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INSIDE THE ARCHIVE

WORKING THE COLT OFFICIAL POLICE MEDIUM-FRAME DA REVOLVERS

"SENATOR OBAMA, WHERE DO YOU STAND?" • DISASSEMBLY AND REASSEMBLY OF THE C270 SEMI-AUTOMATIC PISTO...

ORIGINAL METHODS. MODERN ACCESS.

ARCHIVE EDITION 058

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FROM THE ARCHIVE

“Senator Obama, Where Do You Stand?”

BY AMERICAN GUNSMITH EDITORS OCTOBER 2008

ORIGINAL PP. 2

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” Following the recent landmark Second Amendment ruling by the U. S. Supreme Court, the National Shooting Sports Foundation (NSSF), the trade association for the firearms industry, sent Democratic presidential nominee Senator Barack Hussein Obama (Dem., IL) a letter, dated July 4, asking whether he believes the law in the City of Chicago—his hometown—that bans law-abiding citizens from having firearms in their homes, violates the Second Amendment.

The letter, signed by NSSF Senior Vice President and General Counsel Lawrence G. Keane, referenced the case of the District of Columbia et al. v. Heller, which affirmed that the Second Amendment to the U. S. Constitution protects the individual right of law-abiding Americans to keep and bear arms, including handguns. NSSF’s decision to send Sen.

Obama the letter stems from the candidate’s recent remarks in which he indicated his agreement that the Second Amendment

guarantees the individual’s right to keep and bear arms. That statement seems in contrast to his voting record, however, including his support for banning the civilian ownership of handguns, a position he took as an Illinois state senator, and his position as a U. S. senator in supporting the District of Columbia gun ban.

The Supreme Court will likely hear more Second Amendment-related cases following the Heller decision, and there remains a strong likelihood that the next president will appoint at least one new Supreme Court Justice. This possibility demands that candidates for office clearly articulate how they view firearms freedoms and the Second Amendment rights of law-abiding Americans. In his letter, Keane inquired of Sen.

Obama: “In light of the Heller decision, NSSF would like to know whether you believe that Chicago’s gun ban violates the Second Amendment rights of lawabiding Chicago residents? Do you continue to sup-

port banning an entire class of firearms from private ownership by law-abiding citizens, including your fellow Chicago residents? Do you believe the Second Amendment rights of Americans should depend on where they happen to live?

If you do, which other rights enshrined in the Constitution do you believe are limited by municipal borders?” I can’t say that I was surprised to learn that, as of the date this issue went to press, NSSF had received no response from Sen. Obama or his campaign committee. Need Some Extra Cash? If you would like to turn your gunsmithing ideas and expertise into cash (we pay pretty handsomely), I would like to discuss your article ideas with you.

Contact me, Keith Lawrence, Editor, at: American Gunsmith, Merritt Island, FL 32954; email voice fax Editor Keith Lawrence Technical

PISTOLS

Disassembly and Reassembly of the CZ70 Semi-Automatic Pistol

Although it looks remarkably like the Walther PPK of 007 fame and shares a common ancestor, there are some significant differences in the CZ70's takedown procedure.

BY CHICK BLOOD OCTOBER 2008

ORIGINAL PP. 3-5

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The post-World War II Czech Army considered the CZ38 pistol to be minimally short of a total failure. This was primarily due to the pistol's 9mm Short chambering, the large size, and the stiff action. So after the war, they insisted on and eventually adopted a design inspired by the Walther PP that incorporated a few mechanical improvements. This pistol, known as the CZ1950, was chambered for the 7.65mm cartridge, which we know as the .32 ACP on this side of the pond.

Like the CZ38 before it, the military eventually decided the Model 1950 didn't measure up to military standards for reliability. Thereafter, the Model 1950 was limited to use by the Czech police, with a smattering finding their way into civilian hands. Reliability problems continued to plague the CZ1950. Changes were made to eliminate them in the late 60s, and the troubled Model 1950 became the CZ70, also chambered for the 7.65mm cartridge.

When that pistol's production ended in 1983, it was replaced by what is considered to be "the best of the Czechs," the CZ75 (see American Gunsmith, January and February 03). Thousands of CZ70s (also known as the Model 1970) have been imported to the U. S., so it's not unlikely one could show up at your place for service at any time. Here's what you do when that hap-

pens. Field Stripping After donning your protective eyewear, drop out the mag, check the chamber, and depress the takedown latch (#35).

It's on the right side of the main frame above the trigger guard. Get a firm hold on the slide. The recoil spring (#10) is a strong one. Pull the slide all the way to the rear, lift its back end, and control the spring pressure working against you as you remove the slide to the front. At one time, CZ70 grip panels (24 and 27) were held to the frame by a sturdy metal clip. The model shown here has a single grip screw (#15). Back it completely out and remove the grips.

Slip the recoil spring off the barrel (#43) and you're done. Detailed Disassembly Invert the slide. Near its rear, between the finger grooves, you'll see the firingpin lock (#9). Press it down with a small tool, hold it down, and bump the rear of the slide against your bench. The firing pin (#7) may or may not come out. If not, secure the inverted slide between padded vise jaws and depress the lock again. As you hold it down this time, use a small-diameter drift to push the firing pin out the rear.

Now carefully ease off the pressure on the lock. If you move too quickly, the lock spring (#8) which also serves

DISASSEMBLY AND REASSEMBLY OF THE CZ70 SEMI-AUTOMATIC PISTOL CONTINUED

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as the firing-pin spring, will exit your work area. The pistol has a loaded-chamber indicator (#3) that sticks out noticeably from the left side of the slide when around is present in the breech. This occurs because the indicator is in contact with the extractor (#6), which pivots on the extractor pin (#2) when its hook end rides over a case rim. Conversely, when no cartridge is present, the extractor spring (#5) feels no pressure and therefore doesn't act to move the indicator outward.

Now drift the extractor pin downward until the entire assembly—extractor, spring, and indicator—can be taken from the slide. Nothing's stopping you from taking a look inside the firing-pin tunnel right now to find out why the firing pin failed to drop out as it should. Before further disassembly, the hammer should be thumbed to its full forward position. have a few minutes ago. Chances

are it's crud of one form or another. Clear it out and clean up the pin, and then we'll move on to the main frame.

Move the CZ's safety to its "off" position (with the red dot showing). Pull the trigger and thumb the hammer forward. Invert the frame with the empty mag well upward and secure it in your bench vise. Things will be easier from here on if your vise can be unlocked, rotated, and relocked. Here, the arrow indicates the well-seated spring retainer. Just visible under it is the additional spring that prevents the magazine from rattling within the grip frame.

D The spring retainer (#26) is positioned in a slot milled into the grip frame. Grab onto the retainer with needle-nose locking pliers and pull it free. Having a little trouble? Drift the stubborn thing out as you would a too-tight dovetail sight base. (Note: You may be handed a CZ70 with a spring under the retainer.

Its job would be to provide tension against the magazine and prevent it from rattling around.

When you remove the retainer, that extra spring can be gently pried from the grip frame.) Now pick the mainspring (#25) from the hammer strut (#24). The hammer bolt (#19) has a nut (#40) holding it in place. A wrench from an automotive ignition kit will fit that nut perfectly. So will a set of smooth-jaw parallel pliers. In either case, once the nut has been taken off, the hammer bolt can be drifted to the left side of the frame, releasing the hammer, which is lifted away with the strut attached.

If you need to replace either the hammer or strut, the two can be separated by drifting out the strut pin (#22). It will be necessary to reposition the frame in your vise to access the sideplate (#39). It's secured in



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place by the trigger pin (#31), sear pin (#38), and a sharp, flanged front end that interfaces with a matching cut in the frame. Don't drift the trigger and sear pins clear through at this time; there are too many springs and other parts that would be freed up before the sideplate can be taken off. Instead, move the trigger and sear pins inward a maximum of 1/4 inch, then treat the plate as you would the same component on an S&W revolver.

To be precise, use a wooden dowel, the handle of a screwdriver, or the handle of a hammer to partially dislodge the plate by striking the grip frame opposite the plate before withdrawing it from its flanged frame engagement. As careful as you may be in the step above, the trigger bar (#28) and trigger spring (#29) could tumble out when the sideplate is reof avoiding this is to relocate the entire frame to your bench top (plate side up) and applying the dowel or tool handle to the plate side of the grip frame.

So positioned, you may be able to start it off without disturbing what lies beneath. There's an additional advantage to this approach.

When the plate is off, you can take a really good look at the inner assemblies and either remember CZ70 .32 ACP Semi-Automatic Pistol 1 Slide 2 Extractor Pin 3 Cartridge Indicator 4 Rear Sight 5 Extractor Spring 6 Extractor 7 Firing Pin 8 Firing Pin Lock Spring 9 Firing Pin Lock 10 Recoil Spring 11 Hold Open Latch Spring 12 Hold Open Latch & Ejector 13 Hold Open Hinge Pin 14 Grip them or make a sketch of their relationships.

Once you're comfortable with your newly gained knowledge, drift the trigger pin through and remove the parts it held together, either 28 Trigger Bar 29 Trigger Spring 30 Trigger 31 Trigger Pin 15 Grip Screw 16 Safety 17 Safety Plunger 18 Safety Spring 19 Hammer Bolt 20 Sear Spring 21 Sear 22 Hammer Strut Pin 23 Hammer 24 Hammer Strut 25 Hammer Spring 26 Spring Retainer 27 Grip 35 Takedown Catch 36 Magazine Catch 37 Magazine Catch Spring 38 Sear Pin 39 Sideplate 40 Hammer Bolt Nut 42 Magazine 43 Barrel as a unit or separately.

Your next target will be the sear assembly (#20 and 21). Drift the sear pin through, but leave your drift in the hole. Slowly pull out the drift

FINISHING

Enhancements to the Power Series I Stoning Fixture

These simple shopmade add-ons can make an excellent tool even better, faster, and more versatile.

BY GENE BELL OCTOBER 2008

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For many years, I've owned one of Ron Power's Series I stoning fixtures, and I'm amazed at the different jobs it will do and the high quality of the finished sears and triggers that can be produced on it. Before I owned it, I had to cobble something together for every stoning job. Usually, I would clamp a trigger between two 1-inch-square steel bars on a surface plate and let the tip of the trigger protrude a few thousandths.

More often than not, when I removed the trigger and installed it in the gun, it wasn't right. Then I had to go back, Below left and

do it over again, and it was virtually impossible to repeat the exact same setup the second time. Ron's fixture and adapters have solved all that. Sometime when things get slow, usually after Christmas, I start dreaming up ways to build, modify, or improve a particular piece of equipment. That's exactly how I came up with these modifications to the Power stoning fixture.

Building the Roller Assembly The first modification I came up with was building a roller assembly to replace the small steel roller. I first removed the elevator block and removed the section as shown in Figure 1. This is

quite a hefty chunk of material to deal with. I located the roller-axis bolt and, using anew pilot drill, drilled the hole in the lathe using a four-jaw chuck. I Figure 1. took care to get the side of the elevator exactly 90 degrees to the drill.

I then drilled with a #3 drill for a 1/4-28 tap and enlarged the near side with a 1/4 drill for 3/8 inch. I then sawed both sides with a hacksaw and drilled a series of interlocking holes across the bottom, after which I sawed across the

ENHANCEMENTS TO THE POWER SERIES I STONING FIXTURE CONTINUED

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bottom and cleaned up everything with a mill. If you “goof” and the hole is not perfectly square with the side of the elevator, you can take a small round file and elongate the 1/4-inch hole up and down slightly. Next, I used a number 43 drill to bore from the top down through the bolt hole and down in the side of the elevator so a 1/4-inch-long 4-40 Allen screw will go below the 1/4-inch bolt hole.

I tapped this hole and installed a 4-40 Allen screw in the bottom and one in the top, and adjusted the 1/4-28 bolt until it was exactly 90 degrees with the side of the elevator. I cut the roller bolt slightly short so it wouldn't drag on the side plate. The roller, shown in Figure 2, was made of a section of 3/4-inch heavy black iron pipe. I cut it to length, faced both sides, and bored it for the ball bearings.

The ball bearings (Figure 3) can be cheap ones, since they don't have to bear a heavy load. (Mine cost \$4.50 each.) I wanted a hollow roller assembly to avoid having a

heavy rotating mass. I could have used a solid section of round stock and enlarged the center with a large drill and bored for the bearings. It's important to ensure that when you spin the roller assembly, there is no run out on the OD.

I modified Ron's hammer/sear adapter slightly in that I used a fineline metal-checkering tool and lightly scribed lines in the location that he uses for a reference point. I also drilled and tapped the edge of his trigger/sear adapters for a 10-32 hole and pleted, I began to think how great it would be if the fixture could do the hammer-engagement surface also.

The stoning fixture will already square the hammer hooks and reduce the depth of the engagement surface, and you can put a mirror finish on the trigger/sear surface, but you still have a rough hammer-shelf surface. Building the Hammer-Stoning Adapter After the roller assembly was com- After much trial and error, I came up with a hammer-stoning

adapter. The adapter, shown in Figure 4, is made of 2-inch heavy-duty angle iron and shaped as shown.

The adaptor is clamped to the side plate (Figure 5) and the location is spotted in the adapter for the 1/4-20 Allen bolt in the side plate that Ron uses to hold his hammer and sear adapters to the fixture. I drilled with a #7 drill and used a 1/4-20 tap for his original Allen bolt. To make sure of repeatability, the angle-iron adapter is bolted to the side plate and clamped tightly. I also drilled a 3/16-inch hole as shown through the original side plate and through the angle-iron adapter for a locator pin.

I chamfered a 3/16-inch pin slightly and used a center punch to put some “dimples” in the part that will be in the side plate. Then I drove it through the side plate and into and slightly through the angle-iron flange. Figure 2. Figure 4.

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Figure 5. built a shoulder bolt (Figure 6) and screwed in the side of the adapter as needed. This is only needed when you are stoning a hammer surface, and allows very small incremental movements when you are trying to get the hammer surface adjusted so it will be parallel with the roller. The final modification I made was not to the fixture itself, but rather to the Brownells 6- x 1/2-inch stones (India, ceramic, and Arkansas) I use with the fixture. This modification is shown in Figure 7.

I cut one side to a 10-degree bevel so it will "reach in" to the back side of the hammer shelf. I use these stones only for hammer shelves so they stay sharp. If one should become dull you can sharpen it by holding it at a slight angle and raking it along the side of the diamond wheel. (The side of the wheel will cut just like the face.) Putting Everything to Work The original fixture still operates in the original manner and all of the original instructions still apply.

The only change is the hammer-honing fixture. To use it, mount the angle-iron hammer adapter as shown in Figure 5. Attach Ron's adapter to hold the hammer with the hammer surface parallel to the elevator

roller. The adapter is mounted on the face of the angle adapter (the side next to the roller). The most convenient method I've found is to place the fixture on my drill press table.

I can then adjust the height to a convenient level to work with. (The drill press table has to be perfectly level.) I make a cylinder out of a quarter sheet of white copy paper and place it close behind the elevator roller. I put a bench light over it and focus it inside the cylinder. This gives a nice soft defused light. Next, I rotate the hammer-hook Figure 6. surface until it seems to be parallel with the roller.

I use a binocular magnifier and look at the hammer surface and the roller and get them as close to parallel as possible. Then I take a level and put it Figure 7. on the roller and the hammer hook and elevate the roller assembly until the bubble indicates level. This will get you close. I always do the honing on the hammer surface before reducing the hammer-hook depth. This simplifies the process of getting the hammer surface parallel to the roller surface, since you have a much greater sighting plane to work with.

The next thing I do is coat the hammer surface with a black marking pen and lightly drag the modified India oil stone across it. Then I check to see where the black ink was removed. I then rotate the hammer and raise or lower the elevator until I'm getting 100-percent ink removal from the surface of the hammer. I then hone the surface until the heavy machining marks are removed, and follow up with a ceramic or Arkansas stone to bring the surface to a high shine—always keeping the original factory angle, of course.

I've found that many of Ron's adapters work on oddball guns that he doesn't build adapters for. You just have to match the hole in the hammer to one of the pins. If I can't find anything that will work, I make my own using a section of 1/4- x 1-inch steel. In my part of the country, for example, the New England Handi Rifle with a heavy barrel is getting very popular due to its price and accuracy. I easily made my own adapter for it.

As a final piece of advice, be sure to make a drawing of every setup you use with this fixture. That will save you much time on the next job.

MAINTENANCE & REPAIR

Converting the Remington Model 700 to Single-Shot

Benchrest competitors and varmint shooters have come to know the inherent advantages of the single-shot bolt-action rifle. Here's how to make one such conversion.

BY NORMAN E. JOHNSON OCTOBER 2008

ORIGINAL PP. 10-13

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Many competition shooters have come to understand that the full accuracy potential of the Remington Model 700 can only be realized by making its action more rigid near its center. As a result, many of these shooters are opting to have the magazine-fed M700 converted to a single-shot rifle. This requires making up a special bedding block to replace the magazine assembly. This bedding block also serves as a cartridge-loading ramp.

At the same time, some of these shooters will also want to change to a custom stock that has the magazine cutout filled in, or they may

choose to switch to a Remington Model ADL stock that has a blind magazine. Either way, the conversion can benefit the shooter in many ways; and, of course, any such custom work can benefit the creative gunsmith who's prepared to do the work. I find that aluminum works well for making the combination bedding block/cartridge ramp.

Aluminum machines well and is sufficiently durable in this application when shaped and bedded into position. Making the Bedding-Block/ Cartridge Ramp To make the block, first make a pattern by pressing a piece of paper against the milled cutout from which the

original magazine housing has been removed. Use the pattern to mark the aluminum block for cutting and milling.

The pillar block should fit squarely against the flat, milled surfaces inside the magazine cutout, and thus must be milled perfectly flat to mate with these precision surfaces. I used a standard 1/2-inch mill to shape the part. The upper configuration of the pillar must have a matching taper where it enters the machined receiver cutout. Here, a bit of creativity can be helpful in shaping the part. Having shaped the major dimensions, the bolt race is cut where it

CONVERTING THE REMINGTON MODEL 700 TO SINGLE-SHOT CONTINUED

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The screw is later removed to release the action from the pillar bed. The two parts form a very solid bed for the action, completing the single-shot conversion. passes over the ramp. A ball-end mill does the job here. Mill the bolt race a few thousandths of an inch below the bolt for clearance. The inclined cartridge ramp is then milled into the block. I use a 9/16-inch end mill and carefully make a few passes at a time.

The cartridge groove is cut at about a 7-degree slant, half way along the length of the top surface of the pillar.

Bedding the Pillar into the Stock A recess must be cut into the stock for the bedding block, and adequate depth and side clearance for the glass bedding material must be allowed for. (If the Remington ADL-style stock is used, the cutout is already provided.) For this project, I had a stock made up by Bell & Carlson Gunstocks Dodge City, KS 67801; without the magazine cutout, so all I had to do was mill out the recess for the bedding block.

This was done with a 1/4-inch end mill, which formed the perfect radius for the corners of the bedding block. I allowed about 1/8 inch of clearance below the block for the Brownells Steel Bedding material. Before bedding the block in place, it should be temporarily attached to the action in the exact position it will assume when permanently bedded. This can be done by fastening a metal clip across the receiver rails, held in place by a short screw tapped into the top center of the bedding block.

This part is about the size of a postage stamp with a center hole. I used an 8-32 screw to hold it squarely The angled cartridge ramp is clearly shown here. onto the receiver. Before the part is bonded permanently in place, carefully lower the action into the stock to test for clearance between the stock and bedding block. At this time, try to make a close estimate of the amount of bedding material you'll need.

Release agent and/or masking tape should be applied to any surfaces of the stock or action where glass bedding material should not

bond to the parts. With the action set squarely into the soft bedding material, the front and rear action screws only are put in place and tightened to normal torque. This is important because the new pillar bed is attached squarely against the action where it will later remain permanently in place as a precision fit against the receiver.

I usually remove the action from the stock after the bedding material becomes hard to the touch. Dimensional stability won't be affected at this point, and cleanup is easier before the epoxy becomes fully cured. Be sure to remove the temporary screw from the clip before trying to lift the stock from the action. Conclusions Because it adds strength and rigidity to the action, a properly applied pillar-bed/cartridge ramp will contribute to better accuracy in a Model 700 rifle.

This is accomplished by utilizing the central action screw, thereby anchoring the action to the stock through a solid pillar. The cartridge ramp also provides a smooth and positive cartridge feed that any shooter would appreciate.

MAINTENANCE & REPAIR

Tech Topics

In this feature, we examine new tools and tooling, tips and techniques, and news items of interest to the gunsmithing community.

BY AMERICAN GUNSMITH EDITORS OCTOBER 2008

ORIGINAL PP. 14-16

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New Ceramic Firearm Coat-ing: More Testing to Follow We first learned about Cerakote on Brownells' website. When we received a sample, the first thing we thought about was the rack of old shotgun barrels in the corner of the shop. There's nothing wrong with any of the barrels internally, and they're still useful as replacement parts, but on the outside they're all rusted to the pitting point.

And getting rid of the pits completely (before polishing) would remove so much metal the barrels wouldn't be able to hold up to modern shotgun loads. That risk, therefore, eliminated the possibility of rebluing the barrels, and meant that any cosmetic fix would have to involve applying a "coating" of some type. Moreover, that coating would have to flow out and fill any small scratches or pits that remained after the surface rust was removed with fine emery cloth and oil.

Our initial impression is that this new Cerakote stuff could be the ideal coating for salvaging these barrels, but a final decision will require us to do our own testing. In the meantime, we can pass along the results of product testing done by Cerakote's manufacturer, NIC Industries, and an independent lab.

Cerakote, referred to as a "polyceramic" by the manufacturer, was tested against two popular coatings from competing manufacturers, code-named "C1" and "C2." The tests included impact strength, hardness, adhesion, as well as salt-spray and chemical resistance. The latter test involved dipping coated panels into 15 different solvents and leaving them submerged for 24 hours. Among the solvents were brake cleaner, gun cleaner, acetone, ammonia, and a 5-percent solution of hydrochloric acid.

Afterwards, each panel was ranked on its resistance to each of the solvents. Cerakote ranked excellent in 14 of the solvents and good in the "acid test." For the corrosion-resistance test, the coated-steel panels were placed in a chamber and sprayed with a 5-percent saltwater solution. They were checked for signs of rust at time intervals starting at 45 hours and ending at 1,000 hours. The panels shown in the accompanying photo were removed from the salt spraying at 385 hours.

The panel wearing Cerakote looked the same after 1,000 hours, while the other two had failed completely and crumbled to rust. Resistance to wear came next and was conducted by an independent facility in accordance with ASTM Standard D4060. This

testing placed a 1000-gram abrasive wheel rotated at constant speed against a coated panel to determine the number of cycles required to remove 1 mil of coating. Cerakote reportedly lasted 5,212 cycles, while C1 and C2 were removed with 597 and 418 cycles respectively.

We're not convinced that a firearm finish has to withstand a thousand cycles of an abrasive wheel or a thousand hours in a saltwater bath, but we are reasonably sure that Cerakote will provide more wear and corrosion resistance than bluing—which, of course, is what we would expect from a ceramic coating. That only leaves a few more questions in our minds: How easy is the product to apply? What special equipment is necessary? What does the finish look like once it's cured?

And how well will it hide "blemishes" in the base metal? Stay tuned. We'll be conducting our own "real-world application tests" in the next few months, and we'll give you a full report in an upcoming issue. Latest Project from the ACCG: The Special Hornet The latest creation by a team of members of the American Custom Gunmakers Guild is ACGG Firearm #24, known

TECH TOPICS CONTINUED

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as The Special Hornet, a perfect small game and recreational shooter. Each year a lucky \$20 ticket holder wins one of these special projects created to show the public the artistry of custom guns made by members of the guild. Designed to incorporate a unique but traditional American action and cartridge, this project was created as a Winchester 1885 .22 Hornet. It was styled similar to an original Winchester Special Single-Shot. As made by Winchester, the Special Single-Shot was a deluxe target rifle.

Standard features included a fancy checkered pistol-grip stock with cheekpiece, Swiss buttplate, and target sights. While the original Model 1885s were not chambered for the .22 Hornet, they were chambered for the .22 WCF, which was the Hornet's blackpowder-

era parent case. The Hornet is a perfect match for the smaller #3 (low-wall) action size and has the advantages of readily available, economical ammunition and negligible recoil.

This particular Model 1885 (#106382A) was built in 1913 as a Plain Sporting Rifle with takedown frame and barrel. The "A" serial-number suffix was applied to all coil-spring Winchester single-shots. Extensive metalwork by Roger Ferrell restored the 100-year-old action to factory-new condition. Action work included annealing, draw filing, polishing, and reshaping of major components, including bending the lower tang. Originally made as a .25 Above, right, and This photography was done by Turk's Head Productions.

You can view the color versions by visiting the Guild's website at RE; the action was also converted to centerfire. Ferrell made the barrel from an unturned Douglas Premium .224-caliber blank, turning and milling a finished one-half-octagonal 28-inch barrel. The barrel was fitted with a dedicated Unertl 8x1-1/4 varmint scope. The metal finishing is a combination of traditional color case hardening, slow-rust bluing, nitre bluing, and French graying.

After stocking and engraving, all the previously annealed parts were final polished and color case hardened. The colors were removed completely from the receiver and selectively from the lever and buttplate to highlight the engraving. The American Black Walnut stock

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was crafted by Al Lind in a modified special single-shot style. The crotch-grain stock is checkered at 24 lines per inch in a modified point pattern, with mulled borders and a ribbon in the forearm. Length of pull is 14-1/4" to a steel Swiss buttplate. Engraver Jerome Glimm Conrad, MT 59425) complimented the project with subdued and tasteful scroll work covering the receiver, finger lever, lower tang, and accent areas. The style is similar to work done in the late 1800s.

The engraving was completed using a chaser's hammer and gravers only, just as it was done during that time period. The Germanic scroll was inspired by the work of Rudolph Kornbrath on a Winchester Hi-Wall. The ACGG logo is engraved on the buttplate. The team collaborated with A. B. S. Mastersmith Hank Knickmeyer to make the rifle unique and emphasize the .22 Hornet. Knickmeyer, by precisely forging different alloys, artistically crafted Damascus steel with a pattern of hornets within rectangular borders.

This steel was used to make the screwless stock and forend inserts. The Special Hornet is cased in a Marvin Huey oak and leather case with traditional turn screws, brush and oil bottle, and a Damascus knife by Knickmeyer of the same steel and wood as the rifle. Hornets are visible throughout the blade. The Special Hornet is a beautiful and well-balanced firearm of stockwork, metalwork, and engraving. It's a fully functional shooter, and will make a fine addition to anyone's collection.

The lucky winner (who does not have to be present) will be drawn on Sunday, January 25th at the 25th Firearms Engravers & Gunmakers Exhibition in Reno, Nevada. Anyone interested in purchasing a ticket can

send \$20 (per ticket) to: ACGG, Cody, WY 82414 or visit the Guild's website www.acgg.org. All state and federal laws apply. New Product Test: Brownells' Classic Rust Blue The process we call "slow-rust bluing" has been in use at least since early in the 19th century.

The finish is lustrous and highly durable, although the process is timeand labor-intensive. Today, we usually see slow-rust bluing only on the barrels of high-grade English shotguns or the finest custom-built weapons. As we discussed at length back in the September 01 issue, a rust-blue finish is a buildup of black iron oxide.

In a nutshell, slow-rust bluing is accomplished by swabbing a strong acidic mixture onto the cleaned and prepped steel parts, and letting those parts rust for a period of time until the parts are covered with a "fuzz" of ferric oxide (russet brown rust). The "fuzzy" parts are then immersed in boiling water or steam, the action of which converts the russet-brown colored ferric oxide into ferro-ferric oxide, also called "magnetic oxide," which is very black.

Once the oxide has been boiled and dried, the excess fuzz is carded off with fine steel wool or an ultra-fine wire wheel. This process is repeated until the parts take on a rich black color. Of all the different "blue" finishes for steel, rust blue is considered the most durable. We've used several different solutions for rust bluing over the years, including Pilkington's Mark Lee Express Blue and Brown formulas, Laurel Mountain, Plum Brown, and home-brewed formulas.

All of these are capable of producing a rich rust-blue finish of generally good to excellent quality, with varying degrees of work

required on the part of the gunsmith. Along-time supplier of all the above products, the folks at Brownells recently introduced their own product called Classic Rust Blue (item #082-000-010) and we asked our contributing editor David Chicoine to give it a try. David uses lots of rust-blue solution and almost always has a rust-blue project going on.

David noted that the price was attractive at \$12.47 for 4 ounces, making it only a little more than one-third the cost of its closest competitor. David says that, of commercial brands of slow rust blue, Laurel Mountain seems to be the most aggressive oxidizer. Pilkington's, he says, produces the most even first coat of rust, although Mark Lee's formulas are also very good and easy to use. All will usually produce rust in the open air, without the need for the controlled environment of a damp box.

After using Brownells' Classic Rust Blue for three months, David says it's not quite as aggressive an oxidizer as Laurel Mountain, but is decidedly more so than the Pilkington's or Mark Lee products.

He says he was impressed with the ability of the Brownells blue to produce a uniform, seamless oxide coating on the first coat. (The first is the most important step with rust bluing; If it's splotchy or uneven, the finished product will have an uneven color no matter how many coats are applied later.) David says he gets a rich, durable finish in as little as four applications. (Typically, most products require six applications.) He says that the great performance combined with the low price earns Brownells' Classic Rust Blue two thumbs up.

PEOPLE & COMPANIES

Working the Colt Official Police Medium-Frame DA Revolvers

Originally developed as a military sidearm, this early double-action revolver found a home with nearly a million civilian shooters and law-enforcement professionals.

BY DAVID R. CHICOINE OCTOBER 2008

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Colt's Official Police model was the company's answer to the Smith & Wesson Military & Police model of the day. Although the Colt is actually a slightly larger gun than the S&W, both are six-shot revolvers built on what each company considered to be a "medium-size" frame. This frame size also includes the Colt Commando, Officer's Model Match, Trooper, .357 Magnum, and pre-1969 Python revolvers.

The Official Police model was an improvement on the earlier 1889- 1892 New Army and New Navy models which were offered in .38 and .41 calibers. This more modern version was first introduced to the public in 1908 (some sources indicate 1907) as the Army Special. The Army Special revolver was available in 32-20, .38 Special, and .41 Colt. There were strong expectations that the military would be interested in the Colt revolver, but by that point in time, the Army was intent on adopting a heavier, .45-caliber weapon.

As it turned out, Colt had little reason for concern over the U. S. Army's desire for a semi-auto, since this excellent revolver quickly gained popularity with law-enforcement agencies and the shooting public. In fact, the Army Special became so popular with police departments that, in 1928, it was renamed the Official Police. A few years later in 1930, a .22 Long Rifle version was introduced and the .41 Colt version was discontinued.

The 32-20-caliber was produced until 1942, while the standard .38 Special chambering was used through the entire production of the Army Special/Official Police. The Army Special and Official Police revolvers were offered with standard barrel lengths of 2, 4, 5, and 6 inches. A special group of approximately 50,000 Official Police revolvers were manufactured during World War II. Known as the Commando Model, they were not highly polished like Colt's commercial production.

Instead, they received little surface preparation and were given a suitably rough-looking Parkerized finish. The Commando was made in .38 Special caliber in 2-inch (rare), 4-inch, and 6-inch barrel lengths. Colt manufactured the Official Police model continuously until 1969, with a total production of nearly a million revolvers on this frame size.

The only minor change Colt made during this period was in the crane lock on all double-action models; In the 1950s, a spring-loaded detent replaced the old crane lock and lockscrew. Over the 60-plus-year life span, grips were produced from hard rubber, plastic, and walnut, with ivory and mother of pearl offered as an option at various times. Several target revolvers based on the Official Police frame were also manufactured by Colt, such as the Officer's Model Match.

It was only fitting that This example in .38 Special caliber has the optional 5-inch barrel and was made in the late 1940s. Author photos.

WORKING THE COLT OFFICIAL POLICE MEDIUM-FRAME DA REVOLVERS CONTINUED

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Once open, a loaded cylinder is easy to identify. Here they are shown paired just in front of the trigger guard. when Colt introduced its premium revolver, the .357 Magnum Python in 1955, it was built on a specially heat-treated Official Police-sized frame. This frame size was so popular with shooters that even S&W has mimicked it with its popular .357 L-frame revolvers.

The sharp eye will note strong similarities in the design of the actions between the Official Police models and the smaller Police Positive

and Police Positive Special revolvers, as well as with the larger New Service Colt models. Except for the size differences in the frames and internal parts, the mechanical design of all these revolvers is virtually identical. And, as you may have already guessed, the loading, unloading, operation, and disassembly for all these revolvers is identical.

As Once the sideplate is off, the complete action is exposed. a result, these disassembly instructions apply to most Colt revolvers made prior to 1969, including those built on

the same frame size as the small Police Positive, Police Positive Special, Banker's Special, Detective Special, as well as the much larger-framed New Service, 1917, and Shooting Master models.

The exceptions to this are the 1889-1895 series of New Army/Navy revolvers, which are fundamentally different in design and thus have their own disassembly procedures.



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Disassembly Instructions The nomenclature I'll use here comes from a Colt catalog of 1955 vintage, as does the schematic drawing found here. 1. Hold the revolver firmly by its grip with your fingers away from the trigger. With the muzzle pointed in a safe direction, use the thumb of your shooting hand to pull rearward on the latch (#26) and then push the cylinder (#30) open from the right to the left side of the revolver.

If any cartridges are present, tilt the revolver upward so the back of the cylinder faces the bench top, and push in on the ejectorrod head (#35). The ejector will pull the cartridges out of the cylinder. Remove any live ammunition from your work area. 2. The cylinder is removed first.

With the cylinder still open, unscrew and remove the crane-lock screw (#23) and the crane lock (#23a), or on later models (from the mid- 1950s up), unscrew and remove the cranelock screw, detent, and spring (#21, 22, and 23.) Note that the crane-lock screw is the only screw found on the right side of the frame. With the cylinder open, line up one of the flutes with the bottom front of the crane (#38).

With the cylinder in this position, you can withdraw the cylinder/extractor/ 1 Hammer 2 Hammer Pin 3 Hammer Stirrup 4 Hammer Stirrup Pin 5 Strut 6 Strut Spring 7 Strut Pin 8 Firing Pin 9 Firing Pin Rivet 10 Safety 11 Safety Lever 12 Hand 13 Trigger 14 Trigger Pin crane assembly toward the front of the frame (#46). 3.

Remove the grips and the sideplate by unscrewing and removing the grip screw (#41) and lifting off the 15 Main Spring 16 Bolt 17 Bolt Spring 18 Bolt Screw 19 Rebound Lever 20 Rebound Lever Pin 21 Crane Lock Detent 22 Crane Lock Spring 23 Crane Lock Screw 23a Crane Lock 24 Sideplate 25 Sideplate Screws (2) 26 Latch 27 Latch Spring 28 Latch Spring Guide 29 Latch Pin 30 Cylinder 31 Cylinder Bushing 32 Cylinder Bushing Pin 33 Ratchet (ejector star) 34 Ejector Rod 35 Ejector Rod Head 36 Ejector Spring 37 Crane Bushing 38 Crane 39 Barrel 40 Stock Pin 41 Stock Screw 42 Stock, Left Hand 43 Stock, Right Hand 44 Stock Screw Nut 45 Recoil Plate 46 Main Frame grips (#42 and 43).

Then unscrew and remove the two sideplate screws (#25). Now turn the gun on its side so the sideplate is facing up and hold the revolver by its barrel. (Be sure you're working over a well-padded

WORKING THE COLT OFFICIAL POLICE MEDIUM-FRAME DA REVOLVERS CONTINUED

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The bolt still remains in the frame, held with one screw. Before removing them, be sure to note how the safety parts fit into the frame. bench-top.) Using a wooden or plastic mallet, strike the grip frame one or more sharp blows. The hammer blows should cause the sideplate (#24) to be shocked out of place and jump up and out of its tight seat with the frame. Don't ever attempt to pry off a sideplate, as serious damage to the frame or sideplate could result.

While you're in the process of removing the sideplate, hold your thumb over the latch to keep it from jumping out. With the plate off the gun, remove the latch (#26) by pulling it forward out of the sideplate. Then remove the latch-spring guide (#28) and the latch spring (#27) from the latch opening in the sideplate. Take note of how the There are also two notches at the top of the star legs (at about 11:30 and 5:30).

All these must align for reassembly. hole in the rear face of the latch fits over the leg on the latch pin (#29). These must line up for reassembly. 4. Next comes the removal of the mainspring, the rebound lever, the hand, and the hammer. Start by rotating the hammer (#1) back about 1/4 inch, and then use a screwdriver to push the rear of the mainspring (#15) down so it can be separated from the hammer stirrup (#3).

Now push the hammer forward and pull the mainspring out through the left side of the opening in the grip frame. Lift up the hand (#12) and take it out of its seat in the trigger (#13). Look at the base of the hand on the inside, and notice how the rebound lever fits against the hand base to apply forward tension to the hand. Use a pin punch and hammer to push the rebound-lever pin (#20) out of the grip frame, and then slide the rebound lever (#19) forward and out of the frame.

Pull back on the hammer slightly and remove the hammer by lifting it straight up and off of the hammer pin (#2) in the frame. 5. Before removing the trigger and safety parts, pay attention to the relationship of these parts to the trigger. This attention will greatly ease the reassembly later on. Once you have the hammer out of the frame, the trigger along with the safety (#10) and the safety lever (#11) can all be lifted straight up and out of the frame.

The latch pin (#29) is free, and can be pulled straight out toward the rear of the main frame. 6. To remove the bolt, unscrew and remove the bolt screw (#18) first. Using a small pick, carefully pry the bottom of the bolt spring (#17) out and away from the frame in order

WORKING THE COLT OFFICIAL POLICE MEDIUM-FRAME DA REVOLVERS CONTINUED

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The hex hole fits the Official Police model, while the other end has two screw heads that will work on New Service or Police Positive ejectors. The big hole works on a 1911 barrel bushing. Once the star is off, the cylinder can be pulled back off the crane, to release its tension. Then lift out and remove the bolt (#16). During reassembly, install the bolt along with its spring into the frame, carefully work the bottom of the spring back into its seat in the frame, and then install the bolt screw.

These Colt DA bolt screws tend to work loose, so I install them with a drop of blue (removable) Loc-Tite. 7. To disassemble the cylinder, insert six fired cartridge casings or dummy cartridges (.38 Special Dummy Cartridges; 10 pack; Brownells item #367-138-010; \$15.35) into the cylinder chambers for support. Grasp the ejector rod head (#35) in a padded vise and unscrew it from the ejector rod (#34) by turning the cylinder in a counterclockwise direction. Now you can remove the dummy cartridges.

Push in on the ejector rod slightly in order to hold the ejector (#33) up off the Shown here is the Colt Crane Bushing Tool from Brownells, which works on several Colt DA

frame sizes. cylinder. As you do this, notice the witness mark and cutouts at the ends of two of the star legs of the ejector. These need to be aligned the same way during the reassembly.

Use a special tool, like the one shown in the photograph (Colt Wrench; Brownells item #080-557-000; \$24.97), to unscrew the ejector star from the ejector rod by turning the tool and ejector in a counterclockwise direction while holding the cylinder firmly. Once the ejector star is unscrewed and off the cylinder, the cylinder itself can be pulled off the crane assembly to the rear. 8.

To disassemble the crane internals, you'll need a special spanner-wrench like the one pictured (Colt Crane Bushing Tool; Brownells item #080-654-000; \$25.25) to unscrew and remove the crane bushing (#37) from the rear of the crane (#38). The ejector rod and the ejector spring (#36) can now be pulled out from the rear of the crane. 9. When disassembling the hammer, support the hammer sides, and use a straight pin punch and hammer to drive out the strut pin (#7).

Then lift off the strut (#5) and its spring (#6) from the front of the hammer. To remove the stirrup, use an appropriately sized pin punch and a small hammer to drive out the stirrup pin (#4) and remove the stirrup from the rear of the hammer. The firing pin (#8) is held to the hammer by a solid rivet (#9). If necessary, it can be driven out with a straight punch and hammer, but be aware that anew rivet will be required for reassembly of the firing pin. 10.

The hammer and trigger studs area light press fit into the frame. If required due to breakage or for refinishing purposes, they can be driven out using cup-tipped pin punches and a hammer. They are driven out from the right side to the left of the frame. Be sure you take steps to adequately support the frame surrounding the studs during removal. These pins can be replaced by driving them straight in using a flat pin punch and hammer.

Further disassembly is not required for normal cleaning and maintenance of the revolver mechanism. To reassemble the revolver, simply reverse the above procedure.

MEASUREMENT & INSPECTION

Reader Forum

BY AMERICAN GUNSMITH EDITORS OCTOBER 2008

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Sticky AA Release Lever I have an American Arms Silver 1 over/under shotgun in 12 gauge with maybe 1,000 rounds fired. The problem is the Greener crossbolt locking system. If I snap the gun shut, the bolt is flush with the receiver and almost impossible to open with the lever. If I close the barrels while holding the release lever open and then release it when action is closed, the crossbolt sticks out a little and the action opens easily. I have flushed the locking mechanism and oiled it.

I see no burrs, but I do see a wear pattern. I've never had one of these crossbolt actions, so I have no experience with them. Any idea where I might get takedown instructions? Any thoughts on what to look for? I've rebuilt many Savage/ Stevens shotguns, but never one of these. Thank you. Jim Gallo The Greener-type lock extends from the barrels into a recess in the breechface.

The locking bolt is activated by the top lever passing through around hole or rectangular slot in the lock, depending on the shape of the bolt. Interference between any of these parts can cause sluggish to hard opening or imperfect closing of the action. Your shotgun was initially imported in 1987, so we're not terribly surprised

at the appearance of a wear pattern, especially if the locking system wasn't fitted up properly in the first place.

We have no detailed takedown information on the Silver 1, but we do know that American Arms was purchased by Tri Star Arms in Kansas City, Missouri. Tri Star may be able to assist with at least an owner's manual and schematic and can probably help you find a source for replacement parts. CZ82 Rechambering? Your article concerning the CZ82 and CZ83 pistols was very helpful. In reading about these two great pistols, a question occurred to me: Is it possible to rechamber the CZ82 to .380 caliber/9mm Kurz?

Since the only difference between the two is the caliber, it would seem that reaming the 9mm Makarov chamber to .380 would not be difficult. Is there something I am not aware of that would make this a problem? Since .380 is more readily available, this would make it a potentially worthwhile undertaking. Jim Slack The problem here is bullet diameter. The Makarov round is a 9x18 with a .365-inch projectile, while the .380 projectile measures .356 inch. You do the math.

What you could do instead of rechambering is to reform 9mm Luger brass by expanding the case mouth, then trimming it to 0.713 inch in length and deburring it. Dan Wesson Trigger Job I just purchased a Dan Wesson Model 15. It's very accurate in single action, but in double action the trigger pull is heavy and not smooth. I read your article and then removed the sideplate and found the action was dry and a little dirty.

After cleaning and lubrication (without complete disassembly), it improved somewhat, but it still has a heavy pull. I'm thinking of installing a lighter mainspring. Is there a previous article on doing a trigger job? Also what's the difference between the Model 15 and the 15-2? I would appreciate any help you can give me. Thanks. Ralph Marchese

Smoothing the Dan Wesson's trigger is fairly simple.

Start by removing the sideplate and polishing the inner surfaces of the plate and frame with a medium-grit Cratex wheel chucked in a flexible shaft. Turn the shaft at low speed and avoid the edges of the plate. Then remove the hammer and trigger. Arkansas stones and a ruby slip will polish the base of the bolt and the top of the trigger at their interface. Go easy with the polishing; the engagement angle between the trigger hook and the bolt should not be altered.

A perfectly true, round stone is used to shine up the upper hammer notch. The broad side of a triangular Arkansas stone will do for the lower hammer notch. Again, make no change in the angles. Check under magnification for any rough spots you might have missed around the trigger and hammer bosses in the right side of the frame. If present, use the Cratex wheel to smooth them out. Polish the sides of the hammer that extend below the frame line.

Treat the sides of the trigger that extend above the frame line in the same manner. Finally, stone away any roughness in the cylinder stop slot and the hand slot in the frame. You can check with Brownells on the availability of a drop-in spring kit. There's no mechanical difference between the Model 15 and 15-2 and though they still stock parts, CZ-USA is no longer manufacturing the Dan Wesson revolver. H&R Model 88

Flaws? I'm working on an H&R Model 88.

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The breechface has what at first glance looked like gouges, but I now think they are flaws from manufacturing. I base my assumption on the fact that the case-hardening colors run into these depressions. These depressions are .015 inch at the deepest spot. My question is this: Is this type of manufacturing defect common on these guns? I don't want to tell the owner the gun is unsafe if this condition is common with all H&R single-shots.

Based on the assumption that these were there from the time the gun was new, what's the risk of these eventually cracking or causing the receiver to fail outright? Any advice will be appreciated. Name Withheld Not knowing which H&R entity produced the gun (there have been

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several changes in ownership and control of the original company), we can't tell you if this is a "common manufacturing defect." The latest incarnation of H&R (H&R 1871) will not comment on any firearm they did not manufacture. We can, however, assume that the weapon is a "Handy Rifle" or "Topper" shotgun derivative, and would not be unsafe if there are no cracks in the breech area. By the way, real case-hardened colors don't "run"—they're baked in.

Further, case hardening doesn't penetrate deeply into the metal; it's used primarily for cosmetic and surface-hardening purposes. We suggest you test fire the gun. Use reduced loads if it's a rifle or low-brass target loads if it's a shotgun. Lash the gun to an old tire, tie a 30-foot string to its trigger, clear the area of spectators, and pull the string. If the gun survives several re-chamberings and firings, you can feel pretty good about its safety.

The owner will merely have to be satisfied with lighter loads and low brass. Replacement Gun Stocks Can I fit a 1903-A3 or an 1898 30/40 Krag rifle to a Remington 700 stock? If not, what popular stock can I retrofit to these two military rifles? Thank you for your time. Tom Parker Doesn't the Krag have a rotary magazine that requires breathing room within the rifle's long stock? It also, if we recall correctly, carried a barrel much longer than any "popular" rifle we've seen lately.

The only stock we can think of that might be suitable for a retrofit would be one taken from a Savage Model 99, but that's only because it, too, had a rotary magazine. We're not trying to pile things on here, but there are several other factors you must consider beyond the inner space required in the stock. These include receiver spacing, receiver diameter, recoil-lug placement, trigger location, and the other action dimensions.

Then there's the possibility of having to rework the barrel channel in the replacement stock. All the above, except for the rotating magazine, would apply to adapting the Model 700 stock to an M1903-A3. In addition, you'd have to consider magazine location. We don't know if sporterizing is your goal or if you're simply trying to improve the cosmetics of these rifles. If cosmetics is a priority, we suggest you contact Boyds Gunstock Industries and discuss a higher grade of wood than the present stocks.

They carry plain all the way up to super-fancy woods, and we're quite certain they'd have the patterns on hand from which to cut stocks for your military rifles. You can have them fully or partially inletted. If you choose fully inletted, you'll have basically a drop-in installation with only some minor additional fitting. Do a nice job of finishing and you'll have a couple of handsome old warhorses you can be proud of.

Nagant Revolver Ammo I have a Russian Nagant revolver and was wondering what ammo other than the original this firearm will take, since the original ammo is hard to find and very expensive. Will this firearm take ammo such as .32 SW Short, .32 SW Long, or .32 H&R or anything else? I've been told there is a replacement cylinder that takes .32 ACP, but that is also expensive ammo. Any help will be appreciated.

Garry Waters You didn't mention your Nagant's original caliber, but we assume it's 7.62 mm Russian with a bullet diameter of .295 inches. All the other ammo you mentioned runs between .311 and .313 inch in diameter. Unless the chamber of your revolver is out of spec, and many were, you'd be getting yourself into some serious pressure problems. You can reform .32-20 Winchester cases, which are similar

to the Russian 7.62mm brass, and load them according to data available from bullet and/or powder manufacturers.

Of course, that would require the purchase of reforming dies, bullets, propellant, and primers. And that wouldn't be cheap, either. SKB Model 600 Takedown I've got a 1960s gun that was heavily oiled and put away 40 years ago. Now it's sticking when fired after it warms up. It appears to just need a good cleaning. I contacted SKB and they said all their 500/600-Series are the "same" and offered a parts diagram but no takedown instructions.

I'm hesitant to tear into the gun for fear I won't be able to get it back together correctly. Any suggestions? Thanks. John Herslow We can only lead you to takedown instructions for the SKB 900-Series, which appears in Gun Digest's assembly/disassembly book for shotguns. We were unable to locate a phone number for Guns Unlimited, the last listed importer of the SKB, or any reference to the 600. So, unfortunately, we can't tell you if the 600 and 900 are sufficiently alike.

If dirt is the only problem, however, you don't have to go beyond field stripping and removal of the wood. Subsequent to those measures, you'll be able to flush out any accumulated fouling with a squeeze bulb and either kerosene or mineral spirits. Once the solvent comes out clean, dry the cleaned-out interior with compressed air and lightly lubricate the trigger mechanism. Sluggish SP 101 Cylinder Do you have any plans to feature Ruger revolvers like the SP101 for takedown, repair, or modification?

I have a revolver with a cylinder that does not spin as freely as I think it should, and no instructions on how to disassemble it. Bill Dondanville

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(continued from previous page) One of the first revolvers we wrote about was the SP101, but that was way back in 1992. Unfortunately, reprints are no longer available. We don't know how freely you think the cylinder should rotate, but we do know of another source for disassembly and repair information. That would be Jerry Kuhnhausen's book *Ruger Double-Action Revolvers: A Shop Manual* (stocked by Brownells). Once you have the book in hand you'll have no difficulty taking the 101 down to bare bones.

Before doing anything to those bones, however, give them a thorough cleaning and polishing. The problem might be nothing more serious than an accumulation of dirt and grime. Savage Model 110 Mods I just acquired a Savage Model 110 from my brother. He brought it to me when he couldn't get the bolt back in—apparently he had moved the cocking piece pin out of battery—and after I fixed it he mentioned that he was looking to sell it.

Although it was missing the front sight and has a small ding in the wood to the right of the bolt, it appears to be in good shape. Initially, I thought it was an E Model (so many sub models) because of the "E" stamped TDC in front of the barrel lock nut. But that same barrel lock nut is depicted in Gun Digest's exploded long-gun drawings as a Cor CL Model. Should I ask,

what is the difference between the Jand K Series? Is it the box and blind magazine? apart, clean it, and check it over.

And then I am considering doing a Cerama-Coat finish on it like I've done to a few other guns, along with some stock work ideas I've seen in *American Gunsmith*. I would then finish the project with a sling and a nice scope. The mechanism appears simple enough, but I would like to make sure there wouldn't be anything to watch out for when disassembling or reassembling, as you frequently point out in your publication. I was looking through the issues I have, and haven't found anything on this model.

Is there an article or any advice you can offer? For instance, I wouldn't need a special tool or jig to get the bolt back together, would I? I'm also wondering if the trigger group would give me any trouble. Thank you in advance for your time and consideration. Charles May The instructions for disassembly are shown in Gun Digest's book on the subject for centerfire rifles. Or, if you have the June 01 issue of *American Gunsmith*, they also appear there. No special tools are required.

In anticipation of a follow-up query on your project: No, the patented Accu Trigger cannot be fitted to your Model 110 without modifications to the receiver which must be done by the factory. Spring Temper and Heat I work in a small two-man shop.

We put a polymer finish on a lot of the guns we work on. All the parts that we finish are stripped down completely before finishing. Occasionally, we get apart that cannot be completely torn down, like the trigger group of the Remington Wingmaster shotgun. (The hammer pin is braded and the trigger pin is staked.) My question is: Are the curing temperatures for the polymer finishes (300 degrees for one hour) high enough to damage the temper of any springs that cannot be removed?

Wally Erspamer We believe that takedown instructions for the Wingmaster can be found either on the internet or in one or more of the disassembly books such as those published by Gun Digest and the NRA. The hammer pin you mentioned must have its "braded" end ground off in order to remove it and thus it will have to be replaced with anew pin. The trigger pin is not staked in, but is wider at one end than at the other. All the springs are removable.

In fact, if they are not taken out, the hammer must remain in the mechanism and the hammer itself is case hardened, which may suffer more at 300 degrees than the springs. Unfortunately, the best answer we can give you is that some gun springs can take 300 degrees F without losing their temper and some gun springs can't. It all depends on the metallurgy. Whenever possible, a call to the manufacturer would be a good idea.

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