



Weaving Terms

One of the biggest obstacles to learning about weaving is its terminology. Not only are most weaving words ordinary words that mean something else in regular life (so that you don't know you don't know what a word means), but different sources use the same words for different things—or different words for the same things. To make matters worse, each weaving word can usually only be understood in relation to other weaving words, so that to know one, you really have to know them all. To help clarify this muddle, here are the definitions of some basic words about weaving and weaving equipment.

A loom is the frame that holds the warp threads aligned and under tension so that weaving can take place.

The **warp** is all of the threads that are aligned vertically on a loom before weaving begins. A **warp end** is a single warp thread.

The **weft** is all of the horizontal threads that interlace with the vertically aligned warp. A **pick** is a single pass of the weft through a shed; a pick is also called a **shot**.

Winding a warp is the process by which all the threads in the warp are measured and aligned in order. Usually this is done by placing each end in a premeasured path on a warping board or warping reel. The order of the ends is maintained by the threading cross.

The **threading cross** is the "x" formed by alternate warp ends because they each take a different path over and under a pair of pegs on the warping board: over/under for one end and under/over for the alternate end. If the openings created by the pegs are maintained when the warp is removed from the warping board, the crossing of the threads is also maintained and keeps them from shifting their order.

A **warping board** is a square frame with evenly spaced sturdy pegs along the sides of the frame and pegs that can accommodate a cross along the top and the bottom. Warp threads are wound on the board in order and measured by a designated path around the side pegs.

Warping boards can accommodate up to 18 yards of warp length.

A **warping reel** can also be used to wind the warp. Some reels are vertical; the reel spins on a vertical axis and the warp is wound around it through a path that goes from the top to the bottom of the reel and back again. Some reels are horizontal; the reel spins on a horizontal axis and the warp is wound around it from one end to the other and back again. Reels can accommodate longer warps than boards and can be faster to use (the longer the warp, the greater the savings in time).

A **swift** is an expandable cage that turns on a center rod to hold a skein of yarn so that it can be wound into a ball or directly onto the warping board.

A **warping paddle** is a device that allows the winding of multiple warp ends in the same pass around a warping board while keeping them separate and aligned and providing a cross of individual ends. One type of paddle is equipped with two rows of holes that keep the threads separate; the cross is picked by hand at the cross pegs on the warping board. Another type had alternate slots and holes that keep the threads separate and also form a cross of individual ends when the paddle is raised and then lowered at the cross pegs.

A **spool rack** is a frame with thin horizontal metal rods that can support many spools of thread. Multiple ends can be unwound at the same time from the rotating spools to fill a section of a

sectional warp beam or to pass through the slots and holes of a warping paddle.

A **cone holder** allows ends from multiple cones to be wound at the same time. A screw eye, hook, or other device directs each thread so it unwinds above its cone without upsetting the cone or becoming tangled with threads from other cones.

A **choke**, or **choke tie**, is a very tight tie made around all of the threads in the warp—usually this is done on the warping board or reel.

Lease sticks are two rods or flat sticks longer than the width of the warp. They are placed in the openings of the cross. The cross is maintained in the space between the lease sticks, keeping the threads in order for threading or slewing.

A **raddle** is a board at least as long as the the width of the warp with evenly spaced pegs or nails ($\frac{1}{4}$ "–1" apart). Groups of warp ends are placed in each raddle space and the warp is wound on the warp beam with the raddle secured on the back beam. The width of the warp in the raddle and the number of ends in each space determine the density and width of the warp on the warp beam. (Raddles are used for warping methods in which the warp is wound on the warp beam before being threaded through the heddles.)

A **raddle cross** is formed by groups of warp ends on the opposite end of the warping board or reel from the threading cross (which is formed of individual ends). The number of ends in each

group is equal to the number of ends to be placed in each dent of the raddle.

The **heddles** are wires, nylon braid, string, or flat steel rods attached to the shafts. Each heddle has an eye in the center through which a warp end is threaded. (Because of this eye, heddles have sometimes been called needles.)

The **shafts** are the frames that hold the heddles. When a shaft is raised or lowered, all of the warp ends threaded through the heddles on that shaft are raised or lowered. (**Harness** is sometimes used as a synonym for shaft, although originally it was the name for the mounting that holds all of the shafts.)

Each weft pick passes through a **shed**. The shed is the opening made by raised and lowered warp threads.

The **breast beam** is the horizontal crosspiece on the loom directly in front of the weaver. The woven cloth passes over the breast beam on its way to the cloth beam.

The **cloth beam** is the (usually) cylindrical rotating crosspiece of wood (sometimes of metal) at the front of the loom on which the woven cloth is wound.

The **back beam** is the horizontal crosspiece on the back of the loom around which the warp passes on its way to the warp beam.

The **warp beam** is the (usually) cylindrical rotating crosspiece of wood (sometimes of metal) at the back of the loom on which the warp is wound.

Beaming the warp is the process of winding the warp on the warp beam. The layers are usually separated with sturdy paper or warping sticks.

Warping sticks are thin slats of smooth wood about 1/8" thick, 3/4" wide, and longer than the width of the warp.

Sectional warp beams are warp beams with protruding pegs that separate the beam into sections, usually 1–2" wide each. The warp is wound into each section separately.

When a warp is wound sectionally, it is first threaded in a **tension box** that tensions each thread evenly and spreads the threads to the width of the section.

Apron rods are sturdy wood or metal

rods, one of which is attached to the warp beam, the other to the cloth beam, sometimes by cloth aprons, more often by cords. The warp is tied to the apron rod of the warp beam before beaming and to the apron rod of the cloth beam after beaming, threading, and slewing.

Tying on the warp usually refers to the tying of small groups of warp threads to the front apron rod.

The **threading** is the order in which each warp end passes through a heddle on a specific shaft.

The warp threads also go through a **reed**, a steel comb with teeth that space the warp at an even density for the desired width. Reeds are sized by length and by the number of spaces—called **dents**—per inch (i.e., 4, 5, 6, 8, 10, 12, 15, 18 etc.). The reed is placed in the beater and acts to press the weft into the cloth as well as space the warp.

The **beater** is a frame that holds the reed. It is attached to the loom by an upright on each side that pivots to pull the reed through the warp and “beat” the weft in place at the fell of the cloth.

The **fell** is the woven edge of the cloth on the loom where the most recent pick has been inserted.

Slewing the reed is the placing of the warp threads through the dents of the reed. The number of dents in the reed and the number of warp threads in each dent determine the density—or **sett**—of the warp.

The warp **sett** is the number of warp ends per inch—usually abbreviated as **epi**. The weft **sett** is the number of weft picks per inch—usually abbreviated as **ppi**.

A **reed hook** or **sley hook** is a flat piece of metal, wood, or plastic with smooth curves at both ends for pulling threads through the dents of the reed.

Reed holders are wooden supports that keep the reed at a vertical position so it can be sleyed at a table rather than on the loom.

A **threading hook** (or **heddle hook**) is a long slender piece of flat metal with a handle at one end and a tight curve at the other to catch and pull warp threads through the heddles.

The **treadles** are pedals attached to

shafts to make them go up and/or down in all of the combinations required by the weave structure.

The **tie-up** shows the shafts that must be raised and/or lowered by each treadle to make each shed required by the weave structure.

The **treadling** (treadling order, treadling sequence) is the order in which the treadles are depressed, i.e., the order in which each shed is made.

The **weave structure** is the order in which warp and weft threads go over and under each other, i.e., the **interlacement**. If they interlace alternately, the weave structure is plain weave.

“Tromp” is an old way of saying “step” on a treadle. **Tromp as writ** means to step on the treadles in the same order as the shafts are threaded (also called “treadle as drawn in”). If the shafts are threaded 1-2-3-4; to **tromp as writ** or **treadle as drawn in**, you step on the treadles in that same order, 1-2-3-4.

Boat shuttles (which look a bit like boats) are equipped with a central hinged rod on which a **bobbin** (a slender spool) wound with the weft thread is placed. The bobbin rotates as the shuttle is thrown, and the weft is pulled snug at the selvedge by the drag of the unwinding thread against the rotating bobbin.

Stick shuttles are flat pieces of wood that are usually notched at each end so that the weft can be wrapped from end to end around the shuttle. The shuttle must be turned over a time or two as it is brought out of the shed to free weft yarn for the next pick. The turn of the thread at the selvedge must be adjusted manually.

An **end-feed shuttle** has a shaft secured at one end that supports a pirn (like a bobbin but with narrower end). The weft is pulled off the narrow end of the non-rotating pirn and tensioned with an adjustable tensioning device at the nose of the shuttle.

Tabby is used to name a weft that weaves plain weave when there is also another weft, usually heavier, that weaves pattern (as in overshot or summer and winter). Tabby is sometimes used as a synonym for plain weave.