

often admired by his environment, and perhaps can even sell a few things, which removes all doubts about the value of his production.

Whether this explanation is right or wrong, we feel that there is more to it, and that these two factors are not the only ones.

It would be interesting to learn what is the opinion of other weavers on this rather controversial subject. Please write us, and we shall print some of your letters in the following issues, particularly these which present a different approach to the problem.

```

      x x x x x x x x x x
     x x x x x x x x x x
    x x x x x x x x x x
  
```

VARIATIONS OF FOUR-BLOCK PATTERNS

Those familiar with higher mathematics and particularly with permutations, can find the number of possible variations of any pattern from formulas. Those who are not, can only try to square all possible combinations of blocks. This is a tedious task, but gives us not only the number of all variations, but their appearance as well. Not to miss anything we proceed in a systematic way starting with single blocks, then pairs, and so on. The final result is often unexpected. For instance with patterns of 3 blocks plus ground which may be considered as a fourth block, not less than 64 square (i.e. symmetrical) patterns can be obtained. This means that on 5 frames 64 patterns may be woven from the same threading in Swivel or lace. Summer-and-Winter will require 6 frames for the same number of variations, and dimity (turned 1:2 twill) - 12 frames.

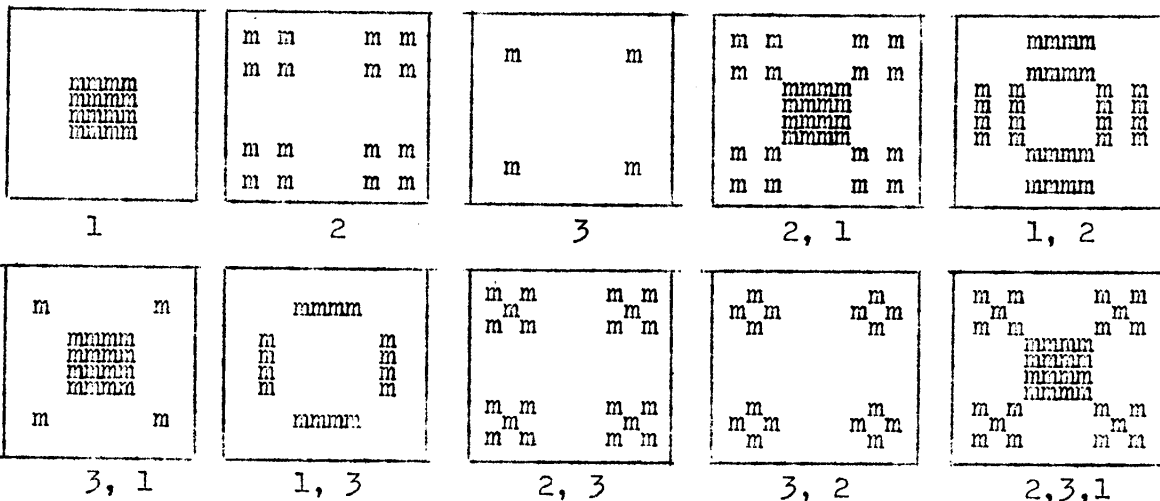
Here is an example of such a four-block pattern. In the profile the lowest line is ground, then come pattern blocks numbered 1, 2 and 3:

```

      m m m m m m m m
     m m m m m m m m
    m m m m m m m m
  
```

3  
2  
1  
G

Each variation is marked with the number of blocks used. Thus: 2,1,3 means that all three blocks were used in the order indicated; 2+1 means that these two blocks were combined into one, and so on.

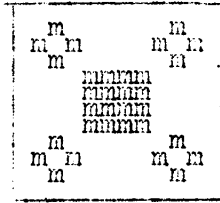




2,1,3



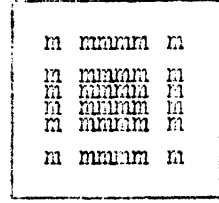
1,3,2



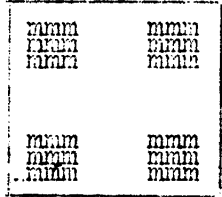
3,2,1



1+2



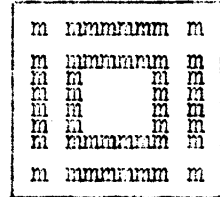
1+3



2+3



1+2+3



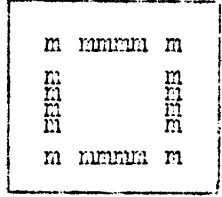
1+2, 2



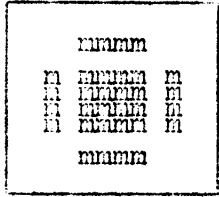
1, 1+2



1+2, 3



1+3, 3



1+3, 1



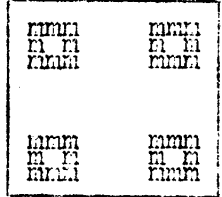
3, 1+2



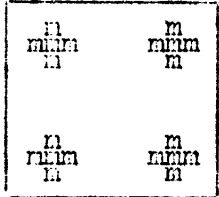
1+3, 2



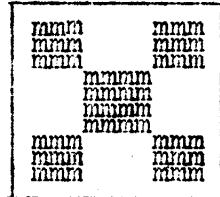
2, 1+3



2+3, 2



3, 2+3



2+3, 1



1, 2+3



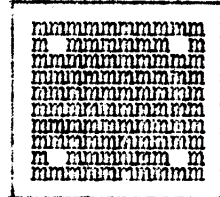
1, 1+2+3



1+2+3, 2



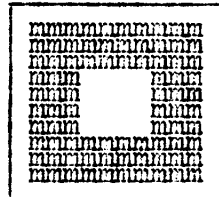
3, 1+2+3



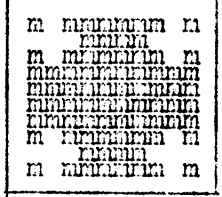
1+2+3, 1+2



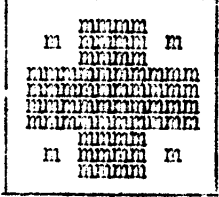
1+3, 1+2+3



1+2+3, 2+3



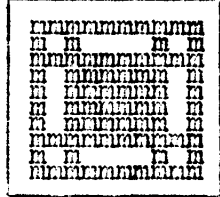
1+2, 1, 1+2+3



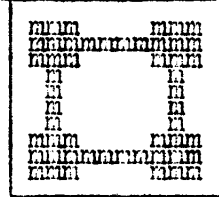
1, 1+3, 1+2+3



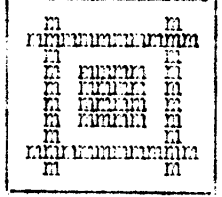
1+2+3, 2+3, 2



1+2+3, 2, 1+2



2+3, 1+2+3, 3



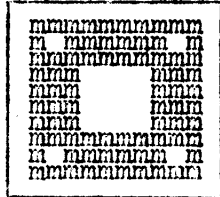
3, 1+2+3, 1+3



1+2, 1+3, 1+2+3



1+2+3, 2+3, 1+2



1+2+3, 1+2, 2+3



2+3, 1+2+3, 1+3



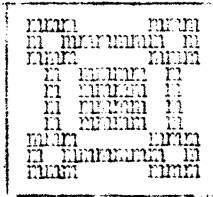
1+3, 1+2, 1+2+3



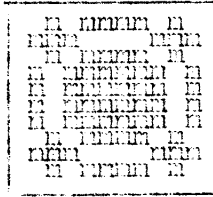
1+3, 1+2+3, 2+3



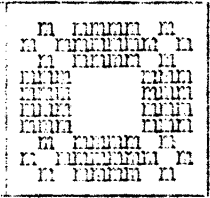
1+2, 1+3, 2+3



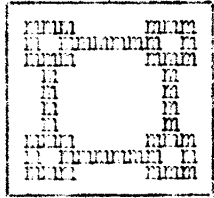
2+3, 1+2, 1+3



1+3, 2+3, 1+2



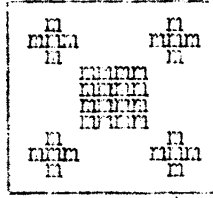
1+3, 1+2, 2+3



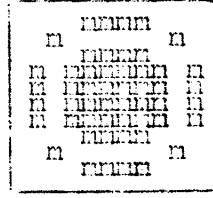
2+3, 1+2, 3



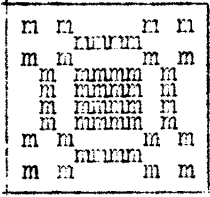
1+3, 2+3, 2



3, 2+3, 1



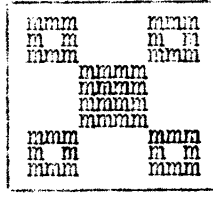
1, 3, 1+2



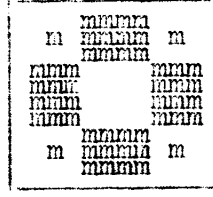
2, 1, 1+3



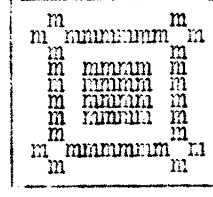
1+2, 1, 2+3



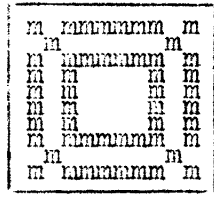
2+3, 2, 1



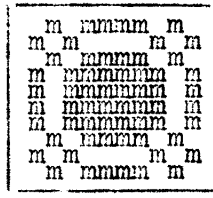
1, 1+3, 2+3



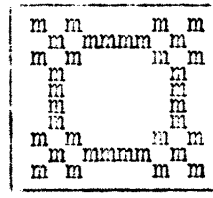
3, 1+2, 1+3



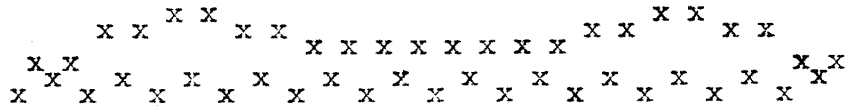
1+2, 3, 2



1+3, 2, 1+2



2, 1+3, 3



NOTES ON WEAVING TERMINOLOGY

(from the "Encyclopedia of Hand-Weaving")

**HARNESS** - (fr.Fr. "harnais" = set of heddle-frames, or leaves)  
Originally the word designated all heddle frames with the upper tie-up i.e. with rollers, pulleys, or horses, and all connecting cords. It is still used in this meaning in Britain.

In the United States the word "harness" acquired quite a different meaning, and designates a single heddle-frame (leaf). This change took place probably towards the end of the last century. Even in books printed as late as 1918, the word "harness" is used in its present meaning only occasionally. The mistake occurred most probably when interpreting old drafts marked: "4 harness" equivalent to "4 leaf harness".

The synonyms for our wrongly used "harness" are: heddle-frame (artificial but clear), or just "frame", "shaft" used in commercial weaving, "leaf" (obsolete), "heald" - in English hand-weaving, and such ambiguous terms as: heddle-stick, shed stick, and Leash Rod (not Lease Rod). In our articles we shall use the term: Heddle-frame, or just Frame, but it would be rather logical if we could return to the old "leaf". Please, comments!