Draw  
P.O. Box 2014, Northlake, Illinois 60614
- Maj. R. O. Ackerman—Black Powder Shooting  
9627 Arvada Ave. NE, Dept. Q, Albuquerque, New Mexico 87112
- Dick Miller—Trap & Skeet  
Casa Correo Sta., P.O. Box 21276, Dept. Q, Concord, Calif. 95421

### Powder Flask

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

S. O. Keane  
Auckland, New Zealand

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

### Manufacturers Dates

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

E. Franklin  
Carteret, N. J.

I would guess that your best bet would be to pick up books on Smith and Wesson and Colt firearms such as Colt Firearms by Serven and Smith and Wesson Revolvers by Parsons . . . they should give you a very good idea as to Mfg. Dates.—R.M.

(Continued on next page)



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**Don't Bother To Try**

I have read a lot about the 240 Weatherby Magnum and wonder about the possibilities of having it chambered into a semi-automatic. Would it be possible? What gun would be most suitable of the Army issues or other guns from other countries that are advertised extensively?

I have considered using the German made Mauser, model G-43 in 8 mm, since it is fairly close to the same size cartridge casing. Also the F. N. Belgium made rifle in 7mm. Would either of these be suitable for conversion? Which would take the least work other than rebarreling? Where could I get the barrel and necessary parts and what would be the approximate cost?

Brian Hofeld  
 Clatskanie, Oregon

*I seriously doubt that either the German G-43 or Belgian FN autoloaders could be successfully rebarreled to the Weatherby .240 Magnum. (Due to the different bore it would require rebarreling, not just rechambering.) We experimented at length in the past on feeding problems of a G-43 which had been rebarreled to a .270. We could not correct it. The arm was made for the 8mm, and when the smaller .270 neck and bullet came to bear against the feeding approach, the lesser diameter brought the bullet points to a hang-up position at the chamber approach. There seemed to be no safe way of altering it. The .240 WM would probably be even more impossible. In addition, to me the purpose of a caliber like the .240 WM is long range varmint accuracy. I have yet to see an autoloader that can fit into this category accuracy-wise. There is also considerable extra time and expense involved in rebarreling gas-operated autoloaders to calibers other than made by the original factories.—W.S.*

**Ithaca Shotgun Pistol**

I am a collector of shotgun pistols and very much interested in all varieties. While reading your October, 1967 issue, I noted an article on p. 47 about the Ithaca "Auto and Burglar" shotgun pistols. I would like some information on these.

James C. King  
 Norfolk, Virginia

I can not give you very much information on the Ithaca A. & B. Shotgun Pistol as it does not fall into the classification of a collectors antique arm. Also, today it is an illegal weapon and must be registered with the Treasury Department, A & T Division. I am quite sure you will need a class four license to own it. Ithaca may be able to help you on some information.—R.M.

**Melchior Sporting Rifle**

I have a rifle that appears to be very much like a Browning gun which appeared in your August '67 issue.

The lock and hammer appear to be identical to the Browning and carry some engraving along with an oval circling the words "N. Melchior Warranted." My rifle has double set triggers and a brass cap box on the bottom edge of the stock but has no patch box.

It is a .34 caliber with seven groove rifling. I would say it is in good to fine condition.

What is its history and value?

Charles Rhoades  
 Cardin, Oklahoma

Nathaniel Melchior of Baltimore, Md. was a maker of fine sporting arms from 1830 to 1841. The date of its manufacture should fall into the dates above. It sounds like a fine gun and, without seeing it, I would guess it to be worth around \$150.—R.M.

**1873 Winchester Rifle**

I have an 1873 Winchester Rifle in about 75% original condition. It has all matching serial numbers 37140. The bore is in excellent condition and is .44-40 caliber. The barrel is 24" long. It has a trap door butt plate. The stock is of a good wood, but, unfortunately, someone has carved a saddle on both sides of it. Please tell me its value.

J. A. Alsobrook  
 Eastland, Texas

The early model Winchester will bring a good price on today's collectors' market, but it's too bad the stock had to be carved. If in 75% original condition, as stated, I would guess its collectors value to be about \$250. Just how much the carving will hurt its value depends on the type and quality of same.—R.M.

Winchester, M70

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## Bergmann Ammo

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

Brigham City, Utah  
Wes C. Bisbing

Your Bergmann M1910/22 pistol is chambered only for the 9mm Bergmann-Bayard cartridge. The 9mm Parabellum case is much shorter than the B-B, therefore, sets up a condition of grossly excessive headspace which often results in ruptured cases and blown primers. The 9mm Browning Ling is also shorter than the B-B but is semi-rimmed and will sometimes headspace correctly on the rim. However, it is loaded to lower pressure and velocity than the B-B and will often not cycle the Bergmann action. In addition, it often fails to feed correctly from the magazine.

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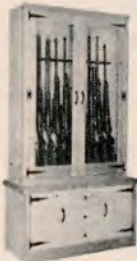
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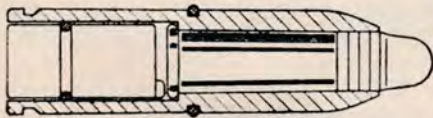
# SHOPPING WITH Guns

WITH an eye to the trend towards the demand for mod colors in anything we wear or use today, Tasco, a major importer of optics, has announced a new line of binoculars in hues of avocado, rust, turquoise, and the traditional black. Appropriately calling its new line "Bold Venture", Tasco reports the more



specific details include a 7x35 glass with a wide 55' field of view at 1,000 yards. Comes with a compact vinyl travel case for \$39.95. For further information write to Tasco Sales, Inc., Dept. G-3, 1075 N. W. 71st Street, Miami, Florida 33138.

OWNERS OF RIFLES chambered for the popular .222 Remington cartridge can now also fire .22 rimfire cartridges in their rifles as well. These highly polished inserts allow the .222 owner to do target practice where space, noise, and backstops are a problem. A host of



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## 10 GAUGE R.I.P.

(Continued from page 35)

a box or two of shells. Ordinarily, the gunner will set off first one barrel and then the other as fast as he can pull trigger and this means he has taken something over 120 ft. lb. or kick—and all in the space of a second or two. I have, after a morning on the big geese along the Guadalquivir in Andalucia, come away with a splitting headache.

The 11 lb. over-under is no plaything when the shooting gets intense.

distributes the punishment over more area. It has occurred to me that the shooter who is really keen on the magnum 10 ought to equip it with a Hydro-Coil stock. To shoot the 10 as I have done in Spain and on the Tierra del Fuego, where you will be firing constantly throughout a long morning, the Hydro-Coil would be very much worthwhile.

The kick not only pushes backward but because the barrels are



Agustin Aranzabal, left, President of the AyA Company who built the 10 gauge magnum for Askins. Dionisio Ruiz de Arcaute, right.

It develops 52 ft. lbs. of recoil. Had Aranzabal added another pound to the big gun and brought it out at an even dozen pounds the kick would have been reduced to 47 ft. lb. The 12 gauge, firing the 3-inch shell and 17/8 oz. shot in an 8 lb. gun turns up 48 ft. lbs., which is practically the same as the 10. I have found with these lighter guns that the motion at the muzzle is higher and faster. This turning motion tends to clout you in the chops as the muzzle climbs.

In producing my AyA, the makers purposely built a large stock with a big buttplate which covers a lot of shoulder area; this is a help for it

above the axis of support—the shoulder—there is a considerable rise of the muzzles. The double is worse than the over-under in this regard. The muzzle climb on the first shot is so considerable that it makes the follow shot necessarily delivered rather slowly—it takes time to pull the muzzles down and align the gun for the second shot.

The 10 gauge AyA was bored full choke in both tubes. The cylindrical bore measures .775"; the choke in the lower barrel went .739" while the upper tube went .732". I tried both Western and Remington loads in the gun (sizes 2 and 4 shot) and found

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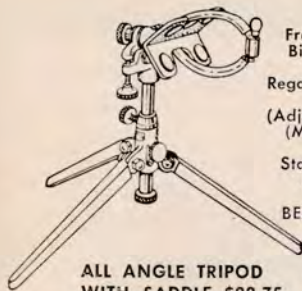
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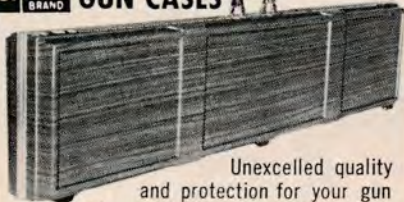
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that the upper barrel was choked too tightly. I had it reamed to .745" and I opened the under barrel to .750". The gun then shot Remington No. 2 shot superbly. It did not handle the Western loading quite as well even after the reaming, so I stuck to the Remington 3 1/2" shell.

At 40 yards, 10 shots from the under barrel patterned an average of 83.4% in a 30" circle. The upper barrel, 86.3%. All patterns invariably show good distribution with no tendency to patchiness, balled shot, or indication that of mutilated pellets (jammed in cone, barrel or choke). Percentages this high show the gun is a real long range duzy. But most any shotgun will kill ducks at 40 yards; how about 50, 60, 70 and even 80 yard kills? A few years ago there were innumerable advertisements for a magnum 10 claiming it would kill wildfowl at 100 yards. What about this?

The 30-inch circle is considerably bigger than the mightiest honker that flies. A goose has a vital area about 6 inches in height, disregarding the head and neck, and 12 inches in length. This is 72 square inches, the 30-inch circle contains 707 square inches, a lot of difference! In checking out the big 10 I elected to shoot at the 6x12 rectangle, this being more realistic. It is usually conceded that a goose, to be surely dropped, needs to be hit with not less than five No. 2 pellets and these ought to deliver not less than 3 ft. lbs. of energy per pellet; a total of 15 foot pounds in all. Criteria for tests on the 6x12 outline would have to see at least 5 shots strike in the rectangle to be considered lethal.

At 50 yards, as you might expect, the score looked good. The big 10 dumped 8.7 pellets for 10 shots into the 6x12 outline. The No. 2 shot at this distance has an energy of 5.5 ft. lb. the total blow then showed an average per shot of 47.85 ft. lbs.—three times as much power as we calculate we need to kill the game. And as for our five hits per bird, this ran well over the needed number of pellets.

At 60 yards there was considerable difference. To add 10 yards at these extreme distances means a lot. Ten patterns on the 6x12 rectangle showed an average number of hits of 6.8 pellets. This was enough on the count of hits, but what about the energy? The No. 2 at 60 yards has a blow of 4.1 ft. lb. Average then was 27.8 ft. lbs. A comfortable margin over the needed 15 foot pounds energy.

At 70 yards—did you ever back off  
(Continued on page 66)



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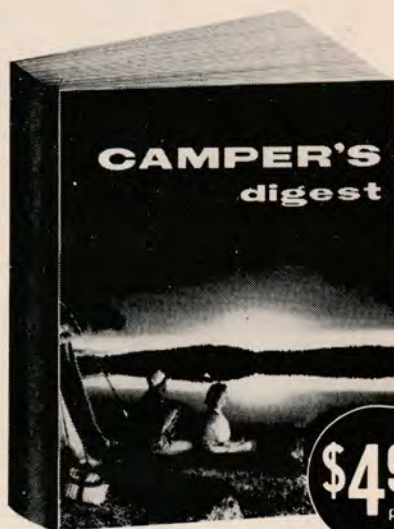
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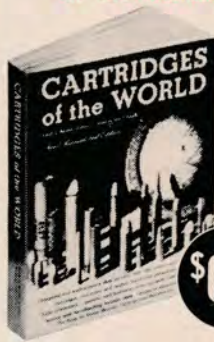
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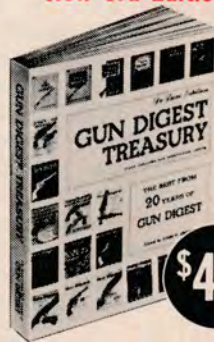
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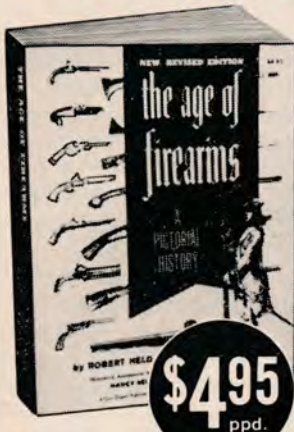
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## PHOTO FILE YOUR GUNS

(Continued from page 22)

also make some of his photographs outdoors if he selects an area in complete shade. Generally speaking, bright sunlight is just too contrasty for good close-ups of guns although there are occasional exceptions. It depends upon the finish of the gun's surface and just what details you want to show in your photograph.

In making the setup for your gun photograph, it is important to select just the right viewpoint for your camera. You must be careful to avoid any reflections from the gun's surface that might obscure details that you want to show. In this connection, it will help if you take a large white card (about 16"x20") and hold it above and behind the subject while you watch the reflections of the white card in the camera. You will usually find one spot for the white card that benefits the area you are photographing.

Another photographic point to consider is the necessity of increasing your normal exposure as you move in close to the subject with the camera. Because diaphragm stops are calculated for the lens focused at infinity, their values are not true for close-up work. For black & white work, this is not too important except for extreme close-ups that occur often in fine detail photographs of guns. As a practical rule, any time your lens is closer to the subject than eight times it's own focal length, you should allow an exposure increase to compensate for the increased bellows extension.

As an example, suppose you are using a 2 1/4"x2 1/4" camera and your lens has a focal length of 80mm, normal for this popular sized camera. Anytime that the lens is closer to the subject than 640mm or 25.6" you should begin to increase your exposure. Just how much to increase it will depend on how much closer than 25" you are to the subject. Most any camera store can supply you with a pocket data card giving the proper exposure factors for various combinations of lens focal lengths and bellows extensions. As a starting point, you might remember that when you photograph "one to one", that is, when the image on the film is the same size as the subject, your exposure must be increased *four times*, or two full diaphragm stops. If the film image size is half size of the subject, you will need to increase the exposure


by one full diaphragm stop or twice your normal exposure.

This matter of correct exposure is almost a personal thing since so many variables are involved and each photographer has his own idea of the proper printing density for his negatives. The only certain way for you to get the kind of negatives that you want is to make a series of test exposures. Once you have made your test exposures and kept careful notes on them, you can get consistent results afterward. Just be certain to use the same film and developer (or photo finisher) and keep your light source constant.

Ingenuity will be required in determining just how to set up each firearm for your photograph. After making one or two overall shots, you will probably want to prop it up in some manner in order to show a particular detail such as the close fitting between metal and wood, proof marks or perhaps an intricate detail of the gun's construction. Small blocks of wood, hexagon nuts or bits of modeling clay can often be used to advantage to prop the piece into the desired position. Just be certain your prop doesn't show from the camera angle.

Generally it is better to prop the gun up and away from the background so as to leave a space between it and the background. This will help to eliminate shadows from around the edge of the gun. This is particularly true when you are using a white card for a background. The farther the gun is separated from the white card, the easier will be your task of lighting it without conflicting shadows.

Of course there are better and more involved methods of obtaining a light toned or white background through the use of light boxes, illuminated screens or other tricky photographic techniques, but these methods become quite involved and properly belong in the professional photographer's studio.

Although a white card is usually suitable as background material, sometimes it is fun to work with an exotic background. An animal skin, a piece of nicely weatherbeaten driftwood or shiny silk or satin cloth are fun to work with when you are photographing your favorite shooting iron. As the wolf said when he slipped his arm around the new secretary, "Sometimes you can work and play at the same time!" 

## .17 CALIBER BASICS

(Continued from page 29)

as well as the two preceding cartridges, it probably shoots 25 grain bullets more accurately and consistently from rifle to rifle than any other .17 caliber case design.

The .17/222 has many good features. Loading data and performance are on a par with the .17 Javelina, although performance in the author's rifle is not quite as consistent. The brass is easily formed simply by necking down .222 Remington cases. Case capacity is about two grains more than the .17 Javelina, but the added capacity does not improve performance much over the smaller case. Optimum charges of powder leave a significant air space in the .17/222 case and this more than likely contributes to ballistic inconsistencies. Also, the .17/222 is somewhat over optimum capacity for the .17 caliber bore. The author's .17/222 does handle 30 grain bullets quite well, something the Javelina will not do as effectively. This fact is due in part to greater case capacity. The 10"-twist Ackley barrel also stabilizes the long bullets better compared to the 11"-twist that has been standard for the Javelina chambering.

The next family member shown in the photo is the .17/223, made from .223 Remington (or 5.56mm GI) brass. The case is as easy to form as the .17/222, but greater powder capacity results in performance changes. More powder means more velocity but, also, less loading flexibility and more residues when slower burning powders are used. Fouling is the bane of .17 caliber performance. Careful loading of this cartridge with proper powders will result in not much of an increase in velocity for overall desirable performance compared to the .17/222. Velocities of 400 fps with 25 grain bullets can be reached comfortably with the .17/223, which gives this wildcat a lot of popular appeal.

One of the most popular .17's is the one made on .222 Remington Magnum brass. The two examples shown in the photo are nearly identical, one having the regular factory shoulder, the other with an improved A&M shoulder of Javelina design. A sharper shoulder helps ignite slower burning powders more efficiently in this overbore capacity case. It is easy to reach 4000 fps using 25 grain bullets with the .17/222 Mag., although loading is narrow ranged compared to the more efficient cases mentioned earlier.

The .17/223 has a couple of grains less capacity than the .222 Magnum version; it should be a bit more efficient. Consistent, high-grade accuracy at ultra-high velocities in the .17's is a sometimes thing for most rifles. Factors involved in this problem will be discussed below. With the present level of development of this caliber, however, many shooters are disappointed with their .17 rifles when loaded to 4000+fps velocities.

The "Big Daddy" of the .17's is the .17/22-250. This is a .22/250 Remington case necked down. Ted Smith of SAS Dies has been experimenting with one of these for the past few months. Cases of this size grossly exceed bore capacity and require much more powder to obtain optimum velocities than cases based on the .222 Remington design. One virtue of the .17/22-250 is that it can be chambered in an action made for .30-06 head diameters with no bolt faced alterations. Efficiency is another thing, however.

Once the diminutive .17 bullets approach 4000 fps velocity, accuracy tends to become erratic. Dynamics at this high velocity are often too much for low-mass lead core bullets. The fault is not always in the bullet structure itself, however. Variables in loading technique, bullet manufacture, and rifling tend to be magnified in this diminutive caliber.

The .17's have their foibles. Imperfections in loading technique are more critical on bullet performance when velocities approach 4000 fps. Tight necks, canted bullet seating, skewed neck reaming can all contribute to accuracy ills.

The manufacture of .17 caliber bullets has a great bearing on successful performance. Uniformity of jacket thickness, regularity of core distribution, biasing of jacket walls during forming operations all play a more significant role in .17 performance be-

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cause of the small scale of bullets. Since the bullet usually is the most important single factor in consistent accuracy, quality becomes increasingly significant in .17 caliber.

Rifling, too, must be cut "on-the-money." Too tight or too loose bore and/or groove dimensions can cause shot-to-shot variations that will open up group size. Tight or rough cut bores tend to damage jackets with attendant bullet disintegration and instability when loaded to 4000 fps velocities. Barrels of high quality are needed for best results. Much development work is being done to engineer bullet and barrel components to more effectively take advantage of the inherent high velocities of .17 caliber. For instance, P. O. Ackley has cut 3 groove .17 barrels designed

The slower burning rifle powders (slower than 3031 or equivalent on a relative burning scale) will more than likely leave residues that clog delicate rifling tolerances. Fouling is the nemesis of .17 caliber bullets that need critically close and consistent tolerances to give the maximum performance of which they are capable.

Caked residues, after as few as a dozen shots in some overbore .17's are all that is needed to cause jacket damage and erratic bullet behavior. Most of the overbore cartridges (larger than the .17/222) may need to have barrels brushed thoroughly after 12 to 15 shots in order to maintain top accuracy when slow burning powders are used. However, this practice is not usually necessary with powders of 3031 or faster burning characteris-



The .17/222 with it's 25 grain Hornady bullet with the remains of two shaving cream cans. Small bullets have explosive effect.

to reduce frictional factors that tend to deform bullet structure and increase metal fouling in the bore.

Velocities in the 4000 fps range tend to increase metal fouling from bullet jackets, which also affects accuracy adversely. Various gilding metal alloys are being experimented with to make bullet jackets tougher and provide anti-galling characteristics. Regular gilding metal alloys tend to gall and leave increasing amounts of metal fouling in the bore as velocities reach or exceed 4000 fps. Fouled .17 caliber barrels will shoot erratically. Judicious use of J-B Bore Compound is indicated with ultra-hot loads to minimize the effects of metal fouling build-up.

Powders affect .17 performance in a way not always considered by shooters. Slow burning powders, necessary to obtain good performance in overbore cartridges, can be pure poison on accuracy in these narrow tubes.

tics. But, since the overbore cases do not function most efficiently with these powders, it leaves only one conclusion. The most efficient .17 caliber case designs are those of .17/222 capacity (approximately 22 grains of powder) and below, utilizing relatively fast burning rifle powders.

Readers ask for preferences in this caliber or that, and usually writers are reluctant to make definite recommendations where actual differences may be only a matter of personal choice. However, in the interest of fostering increased popularity for .17 caliber shooting, certain recommendations are in order based on my own experience and observations.

1. For the guy who wants a screamer and doesn't really care about loading flexibility, consistent accuracy, or fouling problems, the .17/222 Magnum is the answer.
2. For the novice who wants a cartridge that will give very good



performance without case forming and loading problems, the .17/222 is the ticket.

3. The man who is willing to compromise with some of the virtues of both (1) and (2) above will be content with the .17/223. GI brass will be available for this case.

For those shooters who don't mind more complex case forming problems, and who want the optimum in overall .17 caliber performance, three cartridge types are recommended by the author:

1. The .17 Javelina is the best balanced cartridge for use with 25 grain bullets, giving optimum consistent performance characteristics for .17 caliber shooting under the present state-of-the art.

2. The O'Brien Mach IV is suitable for efficient loading with bullet weights from 18 to 25 grains. Velocities are slightly below those produced in the Javelina.

3. The .17 A&M (or .17 Ackley Bee) cartridge is highly efficient and flexible, being well-suited for use with single shot actions. Performances are phenomenal using optimum loads of 4227 and 2400 powders, with velocities nearly the same as those for the Javelina. This is one of the easiest .17's to reload.

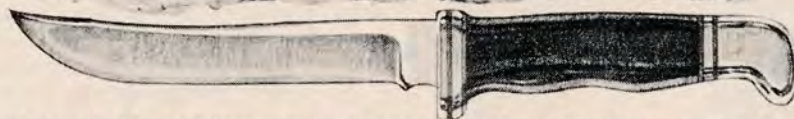
The need for internal ballistic efficiency is paramount when considering high-grade performance in the .17s. Velocities with 25 grain bullets in the area of 3600 to 3900 fps are about optimum. Performances of the Javelina, .17 A&M, and Mach IV designs epitomize this fact. No powder or metal fouling problems are attendant with these cartridges or those of smaller capacity when properly loaded. The day may come when advanced design, metallurgy, and propellant chemistry can give us ultrahigh velocities of up to 5000 fps from .17 caliber bores. But until then, friends, what good does it do to be 1/50th of a second faster to the target if the bullet doesn't hit the mark consistently?

For more information on .17 caliber rifles, loading components, and accessories, contact: A&M Rifle Co., Box 1713, Prescott, Arizona (86301); P. O. Ackley, Box 17347, Salt Lake City, Utah (34117); Lee's Precision Bullets, Box 65786, Los Angeles, California (90065); Hernady Mfg. Co., Box 1848, Grand Island, Nebraska (68801); RCBS, Inc., Box 729, Oroville, Calif. (95965); Forster-Appelt Mfg. Co., 82 E. Lanark Avenue, Lanark, Illinois (61046); SAS Dies, Box 250, North Bend, Oregon (97459).

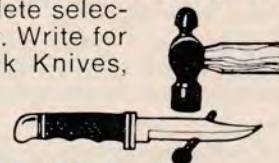


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(Continued from page 58)

and look at a measured seventy yards? I fired the usual 10 loads. The hits averaged out at 4.7 per target, the pellet energy is 3.25 ft. lbs. The score was 15.27 ft. lbs. barely enough to meet our kill-formula. Hits likewise were almost enough; we wanted five but got four-and-a-fraction. The load would kill, but there would be a constant problem with cripples.

At 80 yards, the No. 2 pellet has an energy of only 2.25 ft. lbs. It would require 6.7 hits to attain our necessary 15 pounds of energy. I could not get but 4.7 hits on the 6x12 cut-out at 70 yards so why burn up ammo at the longer range at what would most assuredly been a hopeless task? Geese are killed at 80 yards, but more often with lucky hits in head and neck. It is poor sportsmanship to try for such long shots. The game more often is not brought down but is wounded and may go off to die miserably.

The idea that the super 10 magnum will kill at 100 yards is mostly in the vivid imagination of some gun writer. This leaves the big 10 as essentially a 60-70 yard killer. I am frank to say that most of my geese and ducks have been shot at ranges near the 50-yd. mark. It takes some mighty clever calculations to decide how far and how fast an old honker is winging along when he gets beyond 60 yards. I prefer to let the far out chances pass and concentrate on the birds in closer range.

The question arises as to the real worth of the magnum 10 over the magnum 12. The 3-inch 12 gauge holds 1 7/8 ounces of shot driven by 4 1/2 drams equiv. of powder, a charge that is only fractionally beneath the 5 drams and 2 ounces of the big 10. Is the 10 any better than the big 12 or are the differences just paper ones? Tests of the magnum 12 on the 6x12 cutout of the vital portions of our

goose show that at 40 yards the bird would have been struck by 9.7 pellets, on the average (10 patterns fired) and the per shot blow would have been 66.9 ft. lbs. This looks pretty heavy but then 40 yards is sort of midrange for these Big Bertha rounds!

At 50 yards, the hits averaged 7.8 and the energy blow, per load, was 42.9—almost three times what we calculate we need to surely down the big bird. At 60 yards the hits were down to 5.6 per shot and energy was 23 ft. lbs.—still plenty of oomph on both the score of needed numbers of pellets and energy to kill surely. At 65 yards the number of hits were down to 4.7 and energy stood at 16.6 ft. lbs. This still meets our criteria of 5 pellets and 15 ft. lbs. to surely kill.

At 70 yards the magnum 12 showed 3.9 hits per shot and energy is 3.25 ft. lbs., for an average per shot blow of 12.6 ft. pounds. Neither were there enough shot in the 6x12 outline nor sufficient energy to be sure of grounding the Canada. Like the big 10, the 12 magnum will kill geese at this range and ducks, too, but the execution will have a considerable element of luck attached. The gunner will have to get his due share of hits in head and neck to down the game. The 12 gauge used for this shooting is a handsome Browning over-under with 30-inch barrels, bored full choke in both tubes. It regularly shoots 80% patterns at 40 yards with 1 7/8-oz. No. 2 loads.

The fate of the magnum 10 is a gloomy one. It is strictly a wildfowl gun, and as such its use is restricted. With bag limits down to two or three geese per day the advantage of the big tube over the 12 is decidedly slim. The chances of the 10 slipping into oblivion are obvious, and when it goes it will, I am afraid, scarcely cast a ripple.

## MERKEL SHOTGUN

(Continued from page 25)

practically impossible to obtain is that they are made in Suhl, which is in East Germany. Recently, however, trade restrictions have been eased, and new Merkels are available.

Until you've examined a Merkel it is almost impossible to describe the fantastically tight fitting of metal to metal, of metal to wood, and of wood to wood. Yep, the forearm is made in two pieces, but you'd never guess from looking. Folks today talk about the paper test—place a sheet of paper in

the breech of a double, and if it refuses to close, why it's tightly fitted. Frankly, I doubt if a Merkel would close if smoke were in the locks! This may be a slight exaggeration, but very slight. The gun must have a lot on the ball—some of the finest live pigeon shots in the world put their faith in Merkels.

Now, let's take a brief look at my Merkel. It's a garden variety 200E, double triggers, 27 1/2" barrels choked modified and full, and with a solid

rib. The stock has 1/4" of castoff, of which I heartily approve. Otherwise, the stock dimensions are normal by American standards—14"x1 1/2"x2 1/2".

How much do I think of my Merkel? Well, let me put it this way: If I had to reduce my shotgun collection to a single smoothbore, the Merkel would stay. I've turned down more than the gun's worth for the simple reason that in addition to its style and class, I can shoot it better than any other smoothbore that I have ever owned. Oh, I'm no Doc Carver, but I do recall the day that I dumped seven bobwhite quail with eight shots . . . then there were those two days at Stuttgart, Arkansas, when I got my daily limit with as many shots—eight shots, eight ducks. Sure, I've missed with the Merkel, but not nearly as frequently as I do with other scatterguns!

The Merkel first entered my life in 1959 when I visited a gun shop and saw it sitting there on the shelf. It was love at first sight. I gave a slick 20 gauge side-by-side and a passel of cash for that little 16 gauge German over-under. I've never regretted it. Matter-of-fact, I later found that I had beaten one of my best friends to that gun by less than an hour. He had heard about it via the grapevine, and was headed for the gunshop at the very time I walked out with my prize. He took it well—better than I would have done under similar circumstances.

Many shooters complain that because of the Merkel's double under bolts, the action is deeper than that of other over-unders, notably the Remington 32 and a few British models. Well, it is deeper, but not enough so to create any problems, as its greater girth must be measured in fractions of an inch.

With factory loads of number 5 shot, my Merkel will regularly print patterns of approximately 75% from its full-choked tube, and the lower, modified barrel will run around 64%. This is top performance for all-around waterfowl shooting. For upland shooting I switch to brush loads of number 8 shot, and I get patterns running around 35-40% from either barrel. By handloading, I can up the pattern count to better than 80% from the upper tube, and to over 70% from the modified.

Some readers will probably question my selecting a 16 gauge for my all-around shotgun, but for the life of me I can't see why. I find the 6 1/2 pound heft of my Merkel just right for upland strolls and heavy enough to help absorb the pounding of the duck loads it handles with such aplomb. After all, the modern 16 digests

1 1/4 ounces of shot, which was considered the maximum 12 gauge load when the 12 bore chased the 10 gauge off the marshes. No one has ever heaved any bricks at the 16 as an upland gun, so there seems to be scant reason for believing it won't cut the mustard as an all-around proposition.

I have had the pleasure of examining more than a few top-quality British doubles. They are lovely, if a man may be permitted to call a gun lovely. But, to my eyes, they are not one whit better finished or assembled than a Merkel. After all, when you get to the big leagues, there isn't just a whole lot of difference between the stars. If manufacturing costs in Germany were on a par with those in Great Britain, you'd probably find the Merkel costing just as much as a Holland and Holland. As a matter of fact, the last new price which I saw quoted for a 303E delivered in this country was \$1540, and I understand prices have gone up. So come to think of it, there's not so much difference at that.

Is it worth it? Yes.

How do you get a used Merkel? Well, you can prowl through a lot of gun stores, and ask a lot of questions, and read a lot of classified advertising. When you finally come across one, you'll find a gun with unquestioned reputation, superlative workmanship—even on today's models—good handling qualities, and internal works that should last a lifetime—mine has digested hundreds upon hundreds of rounds and has never given me a hitch of trouble. Should it ever need work, places with qualified gunsmiths, such as Abercrombie and Fitch, are very familiar with Merkmels, although precious few that pass through their hands ever need work. So you get quality, beauty, precision, and yes, even snob appeal, at a price that seems most reasonable to me. If you should become the owner of a Merkel and find yourself disappointed, I for one will be very much surprised.

Searching for a used Merkel can be tiring, although you may be lucky enough to find one just made for you. However, there is an easier way to get a Merkel—buy a new one. If you'll send a buck to J. L. Quick & Son. Co., 1301 Laurence St., Birmingham, Ala. 35210, he'll send you a brochure, ordering details, and prices. Some of the standard models are in stock for immediate delivery, or he can have a custom built Merkel ordered to your specs.

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## KENTUCKY RIFLE

(Continued from page 33)



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into grip to the rear and the forearm to the front. Those two guidelines you drew on the underside come in handy here for the bottom side of the lock molding slopes directly to this line. The top side of the molding curves around the top to the tang. Trace a template of the molding, transfer it to the left side and duplicate the shaping.

With the completion of the lock moldings you will probably need to take a few swipes with the rasp to blend all the stock lines together and as you do so this mess of wood and metal will begin to materialize into a long graceful Kentucky rifle. At this point you will no doubt lay down your tools, lift the rifle to your shoulder and squint down the slender barrel. . . If this is your first effort at building the long rifle, now is when

dressed up a bit. The guard, when installed, is partially inlaid with a molded portion rising above the wood. Prepare the guard by shaping up the exposed portions with a fine cut file and polishing with fine (400 grit) finishing paper and superfine steel wool (fig. 10). The insides of the various curves can be efficiently polished by wrapping the finishing paper around a dowel or round file.

The trigger guard is held in place by inlaid the "ears," both front (fig. 11) and rear (fig. 12), and inserting cross pins through the stock. This method has been used for hundreds of years and is a tradition well worth continuing. The inlaid for the ears is rather deep and narrow but can be quickly accomplished by drilling a row of  $\frac{1}{8}$ " holes where the ears are to be inserted then routing out



Fig. 14—Sideplate installation

you join the elite group who have performed the same joyous ritual for hundreds of years.

The trigger assembly which comes in the Dixie Rifle Kit features a trigger with a broad flat face and a traditional "pig tail" curl on the tip. Locate the proper position for the trigger plate by positioning it so that the trigger is pulled. Center the trigger plate between those two handy lines on the underside of the stock. The trigger assembly can be held in place by the traditional method of running a long machine screw down through the breech tang and into the trigger plate. An unthreaded screw is provided for this purpose but one must drill a perfectly centered line from the tang to the trigger plate, thread the screw shank then tap the hole in the plate. I fudged a bit by using wood screws to hold both the tang and the plate.

The trigger guard comes next but, like the buttplate, it must first be

the slots by wobbling the drill back and forth. After the fore and aft tangs of the guard are inlaid run a  $\frac{1}{16}$ " drill through the stock and ears, insert two-penny finishing nails and the job is complete. Don't trim the nails flush at this point however as you will need to remove the guard soon.

Next chore is inlaid the ramrod pipes. Locate the upper pipe about three inches from the muzzle and place the center pipe (fig. 13) halfway between the upper and lower pipes. Inlaid the pipes presents no special problem though the tang on the lower pipe may require a little bending to match the curve of the stock. They are secured in place by the traditional pin method.

By now you're about ready to install the side plate (fig. 14) but it suddenly occurs that it can't be positioned properly until the lock screw hole is drilled. Trying to figure out where the lock screw will go may cause a few

anxious moments. To be sure there isn't much room but there is enough—just barely. Locate the center of the lock screw about 1/4" forward of the upper bridle screw (that is the "do-hickey" that holds the tumbler in place) and about 1/4" from the top of the lock plate. This should clear the rear of the barrel by 1/8" or so. Now you'll discover that the lock screw will pass through the wrench web below the tang. This problem can be cleared up by simply cutting a notch in the web.

Now you can drill the lock screw hole and, with the lock in place, continue the hole through the stock. Now you know exactly where to put the side plate! In addition to making a firm backing for the lock screw, the side plate decorates the otherwise plain off-side of the lock molding. The side plate furnished with the Dixie Kit is of a beautiful old original design but, like the guard and buttplate, is of cast brass and requires a bit of dressing up for best effect. Traditionally the side plate is installed half in and half out of the wood with the exposed edges beveled (fig. 14). The Dixie side plate is amply thick for this application but it takes a bit of work with file to get the bevel through. After inletting secure the plate with three or four 1/4" brass wood screws. Do not countersink the heads full depth but just enough so that the slotted portion of the screw head will protrude above the plate

the extra expense and time required to install. (Be sure to specify the barrel size when you order.)

To fit the drum to the barrel remove the breech plug (hold the barrel in a vice and use an adjustable wrench on the plug) then drill and tap for the 5/16" x 24 drum shank. You spotted the location for the drum when you were working on positioning the lock - remember? File a bevel on the right side of the breech plug face so there will be plenty of space for proper ignition. With the drum in place you'll now discover that the lock plate will have to be notched before the barrel will return to position. Small problem - just mark the position on the lock plate and use a rat-tail file to make a semicircular cut to receive the drum. Check for fit and proper location as you proceed so the fit will be close and the position correct.

When the barrel comes to proper position check to see how the hammer lines up on the nipple. Adjust to a proper striking angle by tilting the angle of the nipple as needed. Also you may find it necessary to screw the drum in or out until the nipple is properly aligned with the hammer.

The next job will require a lot of cutting and filing but it can't be put off any longer. Five dovetail slots—two for the sights and three for the barrel loops must be cut. If you have access to a milling machine great, but



The proof is in the shooting!

surface. File the heads flush and you have a neat installation with all but invisible screws.

This pretty well wraps up the stock work except for final sanding and finishing. A nice touch is a brass muzzle cap. Though a muzzle cap comes with the more expensive Dixie kits it is not part of the \$79.90 New Dixie Kit which I built. They can be purchased separately from Dixie Gun Works for \$2.00 and are well worth

actually it won't take too long to get the job done by hand. A good bit of metal can be removed pretty quickly by sawing a close row of slots with a hack saw. The remaining metal can be removed with a file. A simple triangular file is all that's needed for undercutting the edges of the dovetail slots.

The front barrel loop should be about five inches from the muzzle and the rear loop about nine inches

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from the breech. Position the center loop halfway between the other two loops. Before you start cutting please make sure that you are on the proper flat of the barrel. More often than occasionally an over eager craftsman will discover that he has located the loops or sights on the side of the barrel. No insult to your intelligence intended.

With the loops attached you go through the through-pin drilling routine again, polish and install the sights and suddenly your rifle is all but finished!

At this point remove the barrel, lock and trigger guard and give the barrel and lock a good scrubbing with steel wool, apply a coating of Dixie Browning Solution (\$1.00 per bottle) and set aside for the rust coating to form. The amount of time spent on final sanding pays dividends and since so much good work has been invested in the rifle it's not very smart to fudge on the sanding. Using progressively finer grit paper work until the stock is as slick as a buckeye then give it a final rubdown with superfine steel wool.

For a dark, rich color which brings out the character of the wood use Dixie's stain for Antique Guns or a similar stain. Some builders prefer to leave the wood in its natural blonde color and the effect is indeed striking. My own choice of finish was Casey's polyurethane spray-on stock finish. This easy to apply finish gives a tough, durable finish which has remained bright and beautiful despite a lot of hard usage.

So now the long rifle is finished, oil the lock, reassemble the parts, insert the pins and clip the pins flush. You are now the proud owner of a beautiful, highly shootable custom hand made Kentucky rifle. Hang it on the wall and it will draw lots of admiring comments or take it to the range and draw a crowd. It's the only one like it in the world.



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## VALUE OF GUN CARE

(Continued from page 47)

greenish copper corrosion and red metal rust!

Frequently, the outdoorsman who thinks that he and his rifle are both tough, boasts of just "shooting out the rust." This is really adding insult to injury. The combined copper and steel oxidization has formed an abrasive surface dust, which the bullet picks up. Therefore its passage through the barrel is in reality a high speed grinding stroke which rapidly wears the sharp corners off the rifling (lands).

The portion of the barrel just forward of the chamber is always subjected to the most severe wear. It is here that the first intensely hot flame of the burning powder eventually erodes (burns out), rounds off the sharp edges of the rifling, and gives the first inch or two of the barrel a dark peppery appearance when viewed from the receiver end. The bullet's initial contact with the rifling here is fast and severe, as the rifling marks are swaged into its shank to grip and start turning it.

When abrasive rust and corrosion coat the inner barrel surface, the wearing is compounded many times and barrel life is drastically shortened. I have seen total cleaning neglect destroy new barrels within a two year period, and sadly enough they were subjected to only limited actual shooting.

It takes only a few minutes to properly clean your rifles and prevent all this costly destruction! Use a copper bristle brush on your cleaning rod, dip it into the powder solvent and push it *all the way through* the barrel before reversing. Trying to change stroke direction within the barrel may lock the brush and create a difficult removal problem. Five or six double strokes with the solvent-soaked brush will loosen powder residue. Then use a patch and wipe the bore dry. Never leave any trace of oil inside the barrel if it is to be fired. It may be slightly oiled when preparing for storage.

There are those who cringe at the thought of using copper bristle brushes. Don't worry about it. They are soft compared to barrel steel, and almost no amount of brushing can equal the wear of firing a single bullet through a barrel. The brush bristles reach into the groove and land corners to loosen dirt, and the scrubbing keeps excessive copper smear from building up. Ordinarily this isn't a

problem, but some barrels have a somewhat rough inside finish. These must be watched and kept clean. I have seen copper build-up in a neglected 2-groove Enfield barrel, reach the obstruction stage and cause it to rupture upon firing.










The same thing can happen from build-ups of lead in rough .22 rimfire barrels and high velocity pistols such as .357's, .41 and .44 magnums. Regular inspection and cleaning can forestall a lot of costly damage. True enough, .22 long rifle rim fire type ammunition has a lubricated lead bullet and when used in quality barrels, neither leading or corrosion is apt to occur. Even when cleaning is neglected it is often possible to have trouble-free performance for many years. However, don't use this as an excuse for not cleaning .22 rim fire weapons. When you take a gun to a dealer for a trade-in appraisal, you'll find it still pays to keep equipment clean.

As a gunsmith-dealer, I have cleaned hundreds of barrels "free," just to make accurate inspection possible. This gets to be "old stuff" after awhile. Place yourself in the busy dealer's boots about two weeks before hunting season, and you'll understand the reason for getting a cool reception when you haul in a neglected dirty firearm for a trade-in.

Novices unknowingly do many things that detract from the selling value of guns. You may be proud enough of that first bull elk to drive a tack-based brass elk head button into your buttstock, but should you want to sell your rifle later, the next owner couldn't care less. Amateurish carving, plastic inlays, or other art work such as animal carving is not a sales leader. Notching a gunstock for every kill made, be it chipmunk or grizzly bear, is sure to bring your trade-in appraisal down to "barreled action, minus wood" status, as the next owner will have his own ideas about such things.

Metal alterations should never be attempted unless you are positive you "know" what you are doing. For instance, the average non-gunsmith gun worker is almost sure to grind 1917 Enfield ears off in a manner which will not conform with any make of scope mount bases. When a gunsmith gets these messes to overhaul for scope sights, his mood is anything but good,—and any "knowing" or gunsmith-dealer is sure to be fa-

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miliar with the problem when a rifle so altered is presented for trade-in. Hence its value is lowered. Re-contouring and shimming, all takes time, and time is money in any workshop. Basically, the proper way to grind off 1917 Enfield ears is to bring them down to the same height and contour as the front receiver ring. A Buehler 1-pc. short base will then fit—and if another mount is used, the necessary alterations, if any, are still possible. British Lee Enfield caliber .303 British rifles are often butchered up to almost zero value as far as scope installations are concerned. This, unfortunately, has been done by some fairly big and well-known concerns! But let's face facts and be realistic. When that receiver bridge ring is ground away no scope mount short of a mickey-mouse side mount, can be used. The rear screw of the Weaver top mount must be located in its center, and the S&K Insta-Mount for No. 4 and No. 5 Lee Enfields clamps against this bridge as well as anchoring between the two rear peep sight screws. When the peep sight ears are ground away, then the possibility of ever using the Insta-Mount are forever gone.

Incidentally the S&K Insta-Mount, made by the S&K Mfg. Co., Box 247, Pittsfield, Penna.,—16340, is easily installed without any drilling or tapping whatsoever, and is the strongest, most reliable mount I have ever tested for the No. 4 and 5 British Lee Enfields. The bases are available for use with Weaver top detachable mount rings and Weaver tip-off rings, as well as those made by the S&K Co. It is therefore readily apparent that doing away with any of the original features of the rifles can be detrimental. The S&K Co. also makes mount bases for the No. 1, MKIII Lee Enfield rifles, the Mauser 98's and the 1917 Enfields, all of which are installed without drilling and tapping. So, unless the alteration is conventionally made for a good scope mount, it is easily possible to make changes that will devalue your rifle.

The reliable old American 1903 and 1903-A3 Springfield .30-06 rifles are

often victims of beginners who grind the receiver bridges so paper thin that no scope mounts made to fit over them, can be properly anchored. The '03 has a rounded projectionless bridge which almost defies further streamlining and is just thick enough to provide ample threading depth for the rear scope mount base screw. These bridges have quite often been ground paper-thin by some supposedly reliable companies. This makes it necessary to spend a lot of time fitting and silver-soldering a shim onto these bridges to restore original thickness.

The 1903-A3 Springfield receiver bridges have a male dovetail to which the military receiver sight was pressed. The rear scope mount base screw of the Buehler base goes through the middle of this. The portion of the receiver bridge under this dovetail is too thin for proper threading and holding. Therefore anyone removing this dovetail is reducing the gun value. The fact that some of these have been fitted with open rear sights is no excuse, as the receiver bridge does not actually interfere with the use of open sights.

A large percentage of today's hunters who might in the beginning purchase a low or medium priced rifle with plain open sights, will at some time in the future decide to install a telescope sight. If their rifle has been altered in a manner which makes it more costly or at times even impossible to install this scope, then the gun's sale value has been drastically reduced.

If you want to keep your firearms at maximum value, care for and clean them carefully, and don't allow yourself to be carried away with needless and ill-advised conversions. When in doubt consult a reliable gunsmith. In fact talk to several of them. They are only human and may at times offer conflicting opinions. After contacting several gun mechanics and mixing their suggestions with your own reading and studying, you should be able to arrive at a sensible solution,—and if you've cared for that rifle, it will be worth a lot more when you trade it in.

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## GLASS BEDDING

(Continued from page 49)

area at the fore-end tip, all of these conditions can be allowed for by bedding the entire length of the barrel and action right from the start. I've found this to be the best procedure because most rifles do shoot best with fully bedded barrels. But now I'm getting ahead of myself. Let's first take a look at the actual bedding job.

Several kit manufacturers emphasize the fact that you needn't exercise a great deal of care when inletting because their product will fill all the unsightly gaps between metal and wood. Actually, they're right, but your finished rifle will look as if you used the fiberglass for that purpose rather than for its contribution to accuracy.

Since we're primarily interested here with the glass bedding operation rather than with actual inletting procedures, let it suffice to say that if you have the skill and patience to

does not. No matter how close you come to matching the color of the stock, any exposed fiberglass will easily be visible along the barrel and receiver even upon casual examination.

While you're deepening the receiver area, cut back the recoil shoulder about  $\frac{1}{4}$ " so that a thick layer of glass will form a new recoil lug surface insuring perfect contact. I usually roughen up this area by cutting unslightly gouges in the front of the recoil lug area thus allowing even more glass to form here. A rifle bedded in this manner will never pound its way rearward to eventually crack the stock. If used for this purpose alone, fiberglass bedding would be more than worthwhile.

Another important step which deserves discussion here concerns the actual seating of the barreled action



Author tries fore-end pressure test with thin paper shim exerting pressure against barrel.

produce a good inletting job you will have the groundwork for a superior glass job.

Once the barreled action drops into the stock to the correct depth, you have arrived at the point of departure. Rather than being finished with the job, the task of preparing the stock for the fiberglass mixture is just beginning.

Using the appropriate wood chisels and gouges (or a Dremel tool if you have one), deepen and very carefully undercut the barrel channel and receiver bed by  $\frac{1}{8}$ ". This undercutting is an important step and the one which will enable the glass to form up around the sides of the barrel, giving plenty of lateral support as well as extra rigidity to the fore-end yet the fiberglass will not be visible on the finished rifle.

Incidentally, don't expect the walnut stain provided with the kit to produce a perfect match with the wood. Wood has pores and grain; fiberglass

into the soft fiberglass. Although some of the kit manufacturers recommend that the guard screws be tightened down, thus drawing the action and barrel tightly against the bedding surface, I strongly advise against this. Remember that extra  $\frac{1}{8}$ " of inletting depth mentioned earlier? What's the good of it if we draw the guard screws up tight thus extruding 80% of the fiberglass? The whole idea is similar to stepping on an uncapped toothpaste tube when we really want the toothpaste to stay in the tube! That extra  $\frac{1}{8}$ " should be occupied by a thick, strength-giving layer of fiberglass not a wafer-thin coating resulting from most of the liquid glass being squeezed out of the stock when the screws are tightened.

To insure that you're going to get all the fiberglass support you planned on when you cut the inletting to that extra depth, the procedure is quite simple. After securing the stock in a horizontal position, lay the fiberglass

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mixture liberally into the action and barrel channel area. At his point it's a good idea to plug up the guard screw holes with soft modeling clay so that the fiberglass cannot drain out of these critical areas when the barreled action is layed in position. Also keep in mind that you're going to use a lot more glass following the procedures as outlined here than you would otherwise so mix up at least two ounces. This is just about the entire contents of the average kit. With that done lay the barreled action in place and gently push until it sinks to the desired depth. Stop! That's all there is to it! If you have used sufficient fiberglass, you should see it extruded all along the barrel and receiver area. Now just let it sit there for the recommended drying time.

Once the mixture is dried and cured; the barreled action separated from the stock, and the extruded fiberglass sanded away, you're ready to assemble the smoke pole and head for the range. It's best to test the rifle in this semi-finished stage because in the event the gun does not perform up to reasonable expectations, the necessary alterations can be made without having to worry about the stock finish.

If, after several extensive bench rest sessions using the different combinations of powders, bullet weights, etc., your musket is not performing up to par, you should then try the fore-end pressure method. Since some rifles seem to shoot best when the fore-end tip is exerting upward pressure against the barrel, you can easily find out if this is the answer to your problem with nothing other than a screwdriver and a book of matches. Simply loosen the guard screws enough to allow slipping the matchbook cover between the barrel and the fore-end tip, retighten the screws and start shooting.

If an improvement in accuracy is noticed, experiment further to make sure your rifle actually prefers this tip pressure. If you're convinced, take your musket home and mix up a small batch of fiberglass. Loosen the guard screws and place the stock in a vise. Then slip the matchbook cover under the barrel and slide it one inch back from the fore-end tip. Now, lift the barrel enough to allow placing of a small amount of fiberglass in front of the matchbook cover in that last inch of barrel channel. When the barreled action is lowered into place the matchbook cover will keep the barrel from resting on the bottom of the barrel channel thus allowing an inch wide band of fiberglass the

exact thickness of the matchbook cover to form at the fore-end. When dry, sand away the excess cured glass and you have a stock that will always exert a uniform pressure on the barrel at the fore-end tip. It should shoot just the way it did at the range.

Usually one of the two methods previously discussed will extract all the accuracy a rifle is capable of delivering. However, if neither method helps and your tube is still spraying 3" groups at 100 yards, your only alternative is to free-float the barrel. This can be done by wrapping some sandpaper around a dowel slightly smaller than the barrel diameter and using it as a sanding block. Sand out enough of the barrel channel so that after the gun is assembled and the guard screws tightened, a matchbook cover will easily slip between the barrel and fore-end and slide down to within about 4 inches of the receiver. I've always felt that it's a good idea to take advantage of the rigidity offered by the thick shoulder area of the barrel and for this reason I recommend that the first four inches of barrel be firmly bedded. Vibration nodes are almost non-existent here where the barrel averages around .850" thick. It's up front where the barrel begins to taper in a straight line towards the muzzle that stock pressure or lack thereof measurably affects accuracy.

It's an unfortunate fact that a rifle that won't shoot with either of the bedding setups discussed here usually doesn't improve with a full float job. It's just one of those things. Although there are exceptions to every rule, hunting weight barrels do not usually provide top accuracy when full floated.

No matter how you look at it, the glassbedding of any bolt action rifle will always strengthen the stock and in most cases substantially improve accuracy. It's simply a case of everything to gain and nothing to lose. It must be remembered though that it is not a panacea for all the ills that can befall a musket.

One of the common misconceptions held is that a glass bedding job will cure a rifle that keeps shifting its zero from week to week. While it is true that fiberglass will strengthen a stock, it will not prevent it from warping. An improperly dried stock or one that is not properly sealed from moisture will warp taking the fiberglass right along with it, thus exerting ever changing pressures against the barrel causing a constant shifting of bullet impact point. In this type of situation fiberglass will help but it won't cure.

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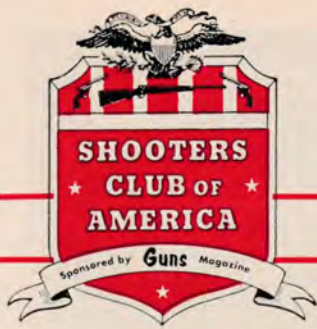
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# SHOOTERS CLUB OF AMERICA

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

The growing flood of anti-gun feelings indicate that legitimate firearms owners must be prepared to act to preserve their right to keep and bear arms. Anti-gun factions in both the House and the Senate, along with many state legislative bodies, are readying new attacks on the rights of law-abiding shooting sportsmen.

To combat these forces working against our interests is difficult but necessary if we are to retain our constitutional guarantee regarding firearms. The work is hard, but not impossible—and you have a strong ally in your work when you belong to THE SHOOTERS CLUB OF AMERICA.

The SCA is the most vocal and perhaps the most militant of all organizations fighting the battle to preserve your rights—and the time has come when we must all make the commitment to do our part in this on-going fight. If we do not make the required sacrifices, then only we can be blamed when our cherished constitutional guarantees are finally stripped completely from us.

Strong arguments against the right of private citizens to keep and bear arms appear almost daily in newspapers, national magazines, T.V. and radio commentary. These mass media have tremendous influence on the thinking of millions of Americans. The opinions expressed by reporters for mass media gain the stature of "facts" simply through repetition. If a newspaper quotes a statement from a national newsmagazine and is in turn quoted by a T.V. commentator, the original statement which was merely an opinion has already gained considerable authenticity in the mind of the listener. But this propaganda can be stopped with your help.

To counter this type of adverse publicity requires intensive public relations efforts—but these P.R. campaigns are costly and reaching a nation-wide audience of uncommitted people is the only way to swing public opinion our way. Only if we are able to alter public opinion can we hope to preserve our constitutional right to keep and bear arms.

The generally biased and cynical attitude of the nation's mass media toward the firearms control issue is a matter of public record. The so-called facts they use to support their opinions are in direct conflict with actual statistics. In nearly every instance where cities and states have enacted stringent firearms control legislation, the crime rate runs well above the national average. Conversely, in those areas that keep regulations to a minimum for law-abiding citizens, crime rates are usually lower.

One of the reasons for this is certainly that the armed criminal is much less likely to attack a person he feels might also be armed. Another reason is simply that the armed criminal is not going to register his weapons under any circumstances and so the soaring crime rate is not going to be checked by firearms registration laws.

You can help The SHOOTERS CLUB OF AMERICA tell the true story of the shooting sportsman to the American public. Write letters to your Representative and Senators expressing your opinions. Give them facts to base their decisions on. Speak before local organizations concerned with topical issues. Make your views known to your local newspapers through the "letters to the editor" column.

We must all work together if we are to achieve our goals—the preservation of our right to keep and bear arms, as guaranteed by the Second Amendment to the Constitution. Facts can counter the abusive and intentionally misleading scare campaign conducted by the mass media.

The SCA will help supply you with the necessary information—but we need your help to continue our efforts. Use the attached coupon application to send your membership to The SHOOTERS CLUB OF AMERICA. If you are already a member of the SCA, recruit your friends. Help the thousands of shooting sportsmen working to protect your constitutional right to keep and bear arms. Join The SHOOTERS CLUB OF AMERICA TODAY!

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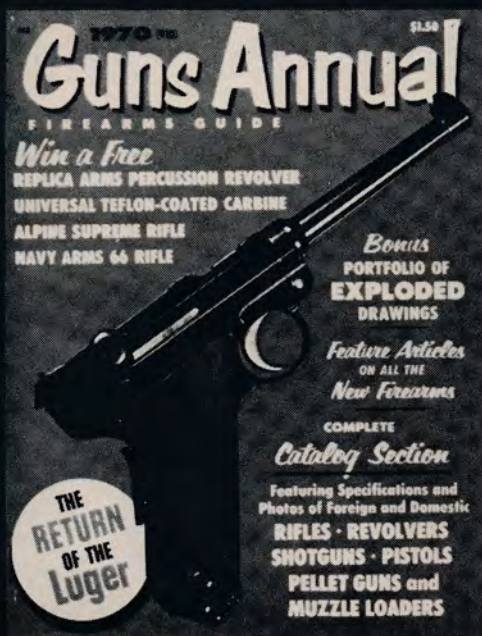
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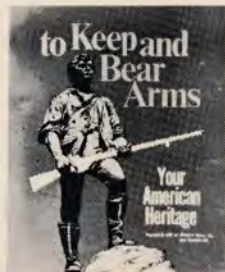
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