

CRAFTSPEOPLE IN THE COMMUNITY

COMMUNITY BUILDERS

Before there were factories, communities were formed by craftspeople. Everything was handmade. These craftsmen were also known as artisans. Each one was skilled at a different trade.

When craftsmen settled in an area, people would come to live near them so they could acquire goods from a shorter distance. The goods were sold for the amount it cost the craftsman to build it, plus a small amount so they could make a profit off of it. Few customers paid cash up front. Most left a signed note promising cash at a later date. Some shopkeepers would sell their goods for farm produce such as eggs. This exchange was known as the barter system.

Unlike nowadays, the skills a craftsman learned were not taught in school, but rather from working as an apprentice for four to seven years. The age of an apprentice would vary between the ages of ten and fifteen for both boys and girls.

TRAINING: A LONG PROCESS

Boys when under apprenticeship were taught a specific trade whether it was coopering or wheelwright. If a boy's father was skilled in a trade, the son would normally follow in the father's footsteps and continue on with the same trade.

Girls who were under an apprenticeship would learn all the home trades. These trades would include: spinning, weaving, sewing, and candle making. Girls would rarely work outside of the home, as their job was to tend to the home and family.

During the first and sometimes second years of an apprenticeship, the tasks performed would be simple. The most common tasks would have included: sweeping, running errands, and collecting payments. After these two years, the apprentice would learn about and how to use the tools and equipment of their future trade.

Master craftsmen, who would be training the apprentice, would teach them all the skills, secrets and talents of their trade. He would refer to his knowledge as his “mystery”. Other skills an apprentice learned were how to read and write along with how to make a simple math calculation known as “ciphering”. The apprentice was also provided with clean clothing, a secure shelter and food. In return for their training, apprentices would work long hours without pay.

At the end of an apprentice’s term, they would have had to craft a finished piece of work presented to the master craftsman for judging. This piece was called a “master-piece” because the master craftsman judged it. If the piece were well made, the apprentice would pass and become a journeyman. A journeyman would work in the countryside until they had earned enough money to open their own shop and practice their trade in a community.

THE HARNESS MAKER

Horses were depended on by people for aid while working and travelling. Work horses that would pull wagons over crops, needed harnesses to attach them to the wagon. Horses used for travelling needed both a harness and a saddle. The craftsman who made the harness and saddle was known as a harness maker.



**Pictured above is an advertisement for
a harness and saddle company.**

Both saddles and harnesses were made from leather. Each item was carefully stitched together to ensure that it would not fall apart after its first use. A harness maker would work with leather that was thick and heavy. This type of leather came from a large animal, normally a cow or buffalo.

HOME INDUSTRIES

Domestic industries provided a community with food, clothing, and light. There were four very important jobs: cooking, baking, spinning, and weaving. Each job was done by hand, so it was not a quick process. For example, bread was not kneaded in a bread maker, it was kneaded by hand and sweaters were not bought, but rather sewn by hand. Women completed all of these tasks and it took them from the crack of dawn to dusk to complete all of these tasks.



This sewing machine is on display in the textiles room of the Fultz House Museum.

THE SHOEMAKER

A shoemaker provided footwear for an entire community. In a twelve-hour day, they could complete two pairs of shoes. Before a shoe was made, it was the shoemaker's responsibility to carve out multiple lasts. Lasts were blocks of wood shaped into the size of a foot, each one whittled by hand. Their sizes could vary from small, medium and large.

After the last was carved, a leather upper was stretched over the last. These remained attached until the sole was ready to be sewn on. To attach the sole it was cut, then pounded on. The shoemaker then made holes in the thick leather using a tool known as an awl. These holes allowed waxed thread to pass through. The heel of the shoe was attached with small nails, and then the finished shoe was polished with wax or oil.



Above is a picture of the shoemakers display located in the W. J. Grace Cooperage.

THE WHEELWRIGHT

A wheelwright's trade involved the construction of wheels for diverse types of wagons and carriages. A wheelwright was also known as a local carpenter. They had the ability to perform jobs with precise expertise at various locations, because not everything was done in their shop.

In the community of Sackville, being a wheelwright was a traditional family trade. Bennett Fultz (first owner of the Fultz House Museum) worked as a wheelwright for some time but did not pursue the career after that. His father, Anthony Fultz, did work as a wheelwright in 1838.



A wheel located outside the blacksmith shop at Fultz House.

THE COMMUNITY BLACKSMITH

The term “blacksmith” comes from the colour of the metal they used. The blacksmith had a very important role in the 1800/1900s. They used iron and steel, forging horseshoes, gates, fences, utensils and parts of machinery. They were also able to forge strong and sturdy tools.

A popular blacksmith in the early 1900s was A.J. (Bert) Smeltzer. He most likely learned his trade from John Robert Ellis (1843-1916), a local blacksmith. A.J.’s blacksmith shop was centrally located in Sackville (located where Disco Deli is today), and was a popular place for young and old alike as they watched Mr. Smeltzer work the forge and strike the red hot metal with his hammer, creating many useful items for the home, field and forest.



Pictured above is local smithy A.J. Smeltzer (on left) outside his shop.

THE TOOLS & COSTS OF THE BLACKSMITH SHOP

The blacksmith would have made many of his own tools, but his most important tool would have been his forge. The forge would have been made from brick or stone, and was usually approximately 30 inches tall and 20-40 inches across. The forge was often square, but could also be rectangular and rarely circular. The forge would usually have been as deep as it was wide, as the oxygen would have stayed away from the metal, making it smoother.

The blacksmith had many tools, all surrounding his forge, anvil and slack tub. For instance, the blacksmith must have tools for his forge, including shovels and pokers. On his anvil (much like a workbench), the blacksmith would have a set of “anvil tools” used for shaping, cutting and molding the iron. The most important tool among the anvil tools is the “cutter” much like a chisel, which allowed the blacksmith to cut without any help.

On average, the price for giving a horse new shoes and putting them on, would have cost 80 cents. If the owner wanted to take the old shoes off, caulk the hooves, and put the old shoes back on, it would cost approximately 40 cents. If you wanted to get your pot repaired, it would cost you 20 cents, and it would have cost around 65 cents to fix your buggy.



Pictured above is the Fultz House Museum blacksmith shop anvil.

GENERAL BLACKSMITHING TECHNIQUES

Blacksmithing is an art that has been lost with time. It is an art that was carried out with great care and precision. Blacksmithing relied heavily on visuals. Blacksmiths needed to be able to see what they were doing, besides seeing what colour the metal was and determining if it would be too hot, or hot enough to mold into something that was needed (i.e. horseshoe, tools, nails, etc.).

The shaping of the iron was basically a molding process. It required strength, control, and technique. Before anything could be done with the iron, the iron had to enter a '*plastic state*'. It was called the *plastic state*, because the metal became like plastic, in that plastic is bendable, but hard to break. This was done by heating the metal up in the forge by lighting a fire and inserting the metal to heat. As stated before, the blacksmith's job was very visual; they had to watch the metal as it changed colours. The metal started at its original color and then went through several shades of yellow, purple, blue, gray, and finally a dull red, which is the considered the *plastic state*. If it continued to heat, the metal would have gone through more shades of reds, growing in intensity throughout, before changing to an orange, and then a white, and it then became semi molten when it turned yellow again. If it continued to heat by leaving it too long in the forge, it would erupt into sparks.



The rule of thumb was that the hotter the metal, the easier it would be to shape. However, if it got too hot, the metal could get brittle. If the metal got

brittle, it would either have to be cooled down or heated up. Each time the metal was heated to the state it needed to be in order for it to be of use, (the colour of red) this is called a '*heat*' - that is the temperature it needed to be in order to be of use, before it cooled down. It is called a '*heat*' because it would have been heated to a specific temperature, and it would have needed to retain that temperature in order for the blacksmith to carry out their work. The blacksmith would have tried and finished their work in as few a 'heats' as possible, as the constant reheating of the metal would damage it by making it brittle and would have possibly resulted in impurities in it.

TECHNIQUES FOR MAKING TOOLS

One of the many jobs of a blacksmith was to make tools for the community as well as for them to use. A few common tools that would have been seen in the forge of the blacksmith were hammers, punches and chisels. Hammers were one of the most common tools made by the blacksmith and the method of how they were made was fairly simple.

1. A blacksmith would punch a hole in the metal big enough for a wooden handle to sit in.
2. The ends of the hammer would then be formed into the face and the back end (typically a claw or a ball-peen) by the use of the anvil or a swage.
3. A steel end piece would often be welded to the face of the hammer by heating the steel and the hammer face before repeatedly hitting the tool until the metal fibers were packed tightly together.
4. The metal around the hole would be tightened to lock the handle in place.

Chisels and punches would follow a similar technique. The ends of these two tools were often the only difference between each other. The chisel was formed by hitting two sides of the metal until a thin strip on the end was created. A punch was made by repeatedly hitting the metal while it rotated to create a round spike on the end. Both of these tools were

incredibly narrow, which made packing the metal correctly one of the most important steps.



**Anvil and hammer located in the
Fultz House Museum blacksmith shop.**

MAKING HARDWARE

Tools were not the only objects that blacksmiths were asked to make. Hardware such as nails, latches, chains and door handles were also common items made by the community smithy. Most large towns had many blacksmiths who would specialize in different types of hardware. Smaller places like Sackville would have had blacksmiths who received orders from the community for the items they required.

Nails were one of the most common pieces of hardware that a smithy would make. Most people in the community required nails to build houses, outhouses, and wagons. Nails were commonly made by hammering the four sides of a rod into a square tip and then placing it in a nail header. Many nail headers were just a small hole in the anvil used to hold the nail in place while the head was heated and welded on. While in the nail holder, the rest of the nail was broken off and the head put on. The blacksmith tended to make many nails from one rod.

Hinges were another common item that a smithy could be spotted creating at their forge. A hinge was made by shaping a metal plate around a rod. This would be done twice for each hinge and part of the hinge would be cut so the matching hinge could fit inside. Once fitted, the hinges were then cleaned to remove any stray piece of metal inside. Nail holes were also punched in the hinge and a pin was made from the original rod.



A few items made in the Fultz House Museum blacksmith shop.

MAKING HOME UTENSILS

All of the metalwork in a house would have been done by a smithy. Many of the utensils used in the home would have required the skills of the local metalworker. Andirons were decorative pieces that were used to hold wood in the fireplace. Originally, these would have been made out of iron but were later made of brass. They were typically formed by heating a piece of metal until they reached an orange-red colour, and then one end was bent down at a right angle. The other end was also bent down and split down the center to create legs.

Often, blacksmiths would even have made the eating utensils. Knives could be made like a long chisel. The bladed edge would be hammered into a taper until thin enough to cut. Spoons required either a swage or the rounded edge of the anvil to make. The head would be placed over a round hole and repeatedly hit until it was shaped into the round shape. Forks were made from a short piece of a metal rod. The handle was formed and then chiseled on one end to separate the rod into two, three or four prongs.

THE FULTZ HOUSE MUSEUM BLACKSMITH SHOP

The planning for and construction of the Fultz House Museum's blacksmith shop came to light in 1990, with a gift from the local county councillors. In the summer of 1991 the Fultz House was given the wood (mostly hemlock) from an old barn measuring 75 feet by 35 feet located in Beaver Bank (erected in the 1800's), donated by Ken Barrett.

With museum members Ken Grace, Jim MacLeod and Glen Slauenwhite, and supported by inmates from the Halifax County Correctional Centre, the barn was taken down board-by-board and beam-by-beam. Throughout the years 1992 and 1993, over 20 tons of rock and gravel was hauled to the site to build the foundation for the shop. Boards, beams, doors and windows were transported to the Fultz House grounds, where they were stored until 1994.

The construction work began in earnest in 1994. When building the rafters, they were built in the style of the 1800's, and when they were put in place, they needed no bracing. The pieces of wood were cut to interlock and their snug fit makes the frame more secure.

The building was finished in September 1994, except for the firebox. This was started, but not finished until May 1995. The bricks for the firebox came from the Anglican Church in Stewiacke. Three truckloads of brick over 100-years old were obtained.

The year 1995 will be forever known as the year of the blacksmith shop at the Fultz House Museum. The blacksmith shop was opened on July 1st by Walter Smeltzer, the son of A.J. Smeltzer, who operated the last blacksmith shop in Sackville. At the ribbon cutting, there were four generations of the Smeltzer family on hand.

It took time, a great deal of patience and hard work from a reliable group of volunteers to ensure that the idea of the dream of having a blacksmith shop at Fultz House became a reality.

The **FULTZ HOUSE BLACKSMITH SHOP** is a tribute to old-fashioned building methods and the fulfillment of a dream. Touring the blacksmith shop helps visitors to look back into our past, and see how our forebears lived and carried on their lives.



The Fultz House Museum blacksmith shop.

THE LIFE & TIMES OF A COOPER

AN INTRODUCTION TO COOPERING

A cooper was a traditional profession in cities, townships and villages that carried on for many centuries. The cooper trade was once as common as the commodities in their barrels.

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.

The trade of coopering has a very long history and dates back to approximately 2690 B.C.E.

The roots of coopering are directly related to the development, growth and evolution of trade. Materials and food had to be transported and barrels were one of the common methods to move these goods from one location to another because of the ease of shipment, cost effectiveness and ready supply of material.

The reasons for the development and popularity of coopering can be determined by the obvious advantages of using wooden, barrel-shaped containers for transporting goods. The shapes of barrels are structurally sound and proportionately supportive.

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.



Sackville's last coopers Richard & Earl Grace

THE PRACTICAL USE OF A BARRELL

The curve of the barrel also allows one person to move the barrel with little or no difficulty. This was a tremendous advantage during the 19th century (and before) when all objects had to be moved by people and not, as they are today, by machines and vehicles.

The wood used to build the barrels could have also been selected to contribute a smell or taste to contents or, likewise, to protect contents from absorbing colour, a smell, or a taste. The containers could be designed and constructed to contain liquids or to prevent liquids from entering and spoiling dry contents.

It was not until the early to mid 20th century (1900s) that the trade was replaced by emerging technologies in factories. As a result, the human component in coopering was reduced. Machinery held boards in place and assisted in placing the hoops on barrels.

Like many other communities in N.S. of comparable age and size to Bedford and Sackville, there were once many coopers that appeared in the community census records. Sackville's last coopers were in fact, brothers Earl and Richard Grace; they retired in 1970.

Barrels are mainly manufactured today for the storage of wines and liquors. There are still companies today that adhere to traditional craftsmen techniques in designing and crafting barrels and abstain from using modernized machinery, and choose to approach their work by constructing barrels completely by hand.

HOW TO MAKE A BARRELL

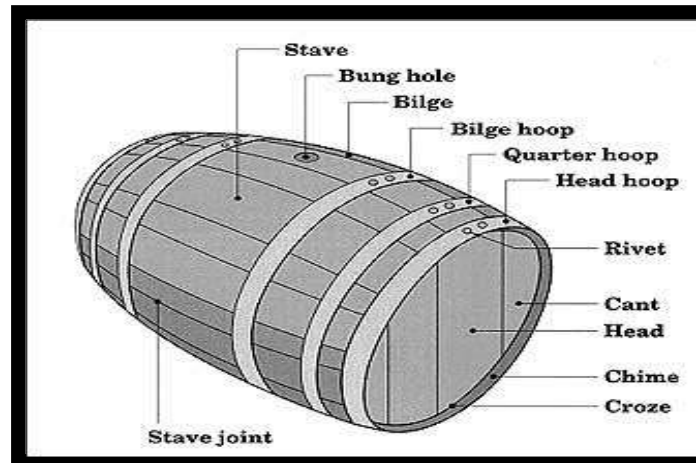
Making a barrel was a long process. A cooper had to know what size to make the barrel, and then had to find enough wood to construct it. The cooper would have to check their tools. Once the tools were all checked and sharpened, the process to construct the barrel started.

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.



The above diagram illustrates the different parts of a barrel.

BRANCHES OF COOPERING

White Coopering refers to the building of buckets, tubs, churns, and vats used at home or on the farm. White coopering involved straight-sided containers. The origin of the name stems from the use of this type of container to store milk.

Dry Coopering refers to the building of barrel-shaped containers for dry goods such as grain, flour, nails, etc. This type of cooper is also known as a “dry tight” cooper because the containers had to be tight enough to protect the contained goods from getting wet if left outside in the rain.

Wet Coopering refers to the building of barrels for the storage and transfer of liquids. This is the most highly skilled division of coopering and that works primarily with oak. The containers must be absolutely perfect as to prevent leakage.

WOOD TYPES

Different containers, constructed for different purposes, required different wood types. Coopers tried, as much as possible, to use local wood in order to save money and therefore built less expensive containers.

Dry goods barrels and white coopering barrels were typically made of soft woods. Soft woods were used so that the cooper could build the barrels

faster and the final product was lighter in weight than with some other woods. White pine and cedar were the most common soft woods used.

Oak was traditionally the preferred wood used for wet coopering. Oak contains tannin acid that can be neutralized with baking soda and water before storing contents and thus preventing the goods from picking up a smell or taste.

Sackville's Historic Cooperage

Fultz House Museum volunteers worked extremely hard to make sure that the dismantling of the Grace Cooperage in Middle Sackville was done very delicately - even to the point where it was broken down board-by-board and each piece numbered in 1987. The intention was that it be reconstructed with each board being positioned exactly where it was in the original structure.



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

The W.J. Grace Cooperage opened officially on the date of Canada's national birthday, July 1, 1988. The cooperage was unveiled and opened to the public as a new exhibit that paid tribute to the work and craftsmanship of Sackville's historic connections to the cooper's craft and trade. The cooperage's authentic appearance and popularity in its initial year of operation was attributed to the efforts of the volunteers who displayed with pride what was involved in the barrel-making trade and the tools that accompany such a profession. Ever since its arrival to the Fultz House

grounds, the cooperage has attracted the attention of both tourists and history buffs.

VILLAGE CARPENTRY

VILLAGE CARPENTER WORK TASKS

The tasks of a village carpenter may have seemed simple and small but were in fact tasks that took time and patience. Some tasks called for very intricate skills. Most items made by a village carpenter would have been for agricultural items. Since most of these items needed iron fittings, the village carpenter worked in close contact with the village blacksmith.

Some of the main items that a carpenter would have frequently made are a wooden harrow, field gates, and wheelbarrows. The wooden harrow was used to cultivate the soil to get maximum work out of it. The blacksmith would have had to place an iron tine, a sharp prong, projecting from the base of the harrow, to comb through the ground. Field gates were very common because farming was such a popular career. It was said that the hardest part to crafting a wheelbarrow was making the wheel to fit, as each wheelbarrow was a different size.

Some other tasks faced by a carpenter were the construction of coffins. A carpenter would need all measurements of the deceased to make the coffin to fit. The carpenter would need to select wood that was elegant, yet respectful to both the family and deceased. The ladies in the carpenter's household normally assisted by lining the coffin after it had been built.

A BRIEF HISTORY ON CARPENTRY

It is said that wood is one of mankind's oldest building materials. The earliest record of carpentry is in the 15th century, but carpentry was around long before then. Each carpenter taught his or her skills to the next aspiring carpenter with each instruction given orally and through hands-on learning.

Before the mid-nineteenth century, many carpenters worked under a system called the artisan system. They would have to work under a 4-7 year apprenticeship before becoming what was called a journeyman in the

1800's. A journeyman carpenter was someone equipped to work both indoors and outdoors, turning things by hand indoors and building frames for houses with their tools outdoors. A carpenter's job was never rushed because all employers knew that each and every carpenter put all his pride into his work, working his best to complete the job to the best of their ability.

Eventually, the indoor work once done by a journeymen was taken over by planing mills, sash, and blind factories in the 1840's-1860's. Items that were once crafted by hand were then crafted by a machine. Soon, even the jobs done outside by a carpenter were taken over by machines, therefore carpenters living standards reduced to not much higher than that of a labourer.

For a while, Sackville was home to a well-known carpenter. Robert Fenerty, son of Augustus Fenerty, who became a carpenter upon his return from Boston to Sackville, and married Mary Oland.



The above picture was taken inside the W.J. Grace Cooperage of the carpentry display.

THE HISTORY OF WOODWORKING

Woodworking can be anything made from the types of wood used or selected for carving, painting, and sawing, or anything else desired. It is

said that around 2000 B.C. the Egyptians used woodworking as a skill to supply them with furniture.

Once, the wood used in a country for woodworking came from that country's natural resources. Now, different types of wood are imported from around the globe to many different countries.

Unfortunately, over time wood splits and cracks due to deterioration. To try to avoid the cracks and splits in the wood, wooden creations started to be painted. It is still unknown as to when this began, but it has continued to this day.



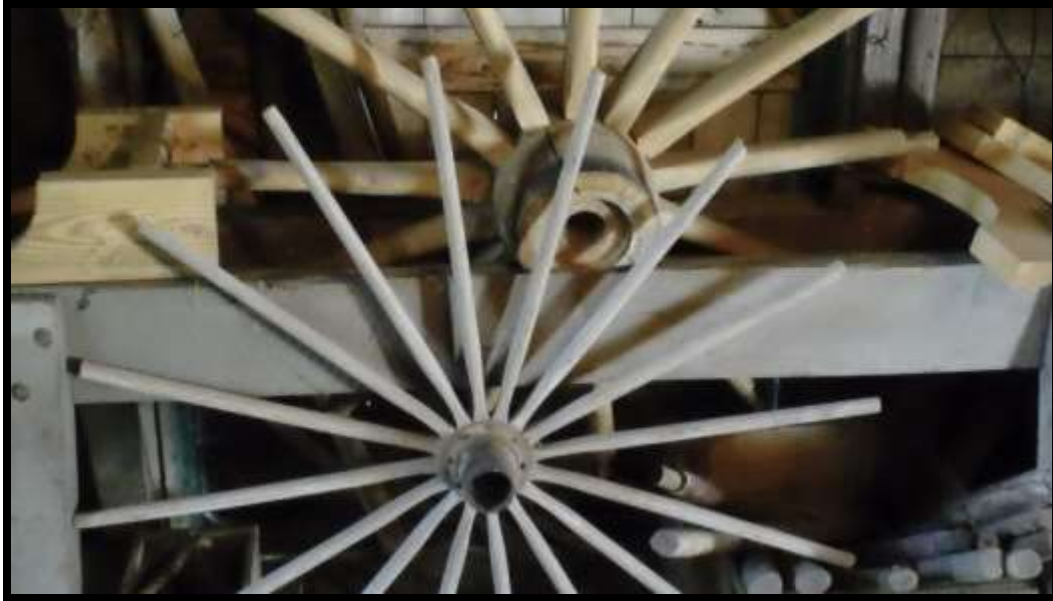
The above photograph is circa 1920's. Harry and Kit Little operating a crosscut saw in the mill on their property.

THE WHEELWRIGHT CRAFT

AN INTRODUCTION TO WHEELWRIGHTS

Once a mainstay of the community, a wheelwright was a trade involved with the construction of wheels for diverse types of wagons and carriages. Often known as a local carpenter, the wheelwright would perform jobs with precise expertise at various locations throughout the community involving woodworking. Working without the assistance of drawings, these tradesmen developed great expertise at their craft.

A wheelwright shop was normally situated near a blacksmith's shop because most jobs requiring wheelwright and carpentry expertise also needed a blacksmith's knowledge. Some wheelwright shops had a blacksmith and forge in the shop while others were skilled enough in both trades to complete all the work themselves.



Opposite are wheels without rims on display in the W.J. Grace Cooperage on the grounds of the Fultz House Museum.

A WHEELWRIGHT SHOP

A wheelwright shop was set up with little to no clutter as to not complicate the working area. The walls would be lined with carpenter benches. The tools would be displayed on racks and in drawers. Everything had its spot to ensure a neat and tidy work area.

THE WHEELWRIGHT TRADE IN SACKVILLE

Being a wheelwright was a traditional family trade and a very common job choice for early Sackville settlers. Bennett Fultz, an early settler in Sackville, worked as a wheelwright for a time, but did not pursue the career after that. His father, Anthony Fultz, operated a wheelwright shop across from Bennett's home (now the Fultz House Museum) on the road to Windsor. Halifax County census records show that Anthony Fultz (as

shown below) operated as a wheelwright in the Sackville community in 1838.



THE WHEEL...

In the 1800's, most of the axels on a wheel were made out of hickory with the wheel hub made out of Osage orange, a wiry and deep wood. The wheel rims and spokes were normally made out of a hard wood such as white oak, and each spoke would have been made to flare out from the hub to make the wheel look like a saucer. A tapered end of the axel would be placed into the hubs to help keep the wheels parallel. The iron tire was six inches wide and always no smaller than an inch thick. This was tightly secured over the wheel rims so it would not fall off.

Sackville area riders were very fortunate with their experience with the wheel rims on carriages. Out West, the wheel rims would shrink because of the dry climate. There were times when Westerners would get so fed up with the wheel that they would throw it in the bed of a creek in hopes that the water might expand the wood again.

THE TOOLS AND EQUIPMENT OF A WHEELWRIGHT

A wheelwright had many tools. Most of his tools were similar to those of a carpenter or cooper, but even though each tool had the same name, in each shop it served a different purpose. In a wheelwright shop, some of the tools found would have included: compasses, planes, spokeshaves and saws.

A compass would have been used to make sure the wheel was completely round. Planes were used to smooth the wood, like sandpaper is used today. A spokeshave was used to shave off thin layers of wood to help thin and shape a piece of wood. Finally, saws were used to cut the wood to specific lengths. There were many different types of saws like a backsaw or handsaw.

Some equipment used by a wheelwright was a cast iron “traveler”, C-clamps, and the great wheel. This equipment was often found in a wheelwright shop as it was needed for almost all of their tasks.

Wheelwrights would use the cast iron “traveler” to measure the iron rims when they were constructing a wheel. C-clamps were used when they needed to work with both their hands on a piece, so they would use the C-clamp to hold the piece still while they worked. Finally, the great wheel was the most noticeable part of a wheelwright shop. It was a man-powered wheel that the wheelwright would use to rotate the hubs.

WHEEL-MAKING EXPLAINED

There were three main parts to a wheel, the nave (hub), spokes, and felloes. Each part was made out of a different type of wood, oak for the spokes, elm for the nave, and ash, elm, or beech for the felloes.

To start, a piece of elm was chosen and put on the lathe. After that a blacksmith would apply the iron nave hoops to bind the nave to make it stronger and safe. Then the spokes were cut into the nave, and the spokes shaped. The tenons were also cut so that their inner ends would fit into the nave. Before the tongues were marked off at the end of the spokes, the spokes were driven into the nave. After that, the tongues were shaped to

ensure that they would fit the felloes. In each felloe, two holes were cut to concave the side to fit two spokes each, and at the other end there was one hole to separate the felloes. A wooden dowel was then made, and used as joints that formed and held the felloes in a circle. The final job for constructing a wheel was to drive a hole through the center of the nave that would hold the iron “box”.

To finish the wheel, it had to be fitted by a blacksmith so they could put an iron tyre around the wooden wheel. Before it was an iron tyre, the blacksmith would just hammer on strips of iron to the wheel, and it became known as strakes.



Seen above is a wheel on display outside of the blacksmith shop at the Fultz House Museum.