VIII RADDLE OR SPREADER

This is an open comb with 1 dent per cm. (2 dents per inch) and is used to spread the warp for beaming. It is used in the space normally holding the reed.

When you use a warping frame or a warping reel, you have to beam the warp, spreading it the width it will be on the reed — which is the width of your finished material — plus up to 5% shrinkage.

To simplify this operation, use a raddle of one dent per cm. or 2 dents per inch.

To use the raddle, remove the batten handtree of the beater, put the raddle in the batten sley and tie it firmly to the batten sley with a string.

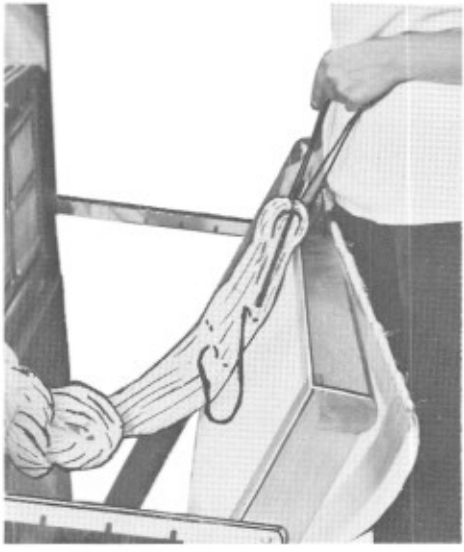

Fig. 340

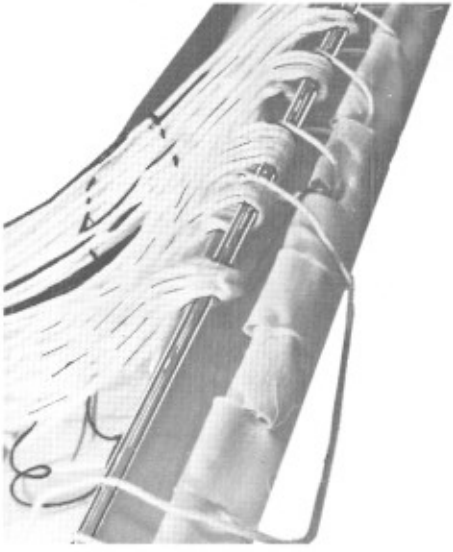

Fig. 341

Place a piece of long narrow cardboard folded lengthwise across the top of the pins of the raddle. This will prevent the warp from falling into the sections of the raddle before you are ready. Masking tape may be used to hold the cardboard in place.

Insert the iron rod through the loops formed by the cross at the end of the warp. Secure both ends of this bar with cord to the warp beam apron bar or perforated wooden stick depending on the style of loom. Be sure to spread the warp evenly to the same width as you wish to weave. Now lace both bars together. (Fig. 341)

You can also cut the loops and tie the warp in small bundles directly to the apron rod.

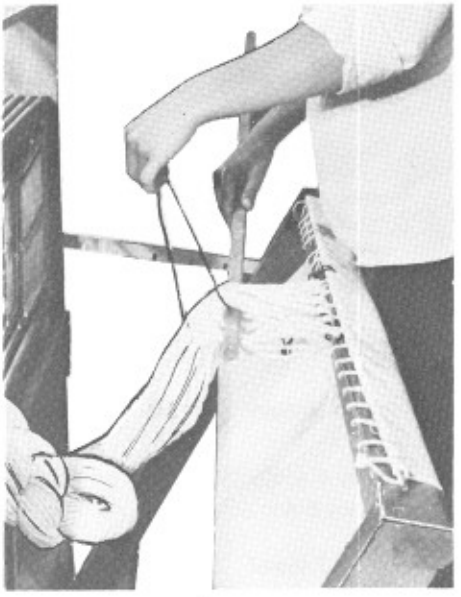

Fig. 342

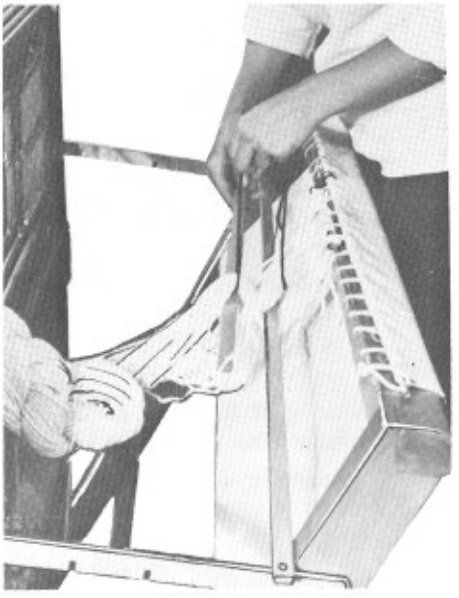

Fig. 343

Insert the lease sticks (cross sticks) (steel, wooden or plastic), which come with the loom, through the loop in the crossing which has been tied with string up to this point. (Figs. 342 and 343)

Tie the lease sticks together at both ends and remove the string which has secured the cross at this end. (Fig. 344)

The threads will go over and under the lease sticks in the same way in which they were warped, either 1 thread over and 1 under, 2 threads over and 2 under or 4 threads over and 4 under. (Fig. 345)

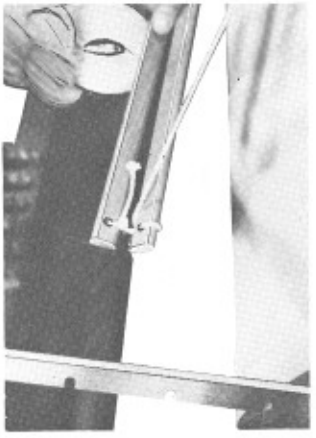

Fig. 344

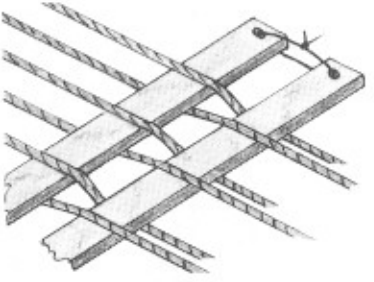

Fig. 345

Next tie both ends of the lease sticks to the thread beam and to the castle of the loom. (Fig. 356)

Place the warp in the raddle by gradually sliding the folded "V" shaped cardboard to the side. (Fig. 346)

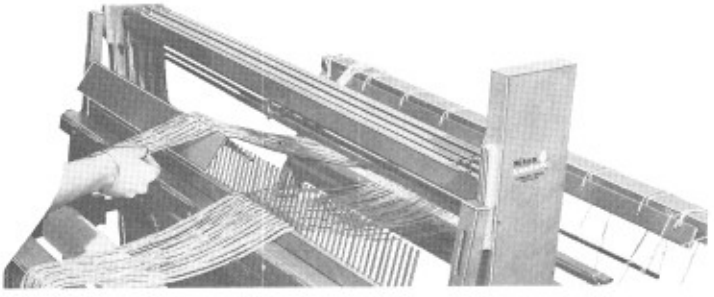

Fig. 346

Divide your threads so that there are as many threads per cm. or inch in your raddle as your planned sett per cm. or inch.

For example, if you have made your warp with 4 ends, there will be 8 ends in each cross. If your sett is ten ends per cm., you can put:

	2	dents	with	one	cross	in	each	(2	times	8	threads)
Next	2	"	"	1	1/2	"	"	(2	"	12	")
"	2	"	"	1		"	"	(2	"	8	")
"	2	"	"	1	1/2	"	"	(2	"	12	")

Thus, your threads are placed as follows: 8 threads, 8 threads, 12 threads, 12 threads, 8, 8, 12, 12 and so on.

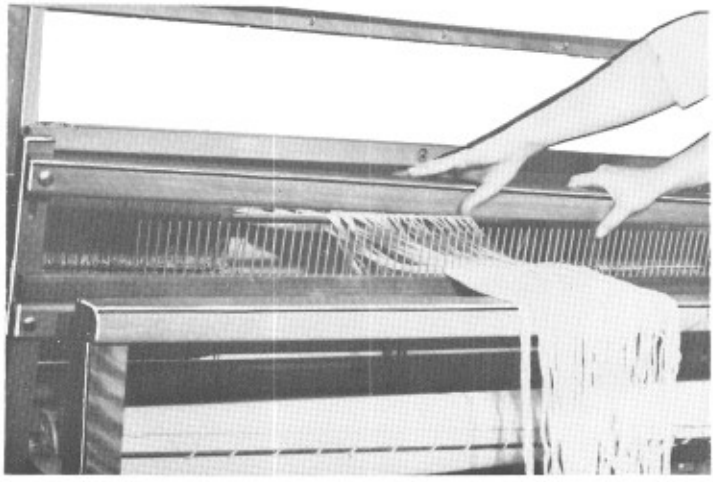

Fig. 347

Replace the batten handtree to close the raddle and prevent the threads from coming out of the dents. (Fig. 347).

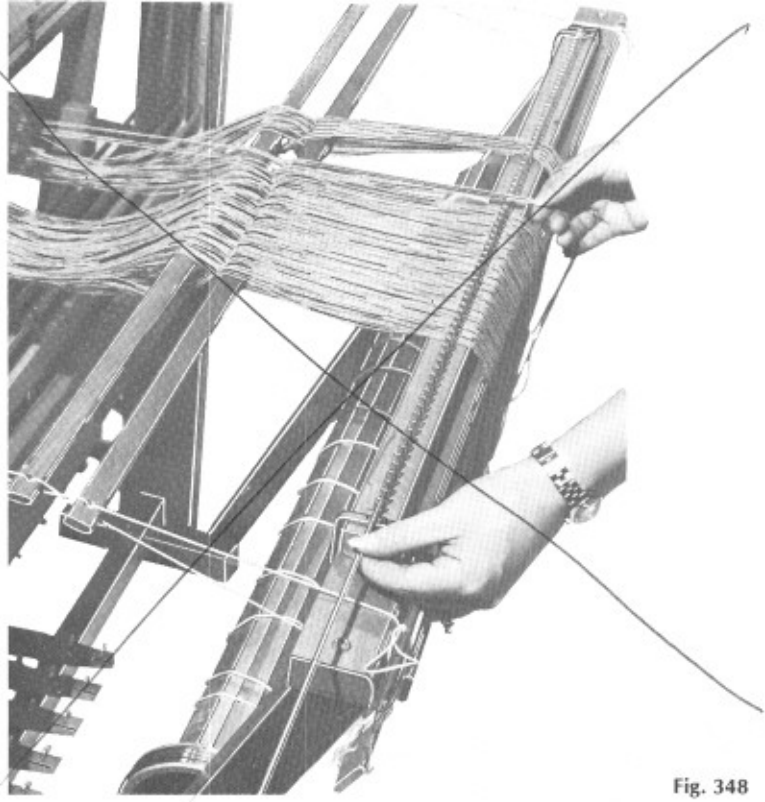

Fig. 348

A **new raddle** is now available which is placed on the slabstock of the loom. This position brings the raddle closer to the beam and enables an even better beaming of the warp.

This raddle can be closed by slipping an iron bar through the cramps.

Now refer to the bottom of this page to do the beaming.

When the beaming is completed, insert the lease sticks in the second cross. Tie the lease sticks at both ends and bring them close to the harnesses by using a threading helper (Fig. 372) or tie them between the slabstock and the upright pieces (Fig. 356).

BEAMING

Be sure that you have another cross at the other end of the warp. If so, you can remove the lease sticks for beaming. This will prevent threads from sticking.

Try to avoid pulling or combing the threads while beaming. Place yourself a few meters in front of the loom and shake the warp to untangle it.

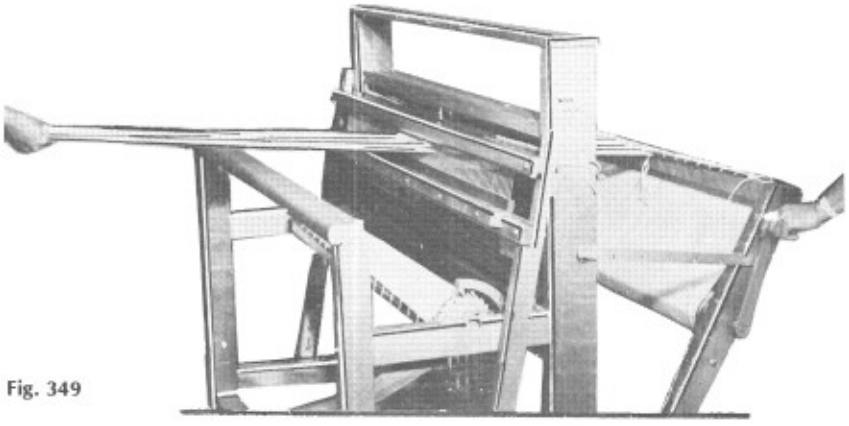

Fig. 349

The person holding the yarn under tension should be at a reasonable distance from the loom so that the angle of the selvedge threads is not too pronounced.

If the threads stick together, a third person may be required to carefully separate them using both hands. (Fig. 350)

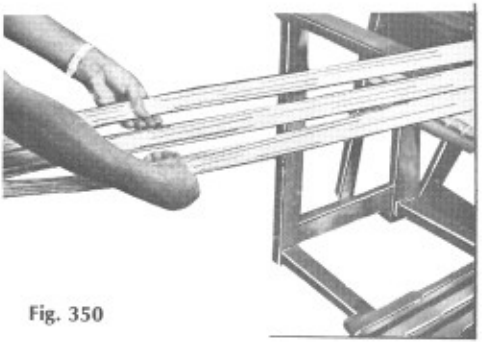

Fig. 350

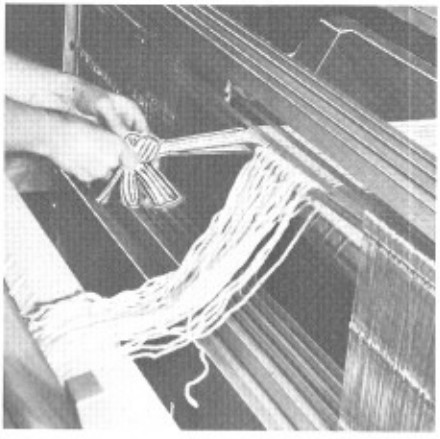

Fig. 351

You can either tie the warp in small bundles to the apron rods for beaming, or insert one rod through the loops and lace it to the other rod in the canvas apron.

Use warp sticks or strong paper to separate the layers of warp as they are rolled onto the beam.

If you are using more than one size or type of yarn in your warp, you may have difficulty with your tension, due to the different elasticity of the various yarns. This may not appear until a meter or so of fabric has been woven. The best solution is to beam each type of yarn separately, using an extra warp beam. If the whole warp is rolled on one beam, pick up the loose threads at the back of the harnesses on a strong rod, slide it under the warp beam, and suspend weights from it until you have the correct tension. (See Figs. 495 and 496)