DRAFTING.

It is obvious from the last lesson that we cannot write a threading draft in full. If we have a warp of 1000 ends, then marking each heddle on a graph paper with 10 divisions per inch, would give us a draft 100 inches or more than 8 feet long.

Thus a practical threading draft is always abridged. For instance, in the last lesson (page 9, fig.10) the main pattern is repeated 31 times, but only one repeat is given, which makes this part of the draft already 31 times shorter than the complete threading.

The first principle then of shortening a draft is to divide it into a number of identical repeats. But it may happen that there are
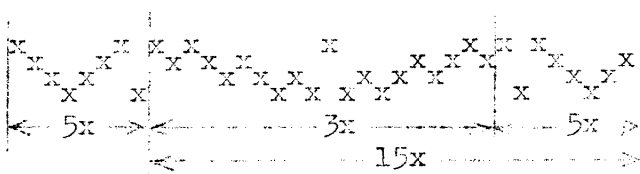
two or more different repeats even in the main pattern, as in fig.1. First we have a small pattern in diamond twill which is repeated 5 times (from D to C). Then comes a pattern in overshot taken 3 times. But then both these patterns are being repeated

Fig.1

15 times as indicates a number below. Thus the main pattern is composed of two repeats: D to C, and C to B. Each of them is taken a different number of times, and they both together form the main repeat: from D to B. The latter is repeated 15 times. Then to balance the pattern we have the part of the draft from B to A - threaded 5 times.

When we want to figure out the total number of ends necessary for this draft, we start with the main repeat from D to B. This is composed of 8 ends (D to C) taken 5 times or 40 ends, plus 20 ends (C to B) taken 3 times or 60 ends. Together 40 and 60 gives us 100 ends for the main repeat. Since this is threaded 15 times - we have a total of 1500 ends. To balance the pattern we have the draft from B to A (8 ends) taken 5 times or 40 ends. So in all we have 1540 ends.

Actually on the draft we have only 36 heddles marked instead of 1540. Such a draft can be justly called short, although the term Short Draft is usually applied to drafts still more abbreviated.

What often happens in practice is that the main draft cannot be divided easily into short, simple repeats. For instance the part of the draft from C to B may be much longer - it may have more than a hundred ends. In such a case if the draft is symmetrical, we can draw only one half of it, and at the very center mark it: REVERSE. This means that from this particular point we start threading in reverse. The central heddle of the draft is not repeated. For instance:
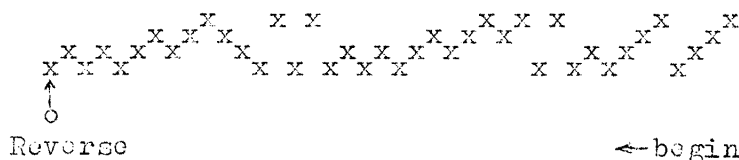
Fig.2

Reverse   ←begin

In this case it is advisable to indicate clearly from which direction the draft should be read. Although it is customary on this hemisphere

to read from the right, most drafts can be read from either direction. Here however there is only one way. When we come to the last heddle marked "Reverse" we go back to the last but one and so on. Fig.3 gives the second half of the draft:

Fig.3

end ← direction of threading
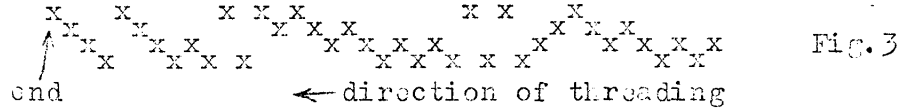
Overshot weave is about the only one in which the threading draft cannot be shorten any further, without using a special method which cannot be applied to any other weave. We shall see later how to deal with other weaves.

Overshot produces floats of different length, and these floats make the pattern. Thus if we can indicate only the position and the length of floats, we shall have enough information to make the full threading draft. By the position we mean the combination of heddle-frames: 1-2, 2-3, 3-4, and 4-1. By the length - the number of warp ends the float skips. Thus the draft on fig.4 can be represented as on
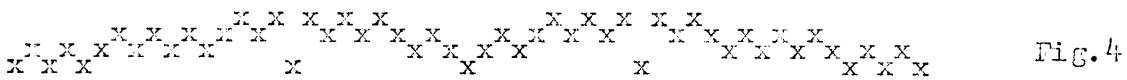

Fig.4

fig.5. The first, lowest line on this new draft means floats produced by the combination of frames 1 and 2. The second: 2 and 3, the third: 3 and 4, and the fourth or top line: 4 and 1. Instead of "x" as in plain threading draft we use now numbers. Each number indicates how long is the float. The first float starting from the right will be made on frames 1 and 2, and it skips 6 warp ends. Thus we place 6 on the lowest line of our new short draft. The next float is on 2 and 3 and it's length is 8. Then comes one on 3 and 4, long 4. And so on. In practice making such a short draft means circling with pencil (or in imagination) groups of heddles on two adjoining heddle-frames. These groups will always overlap one another by one heddle. Then in the short draft we mark: 1-st - the position of the group, and then the number of heddles it contains.

4-1		3		3	
3-4		4	6	6	4
2-3	8		4	4	8
1-2	6			3		6

Fig.5

Later on we dispense with the numbers of frames marked on the left in fig.5, and the draft will take less space as in fig.6.

Fig.6
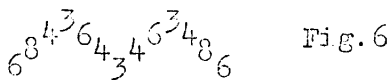
To reverse the procedure — we have a short draft and must develop it into a full threading draft. We take a piece of graph paper, and start marking heddles alternately on frames 1 and 2 until we have 6 of them. But should we start on 1 or 2? The short draft does not say which. The simplest way is to try. If we start on 2 we shall have 7 and not 6 heddles by the time we come to the next float, or the two floats will not match i.e. there will be a gap in threading. Thus we can start on any of the two frames and if the first float turns out to be too long, we simply erase the first heddle. This is the only difficulty. The following floats present no problem.

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