

Making and Remodeling Pistols Part I

By Fred Stutzenberger



Flemish holster pistol created by Daniel Thiermay of Liege nearly three centuries ago. It would be difficult to improve on the grace and workmanship of this beautiful piece.

Making muzzleloading pistols is a much-maligned craft. *“To a gunsmith, Kentucky pistols leave a lot to be desired. Pistol making is time consuming and challenges all of the skills required to make a good rifle. A barrel, breech plug and lock have to be inletted. Triggers, thimbles, nose cap, butt cap, sideplate, bolts, screws, sights, ramrod and a stock all have to be created just as they must for a longrifle. To be of use, the hardware has to be of rifle quality. There is little difference between making a rifle and making a pistol—except how does the smith hold onto a pistol stock while working on it? Getting a grip on and maneuvering the smaller stock into solid yet convenient working positions to perform intricate inletting, shaping and carving can be . . . exasperating! And, most important, the gunmaker cannot get a rifle’s price for his pistol—which requires almost the same effort and expense to produce.”* (Chuck Dixon 61). This article expands on some of Chuck’s observations and offers some alternatives for solving problems in pistol making.

Having built at least a dozen pistols and a lot of rifles, I share Chuck Dixon’s perspective on the economics of making pistols versus rifles. In the mid-18th Century, a gunsmith could get anywhere from £3 - £4 for a brace of pistols. A British pound (£) was equivalent to \$4 American. The pistols would sell for \$12-16, equivalent to \$576-768 in today’s currency—a pretty paltry sum considering the work and materials involved. In contrast, a prime (“made”) beaver pelt would be worth ~\$7.50; the broad range of pelts needed to barter for a trade gun was anywhere from

11-20 (\$528-960) in today’s money). So roughly, discounting Hudson’s Bay Company mark-up a gunsmith could get as much for a cheap trade gun as he could for a brace of pistols if he were bartering directly with the buyer. No wonder the colonial gunsmith made very few pistols, and those he did make were for wealthy customers who could afford to pay top dollar for a nice brace.

The purpose of this article was not to dwell on the comparative cost of building a Kentucky pistol versus that of a Kentucky rifle. However, initial cost versus final value is a consideration, so I did a little survey of pistol kits versus rifle kits in some of the catalogs that have accumulated over the years. The pistol kits, including all parts, averaged ~\$400 whereas rifle kits averaged ~\$750. The shaped and inlet pistol stock accounted for ~17% of the total price, while the equivalent rifle stock was ~30% of the total. At the time of publication (1999-2002) of those prices, their dollar amounts have increased ~45%.

So much for the bean counting. Let’s move on to the making. First of all, Chuck’s frustration in stabilizing a pistol stock in a variety of workable positions will be addressed, moving from homemade fixtures that anyone can jig together in the shop right up to relatively expensive alternatives. For over 40 years, my main workstation included a Craftsman (4” jaws, 5” travel) vise with several sets of homemade jaw inserts. For holding a pistol stock, I use inserts made from 2 x 4s covered in deerskin (**Fig. 1**).



Fig. 1. This clamping arrangement of bench vise and home-made rests has been used for pistol work for many years.

They look a bit cumbersome, but they spread the pressure along the pistol evenly and provide a wide area of opposing force. The inner surfaces have little nibs (Fig. 2) that hook

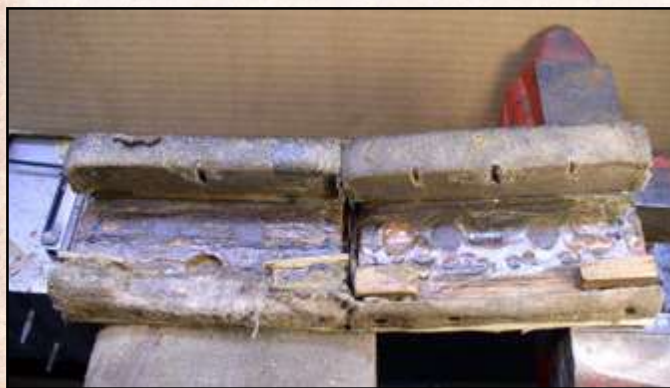


Fig. 2. These vise jaw liners look pretty disreputable, but they have served well in holding many pistols during inletting, shaping and finishing.

under the jaws and keep the inserts from falling off when removing the workpiece. Another set of inserts made from aluminum angle are stabilized by pins set in the tops of the jaws (Fig. 3). I use those for working on soft brass and mild steel parts. A third set of inserts (see suppliers' list) are of plastic with magnetic inner surfaces (Fig. 4).



Fig. 3. These jaw inserts were made from 1-1/4" x 1-3/4" aluminum angle. They are lined with 0.015-inch thick "shirt board" to prevent aluminum smudges on gun parts and to protect the clamped work piece



Fig. 4. These plastic jaw inserts have imbedded magnets to help retain them on the vise. Note the grooves at vertical, horizontal and 45° to prevent slippage of small diameter work pieces.

The adjustable supports on either side of the vise can be shifted closer to the vise or further away along the workbench fascia board (Fig. 5). The adjustable supports are



Fig. 5. The fascia board of the workbench is used for attachments of various supports. The cap bolts that protrude are sharp and should be covered with rubber tubing when not in use to prevent injury.

carpeted and usually covered with old socks as dust covers to keep the carpeting clean. A hole is drilled through the carpet on each of the inserts to accept a backstop to stabilize the pistol during filing or chiseling (Fig. 6). can be held by 1/4 x 2" Allen head bolts and secured by cren-



Fig. 6. These homemade supports were made of one-inch oak. They are adjustable for height to support the work piece on both sides of the vise. Note the backstop on the padded top of the support. It is faced with buffalo leather and has a dowel that can be inserted into the support and pivot to conform to the work piece.

(Continued on page 12)



Fig. 7. I have used two means of support attachment to the fascia board. Cap bolts (1/4 x 2-12") can be inserted through the back of the board and secured with wing nuts over crenulated washers.

ulated washers and wing nuts (Fig. 7). To keep the bolts from backing out under pressure, they were screwed into 1/64"-undersized holes. Whatever you do, do not drill 1/4" clearance holes or you will be inadvertently pushing them out the inner face of the board and dropping them into the Never-Never-Land under the bench.

At some locations along the fascia board, I use an alternate means of attachment fashioned by silver-soldering washers and turn-tabs on to the heads of 5/16" x 2" hex head lag bolts (Fig. 8). Bore holes with a #3 bit

through the fascia board to provide 100% thread engagement of the coarse thread that will last through many years of in-and-out. Waxing the bolts with a bit of beeswax will keep the threads slick and easy working through the hole.



Fig. 8. Washers and thumb tabs are silver soldered to 5/16 x 2" lag bolts (left) and screwed through 7/32" holes.

On the same stretch of bench, I have a wonderful, adjustable roller rest made and given to me by Keith Lisle (custommuzzleloaders.com). It is vertically adjustable on a shaft having a sliding insert that can be set via a setscrew (Fig. 9). It can be attached using a C-clamp to any bench having a fascia board front. It is so pleasant to use because the rifle or pistol fore end just glides over the roller without catching on anything.

These homemade pistol supports really came in handy when a friend sent me a partially finished pistol. He



Fig. 9. This roller support by Keith Lisle is easily moveable and versatile for support of pistols or rifles.

wanted me to engrave the butt cap. I was hesitant because he had put the cap on permanently and had a nice finish on the stock, but I couldn't bear to say No because he had done so much work for me. The difficulty was that the cap was oval with no parallel sides. However, when the pistol was on its side, my vise could get firm purchase on the butt while the homemade supports stabilize the fore end (Fig. 10). Engraving the back of the butt cap required keeping the fore end firmly secured. I drove a wooden plug into the muzzle to give me a clamping surface against the fascia board and used one of the projecting bolts for addi-



Fig. 10. The adjustable support helped me stabilize the muzzle (and yes, I do wash my socks once in a while).

tional support (Fig. 11). Continuing the engraving on the rounded corners was another problem. I used my powder horn maker's homemade vise inserts for that (Fig. 12). They worked great for holding round objects. For engraving the front of the cap, I clamped the butt between the upper areas of the vise inserts, which caused them to cock, forming a cradle that prevented the butt from slipping down (Fig. 13).

No matter what area of the pistol you want to work on, the general strategy is to clamp the fore end (which has parallel



Fig. 11. To engrave the back of the cap, I clamped it in the vise, rested the ramrod on one of the projecting, rubber-covered bolts and clamped a muzzle plug to the workbench fascia board.

Below: Fig. 12. For engraving the rounded corners of the cap, I secured the butt in the vise with the aid of two concave, leather-covered inserts I use for horn work.



Fig. 13. The vise jaw inserts cock to form a V under pressure to keep the butt from slipping down. Note that one concave insert takes up slack at the narrowing of the butt.



Fig. 14. Whether right side up or upside down, the adjustable support will keep the fore end of the pistol from twisting in the vise.

or nearly parallel opposing surfaces then use the adjustable supports to stabilize the work area of the pistol that is impossible to hold steady by the vise along (Fig. 14).

Adjustable supports are not only handy for holding pistols securely at almost any position. They are also great for the most hard-to-hold hardware. Clamp the trigger guard pinning tab in the vise and support the other tab on the rest (Fig. 15). Can't figure out how to hold that butt cap with those long tangs? With an adjustable support under the tangs, you can clamp that sturdy casting gate in the vise to work on the tangs at just about any angle (Fig. 16).



Fig. 15. Pinning tabs are the only parallel-sided structure on trigger guards that provide firm purchase points.



Fig. 16. Those long, tangs won't take much pressure, but the big hunk of metal at the butt will stand as much pressure as a vise can exert.

As versatile as my adjustable supports and vise inserts are, the ultimate holding device for pistol work may be a sturdy clamping unit with "safe jaws" that will not dent wood and will swivel to and from the operator. My homemade supports do quite well. However, if you are planning to make several pistols, you might step to the versatility of a Multi-Vise™ or a Versa-Vise™. Experienced rifle makers like Marvin Kemper (LibertyLongrifles.com) have used this sort of vise that can be pivoted over a wide range of angles to hold the stock at the optimal position for a given operation. The Multi-Vise (see suppliers) is very sturdy, but requires the shaping of a conversion bracket (Fig. 17) to get the rotation to and from the operator that is so

(Continued on page 14)



Fig. 17. This Multi-Vise is heavy-duty construction and made in the USA. Unfortunately, it requires the construction of a support that holds its base in a vertical position to achieve the to-and-from rotation that positions the pistol at the most advantageous work angle.



Fig. 18. These jaw inserts are color-coded, red for wood and blue for metal. I milled recesses on the backsides for magnets to hold the inserts from flopping back and forth during rotation.



Fig. 19. Adjustable supports come in handy for working on your chainsaw. Just make sure the vise jaws clamp on the bar, not the chain.

handy for carving and engraving. An optional set of jaw inserts is available for clamping finished surfaces without marring (Fig. 18).

Finally, for all you rifle builders who rough-shape your stocks from the blank using a chain saw, the adjustable supports hold the bar steady (Fig. 19) for adjusting chain tension, sharpening teeth and setting raker clearance. Perhaps the use of a modern electrical appliance may seem repulsive to traditionalists in the shaping of a rifle stock, but once you get used to the system, you will never go back to mallet and chisel.

Now that you have a way to securely hold that pistol-to-be, we can move on to shaping the stock. Part II will describe machining fixtures and procedures that will get the barrel and stock together. Once they are properly mated, everything else will be shaped in relation to the barrel.

Acknowledgments

Thanks to Bob Hooper, Keith Lisle and Gary Tucker for their insight and suggestions in the reviewing of this article

Suppliers

Brownell's Inc., www.brownells.com, 800-741-1500 for a wide range of specialized vises and fixtures.

References

Dixon, Chuck in: Chandler, Roy F. & James B. Whisker. *The Kentucky Pistol*. Old Bedford Village Press, Bedford, PA, 1994.

Fur Fort Fun Facts, <http://furfortfunfacts.blogspot.com/2012/06/how-much-was-beaver-pelt-worth.html>, 2012

Kley, Frank, *The Samuel E. Dyke Collection of Kentucky Pistols*. The Gun Room Press, Highland Park, NJ, 1964.

Peter_finer_a_patyyir_of_flemish_flintlock_holster_pistols_by_daniel_thiermay_of_liege_circa_1730_13282888416824.jpg

Sherman, Fraser. *How Much Would Colonial Gunsmiths Get Paid?* <https://bizfluent.com/info-8784950-much-would-colonial-gunsmiths-paid.html>, 2017.

Stutzenberger, Fred. *Breeches: Bad, Better and Best. Muzzle Blasts*, June, 2017 MB

TIGER-HUNT



CURLY MAPLE GUNSTOCKS

SPECIALIZING IN SUGAR (HARD ROCK) MAPLE, BLACK CHERRY & ASH BLANKS FOR ALL VARIETIES OF GUNS

Also Pre-Carved Native American Warclubs and T.C. Hawken Replacement Pre-Carves

Visit Our Store At Our New Website: www.Gunstockwood.com

Michael D. Barton • PO Box 379 • Beaverdale, PA 15921
Tigerhunt4@aol.com • (814) 472-5161