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# MODERN WEAVER

Bulletin for Handweavers - Published by Handweavers.

Publisher:
"Modern Weaver"
Nilus Leclerc Inc.
L'Isletville, P.Q.

Technical Editor: S.A. Zielinski, Z-Handicrafts Fulford, P.Q. Managing Editor: Robert Leclerc,

Six issues per year

Subscription: \$3.25

Volume 1 No. 6

Vol. 1 No. 6

August 1955

August 1955

## SETT OF WARP.

Very often this part of weaving is treated in the same way as cooking recipes: take 2/16 cotton, set it at 35 ends per inch and you will have a towel. But why 2/16, and why 35 - and not 20 or 50?

First of all - what is really the count of yarn? As we all know it indicates the weight: so many yards per pound. And somehow we think that it indicates the thickness as well. But how? What we often do not realise is the fact that in most cases the yarn has no definite diameter. In case of wire there is a quite simple relationship between the weight and the diameter, because the cross-section of a wire is a circle. But the cross-section of yarn shows a number of fibers (virtually points) widely spaced and separated by air.

If we take a micrometer and try to measure the thickness of yarn, we can always get at least two readings: first when the yarn starts touching metal on both sides, and the second when the mike is tightened as far as it will go. These two readings may be very far apart in case of a soft yarn, and quite close with a hard twist. For instance 2/6 cetton may give the figures: .035" and .007". But the same cotton twisted harder will give .025" and .012".

Since the "diameter" is not only indefinite, but even wariable there cannot be any hard and fast rule directing us in the choice of the sett of warp.

There is no necessity to have a micrometer to be able to establish the lower limit of the sett for warp-face fabrics. We can as well take a

ruler, and wind the yarn on it so that one thread just touches the next, and then count the number of turns which cover one inch.

The upper limit i.e. the highest sett which will still give an opened shed, or rather all sheds is only matter of experience. It depends to a great extent on the construction of the loom, and the weaver himself. The general principle is that the softer the yarn the higher this limit when compared with the lower one. If the lower is 30, then the higher may be 60 for soft, and 40 for hard twist.

So far we have been speaking about the fabrics where the warp covers the weft. The problem is much more difficult when it does not. For instance when we have a 50:50 fabric, we can weave it very open or very close, according to the effect desired. Then what in this case is the lowest and the highest limit?

The lower limit of sett will be such one which still does not produce the slippage after the fabric is finished. When the warp or the weft threads are subjected to friction going in one direction they should not move in the fabric and produce holes. The slippage depends not only from the grist of yarn used, but on other factors as well: twist, smoothness of yarn, finishing etc. For instance when the fabric is supposed to be sized (as cheesecloth) it may be woven much more open, than when it is not. Wool which is going to be fulled or felted can be more open too. Domestic wool (about 2.000 yards per 1b) usually set at 18 ends per inch, may be set at 9 and still produce a firm fabric if it is fulled afterwards. But slippery yarns such as rayon must be woven much more closely than cotton of the same count.

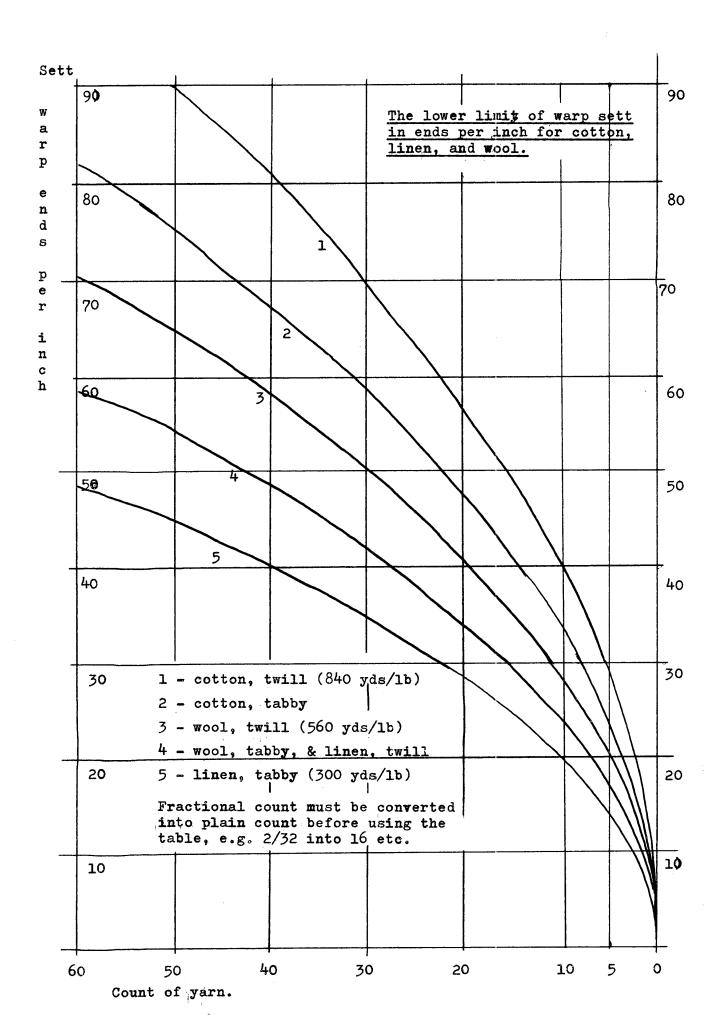
There are certain simple rules which may be useful. For instance if we find a very satisfactory proportion between yarn and sett in a particular fabric, we may use this proportion to make similar fabrics (the same weave, the same material) in different weights. The table on page his based on such a simple rule: the weight of the yarn is proportional to the square of its thickness. For instance 2/4 yarn is twice as heavy as 2/8 - but this does not mean that the thickness indicates. If we increase the weight twice, the thickness will increase by only 41%. To get twice the thickness we must find a yarn four times as heavy. Thus the sett of warp must be inversely proportional to the thickness and not to the weight of yarn. The formula is:

$$s = k \sqrt{c}$$
;

where S is sett in ends per inch, C - the count of yarn, and  $^{11}k^{11}$  - a coefficient which remains the same if the weave and the material remain unchanged. It is about 12 for cotton woven in tabby, 9 for wool, 7 for linen.

The table on page 71 is nothing but the same formula expressed graphically. The horizontal axis shows the count of yarn, and the vertical one - the sett. The table gives approximate figures for the lowest sett with different yarns weren into 50:50 fabrics. In pratice closer setts than these given in the table will be used very often, but it is impossible to judge how much closer they should be without experimenting. There are two lines for each yarn: one roughly corresponding to tabby, the other to twill. Still lower setts may be used for processed fabrics.

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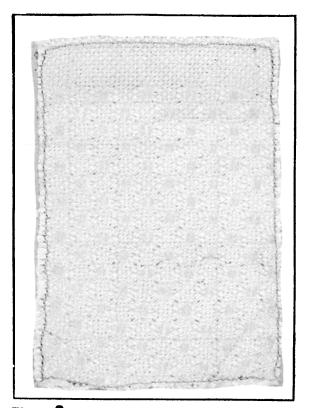
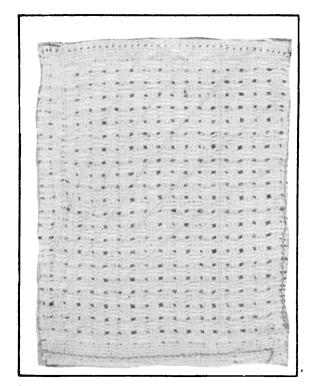


FIG. 2 .



F16.9.

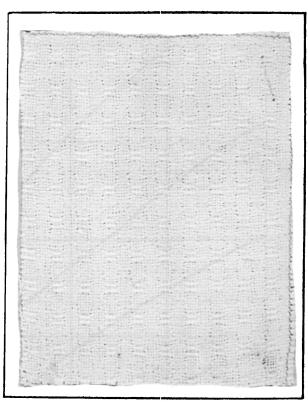


FIG. 7.

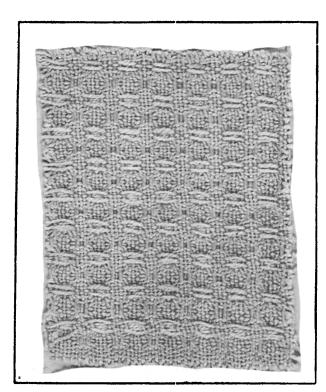


Fig. 8.

### VARIATIONS

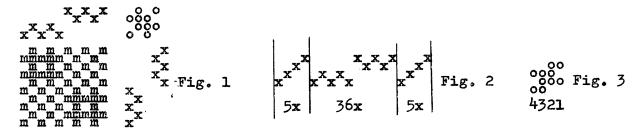
## ON DINE THREADING.

One of the greatest achievements from the point of view of a beginner, and often not only from his point, is to thread the loom, correct the mistakes, and in general - get prepared for weaving. Consequently the progress in mastering different weaves is comparatively slow at first, even if the student is very good at the theory of weaving.

Thus such weaves or groups of weaves which may be woven on the same warp without re-threading, and with only small changes in the tie-up, must be of interest to every teacher - and practically every advanced weaver is a teacher by profession or hobby.

As an example of what can be done with one threading, we selected a modern draft for 10 x 10 huckaback.

Huck is a typical "woven-as-drawn-in" weave, where repeats of threading and treadling are identical in length and order. In pratice this means that one side of the fabric is identical with the other after it is turned by 90°. The repeats can have either 6, 10, or 14 threads in both directions. Thus we have  $6 \times 6$ ,  $10 \times 10$ , or  $14 \times 14$  huckback. The threading draft can be written in several ways but this does not affect the fabric in any way. The tie-up, treadling and draw-down is shown on fig. 1.



The woven piece must have some kind of borders. If only huckaback were woven we could have tabby borders by threading the edges: 1 4 1 4 etc. But since we are going to use this threading for several weaves, the edges will be as on fig. 2. The number of repeats given on the draft should fill about 12 inches in width with 2/16 mercerized cotton set at 32 ends per inch.

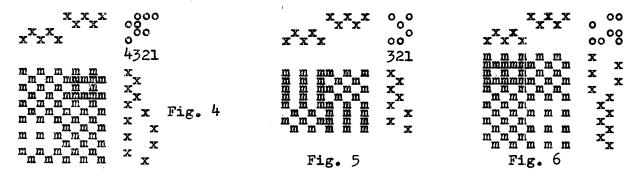
Now here is the list of weaves which can be executed on this threading with changes in the tie-up and the treadling only. We give a short description of each weave, as well as the draw-downs.

#### 1. Huckaback. (fig. 1)

The only huck which we can weave will have to be 10 x 10 of course. The draw-down is as in fig. 1, but for pratical purposes the tie-up should be changed, so that both feet can be used alternately (fig. 3). The treadling with this new tie-up is: 1 3 1 3 1 4 2 4 2 4. Huckaback has a very peculiar texture which shows best when we look at a woven piece against the light. There are tiny slits which run on a diagonal in both directions.

### 2. Turned Huckaback. (fig. 4)

Ordinary huck has floats running in one direction on one side of the fabric, and in another on the back. If for any reason we want to have floats in both directions on the same side, we make one half of the repeat as before, and "turn" the other half (fig. 4). But, since both halves of the repeat are based now on the same tabby shed (treadle 4), they must be separated with an additional shot of tabby on treadle 2. Thus the repeat in treadling is longer than in threading, and to square it we must beat a little harder than usual.

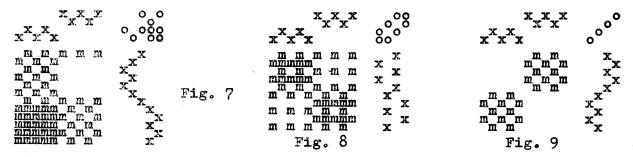


#### 3. M's-and-0's. (fig. 5)

Here it is only the principle of  $M^{\circ}s$ -and-0°s which we use. The result looks more like Huck on one side and like M°s-and-0°s on the other. The texture here is a little softer than in case of huckaback, otherwise the weave is of little interest.

#### 4. Turned M's-and-O's. (fig. 6)

This can be considered as a farther development of Turned Huckaback. The floats here are longer (7 instead of 5) and they form squares on one side of the fabric. The repeat is again longer in treadling than in threading.



#### 5. Double Waffle. (fig. 7)

This is a very attractive and practical weave. Very similar to the plain waffle, has two instead of one float around each square. The floats form more ties with the ground, thus the weave is much firmer. Then both sides are identical, so that the fabric is reversible. When weaving it attention must be paid to good squaring, and the beating must be rather not too heavy.

#### 6. Huckaback Lace. (fig. 8)

This weave has been already described in the 4-th issue of MW. The lace opens during weaving, and not after washing as in Spot-Lace, and any yarn can be used.

Huckaback lace is called sometimes False Basket. Then a stronger colour should be used in threading on frames 2 and 3, and in weaving on treadles 1 and k. Thus the floats standout on a background of less striking colour, and give an effect similar to the Basket Weave.

WEAVE: SATINET (1:3 broken twill).

't No: 7
<u> </u>
X
X

REED NO: 15

ENDS PER DENT: 1

WIDTH: 45"

NUMBER OF THREADS: 676

WARP: cotton

COUNT: 8/2

COLOR: beige or grey

WEFT: rayon or mercerized

COUNT: 8/2 or 6/2

Amy color

PICKS PER INCH: 24 (with 6/2) and 28 (with 8/2)

FABRIC: Bridge-table cover.

Note:

Leave plenty of weft in the shed. Beat hard.

Finishing: Iron through a damp cloth.

## DRAFTING = 5.

Before a draft can be used for weaving it must be adapted to the woven fabric. It must be completed, so it will contain all the information necessary for threading a loom, and later on - for treadling as well. We shall start with threading.

A full threading draft has usually two or three parts:

- 1. The main draft, composed of so many repeats of the particular weave or pattern.
- 2. The borders one on each side. They give a certain finish to the woven piece otherwise it may look as if it were cut from a larger piece. Borders are used only with pattern weaves, but not for upholstery fabric.
- 3. The selvedge. This part of the draft has seldom more than 8 ends, which are threaded so as to give a firm, uniform texture, with as short floats as possible.

All these three parts must be adjusted to each other. In adjusting we must take into consideration both practical and aesthetical factors.

1. The Main Draft. In conventional weaving patterns are usually symmetrical, but the drafts very often are not. Thus the first step in such a case is to "balance" the draft. This can be done in two ways. Let's take as an example the draft in fig. 1.

The draft is not symmetrical. To balance it we can for instance transfer the part from A to B to the left as in fig. 2.

This is still not completely symmetrical, but the difference of one heddle can be taken care of when adjusting the borders. Another way of balancing is to use the draft such as given in fig. 1, repeat it in threading the required number of times, and then add at the end the part from A to C. (fig. 1) It will look as in fig. 3.

Now the whole draft is perfectly symmetrical. It may be pointed out here that such drafts require always an odd number of ends in the warp.

The next step is to fit the draft into the woven piece. If for instance we intend to weave a 40" wide fabric of 18 lea linen,

we shall need about 30 ends per inch, or 1260 ends in all with the take-up and shrinkage. If we want about 2" borders it leaves 1140 ends for the main draft. One repeat of our draft has 36 ends. We divide 1140 over 36 which gives us 31 repeats, and 24 ends left over. This surplus ends must go into the borders - 12 in each. Thus we shall have 72 (60 + 12) ends for the border and selvedge.

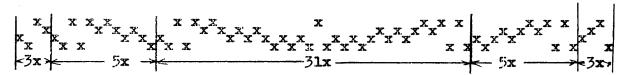
2. The Borders. A border should have either a smaller or a simpler pattern than the main draft. In our case it would be difficult to get a smaller, undistorted pattern without additional frames, but we can have a simpler one: a plain diagonal as in fig. 4.

Adjusting. All three parts must be worked out so that: 1-st there is a continuation of design between the main draft and the border, and 2-nd - that the tabby order is preserved. This means that we cannot have two heddles on the same frame, or a gap between frames 1 and 3, or 2 and 4.

The draft for border on fig. 4 does not fit neither side of the main draft. There is no continuation of design. Consequently we have to change it as in fig. 5 for the LH border, and fig. 6 for the RH one. Since our repeat of the border draft has 12 ends we could use it 6 times, but then we would not have anything left for the selvedge. Thus we shall take it 5 times with 12 ends left for the edge.

The same happens when we try to adjust the selvedge draft as in fig. 7 to the borders. We have to change it into Fig. 8 for the LH edge, and into fig. 9 for the RH edge.

Only now we can assemble the whole draft as in fig. 10.



It is a good idea always to check the number of warp ends in the draft before threading. In our case we have:  $3 \times 4 = 12$ ,  $5 \times 12 = 60$ ,  $31 \times 36 = 1116$ ,  $5 \times 12 = 60$ ,  $3 \times 4 = 12$ ; 12 + 60 + 1116 + 60 + 12 = 1260.

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# QUESTIONS AND ANSWERS

This is a free service offered to our subscribers. We answer only questions of general interest, and which do not require long replies. Write to: "Modern Weaver", c/o Nilus Leclerc Inc., L'Isletville, Québec.

#### Question No 13

On page 14 of your "Encyclopedia" in Volume 1, Number 4 of the "Modern Weaver", you give a description of a brake for loom. Can you give me the proper weights of the two pieces of metal attached to the cords in Fig. B? Should they be changed to balance the number of ends in the warp, also the kind of yarn used in the warp wether linen, wool or cotton.

Ans:

The weights have to be made according to the circumference and smoothness of the beam. This determines the difference between the weights. As the heavy weight keeps the tension of the ends, it should be used proportionately with the kind of thread, the number of ends and the tension desired.

This system is generally used on automatic looms where the front beam winds by itself on each pick. The back weight is made as on a scale, where you can add more weight as wished.

In the next issue (October 55) a complete description of the friction brake will be given. This brake is easy to install, gives a perfect tension and no adjustment is required.

#### Question No 14

Is there a special comb for flossa or chenille rugs on the market?

Ans:

We do not know of any special comb for flossa or chenille rugs, but we generally use a dog comb.

#### Question No 15

We have heard that a 4 dents per inch reed will be the most particular one to buy, as by multiplying the ends per dent, it will give any number of ends. What do you think?

Ans:

A 4 dents reed will be good only for heavy material, where you have not more than 8 ends per inch. A fine material as 8/2 cotton or smaller, linen or wool, where 24-, 30-, 40 ends or over per inch, giving 6 ends or over per dent, the thread will twist together on your material and make uneven weave.

If you weave different material, we suggest you to have an assortment of reeds. The most practical ones are the: 10-, 12-, 15-, and 18 dents.

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CIRCULAR WEAVE - One of double-cloth weaves. Two layers of cloth are connected by the selvedges thus forming a tube. Circular weave is suitable for cushion covers, bags, etc. It may be woven in any standard weave with or without pattern but the number of heddle-frames required is always twice the number for one layer only. The draft for circular tabby weave is:

When the two layers are connected on one side only, the weave is called semi-circular, or double-width, and the treadling is 1 3 2 4. The side on which the layers join depends on the direction of throwing the shuttle, and this direction should never be changed. It should be for instance from the right for treadles 1 and 2, from the left for 3

CISELÉ - (Fr. = finely cut) Pile fabric with pattern formed by blocks of cut and uncut pile.

CLASPED HEDDLES - String heddles made each of two interlocking doups, or half-heddles. The warp ends pass between these doups. When moving the warp forward, the tension on the heddles must be somehow released. Consequently clasped heddles are not mounted on a frame, but between two shafts, of which the lower one can be slightly raised. The advantage of clasped heddles is that they hold firmly the warp ends and consequently there is less friction between the warp and the harness. This is of some importance when weaving very fine fabrics.

CLASPED WEFTS - See Locked Wefts.

This pattern is written partly on opposites. When developping the short draft into full draft it must be remembered that the opposed blocks do not overlap.

CLOTH WORK - Colonial Summer-and-Winter pattern. Short draft:

CLOTH - (fr. AS clath) Any woven fabric. The word is used also to design woolen fabrics only.

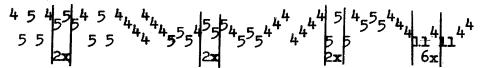
CLOTH BEAM - The rotating beam in front of a loom, on which finished cloth is wound. It is made of wood, and can be either round, hexagenal, or octagonal. In the latter case it is usually made of triangular sections glued together. It revolves on two steel shafts embedded in the ends of the beam, and supported in two bearings set in the loom frame. If the frame is of hardwood, the bearings are not necessary: holes bored in the frame are quite sufficient. On one end the cloth beam has a ratchet wheel (v); a handle with a pawl (or dog) is used for turning the beam. Old looms have a ratchet wheel, but no handle. Holes are bored in the beam, and pegs set permanently in the holes, or removed when not in use. In fly-skuttle looms the beam is often equipped with

Take-Up Motion (v).

Syn.: Breast Beam, Breast Roller, Feen Beam, Front Beam, Web Beam.

CLOUDLESS BEAUTY - Colonial patter (v) of the Three-Block-Patch group.
Short draft:

CLUSTER OF VINES - Colonial pattern (v) of the Sunflower group. Short draft:



COLONIAL - A term loosely applied to early American weaving, and weaving patterns. The period covering colonial weaving extends roughly from the beginning of the 17-th century, to the begenning of the 19-th, i. e. to the introduction of power looms. It is characterised by an extensive use of overshot technique, particularly the four-block overshot, and by a total absence of tissue weaves, brocades, warp-pile weaves, pile carpets, cross-weaves, lappets and knotted tapestry. Besides overshot, and standard weaves, there were used: spot weave (later called Bronson), double spot-weave (Summer-and-Winter), double weaves and turned twills, but not to any great extent. Compared with contemporary English weaving, the Colonial weaving is rather limited on the technical side, but it has developed an extraordinary richness of design. Colonial patterns are nearly all four-block, or their more elaborate derivatives.

Looms in use during the colonial period of weaving had from 4 to 12 heddle-frames. There is no indication of draw-looms being ever used in America.

COLONIAL PATTERNS - All colonial patterns can be divided in the following way (classification of M.M.Atwater - see Bibliography):

- 1. Diamond and Cross: a) Cross and Table
  - b) Diamond and Table
- 2. Star and Rose: a) S
- a) Star and Table
  - b) Rose and Table
  - c) Star, Rose and Table.
  - d) Group of Stars and Table.
- 3. Wheel: a) Star and Wheel.
  - b) Wheel and Table.
  - n) MHeel and labte
  - c) Wheel and Rose.
  - d) Group of Stars and Wheels, and Table.
  - e) Wheel, Star, and Rose.
- 4. Radiating patterns: a) Sunrise and Table.
  - b) Blooming Leaf.
  - c) Bow-Knot.
- 5. Patch Patterns: a)
- a) Two-Block.
  - b) Three-Block.
  - c) Four-Block.

#### 6. Miscellanous:

- a) Sunflower.
- b) Unclassifield.

In all: nineteen groups in six classes. The name of every class indicated the elements of which the pattern is composed. These elements are discribed separately under: Cross, Table, Rose etc. Drafts given under proper names of colonial patterns are all short drafts. For their interpretation see: Short Drafts, and: Development of Drafts.

The names of colonial Patterns included in this book are all classical patterns. Names of patterns not included are of later origin, usually doubtful and of local importance only.

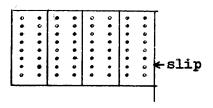
COLOURS - Since the names of particular colours are often misleading and since they vary with nearly every producer of dyes and paints, several attempts to standardise them have been made. Originally Oswald placed all colours in the rainbow's order on a circle and divided this circle into 100 parts. Later for pratical reasons this circle was divided into eight groups, each group having three shades - 24 pure colours in all. These 24 colours are called Range NA. By adding a certain amount of black to every colour we have Range NE, and still more black gives Range NI. Adding more or less white to each colour we have Ranges EA and IA. Still more ranges are obtained by adding black and white simultaneously. Any particular shade is then defined by the number of range and the number of colour. Thus for instance NI-12 will be very dark bluish-purple.

Besides standardising the colours Oswald tried to create a theory of colours combinations. This theory hawever is rather involved and does not give satisfactory results in weaving.

COMB - 1. The same as Reed (v). 2. In tapestry weaving (High-Warp Tapes-try) a wooden fork which is used for beating down the weft. It consists of a heavy piece of wood about a foot long, with a handle on one end, and a head with serrations cut in the wood on another. The number of serrations or grooves per inch corresponds to the sett of warp.

COMBED WOOL - Better quality of wool with fibers from 5 to 12 inches long. This wool passes through an additional carding operation, called combing.

COMBER BOARD - (Word of uncertain origin; it either comes from Cambrai in France, and was brought to British Isles by French weavers, or is an obsolate form of "cumber" /fr. Lat. cumulus = heap/) A board with



tiny holes serving as guides for heddles. The holes are not placed in one row, but in several, and the board is usually composed of a number of sections, called Slips, held together in a frame.

Comber board is used in all types of Draw-Looms.

Syn.: Hole Board.

COMBER REPEAT - Repeat of a pattern which does not change its direction, as opposed to Point Repeat, where the direction changes. Usually this

kind of repeating any pattern, part of a threading draft, is referred to as "plain" repeat " or just "repeat ". Compare: Point Repeat, Turnover R., Drop-Turnover R.



COMBER SLIP - One section of a comber board.

COMBING - A process similar to carding, and used only with better quality long fiber wool.

COMPOUND HARNESS - More than one harness mounted on the same loom, so that every warp end is threaded through one heddle in every harness. Compare: Two-Harness Method.

COMPOUND MONTURE - A Draw-Loom which has the ground harness replaced by a split harness. This requires an additional section of the com-

pattern heddles: ground ground heddles: : shafts

ber board for ground heddles. another pulley-box, and a separate simple. The main purpose of this arrangement is to facilitate the brocading which is very nearly impossible when an ordinary ground harness is placed in front of the comber

board. Draw-Looms with as many as four sections of the compound monture are sometimes used. Compare: Draw-Loom, Split Harness. Comber board.

COMPOUND WEAVES - There are several definitions of Compound Weaves: 1. Any weave which has more than one warp. 2. Any weave composed of two different simpler weaves. 3. A weave composed of two different pattern weaves.

In the last case the weaving can be done with Two-Harness method. The back harness is threaded for one weave, the front harness for another. When the front harness remains in neutral position (neither raised nor sunk), the loom works as if it had the back harness only, and the first weave is executed. When the front harness is used alone, the second weave appears. More than two weaves require still more harnesses is at least 12 inches, the loom becomes difficult to operate, and a Draw-Loom is to be preferred. Compare: Tissue Weaves, Two-Harness Method.

CONE - One of several ways in which yarn is wound and sold. It has the advantage over tubes or spools, that the yarn can be taken off the cont without revolving it, which simplifies such operations as warping, bobbin winding etc. The cone should be placed so that the yarn will inwind in the vertical direction. When this is impossible for any reason, a special stand properly inclined must be used. The cones are then placed on pegs set in the stand.

paper cone

COP - (fr. AS cop = summit) A cone of yarn wound on a quill or tube. Sometimes the tube itself.

COPPIN - The same as Gup (R).

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# Z - handicrafts

FULFORD, P.Q. CANADA

\*

TELEPHONE: WATERLOO 192-J-1

C. P. EXPRESS: FOSTER, P.Q.

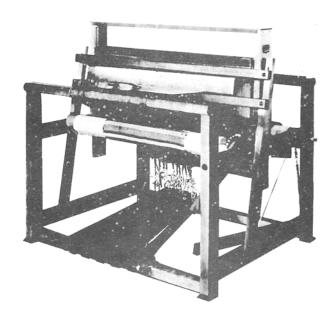
Teaching adapted to the requirements of every weaver. LESSONS. 2 hrs of theory, 6 hrs of weaving a day, 5½ days a week. Beginners, Seniors, Advanced, Masters. Instructors. Terms: Room and board (two persons to a room, 3 meals a day) instruction, and weaving - \$ 35 per week per person. Location: Eastern Townships, Quebec. Picturesque tourist district of wide renown. Hilly country, pleasant surroundings, good roads. The studio and living quarters are located in a large farm house, 65 mls East of Montreal 2½ mls from Brome Lake, 40 mls from Newport, Vermont. Reservations: Only a very limited number of weavers may be accommodated. Make your reservations early, for one week or more from June to September.

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THE "NILUS"

A Leclerc four-harness rising-shed "Jack-type" loom with an independent action of each harness-frame. When a treadle is depressed, the frames are pushed up from underneath by a special mechanism. The loom has 6 treadles, and each treadle can be tied to 1, 2, or 3 frames. The shed is always perfect, regardless of the tie-up.

This is particularly important when weaving double cloth, Bronson, waffle and so on. The loom is very easy to operate. It has a removable front beam, which makes threading easier, and it is built on the same loom-frame as the standard model "M".

Construction: Same as all other Leclerc loom, solidly bolted and screwed.

Finish: Red Birch (Maple) with fine natural color. Metal parts of steel and cast iron aluminium color.

Equipment: Canvas aprons, 15 dent reed, 3 lease sticks, 4 iron rods, necessary wire or flat heddles, shuttles, cords, threading hook, screw driver, wrench, and instructions.

#### SPECIFICATIONS and DIMENSIONS (in inches)

Loom	Weaving	Shuttles		Heddles		Depth	Length	Height		Weight	
No.	width	Quant.	No.	Quant.	Length	Берлі	Lengin	Total	Front	Net	Ship.
N-27	27"	1	120	600	101/2"	361/2"	37"	43"	311/4"	105 lbs.	135 lbs.
N-34	36"	2	120	1200	101/2"	361/2"	46"	43"	311/4"	120 lbs.	150 lbs.
N-46	45"	2	120	1500	101/2"	361/2"	55"	43"	311/4"	125 lbs.	160 lbs.
N-40	60′′	2	120	1800	101/2"	361/2"	70′′	43"	311/4"	195 lbs.	230 lbs.
N. 90	90′′	2	122	2500	121/2"	361/2"	102"	44"	311/4"	235 lbs.	300 lbs

Loom	Wire heddles	Loom	Flat heddles
N-27B	\$ 141.00	N-27A	\$ 143.75
N-36B	151.75	N-36A	157.15
N-45B	162.75	N-45A	169.50
N-60B	184.00	N-60A	192.10
N-90B	256.00	N-90A	267.00

Your standard Leclerc loom series "M" can be transformed as a rising shed loom.

Everything needed for the transformation including head with harness, lamms and mechanism.

4-N-27 4-N-36	for 27" loom for 36" loom	Shipping weight: 35 1bs. Shipping weight: 40 1bs.	Price: \$50.00
4-N-45	for 45" loom	Shipping weight: 45 lbs.	Price: 50,00 Price: 50,00
4-N-60 4-N-90	for 60" loom for 90" loom	Shipping weight: 55 1bs. Shipping weight: 100 1bs.	Price: 55.00 Price: 65.00