STOCK FINISHING WITH CLASSIC GUNSTOCK FINISH

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INSTRUCTIONS

The Classic American Oil Finish. I'll describe the method that I have used to finish ninety-five per cent of the custom stocks that I have made. This method gives a finish with the pores in the wood completely filled level with the wood surface. The finish is totally impregnated into the wood with no thick surface layer. It is a true oil finish. The finished wood glows with a quiet elegance. It is easy to maintain, has moderately good water resistance and excellent resistance to wear. It seems to improve with use.

If the stock has been previously finished, I strip off the old finish and do whatever sanding is necessary, sanding finally with #220 or #240 grit paper then dampening the surface of the wood. As the dampened wood dries the grain rises, producing rough "whiskers" on the stock surface. To freeze the "whiskers" I dilute the Classic Gunstock Finish with Mineral Spirits (Paint Thinner) in a ratio of one part finish to two parts thinner, giving a thin-as-water, penetrating finish. I dilute the finish as I need it into a small "finger bowl." I use eyedroppers, obtained from a pharmacy. I draw a portion of Classic Gunstock Finish about one inch into an eyedropper and put it into the bowl. I add more one inch portions until I have added three to five portions to the bowl. With another dropper I add six to ten one inch portions of Mineral Spirits and mix the two. The dropper used with the finish is easily cleaned in Mineral Spirits. I then soak the diluted finish into the stock, including the inletting, allowing the wood to soak up all it will take. I allow the finish to dry for **two days.** Although this finish always dries hard in 24 hours, I give it an extra day to be certain. The dry finish freezes the "whiskers" on the stock surface and allows them to be sanded off in the next step.

To fill the pores I sand with #320 wet-or-dry sandpaper. I cut, using scissors (never tear), the sandpaper into 1½" squares. In sanding, these may be backed by wood, sponge rubber, a piece of an eraser or by your finger tips. The softer the backing the better is the pore filling. Walnut woods, either English, Black or Claro, have moderately large pores. I fill the pores of these woods using my version of the method of SANDING IN. I do not apply coats of finish and then sand them off to fill the pores of the walnut.

Having diluted some Classic Gunstock Finish with Mineral Spirits in the one to two ratio, I wet a part of the stock with the finish and wet sand this part with the #320 grit paper. Using little pressure, I float the sandpaper over the stock, feeling the cutting action and watching the build-up of the mix of stock finish and sanding dust. I sand just long enough to build up a certain amount of the mix and then wet down another part of the stock and repeat. If the area that I am sanding soaks up the finish before I have built up some mix, I add more finish and continue sanding. I don't sand very long in one spot. To give you an idea how long, it takes me from 30 to 45 minutes to fully sand a plain stock, one without a cheekpiece. When the sandpaper stops cutting well I change it for another piece, a total of about twenty squares being needed to do the whole stock.

The sanding finished, the mix of finish and sanding dust covers the stock surface. Some is very wet and some quite

firm. Some has a pale look, where the mineral spirits has evaporated leaving behind much sanding dust and little stock finish. Next, I wet the entire stock with finish working, with my fingers, the new finish into the old mix of finish and dust, redissolving it. I do this until the surface is wet and gleaming. Now the stock is put aside until the mix gets a bit syrupy and shows a trace of resistance to being moved with a finger. At 73° and 50% Humidity this is about 10 minutes. If it is very hot then 5 minutes.

Then I remove the mix from the surface. I do this with a non-absorbent paper towel. The best are the napkins from fast food hamburger restaurants. They are not too absorbent. The high-absorbency towels from a supermarket are not used. I wipe with as many napkins as are required, using a circular motion and wiping only hard enough to remove the mix from the surface, working harder at the end, when the finish has stiffened. In fact, if slight traces of the mix remain they will be removed in the next sanding. I don't wipe too hard. I DO NOT attempt to polish the surface, wiping only until 99 to 100% of the mix is removed.

Using a circular motion, using a non-absorbent paper napkin to just remove the mix, with no hard polishing, and maybe being a bit negligent and leaving behind very slight traces of mix all go towards packing the Classic Gunstock Finish and sanding dust into the pores. I won't see much filling this first time, maybe a pore or two. But I'm not discouraged since I know they will fill as the process is repeated. Not only will they fill, they will be deeply force-packed with the mix.

After TWO DAYS drying time I exactly repeat the above with #320 grit. After the second time, I see strong signs that the pores are filling.

After TWO DAYS drying time, I exactly repeat for the third time, wet sanding with #320, redissolving the mix with finish, waiting 10 minutes and then removing the mix with a circular wiping motion and a non-absorbent paper napkin. Examining the surface as I wipe, I use reflected light from a shaded lamp and a 100 watt bulb to expose any remaining mix. Not polishing the surface, I wipe only hard enough to remove 99 to 100% of the mix.

This third repetition fills, with dramatic suddenness, the pores of English and dense Claro and Black Walnuts. Porous Claro or Black often require another repetition with the #320. After the #320 grit sandings the stock is well-filled and has a dull surface, a surface completely soaked up with Classic Gunstock Finish.

After two days drying time, I wet sand the surface with #400 grit wet-or-dry paper, generating mix and treating it exactly as I did in the #320 grit steps. Again I wipe just hard enough to remove the mix. If I wipe too hard, polishing the surface, I will pull the filler material out of the pores.

After two days drying time, I repeat the process again with #600 grit paper. With these finer papers one shouldn't use much sanding pressure. Just float the paper over the surface, feeling and hearing the cutting action. You allow the paper to do the cutting. #600 grit is a polishing paper and I repeat the process as with #400 grit EXCEPT that I wipe off the mix with a piece of soft cotton flannel. I do not use a circular motion. I wipe along the length of the stock and I wipe to **remove 100%** of the mix. Again I do not try to polish the surface, but I do wipe hard enough to remove all the mix.

I allow this also to dry for a minimum of two days before rubbing the stock with rottenstone and linseed rubbing oil. The result is a perfectly filled oil finish, the surface of the stock having a glowing luster. If the stock is to be checkered then I allow four days drying, then checker it. After checkering I do the above rub with Rottenstone and my Classic Linseed Stock Rubbing Oil.

To rub the stock I dampen a small pad of cotton flannel with the rubbing oil. I pour on a bit of rottenstone and mix the oil and rottenstone into a brown paste on the

pad. I lightly rub this mixture over the stock, using almost no pressure. This is done quickly. About ten minutes will do for the entire stock. The stock, wet with the mixture of rottenstone and oil, is put aside for 30 minutes. Then I wipe off the mixture with a piece of cotton flannel. This is done lightly — no elbow grease. A very thin film of wet linseed oil remains on the surface. Under average conditions the linseed oil will dry in three days. It is wise to leave it longer before subjecting the stock to hard use.

The result is the Classic American Oil Finish.

This finish is maintained with my Classic Linseed Stock Rubbing Oil. Wet the stock with it and put the stock aside for 30 minutes. Then wipe the oil off the surface with a cotton flannel cloth. There remains behind an ultra-thin coat of linseed oil, plus what has soaked in in the 30 minutes. With this method the stock surface never builds a high gloss.

In contrast to the length of the above instructions, I have found that this is the easiest and most consistent way to fill a walnut stock and produce a fine oil finish. It is easiest in that it takes a minimum of man hours of work. The stockmaker fills the stock, and the filling is what makes stock finishing difficult, as he does the final stock sandings. He wet sands and wipes off the residue. The pores fill themselves. The above lengthy instructions are provided to introduce you to my technique, my "tricks."

The Classic English Oil Finish. The finish that made oil finishing famous was done by the English, although, in reality, they finished most of their guns in varnish. The only English makers whom I have seen to use oil to finish a significant number of guns were James Woodward and Boss.

You can achieve their finish very simply by using only part of the preceding process. First, whisker the stock. Then sand in with #320 as in the first step of pore filling. Do this only once. Then sand in with #400, using cotton flannel to wipe 100% of the mix off the surface. The result is the English Oil Finish, a dull oil with the pores partly filled.

A Built Up Finish. There is no question but that a thicker layer of finish resists water better than the Classic Oil Finish.

I have used a built up finish when I knew that the gun would be used in the wet. Also, Black and Claro Walnuts need, to look their best, a bit more finish.

I fill pores with the first of the Classic American Oil Finish, doing all the #320 grit steps and the #400 grit step. I omit the #600 and the linseed rub. Instead I dilute the Classic Gunstock Finish with Mineral Spirits, one to two. I make the filled and #400 sanded stock gleaming wet with finish, set aside for 10 minutes then wipe off the finish with a cotton flannel cloth. I don't polish the surface. I wipe using as much diligence as I would in wiping up spilled water. That is, I don't wipe too hard. Left behind is a very, very thin film of finish, so thin that dust will not stick to it. I allow to dry a day, two being better. Then I repeat, allow to dry, then repeat again. Each time I add to the thickness of the surface film. I "build up" the finish on the surface. There is no difficulty with dust sticking to the surface as the film is too thin to allow dust to stick. If I want even more build up, I continue to repeat the process.

This "trick" of putting on finish, allowing it to "gum up" then wiping it off is the #1 most widely used "trick" of all top professional stockmakers. It is the thing which licks the dust problem.

With enough repetition the above will build up a high gloss finish. If you want to dull the gloss, rub lightly with 4/0 steel wool then rub lightly with Rottenstone and Classic Linseed Stock Rubbing Oil, following the directions given earlier. This produces a semi-gloss finish. HINTS DEPT.: Degrease the steel wool before using. Steel wool works best used on a finish at least two weeks old. On

fresh finish steel wool sometimes gives spotty results, on old finish uniform results.

Lacking time or patience to build up the finish, then simply use the undiluted Classic Gunstock Finish, applying straight from the bottle with the finger tip to leave a thick coat. Use in a dust free environment if you can find one. Light use of steel wool and a rub with rottenstone and oil gives a semi-gloss.

Finishing "Poreless" Woods. On woods such as Maple and Cherry the Classic American Oil Finish is done by sanding in once with #320, then with #400, then with #600 and then a rub with Classic Stock Rubbing Oil and Rottenstone. These woods are almost poreless, and finishing is relatively easy.

A Hunter Finish. If pore filling is not your concern, then you can complete a finish in two steps. First, dilute Classic Gunstock Finish with Mineral Spirits, one to two, and soak all you can into the stock. Wipe off the excess, down to the wood. Allow to dry for two days. Second, with the fingertips wipe on a thick coat of undiluted, straight from the bottle, Classic Gunstock Finish and allow to dry. This gives a good serviceable finish.

Comments

Classic Gunstock Finish is designed around the sanding in method of pore filling. For sanding in, the finish should not become tacky or sticky too quickly. If it does then you do not have time to remove the mix from the stock. Almost all other commercial stock finishes dry too quickly to be usable with the sanding in technique. Sanding in is, in fact, the lazy man's way to fill pores. You fill as you sand, packing the filler mix deep into the pores and leaving a perfect, uniform oil finish at the end of each step. You can stop at the end of any step and have an oil finished stock, one with the pores in some stage of being filled.

A still added and important feature of Classic Gunstock Finish is that it comes straight from the bottle as a thick filler-finish. If you prefer a filler-finish, filling the pores with coats of the pure finish, then Classic Gunstock Finish works beautifully that way too. The resulting finish is just as tough and water resistant.

Drying Times. Classic Gunstock Finish has the following drying curve: 1) Time before tackiness - 3 hours. 2) Dry to dust - 12 hours. 3) Dry to recoat - 24 hours. 4) Dry to accept heavy use - 3 days. This is at 78°F and 50% Humidity. Except for the initial delay, to give the finisher work time, these figures compare favorably with those of modern quick-dry varnishes.

It has always helped me to keep in mind the mechanism by which stock finishes "dry." Excepting epoxy types, stock finish "dries" by air oxidation. That is, the molecules in the finish react with the oxygen in the air. The result is the solid stock finish. The surface of the liquid finish, being most exposed, reacts fastest, the finish "drying" from the outside in. Once this solid surface is formed, the under layer of finish, partly solid, partly liquid, lying next to the wood surface, "dries" very slowly. The oxygen that it needs is largely excluded by the hard surface. My past experience plus these thoughts about how finish "dries" prompted me to say earlier that steel wooling a stock works best after about two weeks. Steel wooling a stock after only a day or so usually breaks through the solid crust at random points, giving a patchwork effect. My best results were always gained when I enjoyed the rifle in its glossy stock, test shooting and whatnot, for a couple of weeks then used the steel wool.

I hope that the preceding words are a help to you. In reality, I am not selling you a stock finish. What I am selling you is a finished stock, a thing of beauty and a source of pride.