



Kumiko Woodworking

with Michael Olin

SKILL LEVEL: *Beginner*

GATHER FROM HOME

- Pencil
- Tape
- Glue (optional)

TOOLS & MATERIALS

- Kumiko strips
- Kumiko jig
- Chisel
- Sandpaper
- Stand

PROJECT TIPS

- When setting up it is best to work on a hard surface that is a little above waist height. You will want to be standing when you are paring down the angles with a chisel for the infill pieces. The surface should be dry and slip-resistant.
- Use tape to hold the jig's stop block in place. Apply downward pressure with your hand to hold the jig in place while using the chisel. It may help to put tape on the bottom of the jig in order to prevent slipping while chiseling.
- When using the chisel, hold with your dominant hand. The front of the handle should sit on your palm, with your middle, ring, and pinky finger wrapped around the handle. Your thumb should extend to the chisel blade, touching the side of the blade, guiding your cuts. The index finger rests on top of the chisel blade, applying downward pressure to keep the bottom of the chisel flat against the face of the jig. When paring with the chisel, always cut away from your body. Keep your elbow in towards your hip, with the same side leg stepped back to give your leverage.



Before You Begin

Make sure to have all of your kumiko pieces sorted and in front of you.

Anticipate 1-2hrs

Tutorial

ASSEMBLING THE FRAME

1. Let's assemble the frame! There are two types of frame pieces that are differentiated by the style of the half-lap joint.
 - a. "Type A" has a notch cut out of one side of the piece with a vertex in the center. The "Type A" is designed to be able to fit 2 diagonal pieces through it. "Type B" has a smaller notch cut out of both sides.
 - b. There are 6 "Type A" pieces and 3 "Type B". These two types are joined by a half joint. A half-lap joint is joining two same-sized pieces of wood by removing material on both so they sit flush with each other.
2. Start by grabbing one of the long "Type A" pieces with 3 half laps cut out of it. Lay it on a hard, flat surface with the half-lap openings facing upwards.



- a. Next, take the longest “Type B” piece and fit it over the center half-lap joint.
 - b. Then, take two smaller “Type B” pieces and fit them over the two outside half-lap joints. The overhangs on these two pieces should fall on opposite sides of the “Type A” piece.
3. Now flip the partially assembled frame over.
 - a. Take two of the four smaller “Type A” pieces and fit them in the outside half-lap openings.
 - b. Flip the frame over once more.
 - c. Complete the assembly process with the remaining “Type A” pieces in the rest of the half-lap openings.
4. We now have our completed hexagonal frame. This creates 6 equal triangles and a starburst effect from the center.

Note on the fit. These pieces should fit into their half-lap joints with little pressure without any issues, as these are pre-cut. A good half-lap joint looks seamless. There should be no spaces from a loose fit, nor should it be so tight that it compresses the wood. You may have to adjust the frame a little to be able to fit all the pieces into place. The pieces should be flush with one another when pressed into position.



PARING DOWN THE PIECES

1. The next step is to fill each triangle with 3 basswood pieces that fit into each 60-degree corner and meet in the center. Our job is to pare down the angles on the basswood with a chisel and our paring jigs. Paring is defined as shaving off a portion of wood with a chisel.
 - a. A jig in woodworking is defined as a tool, often handmade, used to hold pieces of work or guide tools. Our paring jig has two angles on each end, 30 and 60 degrees, a groove on the top for the basswood to be placed in, and a stop block for the basswood to register up against for length.
2. Place one kumiko infill piece into the groove and register it up against the stop block. Move the kumiko and stop block together until about 1/16" is overhanging the 30-degree end of the jig. Apply tape to the stop block to keep it from moving.
3. Next, we will use our chisel to shave, or “pare” down the basswood until it is flush with the face of the jig and creates that first 30-degree angle.
 - a. First, let’s discuss the chisel. The chisel has a blade with a bevel on the front that creates a sharp edge used for cutting. The flat part of the blade is the bottom.
 - b. When using the chisel, hold it with your dominant hand. The front of the handle should sit on your palm, with your middle, ring, and pinky finger wrapped around the handle. Your thumb should extend to the chisel blade, touching the side of the blade, guiding your cuts. The index finger rests on top of the chisel blade, applying downward pressure to keep the bottom of the chisel flat against the face of the jig.
 - c. When paring with the chisel, always cut away from your body. Keep your elbow in towards your hip, with the same side leg stepped back to give you leverage.



4. Pare down the first kumiko piece. Make sure to apply downward pressure on the jig with your non-chisel hand so the jig does not move. You can tape the bottom to help prevent slipping or clamp the jig to your table if you own a clamp.
5. Flip over the kumiko piece and register it back up against the stop block and repeat the paring process. This should create a 60-degree angle with the vertex in the center.
 - a. To help you understand this, we are cutting two 30-degree angles on one end, which makes a total of a 60-degree angle.
 - b. Repeat this process for the remaining 2 pieces for the first triangle.
6. Next, let's find the length for the final cut on the second angle. Take a piece of tape and extend it from one triangle point to the opposite point on the adjoining triangle.
 - a. Put one of the kumiko pieces with the 60-degree end into the housing of the triangle. Where the kumiko meets the tape is about the final length. Mark that spot and put the piece into the jig on the 60-degree side. Register the piece to the stop block and move them together until the mark is just behind the face of the jig. We want to cut it slightly big because we would rather the piece be too big than too small. If too big we can always shave more off. Once the spot is found, tape the stop block and repeat the paring process. Do both sides to create a 120-degree angle with the vertex in the center.
 - b. Repeat this process without moving the stop block for the remaining 2 pieces of the triangle.

FILLING THE TRIANGLES

1. Start by fitting just two pieces into their 60-degree corners in the triangle. Then, fit the last piece by pressing the 120-degree end where the other two pieces meet and lower the 60-degree end into its housing.
2. If it's too large, shave off a tiny amount on all 3 pieces. Do this by bumping the stop block forward by a hair. Retape and repeat the paring process for just the 120-degree angle. Test fit again.

3. If that is good, then repeat the process for the rest of the 5 triangles. Mark the position of the stop block, as you will have to move it. That is the final length you want. You can also use one of the completed kumiko infill pieces to relocate the stop block location.
4. Continue to work until completion.
5. When completed, all the basswood should be cut to the correct angles and fit into housings to create the Asanoha pattern.
 - a. Some pieces may be a little loose. A rule of thumb is, that you should be able to pick up the whole kumiko artwork and any given infill piece. If the piece comes out instead, then it's too loose.
 - b. This can be alleviated with a little glue if you have any available. The kumiko itself does not require glue. However, for added strength and a guarantee for it to stay together for a lifetime, it is recommended. If you want to glue, you'll have to take everything apart and add a dab of glue to each joint. Just a little will do, you don't want squeeze out from the glue.

FINAL NOTES

1. Everything should be close to flush on the final product, as the pieces are all the same width. However, if I you would like you can sand the top of the kumiko with paper and a flat block in order to get it perfectly flush, giving it a cleaner look.
2. If any gaps are visible at the joints, put a dab of glue in it and sand to fill in those gaps to give it a more cohesive feel.
3. Putting a finish on it is not essential, however, if you have wipe-on products available, it will help make the color in the wood pop. I would recommend a rag to get into those tight corners. Make sure you dispose of oily rags properly. Bunched-up oily rags can combust. Soak them in water and let them hang unit dry before tossing.
4. This is the complete kumiko art piece. It can be used for a coaster, ornament, or displayed as artwork.

WE CANNOT WAIT TO SEE YOUR CREATIONS!

Be sure to share your creative journey and results with us by tagging @thecraftersbox in your social posts, and use #thecraftersbox so our community can see your work.

HAPPY MAKING.

About the Artist

Michael's journey in woodworking began when his parents had hardwood floors put into their old farmhouse. "That small job made a big difference in how I felt about woodworking," Michael shares. After college, he studied agriculture and landed a job in insurance, but soon realized he wasn't cut out for that line of work. Looking for a new road, Michael remembered the feeling of that small dining room job. He did carpentry for about one year before finding his way to a fine cabinet shop, specializing in traditional Japanese furniture. There, he learned how to build Shoji Screens and began teaching himself the art of Kumiko.



Many workshops from The Crafter's Box include tools or materials that could be potentially dangerous if not handled properly. Please take precautions and extra care when working with sharp tools, dyes, heat or associated materials, and be sure to closely supervise any children who might be making along.