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EDITION

PRECISION ARMS WORKSHOP

AND THE AMERICAN GUNSMITH ARCHIVE

A TECHNICAL JOURNAL OF CRAFT, REPAIR & RESTORATION

04

ARCHIVE ISSUE NUMBER

INSIDE THE ARCHIVE

PROMOTING YOUR BUSINESS

FIREARM FUNDAMENTALS • GUNSMITHING REQUIRES INNOVATION • RECOIL PAD INSTALLATION ON SYNTHETIC GUNST...

ORIGINAL METHODS. MODERN ACCESS.

ARCHIVE EDITION 136

DIGITAL ARCHIVE EDITION

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SAFETY & COMPLIANCE

Firearm Fundamentals

BY AMERICAN GUNSMITH EDITORS APRIL 2015

ORIGINAL PP. 2

Gary Behr has authored a comprehensive compendium of firearms lore called Firearm Fundamentals. Certified by the NRA as an Instructor and Range Safety Officer and by the Wisconsin Department of Justice as a Defensive and Arrest Tactics and Law Enforcement Security instructor, Behr has put together a resource for all things related to the gun at nearly 400 pages with over 200 illustrations and 600 terms and relevant descriptions.

Behr started writing the book initially as away to organize his training notes from various classes to help organize his own students. "There are a tremendous number of exceptional instructors and trainers out there and I wanted to give them one more tool to allow them to do their job more easily and effectively," he says. The book is divided into three major parts. Part I is an introduction for new gun owners.

This section is an overview of the technology and basic usage of firearms with an emphasis on how to safely begin shooting. Intended as a quick and easy initial reference, this will familiarize anyone with the fundamentals of firearms by offering an overview of getting started. It sets an initial stage for formal training of a beginner's introduction to firearms, such as leading up to a formal course.

Part II delves into concealed carry and gets into the things needed for a person planning to safely and legally carry daily. Obviously, effective training needs both classroom and range exercises and a book by itself can not be a complete tactical or defensive course but this hits important points. Part III contains more detailed information, expanding into rifles, shotguns, sighting methods and more.

This is followed by a glossary referencing about 600 useful firearm terms and eighteen appendices covering topics such as sighting, zeroing and ballistic data, as well as training overviews. A quick reference guide rounds out the coverage. Firearm Fundamentals is available in a number of editions for specific locations. In addition to an all-state overview, there are also state-specific editions for Florida, Utah, Texas, Wisconsin, and Washington covering legal concerns unique to each area.

Dealer pricing starts with a 25% discount below MSRP when ordering six books for your shop and an additional five percent discount for every additional half dozen books ordered. Details are at firearmfundamentals.net.

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MAINTENANCE & REPAIR

Gunsmithing Requires Innovation

Especially when working with old, out-of-production guns, creative problem solving is key in good gunsmithing.

BY PAUL MAZAN APRIL 2015

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Many of the questions I hear from hobbyists and amateur gunsmiths start with, “How do I...?” My usual response is, “I’ll have to look at it.” This is especially true of repairs and restoration of old guns from factories that have been closed for several decades. In these cases the gunsmith has to be able to see the problem, visualize the solution, and execute the work in a professional and timely manner.

One of the main attributes of the professional gunsmith is the ability to make or modify parts to fit old guns when parts are unavailable. We all need the knowledge that can be gained from books, videos, and practical experience. Good sources of information are indeed our most important tool. However, sooner or later, in pursuing this obsession we call gunsmithing, you are going to encounter problems that are not addressed in any literature.

A perfect example of this arrived in my shop recently in the form of an old Damascus-barreled Belgian shotgun made by F. Dumoulin. The gun was in fair condition and had many of the normal problems associated with double barreled shotguns that area hundred or so years old. The stock was cracked and loose on the receiver,

there was a chunk of wood missing from the toe of the stock, and the barrels were loose when locked in position.

As I say, common problems with solutions I have addressed in these pages before and you can find easily enough. Unfortunately, the forend was also missing. A quick search online revealed that F. Dumoulin went out of business around 1930 and a parts search didn’t even turn up a listing for The most pressing was a missing forend. the manufacturer. Faced with the challenges of replacing the forend wood and latch and the total unavailability of parts, where do you go?

The smart gunsmith might say “the trash.” Considering this is the remains of what was an inexpensive gun a hundred years ago, he might be right. However, if you make your living repairing guns for other people, that might not be the preferred solution for your customer. In this case, the attachment point was still on the barrel and hinted at a solution. Most of the Belgian firearms manufacturers made guns for anyone with the money to pay for them and would stamp any name on the gun that the customer wanted.

They were commonly called hardware store guns. If you owned Frank’s Hardware

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Following the rule to always work on the least expensive part, the forend iron was filed to fit. Once again, judicious filing mated the two parts, and wanted “Frank’s Long Range Goose Getter” or “Frank’s Firearms Manufacturing Company” stamped on the gun, with a minimum order and cash, you got it. Because of this, a lot of the parts for these old guns are similar but not necessarily interchangeable.

For this project, I found an old forend at a gunshow complete with wood and iron and proceeded to fit it to the shotgun. Disassembly of the forend was simply a process of removing the forend iron from the wood by unscrewing the fasteners that held them together, however, fitting proved more of a challenge. It appears the latch on the forend wood was the complete reverse of the iron on the barrel. The first step was fitting the forend iron to the barrel lump and the receiver.

The barrel lump and the extractor activator on the gun were larger than the forend iron mating parts and were fitted by carefully filing the forend iron to fit the shotgun. I always try to work on the least expensive part. In this case, the forend iron could be replaced if I messed it up so I did my filing on it. I coated the barrel iron with Dykem, laid the replacement latch along side it, and roughly traced what needed to be cut and shaped.

A hacksaw was used to cut it as close to the final form as possible and the fitting was done with a file. It takes patience, a lot of cut-and-try and cut-and-try-again, and a feel for the work. Slowly it came together. The fit is tight and completes the gun into a working tool once again. This would be a good time to mention file care. For safety’s sake please put a handle on every one of your files. In the heat of along bout at the bench it is far too easy to run the tang of the file into your hand.

The handle also gives you better control of the file and that is important when working in tight places. Far too many people seem to think files are indestructible. They are not. Depending on how you use and care for them, a good file can last a lifetime or be irretrievably ruined the first time you use it. The first rule of file care is to protect the file from coming into contact with another file.

If you’re one of those folks that just throws all your files in a drawer where they clatter against each other, I can promise you will be cursing at them and replacing them on a regular basis. If possible, hang your files on a rack so they do not touch each other. If that is not possible, make and use simple cardboard sleeves for each file before you throw it in that drawer. The second rule of file



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care is to cut only on the forward stroke. Most of us learn to use a file by simply having one handed to us and then told to file a piece until it fits, proceeding to use it like a saw. The file removes metal with microscopic burrs that are located on the edge of the teeth. When you push the file forward those burrs scratch the surface of the metal and remove small pieces of it. When you draw the file back while maintaining downward pressure you bend those burrs into the valley between the teeth.

On the next forward stroke they take off less material until you remove the burrs completely or they break off from being bent back and forth. Soon you have a file that does not cut. The third rule is to use file chalk. When someone first told me to use chalk on the teeth of my file I thought they were joking. I had never heard of such a thing.

It was explained to me that by using chalk (yes, the same stuff the teacher used on the blackboard when you were in school) it would prevent, or at least reduce, pinning—the build up of file shavings in between the file's teeth that causes it to stop cutting and causes

scratches on the surface of the work. I couldn't figure out how something as soft as chalk was going to stop sharp little metal chips from getting into the teeth and thought I was the subject of a prank. Kind of like being taken on a snipe hunt.

I tried it and they weren't kidding! It actually works. Plus it means you spend less time with a file card cleaning out the chips, the file seems to cut just as aggressively, and it gives the work a smoother finish. You can steal some chalk from your kid, buy it at the local store, or go to that inexhaustible font of gunsmithing knowledge and supplies, Brownells, and buy sticks that are one inch in diameter and four inches long (#080-705-006AK).

Rule number four, clean the chips out of the teeth whenever needed with a file card made for the job. Take care of your files and perhaps you can be like a friend of mine that has used his files for 25 years without having to replace them. I mentioned earlier that I was working on a Damascus-barreled shotgun that should be hung over

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the fireplace and not shot. Fortunately, that is what this customer plans to do with his Grandpa's ol' gun but, when finished, I wouldn't hesitate to shoot it with light black powder loads. The reality of business and litigation requires me to warn the customer not to shoot the gun. Knowing that at some time in the future the gun may be passed on to someone else, I made up a "not safe to fire" notice and had the customer sign it. I kept a copy for myself and send the original with the customer.

Ideally the notice should stay with the gun and I normally tell the customer to roll it up and put it in the barrel. That won't stop some fool from loading the gun without looking but anyone who thinks there is a foolproof way to do anything has not dealt with enough fools to gain a healthy respect for their ability to break things. This keeps them from touching each other and being damaged.

Of course, this is only one example of thinking outside the box, as my ex-boss loved to say when faced with a gunsmithing problem.

If you work on guns for any length of time you are going to be called on many times to come up with solutions that just aren't in the books. You will need to analyze the problem, determine if it can be fixed without compromising the safety of the gun, what needs to be done, and how and what you need to accomplish it.

If you have other gunsmithing friends or just friends that are mechanically inclined, let them look at it and suggest solutions. Many times two heads are better than one and they just might see a solution that eludes you. AG

FROM THE ARCHIVE

Promoting Your Business

While small, one-man shops may have all the business they can handle, some of us need more customers. Here's how to make that happen.

BY WENDELL DEANER APRIL 2015

ORIGINAL PP. 7-12

A business that doesn't attract new customers cannot grow and eventually will fail. There are many ways to promote a business. Advertisements, word of mouth, and the Internet are just a few. Let's discuss some options. Small Seminars The first is to host small seminars. Ever attend a how-to class on home improvement at a big box store, such as on how to lay tile or install molding using a miter saw? A person can learn a lot by looking it up online but it's not the same as hands-on instruction received at a seminar.

Many times factory representatives are on hand to answer technical questions. I've been to a few and they're usually well attended. Most of the people there buy some supplies or tools. These big corporations know what they are doing. Ten people might attend one of these programs and perhaps half will buy something. Each one of those people will pass along the experience to their friends. Word Of Mouth I am a big believer in word of mouth as the best (or the worst) advertisement there is.

You'll likely trust your best buddy much more than a little ad in the back of the paper. It has been estimated that one letter of complaint indicates at least ten other customers were dissatisfied but didn't bother to write, but each one of them told someone else about their problem. That's why they take each complaint seriously. Try your best not to have the word of mouth about your shop be a bad one. I was in a local business where the owner rarely greets me even though he knows I am a regular customer.

He rarely thanks me when I pay. He's a real jerk. A man up the street owns a similar business, purchased when it went into decline from the previous owner who was never there and left operations to a surly staff. Those staff are now gone and the new owner is thriving. He and his staff always have a cheerful greeting for me. They make me feel like a valued customer. The nice man up the street regularly has a few little seminars on his products. People attend and buy. The other guy could care less.

He mostly sits behind the counter and watches the ball game on TV. Guess which store I shop in the most? I don't even care if he charges a little more for some items. It's worth it not to have to put up with a guy who's just there to get my money. Stores can invite industry representatives to give demonstrations of their products to the public.

Lots of shooters would welcome the opportunity to learn about new ammunition or new cartridges, or attend a show and tell regarding the latest version of a progressive reloading machine, or holster manufacturers, or rifle and handgun stock suppliers, or whatever gadget and gizmo might be the latest rage among buying customers. Just like some of those fishing lures might catch more fishermen than fish, it seems that we as outdoor types just love our toys.

The downside is if the product is a real stinker some of the collateral damage may stick to you. This usually isn't a problem because most of us know the shop and the rep are not the same. I'd be happy if some of the stores filled up the slow winter

months instead of staying in their holes longer than Punxsutawney Phil. Deer season over and nothing to do until trout season? Use that cabin fever to your advantage. Show Venues There are some shows around the slow times of the year.

Beyond the SHOT Show, in my area the "really big shoe," as Mr. Sullivan used to say, is the Grand American Outdoors Show at Harrisburg, PA. For nine days during the first part of February, thousands of people attend. Outfitters flock to this show. You can book an elk hunt in Colorado or a leopard safari in Namibia. All you need are deep pockets. Gun manufacturers and other outdoor products vendors are in full force. Almost every imaginable new fishing lure is on display.

If you want to try anew buck call (I suggest leaving the buck lures unopened) and buy it on the spot this is the place for you. Need a tree stand? The factory rep probably has a display set up where you can determine if it climbs as well as advertised. The only drawback to advertising your services at a convention like this is the cost of the booth and your time and expense of staying out of town. For the big industry guys this is no problem, with their booths "manned" by pretty girls in skimpy clothing.

This always draws a crowd, but I'm not sure it's a good idea, at least when the biggest growing demographic in our sport is women. The smaller venues may be more suitable to some of us and there are many of them out there. Even smaller still, imagine the floor space of your shop taken up by a factory rep and some interested customers. Can

PROMOTING YOUR BUSINESS CONTINUED

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you do it? That depends on you and the size of your shop, but I think it's helpful to bring in customers who may have never heard of you before, giving you a chance to display your work. This is the most intimate setting since it is almost like inviting friends to your home. One of my friends has a few rifles and handguns he's built taking space in his glass cases and racks. They are for sale, of course, but are really representative of his work.

One thing can lead to another. "I like the way you did this, but can you...?" Putting a nice gun in a respective customer's hands is always a good idea. Being apart of a gun show can also be worthwhile if it is reasonably close. I can't see much reason to travel 500 miles to advertise unless your clientele are willing to ship guns to work on. I like local venues and there are a few gun shows where I live that can be counted on to bring in customers.

Renting a table to display examples of your wares and giving out business cards and brochures describing your work and prices, just being nice, saying hello, and glad handing can make you some money in the long run. These shows are within driving distance, avoiding big travel expenses. While you can also sell guns and other related items at these shows, I'm not convinced that this activity should be included at your gunsmith's space. Rent another table and staff it for the retail benefits.

You mind the gunsmith's table and focus on that part of your business. These tables are usually pretty cheap considering all the potential customers you are able to reach. Don't waste time haggling over the price of a used rifle and let the guy who wants you to build an expensive custom hanging. Shooting Competitions Don't overlook local shooting competitions. Many of these

shoots are held on a Sunday when you can turn Don't overlook local shooting competitions.

Just attending a shoot at a local club can be time well spent. I've seen guys with tricked-out firearms made up by a local smith specifically for local competitions that go for over \$3,000. Some people are just such fierce competitors that price is no object. your free day into a money maker. Just attending a shoot at a local club can be time well spent. I've seen guys with tricked-out firearms made up by a local smith specifically for local competitions that go for over \$3,000.

Some people are just such fierce competitors that price is no object. In my younger days I competed several times a month in handgun silhouette matches, shooting big-bore handguns at steel targets out to 200 meters. At that range a 50 pound ram is the target. All targets must be knocked over or hits don't count; that's the reason for powerful handguns. When I went to matches some of the guys showed me handguns worth thousands of dollars that this or that shop had built just to give them a competitive edge.

This is no small change. The shooters who are into competition definitely should grab your attention. Also consider all the accessories to go with it that can be offered by you. Don't forget ammunition. Most of these shooters use target ammo and have special hand loading preferences that aren't going to be offered at that big box store and they shoot many more rounds in practice than in actual competition. I remember one event I attended at a nice range in Pennsylvania back in the early eighties.

I had traveled a ways to get there and couldn't claim it as home turf. I was shooting a then-new Remington XP-100 cham-

bered in the 7mm BR wildcat formed from "bench rest" small primer .308 Winchester cases and expensive dies (this cartridge is commercially available now.) Apparently my gun was a rarity as I gathered a lot of attention. Before I knew it was surrounded by other shooters wanting to know about my success, or lack of it, with this new round.

One thing about real competitors is they are always willing to share information and help new shooters. There was one guy who stayed at the fringe of the crowd but seemed keenly interested in what I had to say. It turns out he was a local 'smith who's specialty was turning out high-dollar silhouette pistols. He didn't say a word to me. I guess he heard enough as I was answering questions for the crowd and was going to school on me. I bet he put together some 7BRs after that shoot.

No need to be the big shot when you attend a match or anything else. Open your ears and leave your ego behind. You will learn from your customers if you give them a chance. Local sportsmen's clubs offer an inexpensive and effective way to reach potential customers. Chances are several of them are close to you. Attend their shoots, advertise there and drum up some business.

Just like using your shop to invite factory reps, the local club is a good place to advertise that fact by passing out a few brochures or some freebies from the rep who's going to visit. If the club has a shoot that you're interested in and fashion firearms or products for by, become a competitor yourself. The people who take these things seriously are willing to pay for it can spot a poser right away. Be willing to learn and especially be willing to learn what your customers want.

PROMOTING YOUR BUSINESS CONTINUED

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Another experience with my XP-100. I mounted a Lyman 66 receiver sight and a target front post and globe for matches. The receiver was already drilled and tapped and this setup seemed to give a better sight picture than regular iron sights. You might have thought I was a circus freak masquerading as a shooter. I shot revolver and production class as well but this gun was an anomaly even in Unlimited. Competitors don't change equipment on a whim and have definite ideas about what works.

First learn and offer what is proven in that discipline before you try to turn things on their head. I went on to win my class at a serious state championship competition with that receiver-sighted gun where no other competitor from out of state even placed. When I called the director of the meet about shipping my trophy he pooh-poohed the notion that anyone out of state had won anything.

Then he perused the standings list and said, "Oh, wait a minute, yes, you did!" A small victory, even if I never did see anyone using peep sights at another match. Presentations Local clubs are ripe for a short presentation about what you offer. All of them have monthly meetings. A lot of these meetings last about fifteen minutes because there really isn't a lot of new business to discuss.

The club officers usually are glad to have you and will advertise your visit for free in their newsletter and on their web site. A few suggestions for topics. Gun screwdrivers are a good place to start. Even today some shooters are using Stanley household tools on their guns and wondering why they are "screwing" things up. Pointing out the differences of a set of hollow-ground drivers and the ones bought at the supermarket is easy. Buying the tools from you or direct from the manufacturer makes no difference.

You will be the guy that has brought it to their attention. Also, the self-contained little kits from Chapman, Forster, and Grace are compact and easily taken to the range. Displaying different options and letting the guys handle what you bring can generate some interest. Bring some damaged screws along to illustrate talking points. Putting a scope on a rifle is another topic that can be counted on to initiate some controversy, which is a good way to not bore an audience.

Scope mounting is not difficult if done right way. Show and tell with some of your gunsmith tools like torque wrenches to make sure all screws are tightened with the same amount of force. Scope alignment bars might also be a novelty to many spectators. Scope ring lapping is something few will have any knowledge about. Never forget that all of these shooters have their own ingrained ideas. Grandpap taught him how to mount a scope and that's that.

You offer this service, of course, along with bore sighting, just don't let the customer out of your shop thinking he doesn't have to sight the rifle or handgun in himself to make it work properly. As for sighting-in, some shooters have difficulty with this basic skill. Spend a little time at the range during sight-in day before deer season and it will give you an appreciation of frustration and ignorance. A few tools like optical or laser bore sighters are crowd pleasers.

Don't forget that you have your way of doing this job and they may have theirs. Have the steps you go through for this process in notes and firmly in mind. Be willing to evaluate other methods. You'll probably provoke a lively discussion, which is a good thing as far as I'm concerned. Gun cleaning is also another area where everybody has their own way of doing things. When presenting this subject new products are useful if you believe they actually are worthwhile.

You have your way of doing things that have always worked for you. By all means present this process, but be prepared for at least one person in your audience to tell you that they are using something you may have never heard of. Admit your lack familiarity with it and keep an open mind pledging to try it. Trying to bully your listeners into doing things your way is a recipe for disaster. Don't forget to mention that you offer complete take down, cleaning, and proper lubrication of most firearms.

There are many other topics that could be presented, almost endless. Just be sure to be grounded in your knowledge and be willing to listen as well as talk. Have a supply of your business cards and brochures on hand for those that are interested. This advertising is free except for your time. If I'm home eating potato chips in front of the TV instead of out promoting my business, my time is worth zero. Female Shooters Women can be your best customers if you treat them well.

Females are one of the fastest growing demographics in our industry. Anyone who ignores this fact will be missing a profitable relationship. I maintained earlier that "babes in bikinis" may not be the best mindset for business owners looking to advertise. It is not that I am against this concept (far from it) but I think it is better left to other venues than sports shops.

If a woman comes into your place of business ready and willing to buy their first gun (or their tenth) are you going to make them feel uncomfortable and lose the sale? Do you have any female employees? She might help your female customers feel right at home and repeat business is almost assured. This is not to say that your male customers will shy away, especially if the sales woman knows her stuff.

I have some dealers in my area that I wouldn't do business with for any reason, because I have observed that the dollar comes first with them

PROMOTING YOUR BUSINESS CONTINUED

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the customer be damned. I've dealt with another few for many decades. I can call them and order a gun over the telephone, they know I'm good for it, and I know they will treat me fairly. Trust is always built over repeated encounters and means more than just dollars and cents. Do your help-wanted ads state firmly that gender is not an issue? Many women are knowledgeable and competent when it comes to firearms and hunting but may be hesitant to apply. Let them surprise you.

Not too long ago I bought a S&W pistol for home protection. It sported a pair of black rubber grips. I went to pick it up after the obligatory background check and the grips had been changed to bright pink color. It was actually supplied from the factory with both grips. All the guys in the shop thought it was real funny to play this trick on me. I laughed along at myself, being able to do that and not take offense. When I took the gun home to show my wife the first words out of her mouth were, "Oh that looks nice."

I'd like to shoot that." She has done her share of shooting when she and I were much younger but not so much lately. After I took this little gun to the range and found out how it pounded my hand I wouldn't let her shoot it because I am afraid it would sour her on guns. I won't shoot it very much myself except for the practice necessary to be able to proficiently use any gun kept for self defense.

While those pink grips enticed her, anew shooter might not understand that a little gun with self-defense loads equals "ouch." She might have made a purchase on her own she would later regret. Of course some women can handle the same guns any man can, and I admit with my carpal tunnel syndrome in both hands and arthritis to boot I can't take the recoil I used to. A good salesman should try to determine some of these factors before recommending a gun to any buyer.

There are plenty of inexperienced men coming into the gun stores looking to purchase that first firearm. The only difference is that they already know everything without firing a shot, or imply they do. In my experience a woman will take your advice more readily. In my wife's case, something easier for her to handle with a pink grip or finish if that's what she really wants would fit the bill. Even AR-type rifles can be had with different color stocks if that's what floats your boat.

A good salesman who has actually fired one of these hand bruisers can make a lot of difference in your store. If you have a range at your place of business let your customers try the guns they think they want. It can lead to a better buy for the customer and a life-long patron. In case you haven't found out already, some women can shoot rings around us men. If you ever attend the famous Gunsite Academy you may encounter Il Ling New.

Believe me, if I'm ever in a gunfight I hope a shooter with her ability is on my side. Jerry Miculek's wife and daughter live on a gun range. They could show us all a thing or two about how to shoot. Of course, these ladies are in high demand. Do you know of any women in your area that would fit this description? My club holds a regular Ladies Day at our range. The demand is high for quality instruction.

If some of your female employees would help with these shoots (and also take along some business cards and brochures) it will come back to you, I promise. Don't expect your employees to work for free. It pays to advertise. Find What Works Now there's one thing you must ask yourself: Do I feel lucky? No, no not that—you must ask yourself if this type of promotion is right for you. Are you a people person or are you more comfortable alone with your tools in the back of your shop?

There's nothing wrong with that, we are all different. One thing for sure, you can't get any work done if you sit at the counter

and gab all day with your friends. In one of my articles I suggested not to have any chairs or anyplace for anyone to sit outside your sales counter. They will attract people who just want to BS and hold you up faster than horse pucky attracts flies.

Most of us are fine talking with a group of friends over a good cup of coffee, but how about a bunch of mostly strangers who expect you to put on a show? If you go to a club meeting, remember that most of these guys have jobs, have taken the time out to support their club, and want to catch up with friends. They aren't interested in one of us trying to sell something. Nothing loses my interest faster than someone jerking my chain while trying to pick my pocket. Don't be one of those.

Do a good job with your presentation and good things will happen for your business. I belong to a club that requires everybody to periodically review the range rules before they are allowed to shoot. This is mostly because we may have had an influx of new members or changes to the rules. The officer in charge of this presents (reads) a Power Point slide show that says exactly the same thing as the manual supplied to all of us. Not just the changes but the whole manual.

Two to three hours of this sonorous torture and we're all ready to fly out of there. This is not a good time to show up with a bag full of cleaning supplies and business cards. I suggest trying to determine the club's meeting agenda and waiting for a slow night. A lot of my club's meetings rarely last for more than a half hour because there is no new business to report and most of us are there just to say hello.

We would welcome anyone who could come in with an interesting diversion and be appreciative that this business person remembered our club and thought enough of us to

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show up. As always, try to get your visit mentioned in the club newsletter and by word of mouth so you will actually have an audience. And don't forget my range officer friend. Leave the Power Point behind. Public Speaking This brings me back to the unfortunate reality that if even the thought of public speaking chokes you up you could be doing more harm to yourself than good.

In one of my earlier reincarnations the company I worked for decided that I would give a presentation every month or so to the mandatory morning meeting of the employees. I was terrified. Although it would not be the first time I spoke in public I had hoped that the last time was the last. I really did OK before but ever since I was a very young man I had trouble with this.

I will spare you the description of the scared little boy in the sixth grade who had to sing his solo rendition of Maryland, My Maryland to a couple hundred other kids staring up at me on the stage in that longago auditorium. Or that dinner at the Lions Club where I was the recipient of a much needed scholarship and was required to share a few of my befuddled, freshman-in-college pearls to those distinguished businessmen. Hey, do I hear someone in the back laughing?

When this mandatory talk came due I decided to give them what they wanted. Some of my colleagues had stood up and spoke in a shaky voice for five minutes and sat back down as soon as possible when they took their turn at the podium. When my monthly presentation came due I was as prepared as the president giving the State of the Union. I had copious, organized notes with several jokes at my man-

ager's expense. He took it good naturedly. What else could he do when everyone was watching?

I spoke non-stop for twenty minutes or so and could have taken longer. I was friends or on friendly terms with most of the Anyone without a clinical phobia about speaking in public can do a good job. The most important thing is to be prepared. Give your speech in front of a mirror and have notes in front of you, even if you are you are intimately conversant with your subject and don't need them. audience even though there were at least fifty co-workers present. That made it a little easier.

I tried to project that I was actually talking to them not just staring off into space. I had my choice of topics within the limits of my expertise, as we all would if we pursue this way of promotion. I tried to choose a subject that was current and with the most appeal to the most of my audience while still respecting the boundaries of my field. There was no laughter. Everyone was interested and listening. I was even rewarded with some applause.

Almost anyone who doesn't have a clinical phobia about speaking in public can actually do a good job. I think the most important thing is to be prepared. I gave my speech in front of a mirror before I ever faced alive audience. I had notes in front of me. For the initial part of your presentation I think that's a good idea. If you are intimately conversant with your subject, do your own thing but be prepared to be confronted on every turn by Doubting Thomas having a better way of doing things than you do.

Some of the most famous speakers in history have used notes. Adolph Hitler mesmerized vast crowds with his rhetoric. Watch some of the old newsreels to see

how he usually had notes before him on the podium. Although his message was abhorrent, somehow he got millions of people to follow him who might otherwise have dismissed his ideas out of hand if not for his fiery oratory. Two men I admire greatly are the Reverend Billy Graham and Ronald Reagan. It is no secret that Rev. Graham is a great speaker.

It is also no secret that he often consulted his notes during his crusades. He used to be on television a lot more than today because of his age but every once in awhile an old program is rerun. Although I think he could give a powerful sermon off the cuff, he clearly had notes before him that he consulted frequently. President Reagan was an accomplished actor who could memorize long scripts and memorable speeches. Not many of us could match his presence on TV. There are many blowhards trying but not even close.

President Obama is supposedly another great speaker. Personally, I think I can read a teleprompter as well as he can. Unfortunately, I don't think I'll ever be President. So what if you are challenged on your presentation? I would hope not to be booed and kicked out the door, but if you area know-it-all that can't respect different points of view I suggest bringing good ol' Power Point (God forbid.) Go into it by expecting to learn something new. Let's take for example cleaning supplies.

Suppose someone in the audience has been using a formula you're not aware of and swears it's the best. Then somebody else gets up and says that crap is no good and to use something else instead. Then somebody else claims they make their own and it works as well as the commercial brands. OK, flesh it out and you'll probably have an interesting discussion if nothing

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else. Promise to try these products yourself and congratulate the speakers for sharing. Just don't get cornered into dismissing the products that you know work well. What are you there for? I like to include a product that everyone has had some experience, such as Hoppe's No. Nine and their Bench Rest copper cleaner. They are familiar and available. There may be some products that are better these will get the job done. You may score points. You may be taken for a clown.

Now's the time to break out the more exotic and newer products to prove your bonafides. It's a process and completely up to you. If you are telling the truth as you see it nothing more can be asked of you. It's possible to lose potential customers by giving presentations. There are always some guys in the back who won't be impressed but you may gain more new customers no matter what the nay sayers think. Chances are that these guys are already well known by the other members for always being negative.

You will always have people in your audience who won't say a peep at the meeting but will show up on your doorstep someday with a profitable job for you. Me, I like this kind of format. If somebody tries to one-up, let them go until you can't and they will show themselves for what they are. They're probably already well known for being windbags. Don't get into a fight if you can help it. What do you gain by arguing with a fool? You can take the higher ground and be thought of as a gentleman.

The local, small formats are just the ticket for most of us, but gun shows have some of the same things to consider as the smaller venues. In the course of the show perhaps a thousand people or more will pass by your display. Most will politely check you out even if they just walk on. Maybe they will return. You should be able to get a few new customers from a pool of thousands.

I have never seen a case where One thing for sure, a little out-of-the-way shop that no one has ever heard of is not going to generate the same business as the one that is actively promoted. a show-goer got into a big argument with a displayer, although I'm sure it has happened, people being what they are. Hagglng over prices can be stressful to some but that is what a gun show is all about.

It's easy to be nice at these shows, since almost everyone you will meet has the same attitude that we do about the Second Amendment and guns in general. Sometimes I feel more at home around these types of people than anywhere else. Bring up the subject of guns at your local mall and you'll probably end up having people shouting at you.

When I attend a gun show with thousands of firearms on display and many vendors all safe and everybody respectful and polite it gives me confidence that America still has a chance to be what we want it to be. There's nothing wrong with displaying an American flag at your booth. A lot of people in this country seem to be offended by that, but not at a gun show. So we are with our own kind, so to speak. Now is the time to blab. This is not the same as a couple of old timers sitting in your shop wasting your time.

Talking to new and old customers is what you are here for. Go ahead and enjoy yourself. What if someone asks you about a job that you really don't offer from your shop? There are jobs I don't have any expertise in and I'm not afraid to admit it. Do you know anybody that can do good work in that area? Go ahead and recommend that gunsmith. This will reassure a potential customer that you are not just about money but trying to get the best for that person.

Maybe you'll never see this guy again but I guarantee he will not forget you. If he tells the other gunsmith you recommended him he may do the same for you. I want to touch on other avenues of advertising your business. I once went to a writing seminar where a very experience moderator told us that all the first-time writers that get their book published want to have a full-page article written up for their local paper extolling the virtues of their work.

A lot of this is just author vanity but they also expect to increase sales. Then she explained some hard facts. Say your local paper has a subscription of twenty thousand readers. Consider that perhaps only a small portion, say percent, regularly read new books. Consider out of that two thousand perhaps ten percent of them actually care about what you've written. Then consider that maybe fifty percent of those readers skipped over your ad between coffee and the commute to work.

Many of these people may not have actually read the paper that day. You are not reaching a lot of potential book buyers with this kind of advertising. Every year the week before deer season our local paper has a list of meat processors and gunshops and other local vendors who have a little block ad on the same page. Well, see above. Considering the price of these ads they may be cost effective but I'm not sure of that. I have a friend who advertises there every year.

I bet he doesn't know if he's gotten more customers by buying that ad or not. But, that and the Yellow Pages is all the advertising he does. All this is strictly up to you as everything in this article is suggestion only. My goal was to supply some ideas you may want to act upon. One thing for sure, a little out-of-the-way shop that no one has ever heard of is not going to generate the same business as the one that is actively promoted. AG

RIFLES

Recoil Pad Installation On Synthetic Gunstocks

Installing a recoil pad on modern synthetic stocks can place a real demand on your skills. The job becomes even more involved if a stock needs to be cut off.

BY NORMAN E. JOHNSON APRIL 2015

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It doesn't seem so long ago all you could find was a walnut or laminate gun stock. Now there is a good chance you would walk away with the money if you bet that more than half of today's target and hunting rifles are synthetic. Invariably, these stocks are equipped with some kind of rubber or composite recoil pad or butt plate. It seems modern shooters got tired of being kicked around by the butt end of a gun covered by steel or plastic. For various reasons some of these butt plates and recoil pads may be replaced.

Stock length-of-pull, better recoil absorption, or just plain aesthetics are among the reasons for such changes. Sometimes the color is just a little off. Before taking on such jobs, it will be to your advantage in knowing just what you're dealing with. Some synthetic gunstocks are made up of a shell of fiberglass or other material over a less durable filler that wouldn't even hold a gun screw. Most are made of fiber-filled synthetic polymer or woven fiberglass and carbon fiber.

Regardless of the nature of construction, hollow or solid, we are dealing with materials like fiberglass, graphite, resin, and the like, sometimes finished with some pretty fancy paint styles. It would behoove anyone to first try to determine the make up of the gunstock and how the pad to be replaced is attached. Some pads are bonded in place and others are attached with screws. Cutting into the hidden, hardened screws while shortening a stock will mess up a saw as well as the stock.

Consulting with respective gun or stock manufacturers could prove helpful before we take on the job. Synthetic gunstocks are often pre-finished with a special proprietary or camouflage pattern. Disruption of this finish may involve anew paint job or special repair few are qualified to perform. The other option is to live with the mistake. This is particularly true if a gunstock is being shortened for new pad installation.

Removing Recoil Pads Having determined if screws alone are used to attach a recoil pad to the stock, it can be removed. Pads are normally attached with Phillips screws but some are attached with the square, slotted type, either fillister or round head. A trial run should indicate the type and size screwdriver to use. If pads are both screwed on and bonded, removal can pose a problem. This is particularly true when re-use of the pad is anticipated, as may be the case if only shortening the stock is planned.

If a recoil pad is bonded into position with plans to re-use the pad, on a shortened pad you'll be faced with cutting this pad off flush with the stock and cleaning the pad surface before re-attaching it to the altered stock. In this case two cuts will be made. Cutting a gunstock off is an exacting job, requiring careful attention and precise accuracy. Synthetic stocks are no exception. Failing to make a good, clean, straight cut is not an option.

In preparation for cutting off any type of stock, a precise cutline must be established which will assure a good, square, parallel cut, and must reflect those needed changes in the length, pitch, or angle of the stock. With the cutline determined, a protective masking tape or even a durable transparent tape is centered clearly to show the cutline. The tape, marked at center, serves as the exact cutline as it also helps in preventing the saw teeth from chipping the sometimes fragile stock finish.

Tape can be applied with or without removal of the existing buttplate or recoil pad. The method of cutting may include a table saw, band saw, or hand saw and miter box. I have used all three and tend to favor the miter box. Regardless of cutting method, the stock must be properly aligned and secured so the respective blade will precisely follow the marked cutline. In the process, the outer exterior of the stock must be properly protected to avoid scratching and abrading.

Some synthetic stock finishes may even withstand the cutting by the poorly skilled craftsman and show little sign of damage but don't take chances. With the stock aligned and stabilized, make the cut slowly. A smoother, chip-free cut will be the usual result. I use a special saw blade in the miter box, which I made up from a super sharp length of com-

RECOIL PAD INSTALLATION ON SYNTHETIC GUNSTOCKS CONTINUED

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Above center: Pad removal reveals a hollow stock requiring installation of a wooden plug for new pad attachment. Both old and new pad are shown here. merical hacksaw blade with the set of the teeth ground flush with the surface of the blade. This allows suffi-

cient freedom for the blade while avoiding an overly wide saw cut. Don't remove the stock from the Alternative methods of cutting include a table saw or band saw. The key is a perfectly square, clean cut. Below center: Stock shown squarely cut off.

Tape remains in place until final finish is completed. miter box, band saw, or table saw before completing the cut because exact repositioning is very difficult to achieve. If done with care, hopefully the freshly cut stock will reveal a nice

RECOIL PAD INSTALLATION ON SYNTHETIC GUNSTOCKS CONTINUED

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Above left and center: To properly mark a recoil pad for cutting it should be screwed in place before cutting. Cutting a recoil pad inside the line, as is purposely shown here near the heel, is an irreversible mistake. Always leave sufficient material for clean up when marking and cutting a recoil pad. The plug is tested for fit before being bonded permanently in hole. square, flat cut with little to no edge or border damage.

Well placed tape will have prevented, or at least minimized, any border chipping of the stock finish. At this point I check the cut to

see if it is square and perfectly flat by placing the cut surface on a mirror or piece of glass. This quickly reveals any imperfections. If such flaws are minor or essentially absent, there should be no need to face the butt with a sanding disc or other means. I do, however, draw the surface of the stock squarely across a perfectly flat grit-covered surface of medium grit sandpaper.

This leaves a nice squared off and smooth finish. Below center: A finished recoil pad is shown here ready for attachment. Stock has been squarely cut and wood filler plug added.

Note the perfect heel line formed with the stock. The removed buttplate shows the internal stabilizers used to align the buttplate. As recoil pads are replaced on cut down synthetic stocks, the gunsmith must be prepared to use some adaptive measures. Few stocks are exactly the same.

Stock Preparation Fitting and attaching a recoil pad or buttplate to a wood stock should be a routine gunsmithing job. However, this task can take on a different picture when working with synthetic

RECOIL PAD INSTALLATION ON SYNTHETIC GUNSTOCKS CONTINUED

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Any flaws or mistakes are hard to cover up as we combine many of our talents with this perplexing task. gunstocks of different materials and construction. I will cover some of these differences compared to wood. When some synthetic stocks are cut off, only a shell remains. Attaching a recoil pad requires installation of a plug to fill the hole for the screws or adhesive used in fastening the new recoil pad, much the same way as attaching it to a wood stock.

To simplify this task I trace the exact stock hole pattern onto a one-inch-thick piece of good wood, cut it out, and cement it solidly into the stock. As this plug is cemented into position, I place the butt of the stock squarely on a flat surface as the cement dries. This will form a perfectly flush fit with the surface of the stock shell. It may then require only minimal sanding.

Where the inner material of the synthetic stock is too fragile to hold a screw, a suitable plug must be installed as a means of holding the screws. Here I use a length of wood dowel and fit these plugs into drilled holes beneath the stock surface in line with the screw holes. If squarely cut, they will bond in solidly with the surface end of the cut-off stock. No further fitting should be

required. Attaching The Recoil Pad So far we've prepared the synthetic gunstock for recoil pad installation.

If you've progressed this far without problem fitting the new recoil pad to the synthetic stock will be little different than those you may have fitted to a wood stock. First, establish screw hole position and fasten the carefully centered pad to the stock. Then, with the screws in place, marking the outer stock borders onto the pad is done using ascribe or other marker to define the cutline.

With the pad removed, be sure to cut along the outer margins of the line, leaving enough material for recoil pad clean up following cutting. How you cut the pad to size along the marked cutline is a matter of choice as long as it is cut squarely, being sure the cut leaves sufficient material to form the toe. I use a good quality coping saw for this job. At this point, with the pad re-installed, use a good, sharp file to take the edge off the pad right down to the tape. But watch it!

I then carefully remove the tape and inspect things to see how much outer finish the pad will need for a perfect flush fit with the

stock. The skilled use of a sanding disc or belt with medium fine grit is sometimes used but it's easy to hog in too deeply with power tools. Final fitting of the recoil pad flush with the stock can be performed with a good, sharp file as it is placed on and off the stock for fit and appearance. This is essentially the same procedure as fitting a pad to a wood stock.

Having removed the tape, the stock finish can be closely inspected for any flaws you may have created. Paint chip flaws are quite easily touched up by applying suitable paint with the end of a tooth pick or the like, just as the artists do. These may include something like paint marbling or spider web finishes, similar to touching up paint chips or blemishes on your automobile. Conclusions Recoil pad installations on synthetic gunstocks will require a careful analysis of the job at hand.

It can surely test the skills of the lesser experienced craftsman but should be on the doable list for those who can follow directions and are willing to pay close attention to detail. AG

FROM THE ARCHIVE

The Snub Nose .38

BY ROBERT K. CAMPBELL APRIL 2015

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Working for gun shops sometimes requires patience. When a firearm finds its way from their shop to yours it's because a mistake was made in the "kicking the tires" process. It needs to be fixed and they want it done cheap! A steady source of income is appreciated but we must be paid in accordance with our work. In another life, I worked on vehicles for used car dealers. I am a glutton for punishment! A few weeks ago I ran across a typical assignment from a gun shop that turned out well for all concerned.

A Smith & Wesson Model 36 two-inch barrel .38 Special had been taken in on trade. The owner declared that not only had his associate salesperson allowed too much trade-in on the handgun, he has missed a broken hammer spur. The spur was sharp and had a ragged edge. This reputable shop keep points out defects to potential customers and had to fix the hammer spur as it was making the otherwise decent revolver non-salable.

While honesty has its own rewards, customers were passing on this revolver as the broken hammer spur was sharp. There had

already been a sale and a return with the complaint being the revolver kicked like mad and the cartridges were sticking in the cylinder. All were legitimate complaints. While no collector's item, it was a solid defensive handgun in need of TLC and a knowledgeable hand. A word on gunsmithing and increasing the usefulness of handguns.

After spending much time and effort on Glock and 1911 handguns, the result is a slightly improved handgun at best in most cases. It takes a lot of time and expense to recognize real improvement. On the other hand, with this revolver I was able to transform a handgun that was uncomfortable to use into a handy defensive handgun. It was also accurate enough for use by an outdoorsman as a backup. I began addressing the overall appearance. The revolver had been dropped, breaking the hammer spur.

This is common and the geometry of the handgun is such that many have predictable balance points. When dropped from a few feet with enough time for the revolver to turn 38 was less than desirable. In the air, the piece usually lands on its

hammer. That is why the factory rebound and safety devices are so important. While some shooters may wish to convert to double action only, others shy away from such a conversion so that wasn't something we would do.

A buyer not knowing the person that converted the gun may not trust it. After working in the shops around used guns for so many decades I cannot say I blame them. The same goes for a bobbed hammer. Unless it is done at the factory, bobbing a hammer takes away from the gun's value or at least its attractiveness to a new owner. This hammer was broken in such a way that it was possible to grind and polish it into a short spur.

While not original, the result was a neat looking spur that offered single action capability without snagging as much as the old one might. Also, it was still compatible with thumb break holsters. To begin, I looked over the hammer and decided to shorten it just to the point of the break. The gun shop owner would have went into

THE SNUB NOSE .38 CONTINUED

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Some fitting was required. a fainting spell over the price of anew hammer and fitting! I was removing the broken area and moving it back to the original area that wasn't affected. I carefully scribed the area to be ground and ground the broken section on the grinder. A careful hold, a learned touch, and the hammer bob was finished up with a file, resulting in an improved appearance. More important, the hammer is no longer sharp. This is an operation that takes a bit of care.

Some will put the hammer in a vise and run a file to straighten the broken edge. After forty years or so at this I simply hold the piece in hand and stand while I run it on the grinder.

The revolver was examined and found to have corrosion beginning on the common spots: The rear sight channel, under the grips, and on the ejector rod. A bit of Flitz Polish and some effort addressed this. A neat trick that works surprisingly well on free standing rust is to take the edge of a penny and gently scrub the rust away.

Next, the customer had complained that the snub .38 kicked more than others he had fired. Testing revealed this was true even with standard loads. Modern grips are much better as the original thin grips are designed for concealment, not comfortable shooting. The other complaint was spent cartridge cas-

es stuck in the cylinder. This was not completely true as only two of the chambers in the cylinder were affected. A combination of corrosion and infrequent cleaning were the culprit.

The cylinder was cleaned thoroughly using a Brownells Flex- Hone, producing shiny cylinders that effortlessly drop spent cartridge cases. With the hammer spur bobbed and polished and the cylinder properly honed, the next step addressing the sting of recoil. The laws of physics cannot be altered but energy may be redirected. A set of modern syn-

THE SNUB NOSE .38 CONTINUED

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thetic grips were fit and the original grips were sold with the gun as some value original components. The shop owner balked at paying thirty dollars and fitting for anew set, so a used set of Uncle Mike's grips were used and fitted instead. When first installed, the grips would not close at the top. While Smith & Wesson revolvers are usually pretty constant, the J-frame has been in production for some sixty years and variations exist. It is just as likely the injection mold process for the grips varied.

I took a look at the grips and found each had excess thickness at the sweeping "S" curve in the round butt grips. A bit of study, careful marking, cutting with a razor knife, and placing the grips on the frame, and taking them off again worked well. The grips were fit and tightened. Over tightening a set of grips that do not fit will often strip the screws. Far better to take the cut-and-try method and do the job correctly. Test firing the revolver proved far more comfortable with the new grips installed.

I fired a modest amount of Black Hills 125 grain JHP +P. While I would not have liked to fire these +P loads in the revolver with the small Sometimes a sow's ear can become a silk purse! grips, the new ones improved comfort and concealment was not greatly affected. I took a standard revolver with a few complaints, paid attention to market demands and local mores, worked with a shop keep to do a good job at a reasonable price, and ended up with a more salable handgun and one that would serve the consumer well.

ALL IN THE DAY OF A GUNSMITH'S WORK. AG

MAINTENANCE & REPAIR

Honing Rusty Chambers

Transforming neglected wall hangers into good shooting condition.

BY PAUL MAZAN APRIL 2015

ORIGINAL PP. 20-21

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Many old guns, especially those made during the black powder era, have been relegated to wall hanger status. In many cases this is because they were not well maintained during their working life. Although they may be mechanically sound their barrels and chambers have rusted to a degree that no longer allows chambering the rounds they were designed for. When a customer brings one into the shop it is necessary to take the time to carefully examine the firearm for structural integrity.

If the gun is sound you may be able to return it to a shootable condition simply by cleaning up the interior of the barrel. The fast and simple solution is to simply tell the customer that he has a wall hanger not suitable for restoration. In some cases this is really all you can do, however, if the pitting isn't too bad there are tools that can clean up the bore and chamber.

If the rust is relatively mild without major pitting it can be cleaned up with a Flex-Hone, which resemble a cleaning brush with abrasive balls at the end of the bristles

and powered by a common electric drill. Various sizes are available from Brownells and elsewhere for most rifle, pistol, and shotgun chamberings. Price runs about \$45-\$65 and they do a marvelous job. The problem comes in when you run into an uncommon caliber or gauge, or when encountering a really rusty chamber.

For these the tool for the job is a brake hone for disc brakes, available in auto supply stores. If you can't locate one locally Brownells carries them listed as a Shotgun Barrel Hone (#531-108-002AK) for under \$20. These have two spring loaded arms with abrasive stones powered with an electric drill and will fit any chamber or bore of 28 gauge or larger.

All of these require lubricant with the Flex-Hone using a proprietary oil that will not dissolve the abrasive balls as use of any other oil will voids the warranty. This oil is sold separately for around The Barrel hone can be used with any quality gun oil. The gun started out as a 1853 muzzleloading ri-

fled musket before being converted. Recently I had a .577 Snider come into the shop that had been sold as a wall hanger.

Looking it over I was sure it was safe to fire with moderate black powder loads but cartridges could not be chambered due to the build up of rust in the chamber. If you are not familiar with the Snider, it is a single shot conversion of the Enfield Pattern 1853 Enfield similar to the Model 1873 "Trapdoor" Springfield. Where the Trapdoor is hinged at the front and opens forward, the Snider is hinged on the right side and opens to the right.

The Snider system was invented by the American engineer and inventor Jacob Snider and the typical load was 68 grains of black powder under a 530 grain Minié ball. I used Birchwood Casey Blue & Rust Remover in the bore and scrubbed it with a bore brush wrapped with 0000 steel wool soaked with Brownells Rust Preventive No. 2 (083-019-016AK). That left the bore rust free with clear rifling but some pitting. I attached the bore hone to an old shotgun rod by drilling a hole for

HONING RUSTY CHAMBERS CONTINUED

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across pin through both the rod and the shank of the hone, then pushed it down the bore from the muzzle using an electric drill to power it. Just a few minutes work left the chamber rust free. Cleaning up the bore and chamber to insure any abrasive from the stones was washed out, I made The rust is gone and only clean up is left to do. Below center: The cleaned up Snider and a box of 26 gauge hulls loaded with black powder and lubed Minié balls ready for a range session.

Having a rear sight would help see what the gun is capable of. some test ammunition after ordering Cheddite 26 gauge plastic shotgun hulls I found on the Internet. Yes, I did say

26 gauge. I've seen videos where they used 28 gauge hulls wrapped in paper to bring them up to chamber diameter but the 26 gauge fit perfectly. I kept the loads light us-Far The gun had been a wall hanger for years. Bottom Attached to an old shotgun cleaning rod, it was inserted from the muzzle and used to polish the Snider's chamber.

Using an electric drill at the muzzle end and gun oil in the chamber, it is ready to use. ing 50 grains of Pyrodex RS and a patched .570 ball that weighed 275 grains. I headed off to my local range to test fire the gun before returning it to its owner. Considering there was no rear sight on the gun I was pleased to put

all three shots on the paper at 50 yards. Feeling the gun was up to handling a heavier bullet, I moved up to a 480 grain Minié ball but point of impact was off the paper.

Having only had two rounds loaded I headed back to the shop. One of the things I really enjoy is taking an old gun that others have written off and bringing it back to shooting condition. So, next time an old relic walks into your shop with a gun even older than the geezer carrying it don't be to fast on turning him away. After all, we get paid to repair guns and there just isn't any money in advising people to hang a gun on the wall. AG

MAINTENANCE & REPAIR

Reader Forum

BY AMERICAN GUNSMITH EDITORS APRIL 2015

ORIGINAL PP. 22-24

Ithaca Model 37 Several years ago I inherited an Ithaca Model 37 20 gauge.

The prior owner lived very close to salt water on the gulf coast. Because the shotgun came from the deep South I recently disassembled, cleaned, and replaced the bottom ejector spring, main spring, magazine spring, shell spring stop spring, and trigger spring. It was not fired by me until after this work was done. The problem is, if the shotgun is fired with only one shotshell in the magazine, that lone shotshell will fall out.

This does not happen when two or more shotshells are in the magazine. What can I do to eliminate this problem? The shell stop itself may be worn. There might be a problem where the magazine tube enters the chamber or with the tube itself. Sako Extractor On XP-100 Pistol I would like to say that I enjoyed Mr. Johnson's "Sako-Style Extractors On Model XP-100 Pistols" (February 2015.) It did indeed bring back some fond memories of a bygone era. I'd like to share one pertinent to the article.

In the late 70s my father and I were into Long Range Pistol Silhouette Competition. We had one rebarreled XP and my trusty .221 Fireball. When it was time to have the second pistol rebarreled we sought out the man that did the first conversion, Mr. R. B. Findley. He lived west of El Paso, Texas and was an older fellow, but when you're a teen everyone is old. We asked that the second one be barreled and chambered the same as the first and he said that would be no problem.

While we had his attention, we asked about the M16 extractors we heard he was adding to the bolts for wildcatters like us that were bending the original. To my surprise he produced a letter from Remington Arms telling him to stop immediately. I had to ask myself, "Why?" Now it's 37

years later and I work in a metallurgy lab for a company that would probably rather their name not be mentioned. For this occupation I have learned more about steel than I knew before.

Beyond cutting it, I can run tests involving tension, compression, and stress introducing risers that can cause parts to crack and fail. I sought the advice of the plant metallurgist about modifying a bolt to fit a Sako/M16 extractor. I explained how things worked and showed photos. He told me that he could see no problem, but did agree the right way to do it is out of the scope of a non-production environment.

Of course, I know that you can ask three different metallurgists a question and get three completely different answers. Jack So, what is it? Remington not wanting to tell people they voided their warranty? Or having to answer the questions of liability? Just my two cents and keep the change. Billy Nelson Wild Bill's Customs Chambersburg, Author Norman Johnson responds. Thank you for your interesting comments on my article about installing a Sako-style extractor kit on a Remington XP-100 bolt face.

These precision-made Tubb Extractor Kits sold by Brownells feature the highest quality Sako-style extractors on the market used to replace the Remington riveted and newer non-riveted extractors on their models 721, 722, 725, 700, 600, 660, 40X, XP-100, Model 7 and Sportsman 78. A caution statement accompanies the extractor kit, as might be expected, with application of an after-market part such as this.

In part it reads, "The bolt modification necessary to install these parts are permanent and non-reversible and will therefore void the factory warranty." On close inspection of a Browning/Sako Safari .243 Winchester bolt equipped with a Sako-

style extractor, it was noted the smaller Browning bolt diameter was 0.593 inch in diameter compared to the 0.694" XP-100 bolt diameter. There was no hesitation on my part when installing the Tubb Extractor Kit and it functioned perfectly.

However, I can echo the suggestion written in the instructions with the kit to anyone installing such a kit, "It is strongly recommended that only experienced gunsmiths who are properly equipped and practiced in this type of work perform this job." All this was included in my article. Tips For Gunsmiths It's important to include as much information as possible about any firearm you're working on! Quiz your customers thoroughly to make your job easier.

Such information can be seen on the sides of many gun's barrels as well as under the receiver. Remove the stock to look. Buy, collect and read as many books, publications, pamphlets, factory manuals, tool and parts catalogs and the like as you can. Gun shops, bookstores, gunsmiths (current and retired) are also great resources. Be a sponge and learn everything you can. Be helpful. It's good for business, offers good public relations and free advertising for you.

Just be sure to have a sensible limit as you can't provide all your services for free and still have a business or income. Know what you can do in your shop and refer work you can't do to others you know are good. Gain experience and equipment but don't buy stuff you'll likely only use once (or never.) It would be helpful to first work as an employee for a large gunsmith shop for a few years and moving out on your own after learning the craft. That's what I did and kinda-sorta-mostly recommend it.

ROBERT KOWELUK DILLINGHAM, AK

READER FORUM CONTINUED

ORIGINAL PAGE 24

Excellent tips, especially those requesting information in this Forum. Winchester 1400 Do you have any information about removing the magazine tube to replace the plastic throat? I seem to remember that a slide hammer is needed. Right. This process was described to us by one of the four Winchester factory gunsmiths remaining with the company when it still existed in New Haven, Connecticut. The slide hammer has to fit over the tube but not the end cap. Check the magazine tube where it enters the receiver.

There were 1400s with a single throat while others had two. Order in a spare end cap. Replace the OEM cap with the spare. After checking how the throat(s) fit, use a plastic, wooden, or rubber mallet to drive the tube into the receiver until the throat(s) free up. Remove the spare. Place the slide hammer over the tube. Replace the spare. Position the replacement throat(s). Pull the tube forward by hand until you are certain the throat(s) start in properly.

Seat the throat(s) securely by repeatedly bumping the slide hammer forward against the spare cap. Remove the spare and reinstall the OEM cap. H&R 88 Series I have all the American Gunsmith publications since July of 1994 and have been unable to find any information on the assembly/disassembly of the H&R 88 series shotgun. Can you help with this information? Howard F. Unless our rapidly aging brains are nearing total collapse, the original Model 88 was a very short barreled shotgun introduced in 1946 as the Topper.

The action of the gun became the basis for along line of H&R shoulder arms, including the Model 88 series and the Handi-Rifle. If you go through the issues in your pile again, or use our online indexes (americangunsmith.wordpress.com/index), look for Handi-Rifle as the subject. Start with the December 2010 and October 2009 issues. If you still come up empty, The Gun Digest Book of Firearms Assembly/Disassembly, Pt. V: Shotguns (2nd Edition) covers the Topper.

Shotgun Problems I am a disabled vet that started gunsmithing to occupy my time and keep me active. I am at a standstill on a project and need some direction on finding info and several parts for a double barrel shotgun that was brought to me with the right firing pin stuck out. I can't find any sources for take down or parts for this model. The left side of the barrel is marked "Model 433.512370, 12GA, 2 3/4 Sears, Roebuck and Co" with a second row "Chicago, Ill.

Made in Spain." On the right barrel the marking reads "AYA- Aguirre & Aranzabal." Jeff Searce JS Guns Sales and Service Thank you for your service. Sears didn't make the guns they sold. Established manufacturers produced them under contract. The prospect of locating parts for elder Americanmade guns is far better than finding them for those of old Spanish origin. Does AYA-Aguirre & Aranzabal still exist?

A journey through the rear pages of Gun Digest will provide a hint, as will an inquiry of the National Firearms Museum (nramuseum.org). There's always online resources as well. Once the presence of AYA is affirmed, contact them with a parts inquiry. Add to it a request for an English language owner's manual (lotsaluck on that one.) If they are no more, call Brownells and ask for a free copy of their Gun Parts Source List.

As for that stuck firing pin, separate the wood from the gun and thoroughly flush out the action with mineral spirits or K-1 kerosene. If dirt has done the deed, you should be able to depress the pin with a fingertip. If it moves freely in and out you've eliminated the sticking and can be fairly certain the firing pin spring has life left in it. Once the condition of the firing pin and spring have been thusly checked out, depress and hold the pin inward.

Examine the pin's holes in the breech face under magnification. See a burr? Smooth it up. AG

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