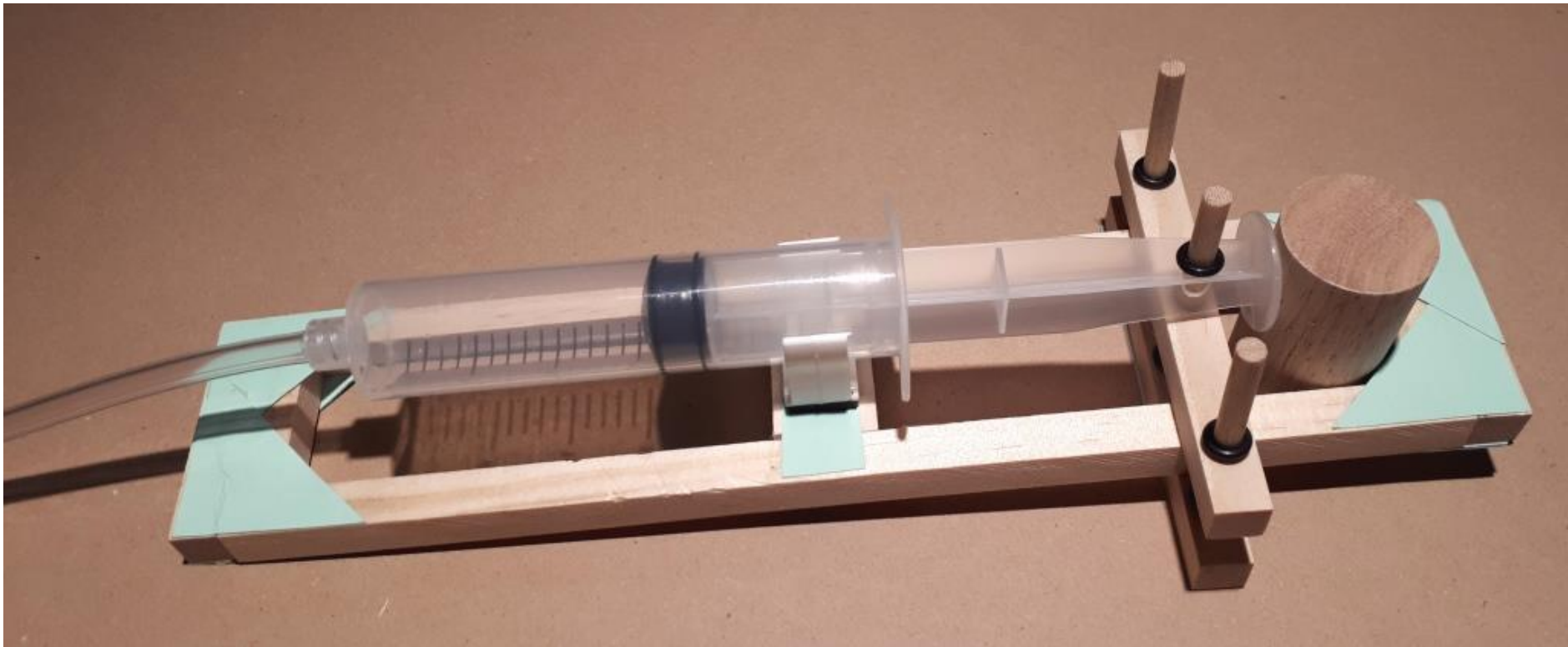


Pneumatic Clamp

Step-by-step assembly instructions



Contents of Clamp Kit



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Wooden pieces ($\frac{3}{8}$ " cross-section): 2 X $9\frac{1}{4}$ "; 2 X $3\frac{5}{8}$ " (drilled); 2 X 2"; 4 X $1\frac{3}{8}$ "

Green corner gussets: 1 card

Syringes, 20cc: 2 (1 has a hole in the plunger $\frac{3}{8}$ " from end)

Plastic Tubing: 1 length

Wooden dowel, $\frac{3}{16}$ " diam.: 3 X $2\frac{3}{8}$ "

Syringe Holder: 1

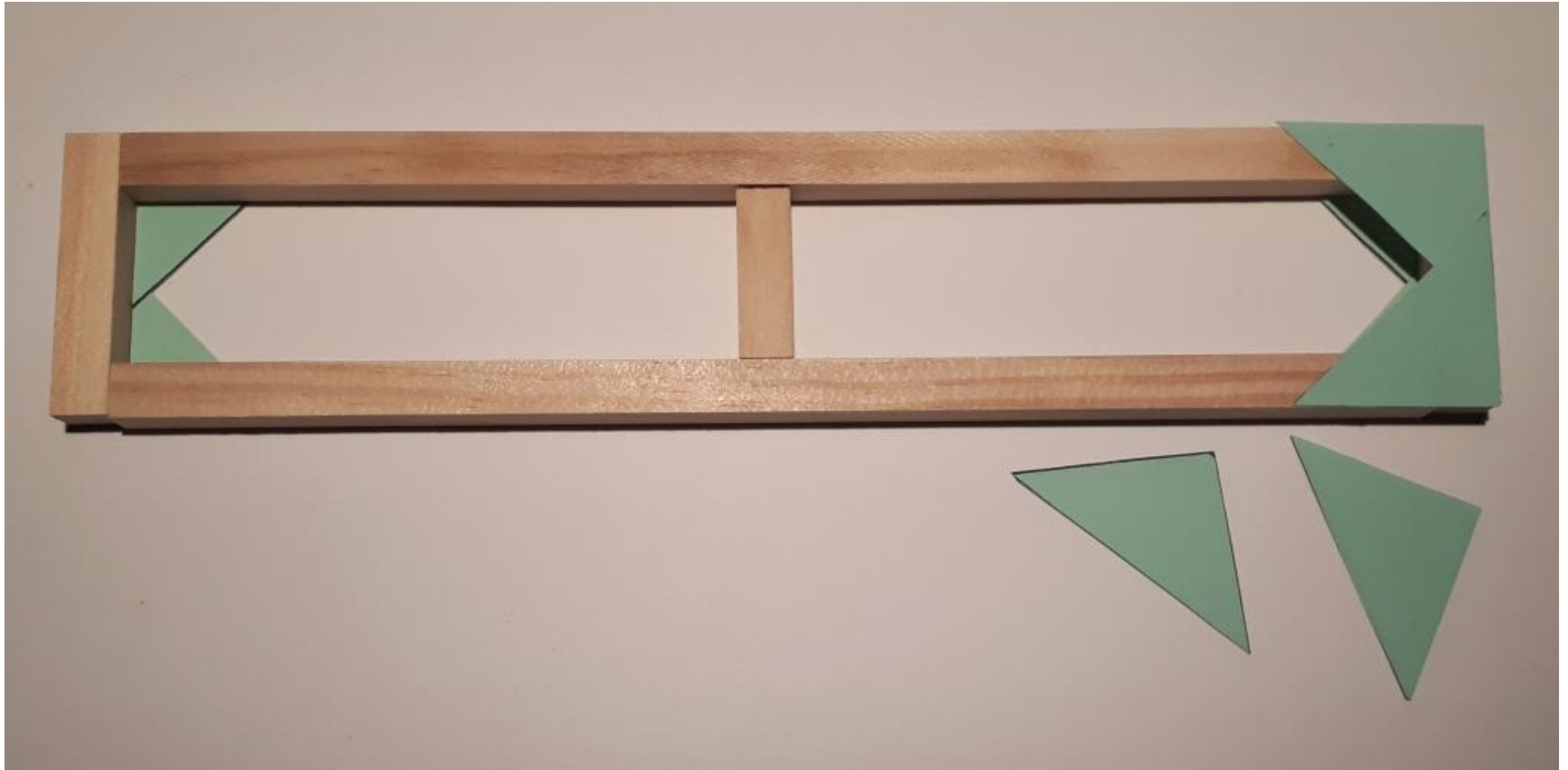
Mini-washers: 3

Stirring Sticks: 1

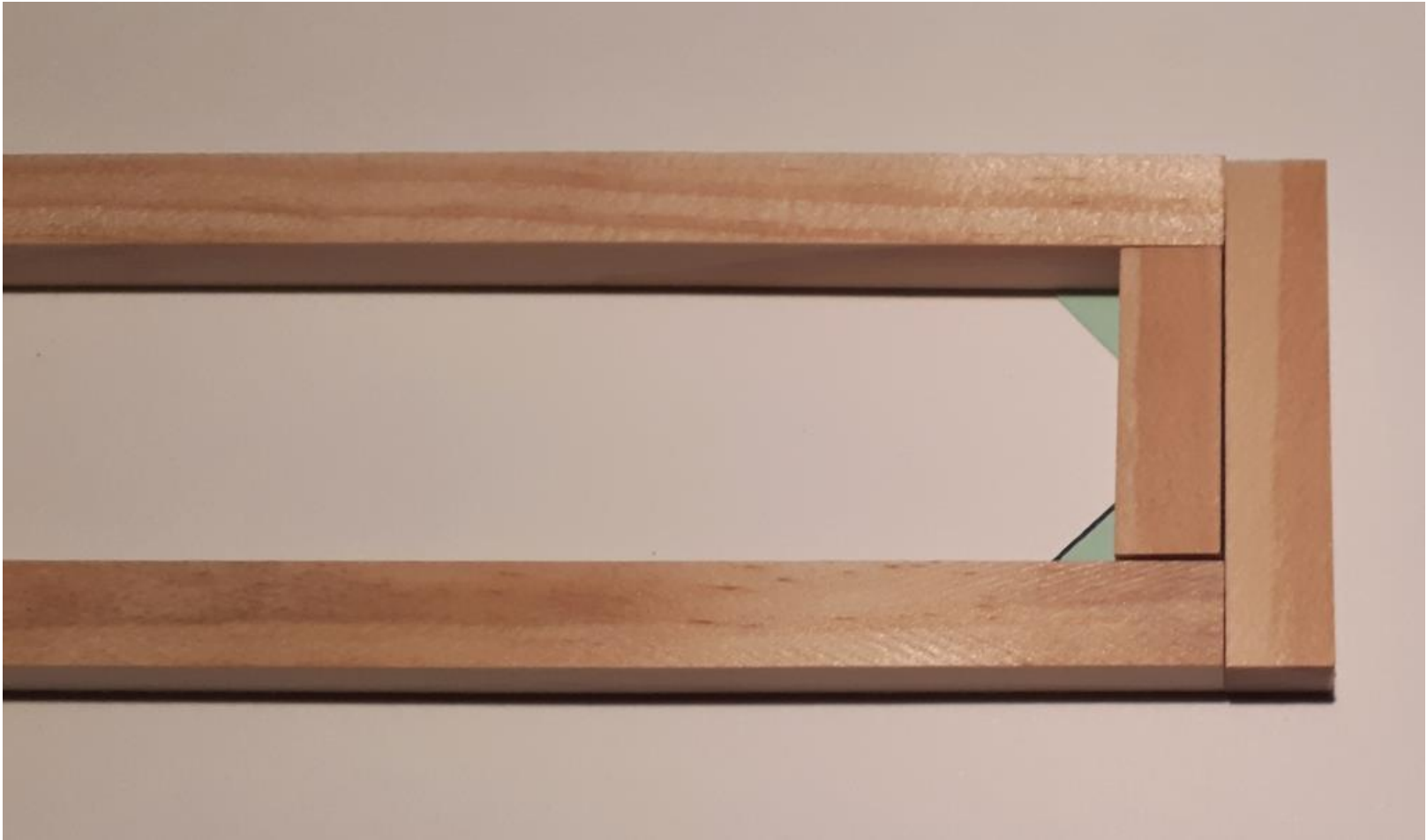
Clamp Object: 1

Plus a small piece of sandpaper

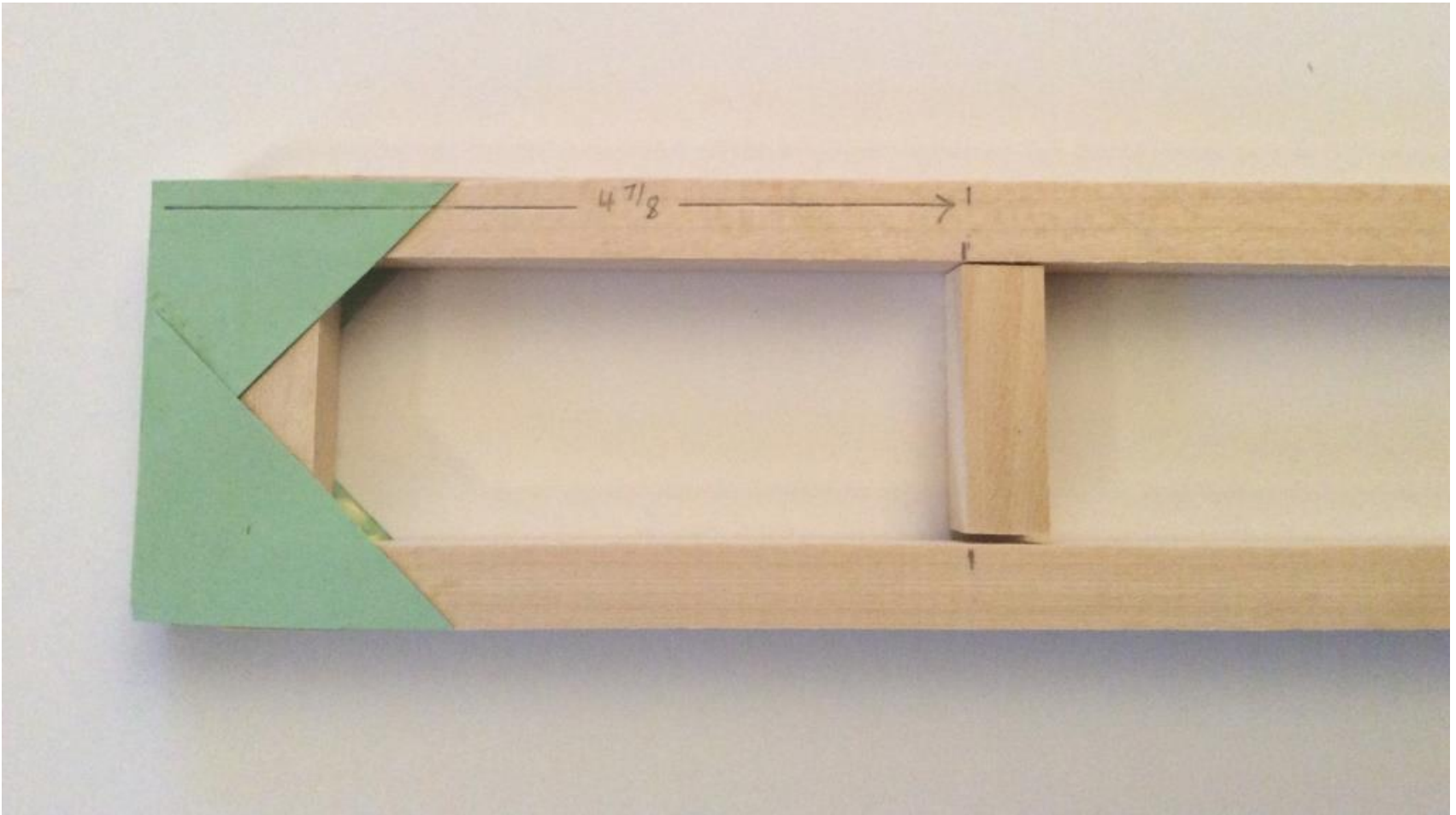
Make a 2 " by 10" frame using two 2 " pieces and two 9 ¼" pieces. To join the pieces of wood together use a green triangle and a small amount of wood glue. Use four corner triangles or gussets on one side only at first. Place a 1 ⅜" piece of wood temporarily between the long pieces as a spacer to keep it square



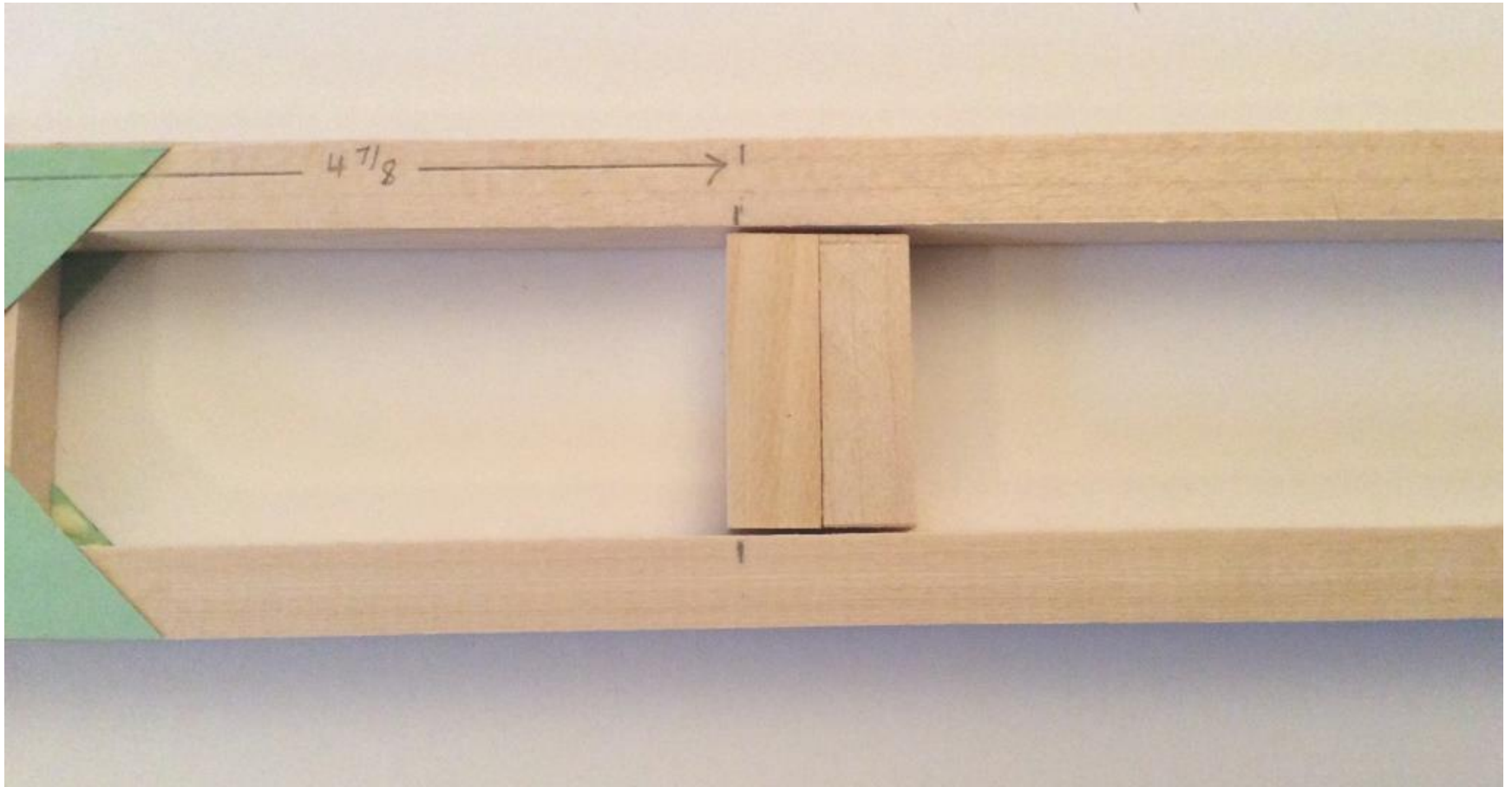
On the other side of the frame glue two 1 $\frac{3}{8}$ " pieces into the smaller ends. Secure them with glue and with four corner gussets, one on each corner.



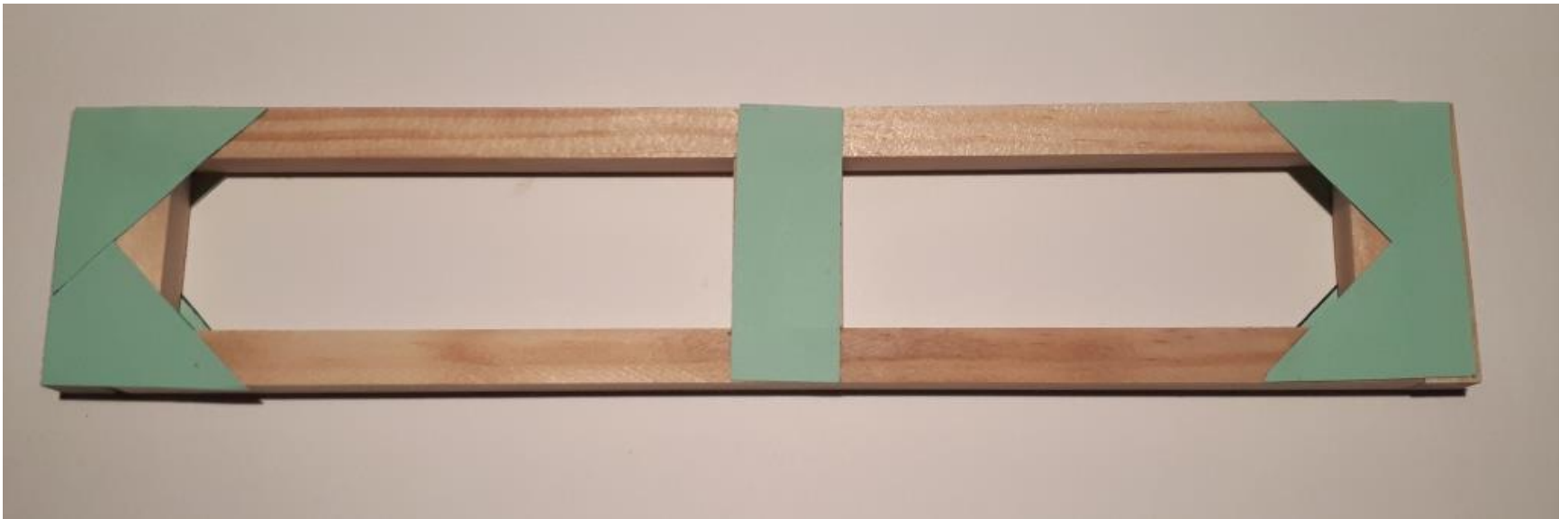
Place a $1 \frac{3}{8}$ " piece so that it lies between the long pieces of the frame $4 \frac{7}{8}$ " from one end.



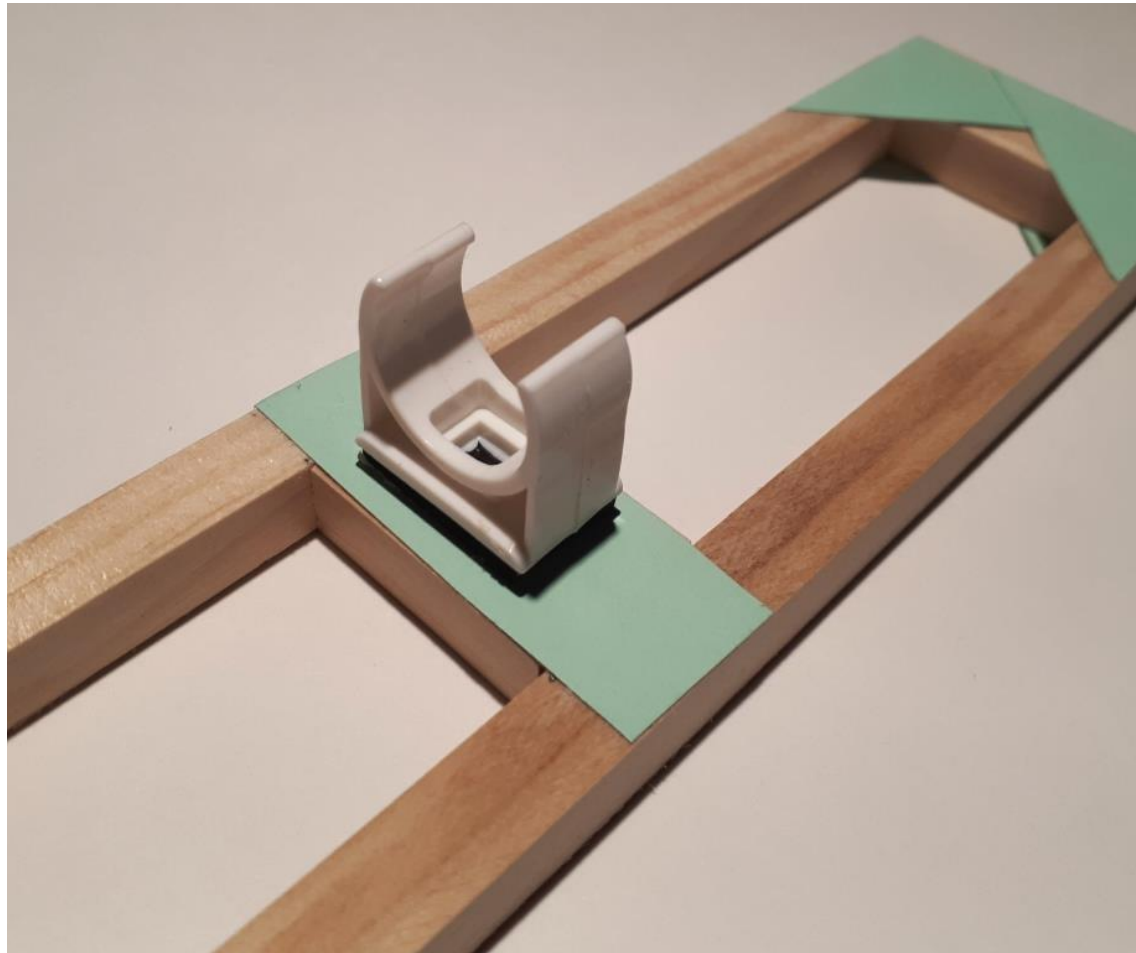
Place the last $1 \frac{3}{8}$ " piece alongside it away from the measured end.



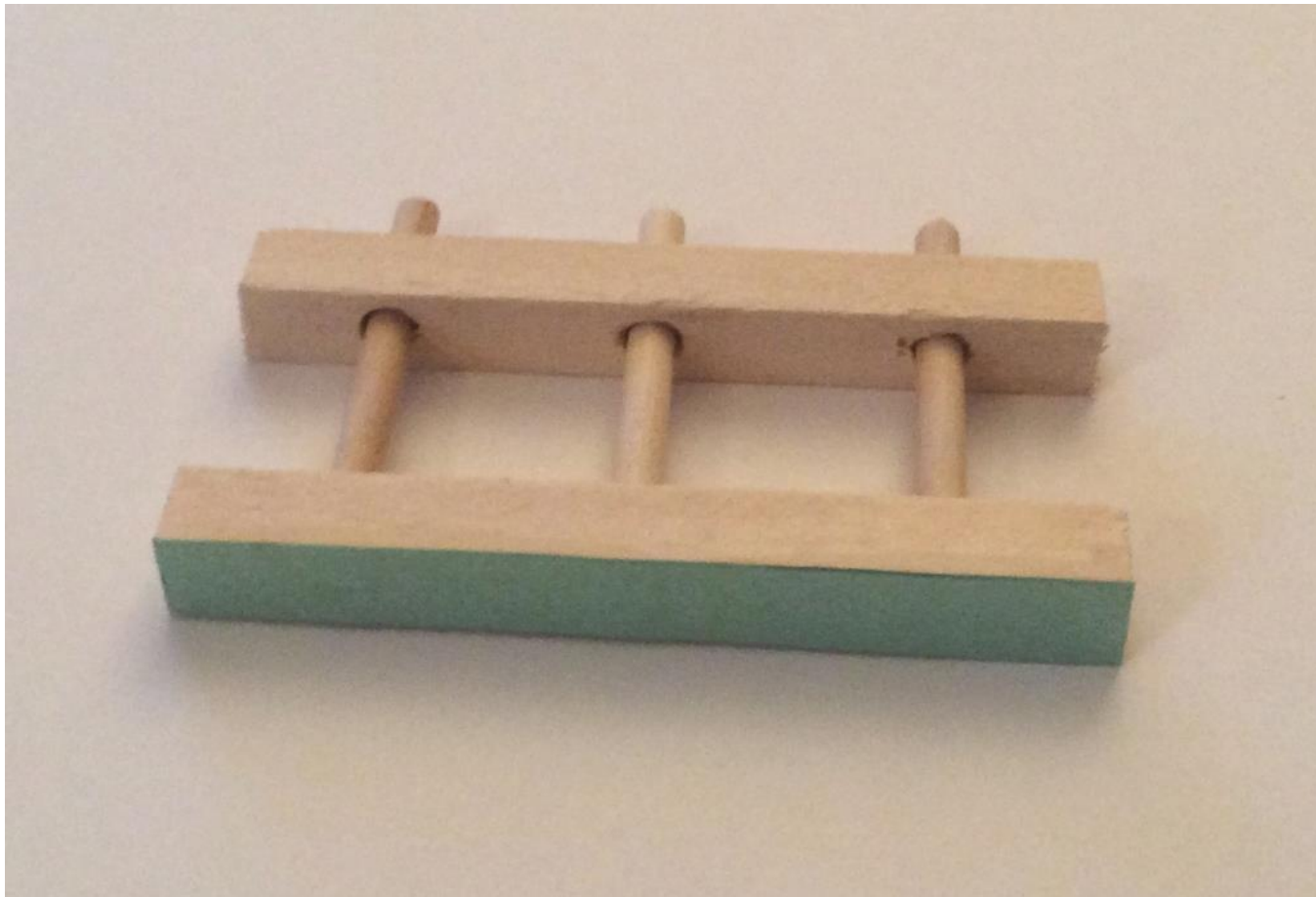
From the green gusset card cut a rectangle ($\frac{3}{4}$ " by 2") and glue it to secure the two $1\frac{3}{8}$ " pieces to the frame. Allow to dry (important!)



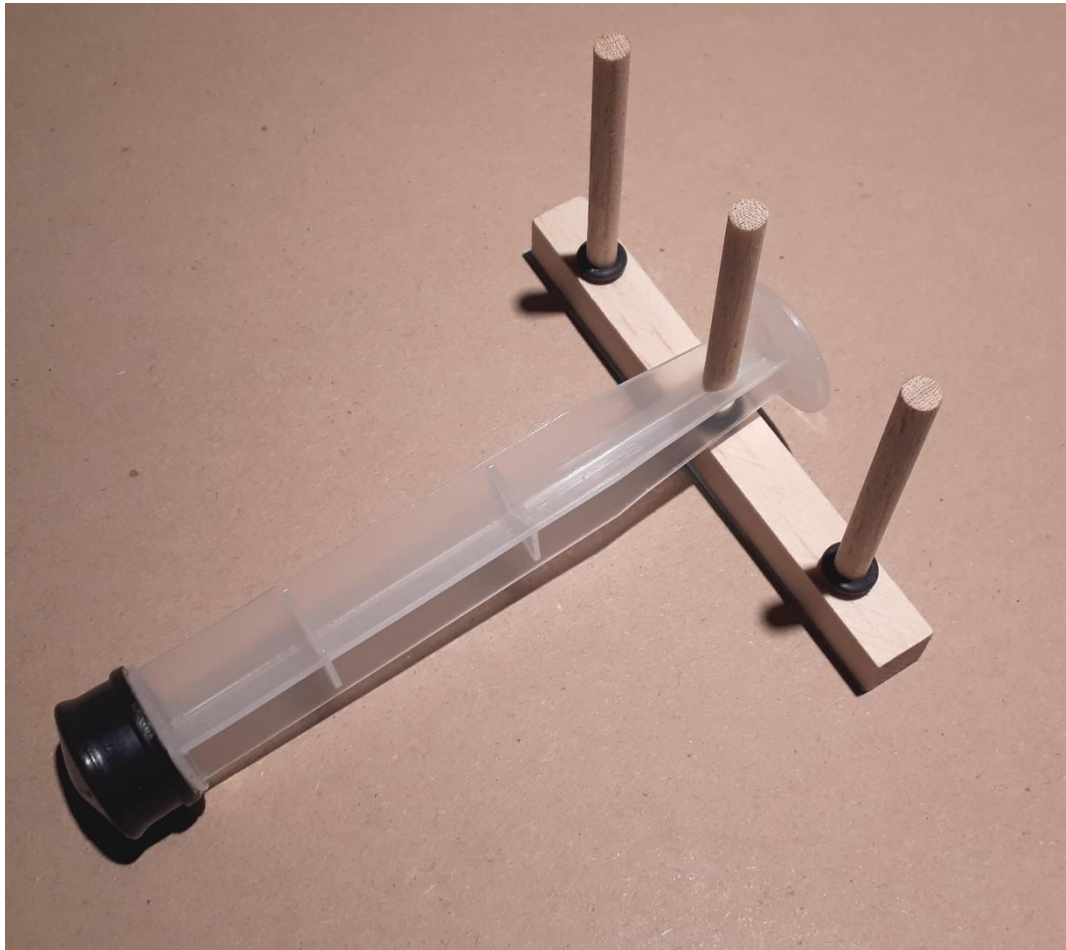
Peel off the backing tape from the white syringe clip and mount it onto the middle of the $\frac{3}{4}$ " x 2" card



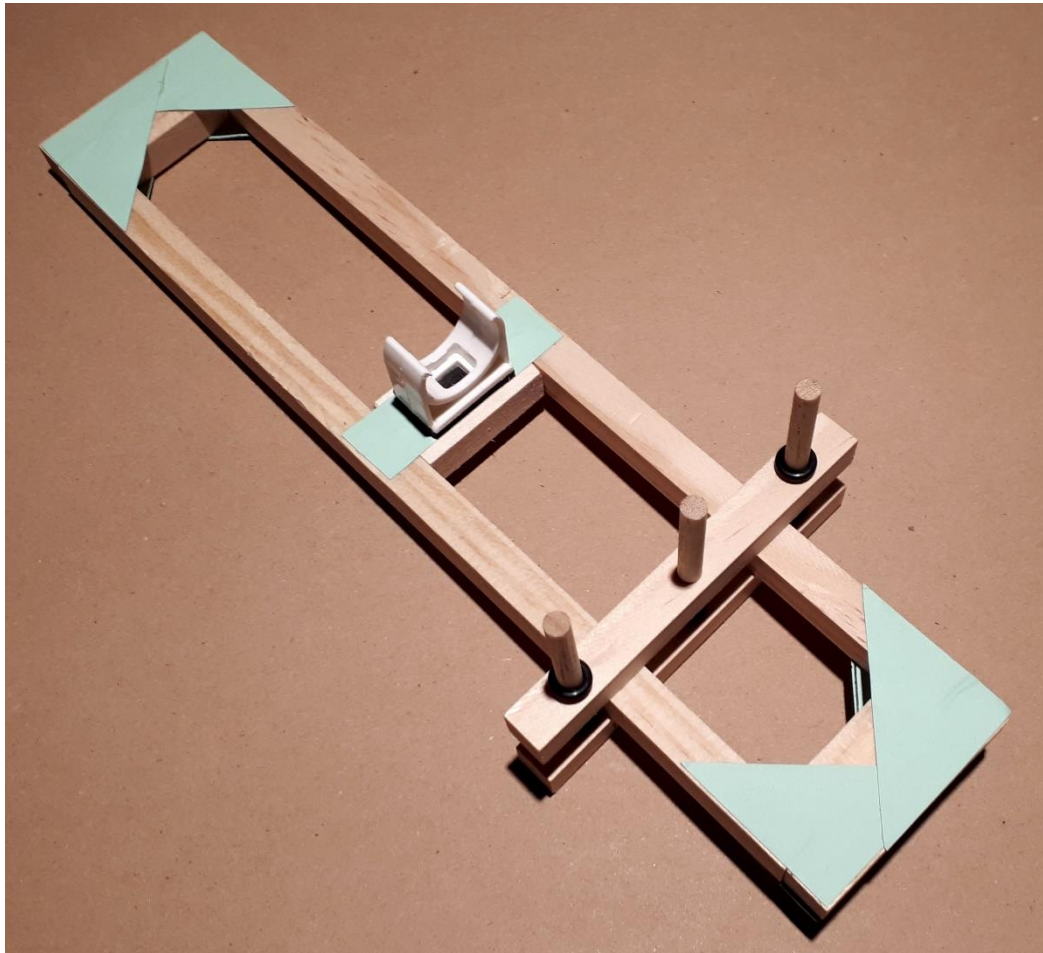
Glue the three $2 \frac{3}{8}$ " axles into the holes of a drilled $3 \frac{5}{8}$ " piece. The dowels are to flush with one side and this is covered by a $3 \frac{5}{8}$ " by $\frac{3}{8}$ " cardboard strip. Use the other drilled $3 \frac{5}{8}$ " piece to ensure that the axles are perpendicular to both of the pieces.



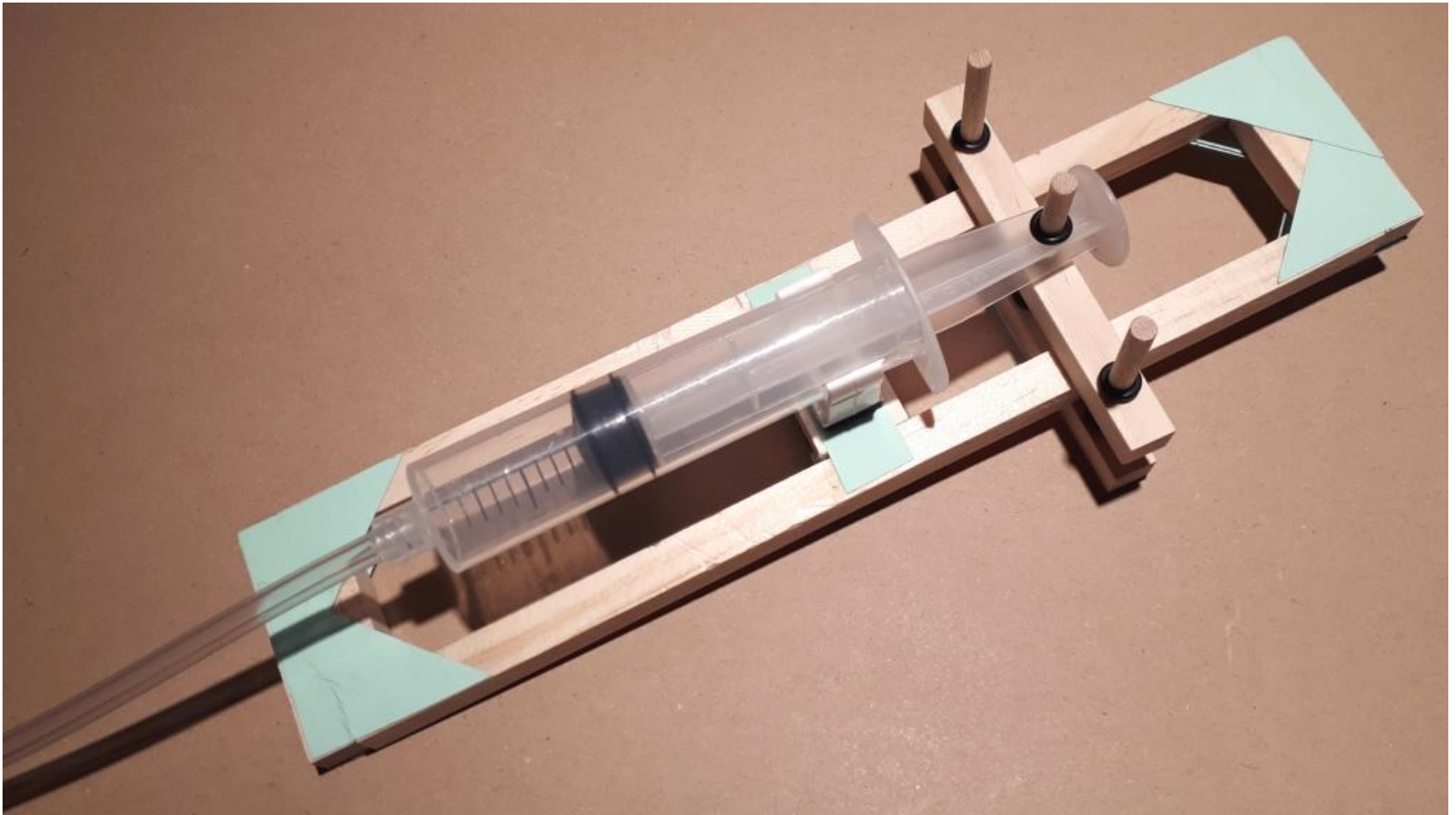
Check that the plunger that has a hole in it rotates when attached to the center axle



Attach the second 3 5/8" piece to the axles so that each of the 3 5/8" pieces are on different sides of the frame. The assembly should slide freely. Finish with mini-washers on the end axles.



Push the plunger with the hole in it into its barrel and then place the plunger onto the centre axle. Secure the plunger with the third mini-washer. Carefully place the barrel of the syringe into the syringe clip and attach the tubing to the syringe.



Carefully push the plunger into its barrel as far as it comfortably goes. To operate the clamp attach the other syringe, fully open with its plunger out, onto the tubing and then press its plunger in. The clamp will close. Pull the plunger out and the clamp will open.

