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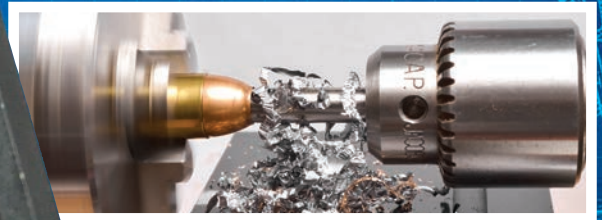
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Family Heirloom

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TAKEDOWN
MAGIC**



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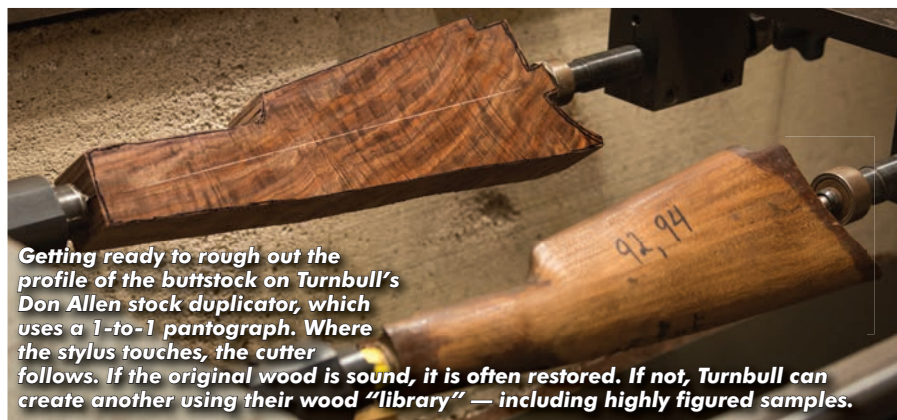
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VOLUME #28

TURNBULL'S MAGNIFICENT MAGIC!

Turning a Model 94 Into a Family Heirloom



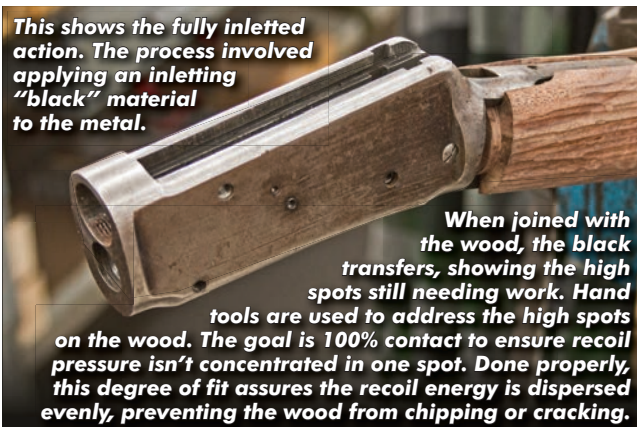
Getting ready to rough out the profile of the buttstock on Turnbull's Don Allen stock duplicator, which uses a 1-to-1 pantograph. Where the stylus touches, the cutter follows. If the original wood is sound, it is often restored. If not, Turnbull can create another using their wood "library" — including highly figured samples.



Getting ready to index the takedown collar to the action. This is critical, as everything needs to line up precisely after restoration work is completed on the metal.



Stockmaker Jack Klapthor uses a Japanese saw rasp to work the buttstock. His process will include matching the contour of the action and blending the top and bottom tang together. This is all work done by hand and eye — no machine could ever do it!



This shows the fully inletted action. The process involved applying an inletting "black" material to the metal.

When joined with the wood, the black transfers, showing the high spots still needing work. Hand tools are used to address the high spots on the wood. The goal is 100% contact to ensure recoil pressure isn't concentrated in one spot. Done properly, this degree of fit assures the recoil energy is dispersed evenly, preventing the wood from chipping or cracking.

The art of a proper restoration of a firearm is not as simple as a "refinish." It's as different as a hand-rubbed, 20-coat lacquer paint job on a Duesenberg from a rattle-can paint job on the farm tractor. They are entirely different animals at every level.

To "refinish" a firearm calls for basic mechanical work, possibly some polishing and stock finishing and then the application of "gun shop" bluing or other commercial finish. The result often comes close to "looking" much like what the sample gun might have looked like when newer. Check out the Model 12 refinishing chapter in this book for a sample project.

But unless the craftsman takes the time to properly care for the original surfaces and adheres to original finishing techniques and styles, the result is indeed a bit like that rattle-can paint job on a farm tractor. It "looks" nicer, but there might still be some small dings, scratches and mechanical glitches present: A classic case of the "10-foot" paint job looking great from, well, 10 feet.

A restoration calls for historical research and knowledge to determine



Using the duplicator again to rough out the new forend. This client opted for an upgrade in stock wood, hence the need to craft entirely new stock parts. Turnbull possesses a library of period-correct models to ensure historical accuracy for every buttstock and forend they make (left). Above right, gunsmith Mike Knowles uses a flat piece of steel and abrasives to polish and check the barrel flats. Contours, flats and edges must be perfectly and appropriately crisp and smooth. Proper polishing is essential in metal restoration and is one of the many measures taken into consideration during historically accurate, period-correct gun restoration.

what the original gun looked like. The craftsman needs to establish what techniques might have been used in the original build and finishing, and what the technology of the era might have been. Then the knowledge is paired with skilled hands and accurate, appropriate tools and materials to first make necessary repairs for functionality and form — and then to restore the various surfaces to their original splendor. Unlike the “10-foot” paint job, this project will stand up to examination with a magnifying glass if done correctly.

And this takes time, energy, skill — and no small amount of determination and commitment. The results can truly make the heart soar, give a family back a distant loved one’s personal firearm in its original glory — and make history come alive in their hands.

Turnbull’s Shop

Doug Turnbull has carefully assembled a small group of highly skilled craftsmen, metal workers, gunsmiths, stock makers, engravers and others who have formed a memorable team in the process. They’re all imbued with that particular passion for their craft, and for excellence in general, seeming to mark true masters in any field. From repairs to complete as-new restorations, the Turnbull shop has risen to the heights of distinction and remains among a tiny handful of shops able to deliver on a promise of perfection.

It’s as simple, and as complex, as that.

Turnbull Restoration also offers modern firearms refinishing using Turnbull’s custom techniques like classic bluing formulations and color case-hardening. They also offer limited runs of reproduction firearms mirroring the fit, finish and high-quality workmanship of original Winchesters,



Final polishing to achieve a particular surface finish for the part in question can take hours — even days. Various grits of abrasive papers and even stones are used to get that “just right” look to the microscopic scratches on the metal’s surface matching an original gun. The metal polish is the backbone of the final finish, whether it is bluing or case hardening (left). Measuring “ink pulls” taken from original markings is a critical step. Determining precisely where the original roll marks were helps assure their reapplication is done correctly. Accuracy is everything in each step (right)!



A craftsman carefully lines up the hand-operated press. It uses tons of pressure to force a die into the metal’s surface. Most factory marks were “roll-marked” like this rather than engraved.



Turnbull maintains an extensive library of marking dies, each highly researched, then expertly crafted to match original manufacturer roll-marks.



Turnbull has a number of hand-operated presses to match the die needed and the mark desired.



Caliber markings can be done using an extremely precise hand punch — and lots of practice!



Gunsmith Mike Knowles polishes the Model 94's receiver. Mike will run through a range of abrasive paper grits to get just the right polish level historically accurate for this particular 1894. Contours, flats, edges — indeed everything — must be perfectly and appropriately crisp and smooth. This may be the not-so-secret magic to the success of a top-quality restoration. A high polish on a Model 94 simply wouldn't look correct — but the restorer has to know that!



Every metal part needs the same degree of attention to detail. Here, Mike polishes all facets of the hammer. As with other metal parts, the sides have a particular surface finish, while the front and rear edges have a different one. Getting the correct combination is what helps to make the final result really pop.



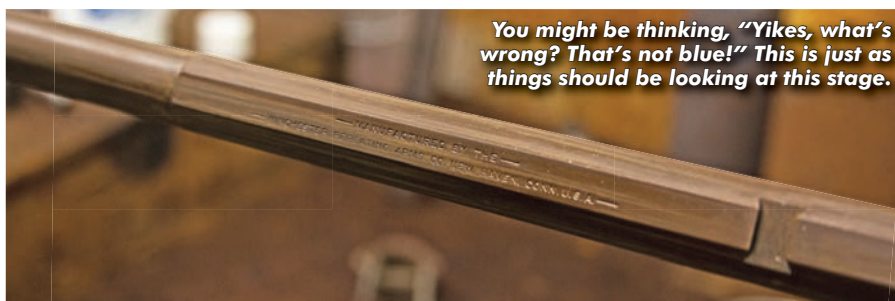
All surfaces are polished to original Winchester factory specs and the colors mirror original finishes, including color case-hardening. What a sight to behold!

Just look at the compound curves, flats and inside and outside edges here on the lever. Each needs addressing by hand while any nicks, surface defects and glitches are repaired. At times, precision welding is used to repair damaged surfaces, then brought back to spec with this sort of careful hand work.

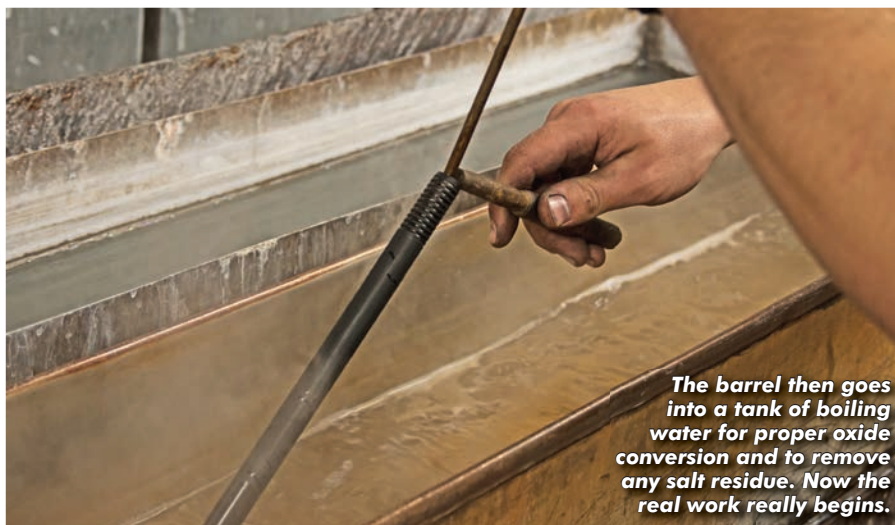




Metal finisher Keenan Whitmore applies the first coat of bluing salt. First the barrel is cleaned of any oils, fingerprints or contaminants. The right application of heat is critical for the proper application of the salts. This work is as much a black art as science and skill.



You might be thinking, "Yikes, what's wrong? That's not blue!" This is just as things should be looking at this stage.



The barrel then goes into a tank of boiling water for proper oxide conversion and to remove any salt residue. Now the real work really begins.

new parts are made and/or originals are located and restored so the project meets the customer's dreams.

While this doesn't showcase the comprehensive work needed on a total restoration like this, an overview of some of the steps can help to flesh out just what's entailed. If you're a hobby gunsmith, look and learn and don't be put off by what seem to be unavailable skills or tools. Often, simple hand tools like files, abrasives and even commonly available finishing products can nudge a basic "refinish" job toward the goal of a true restoration in your home shop.

Practice truly can create perfection and you only have to look as far as these photos to see it in action. Now, look, read, enjoy and start planning your own project! 🖊️

For more info: TurnbullRestoration.com



The barrel — and any other metal part being blued this way — is then polished, and the entire process is repeated multiple times. A different "grit" of polishing wheel is used between each application. Once the "depth" of color is achieved a final polish is done. And no, it's not as easy as it sounds, not by a long shot (left). Among the many "small things" needed done during a complete restoration is touching up any original factory engraving remaining on the gun. Using his metal tools, a master engraver goes over the wording by hand. This assures ornamentation and markings are just as crisp as they were when the gun left the original engraver's bench or factory artisan's hands.



This elegant and highly desirable 1894 "Takedown" rifle has a tang sight, highly figured walnut stock and half-octagon barrel.

Everything is "just right" including the ultra-fine polishing marks on the metal surfaces and wood to metal fit. Impeccable is a good word here! Let this result enthrall you to either have Turnbull's shop craft a result like this on your own gun, or build your own skills to give your own restoration a try someday!