The background of the cover is a collage of various weaving-related diagrams and patterns. It includes several grid-based patterns, some with handwritten notes in Finnish. One note at the top left reads '23 5K-8 5P-8 5T-8'. Another at the top center says 'loimi- ja kudel- vaitaista pomsia yhdistetty.' There are also diagrams with labels like 'Thread from A to C', 'Thread from B to C', and 'Thread from C to D'. A diagram on the right has '2x', '2x', '2x', '8x', '8x' written vertically. At the bottom right, there are labels 'Oikeampitoleisen rakenne.' and 'muoleisen rakenne.'. The overall theme is technical and artistic, representing the craft of handweaving.

MASTER WEAVER

BI-MONTHLY BULLETIN
FOR HANDWEAVERS



Z-HANDICRAFTS
FULFORD, QUE., CANADA

-26-

Threads 880
Inches Wide In Reed 12.5
72D

3-752 K

MASTER WEAVER

BI-MONTHLY BULLETIN FOR HANDWEAVERS

Z-HANDICRAFTS - FULFORD - P.Q. - CANADA

July, 1958

No. 40

FROM THE EDITOR

The two articles which we have published in the last issue of the "Master Weaver" have created much more interest than we expected. One of them was "Shortcuts", the other "Exhibitions".

It would be unfair to recapitulate the discussion at this time. All letters we have received so far are agreeing with us, in some cases violently so. We are waiting for those who would defend the opposite point of view. Therefore we shall resume the discussion in September.

S H O R T C U T S



The word "Loom" comes from Anglo-Saxon "geloma" and means a tool. And very rightly so. It is a "tool", the most important tool the weaver owns. The second in importance is his warping equipment. The rest hardly counts.

Nobody can do decent work without a good loom. Yet many... no: most of our weavers do not seem to realise its importance.

A real loom is made to perform a certain task. To be a good one it must fulfil certain requi/rements. For instance a loom cannot be absolutely noiseless - not more than a HiFi set can be silent. It cannot be portable - not more than a piano. Either one owns a piano, or one does not but one cannot carry it in his shopping bag... It cannot be universal, that is good for every possible kind of weaving. There is no such loom, and there cannot be. One might as well ask for a typewriter which would play music and fry pancakes.

Weaving is an occupation which makes noise and requires space. If we cannot make noise and have no space, we cannot weave anything except tapestry, knotted pile rugs, inkle belts and small samples on a table loom.

Then first the Noise. If we live in an apartment house we can get to some sort of understanding with the neighbours (really only the ones living below are affected). If they object to our weaving, we may object to their radio, or TV, or parties, until we reach a compromise.

Space. Since weaving is an important part of our life, we can easily sacrifice the less important factors. The room where we should keep our weaving equipment is obviously the living room, unless of course we can afford a studio, a hobby room, or a workshop in the basement. A living room is wasted space most of the time, and a weaving loom will make it more interesting for your visitors, and children.

Thus we have solved the problem of where to keep the loom, and how to get away with it. Now we come to the important moment of buying one. If you are a beginner, never buy a loom before learning how to use it, and before getting acquainted with different types of the "shedding motion", and different weaving techniques. The selection of the type of loom depends on what we are going to weave, and for what purpose.

We should try to be satisfied with the lowest possible number of shafts. In most cases there is no reason to buy a loom with more than four shafts. One should not be afraid that he will soon exhaust all possibilities of such a loom. The possibilities are limitless. However the loom should have at least 6 treadles hinged to the frame at the front and not at the back. Eight treadles would be much better.

The frame of the loom must be strong, bulky, and heavy. The heavier the frame - the less noise because the vibrations are absorbed by the frame instead of being communicated to the floor, and... the neighbours.

Folding or even partly folding looms are inferior to the rigid ones. Folding and portable looms are nonsense. They may serve to demonstrate the theory of weaving but never the practice.

If we decide on a 4-shaft loom, the obvious selection is a counterbalanced loom with a shed regulator. To check the shed regulator try to open just two sheds: 1, and 234. If both open at the same level (but not with the same effort) it works well. If not - it may

be the fault of the operator.

Any counterbalanced loom can be turned at a moment's notice into a reversed jack-type. We stretch the springs of the shed regulator until all shafts will hang in the upper position when at rest. Then no additional tie-up between the regulator and the treadles is necessary. The superiority of this arrangement over a plain counterbalanced-loom-plus-a-shed-regulator is, that we can use any tie-up, and that we can press any number of treadles at the same time, and still the shed will open in the same place. But it will open much faster than in case of a jack-type loom, and there is less effort in opening the sheds. On the other hand it will be not so good with closely set warps, sticky yarns, etc.

Thus a 4-shaft counterbalanced loom can be used in 3 different ways:

1. As plain counterbalanced - for very fast weaving of fabrics which require balanced tie-ups.

2. Counterbalanced with shed regulator - for unbalanced tie-ups. Works as fast as the former but the treadling requires more pressure.

3. Reversed jack-type - for all sorts of tie-ups, particularly for compound treadling (more than one treadle used at the same time). Slightly slower than the former, but faster and lighter in operation than a jack-type.

We repeat once more, and this is the most important advice: if you want a 4-shaft loom, the best answer is a counterbalanced loom with a shed regulator, or at least built so that a shed regulator can be added. Looms of this type which cannot be converted are useless at least for general purposes (no huckaback, no Bronson, no swivel, no spot, no waffle, no double weaves, no leno, etc.)

Four-shaft jack-type looms have no justification whatsoever. They are inferior in every respect, regardless of how they are built.

But even a loom good in theory may be poor in practice. Therefore when buying one ask the agent for a demnstration, or if you are an experienced weaver you can make the test yourself. Do not listen to any excuses. Wait until the agent is ready to show you how the loom works. He must be able to weave on a narrow warp (12 to 20") plain tabby at a speed of 60 picks per minute. Check it with your watch. If the loom refuses to work that fast, don't buy it. But if you suspect that it is

rather the operator than the loom who is at fault, ask a friend who is a good weaver to try it for you, or do it yourself. Beat as hard as you can - no loom can be upset in any way by the hardest beating.

We realise that the advice we are giving here is hard to accept. There are very few good counterbalanced looms on the market, and as far as we know only one is equipped with a shed-regulator. But this should not worry us - if the loom is good we can make a shed regulator to fit, or buy one later on.

To be charitable we may make one exception: if the weaver does not take his hobby too seriously, if he is not concerned with the efficiency of his work, and can limit his weaving activities to experiments rather than production - the second best choice will be a jack-type.

Our readers may have two objections here:

First - I am not going to weave with a speed of 60 picks per minute anyhow. - Yes, but a loom which can give 60 will work much easier at let's say 40 than one whose top speed is 40! If you drive a car, and your cruising speed is 50 you would not buy a car with a top speed of 50.

Second - No counterbalanced looms with a shed regulator were known in the 18-th century and yet... - Yes, but then the weaving has been specialised. Nobody would dream about using the same loom to make different kinds of cloth, of different yarns and in different techniques. A counterbalanced loom with a shed regulator can be easily replaced by three looms: a plain counterbalanced, a double-tie-up, and a jack-type.

Thus this is the first shortcut to good weaving: in the four-shaft class use only a counterbalanced loom of good design. The best models have rollers - they keep the shafts reasonably level, but "horses" or even pulleys are quite acceptable. Treadles hinged in the front - not less than 6 of them. Friction brake on the warp beam - ratchet on the cloth beam. If possible two battens - the overhead model for fast weaving with one shuttle. Enough room for a second warp beam.

In the next issue we shall discuss looms with more than four shafts.

D I M I T Y .

In old books we find a peculiar weave based on 1:2 twill, which sometimes is called Dimity Cord, sometimes Dimity. Its simplest variation can be woven on 3 shafts as in fig.1.

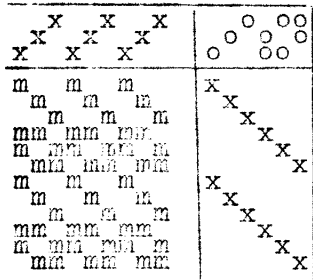


Fig.1

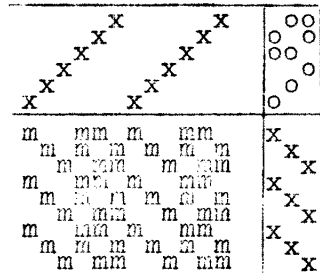


Fig.2

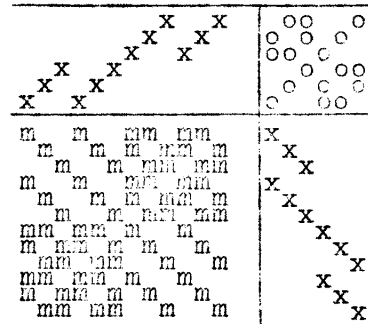


Fig.3.

Here the cords or ridges run parallel to the weft. If we want them along the warp, then we must use 6 shafts as in fig.2. But if we have already a 6-shaft draft, then why not go a step further and combine both? If we do that, we have a very familiar draft in fig.3. But it is not a corded fabric any more. It is the simplest of the "diapers" (turned twills), the precursor of the "dornick weave" (1:3 turned biased twill), and of damask.

The question now is: can a similar effect be obtained with only 4 shafts? The answer must be "yes" or the article would have never been written. We have here really two problems: 1-st corded effect in warp; and 2-nd: patterns in 1:2 twill similar to the one on fig.3. Should we succeed in this second case, we shall have another imitation of damask woven on 4 shafts (the first being S-&-W).

DIMITY CORD. Here the answer is easy. We have a choice of vertical stripes alternately in tabby and 1:2 wave; or of stripes in 1:2 biased twill plus an imperfect tabby. The width of the stripes is very important: if they are narrow, the effect is of corded fabric; if they are wide - the effect is rather of vertical crepe. Fig.4 shows 1:2 wave, and perfect tabby; fig.5 - biased 1:2 twill and imperfect tabby; finally in fig.6 we have a combination of both, which may be the best solution.

The draft in fig.4 will give either cord or crepe depending on the width of the stripes. No.5 will show more difference between stripes

NET WEAVES

FIRST SAMPLER

We did not write for a while about Net Weaving, because so far we have got very little response. However for those who are interested we shall continue from time to time. Also when we shall develop a simple doup technique, we shall return to this subject again.

To make a sampler we must first make a warp. Any yarn or combination of yarns can be used. As an example we shall take cotton 10/2 set at 24 ends per inch. The threading can be either twill, or a texture weave. Among the traditional weaves the only suitable are: tabby, broken twill, and crepe. Besides these any irregular texture weave can be used (compound twills, texture crackle, mixed drafts, accidental drafts).

We shall need two wefts: one about the same as warp, and a rigid weft for the "pattern" sheds. The latter may be bamboo, wood strips, or bulrush stalks.

Wood strips can be made at home if we have necessary equipment, that is a power saw with a planing blade. It is real fun to make them. Different kinds of wood may be tried, then stained (oil stains only) to different colours. Whatever wood is used it must have straight grain. Wood strips are sold in sizes: 1/4" by 1/20" or 1/24" in several colours for about \$ 1 to 2 per pound.

Bamboo must be bought of course. It should be straight without any tendency to curl. It can be also stained at home.

Bulrushes should be collected rather late when they have low vitality, but before they actually dry out. In any case they have a tendency to mould. Some technique of sterilising them could be developed (immersion in boiling water, or hot steam, or gasolene).

Plastics should not be used for many reasons, one of them being that they produce cheap and vulgar effect.

We have now everything we need, and we can start with samples. First we shall weave a few inches of ground, for instance tabby.

Sample 1. Ten picks of tabby. Open the Net Shed (as described in the last article) with the comb. Insert one strip of wood (or what-

ever we use as rigid weft). Repeat this operation several times always trying to place the comb in exactly the same position as before. Beat very hard.

Sample 2. Ten picks of tabby followed by one strip of wood in the net shed. Then again ten picks of tabby. Then open a net shed but move first the comb $\frac{1}{2}$ " to the right (compared with the first position) Repeat several times.

Sample 3. Six picks of tabby. Insert a strip of wood in the next tabby shed. Again 6 picks of tabby. Open a Net shed; insert the picking stick; throw the shuttle with ground weft. Repeat several times.

Sample 4. Six pick of tabby. Insert a strip of wood in the next tabby shed; 6 picks of tabby. Open a Net shed and insert a second strip of wood. Repeat several times.

Sample 5. Start with 20 picks of tabby. A strip of wood in the next tabby shed; 6 picks of tabby; open a net shed, insert the picking stick, throw the shuttle, 6 picks of tabby, a strip of wood in the next tabby shed. Repeat several times.

Sample 6. Ten picks of tabby. Open a Net shed; insert a strip of wood. Open another Net shed with the points of the blades of the Net comb entering the warp exactly half way between the former positions. Insert the second strip. Return the comb to the first position and repeat

By this time you will have plenty of ideas as how to make more samples. For instance reverse the comb and twist the warp ends once in one and then in the other direction. Try to weave entirely without rigid weft and see what happens. Or use a very stiff yarn for the ground, and a very soft and heavy one for the Net sheds.

After this elementary sampler we shall probably wish we could use more advanced techniques. For instance doup Leno (gauze) for the ground, instead of tabby or a texture weave. Double weaves have here unlimited possibilities, particularly with two warps. When one warp is very slack we can weave a sort of venetian blinds with strips of wood hanging down on a background of a net. When both warps have the same tension we can weave nets lined with tabby. And all this on only 4 shafts.

We shall be glad to describe these higher techniques provided that we hear from you from time to time.

SETT INDICATOR

There are several methods of finding the Sett of warp (number of ends per inch), but they all involve some sort of mathematical operations. The only exception is a sliding rule or a rotating scale which gives the answer automatically.

We have produced such a scale. It consists of two concentric disks. The smaller, central disk has names of 20 typical weaves. The larger outside disk shows the number of yards



per pound of the yarn to be used from 100 to 90,000 yds/lb. When the weave and the count of yarn are set opposite each other, the sett of warp shows in a small opening in the central disk. For those, who do not remember the No. of yds/lb, there is at the back of the scale - a conversion table, which contains all sizes of yarns in common use.

Two types of this scale are available. One is made of cardboard, and assembled. The other is printed on a sheet of heavy bond, but neither cut out or assembled. The printed sheet should be pasted on a medium heavy cardboard, then the three disks cut out. The two large discs are then glued back to back. In the smaller disk a rectangular hole is made with a razor blade. It is marked in black at the point of the arrow "Sett of Warp". Finally the two disks are joined exactly in centre with a thumb-tack, a small rivet, or a very short 1/8" bolt and nut.

The Sett given is from 5 to 158 per inch. Higher or lower setts are impractical with normal handweaving equipment. When finding the sett with extremely fine, or extremely heavy yarns, we may notice that the answer in the indicator is either absurdly low, or high. This means that we went beyond the limits of the scale, and that the selection of weave, and yarn is wrong. Thus 90,000 yds/lb yarn cannot be woven in 2:2 twill, waffle, damask etc., with normal equipment. Also 100 yds/lb cannot be woven even in tabby.

The conversion table at the back of the scale can be extended to finer and coarser yarns. To find a lower number we look for a number 10 times higher, and then divide the No. of yds/lb by 10. To find a higher number we look for a number 10 times lower, and multiply the No. of yds/lb by 10. E.g.: No.1 linen is the same as No.10 or 3000 yds/lb divided by 10, which gives 300 yds/lb. No 100 cotton is the same as No.10 or (approximately from the table) 8,500 multiplied by 10, - which gives 85,000 (really 84,000). But it is hardly ever necessary to go beyond numbers included in the table.

1 indicator w.instructions - \$ 1.75 postpaid; "Do-it yourself" sheet & instructions - \$ 0.85; 10 sheets - \$ 5.50. Write to:
Z - H A N D I C R A F T S F U L F O R D P.Q. C A N A D A

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COTTON - Natural, soft cotton, excellent for warp or weft. Fast colours. 16/2, 8/2, 8/4, 4/12 (candlewick), and rug filler.

Prices: 16/2 - 31 colours - from 1.40 to 2.50 per lb.

8/4 and 8/2 - 32 colours - from 1.25 to 2.35 per lb.

candlewick - 20 colours - from 1.25 to 1.85

rug filler - 20 colours - from 0.80 to 1.80

■

LINEN - Our single linen is unsurpassed for warp; can be also used for weft. No. 10 or 14, natural or bleached.

Prices from 1.75 to 2.30

■

RAYON - This is a "different" rayon. It is much less glossy than standard rayons, and has harder twist which makes it as strong as plain cotton, when used for warp. Seventeen colours in 8/2, white in 16/2.

Prices from 1.10 to 1.70 per lb.

■

WOOL - Very fine worsted, 2/16, 2/32. in twenty colours.

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These yarns are outstanding and hard to get elsewhere.

We carry also standard yarns such as Mercerized cotton in 8/2 and 16/2 in 26 colours from \$2.25 to 4.00 a lb; Merino wool 16/2 and 32/2, jute, metallics etc.

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