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AND THE AMERICAN GUNSMITH ARCHIVE

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ARCHIVE ISSUE NUMBER

INSIDE THE ARCHIVE

CAN YOU'S HOULD YOU'RE PAIR A BLOWN-UP PISTOL?

A TOO-NARROW VICTORY • DISASSEMBLY AND REASSEMBLY OF THE RUGER LCP PISTOL • LEARNING TO WORK ON ENG...

ORIGINAL METHODS. MODERN ACCESS.

ARCHIVE EDITION 057

DIGITAL ARCHIVE EDITION

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FROM THE ARCHIVE

A Too-Narrow Victory

BY AMERICAN GUNSMITH EDITORS SEPTEMBER 2008

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I've never wanted to write for a daily newspaper, but there are times I wish I could write about the news in this column and have it in the hands of readers while it still is "news." The June 26th ruling by the Supreme Court in the case of the District of Columbia v. Heller is a good example. The ruling was issued two days after the August issue went to press, so here I am writing about the ruling a few days after it was released, and knowing you won't be reading this until the September issue appears.

But such is the nature of the periodical publishing business. In any case, as we all know, the Supreme Court ruled that the Second Amendment does indeed grant the right of the individual to keep and bear arms—which is clearly what the Founding Fathers intended. I almost wrote about what would have been the "upcoming" Supreme Court ruling last month in the August issue.

What I would have said if I hadn't been overcome by a superstitious fear of "jinxing" the ruling was that the decision the court would announce when it issued its ruling was a foregone conclusion. Given the nature of the 10 amendments that make up the Bill of Rights' amendments that spell out the rights of the individual to freedom of speech, freedom of assembly, freedom of religion, and so on't here's no way the court could have ruled otherwise.

Only an idiot (like the members of The Brady Bunch) could adopt the ludicrous position that nine of the 10 amendments in the Bill of Rights apply to rights granted to the individual, but one't he Second Amendment'applies to a right granted to the states (to form a militia). Which brings me to my point: The Supreme Court decision that determined that the Second Amendment guarantees the individual's right to keep and bear arms was the result of a five-to-four vote!

That means, my friends, that there are four idiots on the U. S. Supreme Court. Another way of putting it: We were only one idiot away from an absurd decision that would have had far-reaching and potentially devastating ramifications for our industry, our country, and the personal freedoms of all Americans.

It seems to me that the system of checks and balances that the Founding Fathers set up works reasonably well between the Executive and the Legislative branches of our government to keep our democracy on course and our freedoms intact. The greatest danger we face is the power wielded by the Judicial branch to modify or "improve" the Founding Fathers' vision to suit the personal agendas of the justices.

And that's why our Presidential elections are so important—not so much for who the president is or what he believes in, but for who he appoints to the Supreme Court. I hope we as Americans keep that in mind when we vote in November. Editor Keith Lawrence Technical

PEOPLE & COMPANIES

Disassembly and Reassembly of the Ruger LCP Pistol

This new entry in the concealed-carry pistol market may change a few minds about Ruger pistols.

BY CHICK BLOOD SEPTEMBER 2008

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The main objections I've heard concerning Ruger semi-autos for concealed carry or law-enforcement backup have nothing to do with reliability or performance. The complaints are usually "too heavy" or "too bulky." Or both.

But those objections are no longer valid—not since the introduction of the Ruger LCP. (LCP stands for light-weight compact pistol.) Actually, that introduction came at the 2007 SHOT Show, but the pistol didn't get rolling off the production line until this year, so I held up writing this until it was readily available on dealer shelves. The LCP is not at all like the other Ruger autoloader, the well-known P- Series. The LCP is link-less, utilizing instead a locked-breech action and a tilting barrel.

Upon firing, the barrel and slide are firmly interlocked and remain that way until both have traveled a short distance to the rear under recoil. After this brief trip, the barrel is cammed downward and disengages with the slide, permitting full-recoil travel of the slide to extract and eject the spent round. When the slide is re-

turned forward by the dual recoil spring, it strips off a fresh round from the magazine. The barrel then cams up to reengage it, and the pistol returns to battery.

The LCP has a manual hold-open latch built into the left frame. Underscore the word "manual." When the last shot is fired from a magazine, the latch will not automatically snap up to hold the slide open. The magazine itself holds six .380-caliber cartridges and is not interchangeable with any other Ruger pistol mags. When fully forward, the hammer of the pistol is tucked completely into the slide, which features a viewing port that shows the presence of alive round in the chamber.

Nothing protrudes to snag on clothing or the inner lining of a woman's purse. The LCP is striker-fired and double-action-only. It measures about 5 inches from back of grip frame to the muzzle, 3/4 of an inch wide, and weighs all of 10 ounces empty. So much for the idea that all Ruger pistols are heavy and bulky. Field Stripping The Ruger LCP is simple to operate and simple to work on—as you're about to discover.

BUT FIRST, AS ALWAYS,

DISASSEMBLY AND REASSEMBLY OF THE RUGER LCP PISTOL CONTINUED

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make sure it's unloaded. Start by depressing its latch and removing the magazine. Lock the slide back with the manual hold-open by racking the slide almost all the way to the rear and pushing upward on the latch. (The dual recoil springs can make moving and holding the slide to the rear a little tough.) Moving the slide farther to the rear disengages the latch, and the slide will ride forward on its own.

It requires a jeweler's screwdriver or other blunt tool to start the takedown pin out of the frame to the left, after which you can pull the pin out with your fingertips. Remove the slide assembly to the front and invert it. Compress the recoil springs to disengage them from the barrel lug and lift them out with the guide. When removing the barrel, it's necessary to push it forward slightly before swinging it down and then back to withdraw it from the slide.

Detailed Disassembly Before getting too deeply into this phase, there are a couple of errors on the schematic contained in the owner's manual that I should point out. The trigger spring is numbered 26, while the hammer-catch spring is numbered 16. They are reversed in the drawing in the manual, but correct. The .380-caliber pistol is doubleaction only. rectly identified on the parts list.

The correction has been made on the drawing shown here; the trigger spring is really part number 16 and the hammer catch spring part 26. Okay? The tools required for complete disassembly will include a 1/16- and a 1/8-inch drift punch, a 3/32-

inch roll-pin punch, a plastic hammer, a hooked dental tool, the previously mentioned jeweler's screwdriver, a small magnet, and your own version of a factory tool they use to reinstall the hammer catch (#27) and its spring (#26).

The factory tool or your own homemade version of it is a requirement due to the lack of working space within the frame. You can make a tool similar to the one used at the factory by simply grinding the lower jaw of a pair of long-nose pliers to the contour shown in the accompanying photos. You'll use this tool to hold the catch and spring together while inserting them as described later on. I chose not to take a grinder to my good-quality pliers.

Instead, I bought a set of ignition tools at a local auto-parts store and ground the pliers it contained. These cheap ignition pliers were actually thinner than my long-nosed pliers and gave me a bit more room to work inside. I suppose these two components could be placed in the frame without a special tool, but you'd have to have the world's skinniest fingers to get it done. I don't. The first item to come out of the slide is the extractor (#5).

Insert your jeweler's screwdriver behind the part and flex it outwards. There's a hole in the slide and the extractor plunger (#4). Using the 1/16-inch punch or the dental tool, insert your choice into both holes to capture the extractor spring (#3). Keep it captured and use your fingers or the magnet to remove the extractor. Now invert the

slide. The firingpin retainer (#2) is a roll pin. The 3/32-inch roll-pin punch will be needed to move it.

Place a finger or a strip of tape over the firing-pin slot at the rear of the slide. Don't drift the retainer completely out to the top of the slide, only enough to clear the pin's cut in the back end of the firing pin (#7). When you've gone far enough, the firing-pin spring (#6) will push the pin to the rear and you can withdraw them simultaneously from the slide. Since both the front and rear sights are permanently integrated, the slide has been taken down as far as you can take it. Now we'll tackle the frame.

At the back, just above the hammer-spring seat (#34), you'll see a "tombstoneshaped" hole. A tab on the spring seat fits into this hole. With the frame upside down, insert the end of the 1/16-inch punch in the hole, depress the tab, and carefully pry upwards to start out the seat. Your fingers should be able to pull it clear of the grip frame. This will expose the hammer-spring seat pin (#33), and you'll be able to see how the hammer spring (#25) engages it.

Remember what you see, as well as how the seat pin "sits" inside the frame. Reach into the LCP's magazine well with the dental tool, latch onto the spring, lift it off the pin, and turn it. There's no need to drift out the seat pin. It doesn't drift, but will drop from the frame when it's positioned right side up. Your next targets are the front and rear frame-insert pins (#29). These are

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high-density polymer and call for the 1/8-inch punch applied from right to left. After pushing upward on the trigger, the frame insert can be removed. On the insert's right side is the trigger bar (#18), among other things. Place your thumb or a finger over the trigger spring (#16) and lift off the bar. The hammer pivot (#17) can be drifted in either direction for removal of the hammer (#23) and hammer spring.

Unless damage is present, there's no real need to remove the hammer spring retainer (#22), which is another roll pin. Invert the insert. Move the trigger (#13) forward within the guard. There's a slot in the trigger's rear. The slot leads to a hole in the top of the trigger. The trigger pin (#14) fits into that hole. Use the 1/16-inch punch in the trigger slot to start the pin out, and then change the position of the insert to push the pin clear.

To save a little time now (and later), lift the trigger spring and trigger pivot (#15) from the insert as a unit and let them remain a unit. The takedown pin detent

(#20) is really a spring.

Use the jeweler's screwdriver or the dental tool to pop it out of Ruger LCP .380 ACP Semi-Automatic Pistol (Specifications subject to change without notice)

- 1 Slide*
- 2 Firing Pin Retainer
- 3 Extractor Spring
- 4 Extractor Plunger
- 5 Extractor
- 6 Firing Pin Spring
- 7 Firing Pin
- 8 Guide Rod
- 9 Recoil Spring, Inner
- 10 Recoil Spring, Outer
- 11 Barrel*
- 12 Frame Insert
- 13 Trigger
- 14 Trigger Pin
- 15 Trigger Pivot
- 16 Trigger Spring
- 17 Hammer Pivot Pin
- 18 Trigger Bar
- 19 Hold-Open
- 20 Takedown Pin Detent
- 21 Hold Open Detent
- 22 Hammer Spring Retainer Pin
- 23 Hammer
- 24 Grip
- 25 Frame
- 26 Hammer Spring
- 27 Hammer Catch Spring
- 28 Hammer Catch
- 29 Magazine Latch Catch
- 30 Frame Insert Pin (2)
- 31 Takedown Pin
- 32 Hammer Catch Pin
- 33 Magazine Latch Spring
- 34 Hammer Spring Seat Pin
- 35 Hammer Spring Seat
- 36 Magazine, Complete

*Factory fitting required

DISASSEMBLY AND REASSEMBLY OF THE RUGER LCP PISTOL CONTINUED

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its groove on the insert. Be sure to cover the detent with a finger before you do any popping. The upper rear of the hold-open (#19) serves as the ejector for the LCP. Your dental tool will lift the holdopen detent (#21) “another spring” away and you take out both components individually. Before drifting the hammer-catch pin (#31) from the right, study how the catch and its spring (#26) mesh together and memorize what you see. Keep the dental tool in hand.

The magazine latch (#28) is held in the grip frame by the latch spring (#32). Extract the spring with the tool and withdraw the latch to the right. You now have a totally naked gun on your bench. (Isn't gunsmithing exciting?) Reassembly Tips The trigger goes back in from the bottom of the insert. The trigger pivot enters from the right, with the long leg of the trigger spring facing forward.

The trigger pin holes in the trigger and trigger pivot must be aligned prior to inserting the pin, which can be tapped down with a punch to fully seat it (if it needs seating).

Slide the hammer assembly in from the bottom, and Above and install the hammer-pivot pin. Lay the trigger bar into its grip-frame recess with the rear of the bar over the hammer-pivot pin and the front of the bar impaled on the stud of the trigger pivot.

Place a finger over the rear end of the bar, and rotate the long leg of the trigger spring back and into its groove under the bar. Now for the hammer catch, hammer-catch spring, and that special tool we made earlier. Lay the catch flat on your bench. Insert the bent leg of the spring into the small, upper hole in the catch. Grasp the two components in the jaws of the tool to maintain their relationship.

The hole in the insert for the catch pin and the matching one in the catch have to be aligned when you position the catch within the insert using the tool. Now push in the catch pin. Before reinstalling the insert in the frame, in- I stall the take-down detent (spring). Also, there's a small hole above the hammer on the right side of the insert. Push

the hammer catch forward and insert a punch or straightened-out paper clip in the hole to maintain the forward position.

Press the insert down in the grip frame until it seats, and then install the front and rear insert pins. Pull out the punch or paper clip restraining the catch. It will snap to the rear under spring tension. Flip the frame upside down. Place the hammer-spring seat back on its “shelves” in the magazine well. Reach inside with the dental tool, hook the spring, pull it upward, and release it over the pin.

Place your thumb on the face of the hammer to protect the insert while you pull the trigger for a proper function check. When the pistol cycles, you can consider everything to be in proper order. Place the hammer at half cock, and push the hammer-spring seat into the magazine well until it snaps in place. Finally, reassemble the slide assembly and mate it with the gripframe assembly, and presto! “the naked gun has been transformed back into a Ruger LCP.

PISTOLS

Learning to Work on English Double Shotguns

Consumer preferences are constantly changing, producing new opportunities for the gunsmith willing to learn new skills. One such opportunity is in servicing high-end imported double shotguns.

BY REID COFFIELD SEPTEMBER 2008

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There have been a lot of changes in the gun world in the last 50 years. Not all that long ago, the idea of the semi-automatic pistol being used anywhere other than in the military was almost unthinkable. And the acceptance of the AR-15/M16type rifles as suitable for a variety of hunting, competition, law-enforcement, military, and civilian uses would have been regarded as ridiculous in the early 1960s. Even shotguns have gone through major changes.

When I first got into gunsmithing it was years before I saw my first English side-by-side double. As I recall, in my first five years or so, no more than two English guns came into my shop. At that time, most of my customers had never even seen a British double and knew next to nothing about them. The well-heeled and sophisticated shotgunners in my area used Brownings, and if they were side-by-side users, they went for Parkers or L. C. Smiths. That's certainly changed within the last 10 years.

Pick up any current issue of *Shooting Sportsman* or *Double Gun Journal* and you'll see a number of articles on British guns' along with the many ads from sellers of imported side-by-side shotguns. It's not surprising then that English and European side-by-sides are becoming more prevalent as many shooters opt for these guns. There are a number of reasons for this.

Some folks purchase British guns as a "status symbol." They see themselves as a cut above the common folk and these high-ticket guns help to separate them from the masses. There are others, of course, who simply enjoy owning and shooting a darn nice gun. They like the way these guns look, feel, and handle. A good friend of mine who shoots an English double told me it helps him to feel like he's back in a slower, more relaxed time.

Whatever the reason, lots of shooters have turned to side-by-side doubles and that can mean new opportunities for the gunsmith.

Getting Started with Doubles Many "smiths shy away from working on doubles for very good reasons. Often, they've had little or no experience with doubles and especially the more expensive imported guns. They understand well the potential hazard. This one is in better-than-average condition. ards of doing a poor job on an expensive gun.

Not only can this incur the wrath of the owner and result in a possible lawsuit, but the owner and his friends will make sure your name and reputation are dragged through the mud. So how can you get started with these guns without the risk of screwing something up and making customers mad? It's really not all that difficult, but it will require some time, as learning anything new always does. And, it will take a modest investment in books, tools, and a few guns. "

LEARNING TO WORK ON ENGLISH DOUBLE SHOTGUNS CONTINUED

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Books You'll Need Let's talk about the books first. There are relatively few books available that cover side-by-side doubles, and none that I would call a true "how-to" manual. However, the basic information you need is available if you take the time to find it and are willing to do some careful reading. The five books I would recommend are as follows: *Double Guns and Custom Gunsmithing* by Steven Dodd Hughes. Hughes is probably the best gunsmithing writer on doubles in the U.S.

This is his latest book and it's filled with good information. Whether it's TIG welding or stock bending, he provides sound advice and practical guidance. Consider this one to be a "must-have" book. *Fine Gunmaking Double Shotguns* by Steven Dodd Hughes. This was Hughes' first book on doubles and is a bit more basic than *Double Guns and Custom Gunsmithing*. However, it provides good information and should definitely be a part of your library. *Shotgun Technicana* by Michael Mc Intosh and David Trevallion.

This small book has a wealth of good material on a variety of subjects ranging from removing dents and drastic stock alterations to leather covering recoil pads. *The Art of Gunsmithing The Shotgun* by Lewis Potter. Potter is a young Englishman who is both a great writer and a darn good gunsmith. This is an outstanding book by an author who ac-

tually gets his hands dirty and understands the realities of a working gunsmithing shop. *The Craft of the Gunsmith* by G. W. Spearing.

This is a much older book than the first four and one that might be a bit more difficult to find. The author tells how he got into the British trade and what it was like to work as a country gunsmith between the World Wars. While the book does not contain as much "meat" as some of the others, there are nuggets there that make it worth owning. The stockbending box is one such jewel. Those five books can provide a wealth of information available nowhere else.

Most gun-book dealers can supply the first four, as they are all still in print. The last book can normally be found as a used book on websites like Amazon.com. In addition, I would encourage you to subscribe to the *Double Gun Journal* and *Shooting Sportsman* magazines. Both regularly run in-depth articles on various aspects of gunsmithing doubles. Training Programs Another great source of information and training is the NRA Summer Gunsmithing Program. Courses on doubles have been offered in the past.

For many years, Jack Rowe, the oldest British-trained gunsmith in America, These Spanish doubles will give you ample opportunity to hone your skills and develop your techniques. Once you successfully clean up this mess, you'll know something about re-

pairing ribs. has taught a basic course in working on British doubles. Until you've seen Rowe bend a stock using nothing more than a propane torch, some cotton rags, and linseed oil, you haven't lived!

Similar courses are offered at a number of gunsmithing schools around the country. I took Jack's course at Montgomery Tech in Troy, North Carolina, several years ago and it was fantastic. It has also been offered through the gunsmithing department at Murray State College in Tishomingo, Oklahoma. If you have more time available, Dean Arnold, the chairman of the gunsmithing program at Murray State College, recently told me of plans to offer a full-time gunsmithing program devoted to double shotguns.

Murray State has even hired anew instructor, Dewy Vicknair, to run the program. Vicknair is well known within the shotgun community and the Custom Gunmakers Guild as one of the finest shotgun gunsmiths in the country. Hopefully this program should be up and running by the end of 2009.

If you want more information on this exciting new program, contact Murray State College ext. 235). tally, another one of the benefits of taking such a course is the opportunity to get to know other students who share your interest and desire to learn. You'd be surprised

LEARNING TO WORK ON ENGLISH DOUBLE SHOTGUNS CONTINUED

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Above left and A great exercise and learning experience would be to cut the guard off, add a piece of steel, and convert it to along-tang guard (right) for a straight-grip stock. how much good info you can pick up just in "shooting the bull" with your fellow students. Working on "British" Guns That Aren't British You can certainly learn a lot by studying the literature and taking classes, but sooner or later you simply have to get your hands on some guns you can experiment with.

Unfortunately, most of us cannot afford to spend thousands of dollars for "practice" guns. That's the bad news. The good news is we don't have to. The basic design of most English doubles is so good that like a lot of other good designs it's been copied! Spain and Belgium both export many thousands of side-by-side doubles that are copies of English designs. And they're inexpensive. This is especially true of the basic Anson & Dealy boxlock.

These guns are not as well built or as nicely finished as the pricier English guns, but the basic mechanism is often identical to that of the top-dollar British doubles. Not too long ago, Century International Arms Making those repairs and possibly making some mistakes in the process is the best way to learn. imported thousands Spanish side-by-side doubles in 12 and 16 gauges. Many of these guns are "well used" to say the least, but the prices on these guns are low (in the \$150 to \$190 range).

Contact Century for information on current prices and availability. These Spanish doubles are ideal practice guns. No one will get upset if you make a mess relaying the ribs or installing anew hinge pin on one of these old Spanish side-by-sides. And if you do have problems, so what? Just try again and keep working at it until you get it right. That's a luxury you would never have working on a customer's gun or even on one of your own personal guns of greater value.

Keep in mind that the basic mechanisms on most of these Spanish doubles are simply copies of English designs. Once you master the Spanish guns, you'll be in much better shape to move on to more complex and higher-grade guns. You'll probably want to start working on the lowerend American double guns and move up to the more expensive guns as your experience and reputation grow. Eventually, you'll find yourself working on English guns and doing a very credible job.

By that time, you'll have considerable experience under your belt, knowledge of the various mechanisms, and a good basic understanding of double gun work. Tools and Suppliers As for tools, you probably already have most of what you need. One of the great things about side-by-side shotguns is the limited number of special-purpose tools you'll need. As Jack Rowe mentioned in one of his (continued on page 22)

FROM THE ORIGINAL PAGE

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PEOPLE & COMPANIES

Micro-Lapping the Remington 700/40X Receiver Bed

The precise fit of a cylindrical rifle action in its stock bed can be improved and glass bedding may be eliminated with the simple application of this do-it-yourself bed-lapping tool.

BY NORMAN E. JOHNSON SEPTEMBER 2008

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Where a cylindrical action contacts the stock bed, the fit is not always as precise as it should be. This lack of precision is frequently seen in a number of actions like the Savage, Weatherby, Remington, and others. Here, I'll describe the construction and use of a precision lapping tool for the receiver bed of the popular Remington Model 700- Series rifle and its direct descendant the Remington Model 40X.

The tool is designed to microscopically improve the bedding on all types of Remington stocks'wood, graphite, or fiberglass'or where glass bedding, pillar bedding, or an integral bedding block is used. Making the Bedding Lap The body of the lapping tool should be made of metal or high-impact plastic. I chose a piece of iron rod stock. Select a piece with a diameter large enough to turn it on the lathe to a diameter of exactly 1.332 inches.

With a finished length of 7-7/8 inches long, the tool will service both the short and long actions. The part should be cut square at each end, without rounding of the edges any more than is needed to relieve sharpness or remove burrs. A Remington Model 700/40X receiver is 1.353 inches in diameter and this tool is designed to be used with 3M Company silicon carbide 240LPS wet or dry abrasive paper, or the like.

This sheet is 0.010 inch in thickness, and when singly wrapped over the lapping tool, yields a side-to-side diameter of 1.353 inches'the same as the action. 332-inch diameter and 7-7/8-inch length. Keep a close tolerance here. Following this, drill and tap two 1/4-inch holes about an inch from each end for top-guide handles. These can be made of any material strong enough to do the job.

A through hole in a piece of plastic, wood, or steel will do, or if metal is used, just drill and tap a hole to fit the 1/4-inch threaded holes in the tool body and handle. I just happened to find a couple of decorative locking handles already tapped at one end. Using the Micro-Lapping Tool Place the rifle stock in a padded vise so it is steady and easy to reach. Cut a piece of abrasive paper to the exact length of the lapping tool and wide enough to extend upward beyond the inner borders of the stock.

To hold the paper snugly on the lap, a full length of double-sided tape does a good job. Be sure this is on the lap well above the stock so the radius dimension isn't altered. Set the tool squarely into the stock so the front is at the forward aspect of the receiver-ring bed and the

MICRO-LAPPING THE REMINGTON 700/40X RECEIVER BED CONTINUED

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Above left and The author happened upon these fancy handles while making the tool, but two long machine screws would suffice. Wet-or-dry 240grit abrasive paper is used between the stock bed and the lapping tool. rear is at the tip of the stock-bedding tang. Then, with very light, downward pressure at each end of the lapping, make very short back and forth strokes'just a few to start with. Remove the tool from the bed and examine the paper and the stock bed for contact where any material has been removed.

The black paper will readily show where the stock bed has been altered. It also shows precisely where the bed needs to be altered as high spots are sanded down. These high spots are the cause of uneven, accuracy-robbing action bedding. In this process, we're

not trying to remove an appreciable amount of bedding material, regardless of whether it's wood, metal, or fiberglass. We're just trying to produce a microscopically uniform fit between the receiver and the stock.

Unbeknownst to many shooters, poor action bedding can be the cause of poor groups on target. That's because a poor fit can allow "springing" of the action, producing vibrations that can destroy accuracy. A good test for uniform contact between the stock and receiver is to alternately loosen and tighten the action screws fore and aft. When turning a screw, feel for any perceptible movement where the action meets. Shown here are two five-shot groups fired from a 270 Winchester heavy-recoil rifle.

The Model 700 action was bedded to its stock using a bed lapping tool described in the text. the stock using thumb or finger pressure at this juncture. It's amazing how little stock-to-receiver movement can be felt in this way. If the center screw on a Remington or any other threescrew receiver is used, it should receive only moderate torque unless a bedding pillar is used at this area of the stock.

Conclusion While the cost to make this tool is negligible, it's easy to make and use, and should become apart of any gunsmith's "bag of accuracy tricks." Micro-bedding is an important part of the workup on any target rifle, and the ultimate accuracy cannot be achieved without it. I

PISTOLS

Can You'S hould You'Re pair a Blown-Up Pistol?

Don't compound your customer's mistake by making an error of your own.

BY ROBERT K. CAMPBELL SEPTEMBER 2008

ORIGINAL PP. 12-16

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Over the years, I've run into very few truly rare guns, but I have seen my share of oddballs. As a result, I assume nothing—not even the caliber of the handgun being examined. (You remember, I'm sure, the old saying about what happens when you assume.) Case in point: One of my recent learning experiences involved a Orbea Hermanos double-action revolver based on the Smith & Wesson Military and Police series.

The owner was fond of the revolver, and claimed to have been successful in hunting rabbits and squirrels with it. He brought it to me because of an unexplained problem with swelling cases. The handgun had not been fired in some time because affordable ammunition was not available. When Black Hills introduced a cowboy load, the owner broke out the old revolver, and ordered a supply of the new ammo.

The Black Hills 115-grain Flat Point load in .32-20 reportedly shot well from the gun, except for the problem with the swelled cases. After more research than the revolver was probably worth, I learned it was chambered for the 8mm Lebel. How this oddball ended up in America is a mystery to me—and to the owner. These Spanish re-

volvers were marketed in France for the 8mm French service cartridge, a cartridge also used in various Velo Dog revolvers and the like, while a .32-20 version was marketed in America.

I informed him that Fiocchi offered the correct 8mm Lebel ammunition. I don't think he believed me and is probably still terrorizing small animals with the .32-20 load. The .32-20 cartridge cases are semibottle-necked and expanded all the way up to the neck and a bit beyond any chance of resizing and reloading. At least the swelled cases keep him from souping it up with handloads too dangerous for the old Spanish Steel. The point here is obvious: Don't make assumptions.

You wouldn't think the ubiquitous 1911 would be prone to such misadventure. After all, it's pretty clear if the piece is a 9mm, a .38, or a .45. But have you ever seen a 1911 in British .455 Webley? (They exist.) Not long ago I examined a 1911 that was marked “.38 Super,” but it clearly was not a .38 Super. And while I don't know the exact history of the gun, it's a history well worth anyone's time and effort to explore. Blow-Ups: What Happened?

Recently's peaking of making assumption-s'I saw a photo of a blownup .45-caliber 1911. What blew it up? Probably it was the .40-caliber case that was stuck in the chamber—and possibly another one wedged in the barrel. I also examined a 10mm that fell apart due to a too-liberal barrel throating. While the pistol can be 45 ACP and one with the .45 GAP. The swelled case (left) was fired and ejected normally from a ramped-barrel Kimber. This is a load on a very dangerous level.

The other case (right) is a typical blowout from over-pressure. repaired, the owner has yet to part with the cash for anew barrel. Such problems are fairly common, and serve to keep the gunsmith's life interesting. One of the most interesting handguns to cross my bench lately was the Colt Super .38 shown in the accompanying photo. This is an example of a darn good gun that fell into the hands of someone who didn't understand it as well as he thought he did.

But I have to give him a pass on this one, because few of us would have caught this problem unless we knew what we were looking for. The story of this particular 1911 began many years ago, before custom barrels were generally

CAN YOU'S HOULD YOU'RE PAIR A BLOWN-UP PISTOL? CONTINUED

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Original caption: Right top: Firing a .38 Super round in a chamber sleeved for .38 Special is a step in the wrong direction pressure-wise. The result is illustrated.

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Original caption: Right bottom: Salvaged after the blow-up, the repaired Colt, now chambered for .38 Super, turned out to be an excellent and reliable shooter. By a .38 AMU and, of course, the springs were intended for the caliber. Some of the handguns had Stevens rear sights, although these were relatively early sights used on National Match pistols. The original barrel was a .38 Super with a sleeve brazed into the chamber to handle the .38 AMU cartridge. These sleeves worked well.

available. At this time, folks like Jim Clark, Sr., welded up Colt barrels and fitted them to slides as a matter of course. These gunsmiths even silversoldered new chambers into barrels. One trick was to produce bull's-eye guns in .38 Special. Clark produced one of the first ramped barrels by welding it himself, and worked extensively with .38 Special 1911s. Many began life as .38 Supers, and were scroll-marked .38 Super on the slide. I've never seen an example remarked .38 Special.

Feed problems are always a consideration when attempting to work a rimmed revolver cartridge into an automatic pistol. The Army Marksmanship Unit had the resources and skill to produce a special National Match pistol in .38 AMU. The AMU is simply a .38 Special with a .38 Superlike case rim. The Super has a case rim that was originally designed to provide headspace unlike the .45 ACP, which headspaces on the case mouth.

The .32 ACP shares this trait with the .38 ACP, in that it headspaces on the case rim, which is largely a product of their early date of introduction and the ideas that prevailed at the time. Later, the .38 ACP barrels were changed to headspace on the case mouth, but only after Bar Sto Precision had been producing the proper case-mouth-headspaced barrels for years. In any case, the .38 AMU was moderately successful in mid-bore competition in the old NRA .22/.38/.45 matches.

Many of the .38 AMU guns were built with GI Government Model frames. These frames were marked "U. S. Government Property" like millions of others. The slide was marked ".38 Super," but the barrel was actual-

The rest of the story is that a shooter who obtained one of the these handguns was unaware of the story I just related to you, and he fired off a .38 Super cartridge in the chamber. The result was pretty spectacular. In typical 1911 fashion, the barrel was

wrecked and the magazine was blown out of the bottom of the frame. Fortunately, the shooter was relatively unscathed. Before attempting to repair the handgun, it was important to learn what in the world went wrong in the first place.

The slide was marked ".38 Super," so we can assume it should be safe to fire .38 Super ammo in the gun, right? Wrong! My historical research into early ".38 Super" pistols gave me a clue as to what had happened. Practical inspection confirmed my suspicions. I don't think I need to repeat my warning about making assumptions. Although I'd never seen this particular mis-marking problem before, over the years I've examined quite a number of other blown-up 1911s.

I can recall only a few pistols that could not be repaired and put back into service, despite the fact that many of the offending rounds must have been double charges. A careful handloader will see pressure build and spot-flat-

CAN YOU'S HOULD YOU'RE PAIR A BLOWN-UP PISTOL? CONTINUED

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tened primers long before the pressure becomes dangerous. But double the powder of even a modest charge and you can expect to wreck practically any handgun except, perhaps, for the 1911. Most often, the case ruptures and the magazine is blown out. This is what happened in the case of the mismarked “.38 Super,” except that this time the barrel was wrecked. At about the same time as the above incident, I examined a Kimber .45 that had endured a double charge.

Interestingly, the case had not ruptured and the magazine had not blown out, leading me to conclude there is something to be said for the ramped barrel. In this incident, the shooter actually fired two double-charged rounds. He was using a chronograph and when the 230-grain bullets averaged 1300 fps, he knew something was wrong.

Although there were no injuries with the guns discussed above, we can never ignore the potential for injury—especially to the face and eyes—or the potential for a blown gun that's been repaired to blow up again. If you're the one who does the repair, you're assuming a certain amount of liability for what happens with that gun later on. (There's that nasty word “assuming”

again.) This has led me to establish a procedure for checking a handgun after an overcharge.

The obvious signs of a frame or slide crack are the first things to look for. Next, I check the slide closely. Several times I've found that the extractor tension is ruined after such a blow and the extractor doesn't work. In another case, the ejector of a 1911 was ripped from its mooring and was higher than before the blow. I also examined one pistol with a very loose trigger that I suspect resulted from such a blow.

I don't really know how this could have happened, but there is a lot of pressure ripping through a handgun during an overcharge. After carefully checking the frame, slide, barrel, and trigger for signs of cracks, stress, or looseness; and checking the extractor, ejector, and safety for function; if nothing serious is found, I consider the pistol safe to rebuild. Rebuilding the infamous “mismarked .38 Super” detailed above presented some special problems because of the damaged barrel.

The chamber sleeve convinced me it was .38 AMU, although there is a possibility it may have been .38 Special. In any case, short of coming up with an identical original barrel, the pistol could not have been

restored to original condition. This meant the pistol's value as a collector was gone, but the owner had never intended it to be anything but a shooter. Since the pistol seemed tight and otherwise passed the tests I mentioned earlier, I agreed to order and install a Bar Sto barrel.

The Bar Sto is available in both “drop-in” and “gunsmith-fit” variations. (The drop-in often requires at least a little fitting due to the variations in 1911s.) The gunsmith-fit barrel will usually give better accuracy, though most guns will be improved to some degree even with the drop-in barrel. If you ever run across a .38 AMU pistol and are contemplating a conversion, I can tell you that the .38 Super barrel was compatible with the Colt frame with no modification or special fitting required.

I'll go over the fitting technique in a moment. But first it should be noted that a custom-fitted barrel reduces slop and decreases wear. The firearm will be more accurate, as the lockup is more consistent. Before we actually fit the barrel, let's look at the lockup points. There are the locking lugs, the barrel bushing, the sides of the hood, and the bottom lugs. A quality barrel will arrive oversized for a good fit. The barrel hood is larger than the breechface opening. This hood must be filed

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to conform to the breechface by the file-and-try method. Go slowly; if you get too happy with the file, you'll end up with a poor fit. You must have .003-inch clearance on each side, and the hood must remain parallel to the breechface sidewalls for good fit and function. This means attention to detail. The barrel extension is also oversized and must be measured with a hood gauge (from Brownells) and be properly shortened. This is usually done on a lathe.

The hood will end up about .003 longer than the hood-gauge measurement. Next, carefully file the barrel lugs until the barrel slides into the slide slots with no excess movement—a good tight fit. The rear cut of the Bar Sto barrel controls upward motion and demands your attention during fitting. The method begins with placing the upper lugs in the slide slots and carefully tapping the bottom lugs with a brass hammer. Tap toward the muzzle for proper fit.

Filing the barrel allows it to move more fully into contact in the locking recess. Be certain your filing strokes are even. Metal will be filed away and evenly moved. You'll eventually reach the point where the barrel rests in its locking lugs without springing away from the locked position when pressed into place. In short, the barrel must be properly fitted and perfectly centered in the slide. With care, this is not difficult, but pay close attention to every step. Sometimes, problems come up.

For example, the bottom lugs may bind on the slide stop. This is not common, but seems to occur most often with the heavy oversized slide stop. With the custom slide stop I used, this binding did not occur. The barrel hood must be centered and the bottom lug must not bind on the slide stop, but ride smoothly against it and be squared properly. There has been some confusion concerning the proper length of the link. This is not rocket science, so I'm surprised it is not understood more thoroughly.

Once the barrel's lower lugs are properly filed and smoothed, with a proper fit to the slide stop, measure the length from the link pivot hole to the area that has been polished. Next, measure the area between the two holes of the swinging link. These measurements must be the same. If not, the link will not fit properly. When using a larger-diameter slide stop this measurement becomes critical.

I've had to use the Chip McCormick oversized slide stop on occasion with off-specification 1911 pistols in order to ensure proper function, and, while not related to barrel fitting, to snug up certain upper-unit caliber conversions. You have to understand the relationship between link length and the barrel-to-locking-lug to slide-stop measurement to do this. When the upper assembly is placed on the pistol and checked for smoothness and function, any drag will normally be the lower lug against the slide stop.

This is addressed by filing and smoothing. The Super turned out very well, with no problems to speak of. When I was done, the Bar Sto barrel and 147grain Cor Bon Performance Match .38 Super loads produced remark 1.25-inch five-shot groups at The adventure was not ov very easy to convert the .38 Super to 9mm Luger, and 9mm 1911s are very popular in competition at the moment. In IDPA single-action, 9mms Among other problems, the slidelock latch was blown completely out of the pistol.

While an examination of the barrel showed significant lead deposits, there was no evidence of an obstruction. are placed in a class with High Powers and the like. A 9mm 1911 is easy to use and has little recoil. Plus, the ammunition is relatively inexpensive in a time of soaring ammunition costs. I bought a second Bar Sto Precision barrel in 9mm Luger and planned on performing much the same fitting as before. This was a drop-in barrel and only slight filing on the bottom lugs was needed.

The fit in the slide was good from the beginning. A note of caution here: The conversion from .38 to 9mm is simple, but 9mm to .38 is a different story. The 9mm guns have a .384-inch breechface. To convert a 9mm to .38 Super, the breechface must be opened to .405 ent on all 1911s, of the Colt converm barrel, I obtained Metalform magazines in 9mm Luger. They are reliable, of high quality, and fairly priced. All went well. Sometimes, fitting of the extractor is

CAN YOU'S HOULD YOU'RE PAIR A BLOWN-UP PISTOL? CONTINUED

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needed in a 9mm conversion, but in this case it was not needed. The owner of this previously blown-up pistol now has a reliable and safe handgun capable of spitting out 115-grain .38 Super bullets at nearly 1,500 fps and he can switch to inexpensive 9mm ammunition. Accuracy is not quite as good with the 9mm cartridge, with Cor Bon Performance Match ammo turning out 1.5inch groups at 25 yards. This is still plenty accurate for a 9mm, and better than most Hi-Power-type handguns.

A Typical 1911 Train Wreck I became involved with another 1911a High Standard G-Man're cently after a rather spectacular blow. The gun owner was an over-50-yearold shooter, with along history of handgun and reloading experience. That doesn't mean he's immune to mistakes. He reported that the cartridge explosion sounded twice as loud as anything he heard before. The gun bucked in recoil and his hands were blackened but otherwise uninjured. His face was peppered with brass.

The Metalform magazine was blown out the bottom of the frame. Several cartridges were strewn around the ground and one bullet was jammed into the case. (I believe this was probably the next cartridge in line

in the magazine.) The base plate was blown off the bottom of the magazine, and the magazine spring was never found. The slide stop was partially blown out of the pistol. The offending cartridge was found to be still in the chamber, burst at the head.

Upon initial examination, the obvious cause was a heavier than normal charge. The case was ruptured and the primer was flat. Perhaps a poor crimp had allowed the bullet to be pressed into the case on feeding, allowing the pressure to skyrocket. The frame was blackened. After a thorough cleaning and examination, the pistol seemed to retain its structural integrity. Nevertheless, I was very concerned with the feed ramp and barrel, and the ejector was loose.

I tapped it back into place and it seemed to retain its position. The extractor retained tension. I don't mind telling you that the first live-fire test was done from a fixture'with me standing at a safe As cleaning progressed, it became obvious that the Alumigrips had probably prevented significant injury to the shooter's hands. distance. Everything went well with a relatively mild load, the Cor Bon 230grain Performance Match.

Not only did the pistol seem safe and unharmed, but it retained its previous gilded accuracy. The shooter got lucky on this one, but, of course, this is not always the case. Still, the ruptured case peppered the shooter's face with cartridge fragments. His wife had the honor of carefully plucking the tiny shards from his cheek. Fortunately, he was wearing Hansen Eagle Eyes shooting glasses.

I'm also certain that the aluminum grips from Alumigrips were responsible for saving his hands from injury, as the force of the blast found its way around other openings in the frame. Conclusions The lack of attention to detail in producing handloads causes most of these problems, and most can be avoided. When a blown gun finds its way to your shop, the first consideration should be safety'not salvaging the value of the gun.

Assuming the gun is worth repairing and the parts are available, err on the side of caution when determining if a gun is safe to fire again after parts replacement. Don't let the shooter's error be compounded by an error of your own. I

PEOPLE & COMPANIES

Working the Colt Walker Revolver

Like the Colt Patterson we discussed last month, you're not likely to see an original Colt Walker. You are, however, likely to be asked to work on one of the Uberti replicas.

BY DAVID R. CHICOINE SEPTEMBER 2008

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The Walker Dragoon revolver was Samuel Colt's first big-bore revolver and, man, what a revolver it was. The huge cylinder had chambers that could hold as much as 60 grains of blackpowder, making this Dragoon-sized Colt the .44 Magnum of its day. Nearly the size and power of a carbine, the Walker was in every respect a powerful and formidable handgun. Colt had produced revolvers before this, starting in 1836 with what is known today as the Paterson Colt, which I wrote about last month.

The Patersons were small and medium frame revolvers and the largest caliber produced was .36. Due to financial difficulties, the Paterson factory closed in 1842. As the Mexican War began in 1846, Samuel H. Walker, a former Texas Ranger and by then a captain with the United States Mounted Rifles, traveled to New York and sought out Samuel Colt. His purpose was to convince Colt to produce anew, much larger and more powerful re- This replica of the Walker Colt was manufactured by A. Uberti in Italy.

Author photos. revolver than the old Paterson. Walker was looking for a revolver that would be suitable for mounted cavalry and could possibly even take the place of the carbine at short ranges. The revolver that came to be named for Capt. Samuel Walker became a reality in 1847. In all, only about 1,100 Walker revolvers were manufactured all made during 1847. Most of them filled the government order for 1,000 pistols to equip five companies of mounted soldiers.

Legend has it that when Captain Walker died of a (lance) wound sustained in combat in Mexico, he had a pair of these massive revolvers in his hands. These massive six-shot revolvers were nominally of .44 caliber (actually, they were almost .46 caliber), nearly 16 inches in length with 9-inch barrels and weighed a whopping 4 pounds, 9 ounces. From all indications, the Walker Colt gave a good account of itself in combat.

This was not only because the Colt was a six-shot repeater pitted against single-shot muskets and pistols, but charged with 60 grains of blackpowder the Walker could throw a lead ball at velocities similar to

that of a service carbine. That combination offered the U. S. Cavalry trooper firepower that was far in excess of what his counterparts had on hand. There were some problems in service with the Walker, not the least of which were cylinders that burst with a full charge of powder.

It's likely the poor metallurgy of the period played some part in this. The loading lever had a latch that was insufficient for the purpose, and, of course, for a sidearm the gun was terribly heavy. For today's collector, the Walkers are some of the most sought after of all Colt products. Original specimens are highly prized by collectors and command prices among the highest of any collectible firearms.

Collectors should be very wary, since the quantity of original revolvers known to remain in existence is very small. That and the high prices they command has tempted a few unscrupulous individuals to build fake Walkers. Make no mistake, some of the fakes are exceptionally good, making them difficult to distinguish from an original Walker, even for an expert. These instructions will work for

WORKING THE COLT WALKER REVOLVER CONTINUED

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the original Walker Colt if you're lucky enough to ever see one but they are directed primarily at the far more plentiful and more affordable modern replicas manufactured in Italy by Uberti. Disassembly Instructions 1. Always begin by making absolutely sure the revolver is not loaded. Do this by holding the revolver firmly by its grip (#11), keeping your fingers away from the trigger (#10), and pointing the barrel muzzle in a safe direction.

Place the hammer (#2) into the loading position by pulling it to the rear until you hear one audible click. You can now check the revolver's cylinder (#5) to be sure it is unloaded before attempting any disassembly. Perform this first check by examining the rear of the cylinder at each chamber to be certain

there are no percussion caps on any of the nipples (#14). If any caps are present on the nipples, consider this to be a loaded firearm.

Then examine the front of the cylinder to see if there are charges in the cylinder chambers. A good indication that a chamber is loaded would be if bullets or balls show at the front end of the chamber or if the chamber appears to be filled with grease or a wad. Of course, we never look directly into the barrel or the chambers. Always view the chambers by carefully looking down into them from the side. You can empty a loaded cylinder by taking the weapon to a range and firing it until it is empty.

Or to render the revolver safe for further handling without firing, the loaded cylinder can be carefully removed by following the instructions in step 2 below. Note: Place the hammer so it is all the way down and resting in between two chambers for the following operation. Once you have removed the loaded cylinder from the revolver, place it aside, somewhere out of the way from the remainder of the firearm. 2.

The barrel (#3) can be separated from the frame (#1) by first pushing out its wedge (#4) from the left to the right side of the barrel as far as it will move. Colt barrel wedges use a wedge spring (#17) with a lock that grips the right side of the barrel, so before the wedge is moved, this lock has to be depressed. If the wedge

is very tight and won't move by hand pressure, use a small nylon drift punch and a hammer to drive the wedge from the left. I use a nylon punch to avoid damaging either the wedge or the surrounding areas of the barrel. Normally a few light hammer blows will break the wedge free. Colt Walker Percussion Revolver (Specifications subject to change without notice) (Uberti nomenclature) 1 Frame 2 Hammer 3 Barrel 4 Wedge 5 Cylinder Place the hammer (#2) back into the loading position so the cylinder will spin freely.

Rotate the cylinder so that the plunger (#24) will come into contact with the cylinder in between two of the chambers. Now pull the rammer lever down, and apply pressure to the cylinder.

This action will 7 Hand 8 Backstrap 10 Trigger 11 Grip 12 Bolt 13 Loading Lever 14 Nipple 15 Sight 16 Cylinder Lock pin 17 Wedge Spring 18 Hand Spring 19 Trigger-Bolt Spring 20 Mainspring 21 Base Pin 22 Hand Spring Pin 23 Barrel Pin 24 Plunger 26 Trigger Guard 28 Cylinder Lock Pin 29 Wedge Pin 31 Front Trigger Guard Screw 32 Rear Backstrap Screw 33 Wedge Screw 34 Plunger Screw 35 Trigger-Bolt Spring Screw 37 Hammer Screw 38 Trigger & Bolt Screw 39 Loading Lever Screw 41 Cylinder Pin 131 Hammer Latch 455 Lower Backstrap Screw 532 Loading Lever Latch 535 Mainspring Latch cause the barrel to loosen and move forward from the frame slightly.

The barrel is now free to be removed from the frame by pulling it off straight to the front. The cylinder assembly can now be removed from the frame by pulling it straight forward off the cylinder pin (#21). The cylinder pin is

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After that, the grip itself can be separated from the backstrap, also known as a base pin or arbor pin. 3. Disassembly of the Walker's barrel and cylinder begins by unscrewing and removing the rammer-pin screw (#34) from the rammer. If the revolver is so equipped, also remove the loading-lever screw (#39) from the left side of the barrel. The rammer (#13, which is also called a "loading lever") along with the plunger (#24) can be removed out the front.

Remove the wedge from the barrel by first unscrewing and removing the wedge screw (#33) out the right side of the barrel, and then withdrawing the wedge. The only disassembly that is possible on the unloaded cylinder will be the removal of the percussion

nipples. The nipples are removed by using a special tool called a nipple wrench. Percussion nipples are threaded into the rear of the cylinder and have right-hand threads, meaning that they will unloosen in a counter-clockwise direction.

Original, vintage percussion revolvers will often have nipples that were hand fitted to each specific chamber. Knowing this, be sure that the nipples are reinstalled in the chamber they came from. 4. Next come the removal of the grip, the mainspring, and the trigger guard. This revolver is equipped with a one-piece wood grip (#11) and is disassembled like this: Unscrew and remove the two backstrap screws (#32) from the top-rear of the backstrap (#8).

Also unscrew and remove the single butt screw (#455) from the butt of the backstrap. The backstrap along with the one-piece grip is removed by pulling down and to the rear so they come off as a unit. Once they're off the frame, the grip can be separated by pulling it straight forward and off the backstrap. Reassembly note: For ease of reassembly, start all three of the backstrap screws together, and then tighten them in at the same rate.

Now compress the top of the mainspring (#20), pushing downward at the same time to allow the mainspring to disengage from its latch (#535) on the rear of the trigger guard.

MAINTENANCE & REPAIR

Reader Forum

BY AMERICAN GUNSMITH EDITORS SEPTEMBER 2008

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Ruger Ejection Woes I'm having a problem with a Ruger Mark II in my shop. Extraction and loading is fine. The problem is kicking the empties out—a combination of stovepipe malfunctions and empty shells getting stuck between the fresh cartridge and the top of the slide. I have the two original magazines and they appear to be okay. The hammer does not fall of its own weight. Could that be a problem? Any direction you could give me would be appreciated.

Bill Dugger Fountain Hills, Arizona It's been our experience that the MK II is not overly sensitive to the differences between brands of standard-velocity .22 ammo. However, high-velocity .22s can cause the bolt to short cycle and cause the problem you're experiencing. So can a dirty, enlarged, or scored chamber, which causes slow extraction and throws off the timing of the pistol. Also, while magazines may "appear" to be okay, check the lips under magnification for rough spots or burrs, and eliminate any you find.

Speaking of dirt and scoring, take a look at the bolt itself and then polish it. And yes, a hammer that fails to fall is a problem. Inspect it, the disconnect, the hammer pivot, hammer bushing, hammer strut, hammer

pin, sear, and sear spring. Replace any damaged, worn, or bent parts. Ward-Burton Sporting Rifle I'm hoping that you can give me some help with this rifle. Maybe you have more resources available. A friend of mine received this rifle in a package deal for his gun shop.

We tried the online appraisal with "What's it worth to You?" They just assumed that it was a converted military rifle, even after seeing the pictures. We have taken it to the NRA Museum and to the Cody Museum. Both of the curators said that they had never heard of or seen one. They felt that it was either a prototype or presentation piece. I am attaching photos of the rifle. I have chamber cast it and the dimensions duplicate the .45-70, except for the rim diameter which is smaller.

The tang sight base appears to be an add-on. My questions are: Do you know where we can obtain the missing parts of the tang sight to make it complete? Could it possibly be a Lyman No 1? (I have been unable to find a drawing of the No. 1.) Do you know of any Ward-Burton collectors association? Do you have any idea what it could be worth? Thank you. The Ward-Burton represents the first bolt-action rifle made at Springfield and followed the 1870 Trapdoor very closely.

Troops did not like it during the 1871 field trials, and only 1,011 rifles and 315 carbines were produced. The rifle was a single-shot in .50-70 centerfire. Due to the short production runs, values on the rifle range from \$950 for very good to \$2,500 for excellent; carbines can demand from \$2,250 to \$4,500. We've know of no Ward-Burton collectors association, but there is a very large American Single Shot Rifle Association.

The Association's archivist, Rudi Prusok might be able to steer you toward a suitable peep sight if you send him the dimensional details. Remington 1100 Barrel Swap? I have a customer who is using a Remington 1100 18-1/2-inch barrel on a Remington 870. Will the gas ports in the 1100 barrel make this unsafe? And are there any other differences in these barrels? Thanks. The gas ports from a semi-auto would have little to no effect on a pump gun. But there are a few things we don't understand.

First, the barrel extension on an 870 is shorter than that of an 1100. Second, the barrel ring on an 870 is farther forward than the same on an 1100, whose forearm encloses the ring. And third, due to these differences, we can't imagine how these barrels could possibly interchange. We're curious: Just how did your customer manage to force-fit one gun's barrel to another gun's receiver? Worn Winchester Model 1300 The purpose of this writing is to get information on repairing a Winchester Model 1300 in 20 gauge.

The problem is the bolt releases at firing. This is not repeatable from shot to shot, though when I fire it with a loose hold on the forearm, the spent shell will fly out of the action and the bolt will be returned to half closed. I have disassembled the shotgun and cleaned the action and the bolt completely. I found no signs of excessive wear or broken parts. The bolt-head lugs are square as are the lugs in the barrel. Do you have any advice or resources to turn to?

The 1300 came into existence when Winchester changed the designation of the Model 1200 in 1978, so your 20 gauge has some miles on it. The fact that the problem is not constant suggests a wear problem is developing or has developed with the slide latch. Though parts may be more difficult to secure now that Winchester is no more, we suggest you try to locate and replace those parts associated with the latch and restore the mechanism. SKS Parts Removal I own an SKS carbine.

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Can you tell me how to remove the front sight and bayonet mount? J. Roberts Baton Rouge, Louisiana To remove the front sight, unscrew it from the stud and knock the stud from the sight base with a punch. How the base is attached depends greatly on the manufacturer. Some are press fit, some are soldered on, and some of the really cheap ones use a “highstrength” adhesive. Of the three methods, the latter would present the least challenge. It wouldn’t take much heat to wreck the integrity of the adhesive.

THE BAYONET MOUNT PRESENTS ITS

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(continued from previous page) own set of problems. Usually, the mount screw has been staked to deform its shank and prevent it from backing out. This staking may be so deep, the end of the screw will have to be relieved with a rotary file or grinder in order to undo it. Any replacement must be re-staked. If your SKS is a late military or Chinese-made civilian model, it's likely that getting the bayonet off will delay any removal of the mount.

On most of these carbines, the bayonet is riveted, not screwed, in place. You have to grind off the head of the rivet, drive out the remnant with a punch, purchase a replacement of the same dimensions, insert it and upset both ends to retain the blade. Bent Revolver Frame? I have an early 1908 S&W Military and Police revolver. It's a good-condition shooter, but the cylinder has become very difficult to swing out of the frame. It locks up good and tight but maybe too tight.

When I try to flip the cylinder out to unload it, I have to push forward on the cylinder release and then smack the cylinder with my hand to get it to swing out of the frame. Any thoughts as to what would make this so tight? Thanks. The problem probably got its start by "flipping" the cylinder open and closed in the "Hollywood-movie style. It might look sexy on

the silver screen, but over time it usually results in a bent frame. Check it out. Push the cylinder open and use two fingers to spin it rapidly.

If the cylinder wobbles as it rotates, the crane is bent. Repair is possible with a nylon wedge, a rawhide mallet, and a copy of Jerry Kuhnhausen's book *Smith & Wesson, A Shop Manual*. The book is an excellent source for "how-to" instruction, and Brownells is an excellent source for the book and other items mentioned. Ah, the Visible Loader I was hoping you would have information on the disassembly of a Stevens No. 70 visible-loading slide-action repeating rifle.

The Model 70 Visible Loader was justifiably dubbed "The Miserable Loader" by gunsmiths unfortunate enough to work on it. We have been unable to locate any take-down/troubleshooting information whatsoever. We did discover through an internet source that the last of the batch was assembled in 1941 from left-over parts from the 1930s. The one sign of hope we can offer is a parts drawing in Volume II of the Jack First, Inc. catalog *Security Six Latch Problem* I have a Ruger Security Six where a couple of the chamber/cylinder stops are not always positively engaged. For instance, in checking this discrepancy (while un-

loaded), I can manipulate the cylinder a little bit on these two stops, and it will roll off. The other four are positive and secure.

I can't see any burrs or why the cylinder stop wouldn't be coming up high enough to engage on these two cylinders. Any ideas or suggestions? After more than a little furrowing of the brow (over the nomenclature), we believe the cylinder latch is failing to fully engage the latch notches on the two cylinders in question. This can occur when the sides of a notch have become beveled, or when the notch itself has filled in sufficiently with solidly encrusted residue.

The resolution for filled notches need not be explained. Rounded notch edges can be reformed or "sharpened," but this requires extreme care. Often, a botched attempt will only result in compounding the problem and require the fitting of anew cylinder. Another possibility rears its head; namely, a wear problem between the pawl (hand) and the related ejector star on the two affected cylinders. However, we don't think your problem is as complex as either of the problems mentioned.

In all likelihood, it's a matter of latch-locking tension. You may end up having to replace and refit the latch, but start with the latch spring and plunger.

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