
AVL WARPING WHEEL INSTRUCTIONS

Assembly Process and Usage

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The AVL Warping Wheel is a new AVL product that will help you do your sectional warping in a fast and efficient way without winding any spools. It will allow you to warp directly from different size cones (the ones that have been sitting in your studio for a while now!) or from just about any other form your warp threads are in. The Wheel adjusts from a circumference of two to three yards, allowing you to put on warps of up to 20 yards.

With a built-in tensioning system, the AVL Warping Wheel will also save you from one time-consuming part of standard sectional warping: threading the tension box. You wind directly from the wheel onto the beam!

And maybe the best part about warping with the AVL Warping Wheel: it will give you the freedom of designing as you go, changing color sequences across the warp without complicated pre-calculations and additional spool winding.

Special Features

Adjustable Tension

With the built-in tensioning system, you will be able to adjust the tension of your threads going into a particular section on your sectional beam without threading the tension box.

Revolution Counter

You do not have to count your turns any more. The built-in counter will do it for you.

Pivoting Raddle

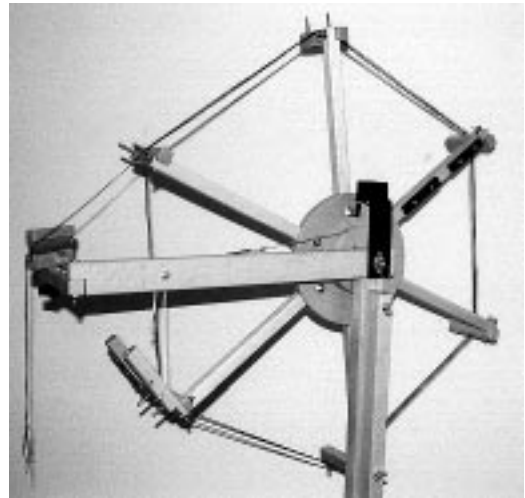
The front raddle will pivot making it easy to adjust the width of the section to fit exactly in the size of the section without rethreading the reed, starting from 5"; (if you just leave the reed straight without pivoting) down to 1"; (the minimum size section on your beam). This feature will give you an easy way to create flat layers in each section of your sectional beam.



AVL Warping Wheel

Adjustable Height

Our warping wheel is designed with an adjustable height to make it comfortable for all weavers: from people in wheelchairs to weavers over 6' tall.



Sturdy Base

The sturdy base allows you to do the winding as fast or as slow as you feel like without worrying about the wheel tipping over.



Assembly Instructions

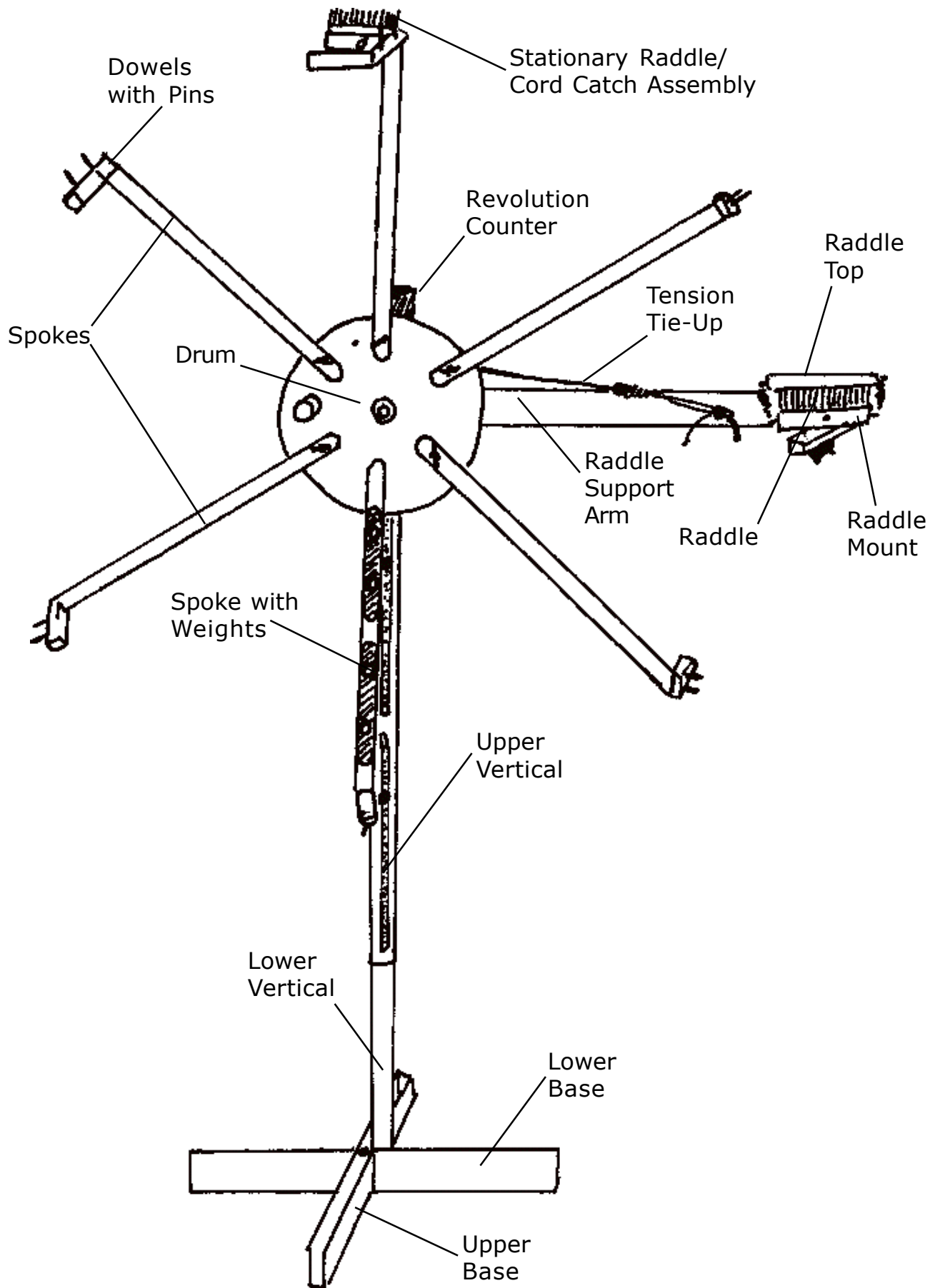
Identifying parts

- lower base
- upper base
- lower vertical
- upper vertical with tie-up mounting bolt
- raddle support with a screw eye
- raddle mount
- drum assembly
- six spokes (five regular plus one with weights)
- five short dowel blocks with pins
- stationary raddle/cord catch assembly
- raddle top assembly
- raddle holder-adjustable
- tension tie-up assembly
- two raddles and a security pin
- revolution counter assembly

Hardware Bag

- # 1 four rubber bumpers with four #10 x 3/4 PHSMS
- # 2 one 3/8 carr bolt x 3 1/2 with one washer, one lockwasher, one hex nut
- # 3 two 5/16 hex bolt x 3" with four washers, two lockwashers, and two hex nuts
- # 4 two 5/16 carr bolt x 3 1/4 with one washer and one wing nut
- # 5 six 1/4 carr bolt x 1 3/4 with one washer and one hex nut
- # 6 one 1/4 carr bolt x 2 1/2 with one washer and one hex nut
- # 7 two #10 PHSMS x 1"
- # 8 six 1/4 carr bolt x 2" with one washer and one wing nut

Assembly Instructions



Assembly Process

Please watch the video before you begin.

1.) Tools you will need are

- electric screwdriver with phillips head
- hammer
- 7/16 wrench or socket wrench
- 1/2 wrench or socket wrench
- 9/16 wrench or socket wrench
- old candle to wax the bolt threads

2.) Base

- a.) Mount the rubber feet on the lower and upper bases using hardware #1. (Four rubber bumpers with four #10 x 3/4 PHSMS.)

Tip: Wax the bolt threads and use an electric screw driver to make assembly go smoothly.

- b.) Bolt the upper and lower bases together using hardware #2. (One 3/8 carr bolt x 3 1/2 with one washer, one lock washer, one hex nut.)

3.) Verticals

- a.) Bolt the lower vertical to the base using hardware #3. (Two 5/16 hex bolt x 3" with four washers, two lock washers, and two hex nuts.)

- b.) Bolt the upper vertical to the lower vertical using hardware #4. (Two 5/16 carr bolt x 3 1/4 with one washer and one wing nut.)

Tip: Put the bolt through the holes so that the wing nuts are to the back of the wheel.

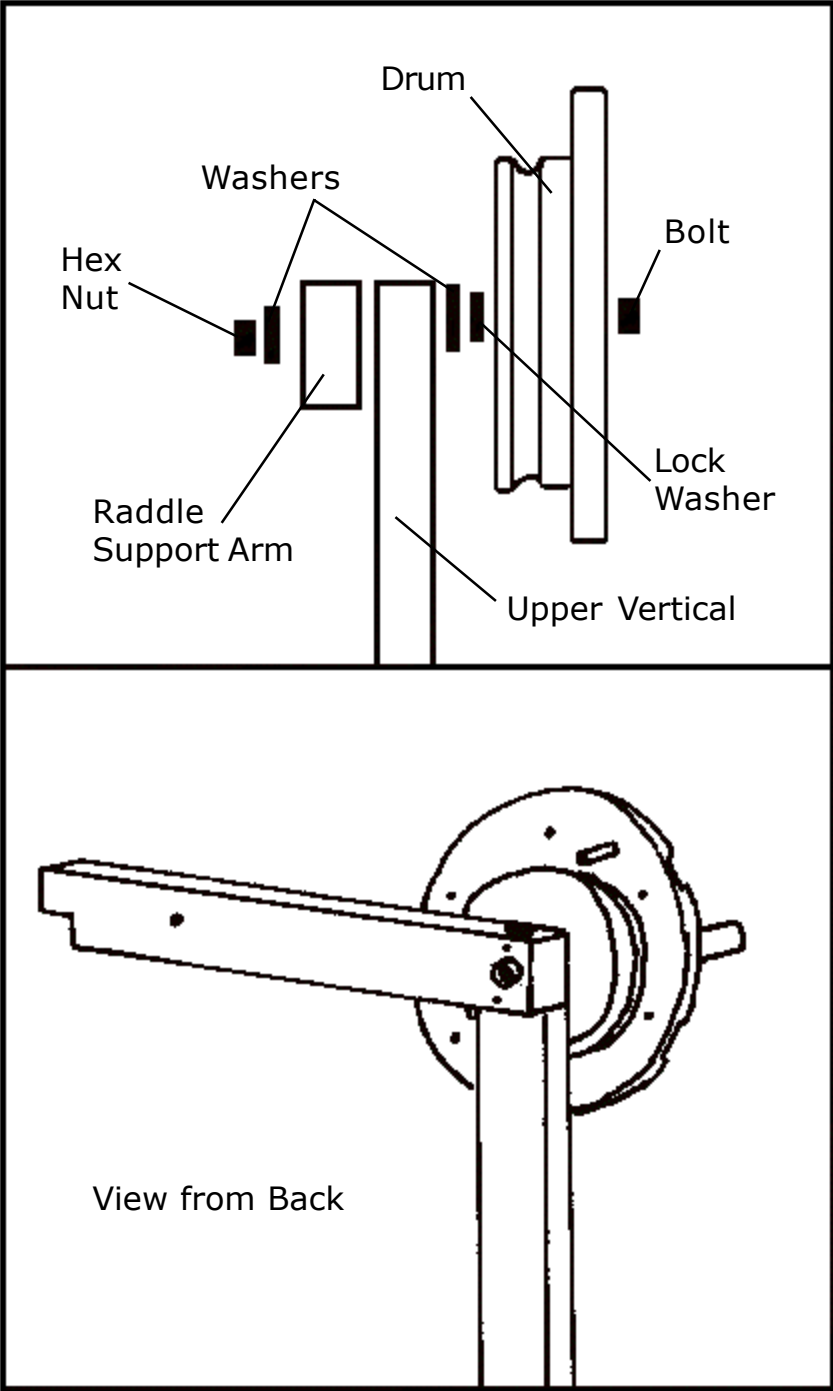
4.) Drum Assembly

- a.) Remove the hex nut and one (1) washer from your drum assembly.

- b.) Attach the drum with the upper vertical, placing the small side of the drum towards the flat side of the upper vertical.

- c.) Before tightening the bolt, place the raddle support on the opposite side of the upper vertical.

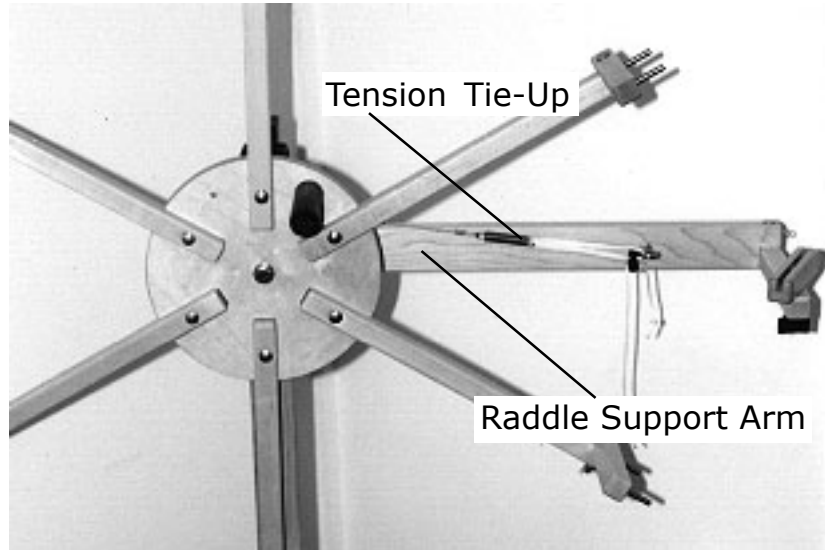
- d.) Replace one (1) washer and one (1) hex nut, then tighten it from the back.



Assembly Process

5.) Tension Tie-Up Assembly

- a.) The tension tie-up assembly is already secured to the raddle support.
- b.) Next ... from the **back** of the warping wheel, wind the cord clockwise around the groove in the drum two full times.
- c.) Take the looped end and slide it over the mounted bolt on the upper vertical.



6.) Spokes

- a.) Use hardware #5. (Six 1/4 carr bolt x 1 3/4 with one washer and one hex nut.)

Tip: Make sure the nuts are secured on the front of the wheel.
- b.) Take one regular spoke and mount it in the twelve o'clock position on the drum so that the revolution pin is in the nine o'clock position (if you are facing the back side of the warping wheel).
- c.) Then take the spoke with the weight on it and mount it in the six o'clock location on the drum, with the weights facing toward the stand.
- d.) Mount the remaining four spokes on the drum assembly.

7.) Raddle

- a.) Mount the raddle mount to the raddle support using hardware #6. (One 1/4 carr bolt x 2 1/2 with one washer and one hex nut.)
- b.) Secure the adjustable raddle support to the raddle mount with the black plastic knob.

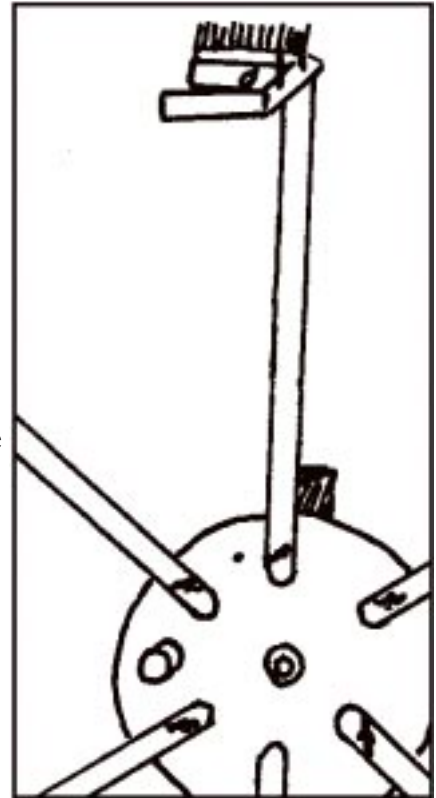
8.) Revolution Counter

- a.) Use hardware #7. (Two #10 PHSMS x 1".)
- b.) Mount the revolution counter assembly on the upper vertical with the counter facing the front of the wheel.

Note: Outer position on the spokes equals a three yard revolution. Inner position on the spokes equals a two yard revolution.

9.) Cord Catch Assembly and Short Dowel Blocks

- a.) Use hardware #8. (Six 1/4 carr bolt x 2" with one washer and one wing nut.)
- b.) Standing in front, locate the spoke that has the revolution pin to its left. Attach the cord catch assembly to this spoke.
- c.) Mount the five small dowel blocks to the remaining five spokes.



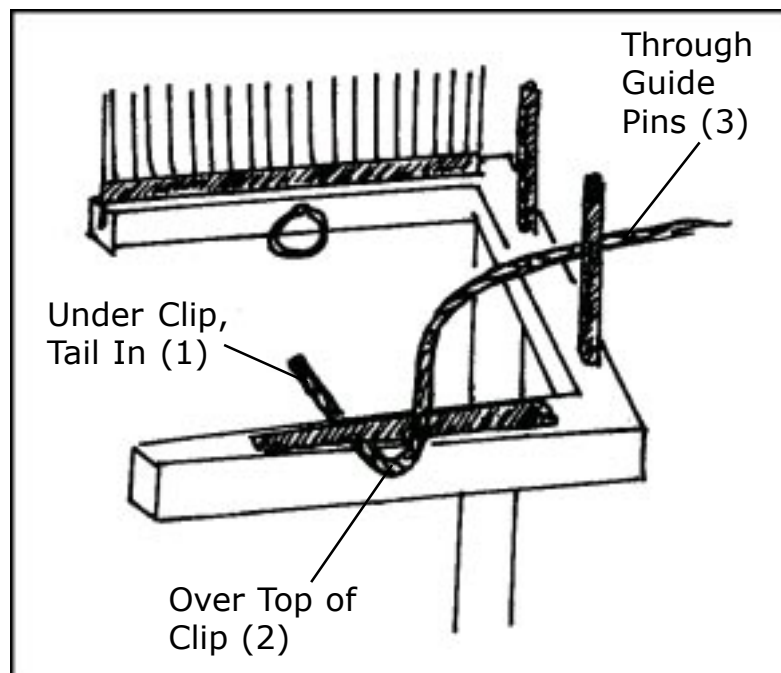
Congratulations, you're finished with assembly ... happy warping!

Use of Warping Wheel

To begin ...

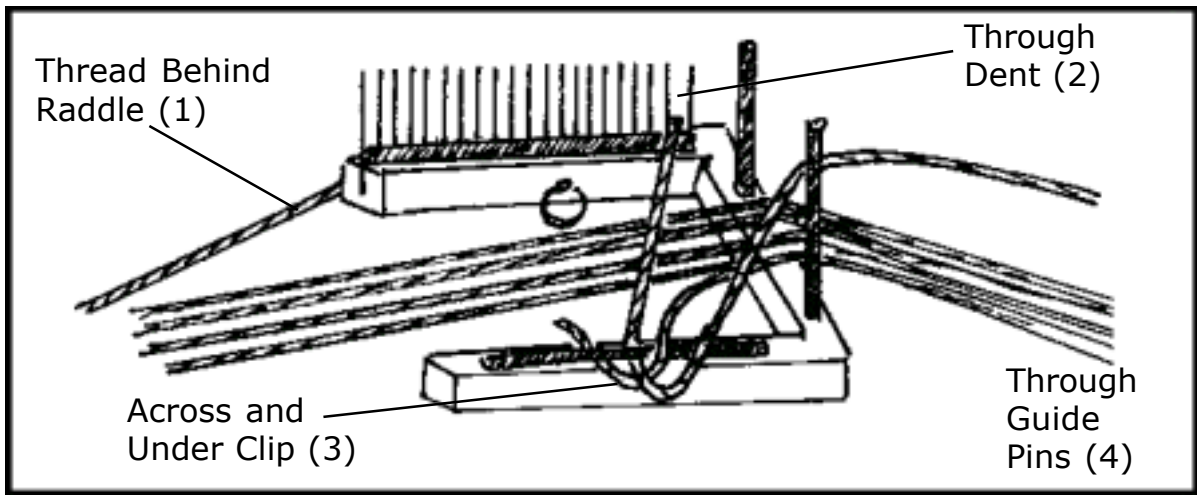
- 1.) Position your cones (or other warp threads) on a cone caddie (or rack) on the floor.
- 2.) Determine the length you want your warp. Remember that the outer position on the spokes equals a three yard revolution and the inner position equals a two yard revolution.

Example: If you wanted a fifteen (15) yard warp, you would set the blocks to the outer (three (3) yard) position. Three (3) yard revolution times (x) five (5) revolutions equals a fifteen (15) yard warp.
- 3.) Open the top of the mini raddle by disconnecting the mini springs on both sides. Hang the top on the hook provided at the end of the raddle support arm.
- 4.) Reset the revolution counter to zero.
- 5.) Securing the thread(s).
 - a.) Slide the thread(s) under the metal catch clip, tails facing in.
 - b.) Bring the thread(s) back over the top of the catch clip.
 - c.) Then through the guide pins.



Winding on ...

- 6.) Grab the handle with your left hand and hold the thread(s) with your right.
- 7.) Progressing from #6, begin to turn the wheel counter-clockwise. Wind on one length of your warp. (From the example above, that would be five (5) revolutions to equal a fifteen (15) yard length.)
- 8.) After you have wound on one length ...
 - a.) Bring the thread(s) from behind the raddle.
 - b.) Bring the thread(s) through the furthest dent on the right (you will be working your way left).
 - c.) Then across and under the clip.
 - d.) And back through the guide pins for your next length. TIP: so that the threads unwind easily later, each length should progress from back to front.



- 9.) When you are done winding on the section, secure the thread(s) under the catch clip.
- 10.) Tying off ...
 - a.) Cut all the threads in the section in-between the raddle and the cord catch, as close to the cord catch bar as possible.
 - b.) Slip the threads through the crossing threads and tie them into a knot. This is important so that the threads do not slip back through the raddle.

Use of Warping Wheel

*From Warping
Wheel to Sectional
Beam ...*

- 11.) Pull the security pin that holds the mini raddle in place out. Carry the entire raddle with the threads to the front pivoting mount. Secure the raddle in this new position with the same pin.
- 12.) Pivot the raddle to adjust the width of the section to fit exactly in-between the pegs on your sectional beam.
- 13.) Take the extension cord from your beam. Create larks-head loop at its end and loop it around the knotted end of your warp section.
- 14.) Adjust the tension of the wheel by squeezing on the black knob to loosen or pull on the cords to tighten. Once you set the tension, leave it that way for all the warp sections so you will have even tension throughout.
- 15.) Tear a piece of masking tape and set it aside on the raddle support arm.
- 16.) Wind your warp onto the sectional beam.
- 17.) Before the last part of the threads pass from the cord catch through the raddle, tape the threads in their sequence using the masking tape. This will help you keep the threads in order when you thread the harness.

Repeat this process for every section of your sectional beam.