

By Dominick Pisano, custom rifle maker

Giovanna: A Little Girls Rifle

Building a rifle for my granddaughter.

Imagine our surprise when our son Steven and his wife Susan announced that Susan was pregnant. The doctors had previ-

ously made clear that after the birth of their second child future pregnancies were out of the question. He said there was reliable data that professional women, Susan is a doctor, become unable to bear children at an earlier age than the general population. After the shock of the announcement sunk in they told us they were not planning to discover the gender of the forthcoming child. Be that as it may, I decided then and there that I would build the new baby a rifle just as I had for their two other children. Months later when a beautiful little girl was born I determined the new rifle would be a Remington #4 because of its petite size. Often called the baby Remington, it seemed ideal for the project.

Easier said than done. My first step was to find a #4 as a project rifle. My first attempt was at the Houston Gun Collectors Association show. As luck would have it I found several that were sound, but the prices put me off. My next effort was at the monthly gun show in San Antonio. This is a considerably smaller show than the one in Houston, but surprisingly enough I have made more single shot "finds" at this show than any other. Luck was with me. There were several #4's



on the tables and reasonably priced. One table also had a decent Stevens 44. After the appropriate dickering I walked away with both rifles for a total cost of \$300! Mind you these were not pristine collectibles by any stretch of the imagination, and I knew I would be putting more money into their rejuvenation. But hey, that's half the fun for those of us who feel like we are doing a service to the world by restoring a near junker.

I had already selected a very nice piece of walnut; a graft of English/claro. My original thought was to make the buttstock from scratch, but after thinking about it I decided to make a pattern out of poplar which would later be used for machining the walnut I planned to use for this project. This probably seems like a lot of



Left side view Butt stock nice clean lines of the fitted steel butt plate.

extra work but walnut is very, very hard. It is much easier to work poplar than walnut. Besides if I made any mistakes they could easily be corrected using Bondo and appropriate pieces of poplar. The other reason is you can actually see the end result of your work. If it doesn't look quite right, changes can be easily made.

I traced the original stock outline unto the poplar blank and roughed out the profile with the band saw. I made the pattern slightly larger in order to accommodate a steel butt plate that I had on hand. This butt plate was a bit larger than the original steel butt plate. That way I kept the original wood and buttplate intact for future sale thereby offsetting my financial outlay. Now began the real work of shaping the butt.

The first thing I always do when making a stock from scratch is to draw a centerline all around the butt. Since I glued and doweled two equal 3/4-inch thicknesses of poplar together this was already done, as the joint would serve as a centerline. This would become a basic and essential reference point to keep things symmetrical as I proceeded with the work of shaping the pattern. Using this centerline as a guide I sawed, planed and rasped away the excess wood keeping the original stock in front of me as a model. The initial work progressed with remarkable speed and soon the outline of the new stock was clearly visible. At this point I slowed down considerably as I did not want it make any mistakes and remove too much wood. That's a big no as it would result in lost time making repairs.

I squared up the top of the wrist, which would accept the upper tang (remember the #4 has but one tang to which the main spring is attached). This is a major departure from all other rolling block actions. I also squared up the front of the wrist where it would abut the rear of the receiver. I carefully measured the upper tang and transferred these dimensions to the top of the wrist. With chisels and mallet I careful hogged out wood being careful to stay inside the lines I had drawn on the stock. This allows me to make the final fitting using the



Right side view of the frame showing the take down feature.

“try and fit” method with the use of a marking agent.

Once I had the upper tang just about fully fitted I turned my attention to perfecting the fit against the rear of the receiver. With that done I drilled a hole in the front of the wrist and fitted a wooden dowel, which would form the tenon to be mated to the corresponding mortise in the rear of the receiver. This tenon adds immeasurably to the strength of the connection of wood and metal. A necessary adjunct as, you may recall, the #4 has but one tang to attach the butt stock to the action.

I replaced the main spring which I had previously removed in order to enable the upper tang to be fitted more easily and completed the inletting for it making certain that there was no binding of the spring when the rifle was cocked. Once that was completed I again removed the spring and filled the spring recess with clay in preparation for lining the inletting with epoxy. The epoxy gives the work an exact fit, which can then be duplicated by the stock turner. The epoxy serves to waterproof the end grain and adds strength to the inletting. After the epoxy cures, the barreled action being held rather tightly in place, I again turn my attention to shaping the butt.

With the buttstock pattern firmly attached to the receiver I could now establish the length of pull (LOP) and begin the process of fitting the butt plate. I measured the LOP out to an even 13 inches, a bit shorter than the

so called standard, but remember I was making this rifle for a young girl. I fitted the butt plate using the try and fit method using a black marking agent to mark and then remove the high spots. Once I assured myself that the fit of the metal to the wood was perfect, I carefully coated the buttplate with paste wax as a release agent and then generously spread epoxy over the end grain and screwed down the buttplate. After the epoxy cured I would have guides to final shaping of the stock pattern; the receiver at the front end and the buttplate at the aft end.

This final shaping is done slowly and carefully in order to create the pleasing lines necessary for a classic looking stock. I set up the original stock, on the bench, as a model and from time to time in the process step back from the work to take a look-see. This is a practice I adopted a long time ago to keep me from becoming so absorbed in detail work that I'm unable to see the "big picture." This is easy to do and the end result can be disastrous. On occasion I have been known to put the project away and continue at a later time. With the final shaping complete and to my liking, I carefully remove the buttstock from the receiver, clean up any excess epoxy remaining and packed the pattern and walnut blank and sent it off for machining. I instructed the stock turner to flip flop the blank so as to capture as much of the English portion as possible with its beautiful mineral streaking.

While waiting for the machined buttstock to be returned I turned my attention to the forend. In this case I opted to change the design of the original forend by adding a small Schnabel in order to create visual interest to the forend. I squared up the forend blank, cut it to length with about 1/2 inch excess for final fitting and carefully scribed the measurements of the straight tapered barrel on the top of the blank. I also marked the front and rear of the blank in order to maintain the correct placement of the forend to the receiver.

With the measurements drawn on the blank I made use of my table router and carefully routed out the barrel

channel using straight sided 45 degree and flat bottomed bits to route out the barrel channel. The barrel channel is almost a perfect slip fit to the barrel, as I was also able to calculate the barrel taper and set up the router fence to accommodate this. Satisfied that the barrel channel was complete I turned my attention to fitting the rear of the forend to the front of the receiver. Fortunately the RB # 4 has a square receiver so the fitting, using the spotted in technique, went relatively quickly. As always I used epoxy to be certain the barrel channel is waterproof. This is fairly important as the forend, when completed, will be rather slender and could be subject to warpage if water managed to seep into the barrel channel.

I continue with the shaping of the forend without removing the forend from the barrel, which will serve as a handle for most of the remaining shaping. Stepping back from the work I try to imagine the final shape of the forend in my mind's eye and the draw in the profile of the forend on the side of the blank. With the barrel firmly clamped in the vice I begin the removal of excess wood until I have reached the lines I preciously drew on the sides of the forend blank. I leave excess wood at the very tip to allow the final shaping of the schnoble.

I now turn my attention to the sides of the forend and carefully begin the removal of excess wood in stages. I say in stages because I frequently step back as I have mentioned before to get a better perspective of the forend. Unlike the shaping of the buttstock there are no guides, e.g. the rear of the receiver and the buttplate to guide the shaping. It's a matter of removing wood until the form you saw in your mind becomes evident. This is difficult to describe because this is almost the only time in stock shaping that I truly feel that I am sculpting in wood. Often, I simply put the project aside and do something else so I will have a fresh look at where I am when I get back to the project.

The schnoble is the last part of the shaping process. I rough out the shape that I want and then little

by little refine it till I get the look that I am trying to achieve. In most cases the schnoble is larger than I want so I simply remove more and more wood. I do not want the schnoble to look like an appendage attached to the tip of the forend. It MUST look graceful and flow back into the main body of the forend.

Once satisfied that it looks A-OK I remove the forend from the barrel in order to drill the hole for the forend attachment screw and escutcheon. This must be carefully measured in order to maintain the tight fit against the receiver previously achieved. This is for me the most difficult part of the forend fitting. I fit the escutcheon just below the surface of the wood. Final sanding will then perfectly flush up the escutcheon and wood.

When the machined buttstock was returned I found it relatively simple matter to do some minor fitting to the receiver. This was due to the care I had taken in shaping the pattern. I then filled the main spring recess with modeling clay and epoxied the machined stock to the receiver. Naturally I covered the metal with plenty of Minwax as release agent. No epoxy will show and the inletted areas will be stronger and water proof. Now it was just a matter of cleaning up the excess epoxy and prepare the butt and forend for sanding.

Sanding is the last and final step prior to applying finish. I begin on both the buttstock and forend with 100 grit abrasive paper, using sanding blocks of various sizes. I find artists gum erasers the ideal sanding blocks as they have enough stiffness to not wallow out soft places in the wood and yet have enough "give" to



Left side view Butt stock nice clean lines of the fitted steel butt plate.

make the abrasives effective. I also use a variety of random orbital sanding machines to speed up the process. I work my way from 100 grit through 220 grit. At this point I wet the stock, both forend and buttstock, to raise the grain. I carefully sand again with 220 grit to make the stock perfectly smooth and search for any places where scratches remain. This last is an important step and cannot be overlooked. Any scratches not removed now will surely show up when the first coat of finish is applied. Count on it! I re-wet if I find scratches and repeat the process until the wood is PERFECTLY sanded. Then and only then do I go ahead and apply finish.

I use a 50/50 mix of TruOil and mineral spirits and work at it, wet sanding from 220 to 600 grit, until I achieve a soft luster finish that is both durable and beautiful. The finishing process can easily take a week or more with 24 hour rests between coats.

Finally I disassembled the rifle and sent the barreled action off to Ken Hurst for engraving and then to Classic Guns where John Gillette performed his magic and color cased the frame and blued the barrel and miscellaneous metal parts. As this work was being performed I completed the stock work by checkering a simple point pattern on the buttstock and forend. When the barreled action was returned the frame glowed with an iridescent look that only perfectly executed color casing can achieve. The subtle engraving by Ken Hurst set off the rifle as something very special. The rifle was assembled one final time for presentation to my granddaughter.

EPILOGUE

I planned to present the rifle to Giovanna on her first birthday but unfortunately was unable to make that date. I did give it to her several months later. I understand she doesn't quite know what it is, but Steve and Susan do. It was my acknowledgment of yet another wonderful grandchild to my wife and I.

I hope that someday she will appreciate it and join the ranks of single shot aficionados. What else can one hope. ●