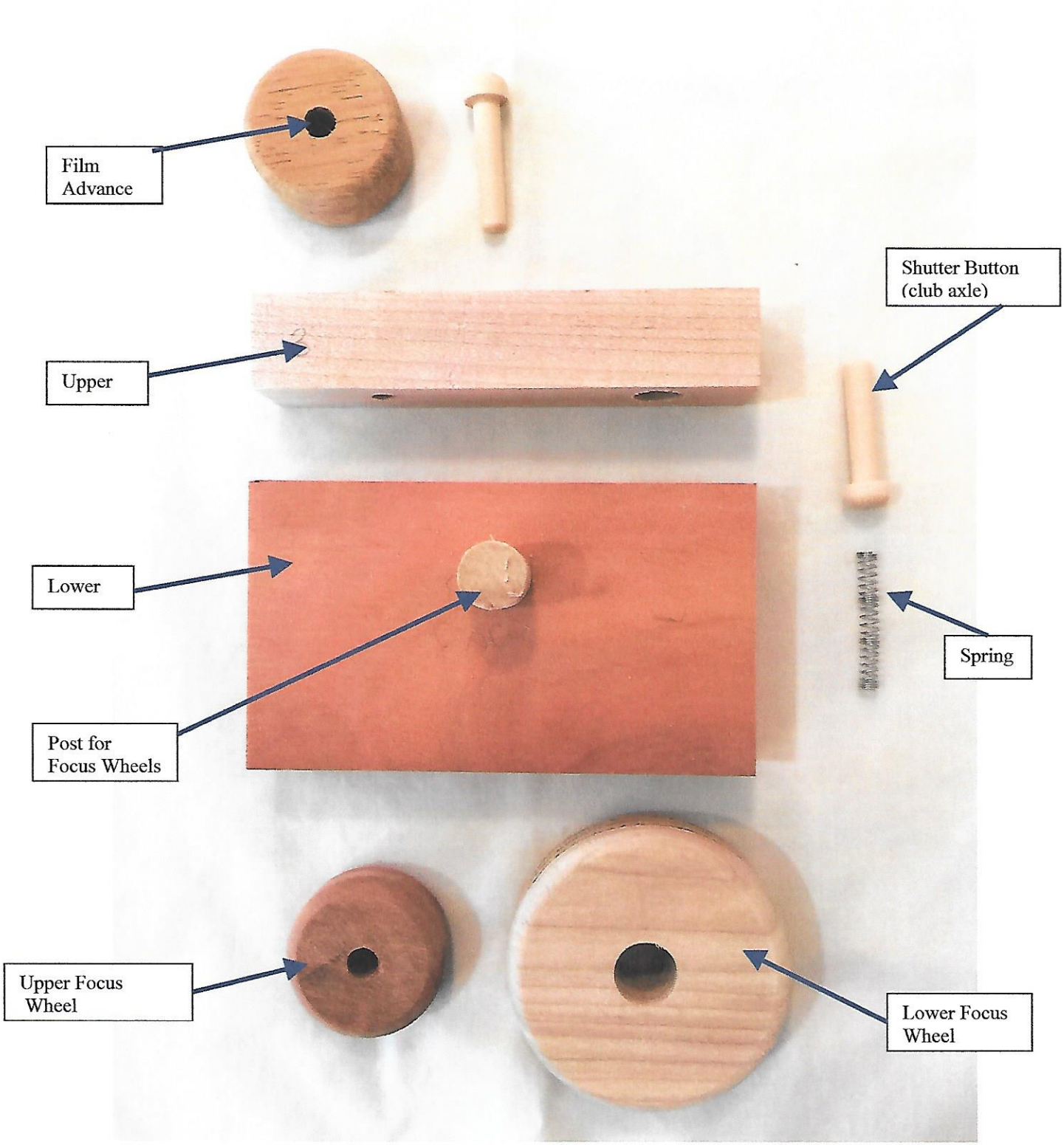
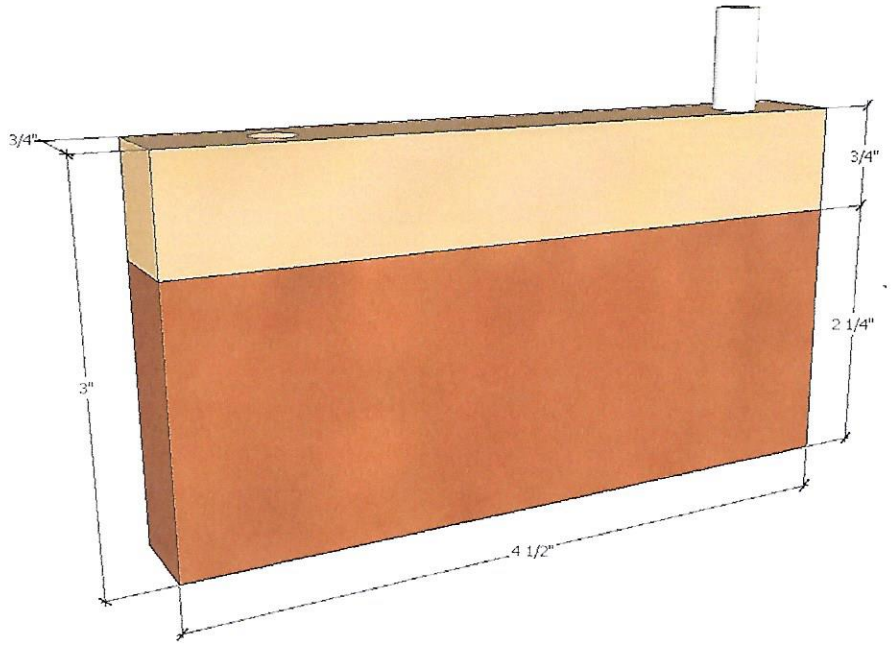
Camera Parts

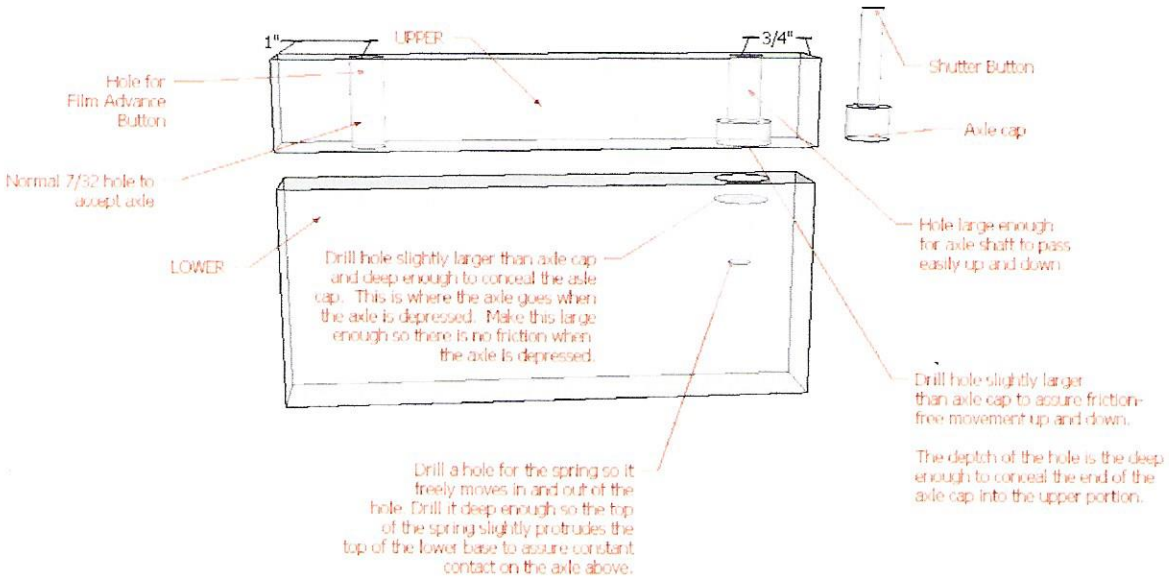


1. STOCK PREPARATION



The camera is made from contrasting woods. The UPPER piece is usually lighter color than the LOWER piece. It is very important you make the width of UPPER and LOWER exactly the same or the operation of the camera will be compromised.

2. DRILLING THE HOLES



1. Carefully place the UPPER and LOWER camera pieces together. It is very important they are flush on the sides.
2. Using masking tape, tape them together being careful not to lose the alignment. I have found the pieces slip when using a clamp. Use as many pieces of tape to make sure the UPPER and LOWER do not move during drilling. This will also prevent "blow out" between the pieces.
3. Take care to use a Drill Press and make sure the holes are vertical to the UPPER and LOWER. If these holes go in at an angle, the camera will not work.
4. Using a 7/32" bit, drill a hole for the FILM ADVANCE WHEEL, one inch from the edge. Later this hole will accept an axle. The depth of this hole only has to go through the UPPER piece.

5. Using a 1/8" bit, drill a hole through the UPPER and into the LOWER ¾" from the edge. This hole will allow you to accurately locate where to drill holes for the Shutter Button (axle).
6. Review the figure above to see the depth of holes.
7. The diameter of the UPPER and LOWER pieces that will accept the axle cap must be oversized to assure unhindered movement of the Shutter Button (axle). I used a 27/64" bit.

3. ASSEMBLY

SPRING: Drill a hole deep enough to make sure the spring protrudes slightly above the Lower piece. I get my springs from old ballpoint pens. Careful, they can vary in diameter and length. Dollar Tree sells an 8-pack of pens for $1 - just remove the springs so they are all the same size.

It is now time to glue the UPPER and LOWER pieces together with the Shutter Button (axle) in place. Careful, do not get glue on the axle or around where it will travel. It is very important the UPPER and LOWER are flush with each other. I found using masking tape rather than a clamp helps keep the pieces aligned. Before the glue sets up, move the Shutter Button up and down to make sure it moves smoothly. If it does not, gently adjust the UPPER and LOWER pieces until it does.

After the glue cures is when you want to sand all surfaces of the camera - especially the edges. I use a ¼" router bit for the edges and lower sides to do this.

4. Focus / Lenses

Using ¾" stock and a hole saw, make one 2.25" and one 1.5" wheel. I found mounting them on a pen mandrel works well to round the edges and burn in groves on the sides of the wheels.

Next, locate the center of the camera body assembly (upper and lower). Drill a ½" hole approximately 3/8" deep. Insert and glue a ½" dowel into this hole. The dowel must be proud of the camera surface slightly ***less*** than the thickness of the 2.25" wheel. So, when you put the Large Focus Lenses on the dowel, it is not proud of the wheel. Drill a ½" hole in the 2.5" wheel and slide it onto the dowel. Sand either the dowel or the hole so the wheel will rotate with little effort.

Next, drill a 7/32" hole in the center of the ½" dowel. Using a standard axle, put the 1.5" wheel on top of the larger wheel. Hammer the axle into the ½" dowel making sure the wheel freely rotates. Both wheels (the 2.25" and 1.5") must easily rotate to act as Focusing Lenses.

5. Film advance

This is the final step. Using a club provided wheel and axle, mount the film advance wheel on the top of the UPPER portion of the camera. Make sure the wheel turns freely. An alternative would be to make a second 1.5" wheel when you are making the focus-lens wheels.

6. Finish

I know we do not finish our toys. However, since we are using contrasting wood for the camera, I found a little "pop" goes a long way. Before mounting the Focus / Lens wheels and the Film Advance wheel, I put a coat of Mineral Oil on the camera body. After an hour, wipe off the excess and continue with the assembly. Mineral Oil is safe and softens the wood.

NOTE: I put a small button on the Shutter Button. Just drill a 7/32" hole in the center of the button and using 2-part epoxy attach to the Shutter Button. We don't want this to come off - could be a safety issue. This just adds another layer of complexity and is optional.