

A Word About Blacksmithing

The Hittites, who lived in what is modern-day Turkey, were the world's first blacksmiths. Beginning about 3500 years ago, they heated iron to make pins, cups, small statues of animals, swords, and daggers.

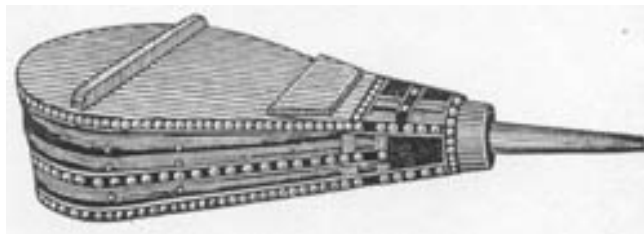
A blacksmith is a person who makes things out of "black" metal, otherwise known as iron or steel. To do that, they heat a piece of metal until it becomes soft, then hammer, bend, and cut it into shape using hand tools such as a hammer, anvil, and chisel. These metals are called "black" because of the black color, known as "fire scale," that forms on their outer surface during heating.

Blacksmiths heat metal in a forge, using natural gas, coal, charcoal, or coke. Modern blacksmiths also may use a blowtorch for more localized heating.



Some tools of the blacksmith trade around 1870: hammer, mallet, tongs, vise, and anvil.

There are four steps to blacksmithing: forging (sometimes called "sculpting"), welding, heat-treating, and finishing. As they work, blacksmiths pay close attention to the color of the hot iron. That's because the color is a good indicator of how hot, and therefore how workable, the metal is. When they begin to heat the iron, it glows red first. But as they raise the temperature, the color changes to orange, then to yellow, and finally to white (then, the iron melts!). The best color for forging is bright yellow-orange. Because the color of the heated iron is so important to successful metalworking, many blacksmiths work in dim, low-light so they can see the glowing color of the metal.



Blacksmiths use "bellows" to blow air into their furnaces to generate the heat needed to work the iron. In the past, blacksmiths pumped wooden bellows (left) with their feet. Today, blacksmiths use electric bellows (right).

Some of Kentucky's first settlers were blacksmiths. They put their talents to good use on the frontier, making and fixing guns, horse shoes, hinges, nails, and other items of daily use. Today, blacksmiths make many different kinds of useful things: gates, grills, railings, light fixtures, furniture, tools, agricultural implements, sculpture, decorative and religious items, cooking utensils, and knives. Blacksmiths who only shoe horses are called ferriers.