I GENERAL INFORMATION

THE CHOICE OF A LOOM

There are many sizes and types of looms available. Each has advantages for certain purposes, and also disavantages.

There are many important considerations in choosing a loom.

To what use will it be put?
How much space is available for weaving equipment?
How much can you afford to spend?

A good loom should be deep enough to make a good shed, sufficiently solid for good beating, and well balanced.

TABLE LOOMS

Table looms are mainly rising shed, except for 2-harness looms or rigid heddles looms which are usually counter-balanced looms.

There are three basic operations to weaving: opening the shed, throwing the shuttle, and beating. On a table loom, the shed must be changed by hand and this slows the weaving.

Table looms fill many requirements, and are especially recommended as:

A First Loom: Beginners who do not want to invest too much to start weaving are well advised to consider a table loom. They can always be used later as sample looms, for research and for small projects.

Demonstration Purposes: It is easily transported.

Samples: Less time needed to thread, and many treadling variations are possible without the necessity of changing the tie-up.

Schools: Where space is a factor, and large groups are in the same class, folding table looms are ideal. They are easily stored on shelves.

Occupational Therapy: They can easily be taken into the rooms or areas where they are required.

Rehabilitation Centers: Excellent for finger and wrist exercices, also useful for those who are deprived of the use of their legs.

Weaving Workshops or Guilds: A number of table looms set up in different weaving systems and drafts, and exchanged by the members, speeds the process of learning the craft.

FOOT-POWER FLOOR LOOMS

The largest loom that a single weaver can operate without mechanical assistance is the 150 cm (60") loom. A loom of this size will produce finished cloth of approximately 142 cm (56") and is a wise choice for area rugs, unseamed tablecloths, and bed spreads. Because of its wide weaving width, it offers the greatest amount of possibilities for the weaver. One must remember that very narrow items may also be woven on a very wide loom. The inexperienced weaver or a weaver with short arm reach may find it awkward to throw and catch the shuttle when the loom is threaded to its full weaving width. A flying shuttle beater, which is a mechanical means of throwing the shuttle, may be added to this loom. If you consistently weave over 110 cm (42"), you may wish to consider a flying shuttle beater. Flying shuttle beaters are usually found on looms in commercial production studios.

The most popular size loom is 115 cm (45"). The shuttle is easily thrown and caught when threaded to its full width. It is an excellent size for all items of interior decoration, yardage, wall hangings, rugs, etc. The 90 cm (36") loom can be used for scatter rugs, yardages, linens, drapes, upholstery, etc. It has a satisfactory working width for general purposes. The 70 cm (27") loom is an excellent loom for teaching purposes. It requires little space in a studio. With good designing and careful joining, many large projects can be undertaken with this loom. It is very good for scarves, stoles, small mats, linens, and other narrow items.

REEDS

Because of the variety of yarns used and the different effects desired, an assortment of reeds is necessary. One must remember that to increase the usefulness of each reed, it can be threaded 1, 2, 3, or 4 ends per dent or any number of dents may be skipped.

The most generally useful reed is the 4 dents per cm. (12 dents per inch). This size is provided with each Leclerc loom and can be threaded as follows:

(E.P.CM: ends per centimeter) (E.P.I.: ends per inch)

1 end every second dent	2 E.P.CM (6 E.P.I.)
1 end every dent	4 E.P.CM (12 E.P.I.)
1 end in a dent and 2 ends in the next dent	6 E.P.CM (18 E.P.I.)
2 ends per dent	8 E.P.CM (24 E.P.I.)
2 ends in a dent and 3 ends in the next dent, etc.	10 E.P.CM (30 E.P.I.)

A steel reed is satisfactory for most weaving. In damp areas, a rust resistant reed is recommanded.

The reed on every new loom is treated to prevent corrosion in shipment. The corrosion preventative should be removed from the reed prior to use or it may soil your first weaving. If traces of the corrosion preventative are found in your weaving, it can be removed by dry cleaning or washing depending on the yarn used. To remove the corrosion preventative from a new reed, it should be wiped down with a clean cloth, moistened with white naphtha.

Care must be taken when cleaning between the dents so as to not bend them or damage the paper or tape covering on the reed edge. An alternate method of cleaning the reed would be to make your first warp 25 cm (12") longer than necessary. Weave as usual using a fine weft. The reed will be cleaned prior to the start of your planned weaving.

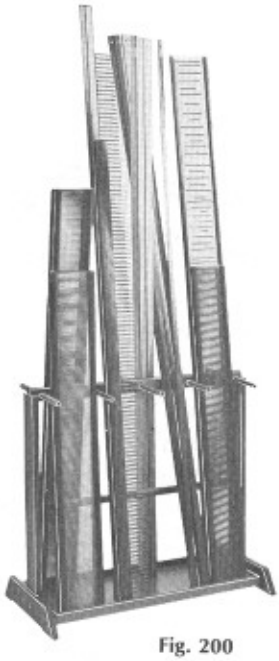

Fig. 200

A weaver should have a variety of dent sizes of reeds available suitable for his projects. As the texture of the fabric changes so does the size of yarn used and the threads per dent. The most commonly used reeds are: 3 dents per cm for heavy wool, 4 and 5 dents per cm for medium yarns and 6 dents per cm for fine wool. (8, 10, 12 and 15 dents per inch respectively).

At the end of weaving, when the material is removed from the loom, take time to remove any of the fibers that have clung to the reed. If the reed is to be removed from the loom, place it carefully in a dry place where there is no chance of it being damaged. It is best to store reeds standing on end. This helps to prevent damage to the dents caused by things being placed on them. It also provides better air circulation, which will help to prevent corrosion.

Remember that reeds and heddles are important and expensive parts to your loom. It is wise to give them good care.

HEDDLES

Wire heddles are light, slide easily on the frames during weaving. You can put up to 11 heddles per inch on each harness frame without damaging the warp. They are very good for weaving with almost and type of yarn. They tend to catch on each other when bunched during the threading of the warp. Separating the heddles slows the process somewhat. The plating is not as durable as on the flat steel heddles.

Inserted eye heddles: This is a wire heddle with a special eye that has a build up of lead around the circumference on the eye. They slide easily in the harness frames and do not catch together when bunched. They are a good choice because a very wide range of warp thread sizes will glide easily through them because of the special design of the eye.

Large eye heddles: are wire heddles with an inserted eye of 14 mm and 8 mm wide (9/16'' X 5/16''). These heddles are used for heavy warp threads. Flat ribbons on warp, rag warp, or leno weave with an extra string heddle which works in the selvage. These heddles have the same advantages as the inserted eye heddles.

Long eye heddles: are wire heddles with an eye of 50 mm long by 3 mm wide (2" X 3/32"). These heddles are used for special weaves such as on the draw loom, pattern harness loom and pick-up or card techniques.

Flat heddles: are easy to thread. They also slide easily on the harness frames when not threaded. You can thread up to 8 heddles per inch on each harness frame without damaging the warp. This style of heddle does not slide easily on the harness frames during weaving. Their heavy weight will be more noticeable on jack looms. For proper spacing, they must always be placed on the harness frame rods in the same precise order in which they are bundled originally.

String heddles

These heddles are seldom used on modern looms. They are time consuming to thread and difficult to obtain. They are useful in a few specific instances such as on a draw loom where a long eye is required or in special pick-up techniques used in conjunction with harness frames on a standard loom. If a weaver wishes to use these heddles, he may make them out of strong twisted linen or mercerized cotton. We suggest to use of a board with headless nails driven in at appropriate distances for the harness frame rods and eye of the heddle. The string should be looped around the first nail and a knot tied at each of the following nails. (Fig. 201)

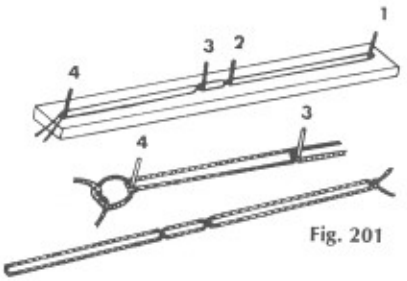

Fig. 201

To install the heddles in the harness frames, it is best to remove the harness frames from the loom, if this is possible. The harness frame should be placed on end as shown in Fig. 203. The heddle bars should be disconnected from only one end of the harness frame by loosening the spring clip. (Fig. 202) The cords from the package of heddles should

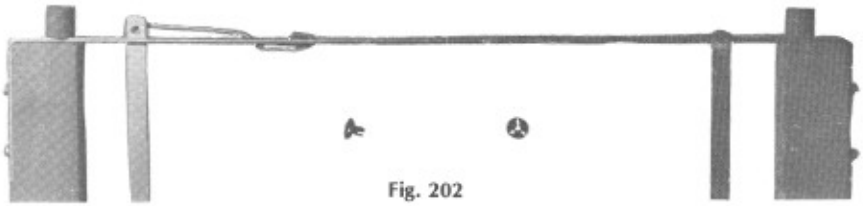
Fig. 202


Fig. 203

then be tied to heddle bars. (Fig. 203) The heddle bar should be refastened in the harness frame.

To distribute the heddles evenly within the harness frame, simply disconnect the center heddle bar support and arrange the heddles as desired.

If the harness frames can not be removed from the loom, remove only the heddle bars and use the same general procedure to install the heddles on the heddle bars. The heddle bars with heddles installed can then be installed in the harness on the loom.

If the heddle bars of your loom are only punched, disconnect the center of heddle support and take it out of the end frames by bending it.

To remove heddles from the harness frames, reverse the procedure putting them back in a string tied bundles prevent loss, damage, and are always easy to transfer.

SHUTTLES

The purpose of the shuttle is to carry the weft thread from side to side across the loom through the opening or shed.

Both hands are used to work the shuttle — one to insert it through the open shed, the other to pull it out at the other side with the weft thread laid in place.

Shuttles may be obtained in a variety of sizes and designs. The style and size chosen depends on the type of loom used, the kind of weaving being done and the size of yarn needed.

If a long piece of fabric is to be woven, shuttles should be wound with as much thread as possible to prevent a constant joining of new thread.

In winding the yarn or thread on a shuttle, the thread should be held slightly loose to prevent it from stretching and should be wound in even layers.

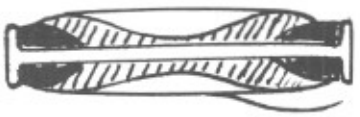

Fig. 204

To wind a bobbin which inserts into a boat shuttle, pile up the ends first and then the center. This prevents threads from catching. The bobbin can be wound with as much thread as permits it to rotate easily within the boat shuttle (fig. 204)

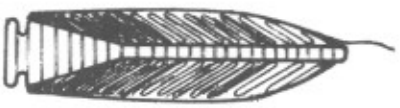

Fig. 205

To wind a wooden quill, with one end finished as a cone and unwinding by the end, used for the flying shuttle, pile up the opposite end, and come gradually to the other end, in order that thread will unroll easily (fig. 205)

Fig. 206

To wind a plain quill unwinding by the end, for a flying shuttle, a cone of yarn should be formed first (fig. 206)

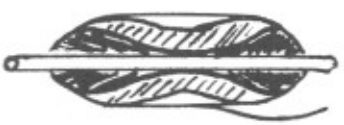

Fig. 207

When using a quill unwinding by turning in the shuttle, build up both sides first, high enough not to have to come back with the yarn at the end, and then fill the centre (fig. 207)

A boat shuttle should be smooth, easy to catch, of a form which can be thrown easily without sticking on reed nor on warp.

It should be wide and deep according to the shed opening. On a loom with a small shed, such as a table loom, or for some fine weaving on a floor loom, a shuttle 32 mm. (1¼") deep will be recommended.

On an ordinary floor loom, a shuttle 35 mm. (1⅜") deep is perfect.

On a very large loom, a 45 mm. (1¾") shuttle is recommended. It has to be heavy to maintain its momentum when thrown and sufficiently deep to hold weft for large projects.

The flat shuttle is used on a narrow loom, for pick-up patterns and to carry colors when only a few lines are made.

This shuttle should be as long as the width of the fabric. When working with it, you use both hands, for it is not thrown through the shed, but passed by a hand through the shed and taken out by the other hand at the other side. It is for this reason that you need various lenghts of shuttles — always corresponding to the width of your fabric.

When using the flat shuttle, you will notice that the yarn will unwind by itself. You may wind as much yarn on this shuttle as it will permit it to pass through the shed easily. If the shuttle is wound too full, it will cause an unnatural separation of the shed, which may break the warp.

On small looms that have no beater, the edge of the flat shuttle is used to beat.

A rag shuttle is used for a rag weft. To be thrown easily, it should not be filled beyond its edge. The rag shuttle with curved edges and the ski shuttle can be filled to capacity.

The ski and the rag shuttles are used for heavy rug yarn, heavy wool, etc. Rag shuttles with a rod in them can be used with up to three bobbins, which enables you to throw more weft thread with each shot.

When using two threads on the same shot in the same shed, use a shuttle carrying two bobbins.

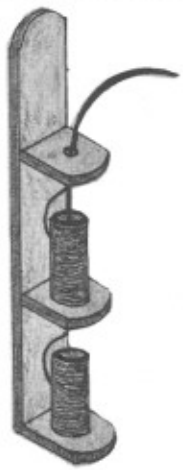

Fig. 208

When using two or more threads on a single bobbin, twist the threads first to prevent them from catching in the shuttle, and do not apply a heavy tension when winding the bobbin.

To twist two or more threads, use this system. It works by passing the thread through the center of the top cone and by pulling both the threads together. (Fig. 208)

The smaller the cone, the more twists per meter.

When using this system with more than two cones, always place the additional cones below the first two cones.