

BLACKSMITHING

By Oliver Cameron
with Ole Wik

I grew up during the Depression, at a time when my father had the initiative and the know-how to get hold of a piece of unimproved stump land and turn it into a home. He was a very adaptable person. I was old enough to have an interest in working with him, and that was a big start for me.

In that sense, the Depression was a very valuable experience. I learned that when you want something but don't have money, why, you try to make it.

I wanted a knife of my own. The loggers sometimes left a file sticking in a stump here and there out in the bush. Whenever I found one of those files as I ran around out there picking berries or whatever, I picked it up.

In those days, there were quite a few touring cars that had folding tops. The framework was made of wooden bows with metal stays and braces on them. I made sleds from those hardwood bows that worked out very well.

I went to the dump and cut a piece of soft iron out of part of a framework that had held up the folding top, and worked on it for a long time. Finally I shaped it into a knife blade.

Of course it was just very mild steel, maybe not even steel, so naturally it wouldn't hold an edge. I asked my dad about it, and he said, "Take it over to the blacksmith at Meadowbrook", which was a big dairy farm that had quite a few horses and a well-equipped blacksmith shop.

So I took that knife and was standing inside the door watching. The blacksmith had the forge going and was working. He asked me if I wanted something. I showed him my knife and told him the problem. He asked what I had made it out of, and I told him.

He was encouraging, and said "Let's give it a try. Maybe we'll luck out."

He heated the blade and cut down through some tissue paper floating in a bucket of water. He pulled it out cold and touched it with a file.

Then he took a little time and explained to me that steel is iron with a certain amount of carbon worked into it, and that this piece had practically no carbon in it [and so would always be soft, and would never hold an edge]. He said there was not a whole lot that could be done about it.

I was six years old at the time, I guess, and I remembered what he told me. It was some time before I got around to trying to making a knife out of another piece of steel.

I think the next time I did, I used a piece of a broken saw. I found a two-man saw that had been broken in two, either accidentally when a tree fell on it, or more likely,

purposely. I cut a piece of it and went through the same process again. The steel in a crosscut is soft enough so that you can file it, so I was able to use it just the way it was, with the original hardness.

I don't remember just what happened, but anyway, I started fooling with tempering it. In those days most men had grown up on homesteads and so forth, and knew quite a bit about that sort of thing.

My dad didn't have a forge, but he did have a blowtorch. I stood up some bricks and made kind of a furnace, put the blowtorch in there, and heated it with that. I didn't have any supervision, but I'd watched my dad use the blowtorch, mostly for heating soldering irons. It wasn't much of a job to figure out how to use it. I don't remember ever having any restrictions on any of the tools we had.

My dad gave me a few pointers. He said to get the steel red hot, but don't let it start shooting out sparks, because that's burning out the carbon. Then plunge it. Then you have to heat it up again, but not so hot this time. You heat it until it's maybe a dull cherry red, and plunge it. That will draw the hardness out of it.

I did all that, and got it too soft. So I tried it again, and heated it just a little hotter. I let it cool, and I did have a workable piece of equipment. That's pretty much the way I learned.

I once made a hunting knife out of a fairly big file. Those files are made of a very high carbon steel, but they're coarse grained and are not suitable for edge tools like a knife. Even as a file, it's easy to break teeth out of them, if you mistreat them.

But you can heat that kind of steel up to a certain temperature—not quite to the place where it's really malleable—and then pound it. That compresses the grain structure in the metal, and makes it a lot tougher. If you work it enough you can finally get a blade that you can bend quite a ways without it breaking, whereas you can't do that at all with a file.

It's called a "critical temperature". You have to keep it above the critical temperature while you're working. I don't know what that temperature is—it differs for different types of steel. It's red all right, but not real bright red. Steel with a lower carbon content will work at a lower temperature.

I don't have a solid rule to go by. I fool around with it a little bit, and check it out. I'll stick the end of, say, a spring leaf into the fire, get it hot, bring it out, and see how malleable it is. The color will change fairly rapidly, indicating it's cooling off, and then I stick it back in the fire.

I learn by experimentation, usually the hard way (laughs). You make a tool and it splits, or a big chunk breaks out of it.

If I can make a good chisel and a good axe out of a piece of spring leaf, I feel good about myself in being able to do that. I've taken a piece of steel and made myself a useful tool, and it didn't come from a factory. I've cut out a whole lot of middle men, you might say. I guess you understand a little bit.

My point in blacksmithing is that the more I can do for myself, starting with whatever is commonly available, the more I am an individual in my own right, and the less I am dependent on somebody else's initiative and ingenuity.