Getting The Best From Your Spinning Wheel

The following are personal observations on spinning wheels in general but this advice should not override manufacturer's instructions for their products.

Using a spinning wheel is a mechanical way of twisting fibre into a yarn or thread and winding it onto a bobbin. A basic understanding of the following sequence of events will help you to trace any faults in your spinning wheel.

The motive power is supplied by your feet via the treadle. The Footman arm conveys the power to the crank which turns the wheel. The energy is stored in the rotation of the wheel and taken to the whorl by means of the drive band. The whorl and flyer are driven round drawing in and twisting the fibre and winding it onto the bobbin.

Any undue friction, misalignment or drag that interferes with this sequence causes wear and tear on the machine, the spinner, and can cause the most astonishing language to be used. Your comfort is most important. Here a combination of the treadle movement, your build and your chair height all play their part. You will have to experiment for yourself but as a general guide your leg and foot should be at right angles when the crank is midway between the top and bottom of its stroke. The treadle and orifice should be positioned so that when you sit at your wheel your body is comfortable and relaxed with no sideways twist in your back. Remember your wheel is a machine, and will have parts that wear and need attention or replacement. The better condition your wheel is in the easier it is to use and the less tiring.

MAINTENANCE

THE ORIFICE, after some use, will get a build up of grease, dust and fibre which can be scraped out with a toothpick or similar piece of wood and cleaned with a piece of cloth moistened with spirit.

THE FLYER ARMS AND HOOKS can be cleaned the same way. Check the hooks and replace any that show signs of wear. The spun yarn should not touch the flyer on its way from orifice to bobbin.

THE FLYER SHAFT on which the bobbin sits should be clean and straight. Smear with Vaseline at every bobbin change.

THE WHORL should be made with V shaped grooves so that the belt is gripped on the sides and does not just rest on the bottom of the groove.

BOBBINS should fit onto the flyer shaft with a little room to spare in the length and should be grooved at one end to take the brake band or drive band. This groove should be U shaped so that the band can slip in this groove when required. Ideally the core of the bobbin should not run on the shaft but should be supported at each end on a bush which should be a passing fit, not too loose but, able to turn freely. If your bobbins are not bushed make sure that they are free on the shaft and well lubricated.
TENSION applied by a BRAKE BAND will run over the grooved end of the bobbin. When the bobbin is turning clockwise the brake band should be positioned so that the pull of rotation is drawing on the spring or rubber band at the end of the brake band; this will allow easy slippage. When the direction of the wheel is anticlockwise the direction of the brake band should be reversed. If you remember to do this you should have no more trouble filling your bobbins, spinning or plying. Use as fine a band as possible on your wheel. You should be able to slack the tension so that there is no draw in, then gradually increase pressure until you feel it start to take up.

THE MAIDENS are the two posts which hold the flyer in position, one or both of which turn to allow the flyer to be removed. The bearings which hold the flyer are usually made of leather, nylon or wood and should be lightly smeared with Vaseline where they make contact with the flyer. When the maiden is closed on the flyer the bearings should be at right angles to the flyer. If turned too much or too little it will cause the bearing to bind on the shaft causing unwanted friction.

THE MOTHER OF ALL carries the maidens and on many older machines this is the cause of most tension problems since the wooden screw threads which drive this piece backward and forwards are worn. Unfortunately there is not much to be done apart from having the worn pieces replaced with threaded metal pieces by a competent wheel repairer.

THE DRIVE BAND should be a good fit in the groove of the whorl. If it is not and runs only on the bottom of a U shaped groove it will require more belt tension to turn the whorl without slipping. This requires more energy from your feet to overcome the extra drag.

THE WHEEL should be concentric and true. Some wheels, although true when made, have become warped and eccentric due to movement of the wood from which they are constructed. Provided the buckle in a wheel is not sufficient to throw off the belt when in use it can be tolerated. If it does throw off the belt it must be replaced or remade. Depending on the amount of eccentricity, you may find this will affect the regularity of twist in a yarn since the furthest point of eccentricity will stretch the belt and the closest point will slacken the belt altering tension as the wheel revolves and therefore allowing more or less slippage. This is more noticeable when using a double drive band wheel.

THE POSTS holding the wheel must be of equal height from the bed to the bearing and aligned for the crankshaft to pass through the bearings. If, these points are not correct the wheel will tip to one side or not turn freely. Extra friction for your feet to overcome! Lubricate bearings with a little thin oil or Vaseline.

THE TREADLE works on a bar either with a hinge or a pivot pin in either end fitting into two of the legs. In either case hinges or pivot pins should be kept clean and lubricated so that the action is free. Some treadles are designed to work with toe
pressure alone and some by heel and toe. A treadle to accommodate both feet is preferable to a single since it shares the work between both sides of your body.

THE CONNECTING ROD (Pitman Arm or Footman Arm) moves in two planes. Look from the front and it moves sideways at the top around the crank. Look from the side and it moves sideways as the treadle rises and falls. These two actions happen at the same time giving a compound movement and the crankshaft should have a bearing system to cope with this. On many wheels this can be achieved by using a stout but supple piece of leather at the top and 'bottom of the arm to connect to crank and treadle. Toe wheels are fairly quiet but with a heel and toe if the leather is too thin it will thump on the up stroke. Keep supple with leather preparation or Vaseline. The leather will wear and collapse in time and must then be renewed.

THE LEGS should be a firm fit into the bed. Older wheels built to be dismantled for traveling often fit together with tapered ends on legs and posts. With age they sometimes become loose and it is difficult to set up and keep the wheel running properly. If you want a working wheel as opposed to a floppy "Antique" these pieces will have to be properly aligned and glued in place. Some wheels creep across the floor when in use and although I have seen some novel methods of overcoming this - not least tying the wheel to the spinner's chair - it is quite easy to glue or screw rubber strips or buffers under each leg. The cause of this creep is usually a sign that the wheel is so tight in its action that the spinner is having to put too much pressure on the treadle.

THE WOOD from which wheels are made can be of many species but all have one thing in common - they are inclined to warp if placed in the heat of a fire or direct sunlight. All wooden parts should be sealed to prevent moisture in the atmosphere from entering.

LUBRICATION. Always clean off the remains of earlier oil or grease before applying fresh. Since the flyer moves at a faster rate than the wheel I recommend using Vaseline since too generous squirt with the oil can cause the room and your fellow spinners to be spattered. If you need to use oil, use a thin oil and be sparing. Excess oil or grease picks up dust and fibre which start to gum up the moving parts. Worse still, if grit from fibre mixes with oil or grease you will have a very efficient grinding paste that will cause wear on any moving parts with which it has contact. Generally speaking if it moves it needs some lubrication, the exception being the drive band.

We wish you happy spinning and a lot less strain.

Mike and Maggie Keeves.