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Thread from ... to ... times*

ja

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5P-8
5K-8
33*

MASTER WEAVER

**BI-MONTHLY BULLETIN
FOR HANDWEAVERS**



**Z-HANDICRAFTS
FULFORD, QUE., CANADA**

*Oik-ampuleisen
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-26-

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72D*

3-752 K

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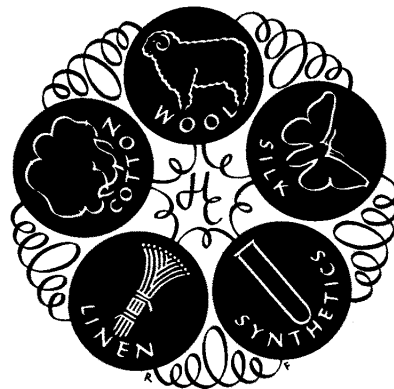
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MASTER WEAVER

BI-MONTHLY BULLETIN FOR HANDWEAVERS

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

July - August, 1961

No.58

RESEARCH

To be a craftsman, it is not enough to learn the technique, produce good work, even take part in exhibitions. There is much more to it. There are times when we do not feel like weaving, yet we should like to do something constructive and closely related to our craft. There are social activities of course: guilds, meetings, lectures, sales, and what not. But this is still not all.

There is a large field for individual work, extremely satisfying, and very important, not only for the weaver, but also for the whole weaving world. This is RESEARCH.

Handweaving has no organized research centers, no laboratories such as owned by the textile industry, yet somehow it always develops, and progresses toward goals which are seldom clear to the present generation, but which become obvious in historical perspective.

In the crafts research is done by every craftsman, consciously or unconsciously. His achievements, small as they may be, are shared by the group to which he belongs, and the more significant they are, the faster and the further they spread. We might risk a statement that this type of research is much more important to the society at large, than the organized textile research which usually is short sighted, and has definite, economical objects, only too often concerned with cheap production and large consumption.

The individual research in handweaving can be roughly divided into three classes: technique, designing, and history. We shall take them up in the above order.

TECHNIQUE.

This in turn must be subdivided into: weaves or the structure of the cloth, equipment or the design of looms and accessories, and the methods of weaving.

Weaves. Although we have stated repeatedly that there is probably no such thing as a completely new weave, yet there are weaves which are new to our country or our generation. Weaves forgotten, not exploited enough, not adapted to our weaving equipment, or perhaps based on principles which would not be accepted in the past, e.g. irregular texture.

The research in this area consists of:

1. Studying old books about weaving, which implies getting familiar with old weaving language (our "Encyclopaedia of Handweaving will help if the books are in English). Interpreting old drafts, and transcribing them into our modern version of drafting. Here one must be very careful not to jump to conclusions: a weave which has an unfamiliar name, and a draft which looks like nothing on earth may still be quite well known under a different name, and a different method of drafting. Making draw-downs, and still better: samples, will settle the doubt.

2. The same applies to books in foreign languages, particularly if they are old, particularly if they come from out of the way places. For instance a really old book about weaving in Russian would be a treasure chest. Do such books exist at all? Who knows?

3. The same applies to collections of old drafts, which were never published. They can be found in musea, in private collections, in attics of old houses.

4. There are plenty of weaves, which although known and used, were never thoroughly explored. Take multiple spot weave for instance. Single spot is our Bronson, and Swivel; double spot is our Summer-and-Winter, and Paper Spots (dropped tabby); triple spot has been described by us some time ago. But only Bergman gave it the works. Is it a new weave? Probably not, but either it has been forgotten, or never developed sufficiently.

Take any weave at all, plenty of graph paper, and see what can be done with it.

5. Any manual of commercial weaving is another source of inspiration, whether the book is old or new. There are many techniques there which can be adapted to handweaving. They usually require too many shafts and too many gadgets, but often they can be simplified, or condensed, or turned around. When looking at any commercial draft

we must remember that their worry is to make the threading and the weaving comparatively simple, but at the cost of many superfluous shafts, and complicated warping. Turn the draft by 90° , and we may find that now the warp is simple, the number of shafts reasonable, but the weaving, that is the number of shuttles rather awkward. But this is not a real problem in handweaving.

6. "Irrational weaves", not acceptable in the old times, and too complicated for power weaving, is another area where an enthusiastic handweaver will succeed, even if the expensive labs of the textile industry failed. The best example is plain striped yardage in tabby or twill with ever changing colour combinations. This could not be duplicated in power weaving regardless of cost. Irregular texture, mixtures of textures such as leno, pile, and plain cloth all in one piece of weaving are also in the same class.

Equipment. Who designs the looms? The manufacturer? Only up to a point. In the last analysis it is the weaver, because he selects, approves, or rejects. And the manufacturer must follow his requirements or else. Granted that this is a negative influence, but there is also a positive one, when weavers send their suggestions to the loom makers and often not only suggestions but complete designs of new equipment.

The research in this field must go in two directions: fairly good universal loom (4-shaft counterbalanced with a shed regulator), and a really good warping frame on one hand, and very good specialized multishaft looms, or even draw-looms, and automatic warping mills on the other.

Methods of weaving. This is mostly negative research to find out what is wrong with our modern methods, and why our weaving seems to be so slow and strenuous. Why cannot we go back to the XVIII-th century, when with simple equipment the efficiency of a weaver was far beyond anything we can imagine. Why for instance a weaver was able to hold two small shuttles in one hand, and throw either of them at will? Why the limit of fine weaving was around 500 ends per inch, when we consider 100 a remarkable achievement?

DESIGNING.

This subject is much too large to be dealt with here, but obviously designing is an area widely open to research, which can go in many directions: yarns, particularly when the weaver takes up spinning

as a secondary hobby; textures in the widest meaning of the term, which implies study of yarns and weaves; finally patterns: from adaptation, or simple transcription of traditional ones, to creating new - whether "modern" or not.

We can only refer the reader to the articles written previously on this subject: MW 22/1, 23/1, 30/9, 32/1, 33/1, 34/1, 35/1, 37/1.

HISTORY.

If we know so little about the history of handweaving, that we need the help of archeologists, and historians to establish the most basic facts pertaining to the development of weaving technology, it is either a result of a peculiar attitude of the society towards crafts or of the weavers' themselves. In all the books on weaving, regardless of when and where they were published, there is hardly ever a chapter on history of weaving.

Even in quite recent times, the last few decades, we find it extremely difficult to establish the chronology of events, to reconstruct the biographies of outstanding pioneers of handweaving, even to estimate the number of active weavers in this or in any country.

Here the possibilities for research are unlimited. We can again divide them into several branches: collecting, coordinating, and working out special problems. In each case we must limit our research to one particular area, or epoch, or one particular aspect of weaving. Otherwise we could not cope with the tremendous amount of work required for completion of our subject.

Collecting. Research must be based on materials, and the latter must be collected. Some of them are already in musea, archives, and libraries, but there is precious little of them. Private collections are therefore much more important.

There are two conditions to make collecting more than a harmless hobby: the collector must specialize in one field, and his collection must be accessible to everybody, which also implies that the fact that such a collection exists must be advertised in some way.

What should one collect?

1. Books about weaving, and periodicals, in one or in all languages. All editions of the same book, particularly of old books.
2. Information about weaving found in other publications than weaving periodicals, and books. There is no need to collect originals.

Photostatic copies, or even typed copies will do.

3. Drafts, original or copies, but only drafts which were never published. Otherwise it would be an unnecessary duplication of # 1.

4. Weaving equipment is too bulky to be collected as such, but photographs, or old engravings of looms, warping mills, and of smaller equipment take hardly any place at all. If the collector takes his own pictures, he should take 3 of each item at right angle to each other, e.g. front view, side view, and top view. Pictures should be sharp and large to show the detail of construction.

5. Samples of weaving. Either whole woven articles, or small swatches. These should be analyzed as soon as acquired, and drafts should accompany the samples.

In all cases complete information must be included with each item: when and where found (1,2,3,4,5); who was the author (2,3), or maker (4), or weaver (5); the place of origin, and the year or epoch (3,4,5).

Finally the collection must be indexed, and the index mimeographed, or otherwise duplicated, and made available to other weavers.

Research proper. Many subjects are too large for one man to make a complete survey. For instance: "history of weaving" in any country would be too much for one researcher; thus he has a choice of limiting his subject to one period or one region, or still better to make only a preliminary research.

By "preliminary" we understand coordinating and organizing the materials available. If the weaver has access to several libraries, musea, archives, and private collections, he selects in each of them the items which have any bearing on his subject, and makes a master index. This part of any research is rather unrewarding and very tedious yet it is a necessary stage, and must be done by somebody. As an example may serve the "Handweaver's Reference" by Mary Black: an index of weaving techniques ever described in American periodicals and books.

Several such preliminary surveys may be necessary to cover the subject. In case of the above mentioned "Reference", someone else should make a similar index for weaving literature published in other English speaking countries of Europe, Africa, and Australia.

It would help a lot if Weavers' Guilds had research committees which would coordinate their members' work, facilitate finding sources of information, getting access to the stacks in libraries (real research requires this, the normal way being too slow), and helping to exchange information between different groups of researchers. For instance if a weaver is looking for a very rare book, he cannot possibly travel all over the world to find it, but he could mail his request to other research centers, whose members would check up on local libraries, second-hand book stores, and other possible sources.

Should such research committees materialize, then large projects could be undertaken by a number of weavers working simultaneously in different parts of the country.

What sort of subjects could be tackled? Here are just a few suggestions:

- "Handweaving of native silk in U.S.A."
- "The story of Linsey-woolsey"
- "European background of American Overshot"
- "Who and when invented Bronson weaves?"
- "The types of Colonial looms, their origin & development"
- "The history of the modern Texture Weaving"
- "What happened to the English Spot Weave in America?"
- "Biographies of the pioneers of modern handweaving"

All these fascinating subjects and many other wait for authors who could and would spend some of their time on research.

There is also a number of subjects which do not fall into any of our three classes. There are for instance economics of handweaving. The relationship between the standard of living and the type of weaving produced by craftsmen e.g. handweaving in Europe during the last war; handweaving in highlands of U.S.A. and Europe. There is also sociological and psychological aspect of handweaving, e.g. relationship between the age groups and the individual approach to the craft. All these subjects require a lot of research before they can be written up. Otherwise they are nothing but pure speculations.

LOCKED WEFTS

I N S W I V E L

Locked wefts technique (see MW 4/7) cannot be recommended in traditional pattern weaving, although the possibilities are tempting. This is because the point of interlocking the two wefts would have to be very precisely adjusted to the pattern, and this would ruin its main advantages: the freedom of pattern and the speed of weaving. Swivel is probably the only exception. Since there is only one side of the fabric to be considered, and the long floats on the other side are either cut, or are invisible, it is very easy to interlock the two wefts anywhere between blocks of pattern. No precision is necessary, and the speed is not affected either.

Let us start with a classical example of swivel (fig.1):

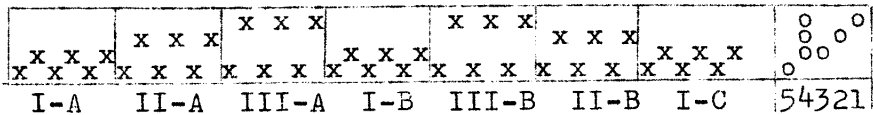


Fig.1

In normal weaving we have the three blocks of pattern marked on the threading draft: I, II, III. There is no difference between I-A, and I-B, II-A, and II-B etc. But with locked wefts we can have a different colour in block II-A than in II-B, or one colour in III-A and another in III-B. In case of block I which appears three times we can have either I-A and I-B together, or I-B and I-C of the same colour, but not three colours on the same block. Thus with the draft in fig.1 we can have up to 7 blocks of pattern.

The weaving goes as follows: one shot of ground on treadle 5, followed by locked wefts on 1,2,or 3. Treadle 4 is used only for plain weaving without pattern. To preserve the same texture however in the ground and in the pattern we must either use two shots of tabby after each shot of pattern: 3,5,4, or the rest of the tabby shed which then must be doubled: 3,2+1,5. In the latter case all shots on treadle 4 must have double weft, exactly as the 2+1 in the example above. Thus in all we must have quite a lot of shuttles. The reader would be advised at this stage to refer to MW.44/5. The locked wefts shots can be always considered as a heavier pattern weft.

The patterns which can be woven on this set-up are shown in Fig.2. All in short draw-down, or block-out:

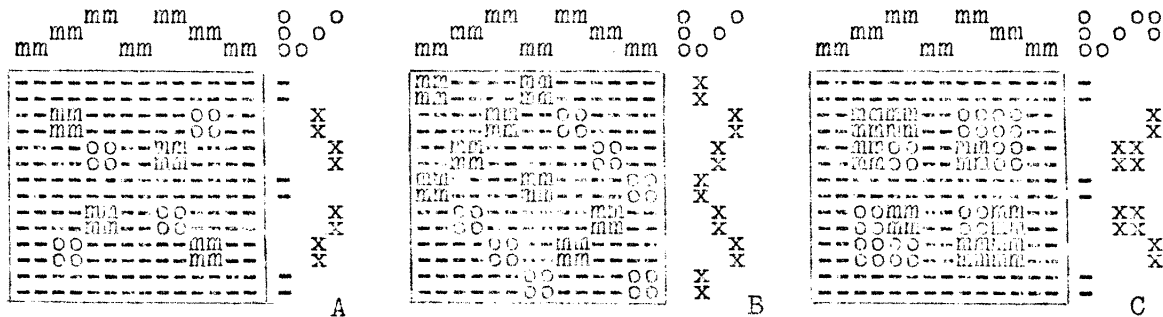


Fig.2

Incidentally once the floats at the back are cut, there is nothing to indicate that locked wefts were used, and a sample if analyzed would give completely wrong answers: fig.2A and 2C would then require 6 shafts, when 2B would ask for 8.

In treading directions there is no way to mark the two colours, as long as we use standard drafts. A special draft could be devised as in fig.3, where each pattern treadle has two divisions: left,

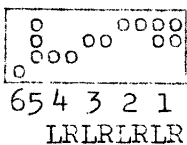


Fig.3

and right. In this new draft the treading directions for fig.2A would be as follows: 6g, 5dW - X times (that is to square); 6g, 3Lm+3Ro, 5dW; 6g, 2Lo+2Rm, 5dW; 6g, 5dW; 6g, 2Lm+2Ro, 5dW; 6g, 3Lo+3Rm, 5dW; 6g, 5dW.

Here: g - is the fine ground; dW - double white; and "m" and "o" - two different colours, single. Thus for instance "3Lm+3Ro" means: on treadle 3 throw colour "o" from the right, and catch colour "m" from the left; pull to any place between II-A and II-B in fig.1.

Only practice will show how easy this method is.

On the other hand designing becomes more difficult just because of the increased number of blocks, and therefore of more freedom. Drafts in fig.2 are only showing the principle but are not meant to be actually woven. Real weaving drafts will be much more complicated or at least much longer.

The original idea of Swivel, called then Spot Weave, was to have a number of small patterns on plain background. Short of pick-up or of a high number of shafts these patterns had to be identical in colour.

In plain swivel we shall have a pattern as in fig.4A. In fig.4B we have the application of the new principle.

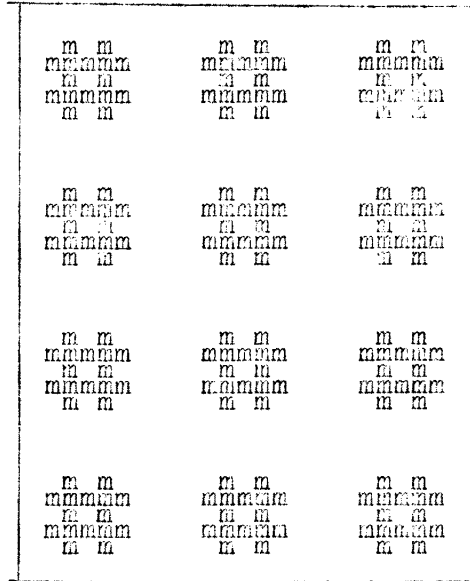


Fig.4A

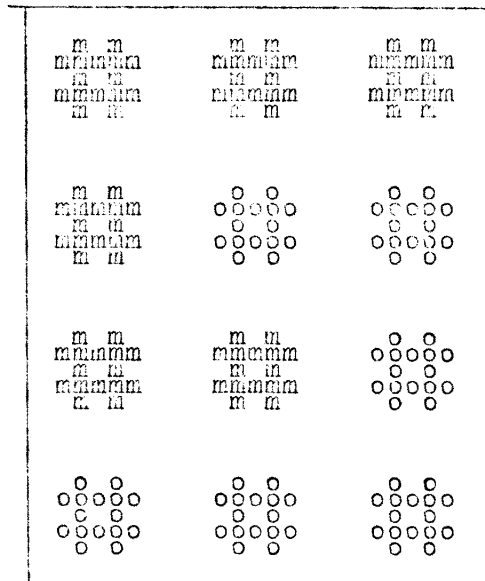


Fig.4B

Again in fig.5A we have the usual "double cross" in Swivel. To make it look as in fig.5B would normally require an extra shaft. Both 5B and 5C (four colours) can be woven on 4 shafts with locked wefts provided that we have a counterbalanced loom with a shed regulator (see MW 56) or a jack-type loom.

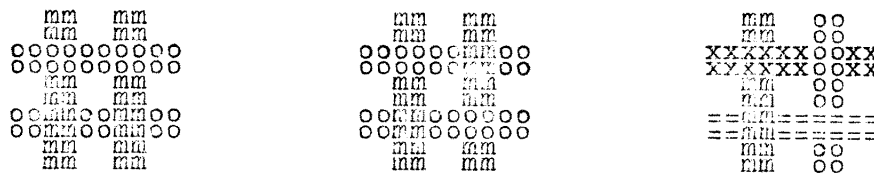


Fig.5

The tie-up must be as in fig.3, and the draft (for small samples) as in fig.6.

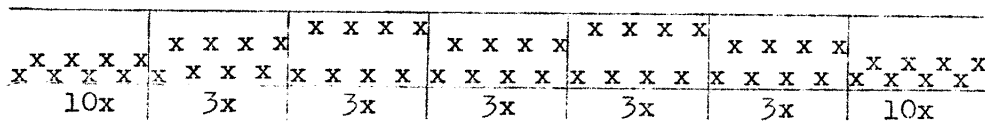


Fig.6

With this set-up we shall have the following treading for fig.5B: 6g, 2dm, 3+4dW; 6g, 2Lo+2Rm, 3do, 4dW; 6g, 2dm, 3+4dW; 6g, 2Lm+2Ro, 3do, 4dW; 6g, 2dm, 3+4dW.

Treading for fig.5C: 6g, 2Lm+2Ro; 3+4dW; 6g, 2Lx+2Ro, 3dx, 4dW; 6g, 2Lm+2Ro; 3+4dW; 6g, 2Lm+2R=, 3d=, 4dW; 6g, 2Lm+2Ro, 3+4dW.

All the above exercises are only preliminary, but rather necessary to understand the technique. After one sample on the loom the rest can be done on paper. We can start with a pattern for plain swivel as we did in fig.4 and 5, and develop it into a pattern for locked wefts. An example of a more modern pattern is shown in fig.7.

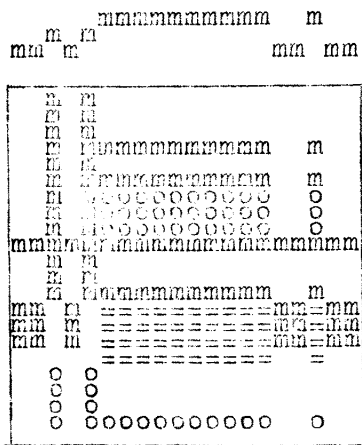


Fig.7A

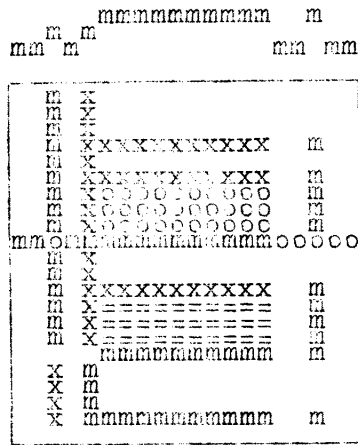


Fig.7B

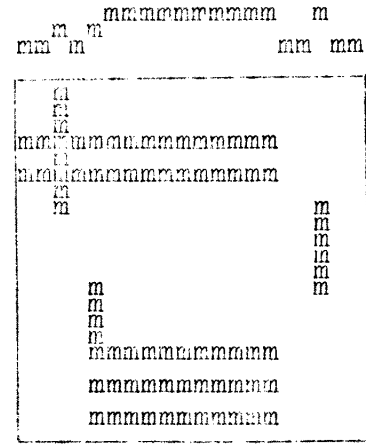


Fig.7C

Here A is the plain swivel; B is derived from it by introducing new colours. But C is all in one colour on plain ground, yet it looks as a 6-block pattern. This is done by obliterating sections of one block, i.e. weaving them in the same colour as the ground. Surely there will be a mark in the fabric where the ground and the pattern meet, but the general appearance will be as illustrated.

We do not give the treadlings for fig.7. They can be worked out in the same way as treadlings for fig.5. This can be done on paper first, or tried directly on the loom.

All these patterns could be woven on a higher number of shafts without locked wefts. Therefore Locked Wefts Swivel is essentially a four-shaft weave, although it can be used with any number of shafts to increase still further the number of blocks.

There are no particular technical problems in weaving, except that they are a combination of problems in weaving Swivel, and in weaving Locked wefts. Thus one must be very careful not to pull the pattern weft tight: better leave small loops at the edges of blocks. This is probably the most difficult operation because it presents a problem in both weaves.

MULTISHAFT

OVERSHOT

Eight-shaft drafts for overshot were used in Colonial times, but we can take Mary Atwater's word that they were "extremely rare". Usually they were transcriptions of 4-block patterns into overshot on opposites. Fig.1A shows the original draft and fig.1B its transcription for 8 shafts.

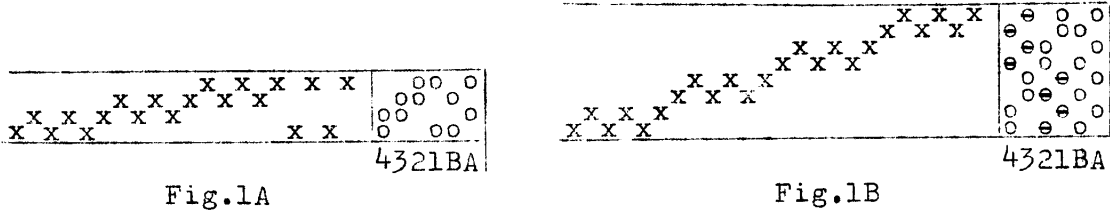


Fig.1A

Fig.1B

In the tie-up 1B ties marked "o" correspond to the tie-up 1A. Ties: "e" are stitching ties. Without them we would have very long floats at the back of the fabric, and the shots of pattern would be not very stable. The only advantage of this method is that the blocks of pattern do not overlap each other, and that they can be perfectly square.

Much more interesting is overshot with as many blocks of pattern, as shafts: 6 blocks on 6 shafts, 8 on 8, etc. Here at least we have a definite gain in the number of the blocks, and completely new patterns can be designed. A draft of this type for 8 shafts looks as follows (fig.2):

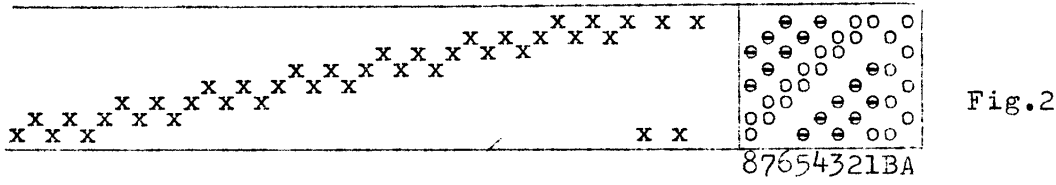


Fig.2

It will have floats of the same length on both sides of the fabric, and a faint pattern in the ground will follow the blocks of the main pattern, due to the arrangement of the stitching ties ("e"). The latter are necessary here as in fig.1B if the fabric is supposed to be reversible. Otherwise we can dispense with them: the stability of pattern shots is much better than in fig.1B, because of the half-tones. Fig.3 shows what happens when we have no stitching ties.

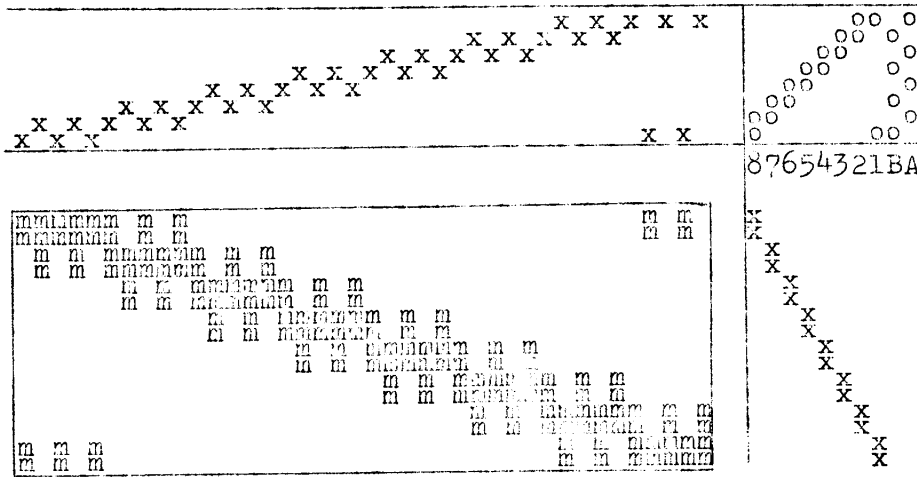


Fig.3

Here each float of pattern is stitched to the ground by two tabbies (half tones) on each side of the float. Still there are very long floats at the back, and only one side of the fabric can be used.

With or without stitching ties the 8-shaft overshot offers tremendous possibilities in designing. We shall not even attempt to describe them. If it took practically a whole book to describe only traditional patterns of 4-shaft overshot, then to do the same for 8 shafts would be more than a life-time work. In our example in fig. 2 or 3 we have only a straight diagonal with all blocks of the same size. Needless to say that the blocks can follow each other in any order and that they can be of any size. Nearly perfect circles, all sorts of curves, flowery designs, as well as modern patterns can be easily woven. But there is no literature pertaining to this subject, and the weaver must work out his drafts by himself.

Both the advantages and limitations of the 4-shaft overshot are valid here: the blocks cannot be combined, or the floats would be too long even on the face of the fabric; but on the other hand we can use as many as 8 colours following one another as in so called Italian overshot. We can have 8 "tables" of any size in modern overshot, We can have also Swivel effect.

In all, this type of overshot opens new horizons for anybody interested enough in this weave.

Eight-shaft overshot has one rather amusing possibility: we can thread the first 4 shaft to any traditional pattern, and the shafts from 5 to 8 to another pattern. Then both can be woven independently.

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