

# Arrow Cresting Machine



**By: Ron Shealer**

The following gives you some instructions on how to make a low cost cresting machine which nearly everyone can make at home - provided you have a few basic hand tools such as a saw, file, and a drill. I put this information together for my students at school and my fellow traditional archers visiting the *Stickbow*.

The original power unit is a sewing machine motor complete with the foot peddle control. I bought this motor and peddle at a sewing machine repair shop for \$15. I told the shop owner I was building a project and asked if he had a motor and peddle control off of a used sewing machine. He had several to chose from.

After cresting a dozen arrows with the peddle control I decided to try a dimmer switch for greater control of the turning speed. A stop or control could be added to the peddle assembly but by chance I had a dimmer switch/rheostat which wasn't being used. The dimmer switch worked great, but be sure to turn it completely off or unplug the motor when not in use as the switch could heat up over time.



The main chassis of the cresting machine is a pressure treated 1" X 6" plank. I just happened to have some scrap left over from a deck project. There is nothing special about the wood, plywood can also be used. The overall length needs to be longer than the arrows you are working with as you will have to mount the motor on the board and you may want to mount a control switch on the base. A light could also be added to the machine if you really want to be fancy. If you need somewhere to store your freshly crested arrows you could add a piece of 2" x 4" with holes to stand your shafts on end while they dry, I plan to add this feature later on.

Under the main body I put two small strips of wood as feet. This allows the cords to be placed under the whole assembly and out of the way. I also mounted small rubber feet under the base. I drew a center line on the board and mounted my motor in line using two carriage bolts with wing nuts. (Carriage bolts and rubber feet \$3) The bracket over the top of the motor has some foam tape on the hidden side to help hold the motor in place and dissipate any vibration.

**Motor Mount**



I made guide rails that are approximately 3/4" square and nearly the length of the working base. If you do not have access to a table saw to make the rails, some square trim found at most lumber stores will work ( angle iron or aluminum will also work). These rails contain the sliding block that supports the arrow shaft. This sliding block can be moved from end to end to account for shafts that may not be true. The sliding block has a "v" cut into it to hold the shaft. I used a table saw to cut the v but a hand saw or file should do the same job. The "v" was then lined with felt. Felt "v" blocks can also be purchased from some traditional equipment suppliers. One fellow archer recommended using a small cloth bag filled with lead shot to hold the arrow down in the "v" block. Although I have yet to try this myself I think this would be an asset as you would then have two hands free to do the crestring, make adjustments, etc.



**Sliding V-Block**



**Coupler made from surgical tubing**

The arrow attaches to the motor by sliding a piece of surgical tubing over the motor shaft and the nock or taper of the arrow to be crested. This joint works well but it is sometimes challenging to get the tubing over the arrow nock. If you are going to use this type of coupler it may be best to crest your arrows prior to gluing on the nocks. The tubing will slide onto the taper easier than the nock. I was just looking for something quick and simple. Couplers are available from a few of the traditional equipment suppliers. A coupler could also be made on a metal lathe with a set screw at one end to lock to the motor shaft and an internal o-ring on the other end to grip the nock.