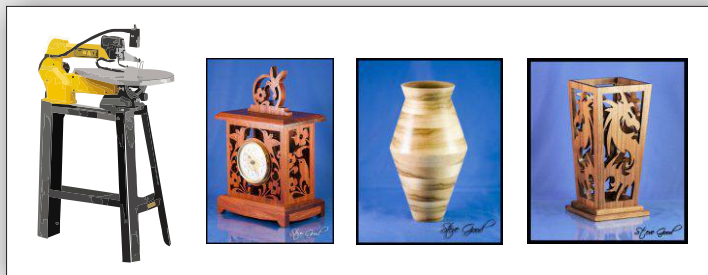


# Digital Patterns



Designed by Steve Good

[www.scrollsawworkshop.blogspot.com](http://www.scrollsawworkshop.blogspot.com)

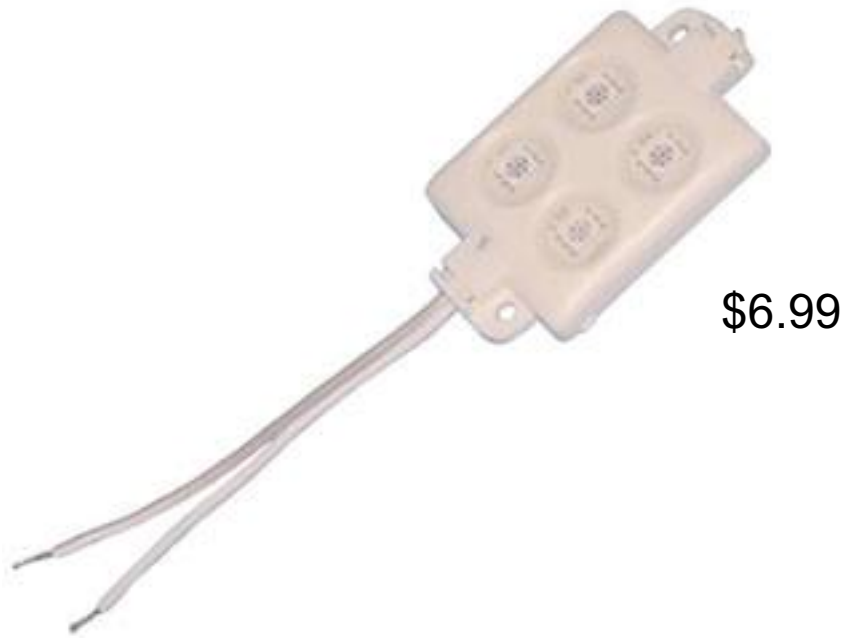
Home of Scroll Saw Pattern Printer  
and the Scroll Saw Key Chain Printer



Note to commercial print employees: I give my permission to print as many of this pattern book as your customer requires.



## Four LED High Bright module from FRYS.COM



[http://www.frys.com/product/7250523?site=sr:SEARCH:MAIN\\_RSLT\\_PG](http://www.frys.com/product/7250523?site=sr:SEARCH:MAIN_RSLT_PG)

## Rocker Switch from Radio Shack



<http://www.radioshack.com/product/index.jsp?productId=2062524>

12 volt 500mA Power Supply from Amazon.com



\$7.89

[Link to Power Supply](#)

Heat Shrink Tubing from Radio Shack



\$6.99

[Link to Heat Shrink Tube.](#)

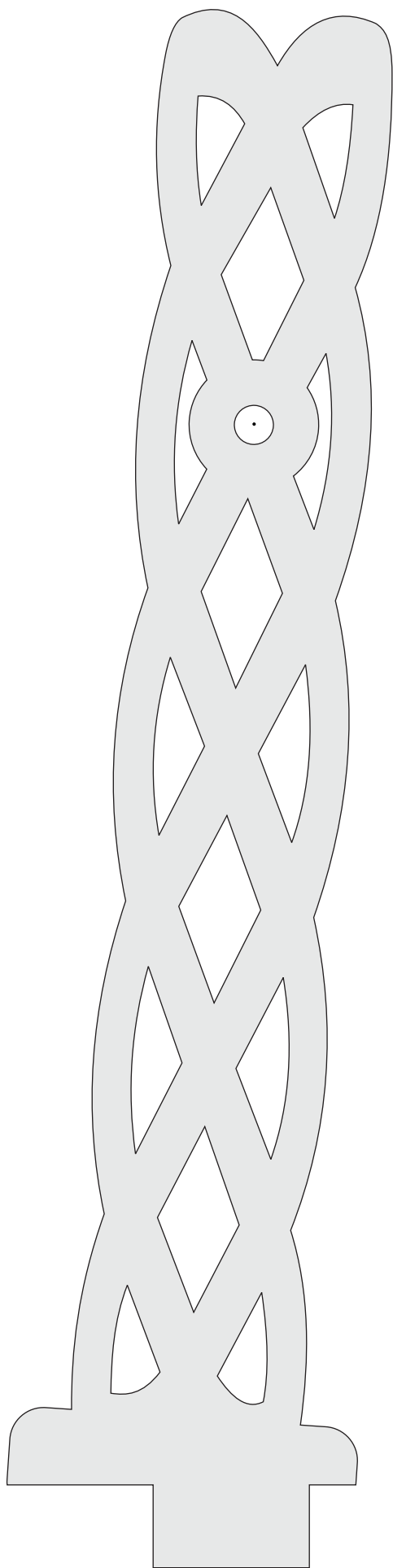
You will need

4 wing nuts.

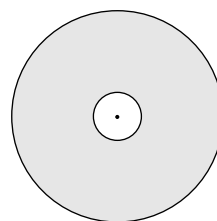
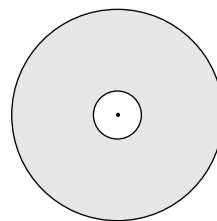
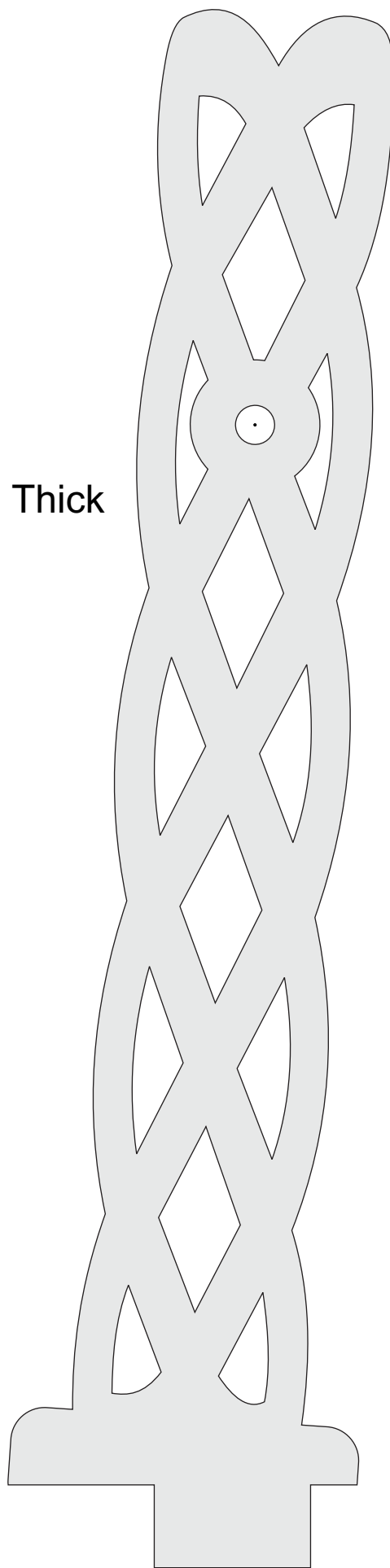
a section of threaded rod. 1/4" diameter with thread pattern to match the wing nuts.

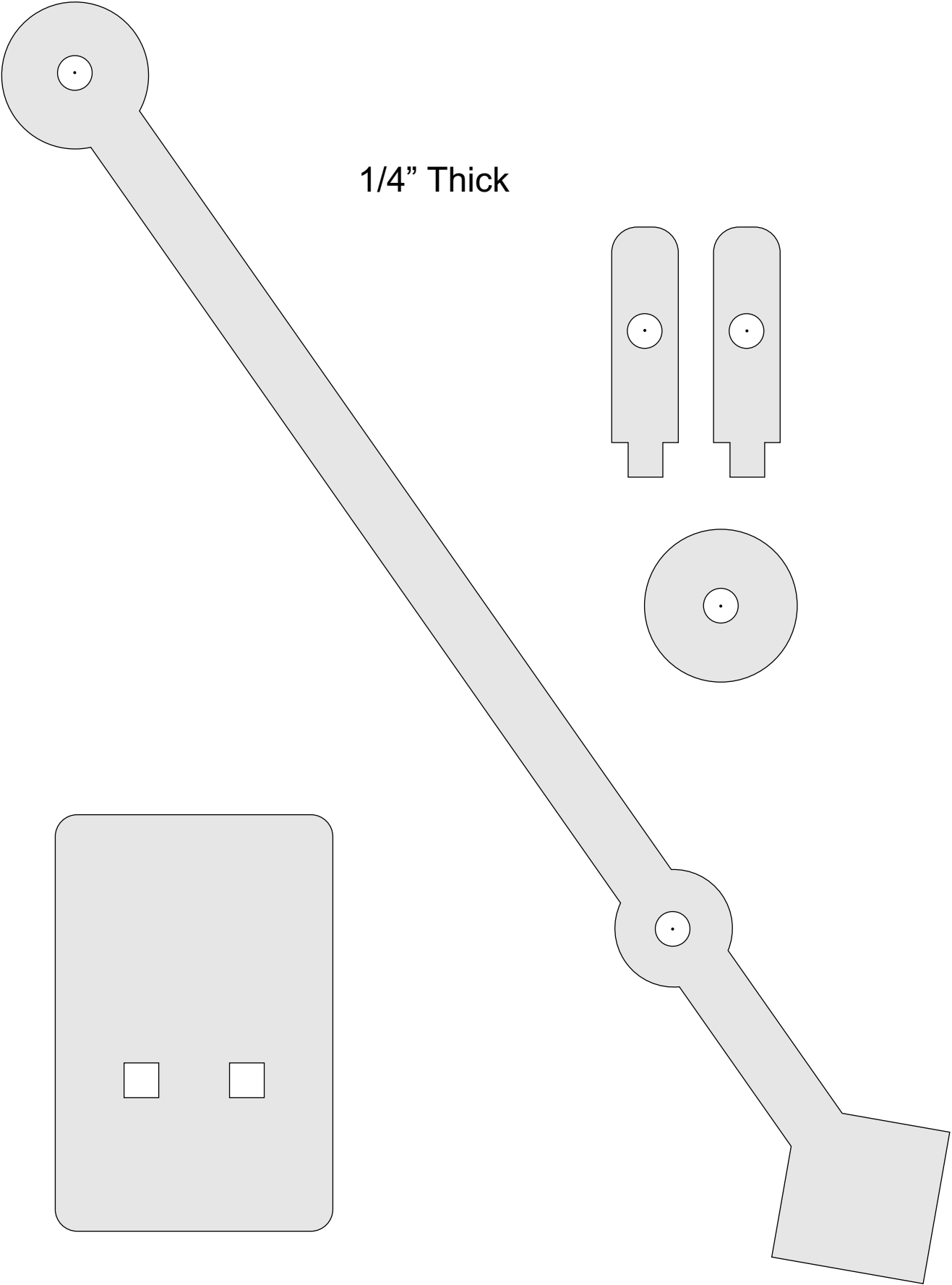
Metal washers

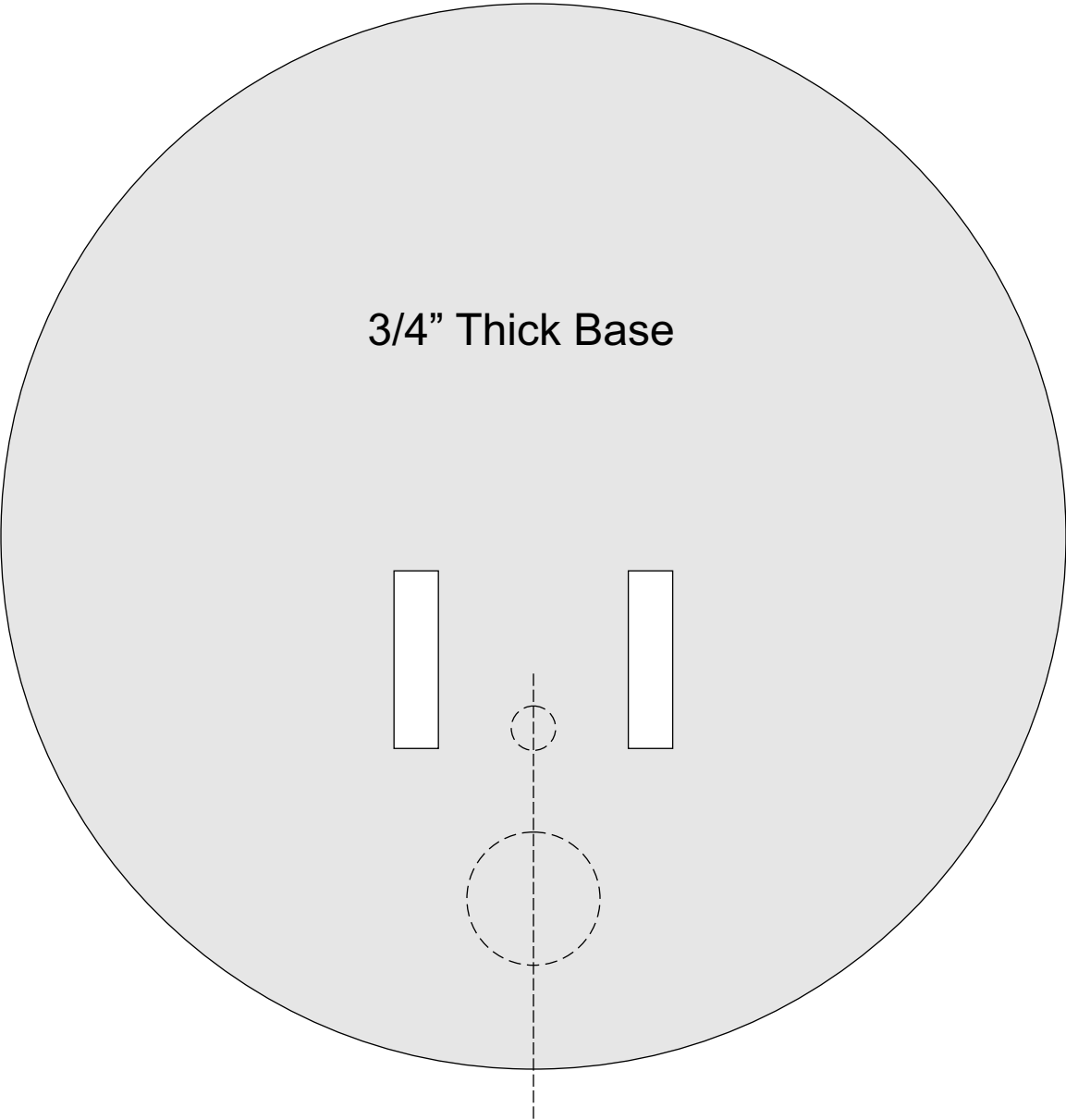




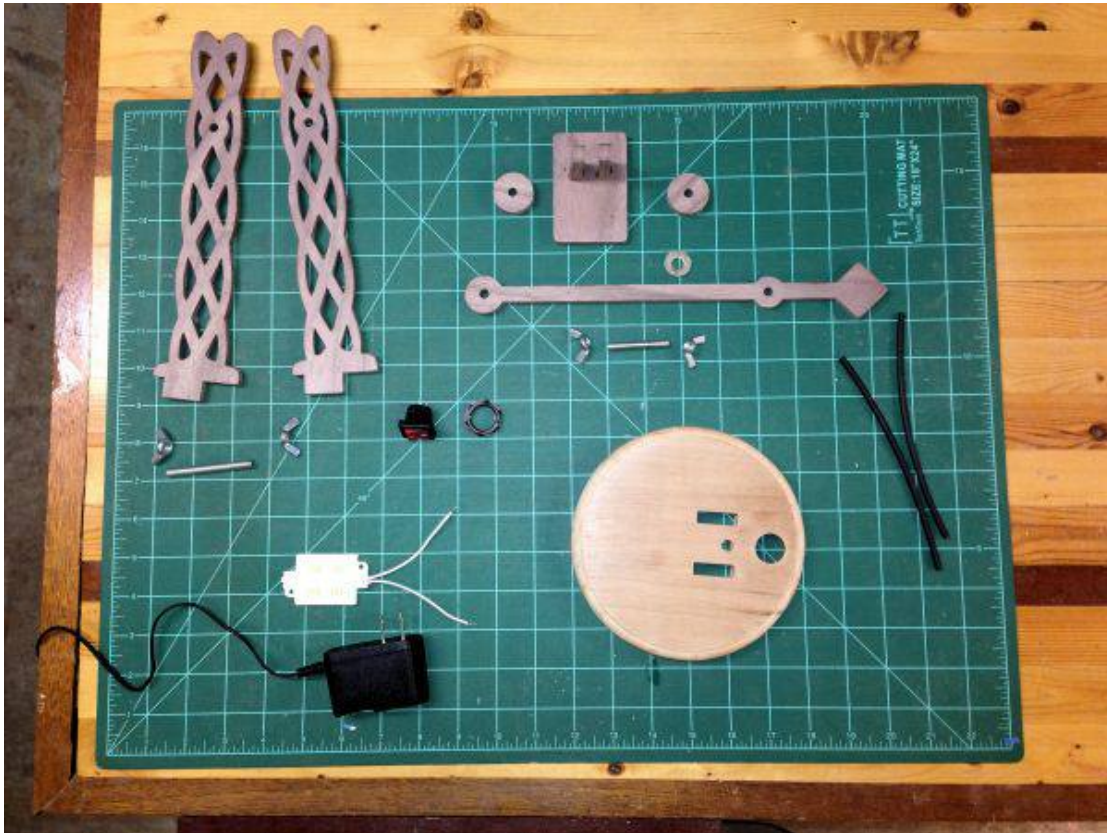
1/4" Thick



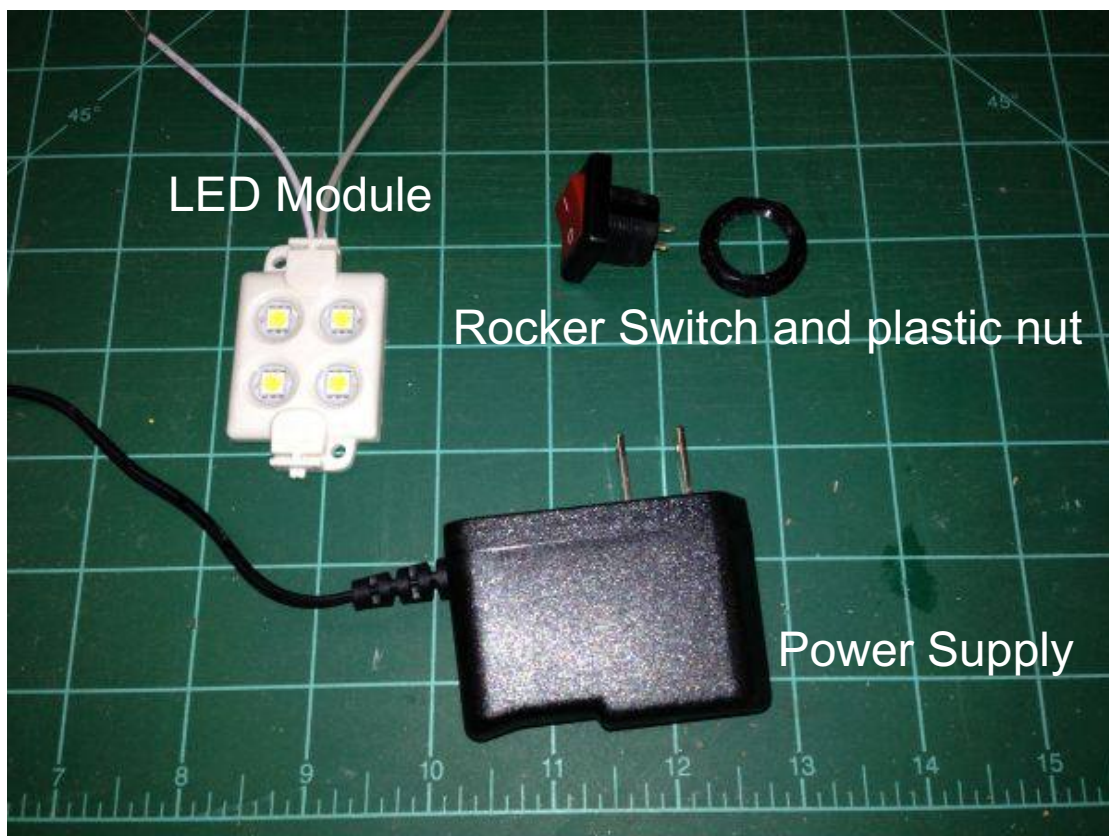


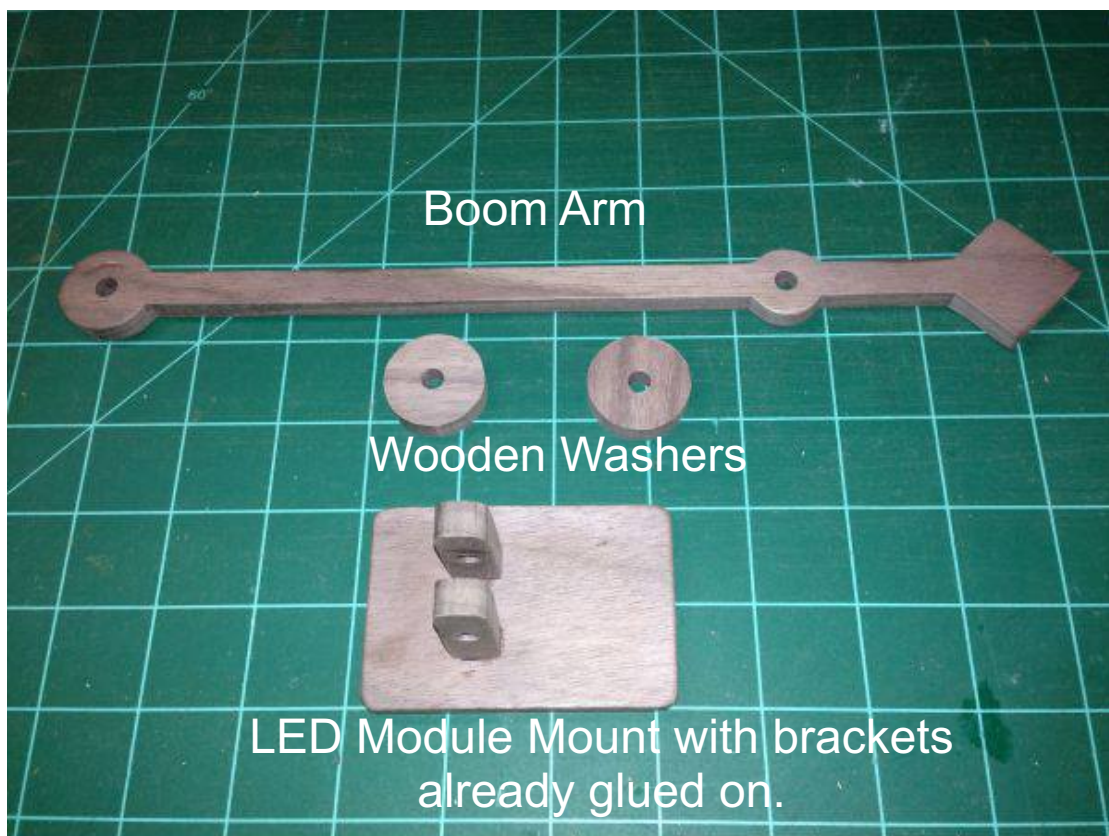


Cut the wooden parts.  
Layout all the parts.

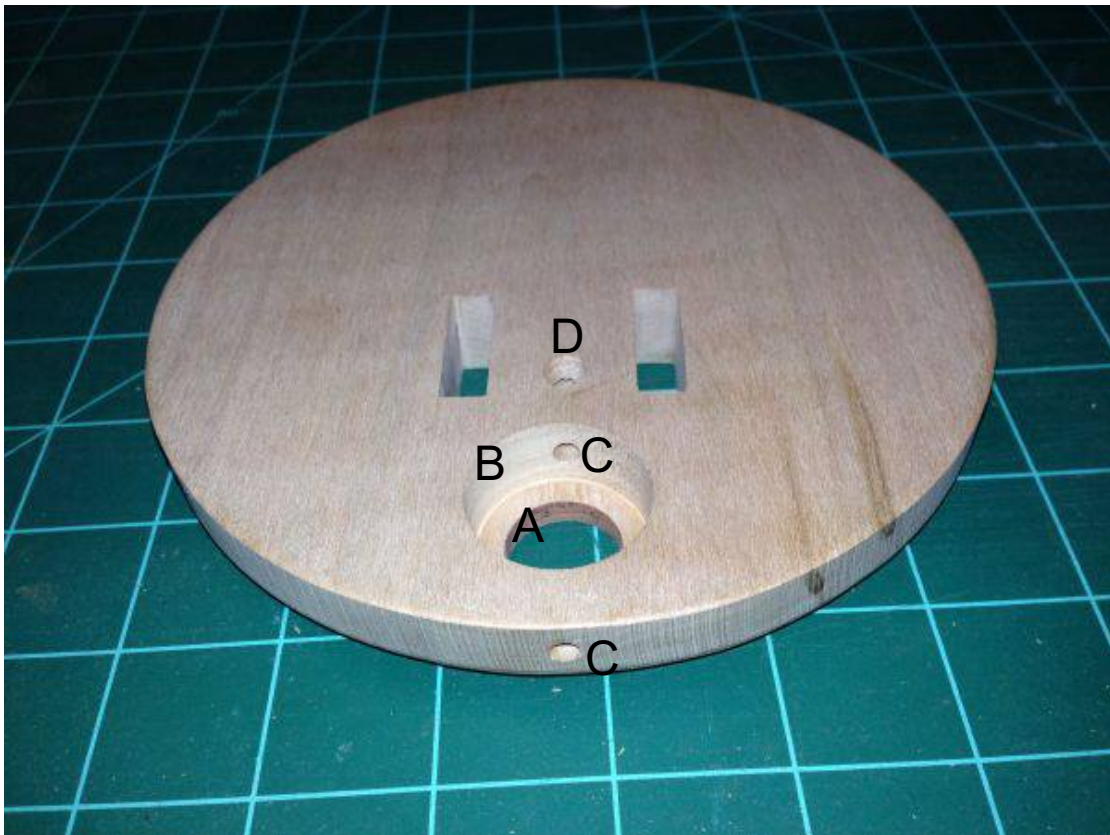


## Electrical parts.





## Bottom of Base



Notice that the mounting hole for the switch is counter sunk. The small hole A is  $\frac{3}{4}$ " diameter. The larger hole B is 1 and  $\frac{1}{4}$ " in diameter. There is a hole C drilled in the side to insert the wire. It goes all the way into hole D. D is  $\frac{1}{4}$ " in diameter and allows the wire to go up to the lamp.

Top view of BASE



## Lamp Arms



The threaded rod and wing nuts will allow the boom arm to be moved.

The washer is used to take up slack if needed.  
I'll show the washer in a later picture.



You can cut the threaded rod to length with a hack saw.

Glue the Arms into the base.



Notice the orientation of the arms. They should slightly lean toward the switch.

Let the glue dry.

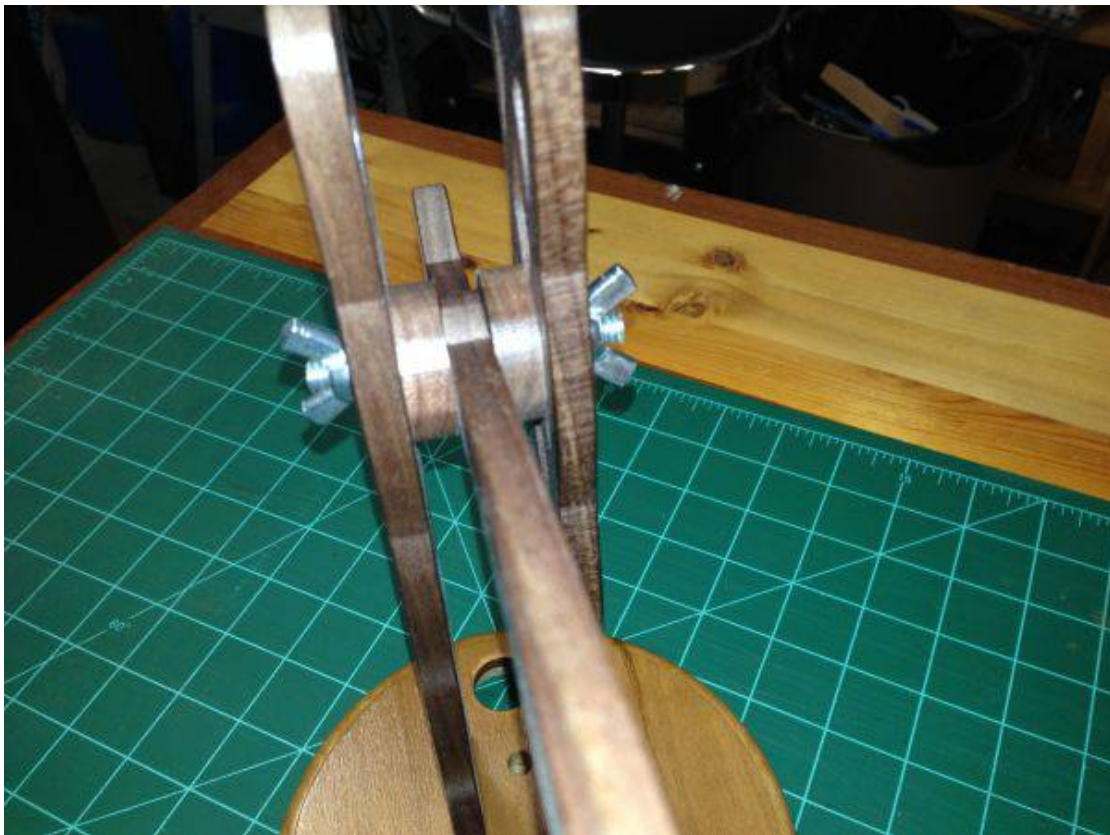


A photograph of a wooden workbench. On the bench, there is a dark, curved object hanging from the top left. In the center, a wooden block with a lattice-like structure is standing upright. To its right, a small wooden block is being worked on with a tool. A green triangular tool is also visible. In the foreground, a long wooden handle with a dark, curved end is lying on the bench. A green triangular tool is positioned near the handle. The background shows a wooden wall and a wooden bench.

Install a wing nut on to the longer threaded rod.  
Insert the rod through the Arm, wooden washer, boom arm,  
another wooden washer and the other upright arm.  
Then install the second wing nut and slightly tighten so the boom  
moves but stays in place.



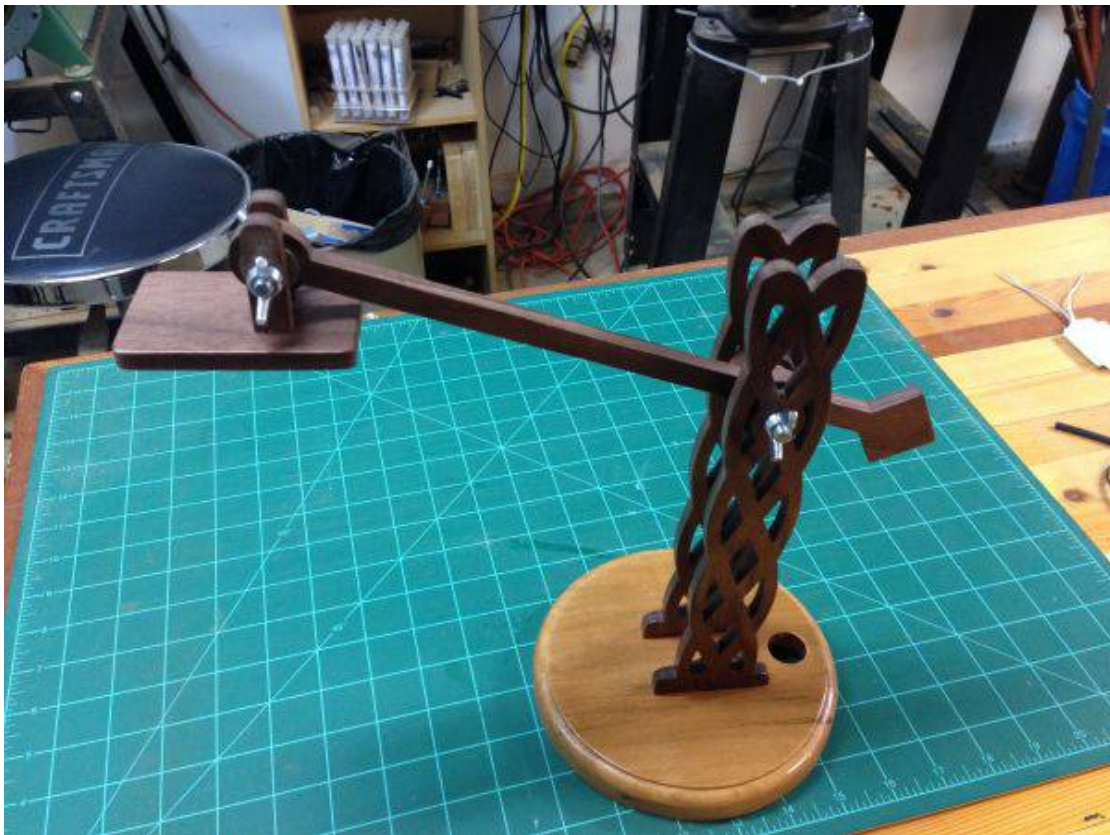
Boom arm installed with rod and wooden washers.



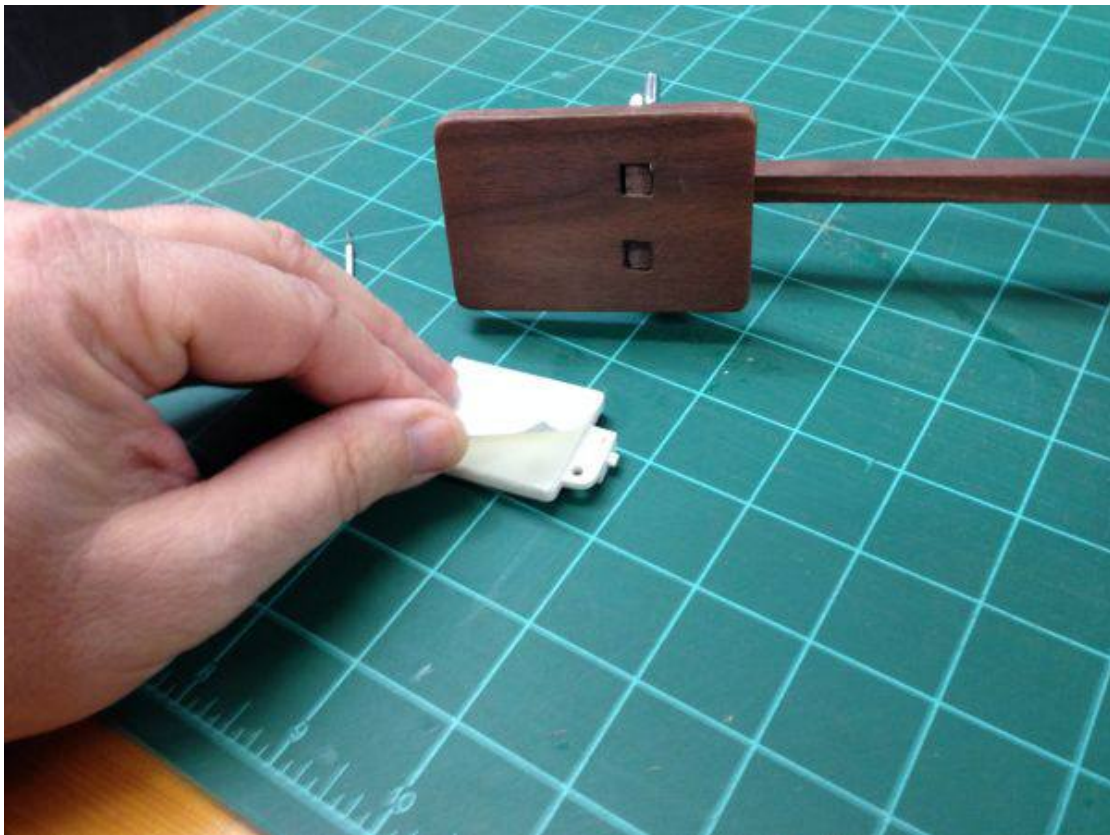
Install the short threaded rod through the LED module mount. Use a wooden washer and metal washers to take up the slack on each side if needed. Install a wing nut on each side and tighten until it is movable but not loose.



Here is a finished picture of the lamp construction without the electronics.



The LED module has a sticky tape back.  
Remove the peel off covering.



Apply the LED module to the bottom of the LED holder. You can screw it in place if you desire. I think the tape is enough to hld it.



This is the bottom of the base ready to be wired.



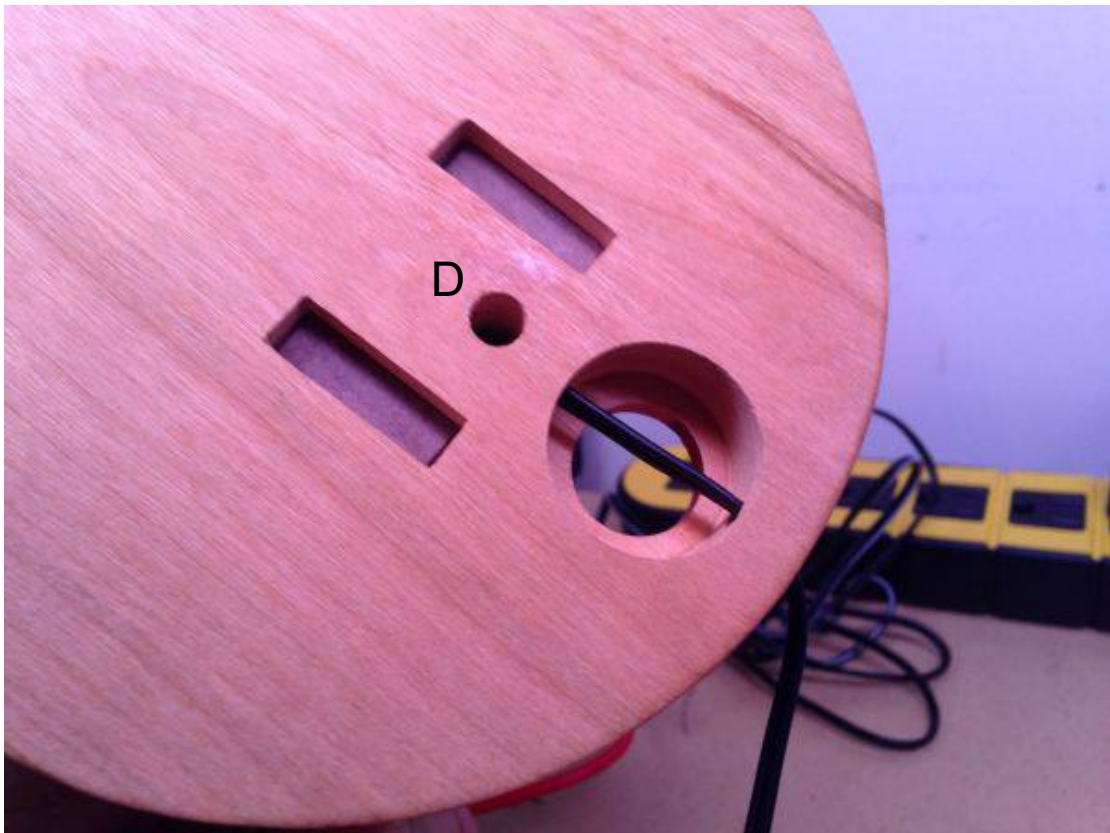
Insert the power supply wire into the hole  
on the side of the base.

**Important:** Install the Rocker switch lock nut on the power supply  
wire now or you won't be able to get it on Later.

Puch the wire through the first hole then install the plastic nut.



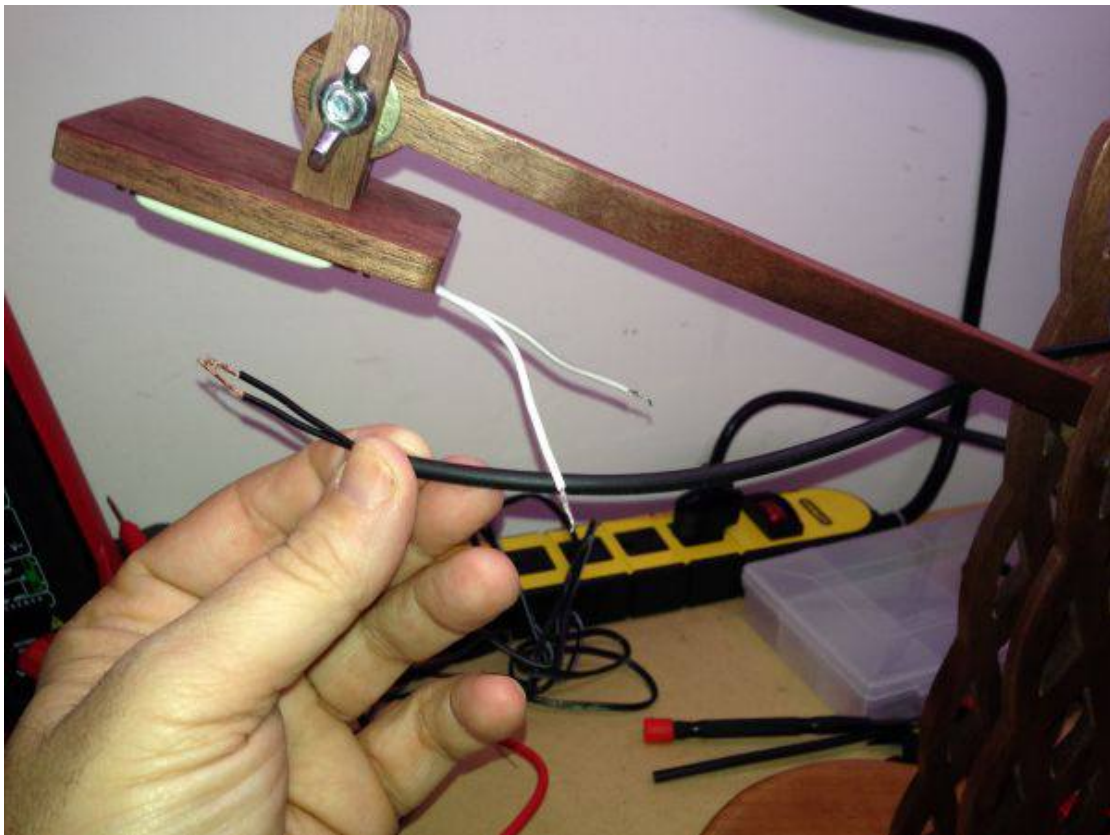
Run the wire across the switch mount hole until it reaches hole D



Push the wire up through hole D.



Run the wire up the lamp until you have enough slack to connect to the LED module.  
Install 1/4" shrink wrap tube around the power supply wires.



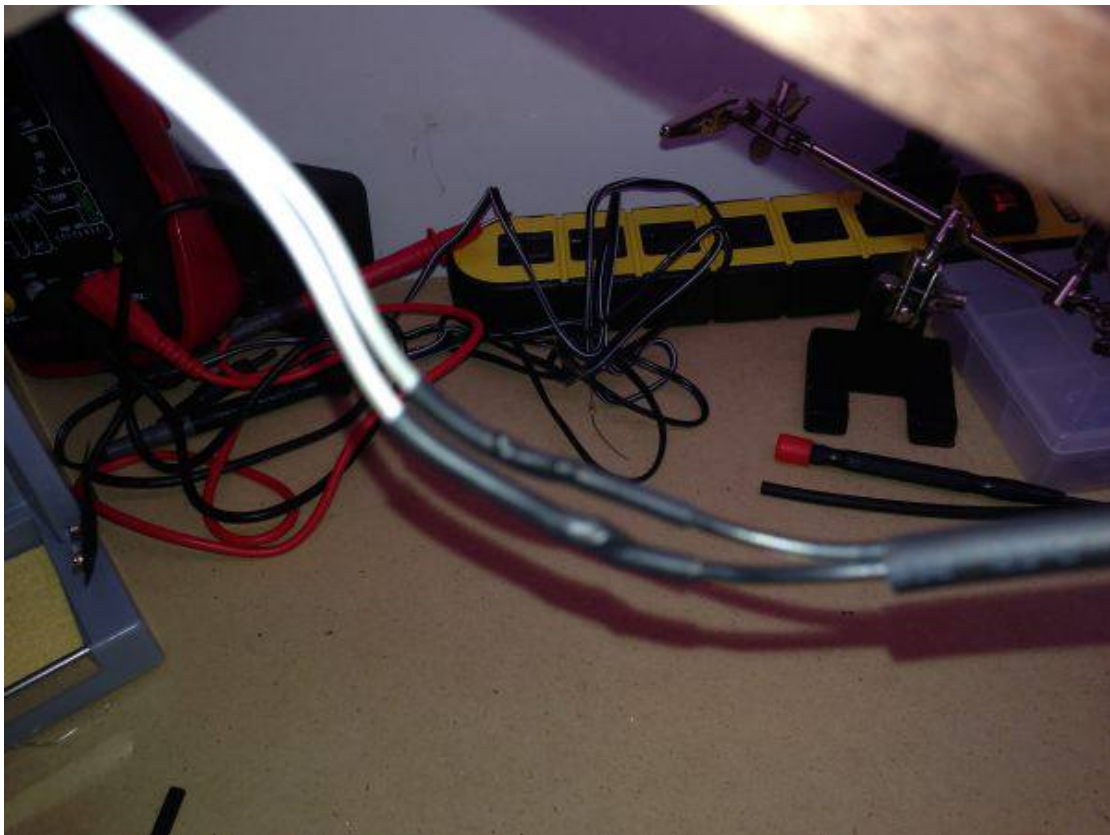
Install 1/8" shrink wrap tube around each individual LED module wire.

Twist and solder the wires.

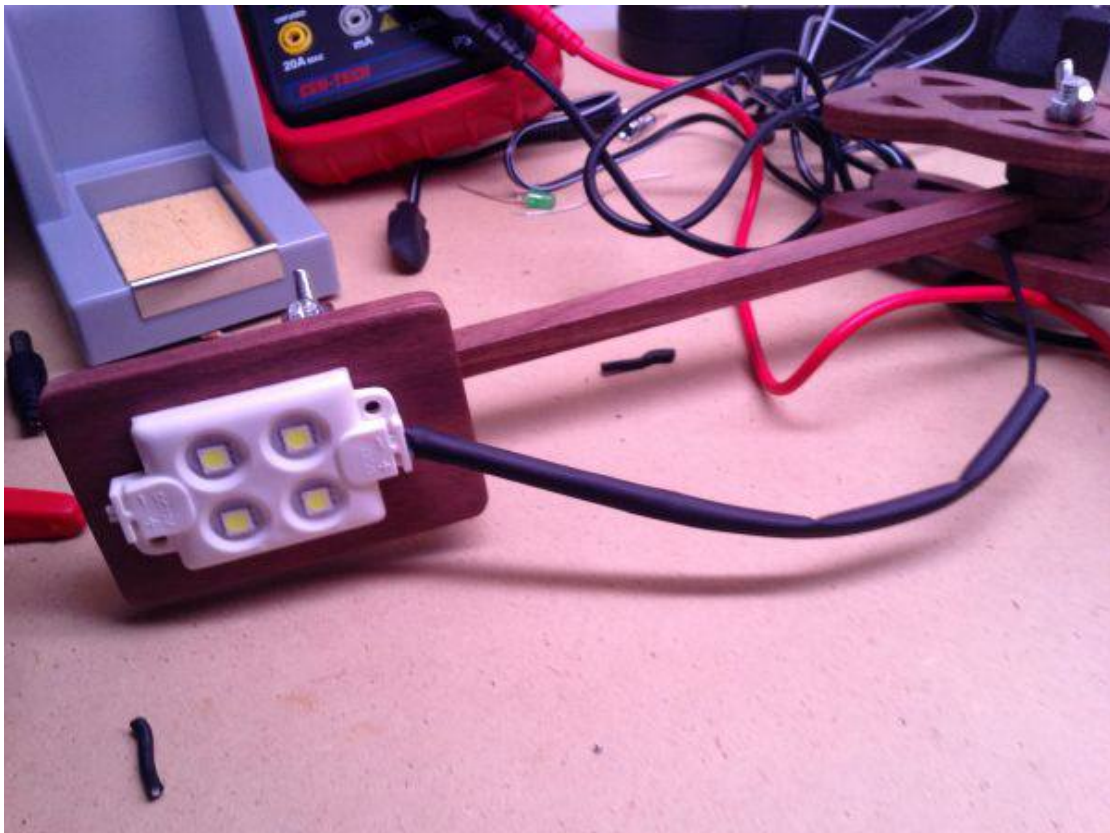
**IMPORTANT:** The wires have to be connected according to polarity. Double check the polarity before you solder and wrap.



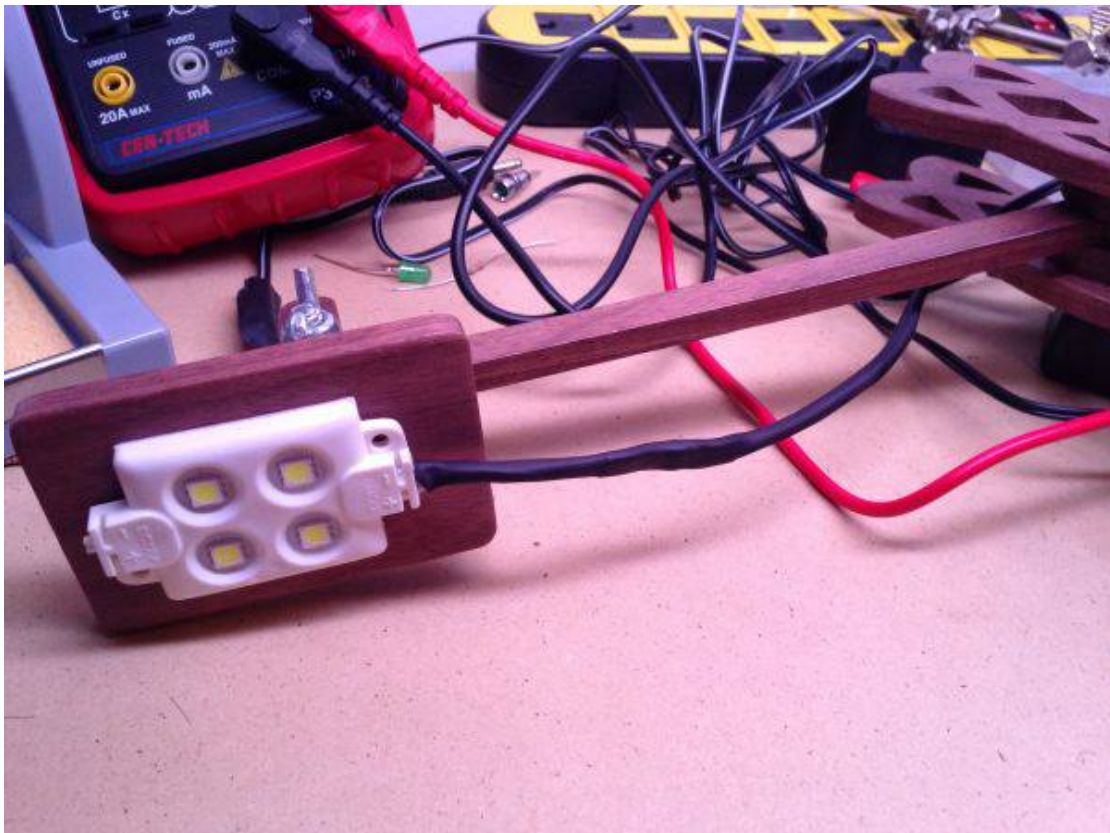
Pull the shrink wrap in to place and heat to shrink it tight.



Pull the larger Shrink wrap over the LED module wires.



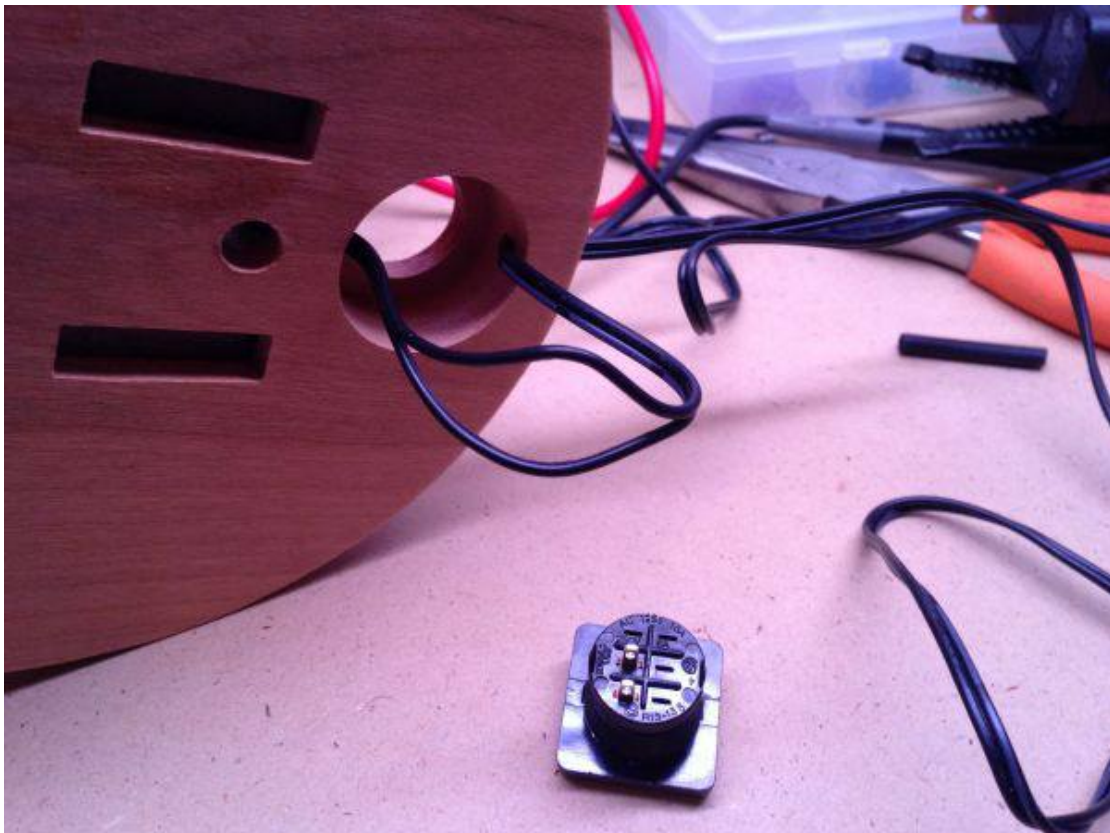
Heat the shrink wrap until it shrinks and holds the wires in place.



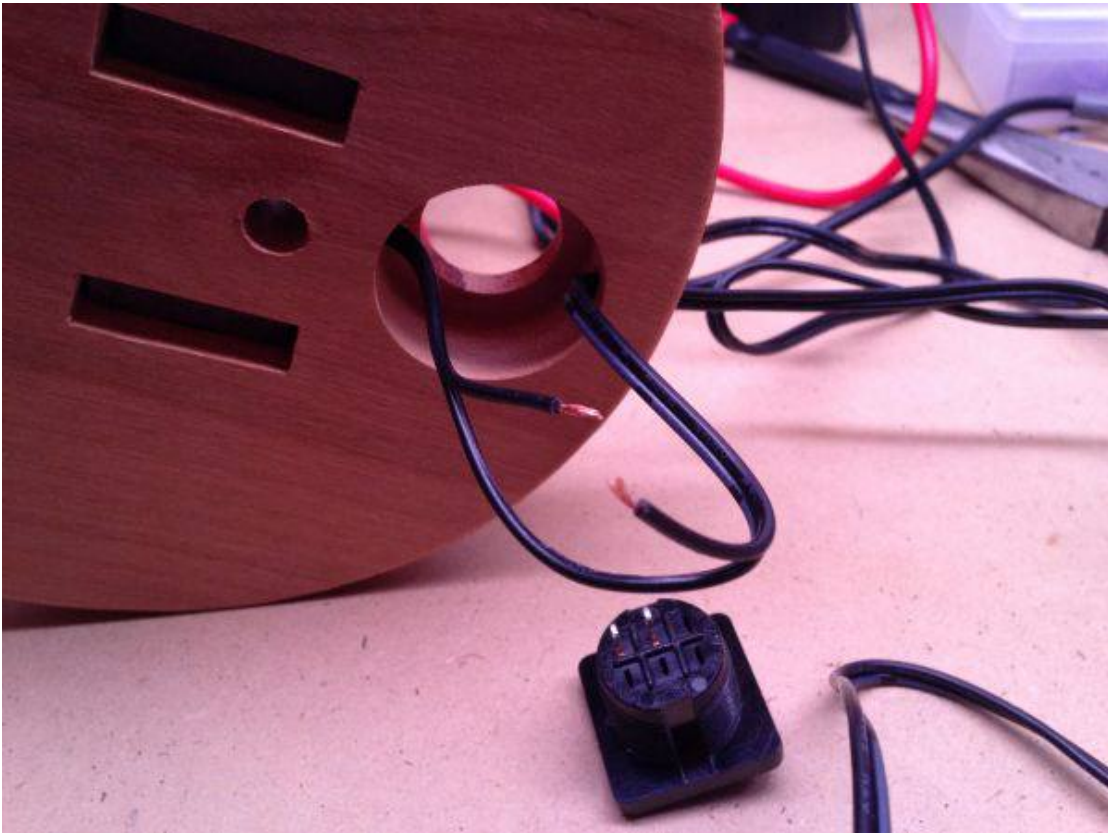
It's time to connect the switch.  
Pull out a small length of the power supply wire.



Separate the wire for about 2 inches.



Cut one of the wires and strip a small amount of the insulation.



Pull the wires through the top.  
Install a small length of shrink wrap on the cut wires.



Solder the wires to the terminals of the rocker switch.  
Pull the shrink wrap tube over the terminals and heat.



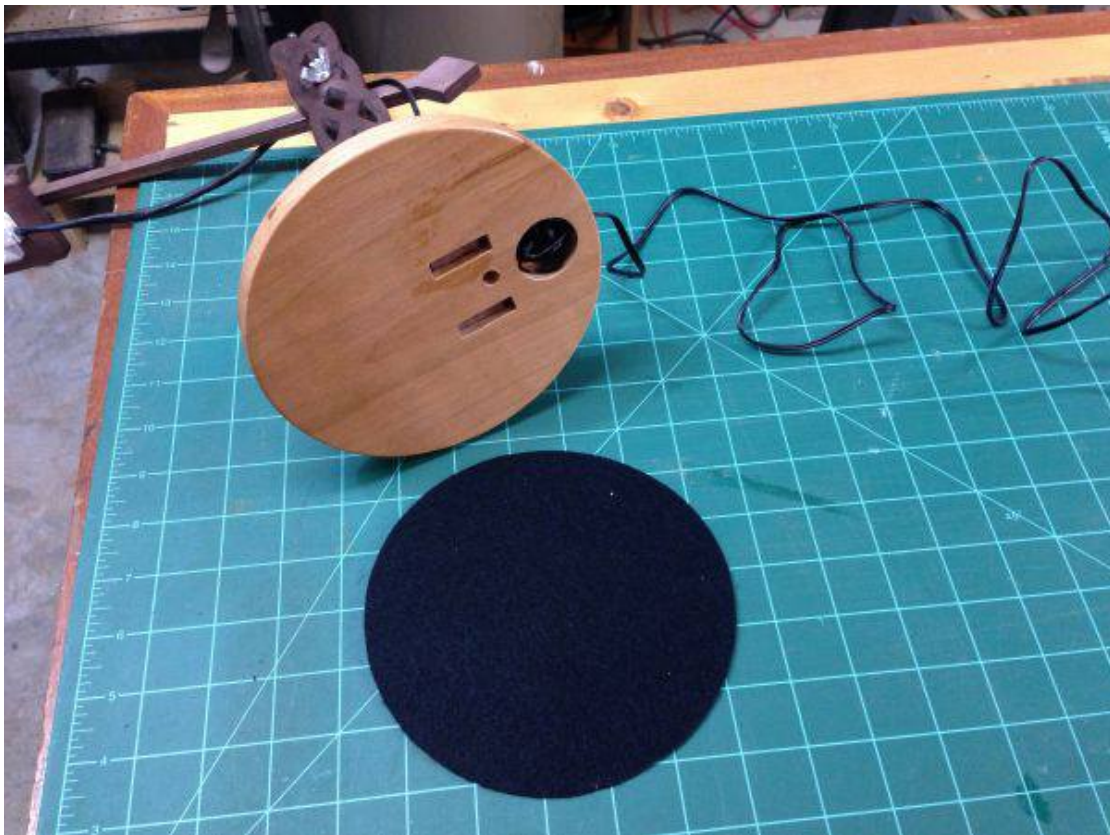
Install the rocker switch with the plastic nut until it's tight. Tuck the wires into the hole and make sure the terminals don't extend below the bottom. If they do bend them up into the hole.



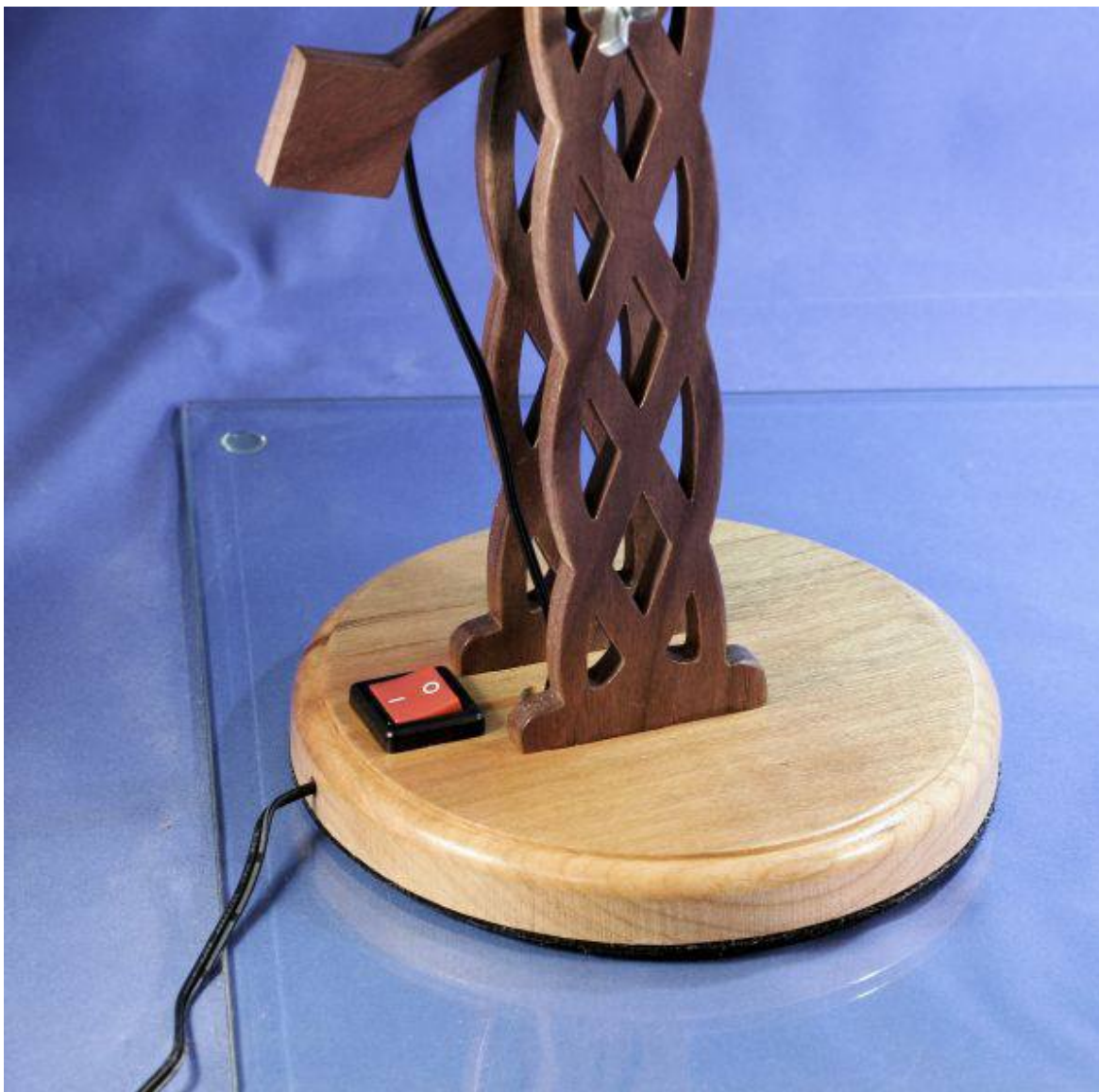
I covered the base of my lamp with craft felt.  
Sit the base on the felt and use a razor knife to  
cut around the base.



I used permanent spray adhesive to glue the felt to the bottom of the base.



Base with rocker switch installed.



Upper boom arm.

You can dress the wires to the boom arm with ty wraps if you like but I think it looks okay loose.

