PROBLEMS IN TEACHING.

Lesson 3.

DRAFTING.

It often happens that the draft contains only the threading and the tie-up. Then the problem arises how to find out the threading, or rather one of the many treadlings possible. When we speak about treadling drafts we must distinguish between drafts which give a square, symmetrical pattern, and fancy treadlings which can give any pattern at all. The number of the former is very limited.

When we speak about a square pattern we may remember that the best guarantee that we are dealing with a square is to have two diagonals, which cross each other at the center of the figure at a right angle. The treadling which will produce such diagonals is called BASIC treadling, and there is only one such treadling for each threading draft. The way to find it is to draw the diagonal first so that it would cover a square space right under the threading draft. In fig. 1 we have a 1:3 diamond twill draft.

Since each treadle is tied to only one frame, the weft will go only over one warp end. This is easy to check by making the draw-down of one shot of weft on each treadle. Then our diagonal will be made of single squares of the graph paper. The first step then in finding the treadling will be to draw a diagonal from the upper right corner to the lower left corner of the draft. Doing it we do not look at the threading draft at all except to locate the beginning and the end of the diagonal. After the diagonal is drawn we can find out square after square which treadle produced each element of the diagonal.

We look up from the first square ("m") to the threading draft and see that immediately above the first square there is a heddle on on frame 1. Since frame 1 is tied to treadle 4, then obviously treadle 4 is the first to be used. Consequently we make a mark on the treadling draft right below treadle 4 and in line with the first square. The second square was made by a heddle on frame 2, which is tied to treadle 3, and the mark comes under treadle 3 in line with the second square. The third square: frame 3, treadle 2. The fourth: frame 4, treadle 1, and so on.

When we complete in this way the whole treadling draft, we can compare it with the threading draft, and we can see that they are identical, except that the first is horizontal and the second vertical.

From this observation comes the expression "woven as drawn in". It is an old term and means literally: treadling the same as threading. In the above example the term "woven as drawn in" can be taken literally. But we shall see later on, that it is used often to mean that the treadling
is only similar to the threading. The main point is not so much that both
crafts are the same, but that they will produce a pattern as close to a
square one as possible.

Fig. 2 gives an illustration of squaring a pattern in such a way
that the diagonal will be absolutely straight although the treadling
draft will be no longer identical with the threading.

Here two frames are tied to
each toodle, and consequently the
weft will go in most cases over
two warp ends. The skips of weft
which go over two or more warp
ends are called "floats". Then
we shall draw the diagonal with
blocks of two by one (two squares
long, one square deep). The blocks
of floats will overlap each other
by one thread of the warp. Other-
wise the diagonal would not have
the 45° angle necessary to produce
a square pattern. Here again we
draw the diagonal without looking
the beginning and the end of the
diagonal which must be in line with both
ends of the draft. Then we look
up from the firat block of the
diagonal, and we observe that it
is produced by the combination of
the first and the second frame.
The treadle which is tied to those
two frames is No. 4. Thus the first
mark in the treadling draft must
be placed directly under treadle
and in line with the first block
or float. The second block is made
by frames 2 and 3. They are tied
to treadle 3, so the treadling
mark comes under treadle 3. The
third block requires heddles on
frames 3 and 4 — tied to treadle
2 — so the third mark is under
and so on until the end
of the diagonal is reached.

Here we can see that the tread-
ling draft is similar but not
identical with the threading draft. Still we call it "woven as drawn in",
because the pattern will be square.

Finally in Fig. 3 we have the same method used for a different draft.
Here the treadling and the threading drafts are hardly similar, but still
they produce a pattern as square as it can be, and this way of treadling
will be still called "woven as drawn in", although the original meaning
has been nearly lost.