TOOLS USED BY A COOPER

AXES

This picture of two axes and two adzes was taken in New Guinea.

A cooper would have used many different types of axes to form and shape wood into the form of a barrel. Some of these axes could also be referred to as adzes.

DRAWKNIFE

This drawknife is an artifact on display in the W. J. Grace Cooperage.

A drawknife would be used when a cooper was making a barrel to split the staves before they formed the barrel.

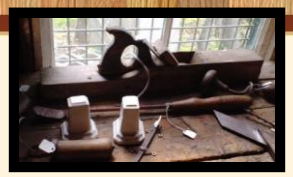
CHISEL

This chisel is on display in the W. J. Grace Cooperage.

A cooper would have used a chisel if they wanted to create joints in their pieces of work or to slicken the piece of wood that they were crafting.

TOOLS USED BY A COOPER

PLANES



This plane is on display in the W. J. Grace Cooperage.

The plane used by a cooper would have produced all the wood shavings that were used in the cresset to heat the inside of the barrel.

VISE

This vise is on display in the W. J. Grace Cooperage.

A vise used for coopering would have been attached to the cooper's workbench to hold their piece of work for them securely.

WORKBENCH

This workbench is featured in the W.J. Grace Cooperage.

A cooper's workbench was always used and never served as a decoration. Their tools would either be strewn over it or leaning up against the bench.

THE LIFE & TOOLS OF A COOPER

Sackville's last coopers were Richard and Earl Grace
(pictured above)

FULTZ HOUSE MUSEUM

The W. J. Grace Cooperage sign hangs on the front of the building located on the grounds of Fultz House Museum

A COMMUNITY COOPER

A community cooper served an essential role in the community. Very few jobs required the intricate skill that a cooper needed to have to construct a cask. Coopers were well known for their knowledge and craftsmanship in barrel making. Their barrels held thousands of commodities and were exceptionally strong. Crafted with hoops that bound joints to form a double arch, barrels were used when only man and beast moved items.

Becoming a cooper was not easy. It took as much time as it takes to become a doctor today. First, a cooper would have had to serve a seven-year apprenticeship where they would learn the monotonous tasks performed by a cooper to guarantee a leak free barrel or sturdy tub to bathe in.

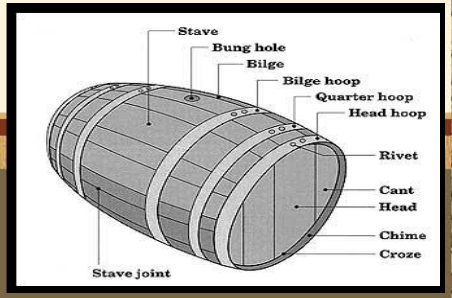
Unfortunately, coopers and their cooperages began to become obsolete as they were replaced by machinery. Even before machinery, the community cooper, whose shop would have been smaller than that of a cooper residing and working in a city, had issues with the ever-changing technology. To continue to be able to provide for their family, coopers began to take on other jobs. By the mid-nineteenth century, the domestic trade of a cooper diminished to a rare trade work. Coopers nowadays are prized for their "old-world" charm.

A BRIEF HISTORY ON COOPERING

It has been indicated that buckets with wooden hoops were made in Egypt as early as 2690 B.C. Some Greeks and early Romans used clay vessels, which served the same purpose as a barrel did later on. The broken piece of potsherds from the vessels became lost in the 2nd century A.D., suggesting the replacement of wooden casks. After this, coopering developed very quickly into a trade.

Eventually, coopers expanded their market into three types of product. Some began to make cheap, frail casks to hold fruit and vegetables, known as dry bobbing, while others made stronger casks for gunpowder. The final type, and most popular were the leak proof ones most commonly used to hold oils and vinegar, but eventually wine, beer and spirit. Some coopers could design all three types of casks, and were seen as multi-talented village coopers.

Coopering became popular very quickly. If a cooper worked in a city, they were not allowed to open their own shop, but instead had to come together with other coopers in a group like a Coventry. If a cooper did not abide by the rules in the Coventry, they had to leave the city. If they desired to continue working as a cooper, they would have worked as a village cooper.



The above diagram illustrates the different parts of a barrel.

HOW TO MAKE A BARREL

Making a barrel was a long process. A cooper had to know what size to make the barrel, and then had to find enough wood to construct it. The cooper would have to check their tools. Once the tools were all checked and sharpened, the process to construct the barrel started.

To begin, the staves were shaped, which were the pieces of wood that ran up and down the barrel to form the desired shape. The staves were then split or sawn using drawknives and jointer planes.

A cooper relied on experience to complete the task of barrel making. The staves had to be tapered and left wide to form the bulge in the middle of the barrel. This process was not easy, and to learn, it had to be repeated until the movements were effortless and exact.

The staves were then organized vertically inside of a rising metal hoop. The next process was referred to as "the firing process". Scrap wood shavings were collected and put in an iron basket called a cresset. The cresset was then placed in the center of the barrel and lit, producing heat from the fire. This helped the wood to relax its fibers, making it easier for coopers to gradually hammer metal hoops tighter around the barrel. This formed the finished shape of a barrel. This final process was called trussing.

The ends were then leveled off and a groove was cut into the inside edge of the barrel to hold the barrelheads that close the cask. Most 18th and 19th century barrels would have been bound together with wooden hoops instead of iron hoops. The wood used could have been hickory, oak or ash.