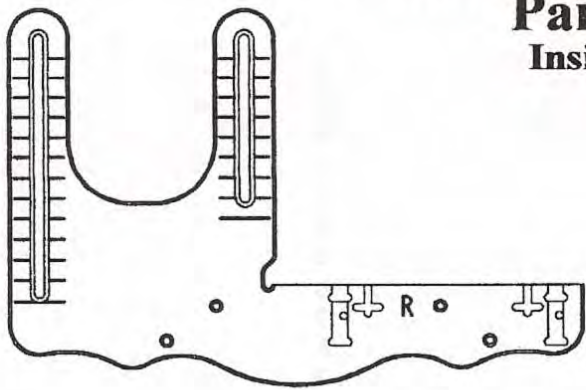


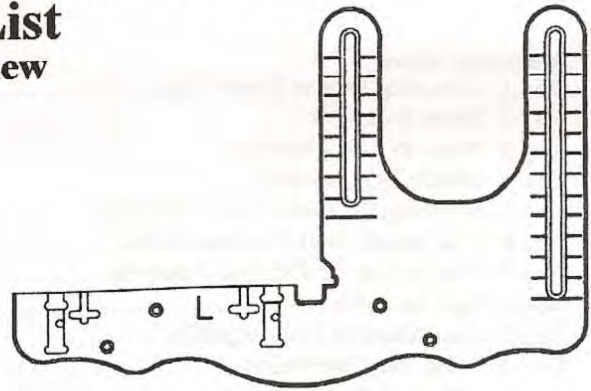
Grace Machine Quilter

Parts List

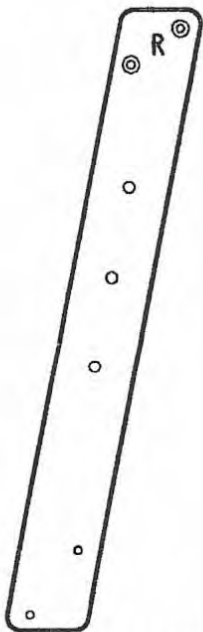
Inside View



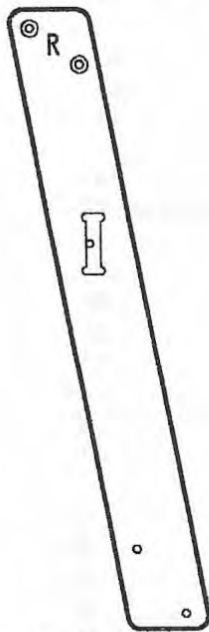
1-Right Frame End



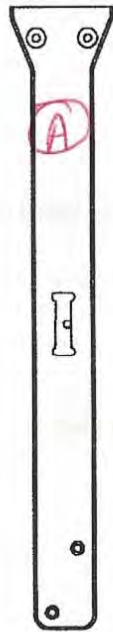
1-Left Frame End



1-Right Back Leg



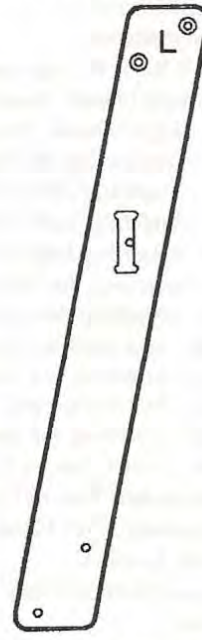
1-Right Front Leg



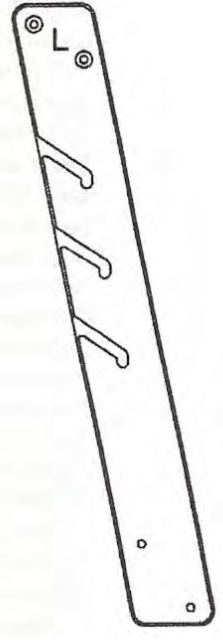
1-Middle Leg



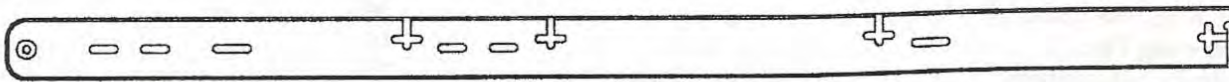
1-Opposing Middle Leg



1-Left Front Leg



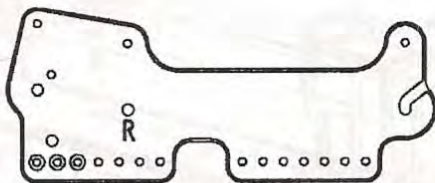
1-Left Back Leg



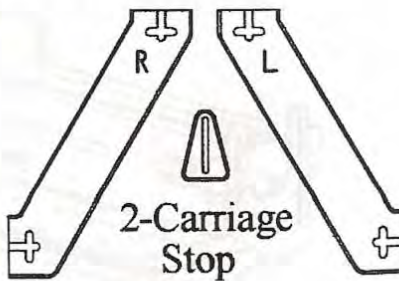
4-Table Brace



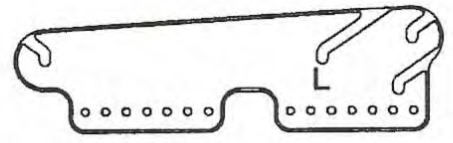
1-Middle Leg Brace



1-Right Pole Mount End



2-Carriage Stop

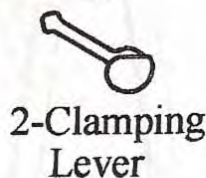


1-Left Pole Mount End



2-Clamping Bracket

1-Right Angled Leg Brace



2-Clamping Lever

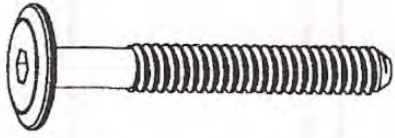
1-Left Angled Leg Brace



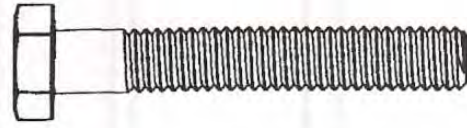
2-Base

Grace Machine Quilter Hardware

****Drawings display hardware in actual size****



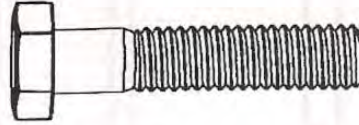
26-1/4" X 45mm Connector Bolt



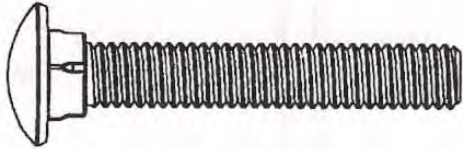
4-5/16" X 2" Hex Bolt



8-1/4" X 35mm Connector Bolt



4-5/16" X 1 1/2" Hex Bolt



4-5/16" X 2" Carriage Bolt



3-1/4" X 1 1/2" Truss Bolt



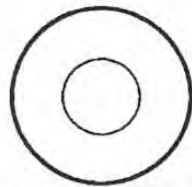
2-1/4" X 1 1/2" Carriage Bolt



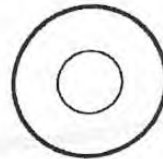
1/4mm Alan
Wrench



1 1/2" Fender
Washer



8-5/16" Flat
Washer



6-1/4" Flat
Washer



4-Roller
Bushings



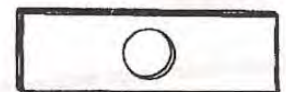
4-5/16"
Wing Nut



2-1/4"
Wing Nut

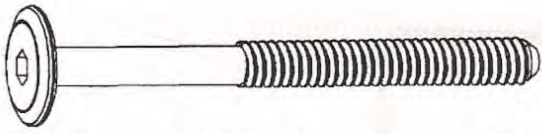


4-5/16"
Jamb Nut



26-Rectangle
Nut Threaded

Hardware for Carriage Assembly



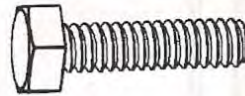
1-1/4" X 70mm Connector Bolt



2-1/4" X 3" Carriage Bolt



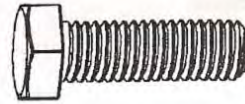
1-1/4" X 60mm Connector Bolt



8-1/4" X 1" Hex Bolt



5-1/4" X 50mm Connector Bolt



1-8mm X 25mm Bolt



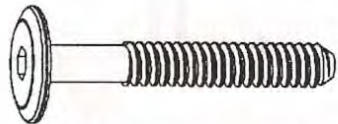
5-1/4" X 45mm Connector Bolt



3-1/4" Wing Nut



4-1/4" Square Nut



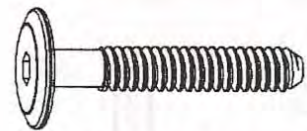
2-1/4" X 40mm Connector Bolt



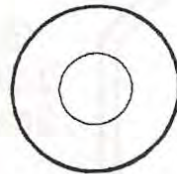
24-1/4" Nylock Nut



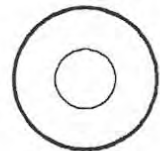
2-1/4" Jamb Nut



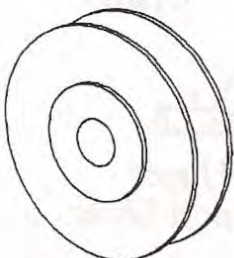
6-1/4" X 35mm Connector Bolt



6-5/16" Flat Washer



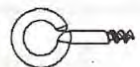
37-1/4" Flat Washer



8-Wheels



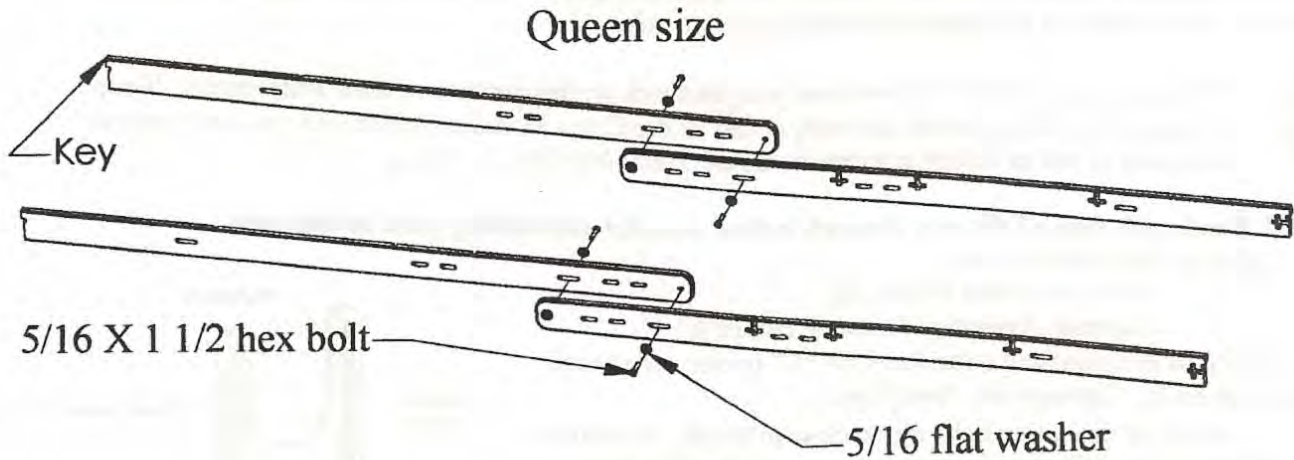
1-1/4" X 1 1/4"
Thumb Screw



2-Eyelet Screw

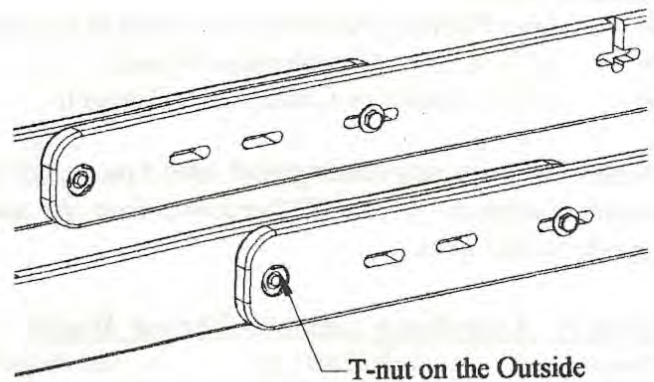
Step 2: Brace Assembly

Parts Needed: 4 – Braces
4 – 5/16" x 1 1/2" Hex Bolt
4 – 5/16" Flat Washers

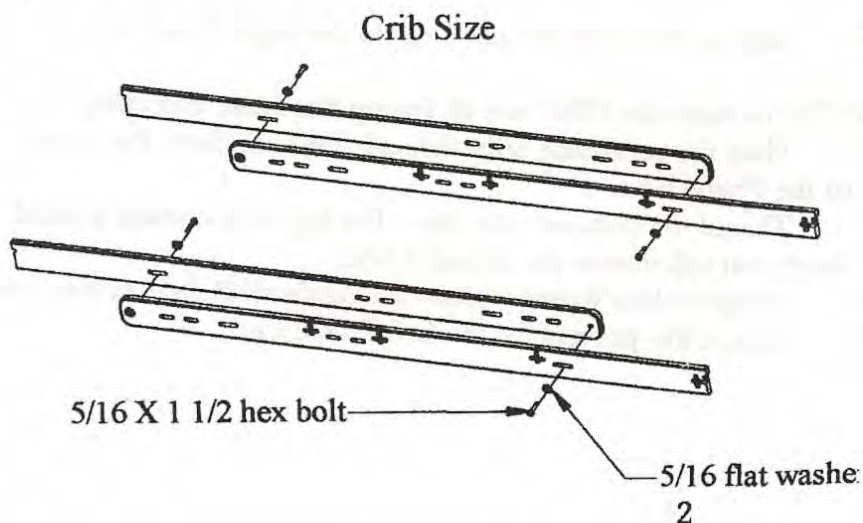


- The manner in which you assemble the braces determines what size frame you will have. (Queen size pictured above, Crib below).
- To join, place the braces together overlapping the curved ends as pictured. The opposite end of the brace has a key that should always face up (see picture above).

NOTE! There is a metal T-nut already inserted in the end of each brace. As you pair the braces together, be sure the inserted T-Nuts are visible, facing toward the outside (away from the other brace—see right)! Failure to do so may force the T-Nuts to pull out of the brace, causing the braces to come apart.



- Put a washer onto the bolt. Put the bolt with washer through *the slot* of one brace and into the hole of the second brace. The bolt will come out through the T-Nut on the opposite end. Repeat this process for all four bolts.

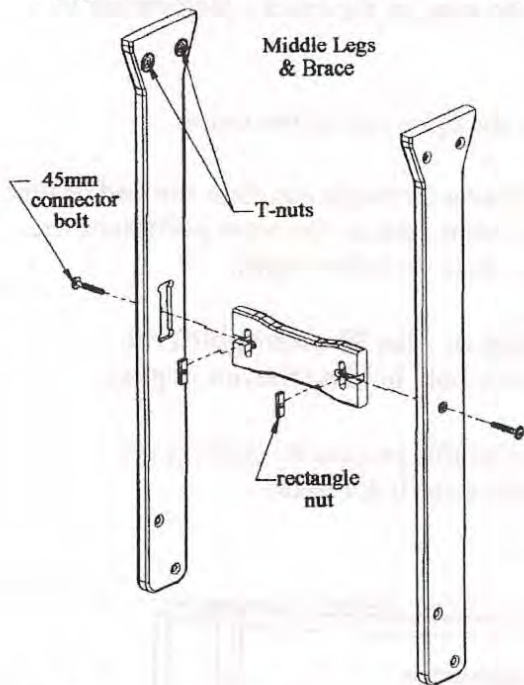


- **NOTE!** Do not completely tighten the bolts at this time—**FINGER TIGHTEN ONLY!** You will completely tighten them after installing the rails and adjusting your frame (Step 11).

Step 4: Middle Leg Assembly

Parts Needed: 1 – Middle Leg
1 – Opposing Middle Leg
1 – Middle Leg Brace
2 – 1/4" x 45mm Connector Bolts
2 – Rectangle Nuts
1 – Alan Wrench

- Connect the Center Legs by placing the connector bolts through each leg hole as pictured, and into the Center Brace. (There is no specific front or back Leg, but the two legs are slightly different based on the position of the hole in the "I" slot).



NOTE: If the Center Brace is placed backward between the two legs, the holes will not line up properly.

- Thread a rectangle nut onto the ends of the bolts.
- Holding the nuts in the cross portion of the slot, tighten the connector bolts using the Alan Wrench.

Step 5: Attaching the Middle Leg Assembly

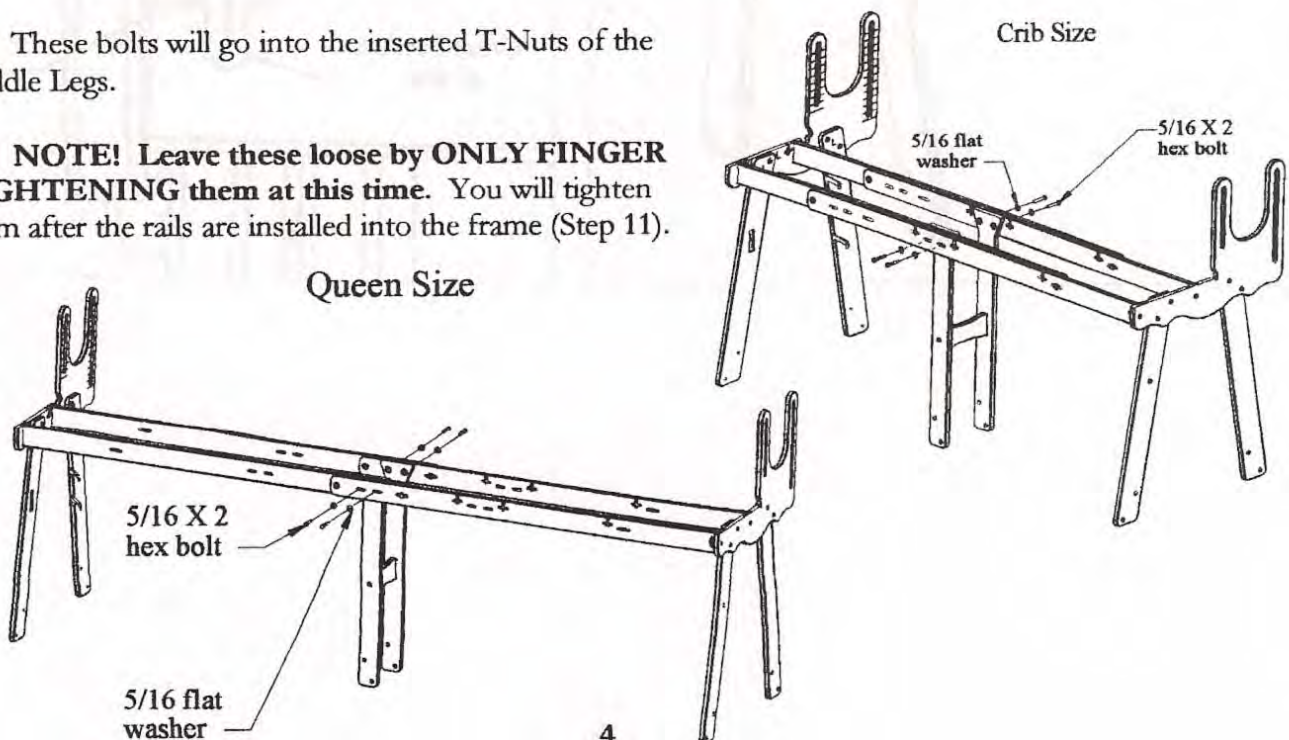
Parts Needed: 1 – Middle Leg Assembly
1 – Brace/End Assembly
4 – 5/16" x 2" Hex Head Bolt
4 – 5/16" Flat washers

- With these pieces assembled, attach them to the Brace/End Assembly. First putting the Middle Legs sideways inside the braces (see illustration top of next page).
- Second, put 5/16" flat washers on each of four hex head

bolts. Put those bolts through the two queen size or crib size slots on both sides of the Brace Assembly and into the two holes at the tops of the Center Legs.

- These bolts will go into the inserted T-Nuts of the Middle Legs.

- **NOTE!** Leave these loose by **ONLY FINGER TIGHTENING** them at this time. You will tighten them after the rails are installed into the frame (Step 11).

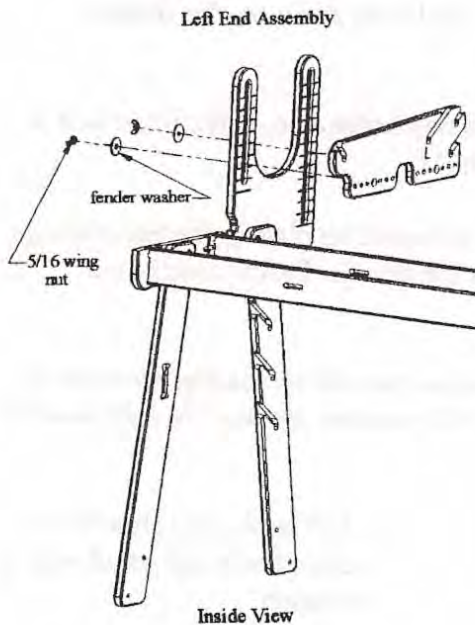
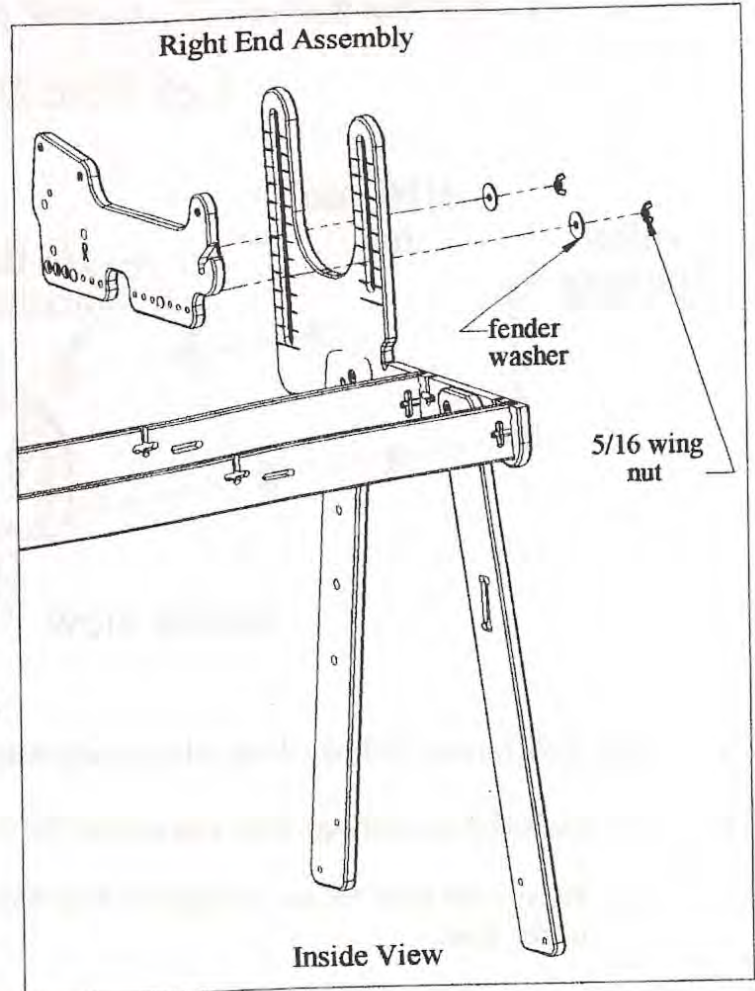


Step 7: Pole Mount End to Frame End Assembly

4 – 1½" Fender Washers

4 – 5/16" Wing Nuts

- Now you are ready to attach the Pole Mount Ends to the rest of the End Assembly. First, position the Pole Mount Ends in the inside of the End Assembly.
- Holding the outer side of the Pole Mount End to the slots of the End Piece, fit the two carriage bolts through the slots.
- Place a fender washer and wing nut on each bolt.
- As you tighten, make sure the part is level by looking at the bottom of the Pole Mount End and the grooved lines on the inside of the Frame End Piece. (A good estimated setting is to line up the bottom of the Pole Mount End on the 3rd line up on the set of lines closest to the table tops. However, you will readjust this to your machine later).
- Complete this step for both sides.



Step 8: Rail Assembly

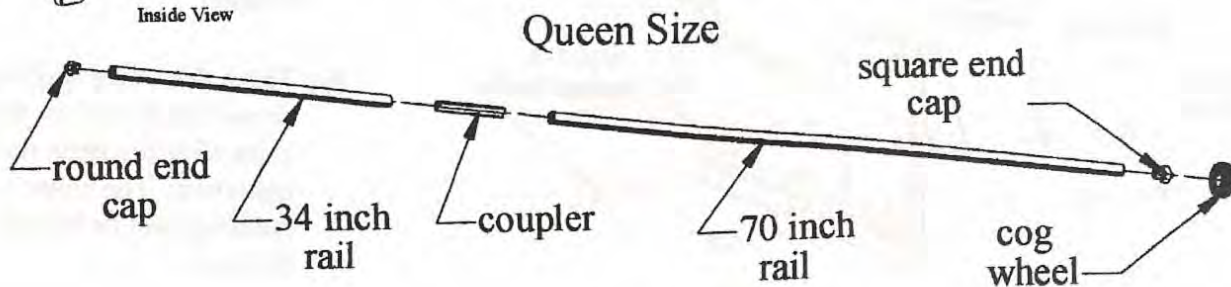
Parts Needed: 3 or 4* – 70" (Longer) Rails

For Queen Size, these parts are also required:

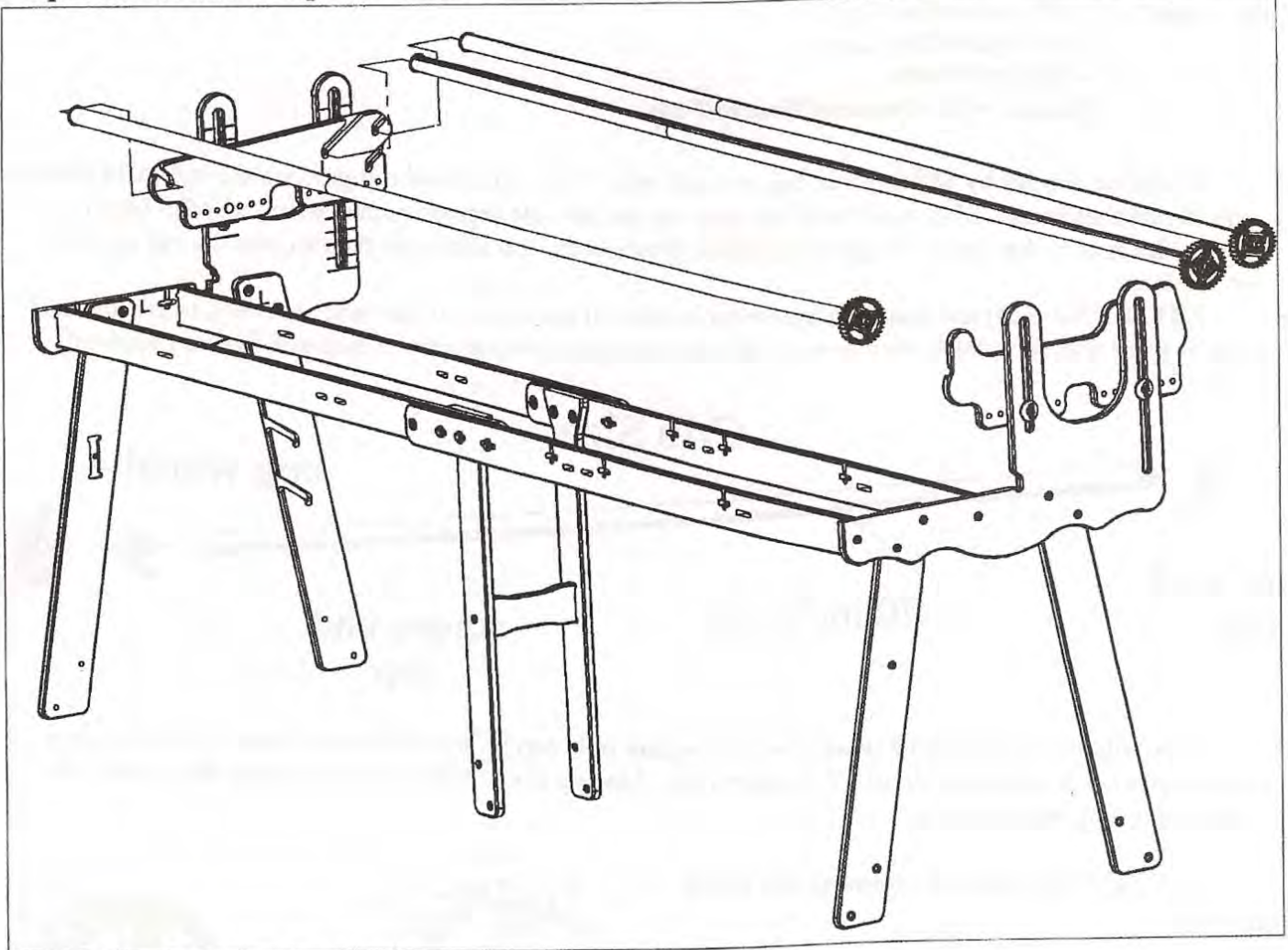
3 or 4* – 34" (Shorter) Rails w/ coupler

***Needed with Optional Fourth Pole**

- If you are setting up your frame in Crib Size, you will be using the Long 70" Aluminum Rails by themselves. The Queen Size set-up requires the following assembly:
- Construct your queen size rails by connecting the long and short aluminum rails using the aluminum connectors.

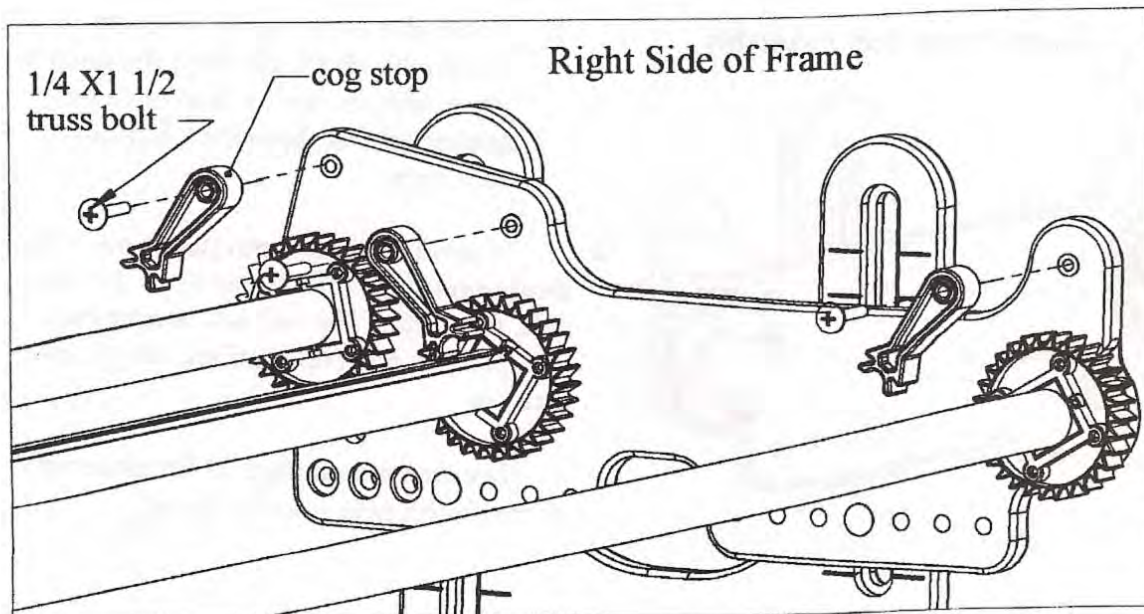


Step 10: Ratchet Stop Installation



Parts Needed: 3 – Ratchet Stops
3 – $\frac{1}{4}$ " x $1\frac{1}{2}$ " Truss Bolts

- Install the three ratchet stops to Right Pole Mount End by putting a $\frac{1}{4}$ " x $1\frac{1}{2}$ " Truss Bolt through the hole in each ratchet stop, and into the metal insert as pictured.

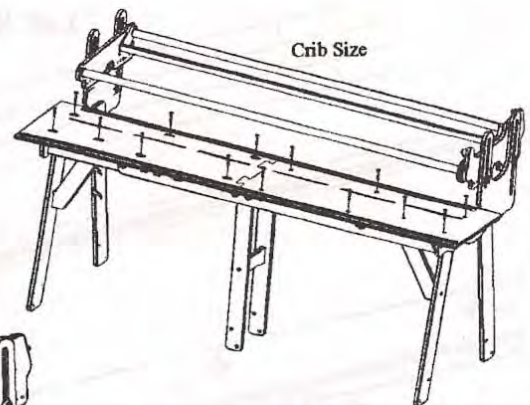
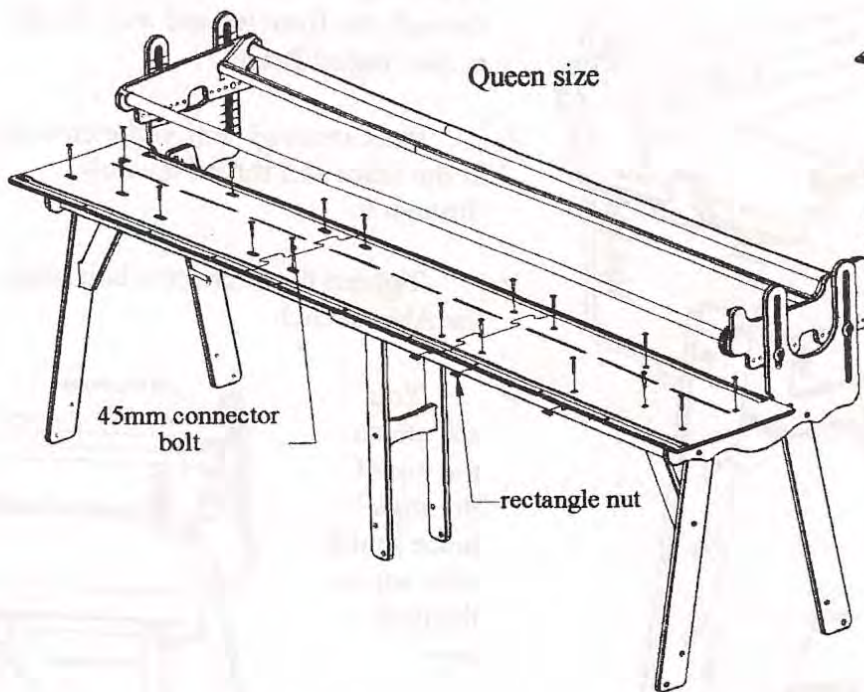
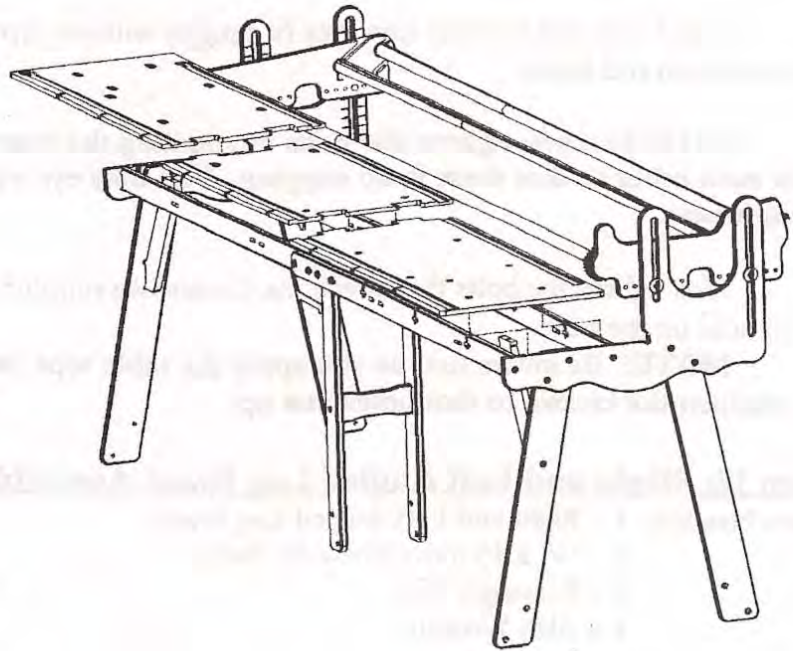


NOTE! Do not over-tighten the bolts, or else they will puncture the wood!
FINGER TIGHTEN ONLY!!

Step 13: Table Top Assembly

- Parts Needed: 1 – Table Left Side
1 – Table Middle Section
1 – Table Right Side
18 – 1/4" x 45mm Connector Bolts
18 – Rectangle Nuts
1 – Alan Wrench

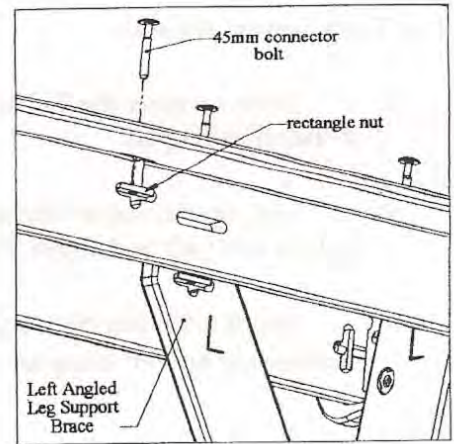
- For queen size assembly, all three Table Sections will be used. For crib size, the center Table Leaf will be omitted.
- **The Left Side is the one with the slots. The Right Side has circular holes.**
- Standing at the table side of the frame, lay these pieces onto the Brace Assembly as pictured, beginning with the Table Right Side at the right of the frame.
- Connect the Table sections to the Brace Assembly using 45 mm connector bolts and rectangle nuts.



- Completely tighten each connector bolt using the Alan wrench.
- Referring to the illustration on the left, be sure you put a connector bolt through each hole on the Table Tops.

Leg/Table Support Assembly

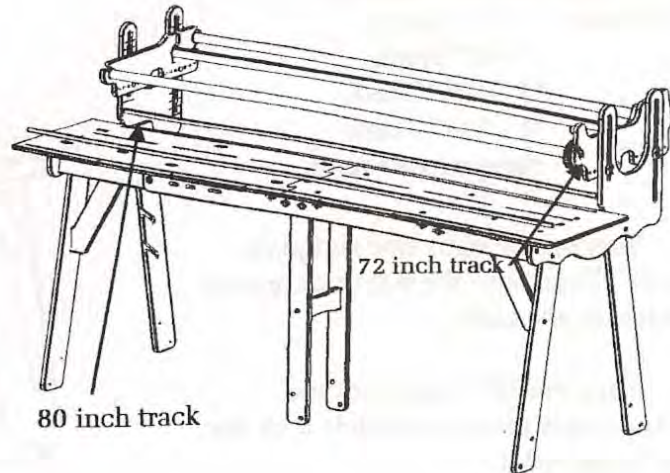
- Now connect the Table Tops to the Front Leg Support you installed in Step 10.
- Line up the top of the support brace with its corresponding hole in the Left and Right Table Sides.
- Insert a 45 mm connector bolt and rectangle nut and completely tighten using an Alan wrench.



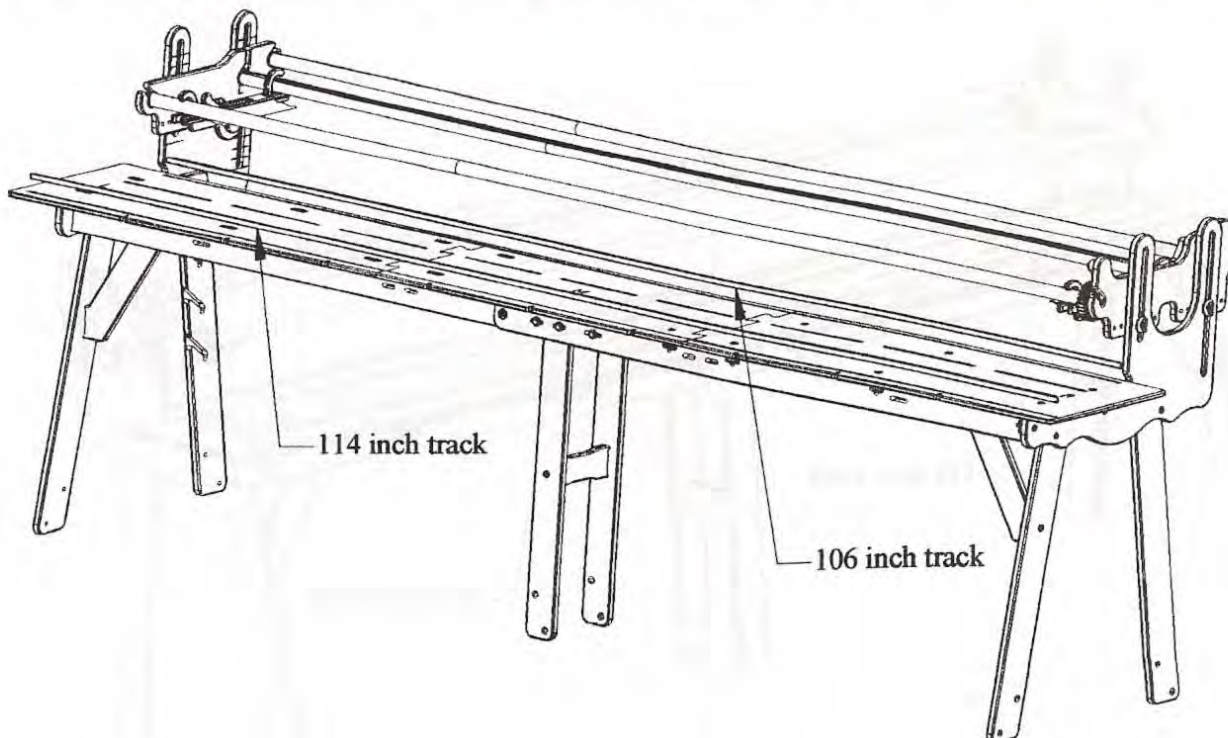
Step 14: Track Installation

Parts Needed: 1 - 72" Track
1 - 80" Track
*1 - 106" Track
*1 - 114" Track
**queen size only*

- Start on the right side and place the 72" Track into the top track groove (closest to the rails).
- Place the 80" Track into the bottom track groove and slide it all the way to the right.



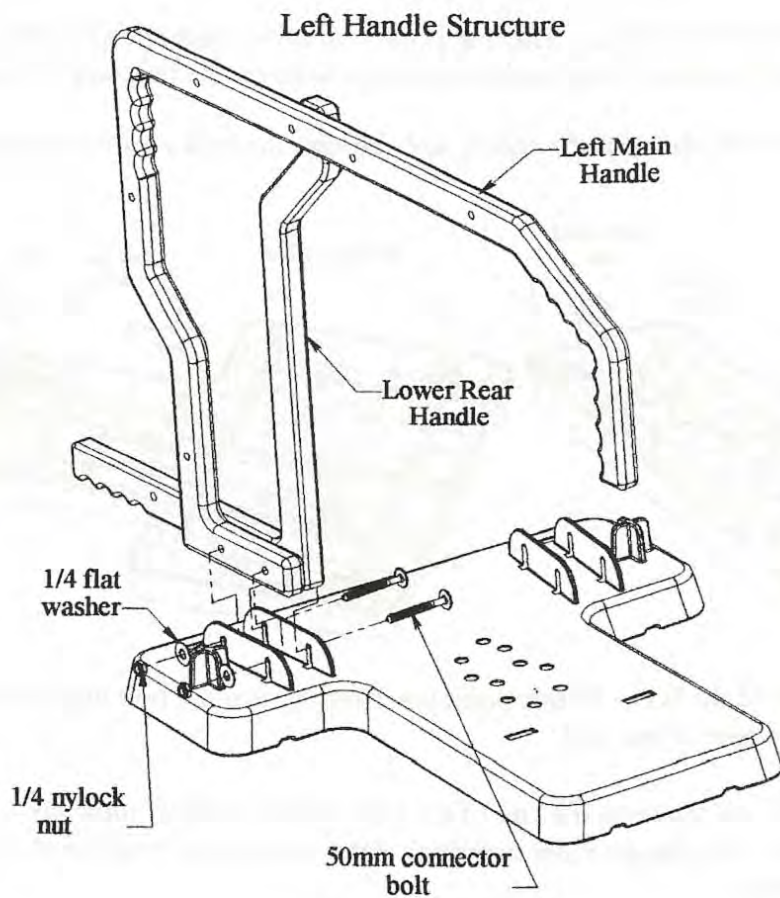
- **If you are doing the queen size assembly, Start on the right side and insert the 106" Track into the top track groove (closest to the rails). Next Place the 114" Track into the bottom track groove and slide it all the way to the right.*



Sub-Assembly 2: Left Handle Structure

Parts Needed: 1 – Top Plate
1 – Left Main Handle
1 – Lower Rear Handle
2 – 1/4" x 50mm Connector Bolt
2 – 1/4" Flat washers
2 – 1/4" Nylock Nut

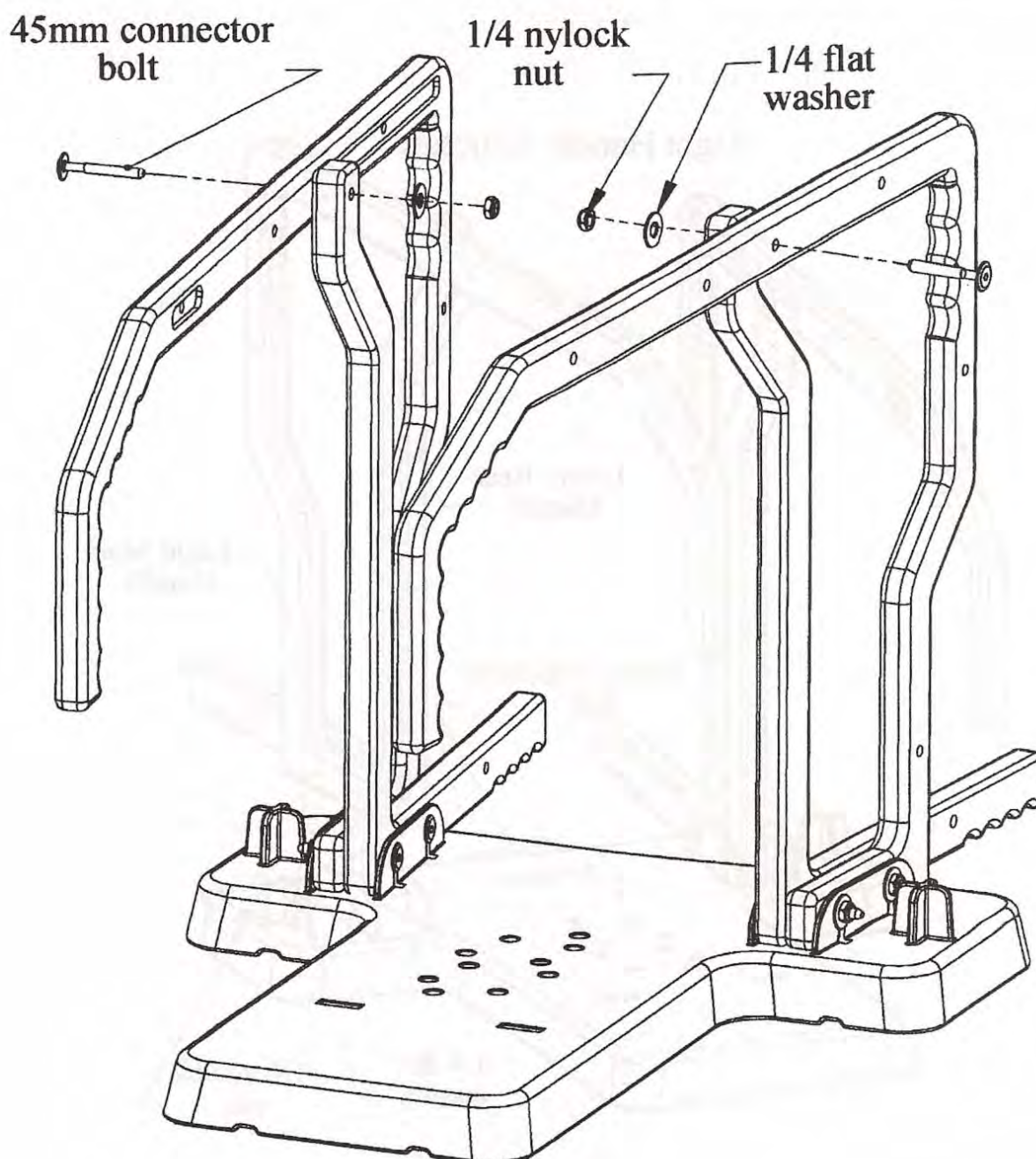
- Pair the Left Main Handle and Lower Rear Handle together as pictured. With the Left Main Handle on the outside, line up the holes at the bottom and place them inside the walls of the Top Plate.
- Insert 50mm connector bolts into the inside wall, through the handles and out the other wall.
- Place a 1/4" flat washer and 1/4" nylock nut on each bolt.
- Completely tighten the nylocks on both bolts.
- **NOTE:** When tightening nylocks onto these connector bolts, put them on threads first, nylon last. Hold the head of the bolt stationary with the Alan Wrench while turning the nylock with the Socket Wrench.



Sub-Assembly 4: Connecting the Handles

Parts Needed: 1 – Right and Left Handle Assembly
2 – 1/4" x 45mm Connector Bolt
2 – 1/4" Flat washers
2 – 1/4" Nylock Nut

- Line up the hole in the top of the Lower Rear Handle with the second hole from the back on the Main Handle. They should almost line up automatically.
- Insert 45mm connector bolts through the Left and Right Handle pairs. Make sure they are going from the outside to the inside.
- Place a 1/4" flat washer and 1/4" nylock nut onto the end of each bolt. Completely tighten the nylocks.



Sub-Assembly 6: Attaching Left Gear Linkage and Rear Lower Speed Control Lever

- Parts Needed: 1 – Left Gear Linkage
1 – Rear Lower Speed Control Lever
1 – 1/4" x 40mm Connector Bolt*
1 – 1/4" x 60mm Connector Bolt
3 – 1/4" Flat washer
2 – 1/4" Nylock Nut

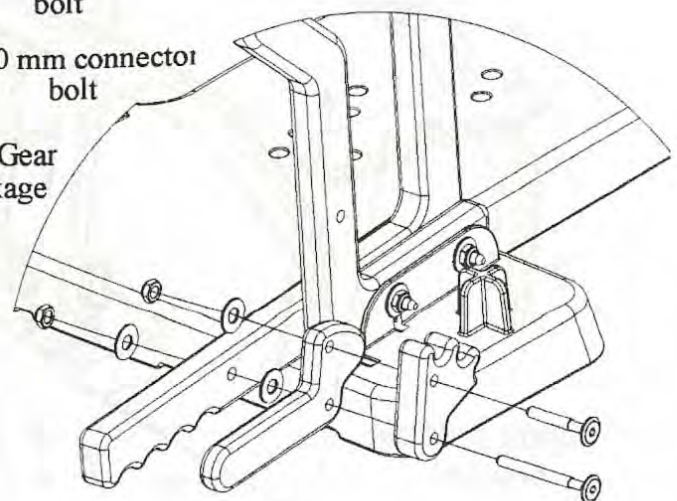
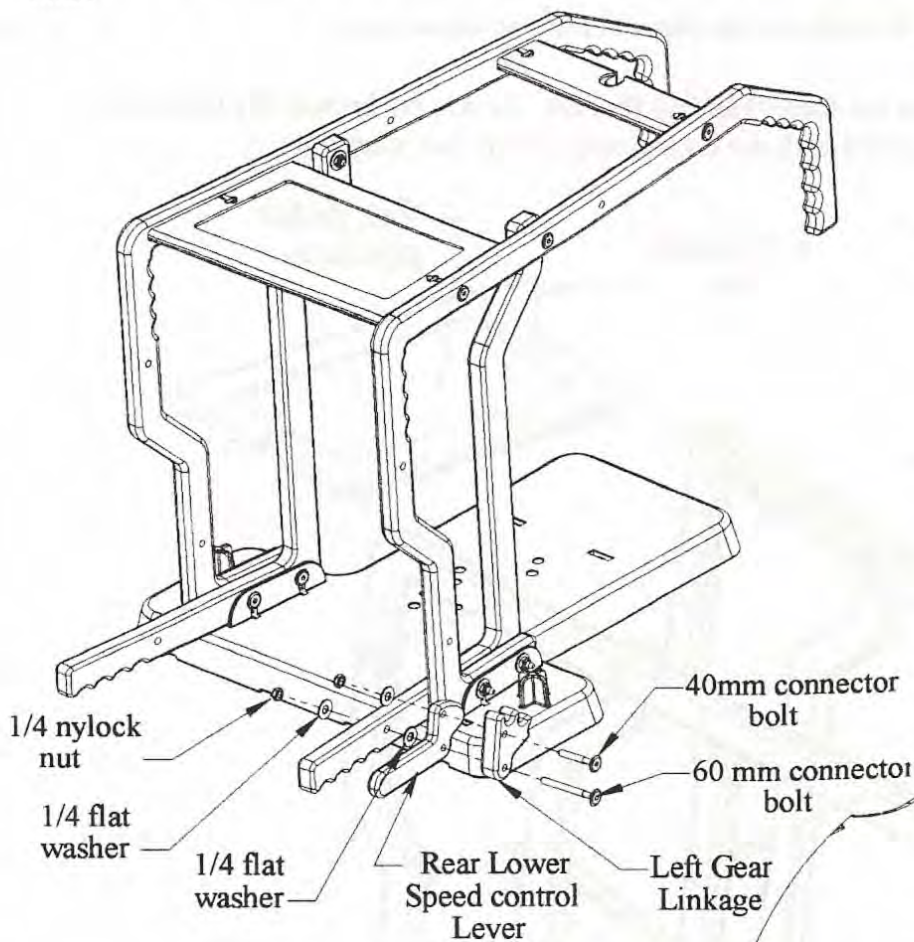
**From this point forward, please note that any place you use a 40 mm bolt, you may substitute a 45 mm (we have included 3 extra 45 mm bolts in your packet), in case the 40 mm doesn't give you enough length (due to slight variances in wood thickness).*

- **NOTE!** The next few steps (through Sub-Assembly 10) are reversible—they can be completed on either the Right or Left Handle Assemblies according to your preference. The illustrations show parts going on the right side.
- Position the Left Gear Linkage and the Rear Lower Speed Control Lever onto the 40mm and 60mm connector bolts as pictured.
- With the end of the bolts coming through those two parts, put a flat washer on the end of both bolts

- Next, put the end of the 60mm bolt through the Lower Rear Handle and fasten with a flat washer and nylock nut.

- **NOTE:** When tightening nylock nuts at movable points like this one, it is important not to over-tighten. Tighten this nylock just enough to hold the washer against the wood, but loose enough to allow it to turn with your finger.

- Thread a nylock nut on the end of the 40mm bolt and tighten it completely.



Sub-Assembly 8: Attaching the Rear Upper Speed Control Lever

Parts Needed: 1 – Rear Upper Speed Control Lever

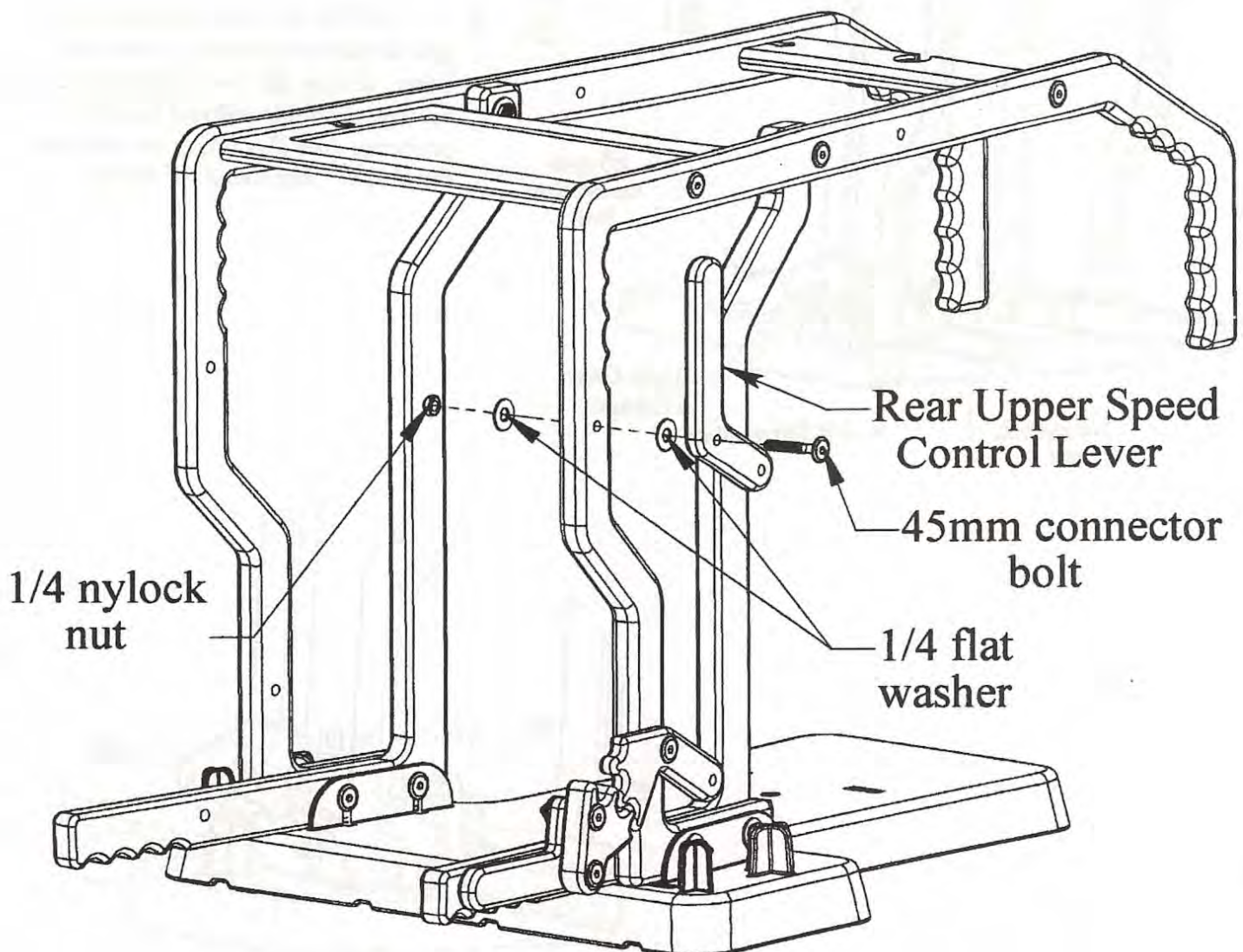
1 – 1/4" x 45mm Connector Bolt

2 – 1/4" Flat washer

1 – 1/4" Nylock Nut

- Place a 45mm connector bolt through the corner hole of the Rear Upper Speed Control Lever as pictured.
- With the end of the bolt coming through the lever, place a flat washer on the end of it and then insert the bolt with lever and washer through the hole in the Right Main Handle.
- On the remaining end of the bolt, place a flat washer and nylock nut and tighten.

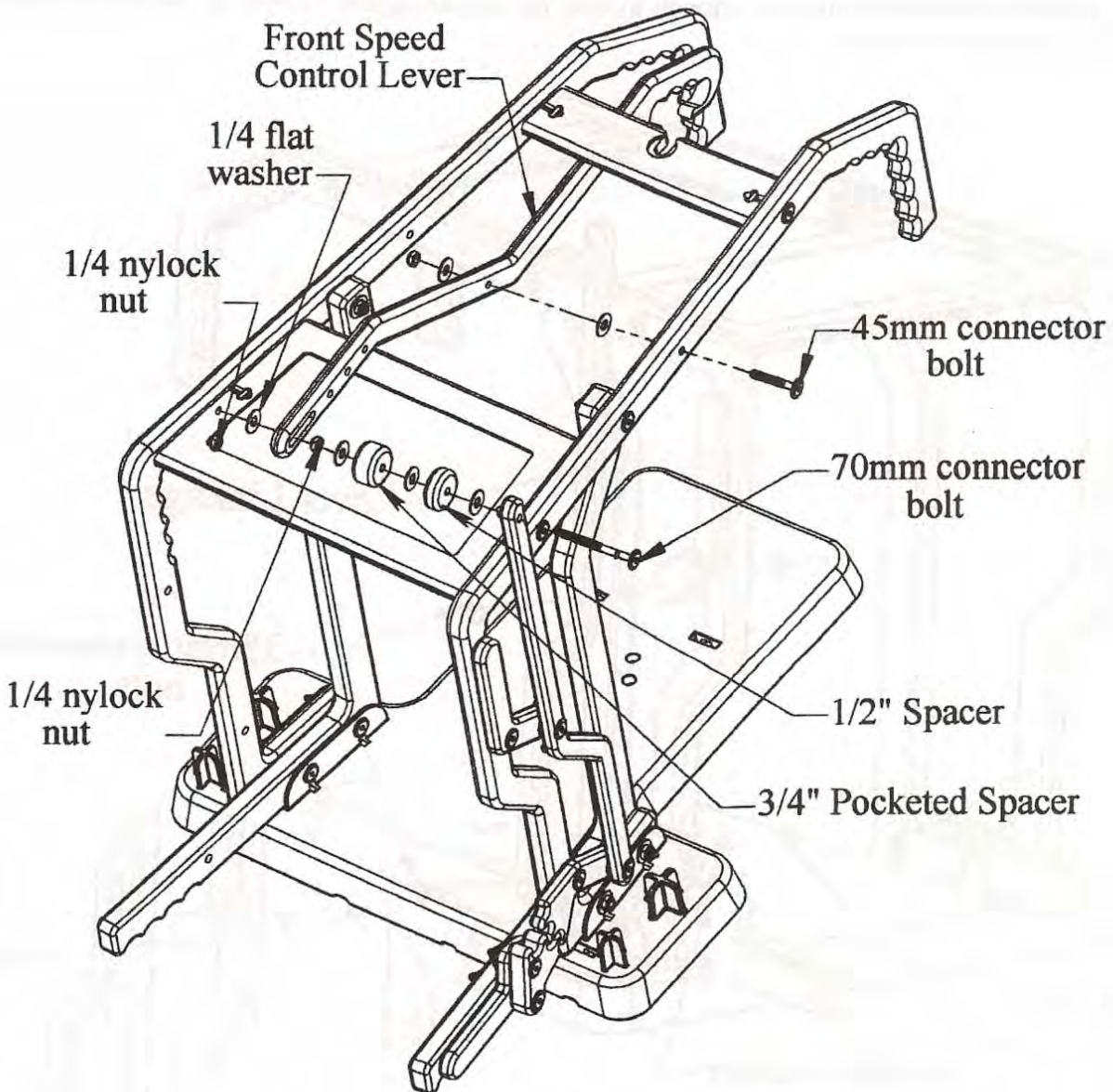
NOTE: Tighten this nylock just enough to hold the washer against the wood, but loose enough to allow it to turn with your finger.



Sub-Assembly 10: Attaching the Front Speed Control Lever

- Parts Needed: 1 – Front Speed Control Lever
1 – 1/4" x 45mm Connector Bolt
1 – 1/4" x 70mm Connector Bolt (longest)
1 – 1/2" Spacer
1 – 3/4" Pocketed Spacer
6 – 1/4" Flat washer
3 – 1/4" Nylock Nut

- Begin by placing a 45mm connector bolt through the hole located in between the Lamp Holding Bracket and the Foot Pedal Platform on the Right Main Handle, as pictured.

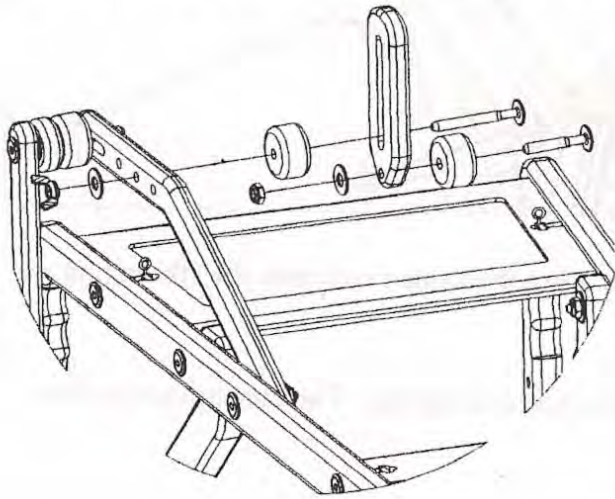


- Place a flat washer on the end of the 45mm bolt
- Next, put the 70mm connector bolt through the hole in the top of the Lever Linkage, as pictured.

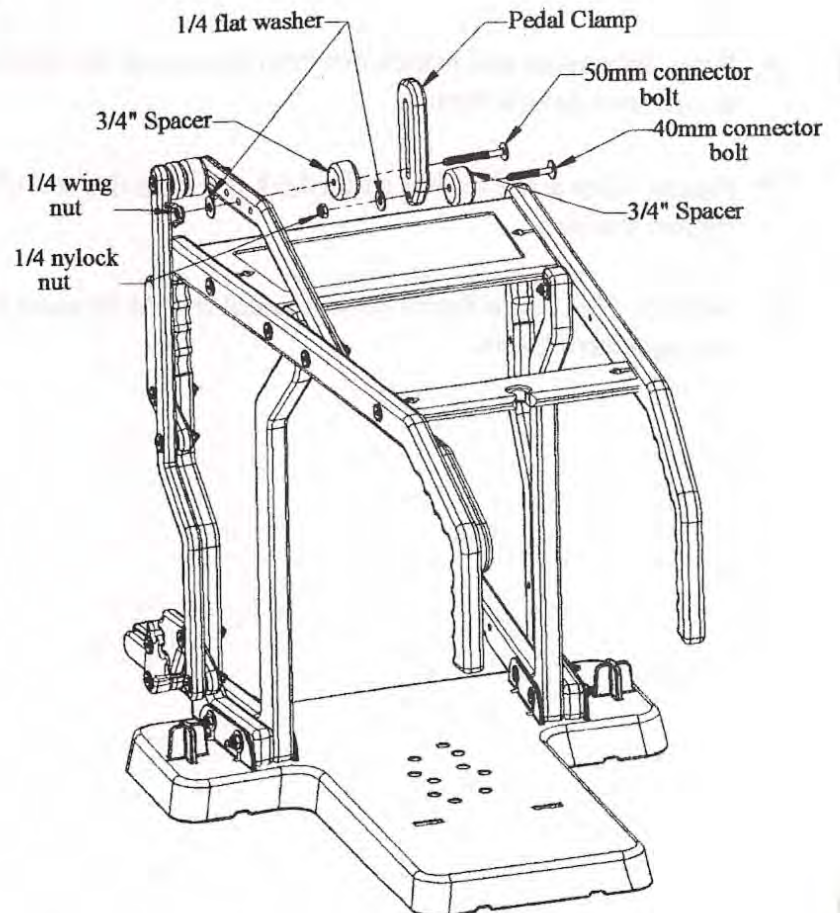
Sub-Assembly 11: Attaching the Pedal Clamp

Parts Needed: 1 – Pedal Clamp
2 – 3/4" Spacer
1 – 1/4" x 50 mm Connector Bolt
1 – 1/4" x 40mm Connector Bolt
2 – 1/4" Flat washer
1 – 1/4" Nylock Nut
1 – 1/4" Wing Nut

- First, place a 50mm connector bolt through the slot of the Pedal Clamp, and through a 3/4" Spacer.
- In the Front Speed Lever Control there are three holes. These holes allow you to adjust the Pedal Clamp to your sewing machine's foot pedal. For starters, put the 50mm bolt through the middle hole of these three and fasten it by placing a flat washer and wing nut onto its end.

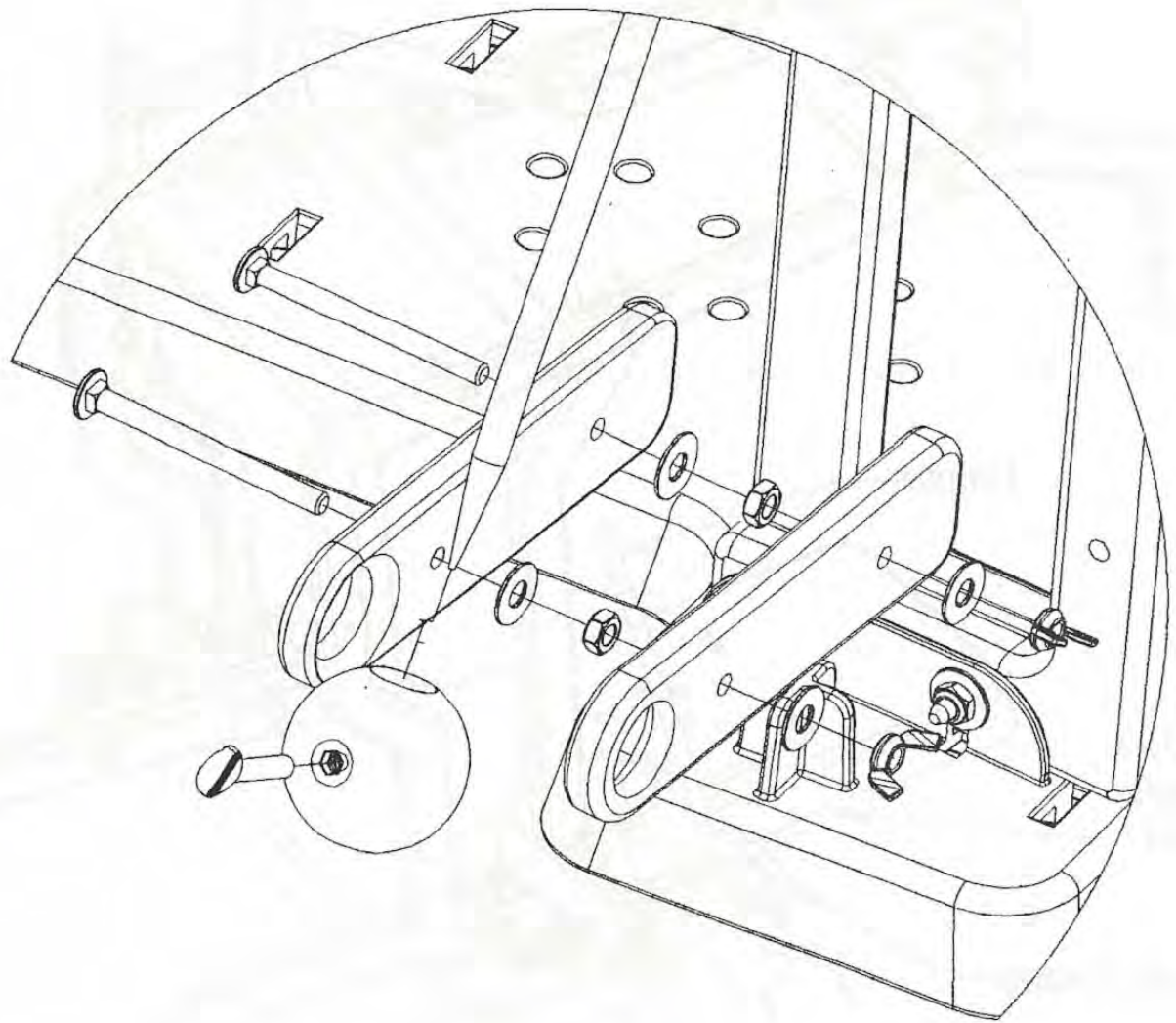


- Next, place a 40mm connector bolt through a 3/4" Spacer and into the hole at the end of the Pedal Clamp.



- Then place a flat washer and nylock nut onto the end of the bolt and tighten slightly. (As you did before, tighten these nylock nuts just enough to hold the washer against the wood, but loose enough to allow it to turn with your finger).
- NOTE: The Spacer attached to the Pedal Clamp needs to be loose enough so you can spin it.
- Now, with this portion completed, test all the movable joints for ease of movement by moving any handle up and down. You should encounter little or no resistance. If you do, slightly loosen the nylon lock nuts at the moveable joints until this resistance is eliminated.

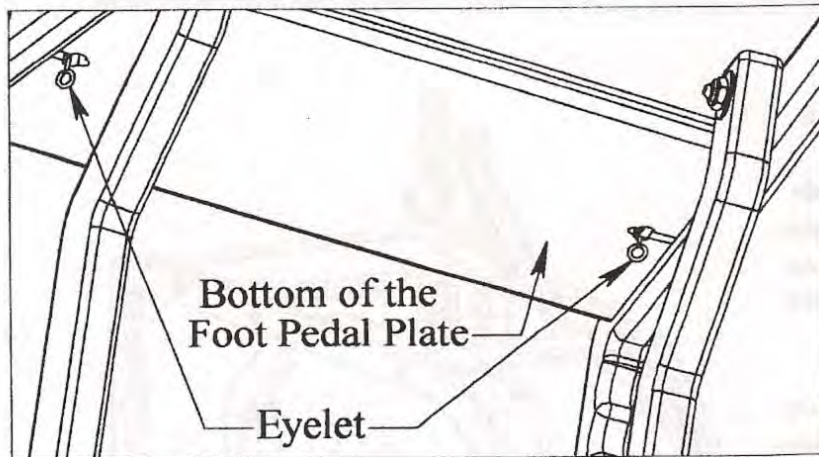
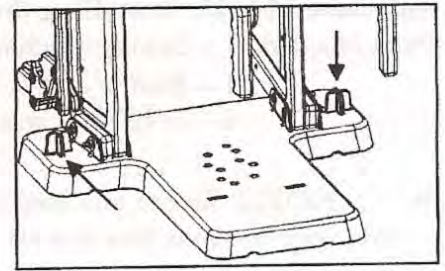
- Next place the Ball Swival into the rounded out part of the Ball Clamp and sandwich it with the other Ball Clamp, put the ends of the two carriage bolts through the two 1/4" holes of the second clamp
- Connect to two clamps by placing a flat washer and wing nut on the end of each bolt. Hand-tighten both wing nuts.
- To fasten the Pointer into the ball, place it in the large hole and thread a 1 1/4" Thumb Screw into the metal insert already in the ball.
- Continue threading the Thumb screw until it clamps down onto the desired part of the Pointer. The Pointer can be aimed almost any direction and can be adjusted for length out of the ball.
- This entire assembly can be made to clamp virtually anywhere on the Carriage Assembly. The ideal placement for following patterns laid on the table top is to clamp it to the Lower Rear Handle (see next picture).



Sub-Assembly 14: Eyelet Assembly

Parts Needed: 2 – Eyelet

- Note the thread spool holders (they look like raised cross-hairs) on each end of the Top Plate. These will hold most large spools of thread.
- To get the thread effectively from the spool to the machine, we have provided small eyelets you can install under the Foot Pedal Platform.



- To install them, hand-screw the eyelet next to the hole where the square nut is located.
- After these are installed, simply pull the thread from the spool, through the eyelet closest to the spool, and then across to the other eyelet.
- From the second the eyelet, take the thread to the machine and follow the normal thread-install method for that machine.

- You have now completed

99% of your assembly! **You will still have Carriage Stop and EdgeMaster pieces leftover at this point. Those steps come later.** Now you can begin installing your fabric.

PREPARING TO INSTALL FABRIC:

At this point, place the Top and Bottom Plates aside, and turn your attention to the frame with rails. You will now install the fabric and batting into your Grace Machine Quilter.

USING YOUR GRACE MACHINE QUILTER

Fabric Installation

- There are two methods for installing fabric onto the rails: The Hem Method and the Cloth Leader Method. With either method it is very important to cut all your fabric square. This will make all the following steps much easier! A rotary cutter helps achieve precise results.
- NOTE: Read through both methods to get a clearer understanding of installing your fabric. BEFORE PROCEEDING, remove the Top Plate/Handle Assembly from the frame.

OVERVIEW:

(Note: To keep verbiage simple, we will refer to the rail nearest the table top the “Front” Rail, and the rail on the opposite end the “Back” Rail).

Step 1: Install Quilt Top to Middle Rail (illustrated), then temporarily remove Middle Rail with fabric.

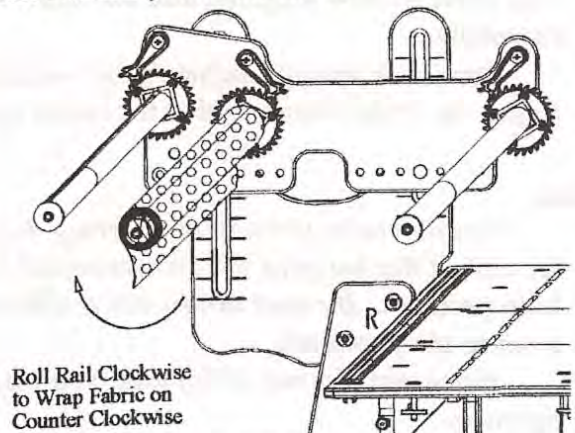
Step 2: Install Quilt Bottom to Back Rail

Step 3: Install other edge of Bottom to Front Rail

Step 4: Lay Batting over Bottom.

Step 5: Install other edge of Top to the Front Rail and pin together.

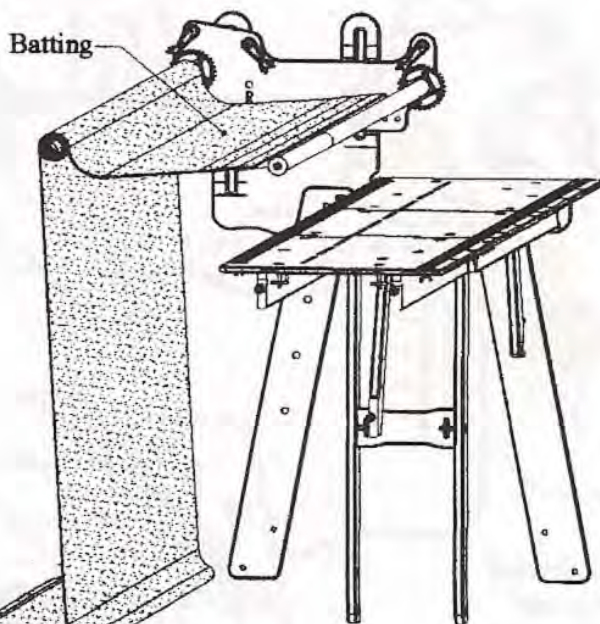
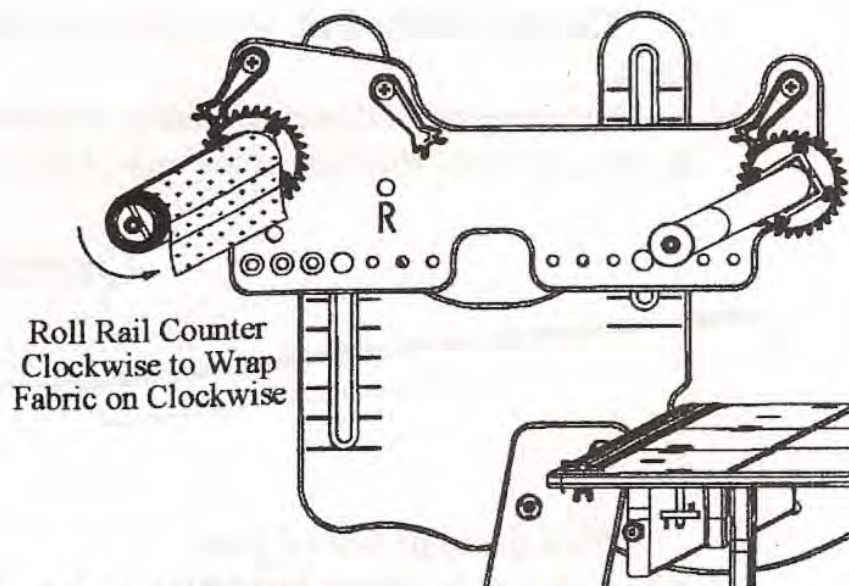
This is an overview of which fabric layer will go onto which rail in which order. Now review Methods #1 and 2 to determine if you will do this with or without cloth leaders.



- Fold over the *back edge* of your backing about 1", with the unfinished side of the fabric on the inside of the fold.
- Stitch the fabric together 3/4" from the fold. This will leave about 1/4" of fabric beyond the stitching. Be sure not to stretch or pull the fabric during this process. Let it lay naturally.
- Now do the same for the front end. NOTE: Make your hem stitch as straight as possible on this one!
- Lay out the backing so that the right side is face down.
- Insert the wooden dowel(s) into the casings of fabric you have just created on both ends. Most quilts will require both dowels. Use the same number and length of dowels as you used for the quilt top.
- Take the front and back rails out of your frame and remove the Ratchet Wheels and End Caps from both ends of each.
- Next insert the dowel and fabric end into the slot of the aluminum rail. Gently pull the dowel and fabric through to the end of the rail. Hold the fabric to prevent it from bunching up. Repeat this process for the other rail/end.
- Again, arrange the backing with the finished side of your fabric face down, replace the End Caps and Ratchet Wheels, and replace the rails back in their positions on the frame.
- With the Middle rail still removed, slowly roll up your backing onto the **Back Rail**. As you do, again make sure the fabric rolls up naturally and wrinkle free.

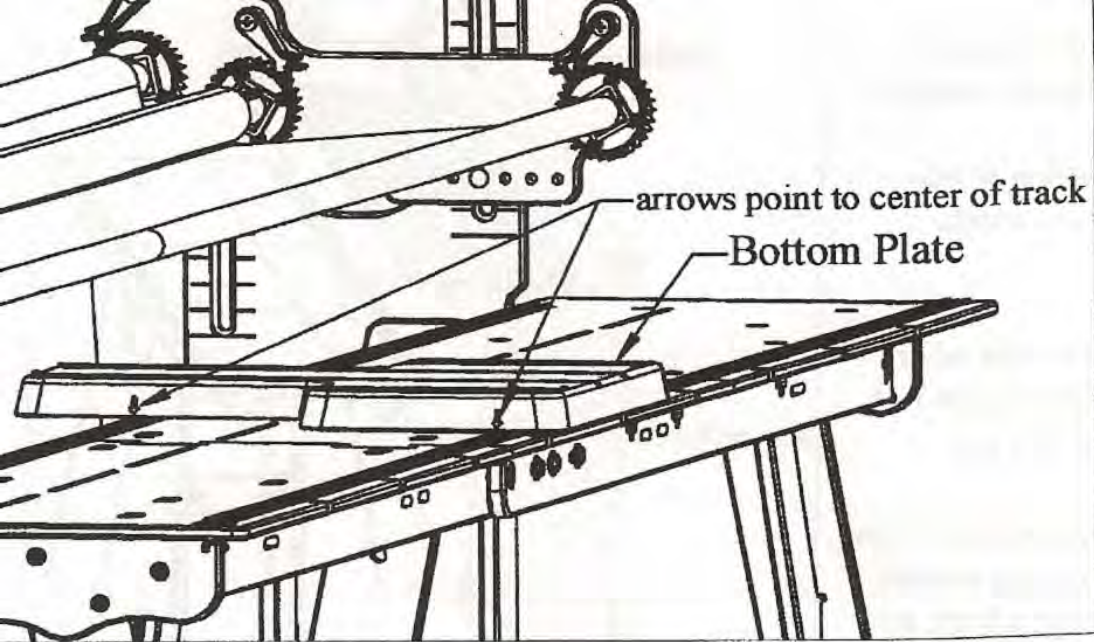
NOTE! It is important that you roll the back rail counter-clockwise so the fabric rolls over and onto the rail.

- As you smooth out any wrinkles, again be very careful not to stretch or pull the fabric excessively.
- Make sure the layers are rolling on top of each other on each end of the rail.
- Also be sure the backing and top are equal distance from the end of the rail.



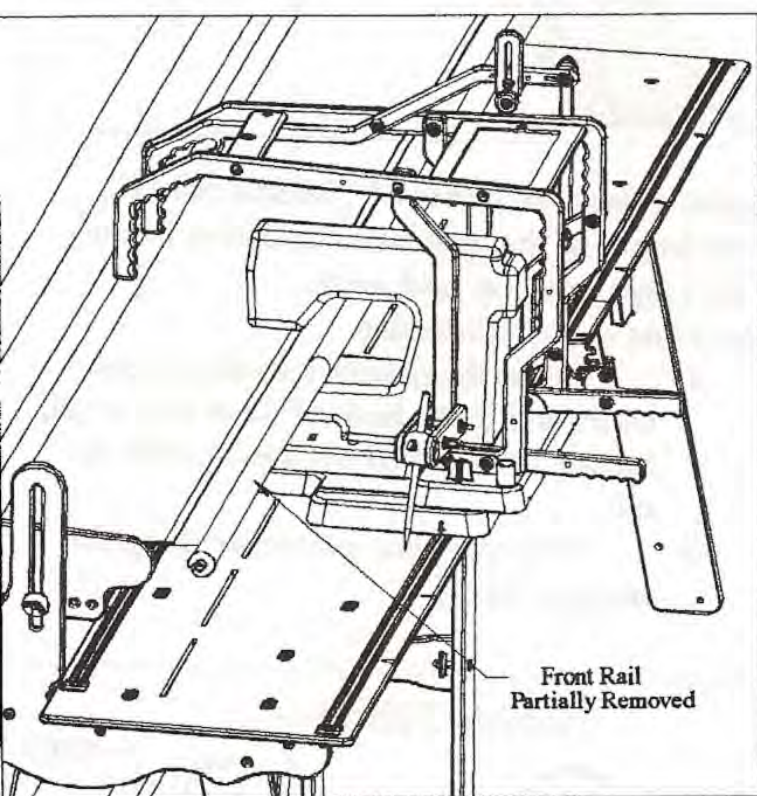
STEP 3: BATTING

- A light, bonded batting is recommended.
- Drape the batting over the backing, lining up the front edge with the hem stitching on the backing at the front rail.
- The other end of the batting can hang freely over the back pole and roll off the floor. However, the optional Fourth Rail kit is ideal for housing the batting and allowing it to roll freely into the work area as you quilt.

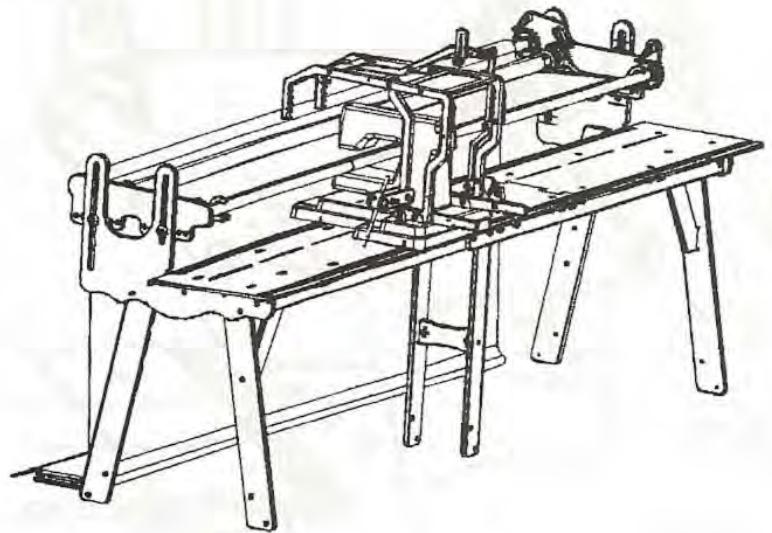


take the left end of the rail out of the end of the frame as pictured. You may want a second person to hold this rail as you feed the rail with fabric through the machine throat (see picture, next page).

- Place the Top Plate onto the Bottom Plate, lining up the roller bearings onto the four grooves. Again the bearings should fit perfectly onto the center mound in each groove.



- Confirm proper placement the same way you did with the Bottom Plate.
- Put the front rail back into place in the frame.
- Adjust the Pole Mount Ends (by loosening their wing nuts) so that the Front Rail almost rests on the base of the machine (leave about 1/16" of an inch). You will want to readjust this as you roll your quilt.



Rolling your fabric

- As you roll forward, the quilt will accumulate on the front rail. Be sure to raise the Pole Mount Ends slightly as needed, so that the bottom of the rolled up fabric stays about 1/16" about the sewing machine base. Failing to do so will cause your Carriage Assembly to roll less smoothly.

The Four-Inch Principle

- If you are using a sewing machine with a regular size throat, you will want to follow the four-inch principle: Limit any quilting pattern to four inches or less from front to back.
- The Grace Machine Quilter actually gives you close to 7" or 8" of reach, but because of a limited throat size, and because the fabric will eventually roll up on the front rail, further decreasing space, you will want to keep patterns to a 4" limit.

Move the Carriage Stop to the edge of the Carriage Assembly and lock it into place by tightening the wing nut. Repeat this process for both ends of the frame.

Turning Your Quilt Around

If you are quilting a large quilt, or using a thicker batting, the fabric may roll onto the front rail to the point that you have run out of throat space. If this becomes the case, you can turn your quilt around and start from the other end. (It is likely that if you use a regular or thinner batting, you be able to avoid having to do this).

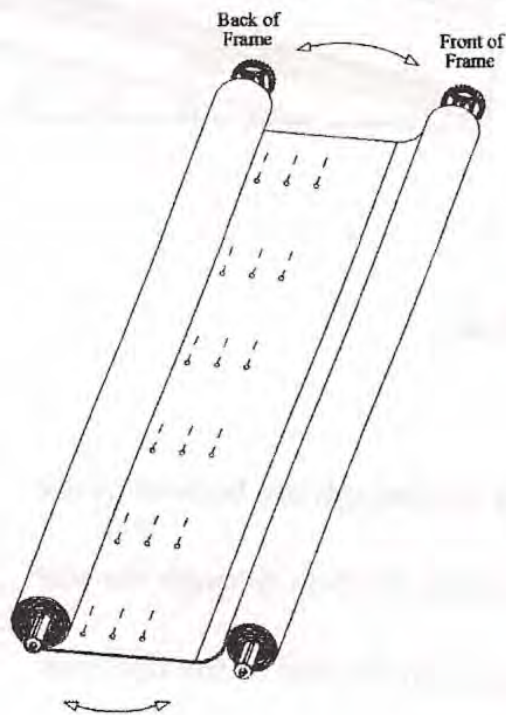
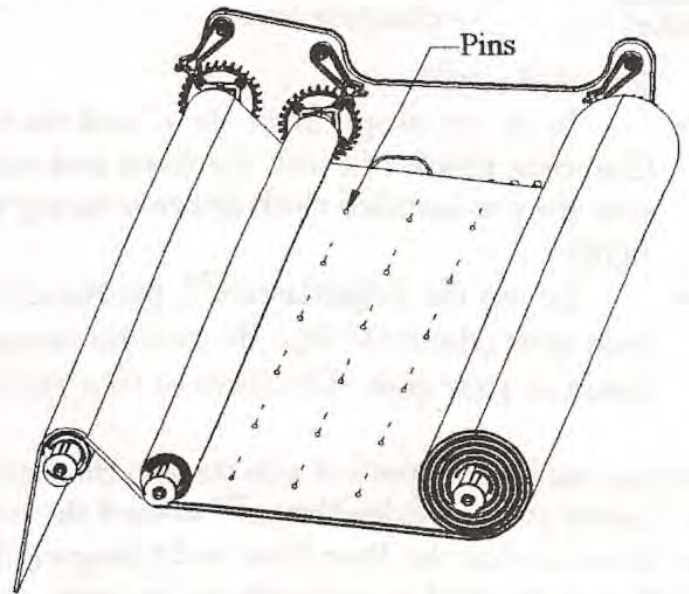
To turn your quilt around, do the following steps:

1. Make sure you are *at least* halfway finished with the quilt and have gone as far as you can go.
2. Next, baste (or pin-baste) the remainder of your quilt while it is on the frame.

(IMPORTANT! While doing this, make sure you leave a row of basting or pins in the work area after you have rolled to the next area for basting. This last row of basting must be visible in your work area, otherwise, if you over-roll, you will have a row of puckering with every turn. (If you are pin-basting, put the pins as close together as needed. It is recommended you don't leave more than four inches between pins).

3. It is also *very important* that you keep tension on the fabric to a minimum as you roll, to avoid pulling the fabric layers unevenly, but pull them enough to avoid puckers.

4. When you are finished basting, remove the MIDDLE rail. Pull off the two End Caps, and slide out the fabric, removing the dowels as well.



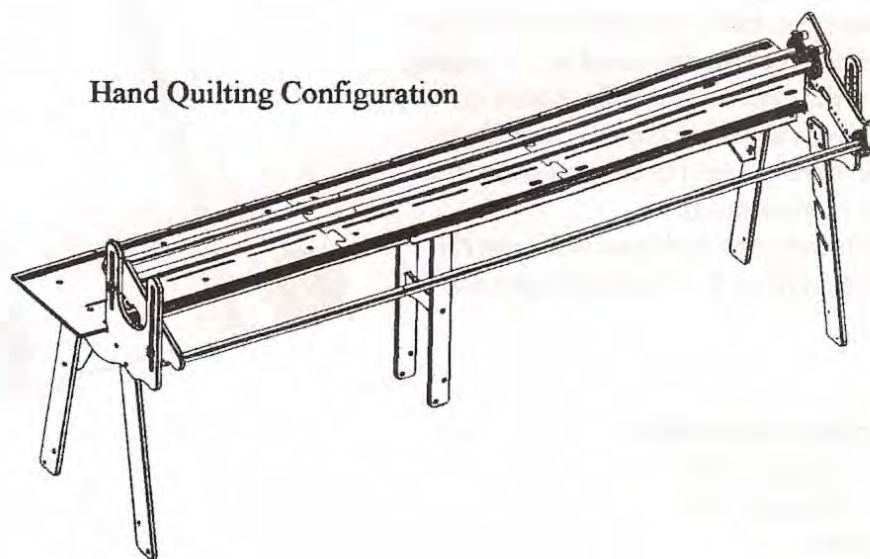
5. Next, remove your machine with top plate.
6. Remove the FRONT and BACK rails from the Pole Mount Ends, and turn the quilt end-for-end, *keeping the top side up* (see illustration left).
7. Switch the End Caps, putting the ratchet wheels on the new right end and place the rails back into the frame. The back of the quilt should now be at the front (You may also remove the caps on one side and remove the fabric/dowels and turn only the fabric around).
8. Roll the entire quilt onto the back rail so that the fabric rolls up and over the rail.
9. Replace the sewing machine by looping it through the front rail and over the un-quilted material that will be in the throat (make sure the needle is up to avoid tearing the fabric).
10. Replace the empty middle rail to keep the fabric level in the work area.

The sewing machine is bouncing or vibrating excessively when quilting

This may occur if the machine is not mounted to the Top Plate. If this is happening, move the sewing machine toward the back of the Top Plate.

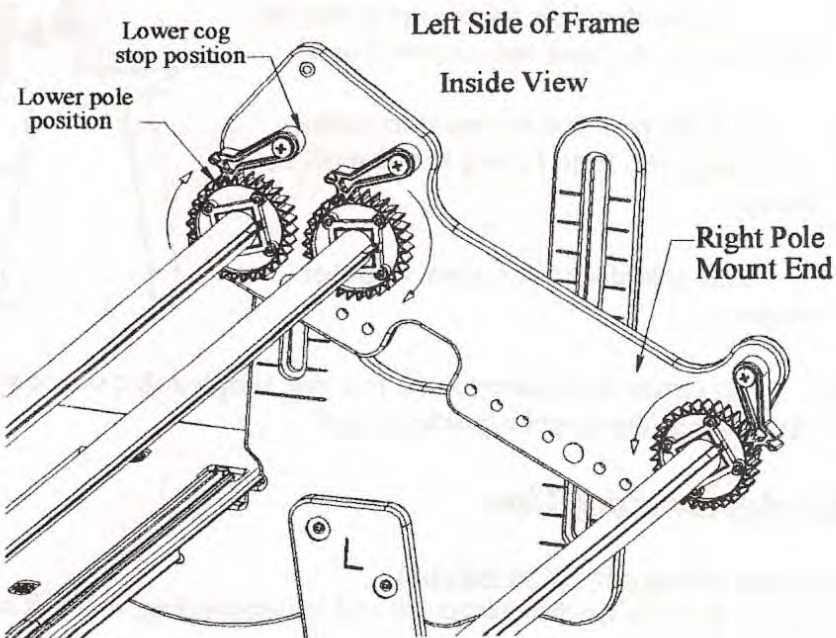
Hand Quilting Configuration

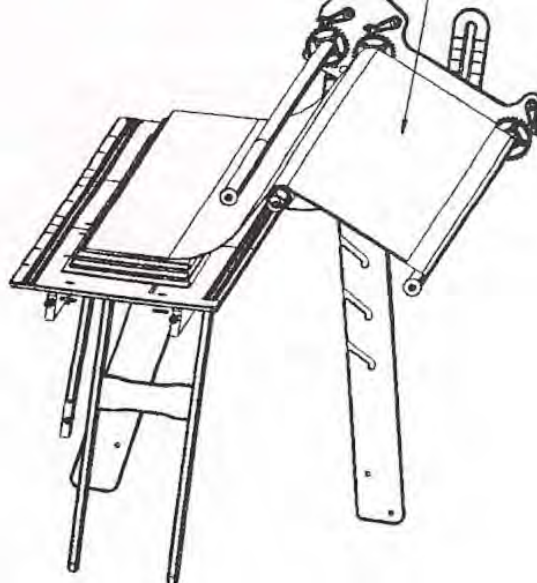
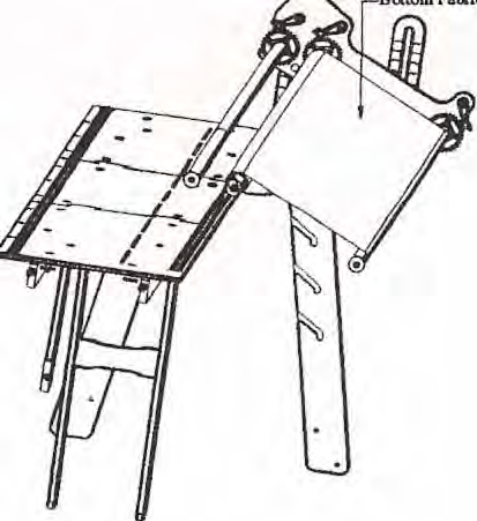
The Grace Machine Quilter can be reconfigured to all for comfortable hand quilting. The pictures below depict how to set up the frame and install the fabric for use of the GMQ in this application.



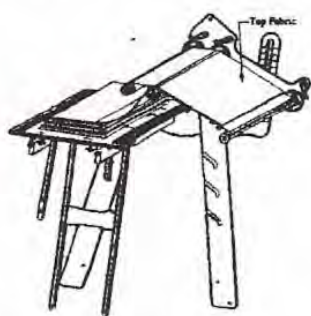
Step 1: Reverse the Pole Mount Ends

- Turn the entire Pole Mounting Assembly (with rails) around so that the Right Pole Mount End is fastened to the Left Frame End.





Step 4: Install the Top



Tips From Grace

Concerning Your Sewing Machine:

- Lower the bottom feed dogs completely so they do not catch the fabric. You want a completely smooth surface over which the fabric/rail can glide (see sewing machine manual).
- Select the Straight Stitch function on your machine. (See sewing machine manual).
- A larger throat machine is ideal.
- Faster stitching seems to work better than speeds. Select higher speeds on your machine, and/or push the speed control levers of your Carriage Assembly so that they are fully engaged.
- Make sure your machine is threaded correctly and the bobbin is installed correctly (see sewing machine manual).
- Perform a tension check by sewing somewhere in a part of the quilt that will be removed to see if the thread tension is correct (see sewing machine manual) or make a test quilt sample and test it.
- Lower the Presser Foot.
- When reloading the bobbin into a top-loading machine, slide the machine all the way to the left of the frame and remove the EdgeMaster™ on that side. This will adequately expose the bobbin compartment for easier reloading.
- **TRACK TIP:** If you experience bumps in your tracking from left to right or front to back, you may try cleaning your track channels in the table and on the top platform with a cotton swab. You may also do the same to the channels in your wheels.

Accessories Available:

The following accessories are, or will soon be, available from the Grace Company or from the store from which you purchased your GMQ. Contact your local store to order, or, if they do not carry them, you may order direct at 1-800-264-0644

Pattern Perfect (Template Guide System)

16" Adapter

Fourth Pole Kit

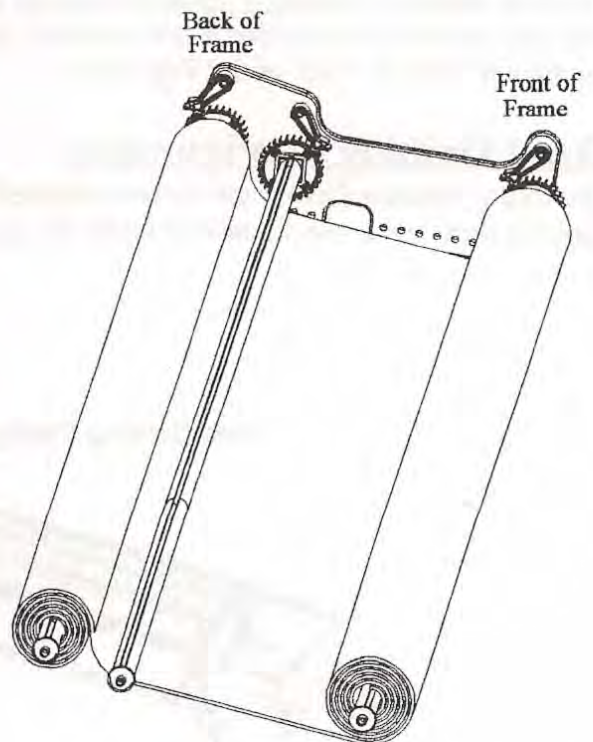
King-Size Add-On

Height Adjustable Legs

Goose-Neck Lamp

True Color Bulb

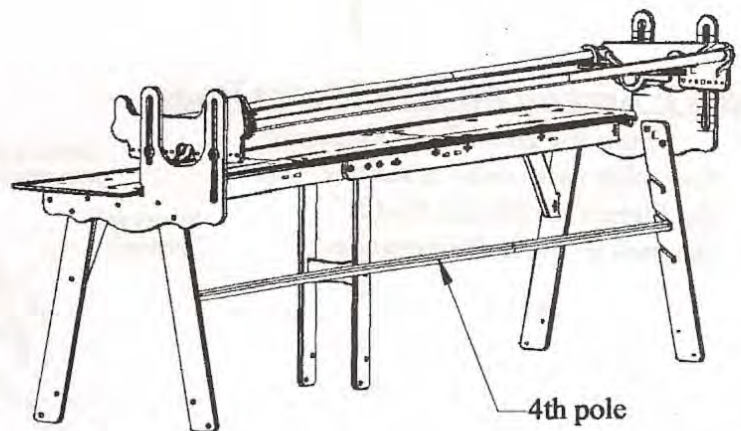
11. Now roll the basted portion of the quilt onto the front rail until your stitching shows up in the work area, so you can start where you left off. (Make sure you have rolled the quilt evenly onto the front rail, with the edge lining up).
12. Remember to use the EdgeMasters™ for better results.
13. Drop your needle into the place where you stopped quilting.
14. Make sure you have enough tension in the work area, avoiding any wrinkles or sagging.
15. Remove the pins as you quilt. Avoid quilting over a pin or a pucker (watch carefully to see that there are no puckers on the top or bottom of your quilt).
16. As you finish your quilt you will now roll from the front to the back rail (opposite of before).



Optional Fourth Pole Assembly

- Parts Needed: 1 – 70” (Longer) Rails
 1– 34” (Shorter) Rails
 1 – Coupler
 1 – Square End Cap
 1 – Round End Cap

- The fourth pole is an extra pole that fits into slots on the back legs of your frame.
- It is the pole that houses that batting, preventing you from having to roll it off the floor.
- This pole does not require a ratchet wheel.
- To fasten the batting to rail, you may simply roll it on, or you can tack the end of it into the wooden dowel while the dowel is inside the rail.



Troubleshooting Tips:

The rail is binding and will not roll easily

If any of the rails are difficult to roll and/or are binding, you will need to readjust your frame to allow a little more room for your rail.

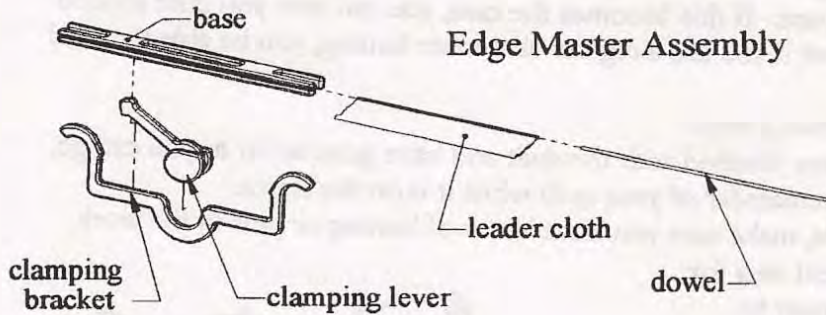
To do this, simply loosen the bolts that fasten the braces together, and loosen the connector bolts that fasten the Table Left Side.

As you loosen all these bolts the frame should naturally push out slightly. Roll the rails to make sure they are loosened, and then re-tighten all the bolts.

EdgeMaster™ Assembly

Parts Needed: 2 – Base Plate w/ Pre-installed sleeve
2 – Lever
2 – Clamping Bracket

- There are three wood pieces that make up one EdgeMaster™ (for side tension). There are two EdgeMasters™ included with your Grace Machine Quilter.

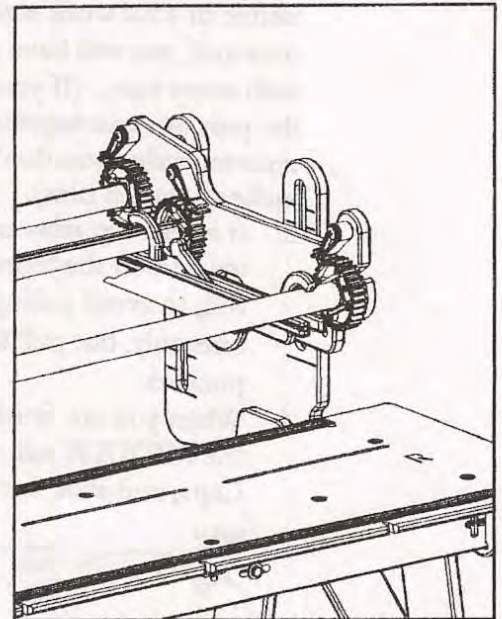


- Place the Lever into the “U” shape of the Clamping Bracket, and put the opposite end through the slot in the Base Plate.

- With your fabric completely installed, you can install the EdgeMasters™ onto the front and middle rails (one on each

side of the quilt).

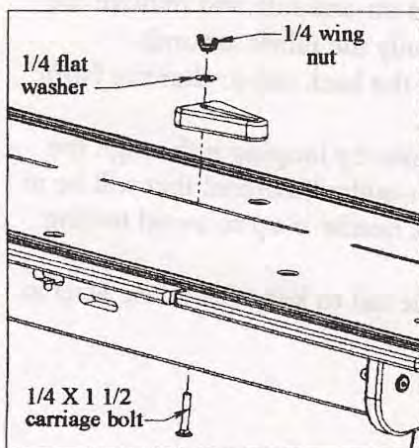
- To do so, simply angle them until the two ends of the Clamping Bracket fit over the front and middle rail. **NOTE!** Be sure the pre-installed cloth sleeve is facing toward the quilt (see right).
- To use the EdgeMasters™, pin the cloth sleeve to the edge of your quilt (about 1/4” in). Be sure the pins go through all three layers of your quilt. Use three or four straight pins for this.



Now you can achieve perfect side tension throughout your entire work area. Gently pull the EdgeMaster™ toward the outside, and move the Lever down so that the Base Plate and Clamping Bracket tighten on the rail. There is no need to over-tighten the lever. It will hold its position.

Note! Due to the difference in some sewing machines, it may be necessary to make wider sleeves for your EdgeMaster™ if your sewing machine hits into the Clamping Bracket of the EdgeMaster™ before you reach the stops or end of your quilt.

Carriage Stop Assembly



Parts Needed: 2 – Carriage Stop
2 – 1/4” x 1 1/2” Carriage Bolt
2 – 1/4” Flat washers
2 – 1/4” Wing Nuts

(Hardware is in packet marked “M”)

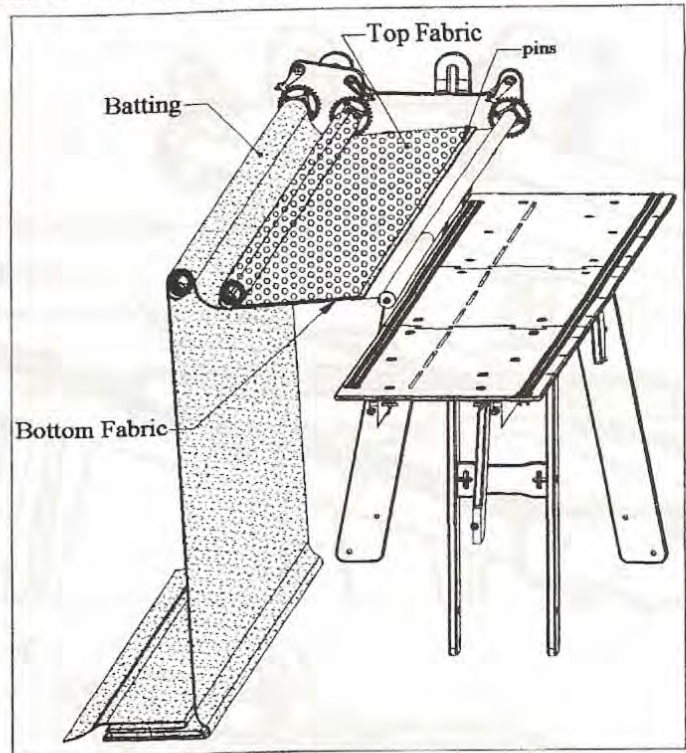
- Place the 1/4” x 1 1/2” carriage bolt up through the bottom of the Table Top (left and right).
 - As it comes up through the table place the bolt through the slot of the Carriage Stop.
 - Then put a flat washer and wing nut on the end of the bolt and leave somewhat loose.
 - With your carriage rolling on its tracks, you can determine exactly where to put your stops.
- Place the flat side toward the carriage assembly (pointed side away).

STEP 4: REPLACING THE MIDDLE RAIL AND PINNING TOGETHER FABRIC

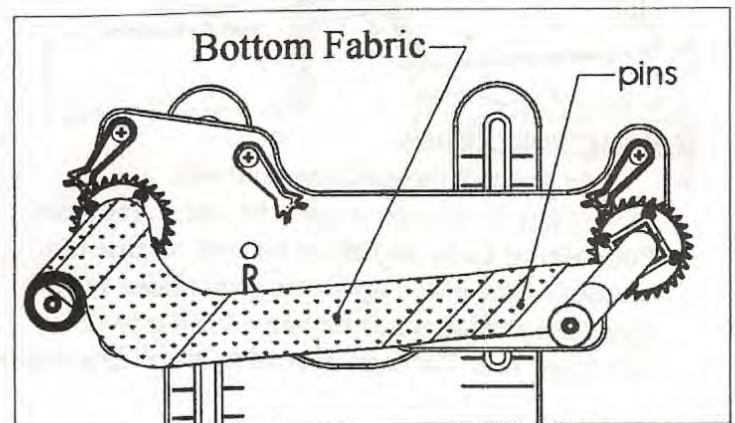
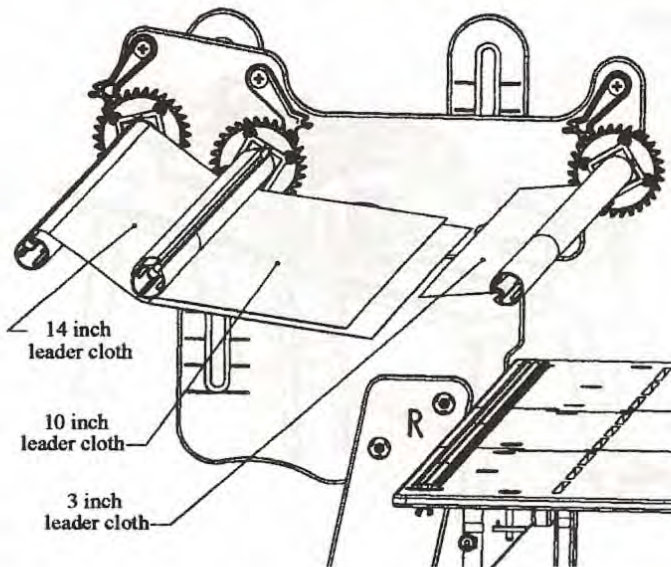
- Now insert the Middle Rail back into its place on the frame.
- Take the front edge of the top and align it over the batting, along the straight hem stitch of the backing.
- Pin the quilt top and batting to the backing along this straight hem stitch.

Method #2: Cloth Leaders

- This method is recommended when quilting a pieced top, or when you are not able to allow for extra fabric like you would in Method #1..
- You will follow the same general steps as in the previous method, except instead of using excess fabric to create a hem, you will sew a hem in separate cloth leaders for each rail using a good quality muslin or similar fabric that has a good thread count, but is not too thick so that it will slide freely into the rail.
- Make a cloth leader with the following dimensions: Back rail leader 14", Middle rail 10", Front rail 3". The other dimension should equal the length of the quilt (see illustration below).
- Sew along one length of each leader, leaving the edges open on both ends.
- Mark a straight line about one inch in from the loose end of the leader.



- Insert the dowels into this leader cloth, and insert both of these into a rail, leaving the stitched portion outside the rail.
- Now pin your quilt layer along the straight line.



Placing the Top and Bottom Plates onto the Table

- Place the Bottom Plate onto the top and bottom tracks with the narrow end on the top track. The groove in the wheel will line up perfectly on the center mound of the track.
- To confirm proper placement, look at the track eye-level and roll the plate back and forth. The plate should glide smoothly along the track and should sit perfectly level on the table.

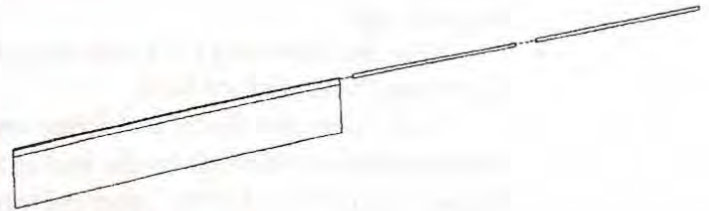
Method #1: Hemming Your Fabric

This method is the most time-saving and works ideally with quilt tops where you can allow for a few extra inches of fabric on each layer. The extra lengths required are as follows: Quilt Top: 15" (3" on the edge being attached to the front rail, and the remainder of extra fabric on the edge being attached to the middle rail); Quilt Bottom: 20" (3" on the edge being attached to the front rail, and the remainder of extra fabric on the edge being attached to the back rail).

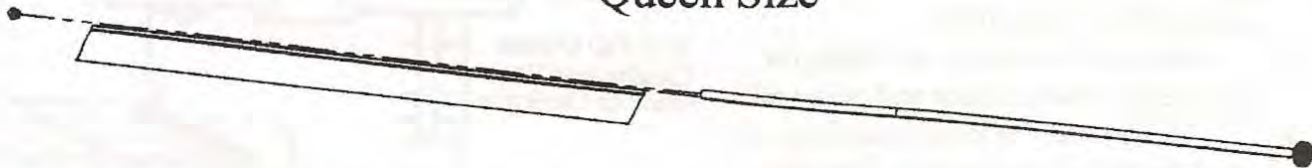
This will give you the extra length needed for the hem, and for bringing the quilt layers into your sewing area when you come to the end of your quilt.

STEP 1: QUILT TOP TO MIDDLE RAIL

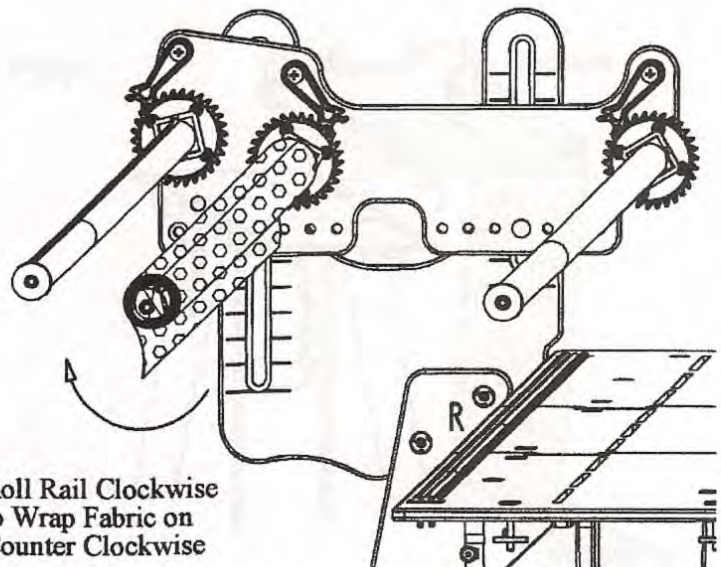
- To begin, determine the front and back edges of your quilt top (be sure it will fit within the size of your frame (crib or queen).
- Fold over the *back edge* of your quilt about 1" , with the right (finished) side of the fabric on the inside of the fold. **Be sure not to stretch or pull the fabric during this process.** Let it lay naturally.
- Stitch the fabric together 3/4" from the fold. This will leave about 1/4" of fabric beyond the stitching.
- Insert the wooden dowel(s) into the hem you have just created. Most quilts will require both dowels. NOTE: If your frame is set-up for crib size and your quilt is bigger than 48" in width, you will want to use both dowels, but you will need to *carefully* cut the second dowel so it will fit in the frame.
- Take the Middle Rail out of your assembled frame and remove the Ratchet Wheel and End Caps.
- Next insert the dowel and fabric end into the slot of the aluminum rail. Gently pull the dowel and fabric through to the end of the rail. Hold the fabric to prevent it from bunching up.



Queen Size



- With the right side of your fabric face up (or facing the table side of the frame), replace the End Caps and Ratchet Wheel, and place the rail back in its position on the frame.
- Release the Ratchet Stop to allow free rolling on the rail. Slowly and gently roll up your quilt top onto the Middle Rail. As you do, make sure the fabric rolls up perfectly natural without wrinkles.
- **NOTE!** It is important that you roll the rail clockwise so the fabric rolls under and onto the rail. [As you smooth out any wrinkles, be very careful not to stretch or pull the fabric excessively.]



Roll Rail Clockwise
to Wrap Fabric on
Counter Clockwise

Sub-Assembly 13: Installing the Sewing Machine and Foot Pedal

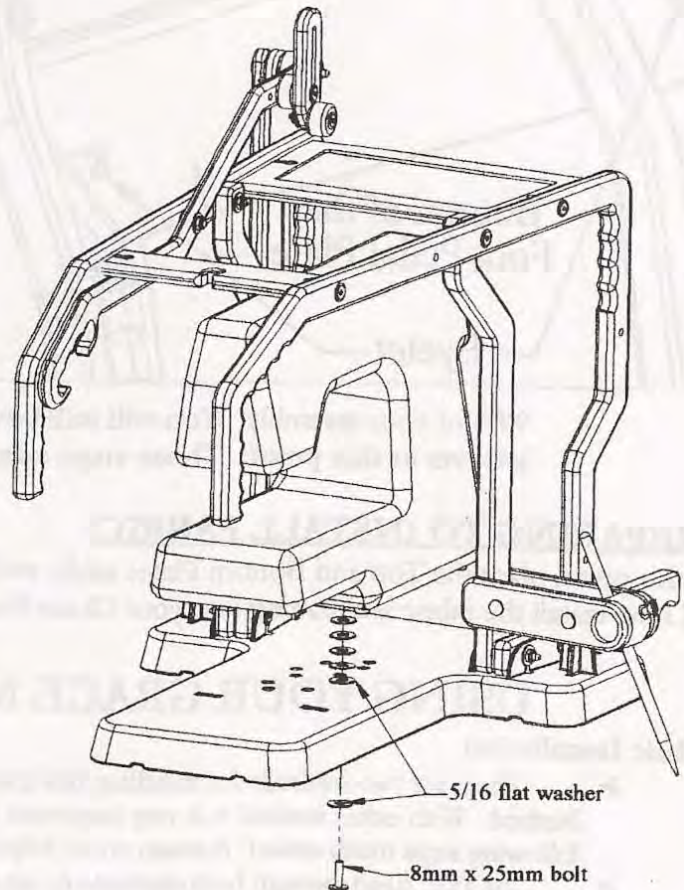
Parts Needed: 1 – Sewing Machine and Foot Pedal

1 – 8mm x 25mm Bolt

6 – 5/16" Flat washer

- **NOTE!** Before you install your machine to the top plate, it is a good idea to plug the power cord into your machine (but not yet into the wall).
- First install your sewing machine onto the Top Plate using the 8mm machine screw provided. There are several holes in the Top Plate you can use to connect your machine. Choose one that reasonably centers your machine on the Top Plate.

NOTE! Almost all sewing machines have a threaded hole on the machine's underside. However, some machines do not have a hole that fits the 8mm bolt provided, and some do not have any hole at all. If your machine has a different size hole you will need to find bolt locally that will fit your machine. If your machine does not have any hole, you can simply center your machine on the Top Plate unattached (you may also fasten it with nylon ties, tape or other methods that won't drag against the fabric).



- Thread up to five flat washers onto the machine bolt (you may not need all five washers as spacers depending on the size of the feet on your sewing machine. You want just enough washers to fill the gap between the bottom of the machine and Top Plate).
- Thread the bolt through the Top Plate and into the hole in your machine. As you tighten this bolt with a socket wrench, **avoid over-tightening as this will cause the Top Plate to bow slightly, and not roll smoothly.**
- Place your sewing machine's foot pedal onto the Foot Pedal Platform of the Carriage Assembly. Adjust the Pedal Clamp so that the round spacer touches the raised end of the foot pedal.

Tips:

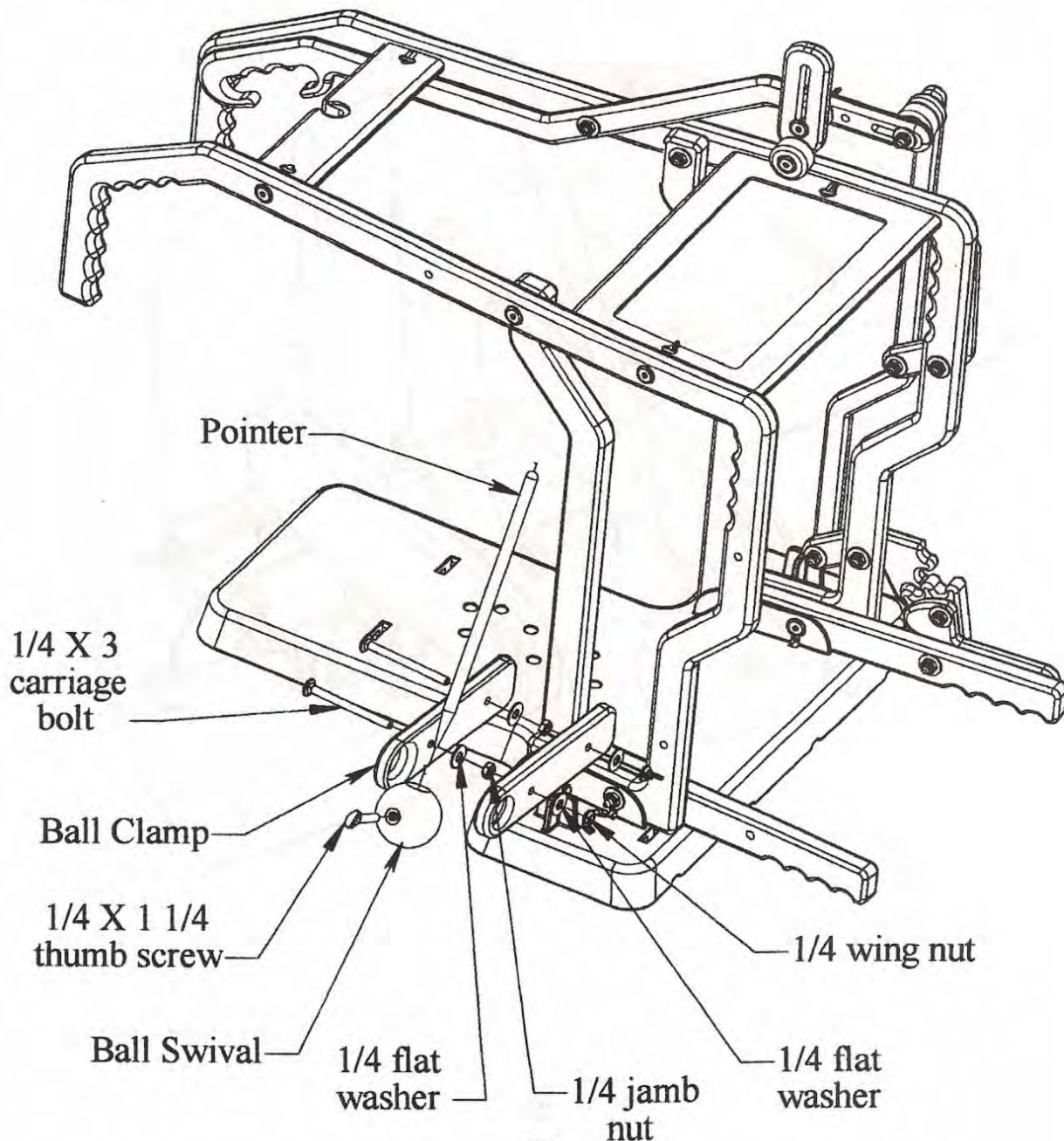
- The moveable joints in the Carriage Assembly can sometimes stiffen due to humidity and other factors. If this happens it is recommended that you lubricate all the pivot points with Teflon based dry lube product. **Be sure not to use a silicon based lubricant and do not use WD-40. These will worsen the problem.**
- Along with the use of dry lube, you may also want to loosen all the nylock nuts and readjust their tightness.
- Some sewing machines have foot pedals with weaker springs that don't push the pedal back up all the way when you release the trigger. If this happens, you may give your trigger an extra nudge as you release so that it completely removes the Pedal Clamp from your foot pedal.

Sub-Assembly 12: Assembling and Attaching the Stylus

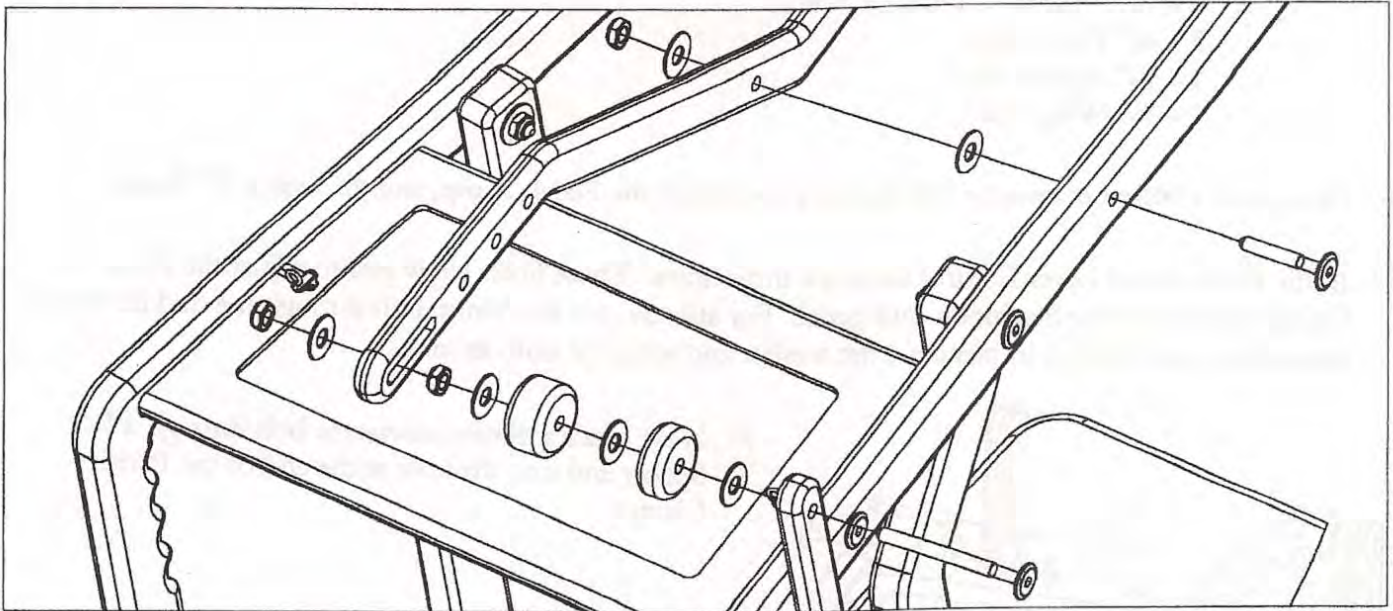
- Parts Needed: 1 - Ball Swivel \$3.00
2 - Ball Clamp \$3.00 ea = \$6.00
2 - 1/4" x 3" Carriage Bolt
4 - 1/4" Flat washer
2 - 1/4" Wing Nut
2 - 1/4" Jamb Nut
1 - 1/4" x 1 1/4" Thumb Screw
1 - Pointer \$1.00

Replacement Customer \$11.00
New Customers \$22.00

- First place two 1/4" x 3 carriage bolts into the two 1/4" holes of one Ball Clamp.
- Place a flat washer on the end of each bolt and then thread a jamb nut onto each bolt as well.
- Completely tighten these jamb nuts using a socket wrench.



- Place a flat washer on the end of the 70mm connector bolt, followed by the 1/2" Spacer, another flat washer, the 3/4" POCKETED Spacer (with the pocket facing away from the 1/2" Spacer), another flat washer, and a nylock nut. This washer and nylock nut will go into the pocket of the 3/4" Spacer. Tighten the nut completely.



- Now put the Front Speed Control Lever onto both bolts: place the slotted end onto the 70mm bolt and the middle hole onto the 40mm bolt.
- Put a flat washer and nylock nut onto the end of the 40mm bolt and tighten. Then un-tighten as done to previous nylock nuts.
- Finally, place a flat washer and nylock nut onto the end of the 70mm bolt. Tighten and then slightly un-tighten the nut.
- NOTE: The Front Speed Lever Control should be loose enough to slide back and forth freely against the pocketed spacer.

Sub Assembly 7: Attaching the Lever Linkage

Parts Needed: 1 – Lever Linkage

2 – 1/4" x 35mm Connector Bolt (shortest)

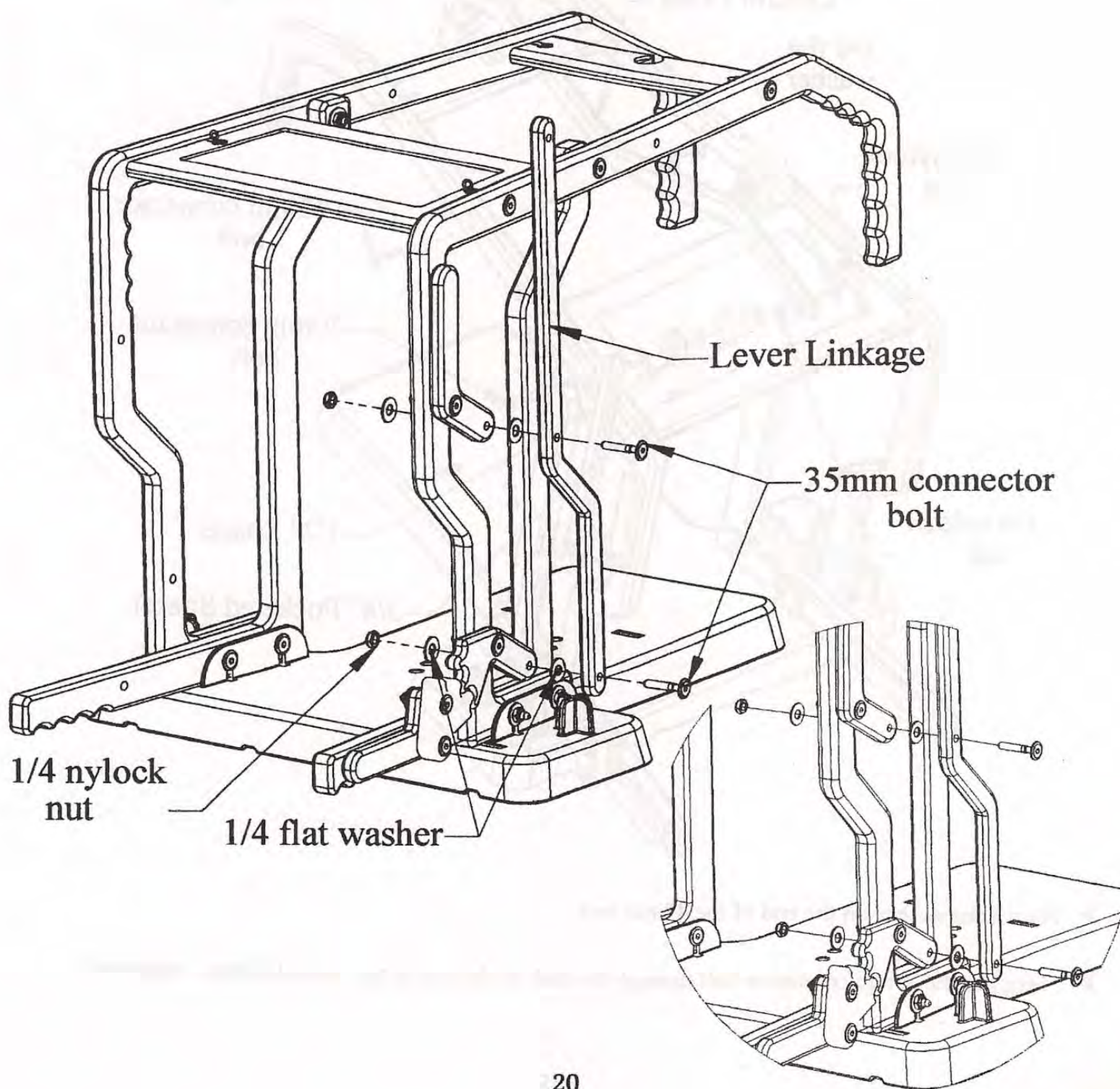
4 – 1/4" Flat washer

2 – 1/4" Nylock Nut

NOTE: Before connecting the Lever Linkage, make sure the shorter "leg" (before the diagonal slant) of the Linkage is down, and the longer "leg" is up).

- Place two 35mm connector bolts through the bottom and middle holes of the Lever Linkage.
- Next, place a flat washer on the end of each bolt.
- Now put the bolts through the end holes of the Rear Upper and Lower Speed Control Levers.
- Place a flat washer and nylock nut on the end of each bolt and tighten.

NOTE: Tighten these nylock nuts just enough to hold the washer against the wood, but loose enough to allow it to turn with your finger.

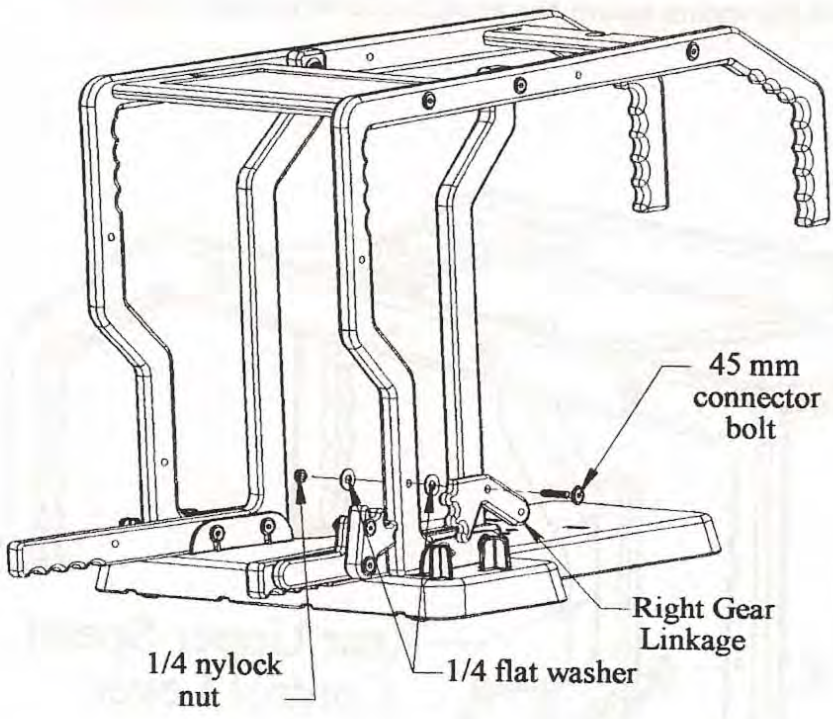


*"Dry Lube"
Teflon Based*

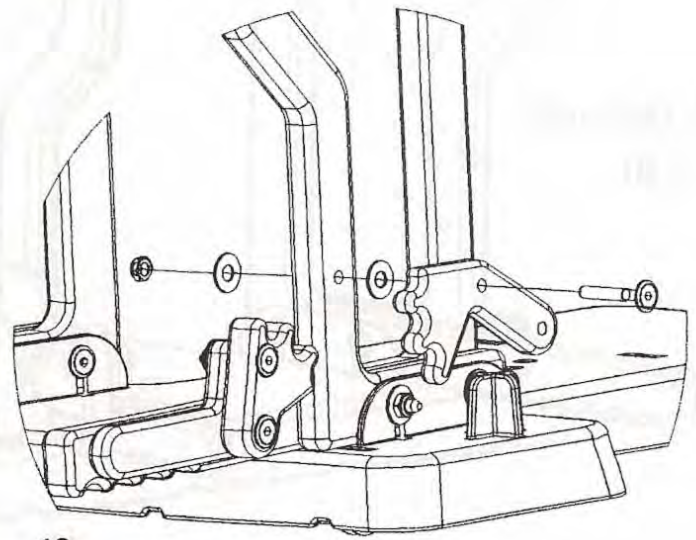
Sub-Assembly 7: Attaching Right Gear Linkage

- Parts Needed: 1 – Right Gear Linkage
1 – 1/4" x 45mm Connector Bolt
2 – 1/4" Flat washer
1 – 1/4" Nylock Nut

- Place the Right Gear Linkage onto the 45mm connector bolt as pictured.
- Put a flat washer on the end of the bolt coming through the gear.
- Next place the remaining end of the bolt through the hole in the Right Main Handle.
- With the end of the bolt coming through the Right Main Handle, secure it by placing a flat washer and nylock onto the end of the bolt, and tighten



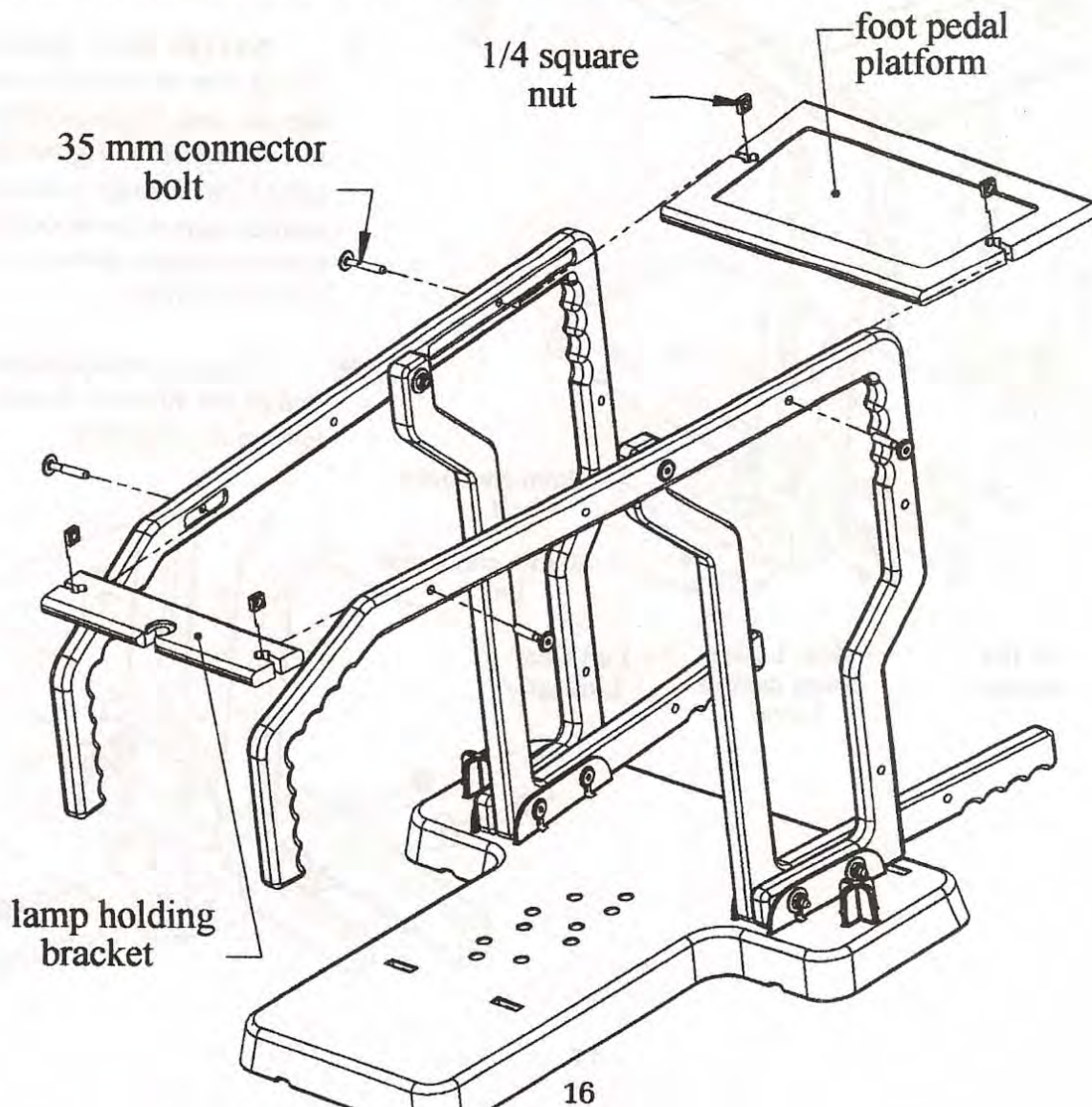
- **NOTE:** Tighten this nylock just enough to hold the washer against the wood, but loose enough to allow it to turn with your finger.
- **NOTE:** Be sure the teeth on the gear linkages stay lined up with each other. If they slip out of alignment, the carriage assembly will not function properly. (see illustration on next page for proper "alignment" of teeth).



Sub-Assembly 5: Attaching Platform and Bracket

Parts Needed: 1 – Foot Pedal Platform
1 – Lamp Holding Bracket
4 – 1/4" x 35 mm Connector Bolts (shortest)
4 – Square Nuts

- First push the four square nuts into their slots, two on the Foot Pedal Platform, and two on the Lamp Holding Bracket (this will be a tight fit). To help them seat completely, you can turn the platform/bracket over and use a desk or table top to finish pushing them in.
- With the square nut hole lining up with the bolt hole, put the Platform and Bracket into place as pictured (the hole in the Lamp Holding Bracket should be facing toward the outside, with the cutout facing up).
- Thread the 1/4" x 35 mm bolts through the handles and into the square nuts..
- Follow this process in attaching the Lamp Holding Bracket. As you do, be sure the hole in the Lamp Holding Bracket is facing outward with the washer ring side up (see diagram).



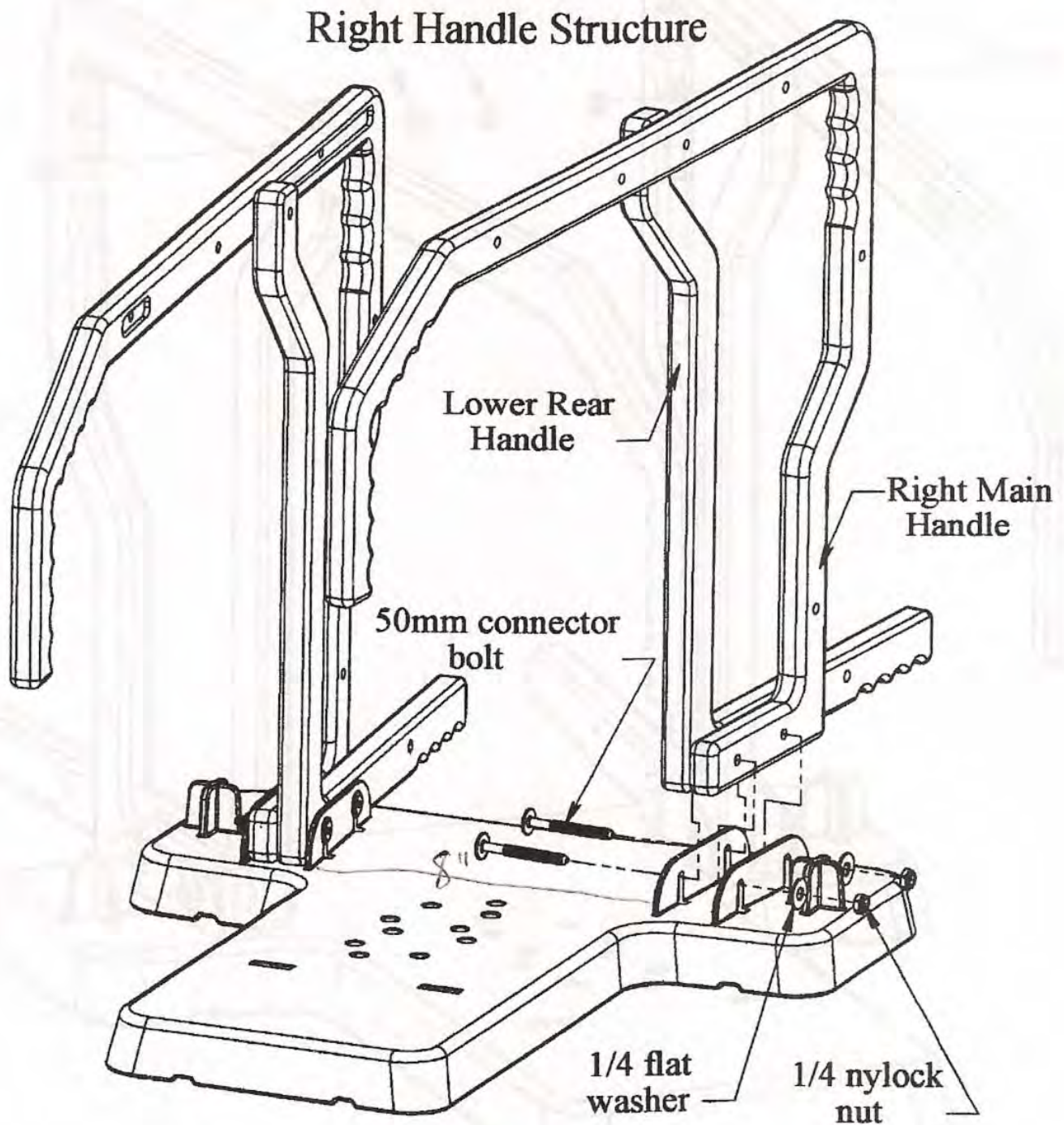
- 2 – 1/4" x 50mm Connector Bolt
- 2 – 1/4" Flat washers
- 2 – 1/4" Nylock Nut

➤ Pair the Right Main Handle and Lower Rear Handle together as pictured. With the Right Main Handle on the outside, line up the holes at the bottom and place the inside the walls of the Top Plate.

➤ Insert 50mm connector bolts into the inside wall, through the handles and out the other wall.

➤ Place a 1/4" flat washer and 1/4" nylock nut on each bolt.

➤ Completely tighten the nylocks on both bolts.

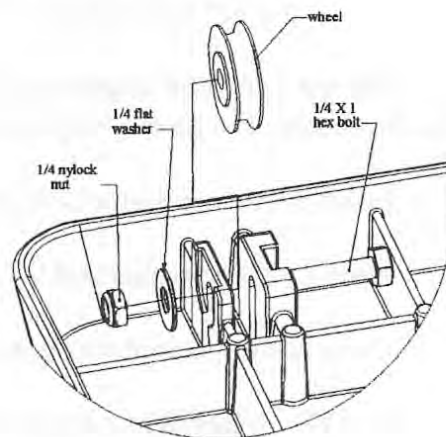


- **Note:** You have now completed the frame portion of your Grace Machine Quilter. **If you assembled your frame in the crib size, do not be concerned that you have extra hardware.** Keep these in the baggy and save them for future use.
- **Before proceeding, take the hardware packet marked “C” and remove the hardware.** We recommend that you stand up all the flat-head connector bolts in line and put them in order of size. This will help you distinguish them as you move through each step, as many sizes are very similar.

Carriage Sub-Assemblies

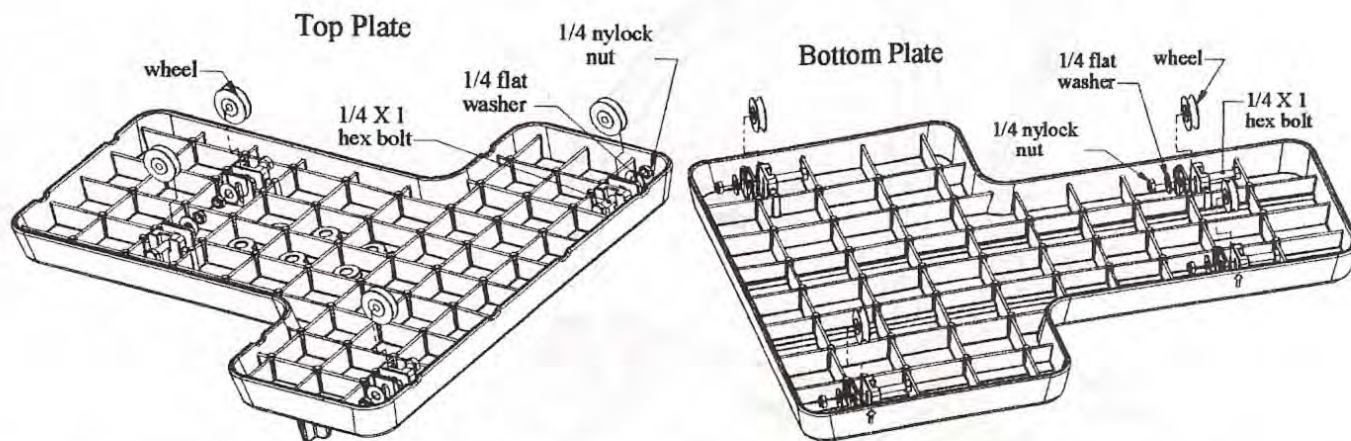
Sub Assembly 1: Wheels to Top and Bottom Plates

Parts Needed: 1 – Top Plate
 1 – Bottom Plate
 8 – Wheels
 8 – 1/4" x 1" Hex Bolt
 8 – 1/4" x Flat washers
 8 – Nylon Lock Nut



Close Up of Wheel Assembly

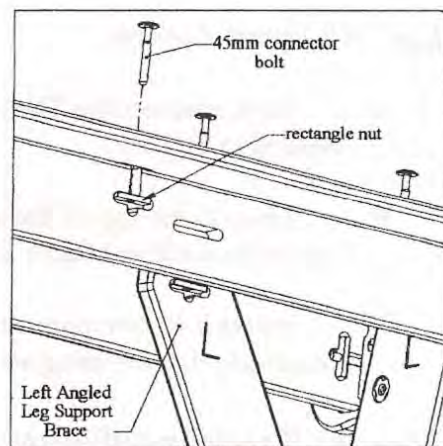
- **NOTE!** The bolts and wheels may be a tight fit going into the platform.
- First, turn the Top and Bottom Plates upside down. Each plate has four places for wheels to be installed.
- The hardware for this step is found in the separate hardware packet marked with an “C”.
- To install a wheel you need a 1/4" x 1" hex head bolt, a 1/4" flat washer and a nylon lock nut.
- Identify the slots where the wheel will sit. There is a bolt wall and a washer wall surrounding this slot. Using the diagram as a guide, place a hex head bolt into the hole on the bolt side of the slot.
- Push the bolt through the hole, through the wheel, and through the hole on the opposite wall.



- Place a washer on the end of the bolt. At this point you need to turn the bolt head so it slips into place, lining up flush with the shape of the wall.
- Once done, place a nylon lock nut onto the end of the bolt and tighten it completely.
- Repeat this process for the other seven roller bearings. After each one is installed turn it to make sure it rotates with no problems.

Leg/Table Support Assembly

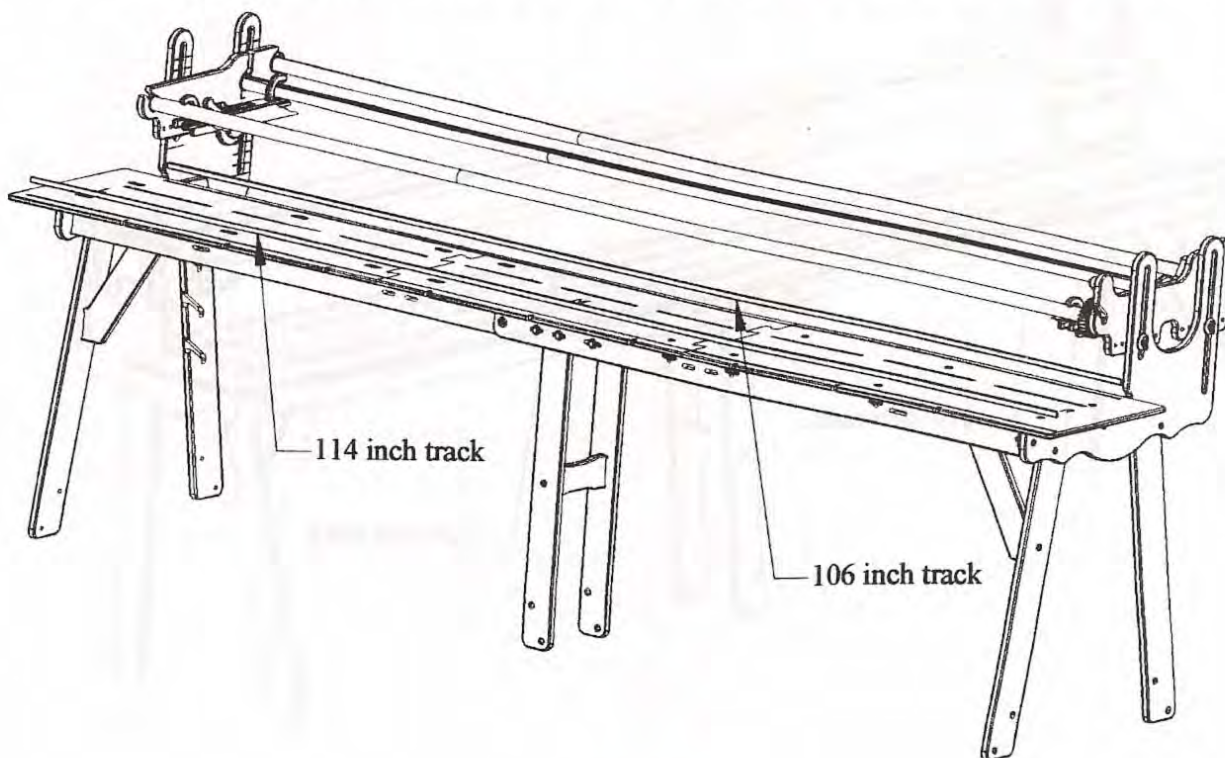
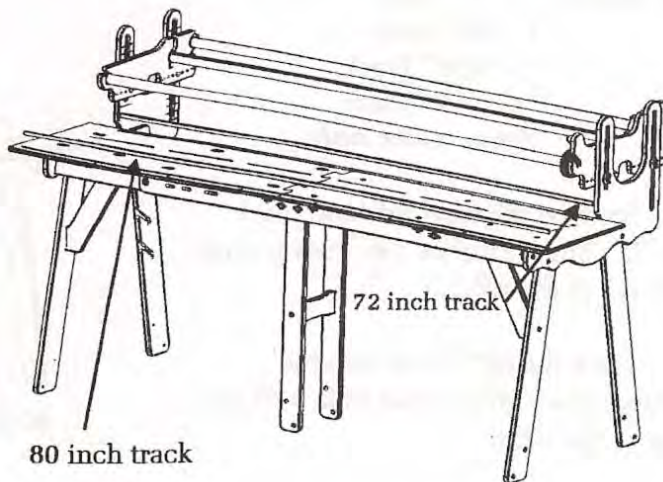
- Now connect the Table Tops to the Front Leg Support you installed in Step 10.
- Line up the top of the support brace with its corresponding hole in the Left and Right Table Sides.
- Insert a 45 mm connector bolt and rectangle nut and completely tighten using an Alan wrench.



Step 14: Track Installation

Parts Needed: 1 - 72" Track
1 - 80" Track
*1 - 106" Track
*1 - 114" Track
**queen size only*

- Start on the right side and place the 72" Track into the top track groove (closest to the rails).
- Place the 80" Track into the bottom track groove and slide it all the way to the right.
- **If you are doing the queen size assembly, Start on the right side and place the insert ^{the} one 106" Track into the top track groove (closest to the rails). Next Place the 114" Track into the bottom track groove and slide it all the way to the right.*



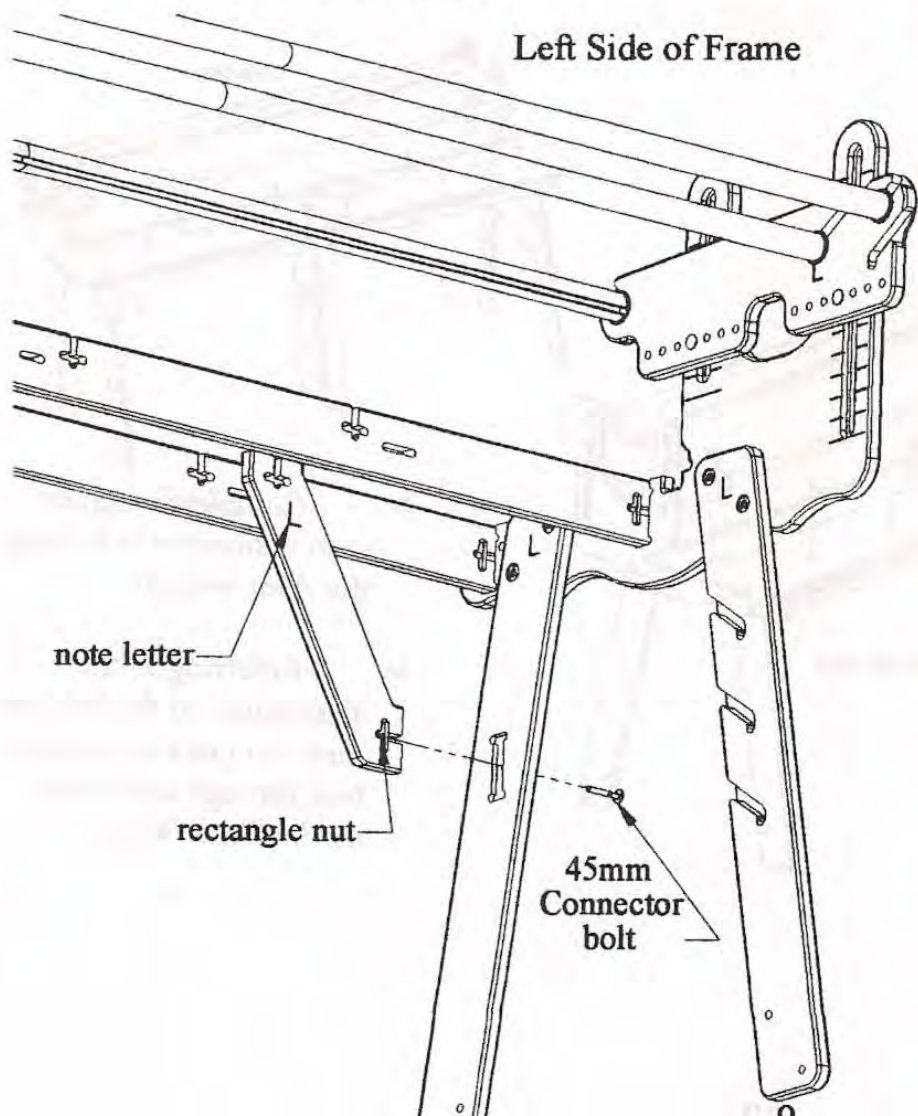
- **With the rails now in place it is time to adjust the frame to the rails.** This adjustment will only work if you have left the bolts loose that connect the Braces and Center Legs. If they are tight, you must loosen them at this point.
- Standing at the Left End of the frame, push the frame all the way in so there is no gap between the end of the rail and the End Piece.
- Check each rail to make sure they fit snugly with no gaps into the end pieces. **They should still be able to roll freely.**

NOTE! As you tighten the bolts connecting the braces, be sure the brace pieces are aligned with each other so that there is no sagging. You may eye sight along the top edge to confirm straightness.

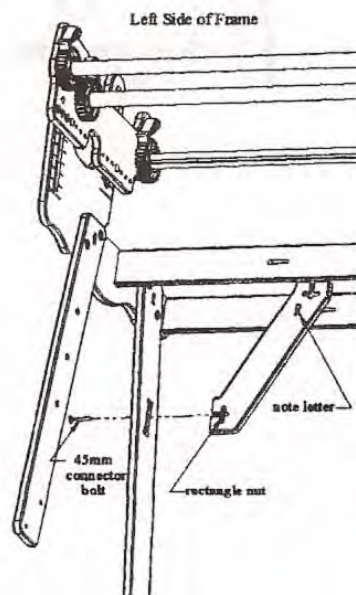
- Also tighten the bolts that attach the Center Leg support assembly, making sure they are properly set to hold up the table.
- **NOTE!** Be aware that as you apply the table tops (in step 13), it may be necessary to readjust the braces so that holes line up.

Step 12: Right and Left Angled Leg Brace Assembly

Parts Needed: 1 – Right and Left Angled Leg Brace
 2 – 1/4" x 45 mm Connector Bolt
 2 – Rectangle Nuts
 1 – Alan Wrench



- Connect the right and left Angled Brace to the Front Legs of the frame by putting a 45mm connector bolt through the front leg and into the slot in the Angled Brace.
- Put a rectangle nut in the cross slot in the brace and thread the bolt through it.
- Tighten the connector bolt using the Alan wrench.
- You will attach the top of the angle brace to the table top in the next step.



Step 9: Ratchet Wheel to Rail Assembly

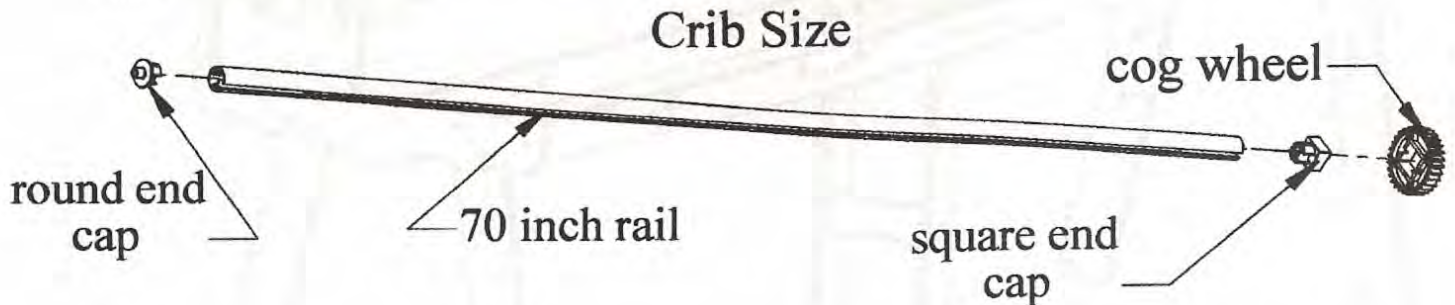
Parts Needed: 3 or 4* Round End Caps

3 or 4* Square End Caps

3 – Ratchet Wheels

**Needed with Optional Fourth Pole*

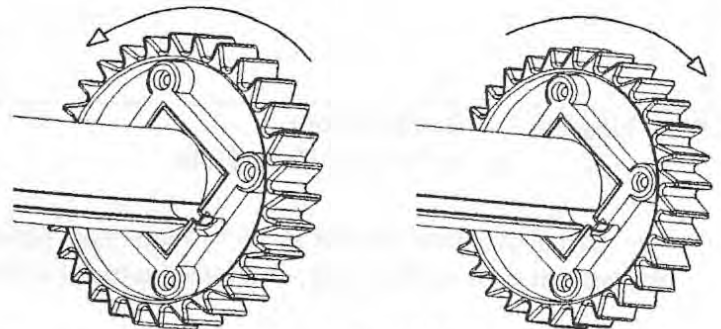
- Complete the rail by adding a rail cap on each end. The square end cap goes on the right end along with the ratchet wheel. The round end cap goes on the left side (opposite the ratchet wheel). Line up the smaller end of the cap so the grooves match those on the rail and push the cap into the rail until it is set in place.
- **NOTE:** The end caps may be a little tight at first. It may help on this first assembly, to put the end caps in place and completely seat them by driving the end of the rail onto a carpeted floor a couple of times.



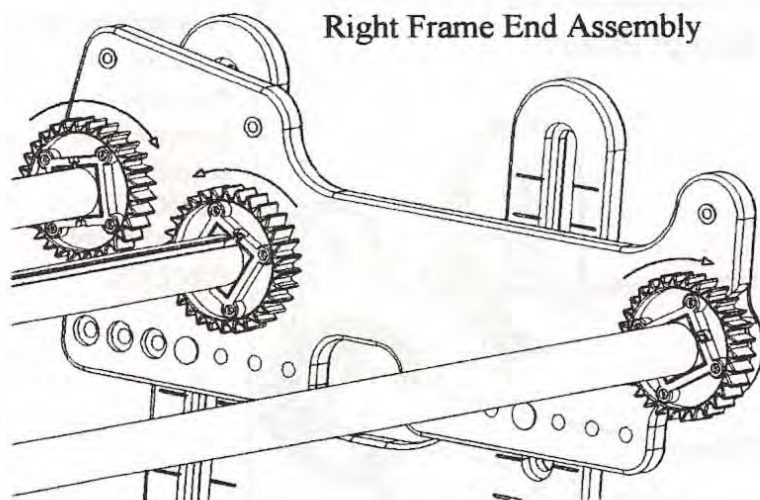
- Now add the black ratchet wheel over the square pole cap on the right end of each rail (no ratchet wheel goes on the optional Fourth Pole assembly). Line up the notches on the Ratchet Wheel with the nubs on the square end caps.

NOTE! Pay close attention to the tooth direction:

1. The ratchet wheel teeth on the two outside rails face toward the table side of the frame, while the ratchet wheel on the middle rail is the opposite.



2. To be sure about tooth direction, you can double check the fit of the ratchet wheel with its ratchet stop once it is assembled (see illustration bottom of next page).



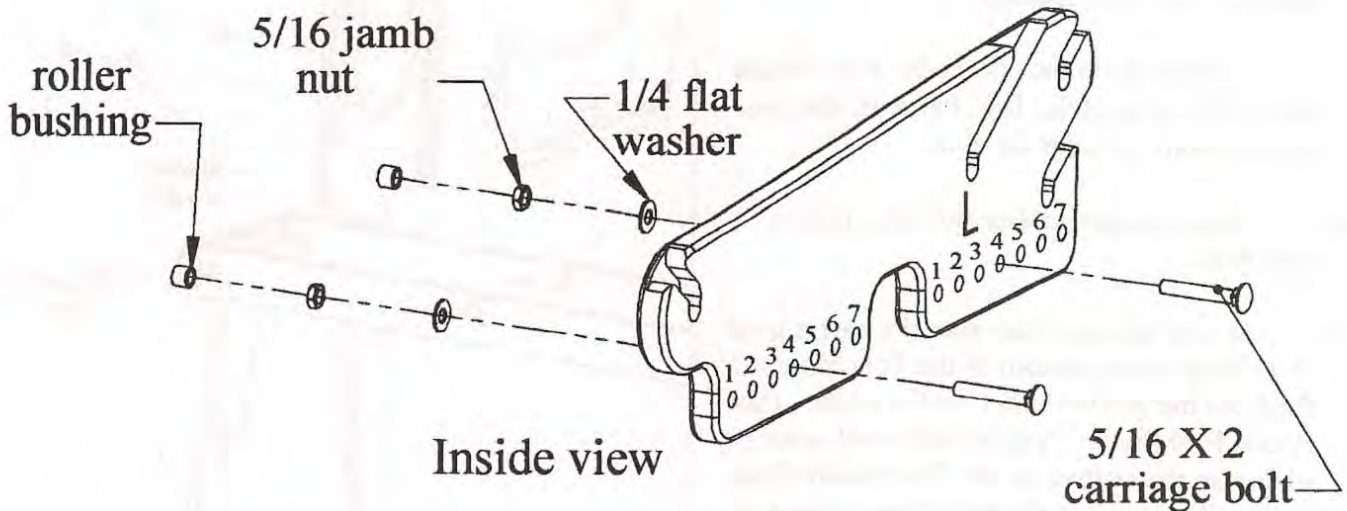
- Now put the rails into the frame. This illustration shows the frame from the table side, right end. The rails will simply slide into place as you put them into the proper grooves.

- See diagram on page 33 for placement of the fourth pole into the frame.

Step 6: Pole Mount End Hardware Install

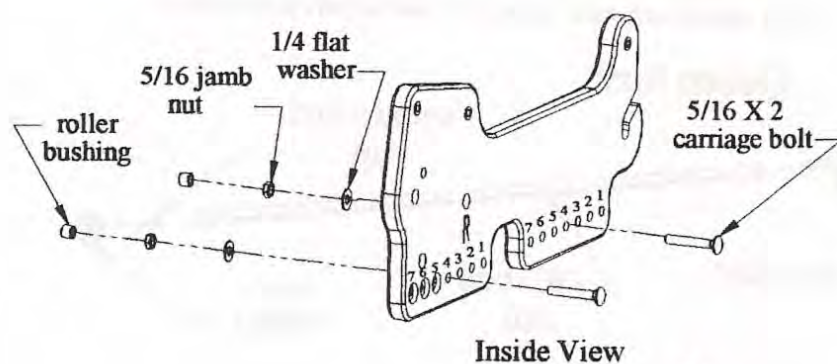
Parts Needed: 1 – Right Pole Mount 1 – Left Pole Mount
 4 – 5/16" x 2" Carriage Bolts 4 – Roller Bushings
 4 – 1/4" Flat Washers 4 – 5/16" Jamb Nuts

Left Pole Mount End



- The Pole Mount Ends are designed to be adjustable both for height and front to back positioning.
- As you install two carriage bolts into each of the Left and Right ends, keep in mind the following:
 1. Be sure the bolts are put through the Pole Mount Ends so the heads show on **the inside of the part**.
 2. **Each carriage bolt can be placed in one of seven *matching* holes.** (i.e. If the front bolt is placed in hole #1, the back bolt must also be placed in hole #1).
 3. A good average setting for front-to-back rail positioning is achieved by placing the two carriage bolts in the center (#4) holes (each in the hole fourth from the front). This is based on a machine with a throat length of about 7 inches.
 4. Depending upon the machine you may later want to reposition the rails by placing the bolts in different holes. A good rule of thumb is *the bigger the throat of the machine, the closer the bolts should be to the front (holes #1, #2 etc.)*

Right Pole Mount End



5. The jamb nuts should be completely tightened with a wrench.
6. The nylon roller bushings should be placed on the bolts after the jamb nuts are tightened. The roller bushings will fit loosely on the bolt.

Step 3: Brace to End Assembly

Parts Needed: Left Frame End Assembly

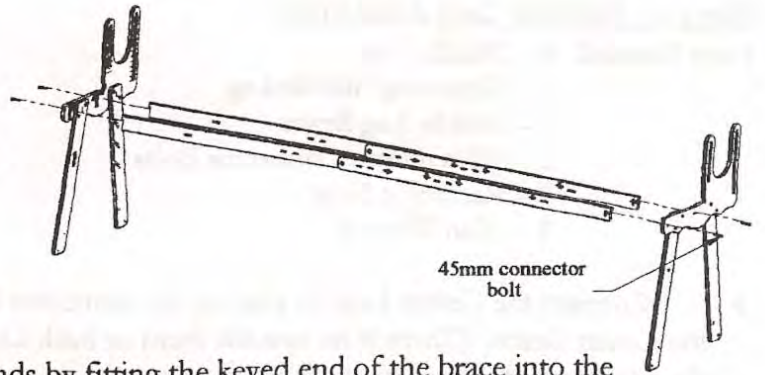
Right Frame End Assembly

Two Brace Assemblies

4 – 1/4" x 45mm Connector Bolts (longer)

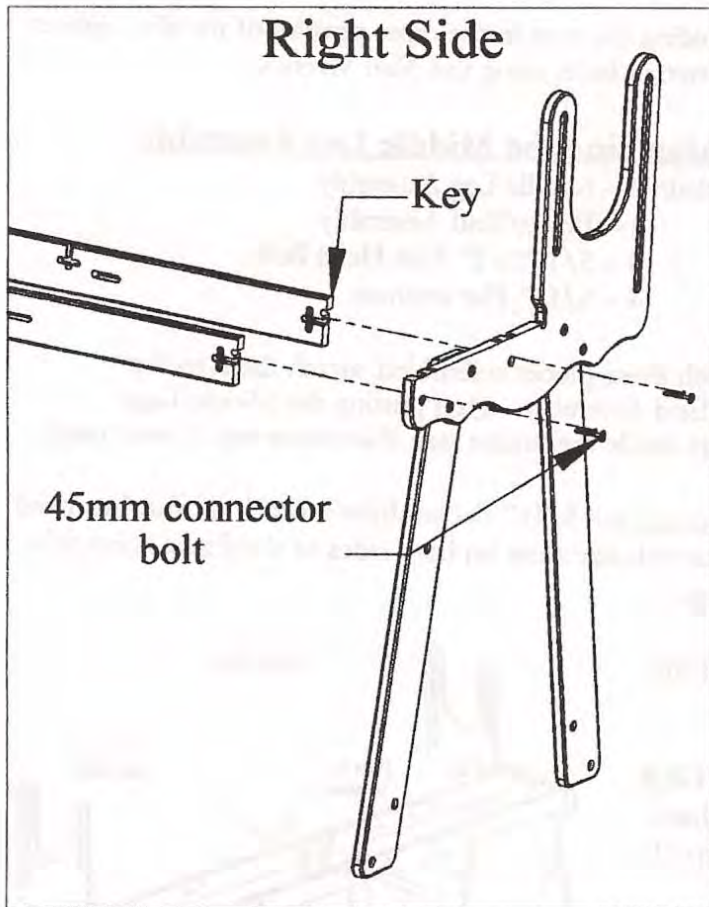
4 – Rectangle Nuts

1 – Alan Wrench



45mm connector bolt

- Connect the brace to the Left and Right Ends by fitting the keyed end of the brace into the slots of the Frame Ends. Line up the Frame End holes with the opening in the brace. (Remember to keep the brace's keyed end up).
- Push a connector bolt through the Frame End hole and into the open slot of the brace.

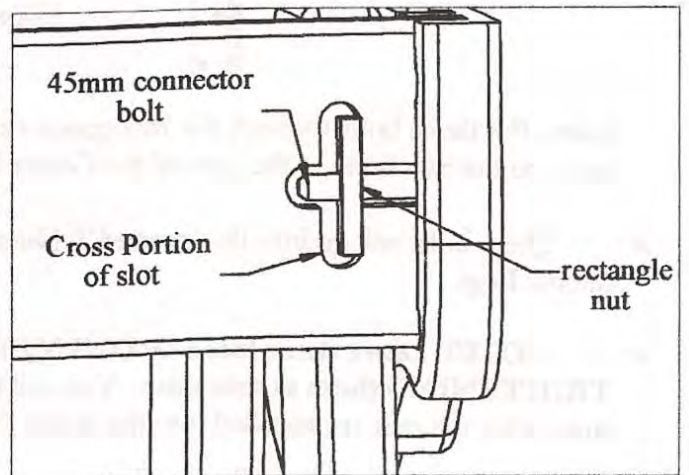


Right Side

Key

45mm connector bolt

- Thread a rectangle nut onto the end of the bolt, so that it rests in the cross portion of the slot (see close-up below right).
- Using an Alan Wrench tighten the connector bolt, holding the nut in place.
- Repeat this process to connect the remaining three brace ends.



45mm connector bolt

Cross Portion of slot

rectangle nut

Instructions For Assembly & Use

Before You Begin

➤ Using the parts list as a reference, take the parts out of both boxes and make sure that you have them all. (If there is something missing or broken, contact the Grace Company. We will promptly ship any needed item).

NOTE: The dowels are packaged inside the aluminum rails.



"This is a new product! We welcome your feedback on this product or these instructions. If you encounter a problem during assembly or use of the Grace Machine Quilter, and you can't seem to overcome it, call us before frustration sets in! 1-800-264-0644." --Grace

NOTE! Read each step all the way through before actually assembling parts in that step.

➤ Identify Hardware Packets:

--Main Hardware Packet (M)

--Carriage Assembly Hardware Packet (C)

➤ For ease in identifying bolts, keep the "C" packet sealed until you work on the Carriage Sub-Assemblies.

➤ Because the connector bolts are so close in length, to assist in distinguishing the different sizes, we recommend standing them on end and grouping them according to length.

Tools Needed

➤ Alan Wrench (Provided for use with all connector bolts)

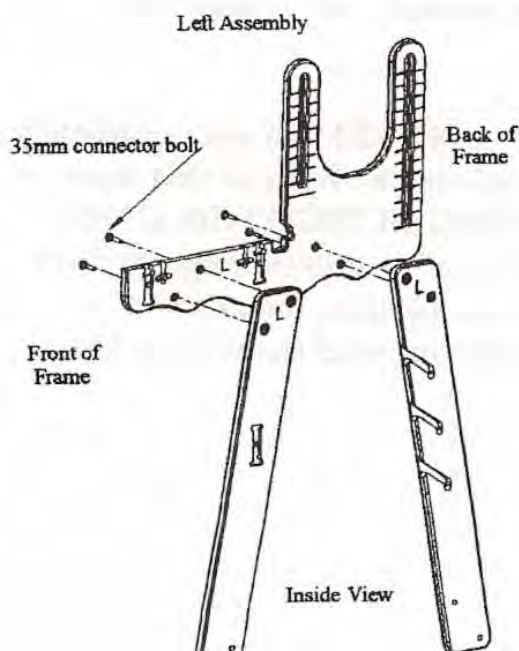
➤ 1/2" Socket or Combination Wrench

➤ 7/16" Socket or Combination Wrench

Note: To help you distinguish wood parts, all end pieces are marked with an "L" or "R" grooved into the wood on the inside of the part.

Step 1: Attaching Legs to Frame Ends

Parts Needed: 1 - Left Front Leg 1 - Left Frame End
1 - Left Back Leg 1 - Right Frame End
1 - Right Front Leg 1 - Alan Wrench
1 - Right Back Leg
8 - 1/4" x 35mm Connector Bolts (shortest)



➤ The Right Frame End will be connected to the *outside* of the two right legs using two connector bolts each.

➤ Line up the front and back legs to the Right Frame End.

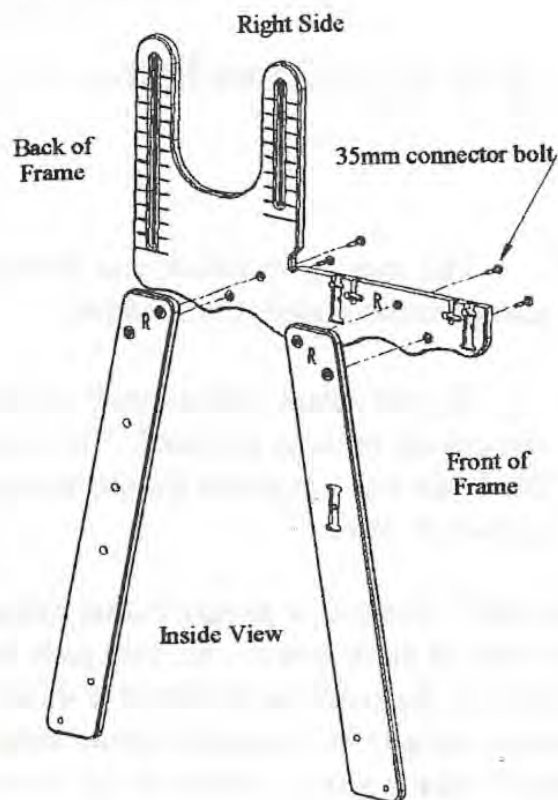
NOTE: be sure the "R's" are all facing the same direction.

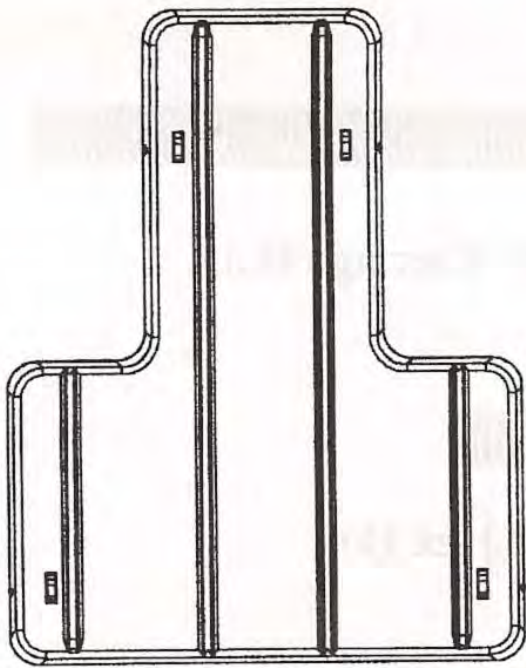
➤ Place the connector bolts through the holes from the outside of the Frame End.

➤ Thread the bolts into the legs. The leg holes contain a metal insert that will receive the threaded bolt.

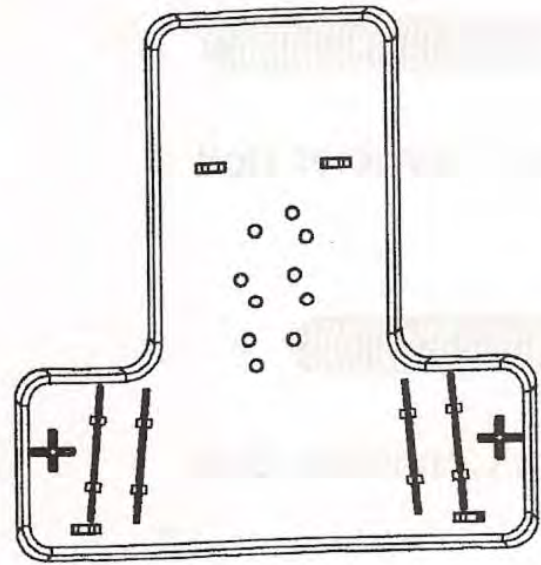
➤ Using the Alan Wrench, tighten the Connector Bolts in all four bolts.

➤ Repeat this process for the Left Frame End.

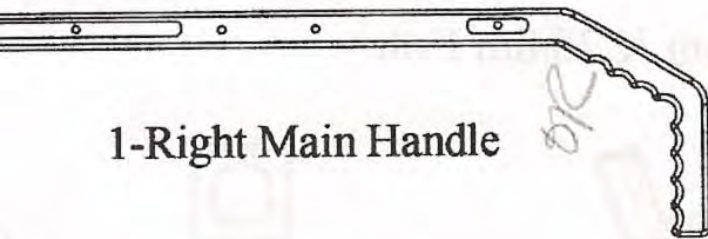




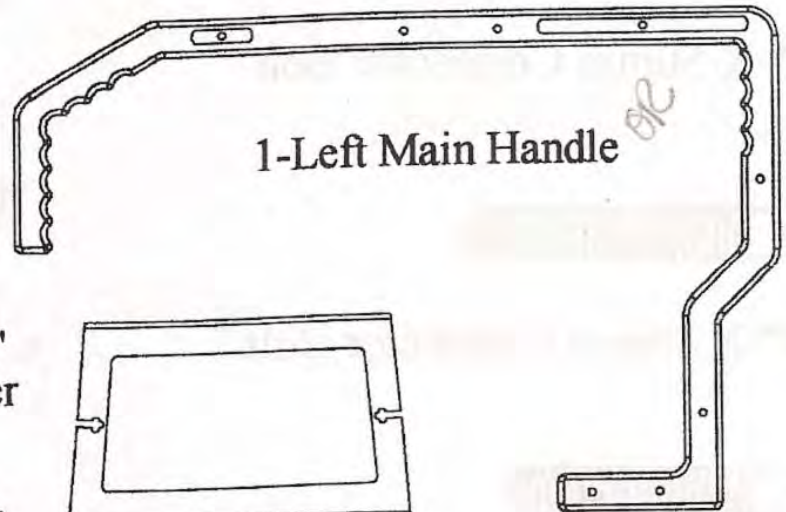
1-Bottom Plate



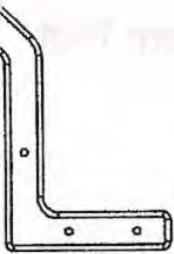
1-Top Plate



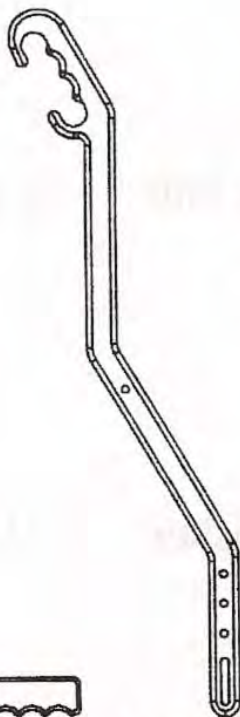
1-Right Main Handle



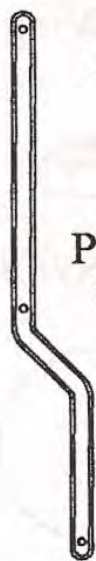
1-Left Main Handle



2-Lower Rear Handle



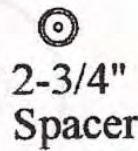
1-Front Speed Control Lever



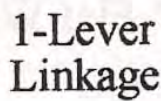
1-1/2" Spacer



1-3/4" Pocketed Spacer



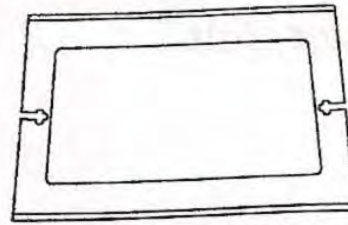
2-3/4" Spacer



1-Lever Linkage



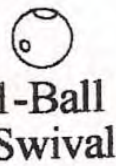
2-Ball Clamp



1-Foot Pedal Plate



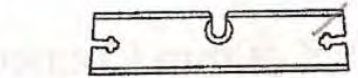
1-Right Gear Linkage



1-Ball Swival



1-Left Gear Linkage



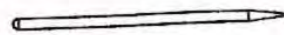
1-Lamp Holding Plate



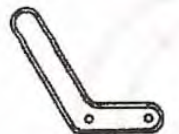
1-Rear Lower Speed Control Lever



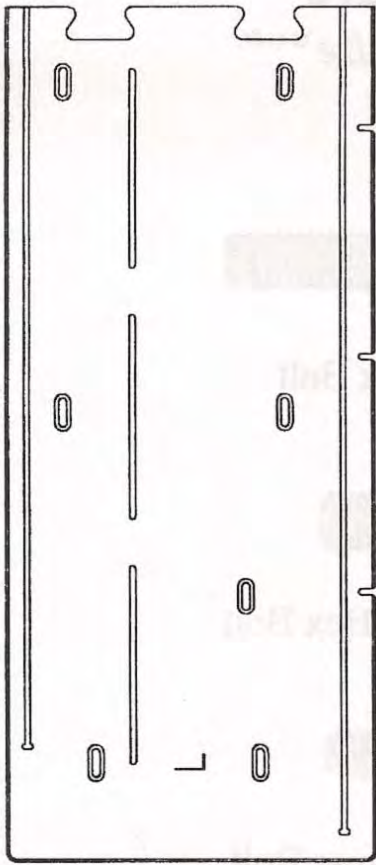
1-Pedal Clamp



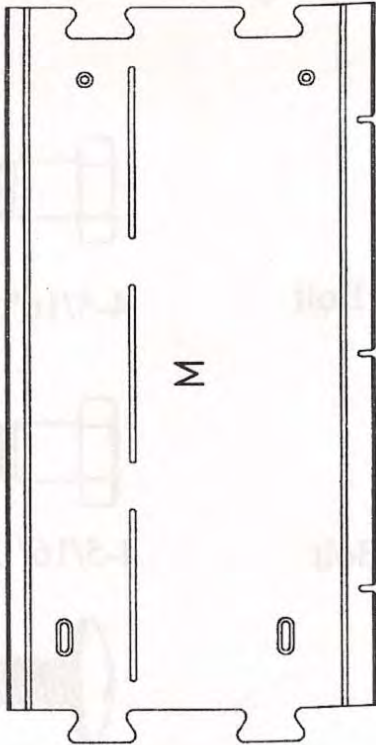
1-Pointer



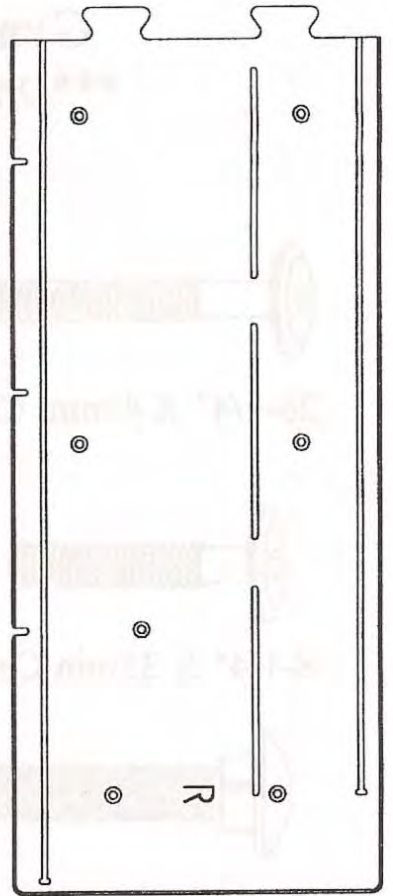
1-Rear Upper Speed Control Lever



1-Table Left Side



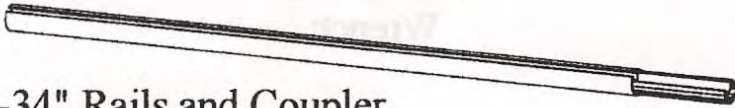
1-Table Middle Section



1-Table Right Side



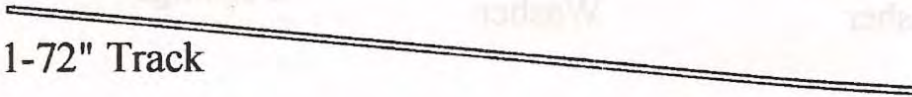
3-70" Rails



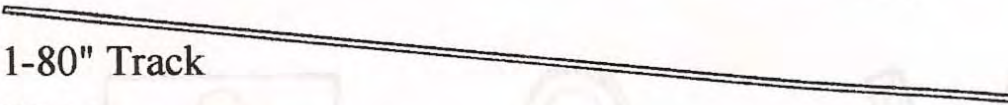
3-34" Rails and Coupler



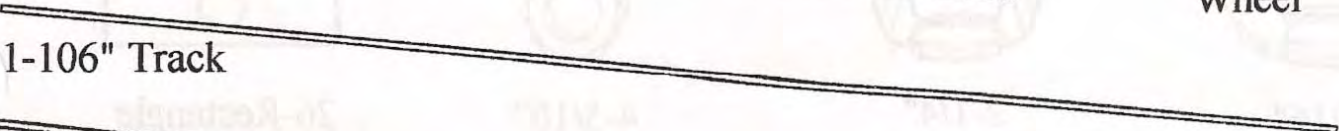
3-100" Plastic Tubing



1-72" Track



1-80" Track



1-106" Track



1-114" Track



3-Round End Cap



3-Square End Cap



3-Cog Wheel



3-Ratche Stop

The Grace Machine Quilter

1/4" Cont Track

Assembly Steps:

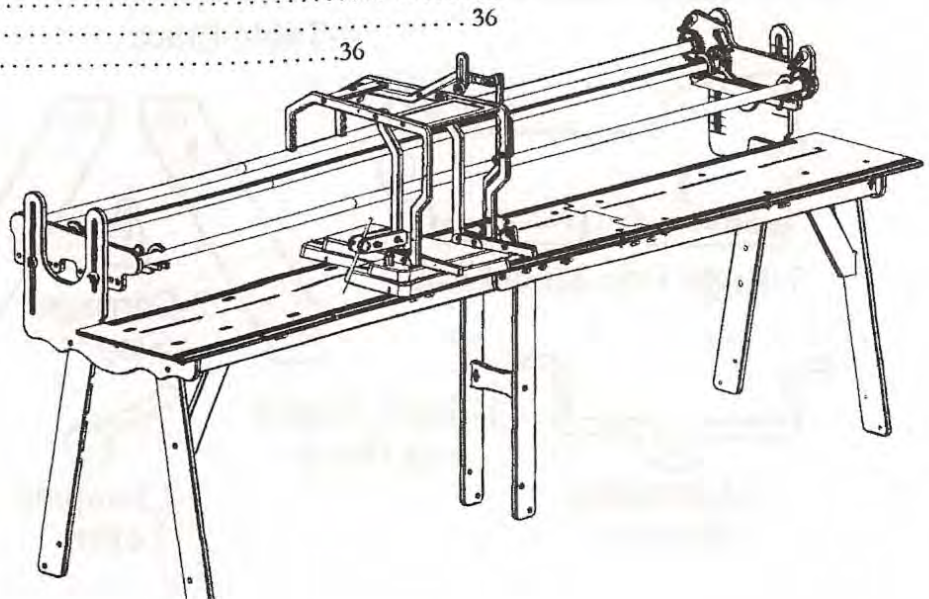
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Patent Pending
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