

The background of the cover is a collage of various weaving charts and patterns. These include grid-based diagrams with different symbols and colors, some with handwritten notes in Finnish. One note at the top left reads '33 5K-8 5P-8 5T-8'. Another at the top center says 'laimi- ja kudel- mallaitta pomeia yhdistet 2g.'. A central note reads 'Threads 880 720 720'. Other notes include 'Thread from A B C D E', 'Thread from A B C D E', and 'Thread from A B C D E'. There are also some numbers like '2x', '3x', '4x', '5x', '6x', '7x', '8x', '9x', '10x', '11x', '12x', '13x', '14x', '15x', '16x', '17x', '18x', '19x', '20x', '21x', '22x', '23x', '24x', '25x', '26x', '27x', '28x', '29x', '30x', '31x', '32x', '33x', '34x', '35x', '36x', '37x', '38x', '39x', '40x', '41x', '42x', '43x', '44x', '45x', '46x', '47x', '48x', '49x', '50x', '51x', '52x', '53x', '54x', '55x', '56x', '57x', '58x', '59x', '60x', '61x', '62x', '63x', '64x', '65x', '66x', '67x', '68x', '69x', '70x', '71x', '72x', '73x', '74x', '75x', '76x', '77x', '78x', '79x', '80x', '81x', '82x', '83x', '84x', '85x', '86x', '87x', '88x', '89x', '90x', '91x', '92x', '93x', '94x', '95x', '96x', '97x', '98x', '99x', '100x'.

MASTER WEAVER

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FOR HANDWEAVERS**



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THE ULTIMATE IN -----

CHENILLE.

I use the word "ultimate" on purpose, to illustrate the poverty of our modern English, in which nothing short of "supreme", "cosmic", or "nuclear" attracts attention. On the other hand I may be partly right, because the technique I am going to describe gives a complete freedom of design, and this is the ultimate object for rug and tapestry weavers. What more can we ask?

The speed of weaving good chenille rugs is about 10 times greater than the speed of making a knotted rug of the same texture, let us say 20 hrs per square yard. Thus if we have the same freedom of pattern in both, there is no doubt that chenille is much more economical.

When we speak about "freedom of design" there are no reservations this time. There were in case of chenille rugs, plain or in Locked Wefts (see MW 19/5, 20/3, and 38/4).

The only difficulty with the method we are going to describe is that the rug must be carefully planned before we start weaving the first warp. On the other hand this planning is easier than in case of Locked Wefts. One of the first factors to be considered is the fineness of the pattern, and this in turn depends on the texture of the rug.

For instance it is pointless to attempt a design with very fine lines if we have a long pile, because the pile does not keep upright but leans in all directions thus blurring the pattern. This applies to all pile rugs, not only chenille. Therefore the finer the pattern - the shorter must be the pile.

With the type of chenille most often made by handweavers, there are about 4 shots of chenille weft per inch. Thus the smallest element of the pattern is about $\frac{1}{4}$ of an inch. If the pile is very short, and the design very fine, we must plan the rug on graph-paper taking one square as equal to $\frac{1}{4}$ ". With normal pile of $\frac{1}{2}$ " (on each side) one square may represent $\frac{1}{2}$ ". Thus a rug 45 by 60 inches will take 90 by 120 divisions of the graph-paper.

This is the practical limit of the fineness of design, but there is nothing to prevent us from using much coarser patterns with the smallest element of one, two, or even three inches. Then of course the paper work will be much simpler, and the weaving of the first warp a little faster (but only a little). Since weaving of a pile rug of any kind takes time, it would not be wise to be influenced in our choice of pattern by the economy of paper work.

After having taken into consideration all these factors, we can start the first stage of the paper work by sketching the rug on plain paper in colours. A fragment of such a sketch is shown in fig.1.

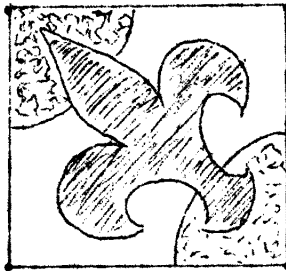


Fig.1

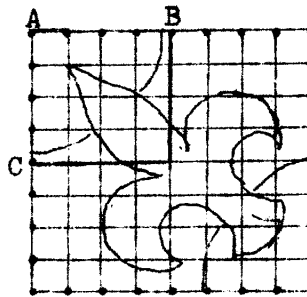


Fig.2

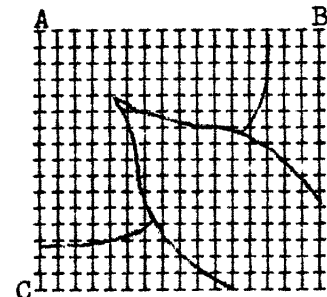


Fig.3

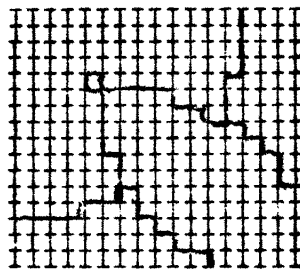


Fig.4

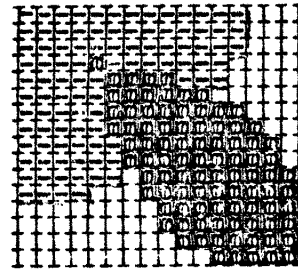


Fig.5

The next step is to decide upon the yarn. All pile yarn in one rug should be of the same count and make. Different yarns even of the same count behave differently when subjected to wear, exposure

to light or humidity, cleaning, etc. Thus we select a manufacturer, get a sample card, and make the final choice of colours. Now we must remake our project this time on graph paper with 4 or 5 divisions per inch (fig.2). We copy the original design without paying any attention to the lines on graph-paper, but using the right colours. Each square of the paper represents now two inches of the rug.

This second stage is particularly important because here our "creativity" ends. All changes in line or colour must be made now.

In the third and last paper stage of the project we enlarge and copy the stage two on finer graph-paper such as 10 per inch, or for those weavers who have very good sight - 20 per inch. In our example a section marked CAB in fig.2 has been enlarged in fig.3. It means that now each square in fig.2 corresponds to 4 x 4 squares in fig.3, and each square in fig.3 is $\frac{1}{2}$ " x $\frac{1}{2}$ ".

Now we copy with a soft black pencil the outlines of the pattern on the fine graph-paper. We do not use colours at first, and we still do not pay any attention to the printed lines except as guides in copying, which is very much like enlarging a map. When this is finished (fig.3) we follow each fluid line changing it into a sequence of short horizontal and vertical lines identical with the printed lines (fig.4). Finally the colours are filled in (fig.5). The last three figures can be drawn on the same piece of graph-paper.

When the pattern of the whole rug is worked out this way, we are ready to start planning the first warp. Here the reader who is not familiar with weaving patterns in chenille is urged to re-read the article in MW 20/3. The thing we must keep always in mind is that the warp of the first operation becomes weft of the second, that is that the pattern woven on the first warp lies at a right angle to the pattern of the rug.

First of all we divide the total number of picks of chenille weft in the rug into several groups of equal size. For instance if the rug is 60" long it probably has 240 picks, and this can be divided into 10 groups of 24 picks, or 8 groups of 30, or 6 groups of 40 picks. The number of groups has nothing to do with the pattern. The smaller is this number of groups, the wider and shorter the first warp. This number will not affect in any way the second weaving.

Let us take as an example a small rug $22\frac{1}{2}$ by 30 inches shown in fig.6. The pattern is already worked out. Each space of the pattern (it would be a square on a graph-paper) equals $\frac{1}{2}$ ".

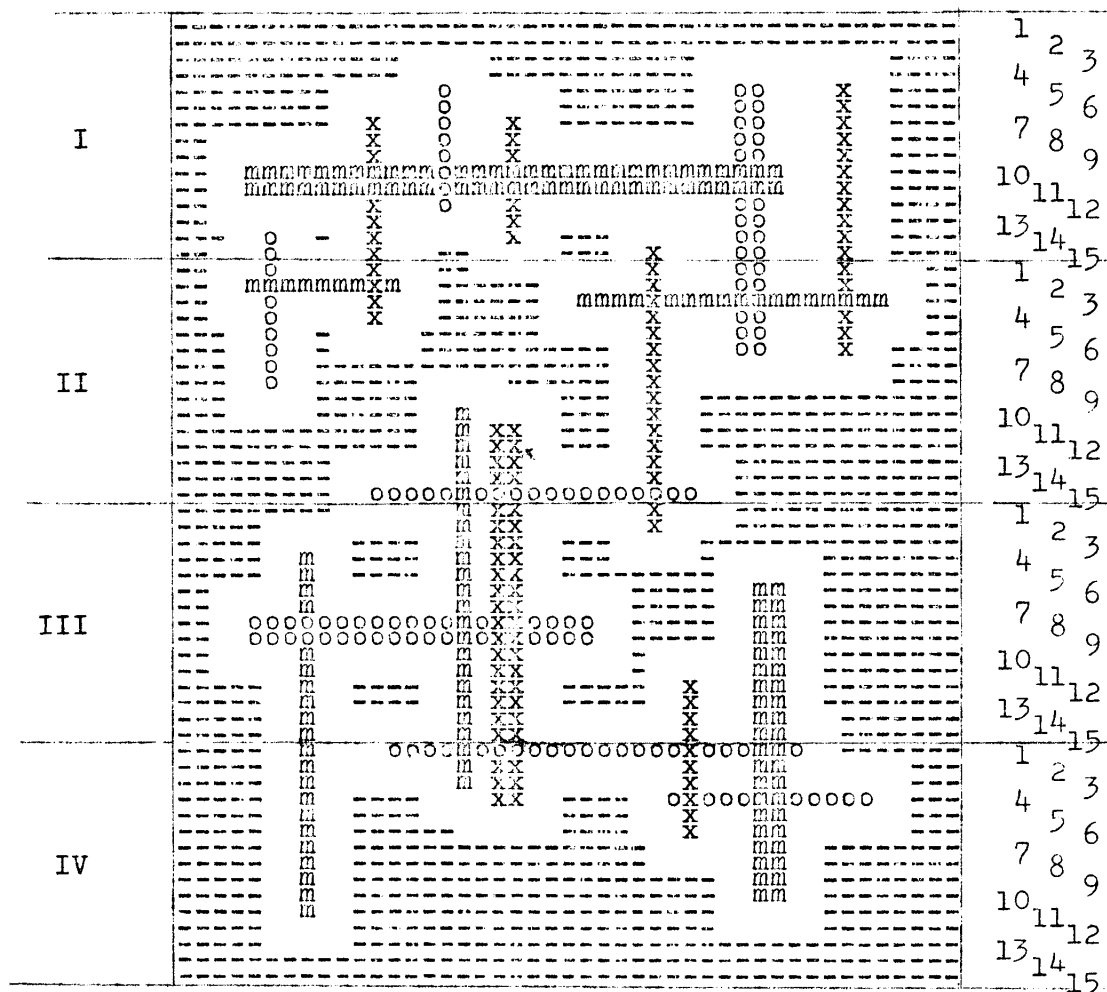


Fig.6

The rug is 30" long and it will have 120 picks of chenille weft, Each number on the right hand side of the pattern corresponds to TWO (identical) picks of weft. The symbols for colours may mean anything; suggested colours are: empty space - white, "-" - light grey, "x" - dark grey, "m" - black, "o" - red.

We divide the rug into four horizontal sections, each of 30 picks, or $7\frac{1}{2}$ " wide, marked I, II, III, and IV. Each of these sections will be woven separately on the first warp. We shall see later on how this is done.

For the time being let us figure out the first warp. Each section is $22\frac{1}{2}$ " long, plus 4" for "tucking in" (see MW 20/3). This

makes 106", plus about 30% take-up, plus wastage, or in all about 5 yards. The exact amount of the take-up is difficult to predict because it depends on how bulky is the pile weft. Since the warp itself is cheap it is better to be always on the safe side by making it rather too long than too short.

If we have a pile $\frac{1}{2}$ " long on both sides the width of the first warp will be 31". It will have 32 groups of 8 ends, that is 30 groups to make the 30 picks of weft, and 2 groups for edges. In all 256 ends of 20/2 cotton, or similar yarn.

The warp is threaded as usual, the first and the last group sleyed through two dents of a reed # 12 or 15, and the remaining groups: all 8 ends in one dent, 1" apart.

Now we can start weaving section one first by filling 2" of the warp with any left-over weft, or cheap yarn such as linen tow. From now on we must follow the pattern in section I (fig.6) by turning the draft so that its right hand side be at the bottom. We have 15 pairs of chenille numbered from right to left. Let us stick a piece of masking tape across the top of the first shaft and mark the numbers of all groups. The first group at the edge is disregarded. Then the two following groups will have number 1, the next pair # 2, the third pair # 3 etc.

In section I we have, reading from the bottom, first 2" of light grey all across. This is woven normally. Then we have light grey on 1 and 2 (4 groups) and white on 3 to 15. This time we shall fill the shed as if it were tapestry. In other words we shall pass the shuttle with grey through the shed of groups 1 and 2, and white through all the groups 3 to 15. This is repeated to fill one inch. The weft is not pulled tight: loops about 1" long are left on the outside of groups 2 and 3.

Since there is no take-up on the weft there is no problem of pulling-in as in real tapestry, but there may be another problem: the weft may climb up at the beginning and end of each colour (except at the edges). Whether it will or not depends on the quality of the weft and on how sturdy is the reed (use narrow reeds). If this happens only occasionally use a plain eating fork to force the weft down. If the phenomenon keeps occurring, change the reed to a much finer one as for instance #20 or 24, and sley each group in two dents.

Continuing section I we have (W -white, LG - light grey, DG - dark grey, B - black, R -red):

½" of 1,2 - LG; 3,4 - W; 5-15 - DG.

1½" of 1,2 - LG; 3-15 - W.

½" of 1,2 - LG; 3-9 - W; 10,11 - B; 12-15 - W.

1" of 1,2 - LG; 3,4 - W; 5-9 - R; 10,11 - B; 12-15 - R.

1" of 1,2 - LG; 3-9 - W; 10,11 - B; 12-15 - W.

1" of 1-7 - LG; 8,9 - W; 10,11 - B; 12-15 - W.

And so on. By this time the relationship between the pattern in fig.6 and the pattern on the loom will be obvious.

When section I is finished we weave again 2" of waste for tucking-in, mark the end with a shot of a different colour, and start on section II again with 2" of waste.

After having taken the first warp off the loom, cut off the first section only, and cut only two chenille wefts at a time from the section. Otherwise it would be hard to find the right pick of chenille, unless all of them were numbered - an unnecessary operation. Also since cutting the chenille weft is very hard on fingers, it is better to do it gradually as the rug progresses, rather than all at once.

There are quite a few small problems in weaving the sections, but they were discussed before (MW 20/3 and 38/4). Obviously all sections must be of the same length or they will not match one another. It is advisable particularly with fine patterns to have a definite number of shots per inch in the first weaving by adjusting the bulk of the pile weft (2, 3, or 4 strands of yarn wound together) so that we have two or three picks per ½", that is 4 or 6 per inch. The beating will do the rest.

The second weaving is exactly the same as in case of any chenille rug with a definite pattern (MW 20/3 and 38/4).

Finally here is a hint which will help handling the cut chenille: use rubber cement on the first and last inch of each section. Apply it to the first warp generously. Even if it gets into the waste it does not matter, because it is not glue, and the waste can be still stripped easily.

A ROSE IS A ROSE IS A ROSE . . .

HOW MANY ROSES IN A DRAFT ?

This is a sequence to the article about "Tromp-as-writ". With the exception of one lesson of drafting, we have never seriously discussed weaving of patterns in "rose-fashion".

The term again is Colonial, and is derived from an element of pattern, called "Rose". A Rose is symmetrical but has no diagonal, thus it cannot be woven as drawn in. It is just the reverse of a Star which however has a diagonal. In case of double weave, Summer-&-Winter, or Overshot -on-Opposites the Star will actually appear at the back of a Rose, not however in case of 4-block Overshot, Barley Corn, or Swivel.

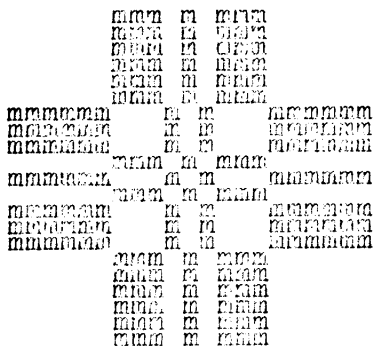


Fig.1

From the beginning this type of patterns, that is not only "Roses", but any symmetrical pattern without a diagonal, presented a problem, and this is precisely because of the lack of the diagonal. The

problem is to find the treadling directly from threading.

It is not easy for us to understand the way a Colonial weaver worked things out. There were no weaving schools, no literature, no professional teachers. There were other weavers, true, but not always anxious to share their knowledge with less fortunate colleagues. Thus most of the creative work was done by trial and error.

As long as the problem was to find the diagonal it was not too difficult, because the diagonal stood out on the woven piece, and any mistake would show immediately by the diagonal getting crooked or broken. It is fairly sure that at least some Colonial weavers knew not only the practice but also the theory of the diagonal. They knew for instance that when weaving Overshot one had to repeat each block a definite number of times: one less than the length of the float. But when it came to Rose patterns they were lost. Even the pioneers of the revival of handweaving still did not know the rules;

compare treading directions in early editions of Atwater or Davison.

Fortunately we do not need to experiment any more to find the treading. There are a few simple rules:

1. The Rose patterns have only individual blocks: no combinations of blocks, that is no two or more blocks woven at the same time. The blocks may overlap by one warp end (Diamond Twill, Overshot, Barley Corn) and then the pattern is slightly distorted.

2. Rose-fashion patterns can be woven on any number of blocks from two up; in practice from three up.

3. The easiest way to figure out the Rose-fashion treading is to find first the basic treading, that is woven-as-drawn-in. Then it is converted to the Rose-fashion.

4. The depth of blocks of pattern remains the same in both. That is the number of units of treading or of shots of pattern weft in each block do not change.

5. What changes, are the numbers of blocks. If there are N blocks of pattern, block 1 becomes block N, block 2 becomes N-1, block 3 becomes N-2 etc.

6. In case of pattern weaves which require only one treadle for each block of pattern (Diamond Twill, Overshot, Crackle, Bronson, Swivel) the pattern treadles in the tie-up can be arranged in the same order as the blocks of pattern, and then the conversion from Basic treading to Rose can be expressed in numbers of treadles:

3 blocks: treadle # 1 = # 3; #2 = #2; #3 = #1.

4 blocks: #1 = #4; #2 = #3; #3 = #2; #4 = #1.

5 blocks: #1 = #5; #2 = #4; #3 = #3; #4 = #2; #5 = #1.

And so on.

7. There is only one Basic treading, but there are as many Roses as blocks of pattern. The rules 5 and 6 give the first Rose. To find the remaining Roses (marked R_2 , R_3 , R_4 , etc.) we add one to the number of each treadle in Rose 1. The treadle with the highest number becomes then treadle 1. For instance for four blocks:

Basic: #4	Rose 1: #1	Rose 2: #2	Rose 3: #3;	Rose 4: #4
#3	= #2	= #3	= #4	= #1
#2	= #3	= #4	= #1	= #2
#1	= #4	= #1	= #2	= #3

This is the theory. But what does it mean in practice? First of all that with 4 blocks of pattern we can get 5 symmetrical variations: one basic plus four roses. Then, that we can combine all these possibilities in unsymmetrical patterns.

In fig.2 we have an Overshot draft woven in Swivel effect.

<pre> x </pre>	<pre> o o o o o o </pre>
4321	

Fig.2

The treadlings are (binder not included):

Basic: 432143432321212141212141414341414121214121212323434123;

Rose 1: 123412123234343414343414141214141434341434343232121432;

Rose 2: 234123234341414121414121212321212141412141414343232143;

Rose 3: 341234341412121232121232323432323212123212121414343214;

Rose 4: 412341412123232343232343434143434323231323232121414321;

Binder in neutral colour on treadles: 3 after 1; 4 after 2; 1 after 3; and 2 after 4.

We took an example of swivel effect on an Overshot draft to show all the Roses. In traditional Overshot Rose 1 is at the back of Rose 3, and Rose 2 at the back of Rose 4.

Fig.3 gives another example, this time in Barley Corn:

<pre> x </pre>	<pre> o o o o o o o o o o o o </pre>
BA321	

Fig.3

The treadlings are (binder not included):

Basic: 3213322211113333311112223312;

Rose 1: 1231122233331111133332221132;

Rose 2: 2312233311112222211113332213;

Rose 3: 3123311122223333322221113321;

Binder: either one shot on A after each shot of pattern (floats in warp at the back), or 2 shots of fine weft on both A and B after each shot of pattern (no floats at the back).

The Rose-fashion patterns are particularly important in designing fabrics for weaves where blocks of pattern cannot be combined because of resulting long floats (Dropped Weaves, Diamond Twills, Overshot, Bronson or Barley Corn, etc).

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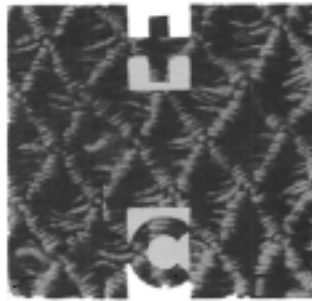
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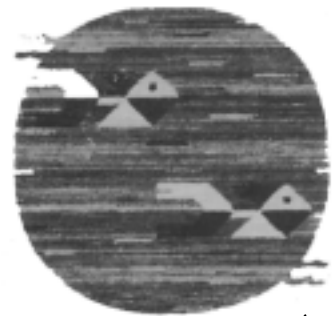


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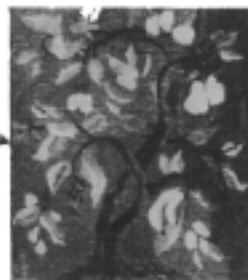
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