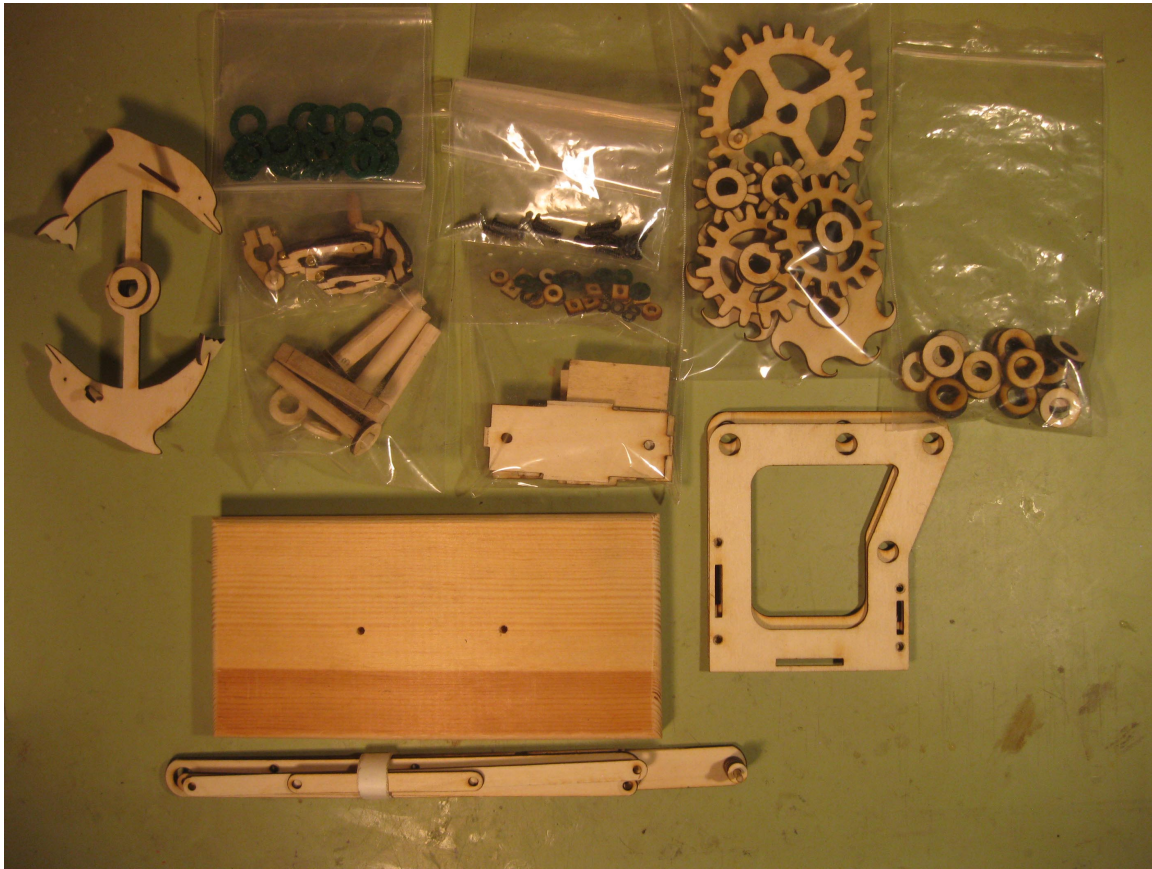


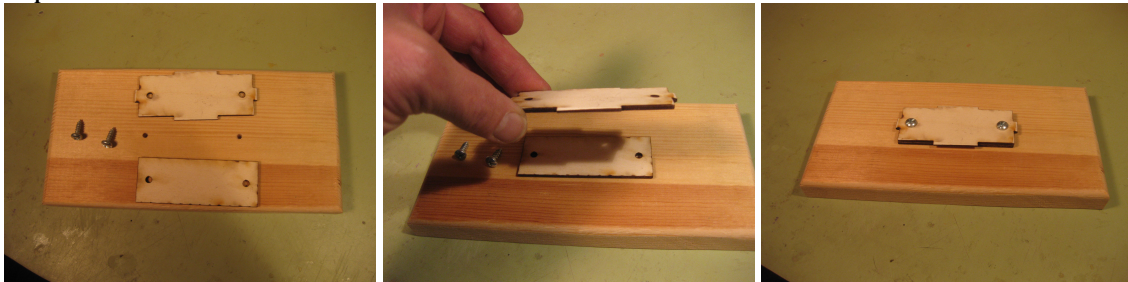
Assembly Instructions for Swimming Dolphins

An original model kit from Bibby's Models



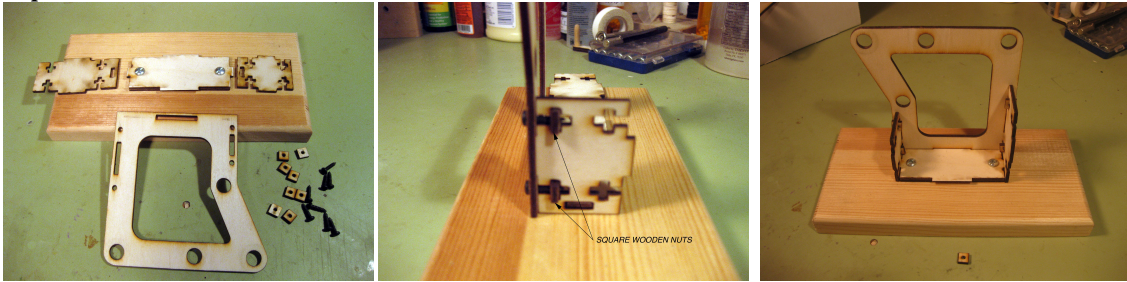
Kit Contents

Step 1:



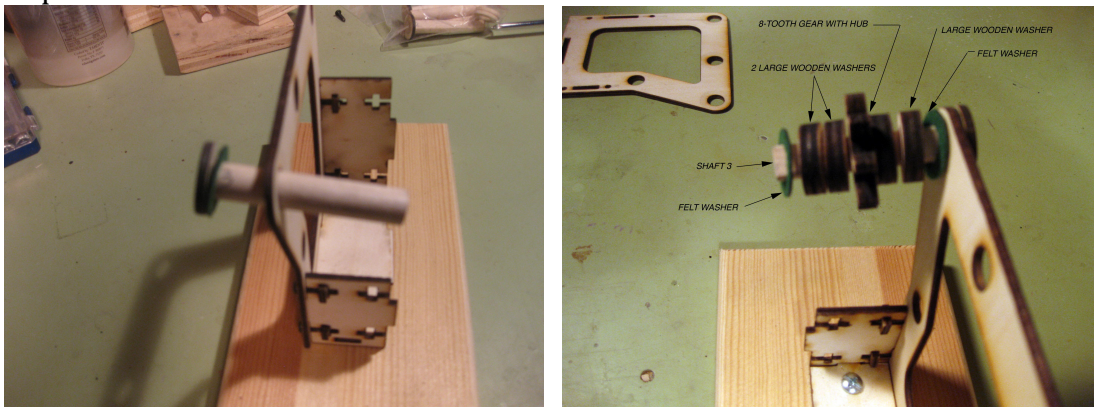
Locate the parts shown on the left. Place the rectangular piece underneath the tabbed rectangle and screw down with the large screws provided.

Step 2:



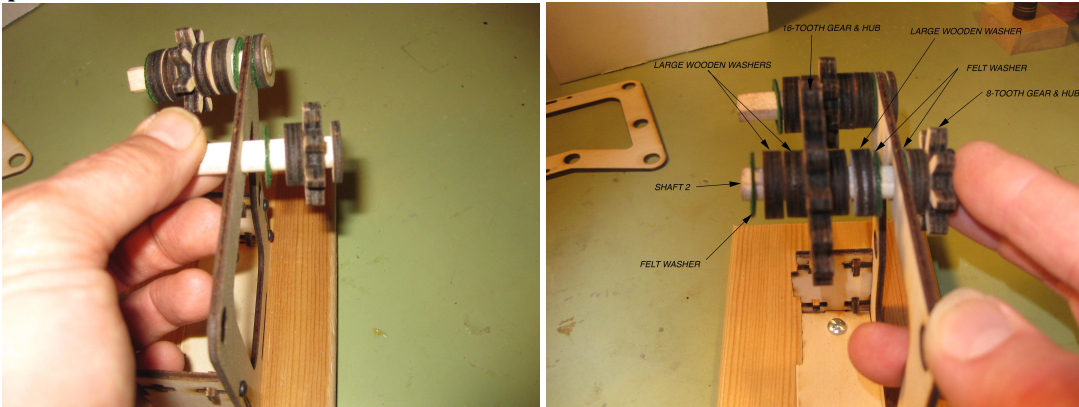
Start by assembling three of the sidepieces of the frame to the bottom tabbed-rectangle. Insert a small square wooden nut into the slot as shown in the center photo. Place a screw through the front of the frame. Make sure the screw goes through the small-predrilled hole in the square nut. Now tighten with the screwdriver. **DO NOT OVER TIGHTEN.** Snug the screw down and then apply just a bit more torque. If you strip out a nut there are a few extra. Go around sequentially and put in all four screws and nuts. When done you will have put three of the sides together as shown on the right.

Step 3:



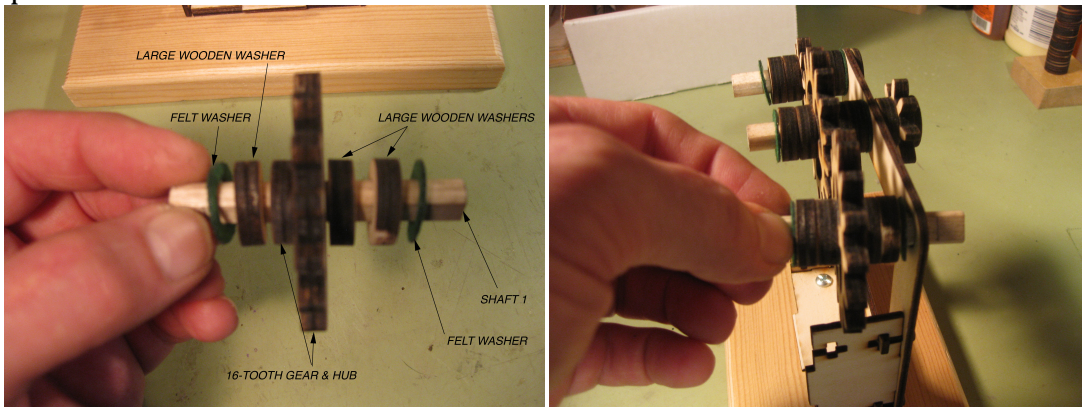
Place a felt washer onto to shaft 3 and slide it all the way to the end. Insert shaft 3 into the frame as shown on the left. Once inserted, slide onto shaft 3 the following items in this order: A green felt washer—a large wooden washer—the eight-toothed gear with its hub facing the frame—two more large wooden washers—a green felt washer. You will need to align the D-hole in the gear with the flat on the shaft. It's a bit precarious, but leave shaft 3 hanging there for now.

Step 4:



Locate shaft 2 and the other 8-tooth gear. Slide the 8-tooth gear onto shaft 2 making sure to align the D-hole in the gear with the flat on the shaft. Also, make sure the hub of the gear is facing the frame. Slide a green felt washer up against the hub, and then slide the shaft through the frame as shown on the left. In order place the following onto shaft 2. A green felt washer—a large wooden washer—the 16-tooth gear with hub facing to the right—two large wooden washers—a green felt washer. Once again let the shaft just hang there for now.

Step 5:



Locate shaft 1 and slide onto it in order: green felt washer—two large wooden washers—the 16-tooth gear with its hub facing to the left—a large wooden washer—a green felt washer. Center all the items on the shaft and slide shaft 1 into the hole of the frame as shown on the right.

Step 6:



Locate the remaining sidepiece. This next step is a bit tricky so take your time. Make sure all three shafts still have the green felt washers attached. Carefully bring the sidepiece up taking care to align each shaft with its corresponding hole. Once the shafts are through their holes carefully line up all the tabs with their corresponding slots in the lower part of the model. Now, using the square wooden nuts, slide them into their slots and place the screws through the front holes in the sidepiece, making sure the screws go through the predrilled holes in the nuts. Tighten to a snug fit using your screwdriver. Make sure all four screws are used.

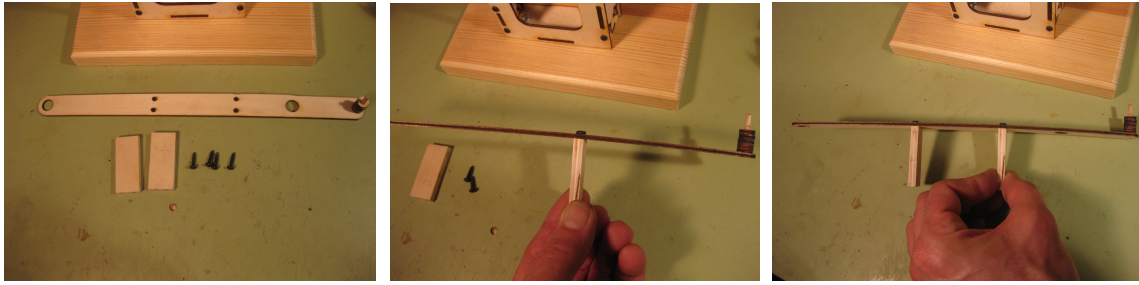
IF YOU WISH TO TEST THE GEAR TRAIN OUT, ROTATE THE SMALLER 8-TOOTH GEAR ON THE LEFT SIDE OF THE MODEL. IT NEVER WORKS AS WELL IF YOU ROTATE THE 16-TOOTH GEAR ON THE RIGHT SIDE.

Step 7:



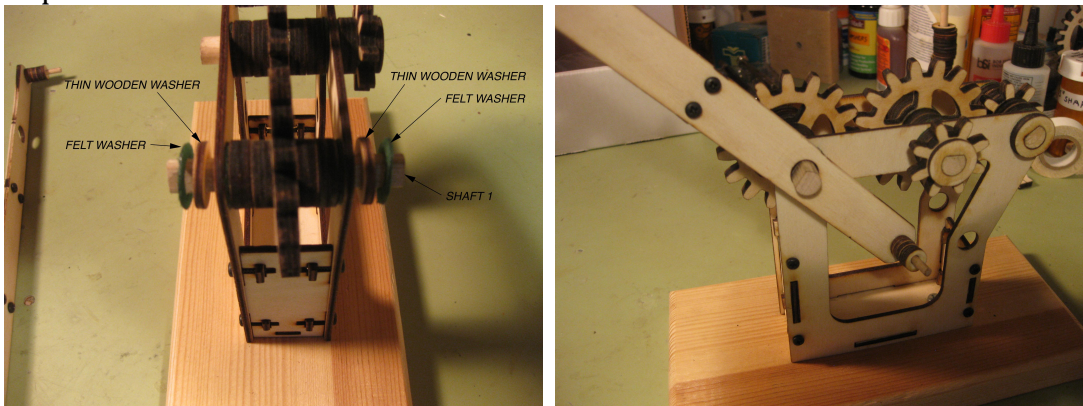
Locate shaft 4 and the other parts shown on the left. When sliding on the wave pieces orient them so the crests of the waves point toward the nose of the dolphin as shown in the center photo. Slide onto shaft 4 these items in order: green felt washer—the wave piece (oriented as shown)—a large wooden washer—the dolphin figure—a large wooden washer—the other wave piece (oriented as shown)—a green felt washer

Step 8:



Locate the parts shown to the left. The long part is called the ladder. Make sure the ladder's pin is facing outward and screw one of the crosspieces on to it. When done screw the other crosspiece on. Make sure to use all four screws.

Step 9:

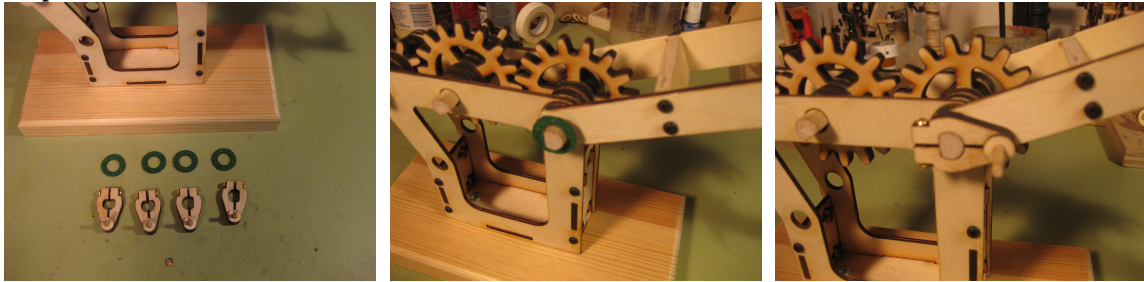


Place a thin wooden washer on each side of shaft 1 and then place a felt washer over that. Place the ladder so that its hole goes over shaft 1 making sure the dowel pin points toward the base. If you carefully allow the ladder to rotate down, it will rest under the 8-tooth gear while you do the next step.



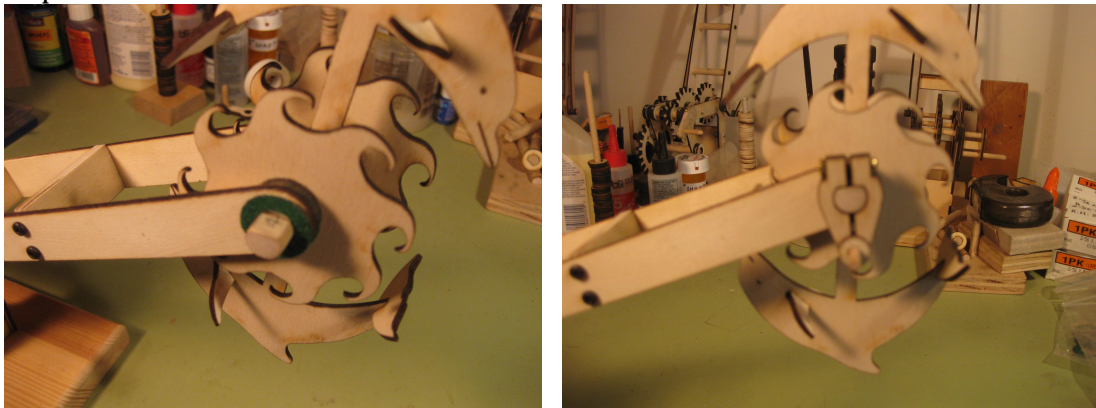
Working from the other side of the model place the dolphin figure, shaft 4 and all the items on it (make sure the felt washers are still on) through the hole at the top of the ladder. Place the shorter ladder side over both shaft1 and shaft 4. Make sure the holes in the ladder line up with the crosspieces. Using the four screws, screw to the crosspieces.

Step 10:



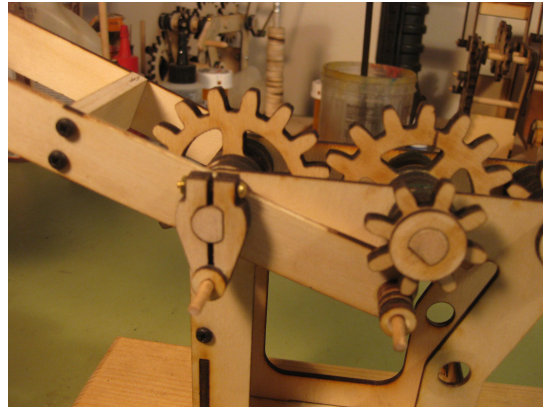
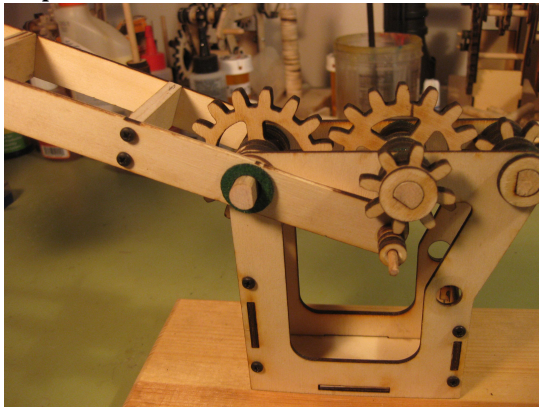
Locate the four cranks and four felt washers. Note that two of the cranks have D-holes oriented the same and the other two have the D-holes oriented 90 degrees. **It is important that you mount two “like cranks” to the same side of the model.** Place a felt washer on shaft 1. Then place a crank onto the shaft. Align the D-hole with the shaft’s flat. Push the crank on until its face is flush with the end of the shaft. Now tighten the screw with a small screwdriver while holding the nut with your finger. There is no need to use pliers to hold the nut.

Step 11:

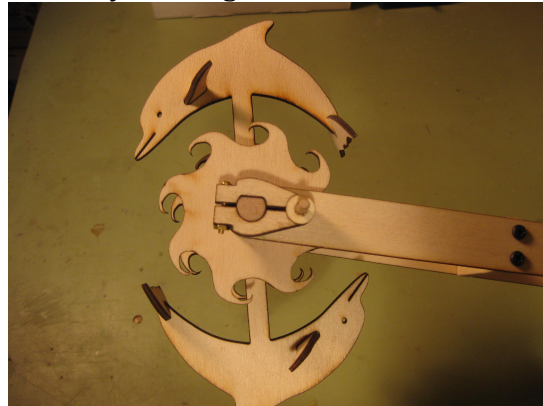
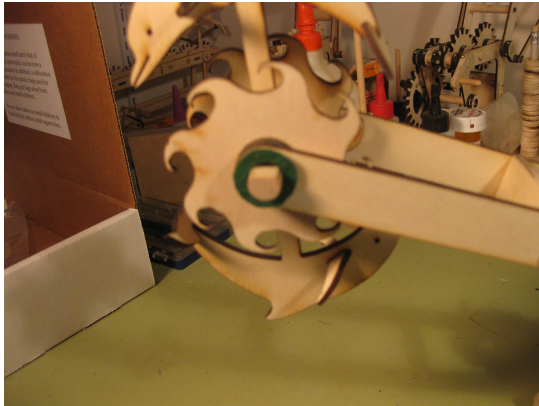


Using the other crank whose D-hole is oriented similarly to the one you already mounted to shaft 1, place this crank on the dolphin shaft making sure to align the D-hole with the shaft’s flat. Tighten the screw with a small screwdriver, holding the nut with your finger.

Step 12:

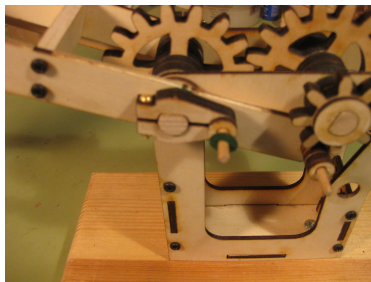
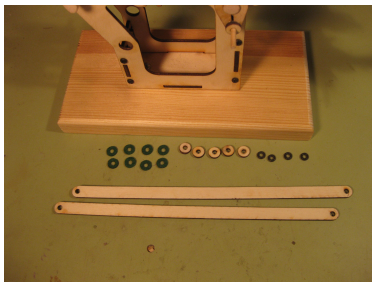


Rotate the model to the other side. Repeat the procedure; first place a felt washer onto shaft 1 followed by the crank. Note that this crank's D-hole is 90 degrees offset from the ones on the other side of the model. Do not push the crank much beyond the end of the shaft. You do not want to cause any binding to the shaft's rotation.

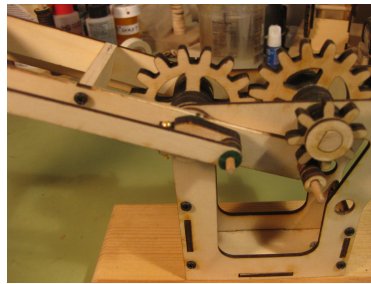
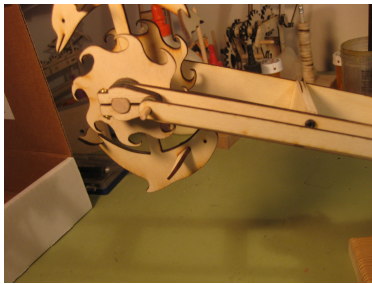


Repeat this procedure on the dolphin shaft.

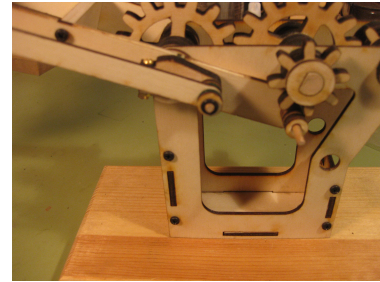
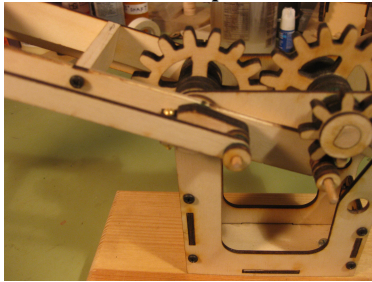
Step 13:



Locate the parts shown at the left. Place small felt washers over the dowel pins of both cranks.

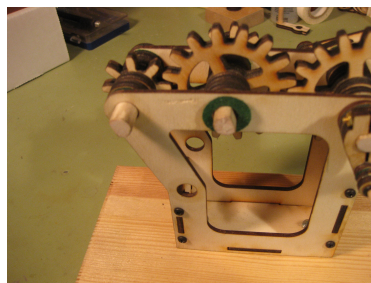
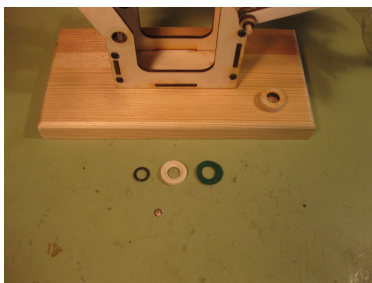


Slide the link onto both crank arms. You may have to rotate the dolphin figure in order to line up the dowel pin with the hole in the link. Place small felt washers onto the dowel pins over the link.

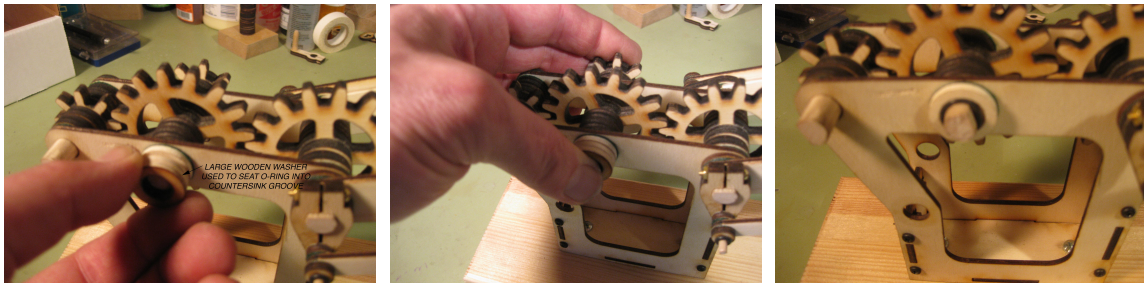


Over the small felt washers, place the small wooden washers followed by the small O-ring. The O-ring prevents the assembly from rolling off the pins when the model is cranked. Be careful when placing the O-rings on. They have a tendency to roll off and go flying off your table. A very good technique for seating the O-ring is to use one of the small wooden washers as an insertion tool. Simply push the wooden washer onto the wooden dowel pin and over the O-ring. Slide the wooden washer onto the dowel pin as far as you can and give it a little twist. This seats the O-ring. Now you can remove the washer and use it to seat the other O-rings.

Step 14:



Find the parts shown on the left. Note that the thin wooden washer has a countersink in it. Place a large felt washer onto shaft 2. Then place the thin wooden washer with the countersink facing outward onto the shaft.



Now roll on the larger O-ring to lock the assembly together. Once again take a large wooden washer to use as an insertion tool as shown in the middle figure. Push the wooden washer so that the O-ring is fully seated in the countersink groove. When you remove the washer the O-ring should be fully seated in the groove as shown on the right.

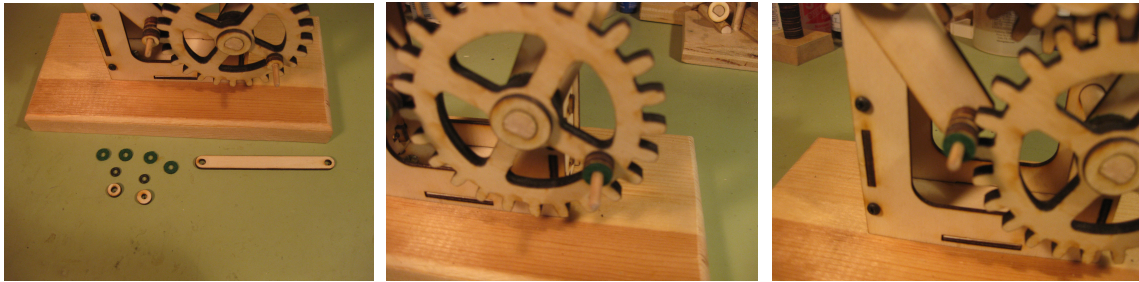
Step 15:



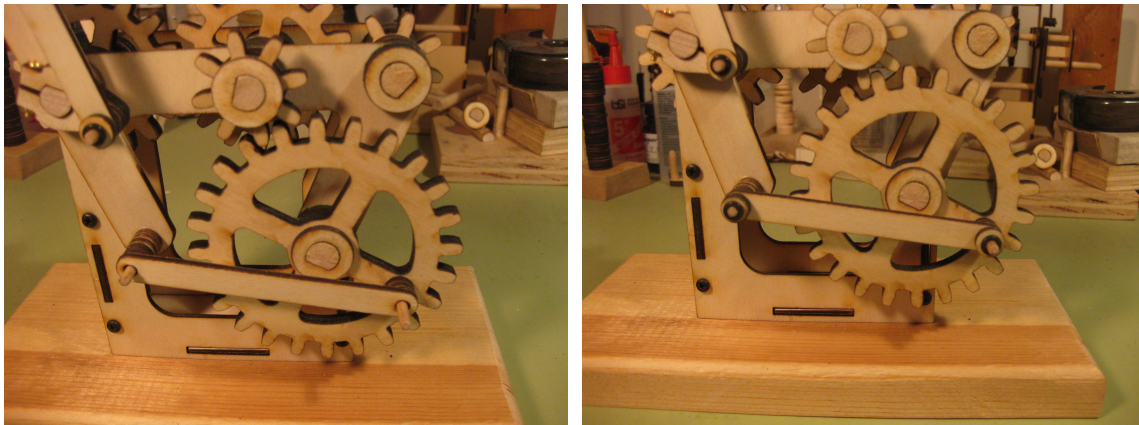
Locate shaft 5 and the other parts shown to the left. Slide shaft 5 through the D-hole of the 24-tooth gear making sure its hub is facing to the right. Next place a large green felt washer against the hub.



Insert shaft 5 through the frame as shown in the left. You may have to rotate the ladder toward the vertical in order to fit it in. Also, make sure the 24-tooth gear is meshing with the 8-tooth gear as shown. Turn the model to the other side and just as in step 14, place a large felt washer followed by the thin wooden washer with the countersink in it, followed by sliding the O-ring on. Make sure the O-ring is fully seated.



Gather the parts shown on the left. Put small felt washers on the dowel pins of both the 24-tooth gear and the ladder.

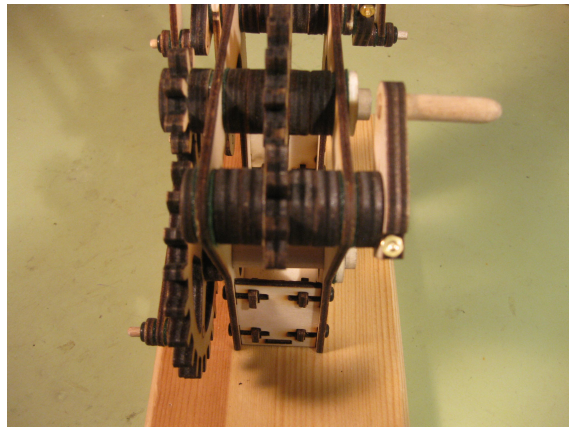


Place the short link onto the dowel pins. You may have to rotate the ladder to align the holes to the pins. As you've done in previous steps, put small felt washers, then small wooden washers, and cap the dowel pins with the small O-rings. Again, you can use a spare small wooden washer to fully seat the O-rings.

Step 16:



Gather the parts shown to the left. Place the large felt washer on to shaft 3, followed by a thin wooden washer.



Now place the handle onto shaft 3. You can push the handle on to the shaft giving it a little squeeze so as to take up any slop in the mechanism. But **DO NOT SQUEEZE** the handle too much so as to create any unwanted friction in the mechanism. Now tighten the screw with a screwdriver. Since this is the handle and it will see a lot of action, tighten this screw fairly tight.



Here is the completed model. I hope you enjoyed building it. If any parts were lost or broken please write me an email and I can send you out some replacements. I look forward to getting feedback about your experience so please send me an email and feel free to include some pictures or videos of your model.