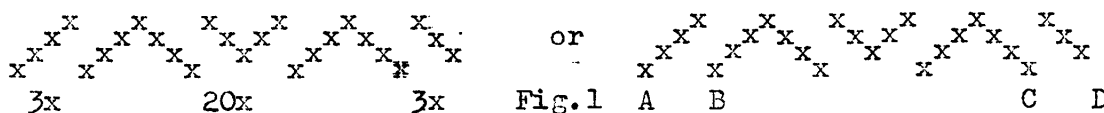


SHORT DRAFTS

(this article has been suggested by our readers in connection with "Pattern Analysis" in MW 3)

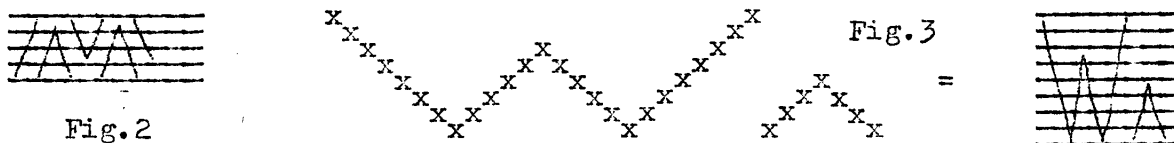
Nearly every draft used in weaving is shortened in some way. A complete draft without any condensation for 1000 warp ends would be 100 inches long if drawn on graph paper with 10 divisions to the inch. Consequently it is necessary to abbreviate the drafts. But there are so many ways of doing it that it is not always clear what a given short draft really means. We shall make here a review of all common methods of condensing drafts, and of developing them back to the form suitable for threading.

The first step in saving the graph paper is to give only one repeat of every part of the draft, and mark in some way how many times each repeat is to be used. For instance in case of a diamond twill with plain twill borders we may write:



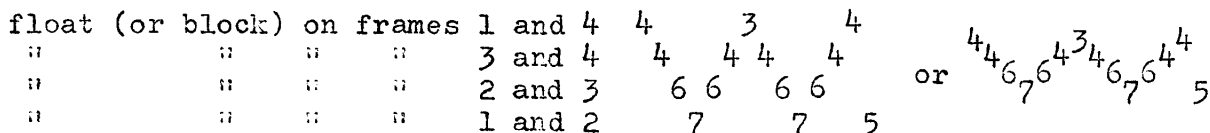
in the first case the number of repetitions is written directly under the draft, in the second we shall find somewhere beside the draft such directions: "thread from A to B 3 times, from B to C 20 times, from C to D 3 times".

This is already a considerable economy, since instead of 384 divisions of the graph paper we need only 26. But even this may be shortened further. In old drafts for twills we find the following way of writing: (fig. 2). This is a "short draft" of the draft in Fig. 1.

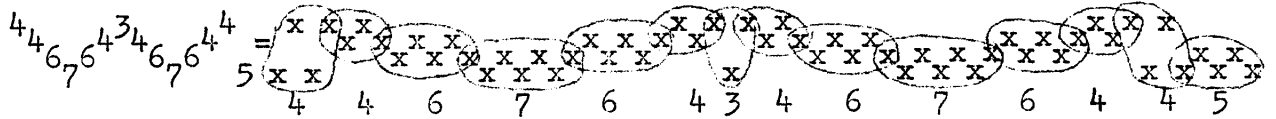


Here the economy is particularly obvious in case of a large number of heddle-frames (fig. 3).

In case of overshoot we do not gain anything by using the above method since the changes in direction of the diagonals are so frequent that indicating them by a zig-zag line is not more economical than the full draft. Thus a new idea is used. The principle of overshoot is to make patterns from floats of different length, and what really matters is only the length of these floats and their relative positions. There are only four combinations of heddle-frames which give overshoot floats: 1-2, 2-3, 3-4, 4-1. Thus we may make our short draft on four lines corresponding to these four combinations, and mark each float by a number indicating its length in warp ends skipped:



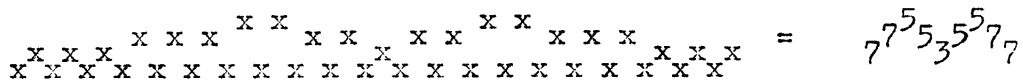
The full draft corresponding to this short one will be:



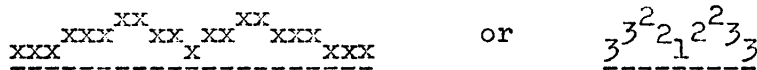
Although we have agreed that the lowest line in the short draft is 1-2, the second 2-3, and so on, it would not matter in the least if we decided to change the order of blocks, for instance: 1-4, 1-2, 2-3, 3-4 or 2-3, 3-4, 4-1, 1-2. It is true that after developing it into the full draft we would have apparently different drafts, but the patterns represented by these drafts would be always the same. Since it is immaterial how we write a short overshoot draft, as long as the length of floats is correctly shown, there is but one step to make the draft still shorter, i.e. to write the numbers in one row: 4, 4, 6, 7, 6, 4, 3, 4, 6, 7, 6, 4, 4, 5. In overshoot the length of floats has an even number when the blocks follow a diagonal, and an odd number, when the diagonal changes its direction. Thus when developing the above short draft we shall know that we have to change the direction at 7, 3, 7, and 5.

In symmetrical patterns we can further cut the draft by one half by writing only half of the short draft and indicating the centers of symmetry by underlining the corresponding blocks: 3, 4, 6, 7, 4, 5. This means that after 5 we reverse the draft until we come to 3, which is already the beginning of the next repeat. Thus in all we have only 7 figures written in one row, instead of 55 crosses written on four lines.

Spot weaves (all-over spots, etc.) Here the situation is very similar to overshoot except that the blocks of pattern are not written on frames 1-2, 2-3, 3-4, 4-1, but on the following combinations: 1-2, 1-3, and 1-4. The relationship between the full and the short drafts is as follows:



A variation of this drafts found often in old literature consists on marking the first heddle-frame by a continuous line, and indicating not the length of pattern floats, but the number of heddles on the pattern frames (2,3,4) by crosses, squares or numbers:



Weaves with "units". So far we have been speaking about weaves which have no definite units of weave. By unit we understand the shortest repeat which has still all the characteristics of the weave. Now we shall discuss the weaves which have more uniform texture. Each of them has as many units as there are blocks of pattern in the draft. Thus:

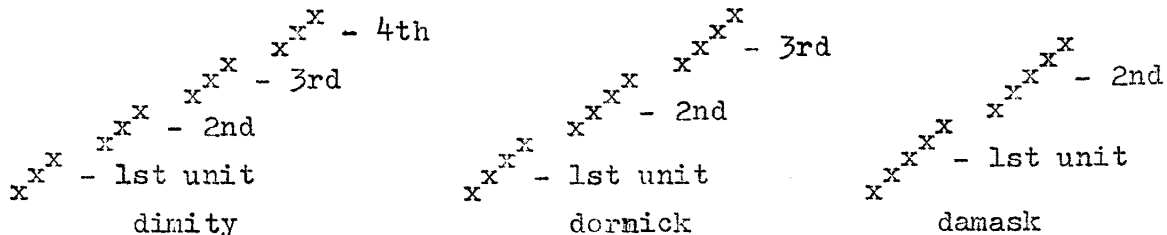
Summer-and-Winter has only two units in drafts for 4 frames: 1323 and 1424, but it will have 6 when woven on 8 frames: 1323, 1424, 1525, 1626, 1727, 1828. Numbers are those of heddle-frames.

Crackle has four units for 4 frames: 1232, 2343, 3414, 4121. Besides these there are "connecting" heddles between blocks.

Lace (Spot, Bronson, or Swedish) has two units of pattern in 4-frame drafts, but it has also the ground. It is advisable to consider 6 or 8 ends of the ground as a unit, too: ground - 121212, 1-st block - 131312, 2-nd block - 141412, or ground - 12121212, 1-st block - 13131312, 2-nd block - 14141412.

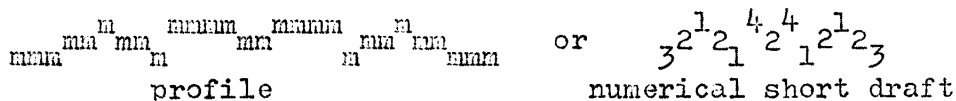
Huckaback has only one unit of pattern on 4-frame drafts, and one unit of ground. For instance - ground: 1414141414, pattern: 1212143434, or ground: 141414, pattern 121434.

Turned twills have all units identical but written on different frames. E.g. dimity (1:2 turned twill) on 12 frames has 4 units, dornick on 12 frames - 3 units, damask on 10 frames - 2 units:

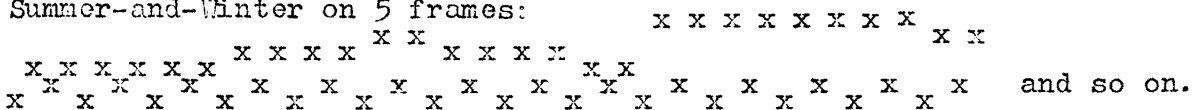


The simplest double weave will have the same units as dornick. The tie-up of course will be different.

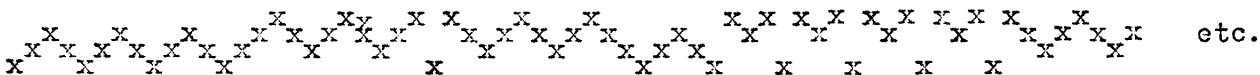
All the above weaves have the same short drafts. The number of identical units to be used in one sequence is indicated either by an appropriate number of squares in one row (graphical short draft or profile), or by a cipher (numerical short draft):



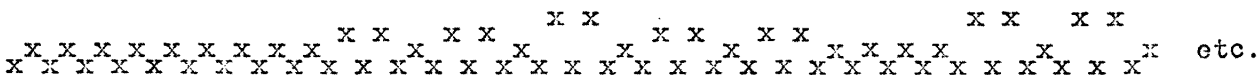
This kind of short draft does not mean any particular weave, but only a certain pattern. It can be developed into any of the above mentioned weaves by replacing each square by one unit of weave. Thus it can be Summer-and-Winter on 5 frames:



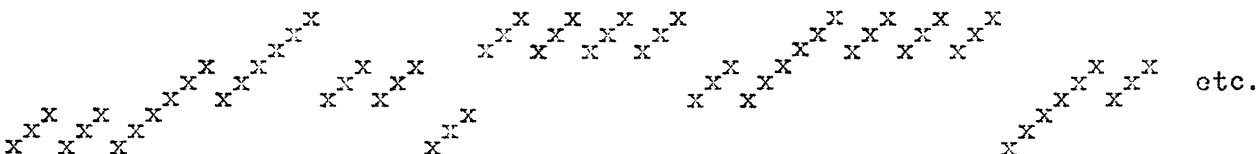
or crackle on 4 frames:



or lace on 4 frames if the lowest line of the draft is the ground:



or dimity on 9 frames:



In the last case the same short drafts as for diamond twills can be used (fig.3) but they are much longer than the profile or numerical drafts.

Other short drafts of historical value have been discussed in Mary Atwater's "Shuttlecraft Book of American Handweaving".
