DRAFTING.

Variations of 3-block patterns.

There is only one weave for 4 frames which can give all the variations of a three-block pattern. This is swivel. It may produce as many as 64 different symmetrical patterns on the same threading. But since we discuss here the variations of a pattern, and not the weave, therefore whatever goes for swivel on 4 frames, will go also for Bronson lace on 5, summer-and-winter on 5, huckaback (plain or lace) on 8, dropped tabby (MW 10/3) on 8, turned 1:2 twill on 9, dornick on 12, double weave on 12, and damask on 15 to 24.

To show all these variations we had to use the simplest possible profile with only one square in each block (fig.1).

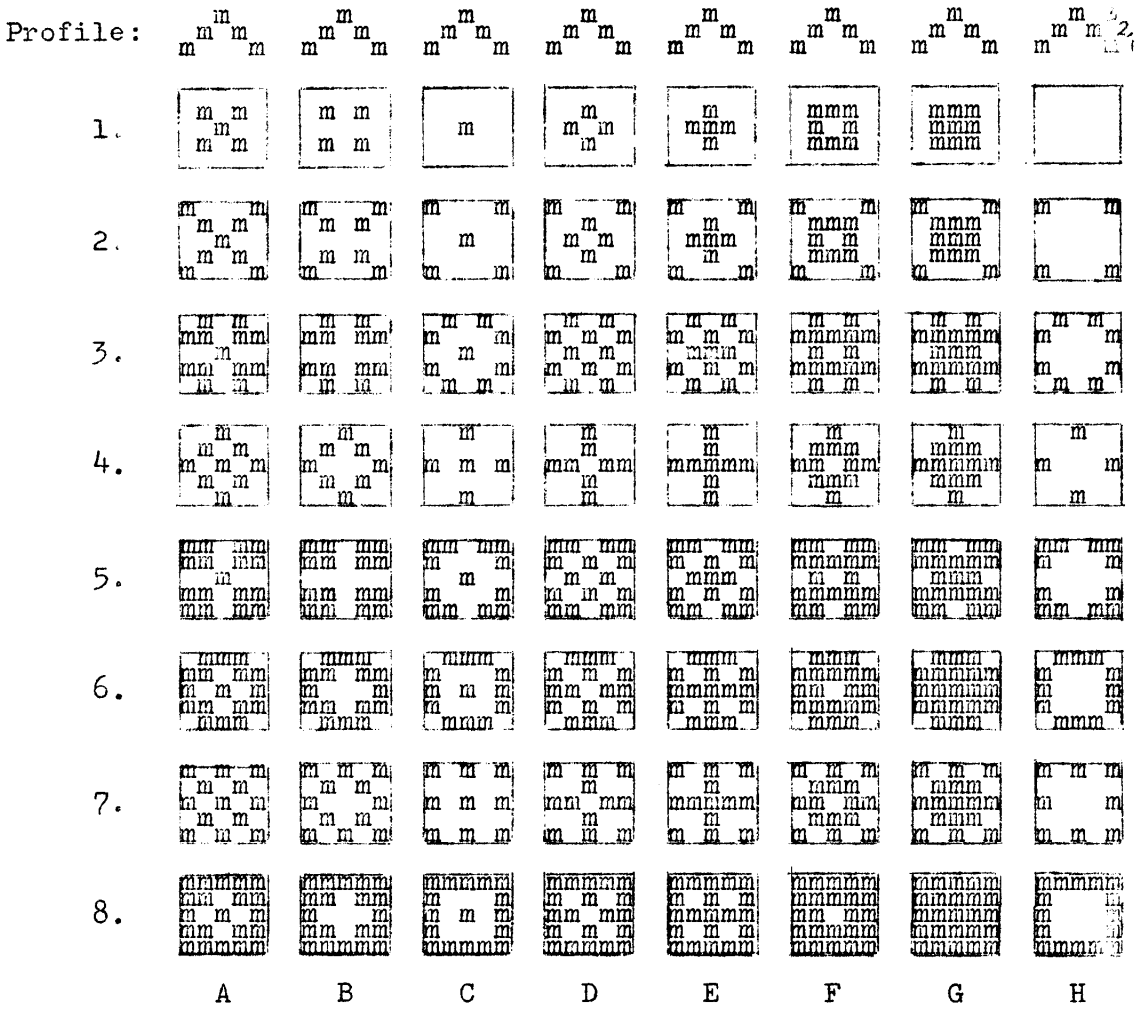

Fig.1

But the number of variations is independent from the profile as long as it has the same number of blocks (horizontal lines in the profile).

Regardless of how involved the draft is, the number of variations is always 8 for two blocks, 64 for three, and 1024 for four blocks. If the ground is present as for instance tabby in lace, it may make the pattern more interesting or more practical even, but the number remains the same.

There is one apparent exception. Such weaves as summer-and-winter, turned twills and damasks produce at the same time two patterns - one on each side. For instance when we weave variation 2F, we shall have 6H also. Therefore we need only 32 samples to get all the patterns.

To find all variations with a 3 block profile, we start by making the 8 variations of the two central blocks (first row of fig.1). We include here both cases: when there is no pattern whatsoever (1H), and when the two blocks form one solid square (1G). By the way: these two cases may be impractical in pattern weaving, but they may be of some interest when only the texture is concerned.

These 8 initial variations will be repeated in the center of all figures which follow. Thus: all figures in column A have the same center, and the same happens in all other columns. But in each row they will be surrounded by a different combination of blocks: in the second row we use block No.1; in the third - block No.2; in the 4-th - No.3; in the 5-th No.1 and 2; in the 6-th - 2 and 3; in the 7-th - 1 and 3; in the 8-th - 1,2, and 3.

But if we simply added these blocks in the first and last line of each variations, some of the patterns would be not symmetrical. Therefore what takes place in those two horizontal lines, must be faithfully repeated in the first and the last vertical line of each pattern. Column H in fig.1 shows how this is done. There is nothing in the center, and only surrounding blocks are shown. Thus in 2H we have block No.1 in the corners. In 3H we have block 2 in the 1st and the 5th line, but to compensate for this addition, we must also use block 1 in lines 2 and 4. In 4H we have block 3 in the center of the first and the last line - therefore we use block No.1 in the 3rd line. And so on. All other variations from 2 to 8, and from A to G are obtained by adding or superimposing one figure from the first row, to one figure from the last column.

As a practical example let us take the profile in fig.2, and make the variation 5F. In the first line we have replaced the ground by a combination of blocks 1 and 2. The second line (taken twice according to the profile) is composed of blocks 2 and 3. But to make the pattern symmetrical we add also block No.1 (because block 2 was used in the first line). Then comes the repetition of the first line. Then block 2 alone, twice. After that: 2 and 3 with the addition of 1 for symmetry's sake. From now on the pattern is simply reversed.

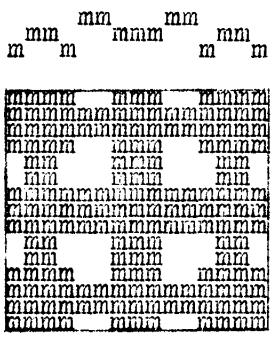

Fig.2

We realise that the process is not clear as yet, and we shall return to it in the following (and last) lesson about the variations of patterns.
