MASTER
WEAVER

BI-MONTHLY BULLETIN
FOR HANDWEAVERS
★
Z-HANDICRAFTS
FULFORD, QUE., CANADA
If we believe the statistics, there are some 500,000 hand-weavers on the continent of North America. Most of them are craftsmen. It means that they weave for pleasure or for a small profit. They are not artists and they do not pretend to be.

Artists may be the salt of the earth, but they are not numerous. They cannot be or they would be worth a dime a dozen.

Nevertheless certain publications, lecturers, and even organisations try to impress all weavers that what they must do, whether they like it or not, is to be "creative", "modern", "contemporary", "inspired", "functional", "dynamic", and what not.

All this is cheap advertising and nothing else. Nobody can become an artist by trying hard, or by studying, or by using fancy yarns or fancy looms, or fancy teachers. Even psychoanalysis does not turn an ordinary human being into an artist, rather the opposite. Artists find the art as the only way of expressing themselves and if we meddle with this natural process we are only likely to stop it.

A craftsman on the other hand is the heir of the science of handweaving accumulated by the centuries. Industrial weaving grew up out of him, and the artistic weaving (if such a thing exists) takes advantage (and seldom full advantage) of his experience.

Thus there is not the slightest reason for a honest craftsman to feel inferior, because he is making only good linen towels with a fairly decent design. His brother artist-weaver will make similar towels in most inappropriate yarn and technique, ask ten times their value, and be either successful by sheer imposition, or frustrated by critical environment.

There is not the slightest reason why towels, place-mats or tapestry should have big and untidy holes in them; why should they be made of strange and ugly materials; why in short should they be useless.

Let us not forget one very significant fact: that a craftsman can teach an artist, but an artist is absolutely unable to teach a craftsman. He can talk, that's all. Ask him: What? And he will deliver a lecture. Ask him: How? And he will find a pressing appointment.
It is another story that a craftsman should know the principles of designing, and we have spent quite a lot of time discussing problems related to this subject. But no amount of knowledge of designing can make an artist.

In our opinion those who encourage all weavers to be artists are doing a lot of harm to our movement, because they lead their followers into hopeless impasses, force them to struggle against tremendous odds, and finally leave them exhausted and disgusted with the very idea of weaving.

We can grant that the same happens in other crafts, particularly in pottery, but this fact does make the problem any easier.

We should remember that crafts are and always were concerned first of all with techniques, with "how" to make things. This makes crafts accessible to everybody, this makes them important as a social phenomenon. If we increase the artistic level of handweaving to a point where only few chosen can follow, we are obviously closing the gates to those who need the craft most. An artist will always find some medium for his creativeness, but a craftsman must be allowed to find his own level, his own direction, and his own medium to be happy with whatever he is doing.

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It is perhaps a mistake to look to other countries for inspiration, but since many weavers consider anything Scandinavian to be synonymous with perfection, then how this conflict between art and craft was solved over there? - They solved it in a very natural way without wasting time on useless experiments. Their designing has always been based on folklore art; therefore it developed very slowly without going to any extremes, and now is as modern as it can be, it is functional without being extravagant, showy, cheap.

What we did was to stick as long as possible to the original folklore (colonial weaving) without changing it at all, and then instead of adapting and developing this style which has already become a part of our unconscious cultural background, we switched suddenly to the stone-age-period of weaving. This sort of experiments may produce extremely interesting results, but it is very dangerous for the craftsman, who loses all sense of security, and even all sense of proportion. This of course makes him unhappy, uncertain of himself, lost in too many possibilities.

And at this stage, instead of correcting our mistake, we start pretending that this is "Art", regardless of what we are really doing. But haphazard experimenting is not art, and if it were then what happens to the Craft? Is the craft forbidden now?

It seems that this is the case, because we hear such expressions as: "His weaving is crafty", meaning that the weaver has good technique but only conventional design. Why not use another expression: "arty"? It could be applied with justice much more often than "crafty". It would mean that the weaving is poor by all standards, but it is unconventional.
We are afraid that if too many weavers will take seriously this "arty" trend in handweaving, the whole movement will go through another crisis similar to the one produced by the industrial revolution. Already now many handweavers after trying this apparently easy and modern trend give up in despair, and our numbers are dwindling.

But there will be always honest craftsmen who will see this crisis through. There will be always honest artists as well, but it is not the artist who preserves the knowledge and technique of a craft. Artistic standards and requirements change from decade to decade, when the craft develops in terms of centuries. Art gives satisfaction to the selected few, when craft is a really democratic movement which satisfies the needs of millions.

But of course the worst is the "arty" weaving which is neither art or craft, but an escape for those who are not gifted enough to be artists, and too lazy to become craftsmen.

The role of a craftsman in weaving is becoming more important than ever. Industrial weaving does not preserve the tradition of handweaving, because their methods are getting more and more involved, mechanised, and specialised. An industrial weaver or rather operator has hardly any idea about the mechanics and possibilities of a hand-loom. We know experts in textiles who take up handweaving as a hobby! Thus the craftsman has the whole responsibility and perhaps the mission of preserving for the future generations the science of handweaving. There is nobody else, who could do it, and this science may be badly needed yet.

FROM THE CLASSICS

"...Mrs.T.Chamberlin, related to me on her 100th birthday this remarkable account of her grandmother:

"My grandmother was a woman of remarkable energy, determination, and skill. One time when my father received a summons to appear in Court in Montreal, and there were only three days before he must start, and he had no suitable pants in which to appear, she went to the pasture and caught and sheared a white sheep, then caught and sheared a black sheep. She carded this wool into rolls, spun it into yarn, quilled the necessary quantity of one colour for the woof, then, taking the other colour for the warp and placing it properly in the loom, she wove some cloth into small black and white checks. When she judged that she had a sufficient quantity of cloth she took it from the loom, cut out and made the required parts for my father, working without sleep for three days and two nights that he might go suitably clothed to the city."


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This article is a continuation of the two previous ones on Chenille, and Patterns in Chenille (MW 19/5 and 20/3). The reader is advised to study very carefully the former before going into this one.

The problem of free design in chenille rugs is hardly a problem at all if one has enough patience to make his chenille weft with only very few strands at a time. Theoretically, if we made only one strand (which of course would be rather wasteful of yarn and time) we could make any design no matter how complicated. Fig. 1 shows how this is done.

1 ————- 2
3 ————- 4
5 ————- 6
7 ————- 8
9 ————- 10
11 ————- 12

Chenille weft: 1-st pick - 16" of white;
2-nd: 2" white, 1" black, 4" white, 1"
black, 8" white; 3-rd: 3" w, 1" b, 2" w,
3" b, 7" w; 4-th: 4" w, 5" b, 2" w, 1" b,
4" w; 5-th: 5" w, 5" b, 3" w, 1" b, 4" w;
6-th: 2" w, 5" b, 3" w, 2" b, 4" w;
7-th: 1" w, 5" b, 3" w, 3" b, 2" w, 1" b,
1" w; and so on.

Fig. 1

The weft could be woven in one continuous strip, but it would have to be a very long one indeed. For instance to make a rug 24 by 36 inches with 4 picks of chenille per inch, we would have to make the first warp 96 yards long!

This example is here only to prove the point. In practice we do not need to prepare each pick of weft separately. First of all because modern patterns are seldom as involved as that, and second - because we have a shortcut. This shortcut is the method of interlocking two colours in the first weft (when making the chenille weft) as in Locked Wefts.

Before going any further the reader unfamiliar with Locked Wefts should look up this method (MW 4/7).

What it amounts to is that we can weave any pattern as long as it has only two areas of colour in one line. Thus if we can divide our chenille rug into horizontal sections which would fulfill this requirement, we have solved the problem. Let us take as an example a black diamond on white background (fig. 2). This simple pattern could not be woven by any method described so far. But if we divide the figure into two sections, there is no more difficulty. This is how we proceed:

Our rug is 15 by 15 inches, and we shall have 4 picks of chenille weft per inch, or 60 picks in all. We shall divide the rug into two sections along the line A - B. The first section from
C-D to A-B will have 30 picks; each pick 15 inches long. If the pile is \( \frac{1}{2} \)" long on each side of the rug, the distance between the groups of warp in the first weaving will be one inch.

This makes our first warp 31" wide with 32 groups of warp (the two outside groups to be rejected). In the first weaving this section will look as in fig. 3. It will be 31" wide, and 15" long. The numbers indicate the picks of chenille weft after cutting.

To weave we use the white yarn on the bobbin rack on the left, and two shuttles on the right: one with black, and one with doubled white. We start with 3" of plain white. Then we throw the shuttle with black yarn from the right, catch the white from the rack and pull it so that the two colours will cross at about 3" from the LH edge. This we do for one inch. Then we weave another inch this time crossing the colours 7 inches from the edge. Then another inch with the interlocking point 11" from the edge. The next inch will have 15" of black on the right, and the next - 19". Then we start coming back: 15, 11, 7, and 3 inches of black - one inch of each. And we finish with 3" of plain white.

This takes care of the first section. Now we fill 2 or 3" with any yarn at all, and start the second section which is identical with the first.

When both sections are finished we can cut them off and start the second weaving. We insert into the second warp (after the usual preliminaries) the strip of chenille cut from the first section at the left (No. 1 fig. 3), then No. 2, 3, 4, etc. When we finish the first section we reverse the process by starting on the right in the second section, and moving to the left.

Here more than ever we should avoid cutting all the chenille weft at once. It is only too easy to miss one pick and find too late that it does not fit any more. When we cut as we go along there is no danger of such a mistake.

It is actually advisable to make such a small rug as an exercise, before we attempt larger projects.

In the next step let us take 3 colours (fig. 4): black (m), red (o), and white (-). The rug will be 29 by 39 inches. The pattern is completely free. Our first task is to divide it into a smallest possible number of sections in which only two colours
appear in the vertical direction. What is more, the sections should be of about the same size. This latter condition is not absolutely necessary but a large difference in size means that we shall waste a lot of yarn, because all sections must be of the same size in the first weaving, and any section smaller than the rest will be made by rejecting some of the chenille weft.

After a few attempts we shall arrive at the division indicated in fig. 4. All sections are 8 inches wide, except section D which is only seven. This means a waste of 4 picks of chenille, which is not very bad.

Nothing prevent us from dividing the pattern into a much larger number of sections, but this means also a much longer first warp, and also much longer weaving.

Now for the first warp. There are 8 inches of each section or 32 picks of chenille weft. To make it with a 3/8" pile on each side we need a first warp 33 inches wide with 34 groups of warp one inch apart.

We need all three colours on the bobbin rack, and also three shuttles with the same colours. But it will be better to have six shuttles: 3 with single yarn, and 3 with double yarn. We shall use the double yarn whenever we have only one colour in any section, as for instance at the beginning of section A.

We start with section A reading it from the left. It is safer to make a plan of weaving of each section in form of a table. The first row indicates the number of inches woven, the second the length of colour on the left, and the third - the length of colour on the right.

Section A.

1. 3" 1" 1" 1" 3" 4" 1" 5" 2" 4" 4"

2. 32 8 12 16 20 16 12 32 16 20 32
   w r r r r r w b b w

3. 24 20 16 12 16 20 16 12
   w w w w w w w w

In practice we do not observe very closely the length of colours, except in geometrical patterns. In most cases we shall try to blend the two adjoining areas so as to produce curved lines.
In the same way we shall "read" the other sections, and make the tables. Later on it won't be necessary to write down the directions in form of tables. With a little practice one can follow directly the pattern drawn on graph-paper, by turning it sideways and crossing out in pencil the chenille already made.

In second weaving we shall also follow the pattern, but it is better to hold it upside down, since our first pick of chenille comes at the bottom of the woven rug.

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Although practically every pattern can be subdivided in such a way as to be woven in this technique, it is advisable to design our own patterns. After the size of the rug is decided upon we mark it off on graph paper and divide it into sections (fig.5a).

Fig.5 a Fig.5 b Fig.5 c

Then section after section is filled in as in fig.5 b, until the whole pattern is made (fig.5 c). The only limitation when filling in the pattern is that there must be no more than two colours in the vertical direction in any section. Otherwise we have a complete freedom.

Everything we have said about the Patterns in Chenille applies here. The picks of chenille weft must be very carefully adjusted in the second weaving, particularly so if we try to get very neat design. In all the speed of weaving is about the same as for all pattern rugs in chenille. Counting both the first and the second weaving it takes about 30 hrs for each square yard.

Probably the only trouble we may have with this kind of rugs is, that when they are sent to an exhibition, it is hard to convince the judges that they are woven and not knotted rugs, because the apparent freedom of design is so deceiving.

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In all examples of higher twills which we have studied so far we have always used the same type of threading: 12345678755432, i.e. going from the lowest to the highest frame and then back. This means that one repeat of the pattern was always 10 for 6 frames, 14 for 8, 22 for 12, and 30 for 16. If we want longer repeats and larger patterns, we must use either a still higher number of frames, or a different threading. It is rather impractical in handweaving to go beyond 16 frames, therefore in case of larger patterns we must change the threading draft.

The simplest thing to do is of course to double or triple each half of the draft, for instance: 123456781234-567876543218765432, or 1234567812345678123456-787654321876543218765432.

This gives a pattern 2 or 3 times as large as the original one. If we take the pattern in fig. 3 page 7 M 37, we can double its size by using the threading in fig. 1 on this page.

Not only that the pattern is larger but we may say that it is a definite improvement upon the original pattern. The lack of space does not allow us to show the same twill enlarged three times but our readers can make such a draw-down on a piece of graph paper. They will probably
agree with us that the latter patterns is not so good. It is too obvious a repetition of the central motif. The same happens when we try to make a very large diamond in twill on 4 frames: what we get is a number of concentric diamonds.

Thus the method of enlarging a pattern by repeating each half of it in threading has its limitations. In most cases we shall find out that the best results are obtained when doubling the draft, but going beyond this gives a rather monotonous effect.

The next possibility is to repeat only a part of the original threading as in fig. 2, or to reverse a part of the draft as in fig. 3. In both cases the final effect depends too much on the tie-up to rely on any rules. Each case must be judged on its merits, and tried out on graph paper.

Finally we can break the order of threading in an apparently irregular way as in fig. 4. This may produce unexpected changes in the pattern, but we must also remember that most probably we shall not be able to weave tabby on such a draft, and therefore that it is not suitable for projects where only a part of the fabric is woven in pattern twill.
The definition of Net Weaves is that the crossing of the warp ends takes place in an area much larger than one dent of the reed, and therefore that the warp is crossed in front of the reed. As long as the crossing is limited to one dent we have Cross-weaves (Gauze, Leno, etc.).

According to this definition many weavers use net weaving (although they call it "leno") either to finish small articles, or to make narrow borders. They do it by picking up, and therefore the process is long and rather laborious.

If we could mechanise this technique, it could be applied not only occasionally to decorate the fabric, but for weaving texture effects at a reasonable speed.

One way of doing this is to use doups in front of the batten, but this means special equipment built into the loom. A much simpler way is to use cross-combs which make the picking up easier and faster.

Each blade of such a comb works in about the same way as a crochet, but it can push as well as pull. It enters the warp from above, catches as many ends as we want, pulls them up above the warp, moves them across, and finally pushes them down below the level of the warp thus opening a small shed. This shed is too narrow for a shuttle, and a flat picking stick must be used to enlarge it to the full size, although it is possible to push a small shuttle through the opening.

![Fig.1](image)

Fig.1 shows one blade of the comb full size. It must be of about this size if made of wood. Smaller blades for finer work can be made of metal or plastic. The difficulty here is that all blades in one comb must be nearly identical, and to make identical small parts in metal or plastic we must have special and very expensive dies. Unless there is a large demand it is unlikely that such combs will be ever made. A wooden comb can be made in any home workshop.

The exact dimensions are given in fig.1, but small changes will not affect the performance. For instance the blades may be longer and the opening moved farther to the left. The angle at the tip of the blade is of no particular importance. They can be made from any close grained hardwood. But the very important operation is finishing. The blades must be not only smooth but well polished on all sides.

The blades are mounted between two flat pieces of hardwood, which make the handle (fig.2). They are about 3/8" x 1" in cross-
section. The length of the comb depends on the width of the warp. To start with we can make a comb 20" long with 20 blades. The distance between two blades is 3/8", which with the width of the blade of also 3/8" gives us 1 blade per inch. The blades may be bolted to the handle (between the two flat pieces) with 1/8" bolts, or glued, or both. In case of bolting alone, it is advisable to insert small rectangles of wood of the same thickness as the blades in the free spaces between blades. This will prevent them from turning. These rectangles will be 1" x 3/8" (fig.3).

Obviously the construction of such a comb can be undertaken only by an experienced woodworker (which does not mean a professional) and it would be a good idea if a group of weavers ordered a number of these coms from one craftsman who would be willing to spend some time on this project. He may easily find a different, and perhaps simpler way of fixing the blades in the handle. The tools needed are very simple: an ordinary power saw with a planing blade (i.e. cutting on the sides as well), and a drill press (hand drills are not good enough), but the operator must know how to use them. The first operation will be to make a block of wood some 4" by 4", face it on two sides, make a rough lay-out for two to four sets of blades (depending on the thickness of the block - about 5 blades per inch), drill the 3/8" holes (better 11/32" hole, and a 3/8 reamer) with high speed and low feed, make final lay-out centered on the holes, cut out the sets of blades, and finally rip the blades to about 1/8" on the power saw. Sand each blade by hand with the finest sand paper.

The comb should not be painted or varnished. It may be rubbed with linseed oil mixed with turps, wiped dry, and a few days later sanded again. All this is done to prevent the warp ends from sticking to the blades.

The above directions or rather suggestions are obviously not for the weaver but for the woodworker, and they are only meant to give an idea of what is wanted.

The principle of the action of a cross-comb is quite simple: we can try it on any warp, regardless of the yarn, the sett of warp, and the threading. Hold the comb above the warp (do not use any treadle) perfectly level. Push it down into the warp, and stop when
holes in the blades are in line with warp. By this time some of the warp ends will enter the holes. If we want more of them, we move the comb to the left (the comb being held as in fig.2); if we want less we move it to the right. Now we pull the comb up so that the points of the blades are above the warp. We move it to the left for the required distance, and finally push it into the warp in the new place as far down as it will go. This will open a small shed in which some or all warp ends will be crossed.

It should be obvious why we need a picking stick. One hand holds the comb, the other could throw the shuttle if the shed were wide enough, but we have no third hand to catch the shuttle.

A picking stick should be as long or longer than the width of the warp. It is flat, pointed at the ends and about 2" wide, as in fig.4. All edges must be rounded, sanded and polished. Again here varnish is not indicated.

When the picking stick is inserted in the shed we remove the comb, by pushing it first to the left so that all warp ends will leave the holes in the blades, and then pulling it up. Then we turn the picking stick on edge which will open a normal shed. This whole operation takes a while to be described, but it can be done in a few seconds.

Now we must experiment with all sorts of weft to see what happens. This method gives best results with rigid weft such as bamboo, reeds, bullrushes, fine blades of wood etc. They are used in sheds with crossed warp. But as a rule we alternate these sheds with plain tabby, twill or any basic weave.

Or we can try rigid weft in tabby sheds and very soft yarn (and plenty of it) in the crossed sheds. This will produce an effect not unlike Spanish Lace.

The crossed warp shed has been made with the warp closed. But we may also make the crossing on the upper part of a tabby shed, which will leave the lower part for weaving a background if so desired.

In the next article we shall give suggestions as to how to apply this method in practice. We shall discuss in more detail the possibilities of combining it with standard techniques, and we shall give practical examples of projects based on net weaving.

We realise that there is no hurry, because it will take some time to make the combs, and to get used to handle them.
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