

Knife Construction and Design

By Jerry Fisk, Master Smith

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I would like to talk to you a bit about the construction and design of my knives.

I use both one piece handles and mortised tang handles for my concealed tang knives. Many times the mortised handle is better on natural materials. Natural materials have a tendency to move with the weather or as they dry out. Having the handle mortised allows the handle material a natural fault line so that it moves instead of cracking. When I mortise the handle, I cut the handle materials so that there is only a maximum total of .004 inch between the handle material and the tang thickness of the knife. This allows a good fit with a bare minimum of bonding materials. Tang length on all of my knives without pommels range from within 1/2 inch to 1/8 inch of the back of the handle depending upon design of the knife. This insures the handle and tang will hold up under tremendous abuse.

A knife with a straight handle gives more speed. A handle that has drop in it has more power. The more you drop it down the more power it has but the less speed. So you have to balance what you want the knife to be used for with the actual design. There is no perfect knife to all chores.

If the desired knife gets a temper line I can make them straight [standard] or use the clay coating method and give it a nice wavy line of some sort. Then the knife can be etched and polished with automotive polishing compounds using leather as a backing for the compounds. This will give a gray type finish on the blade that actually helps retard the rust and looks really nice. This type of treatment and polishing costs a bit more due to the more time involved.

I make my knives as strong as I possibly can. Even if you say you will never use the knife. I believe in making the knife right and as good as I can possibly make it at the time. I will continue to push and learn more about how to make you a good knife.

I press fit my guards on the blades. The guards can come in many different materials on your knife: German silver, steel, stainless steel, Damascus, bronze, copper and wrought iron. You can do several things with some of these, for instance steel guards can be left as is, or they can be blued or browned. One of my favorites is wrought iron. I have a small supply of pre civil war wrought iron. To work it for instance it has to be forged to shape, then ground, then mirror

polished and at that time I put it in muriatic acid for about a 60 second etch to bring out the natural grain flow of the iron. This looks really nice.



Fluting Handles

One of my favorites to look at is the gain twist fluting, [see Hope's Unicorn] along with being my favorite to look at it is also the one that gives me the most terror and the most hand cramps. There are two types of fluting: Convex and Concave. Concave is easier to do and does not take near as much time. I prefer to see the convex. The only way to do this is to sit down with a three corner file. This takes a lot of time. Once you have it laid out, and that is another reason you do not see very little gain twist, the laid out is a booger. Once filed then you take and glue sandpaper to ice cream sticks to clean those lines up. At that time I use fine steel wool to get it closer to polished. Then finer sand paper and finer till you got it polished. I have spent a full week on doing nothing but gain twist fluting a handle in ivory and working about 10 hours each day. It does take awhile and lots of aspirins.

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