

II TIE-UP

Leclerc looms have an easy, trouble free system to accomplish the tie-up. All tie-up cords are of the same length. The system improves the opening of the shed by automatically increasing the travel of the harness frames in relation to their distance from the beater. The rear harness frames have more travel than the front harness frames.

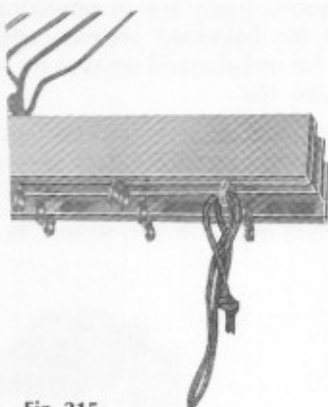


Fig. 215

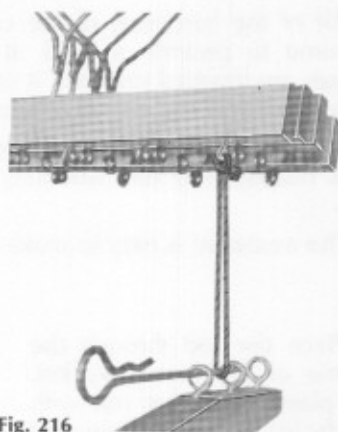


Fig. 216

The tie-up cord is pulled through the screw eye in the lamm. The knot in the end of the tie-up cord will retain it in the lamm screw eye. A metal treadle tie-up hook is used to connect the tie-up cord to the treadles. It is held in place on the treadle by spring tension on one of the treadle screw eyes.

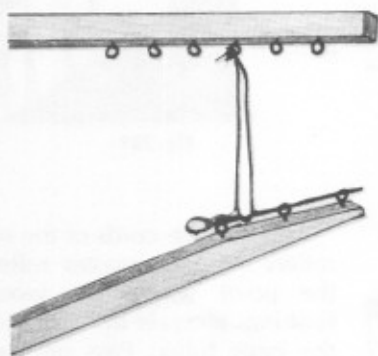


Fig. 217

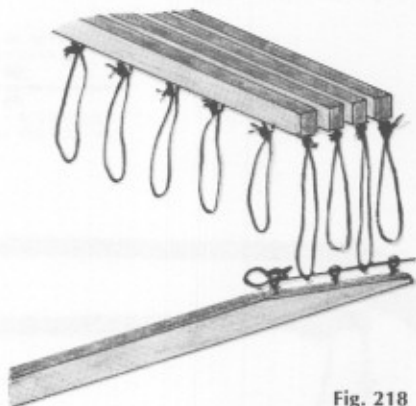


Fig. 218

On Leclerc floor looms, the tie-up cords may be left in place on the lamms when not being used. Tie-ups can be changed in seconds without difficulty.

III COUNTER-BALANCED LOOM

(Sinking Shed Looms)

This style of loom is exceptionally smooth to operate. It provides fast effortless treading and is noiseless. It is excellent with all fibers and is superior with non elastic fibers, such as linen, nylon, etc.


All of the harnesses of the counter-balanced loom are in operation at the same time to provide a shed. It is perfect for balanced weaves where two harnesses are lowered together. It can be used for unbalanced weaves by adjusting the top roller or using a shed regulator. (See page 18)

Leclerc counter-balanced looms are equipped with nylon bearings on the harness rollers. They turn smoothly, are easy to operate, and never require lubrication.

The assembly is easy to make and the height adjustment is simple to alter.

Place the rod through the top hole of the metal bracket. Then, place one wing nut with wings facing up on the threaded rod and lower the assembly down and through the bottom hole of the metal bracket. Place another wing nut, with wings facing down, on the rod. Harnesses are adjusted by moving rod up or down. (Fig. 221)

HAVE THE TOP OF THE HARNESS
AT THIS LEVEL.



AJUSTEZ A CE NIVEAU
LA HAUTEUR DES LAMES.

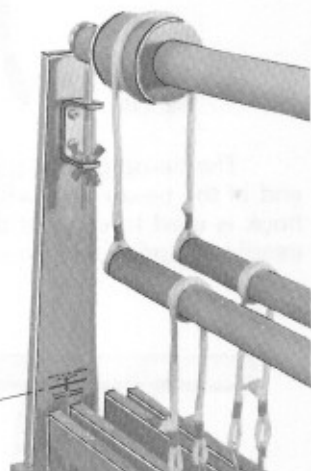


Fig. 221

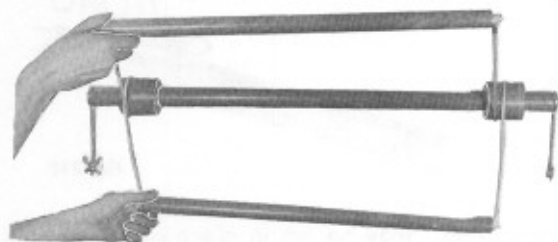


Fig. 222

Place the cords of the small rollers over the master roller at the point where the wooden bushings increase the diameter of the large roller. Pass one small roller inside the cord and over the bushings again to make 1 1/2 turn. (Fig. 222)

To connect the cords, which suspend the harness frames from the small rollers, make 1 1/2 turn around the small rollers. It is important that the cords be coiled on one side to the right and on the other to the left. When the rollers turn, this will cause cords to work to the right or left and return to the original position. This action keeps the harness frames balanced. (Fig. 221). Harnesses are suspended from these cords.

The height of the harnesses should be adjusted in a manner that when the four harnesses are at the same level in the neutral position, the center of the heddle eye will be 5 mm. (3/16") higher than the top of the thread and breast beams. A string tied from the thread beam to the breast beam will be helpful in making this adjustment. Harnesses adjusted in this manner will provide slightly more tension on the lower shed resulting in a better support for the shuttle. During weaving, care should be exercised that the warp is never allowed to come in contact with the sharp twisted wires at the ends of the heddles, as damage to the warp can result.

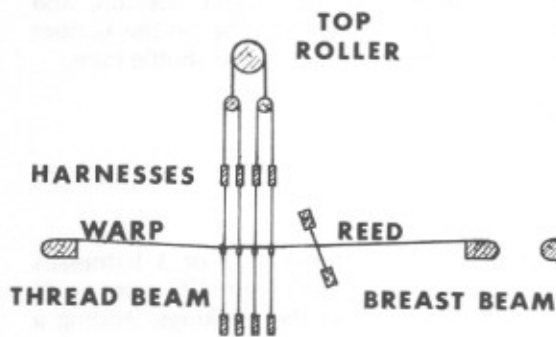


Fig. 223

When harnesses on counter-balanced loom are at their neutral position, the warp should run through the bottom of the eye of the heddle, and 5 cm. (2") above the bottom edge of the reed.

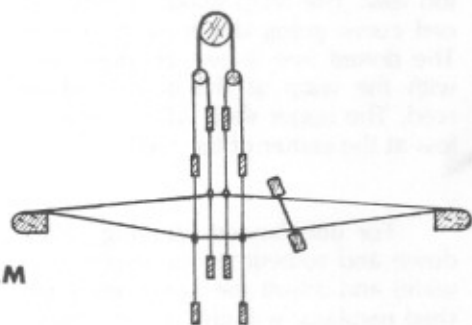


Fig. 224

When using 2 harnesses against 2 in a balanced weave, the shed should go to the bottom of the reed and be at least 8 cm. (3") high.

Each Leclerc loom has factory markings (see Fig. 221) showing the correct height of the harnesses for balanced work (that is, 2 harnesses going down against 2 harnesses up). Adjust the wing nuts so that the harnesses are at the correct height.

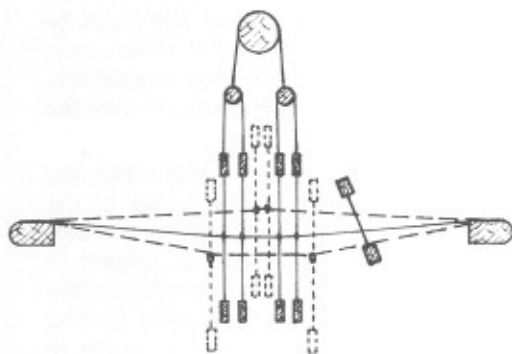


Fig. 225

Harnesses too low: The solid line shows the thread when harnesses are too low. The warp makes a pronounced curve going down in the center. The dotted line shows an open shed with the warp at the bottom of the reed. The upper shed will be more or less at the center of the reed.

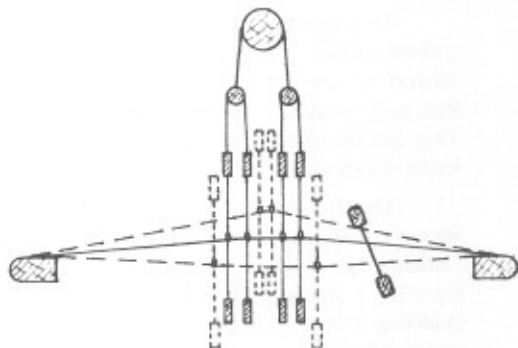


Fig. 226

Harnesses too high: The warp curves upwards at the neutral position, and the threads will not lie on the bottom of the reed, nor on the shuttle race.

For unbalanced weaving, where you need sometimes 1, 2 or 3 harnesses down and sometimes harnesses up, you should use a wide reed (127 mm. — 5" wide) and adjust the harnesses 1 cm. (3/8") higher than the markings. Adding a shed regulator will give a better result.

If your material requires only 3 harnesses down with 1 harness up, as well as balanced sheds, lower your master roller 1 cm (3/8") and you will get a good shed.

If your loom is not a model with the master roller adjustable with a screw, shorten or lengthen the top roller cords to accomplish adjustment.

IV SHED REGULATOR

Your new Leclerc conterbalanced loom “Nilus II” is equipped with a shed regulator.

Here is the way it works:

When you make a balance weave, it is to say two harnesses against two which can be either 1-3, 2-4 or 1-2, 2-3, 3-4, 4-1 or any other combination of two harnesses against two, you can stop the shed regulator by introducing a pin in the hole on the head of the loom and in the corresponding hole in the large pulley in order to maintain warping line from back to front of the loom. (See fig. 235).

For unbalance weave of one harness down against three up or three harnesses down against one up, take off the pin which stop the pulley on the head of the loom. Set the tension of spring in order that it holds the harnesses at proper height to keep warp lightly heigher than straight line from back to front of the loom when at rest. This adjustment of spring is made by changing the hook on spring to different link of the cord. Your shed regulator is now ready to operate.

If the shed is not good readjust by giving more or less tension to the spring by placing the hook of the spring in a different link of the cord.

Shed regulator allow lower or heigher harnesses to run same distance. This is specially important with a non elastic fiber warp such as linen.

It also save the advantages of the conterbalanced loom, it is to say a easier, treadeling, smoother, quicker and noiseless. This system needs a little of patience to understand it, taking used of it and have the maximum of its used.

COMPOUND TIE-UP

When there is a need for a greater combination of tie-ups than treadles available (i.e. the loom has 6 treadles but you need 8), we use the compound tie-up. This is possible by using two treadles at the same time.

For this treadling, put more tension on the spring of the shed regulator. You must engage the shed regulator by removing the metal pin from the pulley. Let the shed regulator lift the whole harness, and use it as a lowering shed loom. This will work very easily and give a good shed.

The **shed regulator** is a device which permits the whole set of harnesses to:

- raise when one harness lowers and three harnesses raise;
- lower when three harnesses lower and one harness raises;
- stay at the center when two harnesses lower and two harnesses raise.

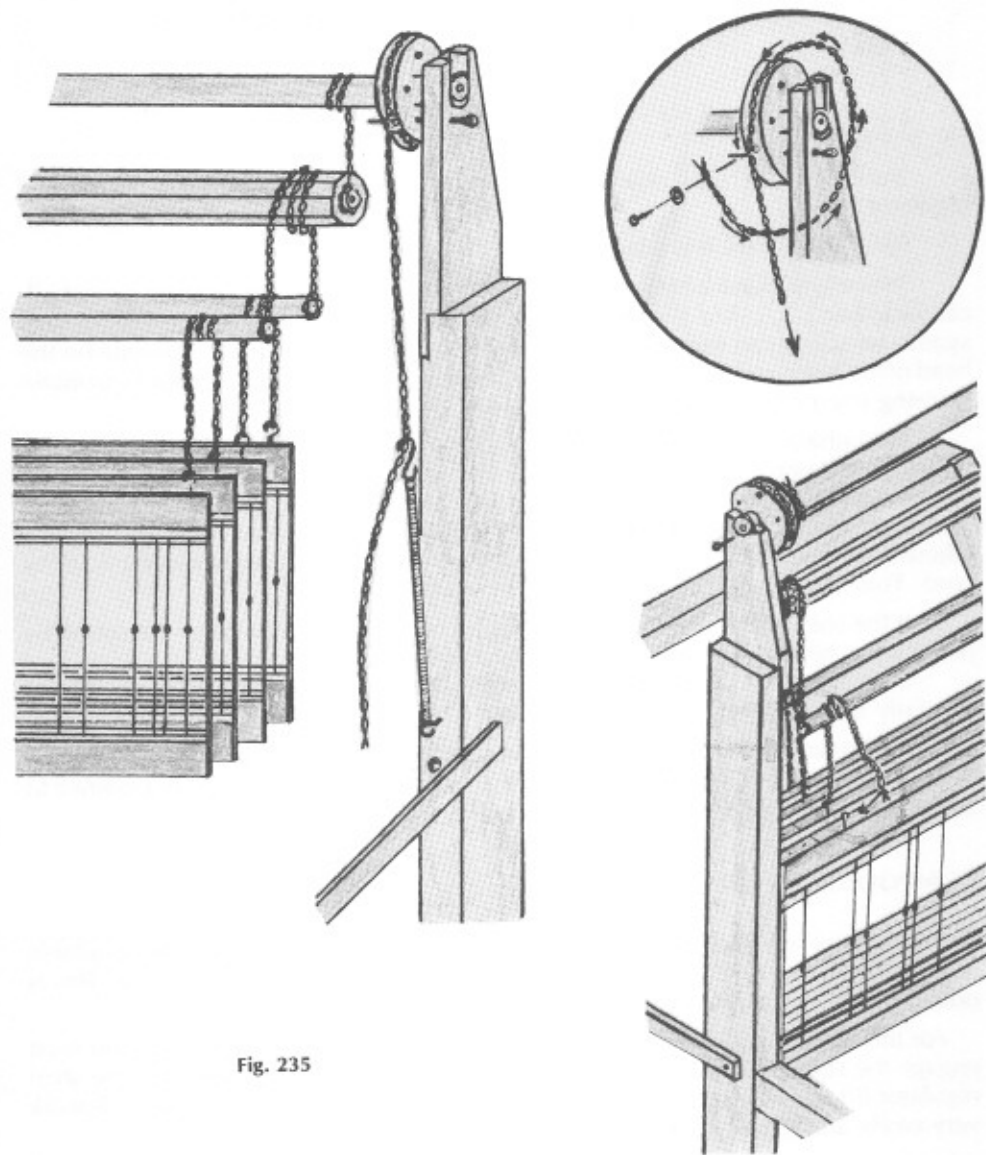


Fig. 235

The illustrated shed regulator has been designed to be very simple to operate. It is easy to understand. The action of the shed regulator can be set for balanced weaves, i.e. two harnesses against two.

The shed regulator is used only on counter-balanced looms such as Mira, Fanny, Nilus II and Artisat equipped with a kit to convert into a counter-balanced loom.

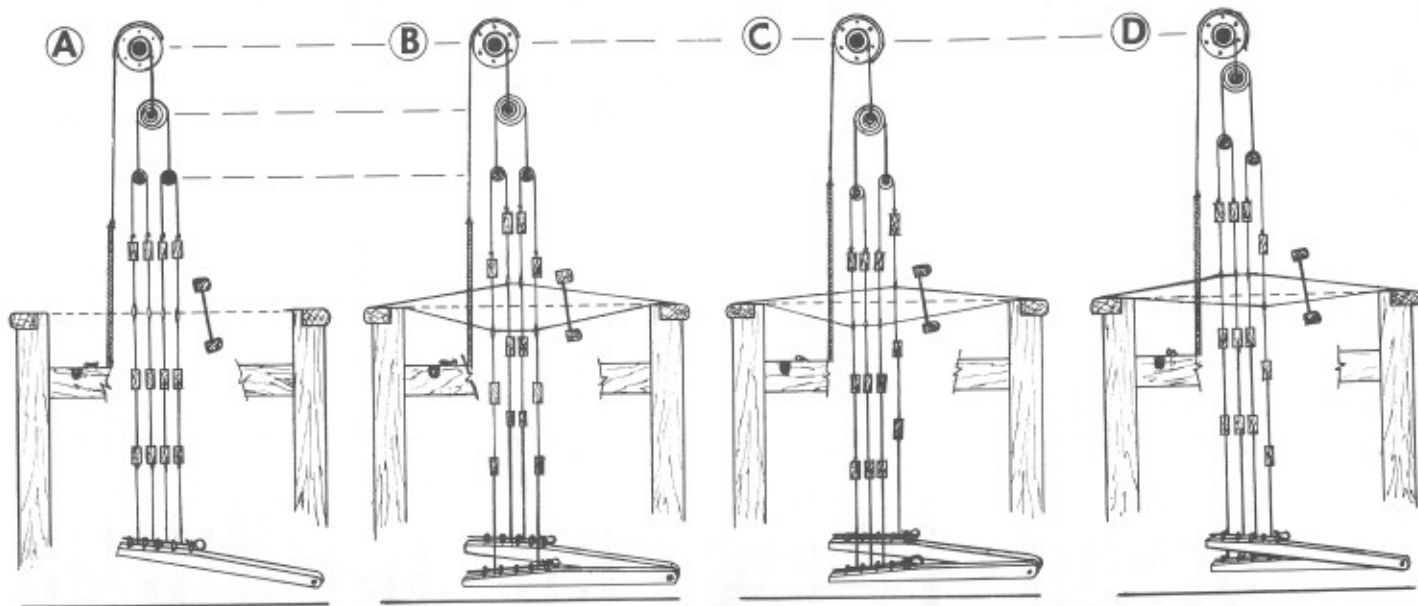
Instructions are supplied with the shed regulator.

Normal height of roller

Two harnesses lowered,
two harnesses raised.

Three harnesses lowered,
one harness raised, the
complete harness system
lowered.

Three harnesses raised,
one harness lowered, the
complete harness system
raised.



When Shed Regulator is not used, stop action of spring by introducing the pin in the hole of the pulley.

Help the harnesses to stay at normal height by adjusting the "S" hook of the spring in the proper loop of the cord connected to the pulley of the shed regulator.

Fig. 236

V JACK-TYPE LOOM

(Rising Shed Looms)

Each harness operates independently on this loom. It gives a perfect shed, regardless of the tie-up. It is very good with elastic fibers such as wool, cotton, rayon, etc. There might be slight difficulty with linens and other non elastic fibers.

The treadling action is slightly heavier than on counter-balanced looms.

This is the most popular type loom sold in North America. It requires very little care. It is quickly and easily set up. Any combination of one, two, or three harness frames may be tied to any individual treadle, resulting in a loom of excellent weaving potential.

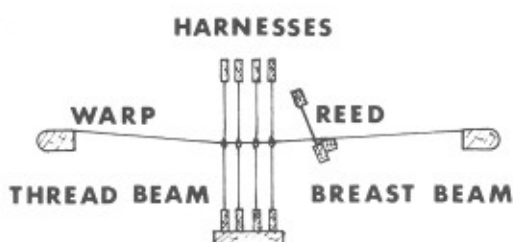


Fig. 245

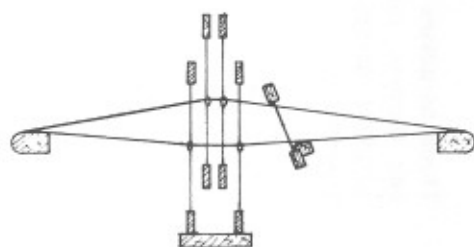


Fig. 246

When all the harnesses are down on a rising-shed loom, the warp makes a curve going down, and rests on the bottom of the reed and shuttle race.

When the shed is open, the curve of the warp that is raised should be slightly greater than the curve of the warp that is at rest.

Do not keep the warp at too great a tension on this type of loom, or it will raise the harnesses and put weight on the warp. If the warp does not rest on the shuttle race, it is because the warp is too tight. Remember to take special care with non-elastic yarns.

The shed is made by the upward travel of harnesses. The tension on the upper shed is much greater than that on the lower shed. The lower shed may actually become slightly loose. This looseness is usually not as noticeable on a wool warp as it would be on a non elastic warp, such as linen. Here your shuttle race that has been installed on the jack loom, will help you. It prevents the shuttle from slipping through the shed.

A word of caution, if in weaving a rug or similar heavy article, you try to correct the shed by putting excessive tension on the warp. The treadles will be difficult to operate and the shed will be reduced. This will be especially noticeable on non elastic warps.

To weave non-elastic fibers such as linen, silk, nylon and many other man-made fibers, the shed may be difficult to open because of excessive tension being placed on the warp. Reduce the tension to the minimum required for a good weaving.

If a very high tension is required on a warp you may find that the harness frames do not settle back to their full down position. To eliminate this, attempt to lower the slabstock further to cause the warp to draw down on the harness frames. When weaving on a folding loom, it should always be opened to maximum extent normally possible. The greater the distance between the slabstock and breast beam, the better the shed will be.

The following procedures may be used to keep the harness frames in full down position while weaving:

- a) Add weight to the harness frames.
- b) A rubber band, piece of elastic or light spring may be connected to the bottom of the harness frame and to the loom.
- c) Use a double tie-up, i.e. tie a cord direct from the harness frame that you wish to remain full down to the treadle that is in the full down position. (When this treadle is then depressed, it will raise the frames you have normally tied up and also drive the additional tied harness frames down).

Use of any of the above procedures will cause the treadling action to be heavier and slower.

When open, the lower shed must rest on the shuttle race. On most of the looms, the beater can be adjusted in height by loosening the nuts on the lower end of the batten. The beater should be adjusted to the proper height and the nuts firmly tightened. So, they will not loosen when subject to the vibration of weaving.

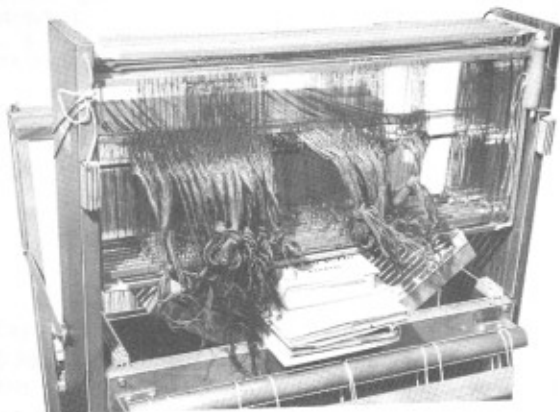


Fig. 247

To remove harnesses from loom, gain access to them by removing the top cover board if your loom has one installed. The top cover board can be removed by shifting to the front or rear depending on the style of loom and lifted off. The harness frames can then be picked up for removal.

For easy threading, raise the four harnesses and use anything suitable such as a book, board, box, etc. to keep them raised.