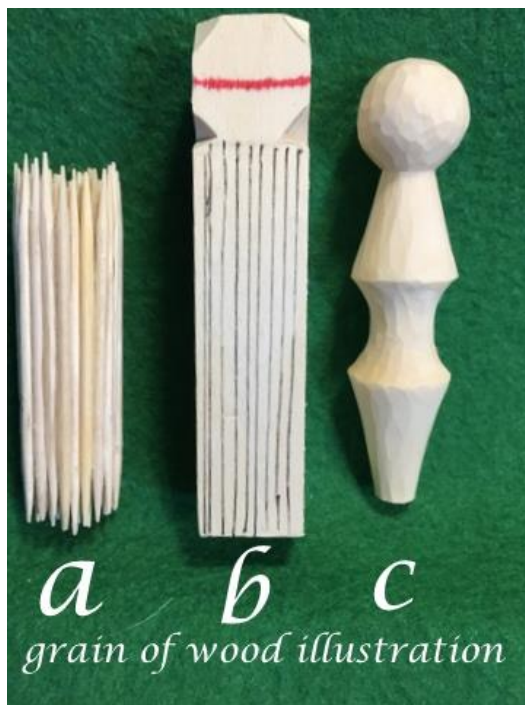




This whittling exercise is to learn a variety of slicing cuts with a knife that is the basis for Whittle-Carving. *"The simplest definition for carving is to shape a piece of wood using a sharp cutting tool in a slicing action to round square corners and flatten round surfaces."*

The beginning lesson is to learn about the direction of the grain so that the carver can carve *with* the grain for the most satisfying and efficient way to shape the wood for the carving project.



The photo to the left contains three illustrations to begin to understand the grain of wood. Illustration "a" is a combination of tooth picks standing side by side and glued into a round dowel shape to represent that wood is made up of fibers like miniature soda straws glued together at their sides by the trees natural glue. It is these fibers that carry the nutrients for the tree's growth from the roots to the leaves. It is these fibers that make up the "grain" of the wood. The lines that are drawn of illustration "b" represent the fibers making up the grain of the wood. At the top of illustration "b" there is a shape that looks like a Stop Sign

that has been made by slicing off the top corners of the block and the cutting in of a "notch cut" at the bottom corners of an area that represents a square shape. This square shape will become a ball shape (top of illustration "c") as part of the whittling exercise. The horizontal line in the center of the square represents the equator as a mental guide to remember that above the equator line the slicing cut is towards the North Pole and below the equator the slicing cut is towards the South Pole.

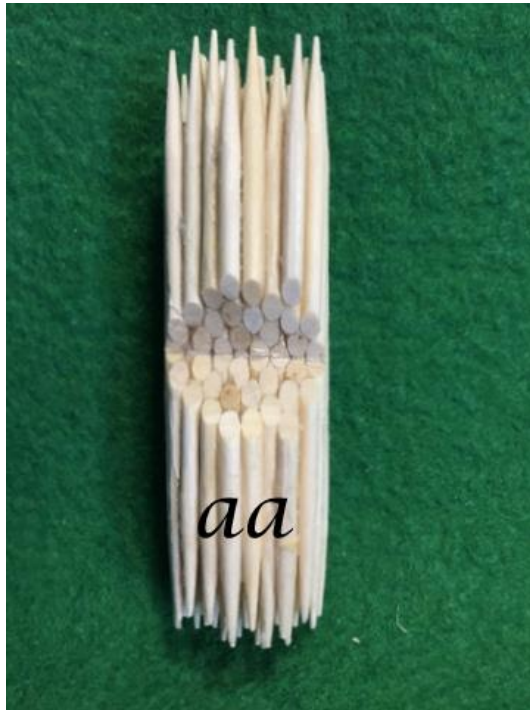
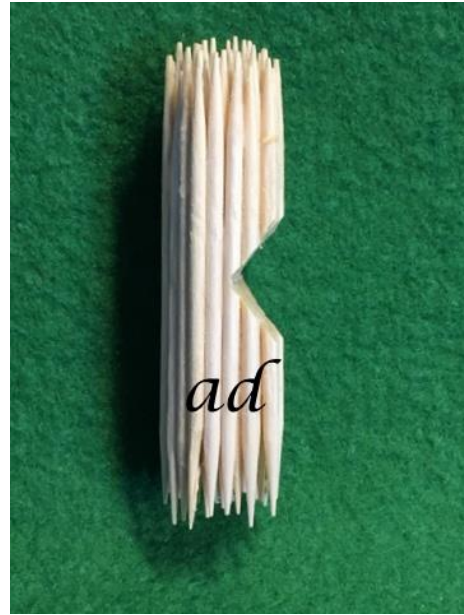
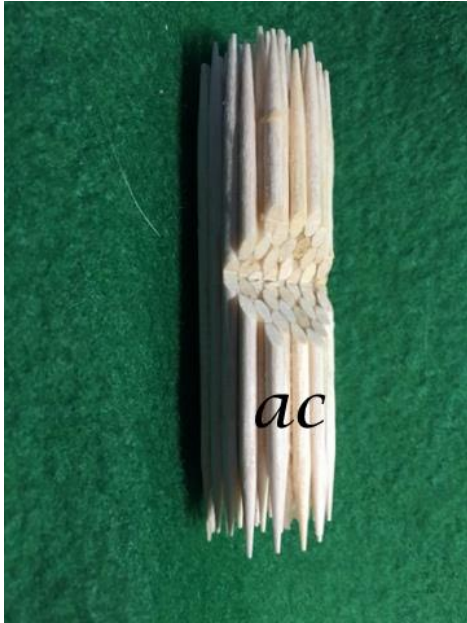


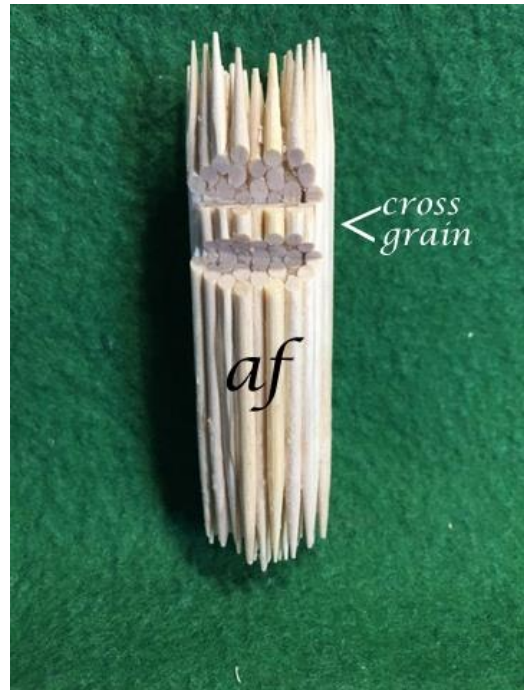
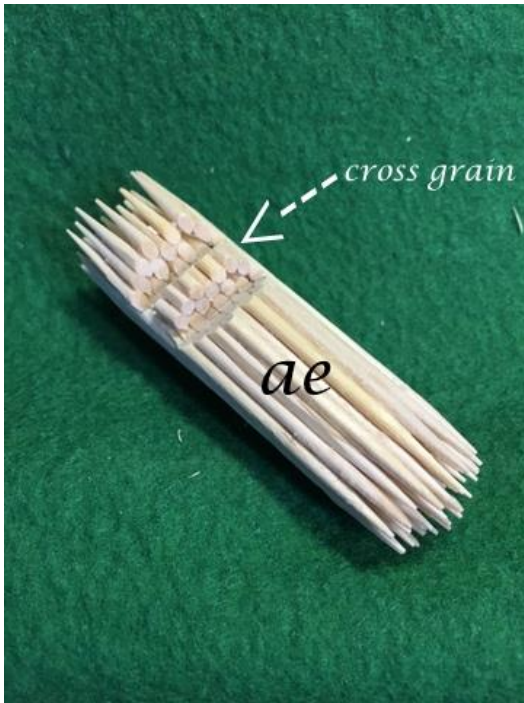
Illustration "aa" shows a "Notch Cut" which is two slicing angled cuts that meet where the two cuts come together. Notice how the tooth picks representing the wood fiber have been sliced to expose how the fibers are sheared at an angle as they would appear under magnification.

Illustration "ab" shows the back side of the tooth picks dowel noting that what holds them together is glue like the actual wood fibers would be held together. Even though a "Notch" was cut in the other side, enough of the fibers above and below the fiber are still held together by the glue on the sides of the fibers. Illustrations "ac" and "ad" below show two views of the Notch Cut. Note that the bottom angle goes in direction towards North Pole and the top angle goes towards the South Pole ~ thus following the direction of the grain of the wood to make for a clean slicing cut.



Looking at the top of each tooth pick dowel, the ends of the tooth pick resemble hair sticking straight up. To slice an angled cut across the top of the tooth pick column think of slicing towards the North Pole. At the bottom of the tooth pick column the points of the tooth pick are like ice cycles. To slice off the bottom of the tooth pick column think of slicing towards the South Pole. Slicing with the grain is like petting a cat's fur but slicing against the grain is to pet the cat's fur backwards which is difficult to do and it annoys the cat.

The next two illustrations, Illustration "ae" and "af" show two notch cuts with the area between the two notch cuts illustrating what is called "**cross grain**" where by the fibers in the cross grain area are very short and the only thing holding them together is the small amount of glue on the sides of the fibers. It is these cross grained areas on a carving that are very weak and are susceptible to breaking under the slightest strain. Care must be given when carving an area of a carving where the weakness of cross grain could present a weakened area. The same consideration is given when designing a carving project by having the legs of animals and humans running the direction of the grain and any other part of the anatomy that is horizontal to the vertical direction of the grain should be taken into consideration because of the cross grain weakness. Hat brim, animal tail, hand held object or any other horizontal object where cross grain is vulnerable should be considered.



Cross grained areas that have been carved can be strengthened by soaking that area with super glue and once dry the glue will strengthen the wood fibers.

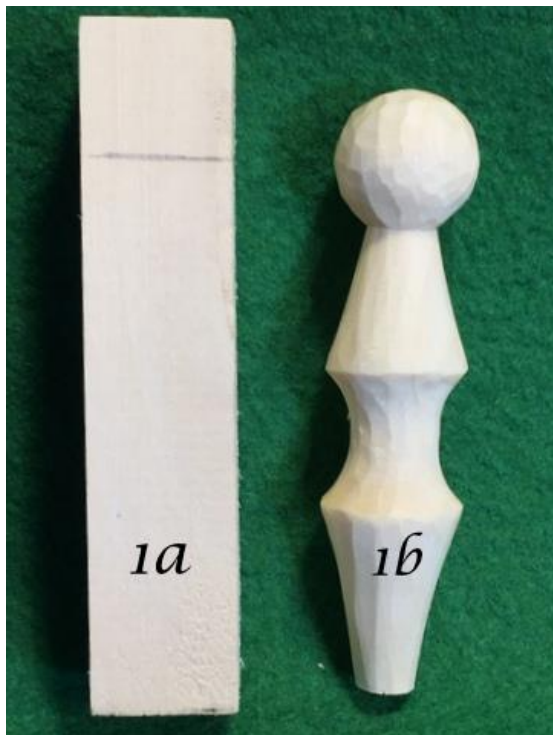


Illustration "1a" shows a three quarter inch square by three inch long block of basswood with the top marked off into a three quarter inch square. Illustration "1b" shows the end result of this Whittling Exercise.

Step 1 ~ measure illustration shows how to measure across the top of the block of basswood using the index finger along the side of the block with the point of the pencil at the outer edge of the opposite side of the block. This measures the top of the square. The next two photos will show **Step 2 ~ measure and mark** and **Step 3 ~ mark all four sides**.



Step 2 while holding the pencil tightly in the same position as in **Step 1**, place index finger across the top of the block and mark where the tip of pencil is equal to the first measurement in **Step 1**. **Step 3** extends the mark made in **Step 2** by drawing a line across each side until all four sides have a mark that resembles the approximate shape of a square. At this point is it necessary to explain the measurement system one is to develop and use to make carving relaxing as well as developing an "eye" for proportions. It is called "**Baseball Measurement**" which quite simply means "**in the ball park**" whereby the carver approximates what looks good rather than being hand cuffed and uptight about always being perfect or exact.

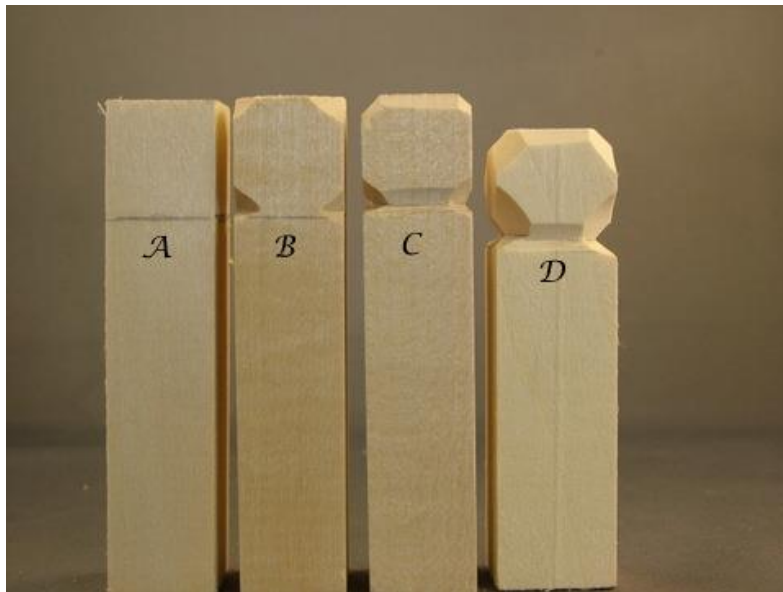
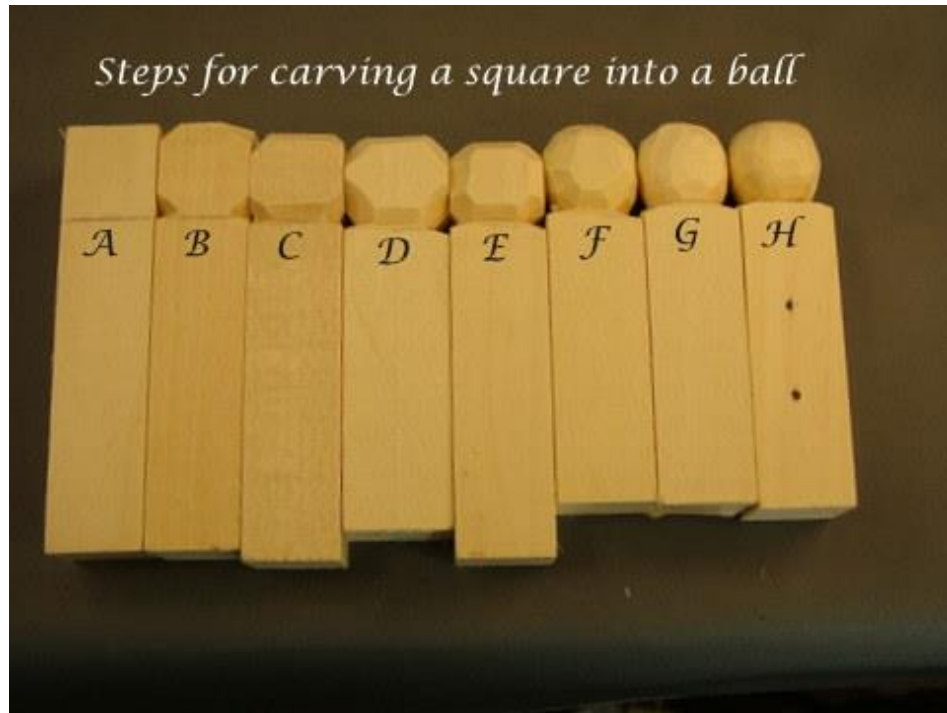


Illustration **"A"** represents the square marked in which a ball is to be carved. Illustration **"B"** ~ Slice off the top four corners of the block at an angle going towards the North Pole. At each corner of the line make a slicing cut across the corner followed by an angled slicing cut towards the South Pole to end up in the bottom of the first cut. Do

this to all four corners. Illustration **"C"** between the top corners that have been sliced off at an angle; slice off the top edge at the same angle towards the North Pole. Do this to all four sides. Next, between the bottom corner notches make a slicing cut across the drawn line followed by an angled slicing cut to create a notch or ditch between each corner notch. Illustration **"D"** is to slice off the top corners with a larger slicing cut towards the North

Pole followed by a stop cut across the bottom corners as the first cut of a Notch Cut and then slice the second Notch Cut to make a larger Notch.

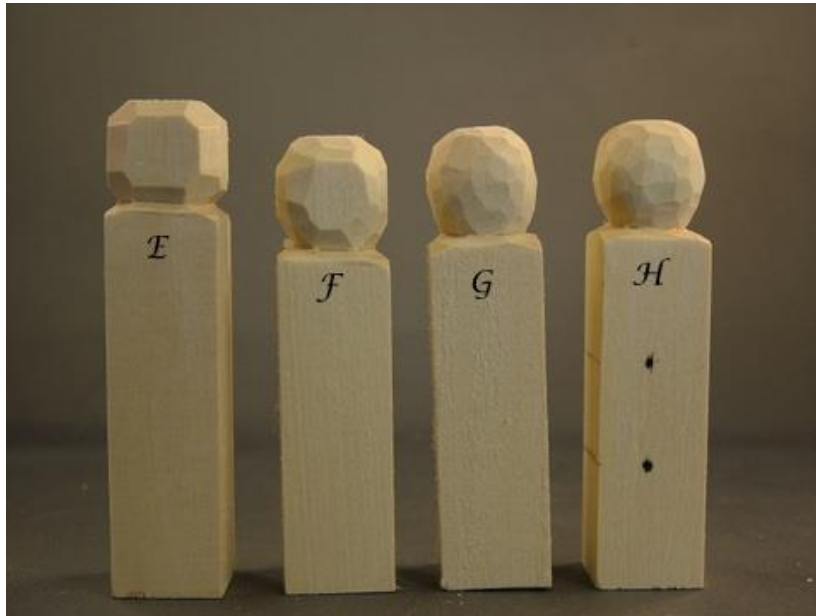


Illustration "E" ~ the corners between the top angled sliced off corner and the bottom sliced notch are now sliced off to create the shape of a STOP Sign on all four sides as well as the top of the square.

Illustration "F" is slicing off each corner of the Stop Sign shape on each face and top and in doing so, the shape of a

ball will begin to take shape. Continue to round off the corners with slicing cuts as in Illustration "G" and Illustration "H" until a ball shape is formed. It is best while carving the ball round is to carve around and around to keep it symmetrical.

Illustration "H" also has two dots drawn in the area between the completed ball and the bottom of the block. This is done to divide the area between the ball and the bottom of the block into three equal proportions. This is a **"training of the eye"** to see proportions by visually looking at that area and with a pencil place two dots that divides that space into three equal proportions. If the spaces between the dots are not proportional, move the dots until the proportions can be seen as being **"in the ball park"** as close to equal. Once satisfied with the dots being proportional draw a horizontal line across and through each dot and then continue that line all the way around the found sides.

The next step will be to begin to round the area between the ball and the bottom of the block by slicing off the corners to make the shape of a pencil with an octagon shape.

In the photo below, Illustration "1" shows the first corner has been sliced away; Illustration "2" shows two corners sliced away and Illustration "3" illustrates that all four corners have been sliced away into a octagon shape when viewed from the bottom. Notice that the areas where the corners have been sliced away equal the space between the sliced away corners to form the octagon shape. Illustration "4" continues the slicing away of the newly formed corners beginning at the first line from the bottom. The slicing action has added the feature of shaping a cone shape that slices towards the South Pole. It has the comparable appearance of the way a pencil is sharpened. It helps to draw an **X** on the bottom from corner to corner before one begins to carve the cone to guide keeping it symmetrical



Next photo shows the bottom view of the first four illustrations.

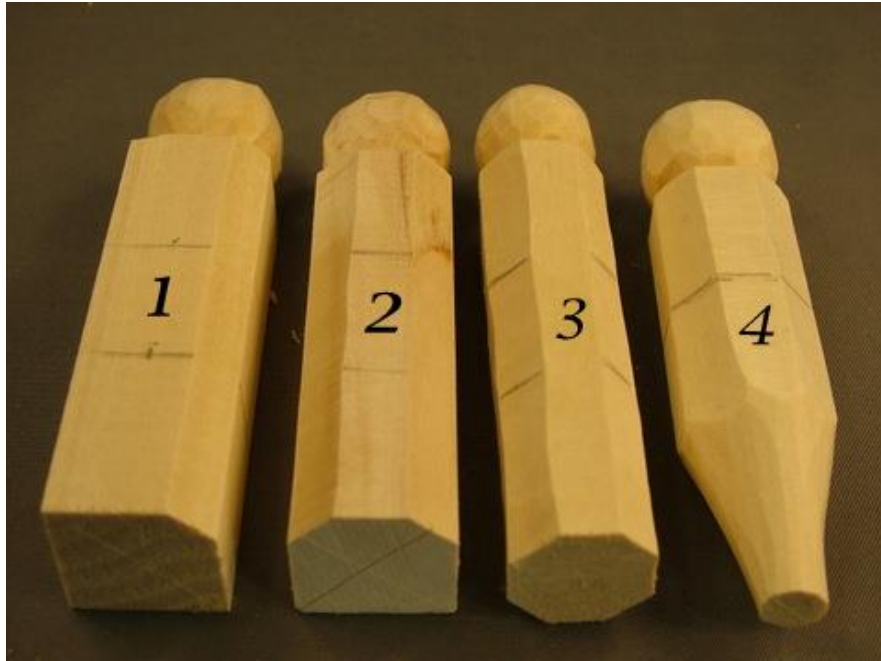


Illustration "5" shows the shaping of the cone from the first line below the ball by tapering with slicing cuts towards the bottom of the ball but once again going in direction towards the North Pole to follow the grain of the wood.

Illustration "6" shows both top and bottom cone shapes with the center section having octagon sides.

Illustration "7" is a testing of the whittler's patience in carving a concaved center section to learn how to make such a cut during a carving project. For this part of the exercise it may be helpful to draw a center line around this middle section. A center line is helpful for other carving endeavors in that the drawn center line becomes a reference to keep both sides of the center line symmetrical. Using the center line as a point of reference, make a Notch cut of two angled cuts into the center line all the way around the middle section. In concave shaping the carving direction is towards the equator or center line. Once a notch is completely etched around the middle, continue to enlarge the notched area thinking of it as being a ditch that is being made into a wider and deeper ditch. As the ditch is deepened be sure to widen it as well and at some point each side of the ditch will be rounded concavely toward the bottom. It is at this bottom of the ditch that the knife will start to carve against the grain (pet the cat backwards) so with slow, light and gentle slicing cuts shave the bottom of the ditch to make a smooth bottom of the concaved middle. This is where the Whittler's patience is put to the test.

Illustration "8" shows the end result of this whittling exercise in which one learns to make slicing cuts; learns that **"one cut is not a cut to end all cuts but opens the way for more precise cuts"**; learns to open up an area with a Notch Cut of two angled slicing cuts that form a ditch in which one can go deeper and wider in shaping the carving project; learned to see proportions with the eye of observation; learned that carving is simply using a slicing cut to round square corners and flatten round surfaces; and learned that carving is the journey more than the destination and on that journey relax and enjoy the ride because the more one carves the better one carves. **"Would be carvers would be carvers if they would carve wood."** (WOOD BEE CARVER)

Donald K. Mertz ~ the WOOD BEE CARVER ~ www.woodbeecarver.com