

## Clemes & Clemes, Inc.

Maker of Spinning Wheels and Spinning Supplies

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Dear Customer,

Congratulations! You have just purchased the finest Kit Wheel available. Many hours have been spent designing and building a wheel which will provide you with many enjoyable hours of spinning. Before starting to assemble your wheel, please study the picture and enclosed sketch of the wheel. This will help you identify the parts and their location on the wheel.

Please read the assembly instructions all the way through before starting assembly. There is information at the end concerning staining and finishing the wheel. All of the parts in this kit were sanded with a medium grade sand paper. We have enclosed fine sand paper and recommend sanding all parts prior to assembly. All of the parts in this kit were pre-fitted before they left our shop. However, due to variations in temperature and humidity, some parts may require sanding for a proper fit.

Check the enclosed parts against the parts list. While we take every precaution to ensure complete packaging of each kit before shipment, mistakes can happen. If a part is missing, or if you inadvertently damage a piece during assembly, please request it by name for prompt shipment.

Should you have any question concerning the assembly or operation of this wheel, please feel free to contact us at the above address, phone number, or email.

Happy Spinning!

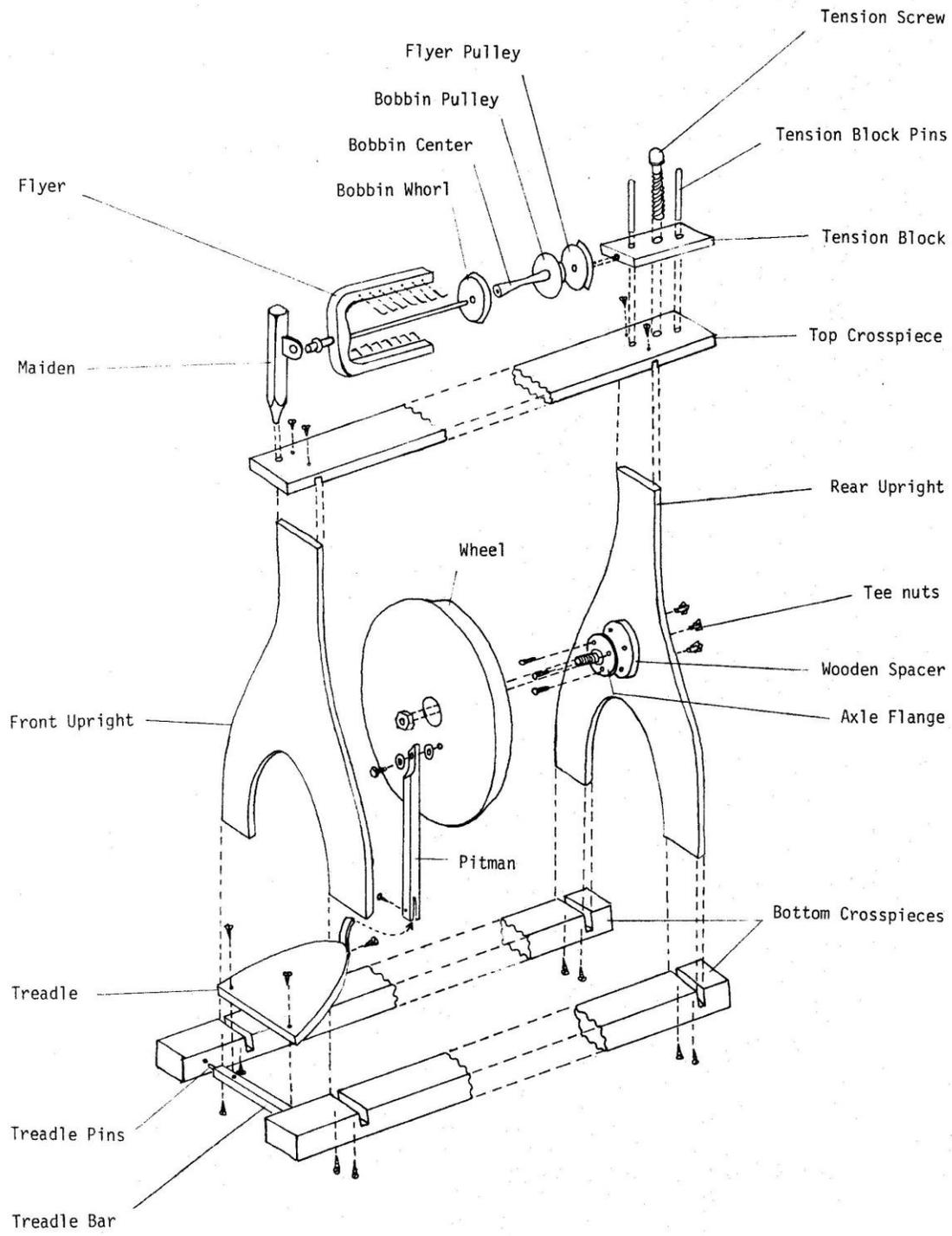
Henry Clemes

Clemes & Clemes, Inc.

## Parts list for the Clemes & Clemes Modern Wheel

| <u>Part Name</u>   | <u>Number Required</u> |
|--------------------|------------------------|
| Maiden             | 1                      |
| Flyer              | 1                      |
| Bobbin Whorl       | 3                      |
| Bobbin Center      | 3                      |
| Bobbin Pulley      | 3                      |
| Flyer Pulley       | 1                      |
| Tension Block      | 1                      |
| Tension Screw      | 1                      |
| Tension Block Pins | 2                      |
| Top Crosspiece     | 1                      |
| Rear Upright       | 1                      |
| Front Upright      | 1                      |
| Wooden Spacer      | 1                      |
| Wheel              | 1                      |
| Pitman             | 1                      |
| Treadle            | 1                      |
| Treadle Bar        | 1                      |
| Bottom Crosspieces | 2                      |
| Flyer Hooks        | 14                     |
| 1 ½" Wood Screws   | 14                     |
| 5/8" Wood Screw    | 1                      |
| Leg Screws         | 2                      |
| Axle Flange        | 1                      |
| Tapered Bolts      | 3                      |
| Tee Nuts           | 3                      |
| Washers            | 2                      |
| Leather Piece      | 1                      |
| Cotton Driver Band | 1                      |
| Treadle Pins       | 2                      |





# Assembly Instructions for the Clemes & Clemes Modern Wheel

## 1. Assemble Bobbins

Each bobbin consists of a bobbin whorl, bobbin center, and a bobbin pulley. Place a small amount of glue in the large hole in the bobbin whorl and, with a hammer, tap one end of the bobbin center into the whorl until it hits to bottom of the hole. Next, place a small amount of glue in the large hole in the bobbin pulley and place it over the other end of the bobbin center. With a hammer, tap the bobbin pulley until it hits the bottom of the hole. Set bobbins aside to dry. Follow the same procedure for the other two bobbins.

## 2. Assemble treadle

Place treadle on bar and fasten together with two (2) 1 ½ inch screws. Then, using a hammer, tap the two (2) ¼ inch diameter treadle pins into the holes in the each end of the treadle bar.

## 3. Attach the Axle Flange to Rear Upright

The rear upright differs from the front upright in that it has three (3) holes in the center of it. Place the upright on a solid surface and, with a hammer, tap one (1) tee nut in each of the three (3) holes. Turn the rear upright over and place the wooden spacer on the rear upright and align the holes. Place the axle flange on top of the wooden spacer and align using three (3) ¼" x 1¼" tapered head bolts. Tighten axle flange and wooden spacer securely.

## 4. Assemble Uprights and Top Crosspieces

Stand upright vertically on the floor and slip the top crosspiece into place. The end with the three (3) ½" holes should be over the upright with the axle flange attached. (See Drawing) If the top crosspiece does not fit over the uprights easily, sand the uprights until it does. Do not use excessive pressure to force the crosspiece on the uprights as this may cause the wood to split. After the top crosspiece is in place, use four (4) 1½" wood screws to tighten it in place.

## 5. Assemble Bottom Crosspieces and Uprights

Look at the bottom crosspieces carefully, and you will notice that they have a ¼" hole in the side of them near one end. Place the crosspieces on the floor with these holes facing each other and with the notches up. Place the assembled treadle on the floor between the crosspieces and slide the holes in the crosspieces over the treadle pins. Now, place the uprights, with the top crosspiece attached, in the notches in the bottom crosspieces. Some sanding of the uprights may be necessary for proper fit. Do not use excessive pressure to force in place.

Note: the upright with the axle flange attached should go in the notch on the end farthest from the treadle. After placing uprights in notches of bottom crosspieces, turn the assembly upside down and install eight (8) 1 ½" screws in the holes provided. Then turn assembly right side up.

#### **6. Install Wheel**

Remove nut from axle flange and slip wheel onto axle. The side of the wheel with the bearings even with the surface of the wood goes on first. Screw nut onto axle flange and tighten with a 1 1/16" socket wrench or a crescent wrench. If you use a crescent wrench, be careful not to slip off the nut.

#### **7. Assemble pitman**

Place the end of the leather with the small hole into the slot in the end of the pitman and fasten with a 5/8" screw.

#### **8. Attach Pitman to Wheel**

Place washer on leg screw, and put leg screw through hole in pitman (curved side of pitman should face away from the wheel.) Slip another washer over leg screw and start screw into hole in wheel.... Do not tighten tight, see next step.

#### **9. Attach pitman to treadle**

Put leg screw through hole in leather and screw into the hole in the treadle. Tighten screw so it lightly touches the leather. Do not tighten tight. Rotate wheel so treadle is at top of stroke. Tighten leg screw at top of pitman so it almost touches pitman. The screw should not be tight against the pitman. Treadle the wheel. It should turn freely. If it does not, either the top or bottom leg screw is too tight.

#### **10. Install tension Block Pins and Tension Block**

Place a small amount of glue in the first and third ½" holes in the top crosspiece. Do not put glue in the middle hole. With a hammer, tap the two (2) tension block pins into these holes. Hold the tension block so that the leather is facing you and the hole in the leather is on the right side. Screw tension screw into the block. Slide tension screw and block over pins and into hole. Adjust tension block so it is more than halfway up the tension screw.

#### **11. Install Screw hooks into Flyer**

Holding the flyer in one hand, screw the right-angle screw hooks into the flyer until the threads of the hooks are below the wood of the flyer.

#### **12. Install Bobbin and Flyer**

Hold a bobbin by the pulley end and slide the bobbin over the shaft of the flyer. Screw the flyer pulley on the flyer so that the side with the tee nut goes on last. Place the small end of the flyer into the hole in the tension block. Place the hole in the leather of the

maiden over the large end of the flyer and put the maiden into the ¾" hole in the top crosspiece. Adjust the flyer so it is approximately parallel with the top crosspiece, then lower it by ¼" before installing the drive band.

### **13. Put drive band on wheel**

Using enclosed 10-ply cotton drive band, place drive band around wheel and over bobbin pulley, around wheel again over flyer pulley and tie a knot. This is one continuous drive band going around the wheel twice, not two separate bands. To adjust tension for spinning, turn tension screw clockwise to tighten tension, and counter-clockwise to loosen tension.

### **14. Lubricate the Spinning Wheel**

This is the most important step in assembling a spinning wheel. A properly lubricated wheel will run for 200 to 300 years with very little wear. One that is not lubricated may wear out in as little as 3 years.

The main axle bearings are ball bearings and will never need lubrication. The flyer has leather bearings. They should be lubricated with a drop of oil placed on the metal where it touches the leather of the maiden and the leather of the tension block. The point where the pitman is fastened to the wheel with the leg screw should also receive a drop of oil. These points should be oiled each time the wheel is used. It only takes a minute and the wheel will run much smoother over its lifetime.

Occasionally, when replacing the bobbin, a drop of oil should be placed on the flyer shaft. This will keep it running quietly and smoothly. Do not apply too much oil here, as it will work out around the bobbin and onto the yarn being spun.

### **Staining and Finishing the Wheel**

We highly recommend finishing the wheel as this will help to preserve the wood. Lacquer, varnish, or an oil finish may be used. Staining is a matter of your personal preference.

Before staining or finishing the wheel we recommend assembling the wheel through step #5. Finish all the parts and give them plenty of time to dry. Care must be taken not to get any stain or finishing material in the ball bearings of the wheel. When parts are dry, continue assembly with step #6.

Having read the directions all the way through, you are now ready to begin assembly of your wheel.

You will need the following tools:

- screw driver

- hammer

- 1 1/16" socket wrench or large crescent wrench

- small amount of white glue - preferably Elmer's Wood Glue