

Carpentry: wood and tree house

Life



Kayla Allison Markwood H English 12 18 March 2011 Carpentry Working with wood is a skill that has been around since man created his first tool. From carpentry's beginnings, it has developed enormously, but in its essence, the tools and techniques our modern carpenters use today are the same as those used in the Stone Age. The Bureau of Labor Statistics defines carpenters as " people who construct, erect, install and repair structures and fixtures made from wood and other materials. This trade has an extensive history, an expansive modern field, and with it, I plan to build a tree house, thus making a difference in a kid's life. The term " carpentry" comes from the Late Latin term " carpentum" which means two-wheeled vehicle. The woodworkers of the Roman Empire built the chariots that allowed the fast travel. They also built the foundation for early highways, between which concrete cement was laid. The innovative ideas of these workers allowed for the Romans to conquer and build such a vast empire.

The woodworkers were thus named carpenters. Carpentry began many years ago and emerged from nations all over the world. Early Europeans created long, wooden homes from planks of wood that measured up to one hundred feet. A Stone Age city from nine thousand years ago created their buildings from mud bricks, supported by posts and beams. The remnants of these buildings have allowed modern scholars to study the way carpentry has evolved over years and across the different cultures of the nations. The first known city's population, who lived until at least 5600 B. C. lived in a unified series of structures that all linked together like a giant fort; they had heavy support beams in the walls and for a roof, smaller beams, reeds and packed mud. About thirty-seven centuries ago, on the island of Crete, in the middle

of the Mediterranean Sea, the natives used wooden columns with a downward taper (opposite of those later made popular by the Greeks) and stone and mud-brick walls to construct the Palace of Knossos, home of the labyrinth housing the fabled Minotaur. One very notable accomplishment was the early Egyptians of four thousand B. C. who were already using copper and metal tools for woodworking.

These people were proficient in some of the modern techniques we use now, such as drilling, dovetailing, which is a tight interlocking joint made by using a fan-shaped tenon fitted into a corresponding mortise, mitering, which is creating a diagonal seam at a corner in order to make a right angle, and mortising, or cutting square or rectangular holes, into the lumber. In the twelfth century, carpenter guilds began to form. There were three kinds of member in the guild: masters, journeymen and apprentices. The master carpenter would have a lot of experience and had the ability to take in an apprentice to whom he could pass on his knowledge.

The apprentice would live with the master, train with him and would receive food, clothing, shelter and the master's wisdom in lieu of a paycheck. After a long enough period of time, anywhere between five and nine years, the apprentice could continue on and become a journeyman. He could then work for payment, start his own shop, and after gaining enough experience would take on an apprentice himself and would thus become a "master." The carpenter's guilds were the beginning roots that would eventually grow into our modern labor unions and associations.

The first Carpenter unions began in 1724 which helped regulate hours and pay for workers and allow for benefits and assistance for the unemployed

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member workers. After the first Industrial Revolution, a few modifications were made to the basic carpentry tools for greater efficiency, but they retained many of the same characteristics from the original design, most of which we still use today. Axes, hatchets and other thick blades were common for chopping wood, just as it is now. Chisels, which are tools with a sharp beveled edge, originated back then, as did the gouge, which is a chisel with a concavo-convex cross-section.

Different kinds of saws were originated for different purposes and mallets, which are small, rubber hammers, and large metal hammers were also just as popular in the Middle Ages as they are now. In every modern carpenter's garage or personal workshop, there are a few tools that are necessary for almost every project, whether it be large or small. The first one of these is the power circular saw. This is a power-driven saw in which a circular disc with a toothed edge that rotates at a high speed. It is particularly useful when used to cut across grains of wood on large or thick planks of wood.

Another important tool to have is the nail gun. It uses compressed air to drive the nails into the wood. This saves both on work time and on energy levels, but as long as there is a basic hammer, it will do the trick. The power drill is of vital importance. Also called a pneumatic drill, it drills holes through the wood and attaches or detaches screws. Another necessity is the router, which is used to create hollowed areas in wood. It has a shaped cutter and can cut grooves into the wood. Another basic, but necessary, carpentry tool is the level. This is a device that helps the carpenter ensure the final project has straight edges.

The old fashioned levels had two to four foot bars with a glass tube with a line on it in it. The newer levels, which are much more accurate, improved and user-friendly, are digital. Every house needs a tape measure, even for non-carpentry uses, but it is very important in a carpenter's toolbox to have a tape measure so he or she can measure everything out accurately. The last vital thing to have in your toolbox is a framing square. Framing squares are steel L-shaped squares that are very simple, but very important as it helps you lay out accurate right angles.

Modern carpenters build all different things and use various materials, but true to their profession work primarily work with wood. There are a few popular kinds of woods often used by carpenters; three of these include ash, pine, and oak. Ash is usually found in northern latitudes. The color is greenish white when it's young, but after it has matured, the older trees have turned into a dark, beautifully marked timber. Pine is a blanket term for all trees that bear cones, but it can be broadly distinguished into Red/Yellow (both of which are indifferently used) or White.

The first kind has a ground color of yellow with pale red markings across it, whereas the other kind is a whitish color, hence the given names. Oak is another commonly used wood among carpenters. The best place to find Oak is in America and Great Britain. The grain of the wood considerably open, or porous, however it is extremely hard and durable. This makes it difficult to work and can dull a worker's tools very easily, but because of its durability, it makes for ideal medium to work with for building houses, floors, staircases, doors, wall panels, tables, chairs, sideboards, and other pieces of furniture.

It is dark in color and can be polished to a high sheen. The same basic steps are almost always used when getting ready before starting a job by all carpenters for the most part. They start by designing, if it is necessary to, and laying out their project; this includes all of the measuring, marking and arranging of the materials that needs to be done. After that, the carpenter will then cut and shape all of the materials, using a combination of his or her hand and power tools. The next step is to join the items together. This can be done by nails, staples or glue.

To increase the accuracy in the final project, it is necessary to implement the tape measure and framing square through the entire process. Many carpenters do different carpentry tasks, but a lot of them specialize in one or two tasks. Those who remodel homes for instance, use a wide variety of skills. They will need to know how to do everything from building countertops to window frames. Others market themselves as experts in their specific fields, such as cabinet installation or moldings. Working as a carpenter can be stressful physically and mentally.

The physical demands can involve standing for a long time, climbing, bending, kneeling and more. There is always a risk of getting hurt from slipping or falling from the roof or off a ladder or one could get seriously injured from working with the dangerous tools. As far as mentally, carpenters will usually work under independent contracts and with these can come a strict deadline. They usually average about 40 hours per week, which can also be stressful on the mind and body. About thirty-two percent of carpenters are self-employed. According to CollegeBoard, the average income of self-employed carpenters is \$43, 640.

In this economy, self-employment can be hit or miss, but my good friends Paul and Samuel Jobe, who own Jobe's Carpentry, and have inspired me with their successful business and have helped in increasing my interest in the trade. I was influenced into studying carpentry for my senior project for a variety of reasons. I love taking things apart to rebuild them and learning how things work. This trait is a testimony to my manual dexterity and the way my mind thinks mechanically. I think carpentry would be a creative and interesting way for me to express these skills and something I would enjoy.

Another incentive that has drawn my interest has been that I really think it would be interesting to study the trade Jesus practiced, as part of my own walk of faith in an attempt to grow closer with Him. I wanted my project to affect more than my own life; I want to make a difference for someone, so I decided to rebuild a tree house that belongs to my 9 year old friend, Sam Ritner. The Ritners have had the tree house for longer than I've known them. They had it for their older sons who have long outgrown it. It is now falling part to the point that it is barely recognizable for what it truly is. I know that by rebuilding it, I will not only enjoy the work and the experience, but it will create a fun and exciting place for Sam and his friends to hang out which is fulfillment in itself. Making that sort of impact on a child's life would mean the world to me. To begin, I'll first go out to the tree house and evaluate the damage. Right now, it does not have a roof or walls anymore. I will then clear out all the ivy and debris that's grown up around it and take the measurements needed for the final project.

As I previously mentioned, my friend, Samuel Jobe, is a carpenter and he has agreed to help me out through the design process and aid me in picking out

the materials I need to complete it. This includes the measuring, marking and arranging the materials. After drawing up the blueprints for the tree house and taking a trip to the hardware store for all of our supplies, we'll begin the actual construction on the tree house. First, I'll stabilize the floor with crossbeams. The tree house currently has only one crossbeam still supporting the floor. I plan on installing at least two or three crossbeams in order to add more support to the floor.

Then, I'll remake the ladder. The ladder currently is missing a step and is very unstable. I plan on making the ladder by putting two pieces of wood on either side, and putting at least three or four smaller pieces for steps in the middle. Next, I'll construct the framework and the support system of the house. As of right now, there is no framework on the tree house; there is only a platform. I will pre-fabricate the frame on the ground so I don't need to try to construct it in the air. I plan on using brackets to screw the uprights of the frame to the floor.

Then, I will erect the walls. At least one of the walls will have a window built in. I will use plywood for the walls and cover them in stucco or another type of siding. Then, I will make the roof. It will be a pitched roof, so rain water will easily roll off the top. To waterproof it and protect it from water, I will attach felt over a thin plywood base and then cover it with shingles. Also with applying these materials, we will add a waterproof stain as the first primer coat to the wood. Afterwards, I will put in the door and install the shutters of the windows.

The window will be a rectangular window and will have a cross in the middle with shutters extending to the outsides of the window. Finally, I will put an

outdoor stain on the wood as paint. It will be a dark brown color and will go over the waterproof stain that had been previously coated. The shutters will be painted dark forest green to add to the ambiance of the tree house. This will be sure to make the tree house as waterproof as possible, while also adding style and making it stand out. While building the tree house, I will photograph the process. This will include the before and after shots as well as pictures of it being constructed.

The action shots will include me sawing the wood, drilling, and painting along with other challenging tasks. I will compile all of the pictures and create a scrapbook to bring in for my presentation to the judges. Carpentry is an interesting subject that has been practiced for thousands and thousands of years, since man created tools. To be using a craft that has been such an influence on the development of civilization and to be using it for to brighten a kid's day makes the effort behind it so worthwhile. This project means a lot to me and I am proud to present it as my final project of high school.