

## Treasure Chest Style Bag:



### Materials:

#### Wood

- 2 pieces of a softer wood – poplar or soft maple or something similar for bag body
  - 2 x 4 x 8 or
  - 2 ½ x 5 x 8
- 1 square of a contrasting wood for endcaps.
  - 6 x 6 x 2
  - Or 2 squares 6 x 6 x 1

#### Supplies

- Yellow wood glue
- Brown paper bag
- Sheet of coarse to medium sandpaper
- Wood Dye or Fabric dye
- Stiff flexible wire 2-3 feet
- 6 inch piece of ¼ inch wooden dowel
- Beads for handle or alternative material

#### Tools/Accessories:

- Lathe
- Gouge
- Diamond parting tool
- Hollowing tool or Forstner bit ½ to ¾ inch smaller than the width of the wood you are using. ( if 2x4, Forstner bit should be 3 ½ or 3 ¼ inches in diameter)
- Bandsaw
- Spur drive
- Chuck
- Jacobs chuck to fit tailstock of lathe
- Performax (optional) or Jointer (Optional)
- Wood clamps (3)
- Dividers and calipers
- Flexible straight edge
- Drill

- 2 ring clamps 4-5"
- 2 sided turners tape
- Faceplate
- ¼ inch Forstner bit.
- ¼ inch dowel center
- Texturing or carving tools
- Dividers, internal and external calipers
- Wax
- Sandpaper

#### Hardware/

- Butt Hinges (2)
- Latch or ¼ inch rare earth magnets (2)
- Screws #2 roundhead 3/8 inch (10)

### **Turning the Bag**

Cut two pieces of wood in the designated sizes, These pieces of wood will be glued together, so you need one side of each block to be smooth and flat. Flatten one 4 or 5 inch side of each block. If you do not have a Performax or Jointer, place a sheet of sandpaper on a flat surface, and flatten the wood by drawing the block across the sandpaper. Test fit the flattened sides of the blocks together until you have a close match. Cut a piece of paper slightly larger than the flattened surface. Avoid any printing on the bag. Spread yellow glue on both flattened surfaces, place the brown paper on one side and make a sandwich. Tighten three wood clamps on the blocks to hold them together. Allow the wood to dry for 24 hours.

Find and mark the center of each end of the glued block. Drive a spur drive into the center on one end. Mount on lathe and bring up the tailstock. Insert tailstock in center of other end. Align the tool rest along the side of the block. Make sure that the glue line is precisely parallel to the tool rest. Correct any unevenness by adjusting how the blocks are mounted on the lathe.

Turn the block into a cylinder. Use your calipers to ensure that the cylinder is uniform in size along its entire length. Remove any unevenness from the ends. Cut a tenon to fit your chuck jaws. Sand. Make sure you have a substantial flat surface to butt the chuck jaws up against. Remove cylinder from lathe and mount in chuck on lathe.

### **Hollowing the Cylinder:**

You may hollow the cylinder by hand or with a Forstner bit. To use a Forstner bit, select a bit that is ½ to ¾ inch smaller in diameter than your cylinder and insert it in a Jacobs chuck in the tailstock.

This wood is glued with a paper seam, which is very fragile. Before beginning to hollow, tighten two ring clamps around your cylinder. You may want to tape over the clamps so that you do not catch your hand on the clamp. Or you may use masking tape by itself wrapped many times around your cylinder.

Hollow your cylinder. If using a Forstner bit, plunge the bit into the cylinder a little at a time, pulling the bit to the rim of the cylinder regularly to clear the debris. Hollow the cylinder to within ¼ inch of the far end resting against the chuck. Make sure the entry edge is even. Sand the interior of the cylinder. If you have tearout inside the cylinder, spread wax on the interior and sand with the wax.

### **Making the Endcaps:**

Cut a circle larger than the diameter of your cylinder. You can turn the endcaps one at a time (with 1 inch thickness) or two at once (with a 2 inch thickness). Use two sided tape to fasten the circle onto the faceplate. Even out the circle and make it the same diameter as the exterior of the cylinder. For the 2-inch thickness - measure the diameter of your Forstner bit or the interior of your cylinder. Using your diamond parting tool, make a tenon the same diameter as the interior of your cylinder or Forstner bit. . It should be no more than 3/8 inch deep. When you have a completed tenon, try the fit of the tenon in the cylinder. Make any necessary adjustments. Take some of the thickness out of the center of the tenon. When the tenon is complete, cut the cap into a graceful curve and part it off with your parting tool. Make two endcaps.

Remount the cylinder on the lathe. Insert one endcap, and finish turn the surface of the endcap. Do this with both endcaps and sand them, taking special care to eliminate any roughness or tearout on the endcap edges. Put your endcaps aside. Extend the tailstock all the way inside of the cylinder. This will prevent the cylinder from flying away as you part it off. Check the depth of your cylinder and use your narrowest parting tool to part the cylinder from its tenon.

### **Assembling the Bag:**

Carefully divide your cylinder at the paper glue joint. Sand the edges to remove any paper and glue. Keep the edges as flat as you can. Check your interior finish and sanding. Tape your bag closed with masking tape. Dry fit the endcaps and tape them in. With a pencil, mark the glue edge of the endcaps on the seam so that you have a bottom and a top of the endcaps. Apply yellow glue **only to the tenon and underside of the bottom half of the cap**. You do not want to glue your cylinder entirely closed so be sure you do not have glue overflow. You are gluing the bottom half and the top half of the endcap will remain unglued. Insert the glued endcaps and secure with clamp. Be sure the clamp does not misalign the endcaps. Allow bag to dry.

### **Applying the Hardware:**

When the bag is dry, remove the top of the bag and place the bag upside down on a piece of wood taller than the round endcaps. With the bag flat, locate the middle line on the bottom of the bag. It is sometimes helpful to use two sided turners tape to locate the feet of the bag where you want them. Once you have found a visually pleasing angle, use your dividers to locate the four bag feet equidistant from the middle line. You can use simple wooden pegs or create your own bag feet from any number of other materials – beads, nuts, bone, etc. You can drill a hole in the desired object and fit it with a brass peg which is glued into the holes drilled in the bottom of the bag. When the four feet are located and marked, use your protractor to measure the angle and adjust the head of your

drill press to replicate the correct angle and drill holes in bag bottom the appropriate . Feet should be glued in with industrial glue, but not with CA glue which tends to be brittle.

When your feet are inserted and glued, re-tape the lid of your bag and mount the hinges and screw them in. Mount the latch and screw it on. You may also omit the latch and instead, drill edges for rare earth magnets.

Decide where the handle will be mounted – top or side. Measure an appropriate length of wire. Drill the holes for the handle. Twist one end of the wire into a loop. Feed the wire from the inside with the loop remaining inside. Screw a washer down over the wire loop. String beads onto wire or whatever material you are going to use for the handle. Feed wire through the hole and twist a finish loop. Screw washer over the wire loop.

### **Surface decoration:**

Because of the difficulty of drilling the wood with a Forstner bit, softer wood is used for these bags. You may want to texture or carve the surface of the bag body, and or to dye it to enhance its appearance.

### **Other Options for this Form:**



### **Variations:**

- Endcaps can be turned off of end of paper glued cylinder so that the ends of the bag open along the same lines as the body of the bag.
- Turn the cylinder leaving two ridges which can be carved away except on the bottom where they are shaped to make feet.
- Use slices of 4” bamboo poles for the body of the bag, leaving interior divisions and turning endcaps from other materials.
- Instead of using two pieces of equal thickness for the bag body and lid, make the body piece 2/3 of the thickness, and the top piece 1/3 of the thickness. This is especially attractive when your top and endcaps are of the same wood or visa versa. If you use two different woods, be sure they are of similar density.