is preserved. As an example of a complete project we can take the following draft (fig. 7):



Let us make the warp grey, except for "o" which is blue, and "w" which is navy. When sleying one should not consider the ends in the frame 4 as belonging to the warp at all. I e. if the sleying calls for two ends per dent, then sley all grey (x) 2 per dent, and the other colours wherever convenient, except that two ends threaded through frame 4 should not go into the same dent.

The trendling should start with 4,1,4,5-5 times, then 4,1,4,1,4,5-1,4,5-5 times, then comes the crossing of the two borders which is always tricky. The crossing cannot be completely symmetrical since we have to have one set of colours or the other on top. One of many ways of crossing is as follows:

where 11 is blue, 11 and all other treadles - grey. Then we continue with 41 41 43 up to the next border.

It would seem that for a good job we need two warp beams: one for the grey ground, and the other for the blue and navy floats, because there is much less take-up in weaving on the vertical floats than on the tabby ground. In practice however we do not want the floats to be stretched as tightly as the tabby ends. The difference in the take-up just compensates for the desired effect of the pattern standing out on a flat ground. For that matter it is advisable to start a new warp of this kind by weaving for a while on treadles 1 and 4 which leave the pattern warp alone and produce the desired slack.

The frame 4 in counterbalanced looms has a tendency to rise too high because there are so few ends which it operates. It is a good idea then to tie it with two cords to the loom frame so that it could not rise any higher than the other frames. Thus an unnecessary strain on the pattern warp will be avoided.

The basis for the above project is the draft on fig. 3. A similar project can be made with draft on fig. 5. The treadling must be changed accordingly.

WEAVING TERMINOLOGY

We have received the following remarks from Mrs. Mary M. Atwater, and we have her permission for their publication:

"Yes, the vague way our technical terms are used is very annoying. People cannot say what they mean when the words they have to use mean a dozen different things. To have to define as one goes along takes so much space. I particularly dislike "semi-damask" for overshot. Nothing could be much less like damask than the overshot weave. And I also dislike "lace weave" for the Spanish openwork or eyelet weave

which is anything but lacey. This is particularly misleading because there is a real lace weave.

"I agree that it would be better to use the word "harness" in the English manner as you suggest, rather than for a heddle-frame as it is custom with us. But I think it is rather hopeless to try and make the change. I made a mistake when I christened the "Bronson" weave as I discovered after the name and the weave had become fairly current, and though I have tried ever since to get it back to its proper title I have had no luck, so I suppose it will continue to be "Bronson". As long as people use a word for one single thing, and others regognize it as meaning that thing, one can't really quarrel with it. It is when people use the same word for half a dozen different things — as "finger weaving" is used — that I feel something should be done.

"Origins and names interest me. I got the name of the "summer-and-winter" weave from an old manuscript book preserved in the library of the Pennsylvania Museum of Art in Philadelphia. I coined the name "crackle weave" as the Scandinavian name was impossible for most people, and I was using it in ways quite different from the Scandinavian and thought it might as well have an American name. The "shadow weave" which I found quite by accident when I was looking for something else, I just named in order to have a handle for it. These names have nothing to recommend them except utility."

PATTERN HARNESS

and How To Make It

Weavers who try to find means for self-expression in the pattern rather than in the intricacies of weaving techniques are often frustrated by the technical limitations of a weaving loom. Freedom of design means so many heddle-frames per one block of pattern, and one block is not much for self expression, and neither are five or for that matter even ten blocks. On the other hand so called "free techniques" are in most cases desperately slow, so slow that no amount of artistic inspiration can be expected to survive the drudgery involved.

This conflict between the artistic temperament and the technical limitations of hand-weaving has been solved long ago by the unknown inventor of the Draw-Loom, a loom where each heddle can be operated separately. From our point of view however such a loom has several drawbacks. First it is not on the market and probably will never be. Its construction is involved and very expensive. Then it requires slave labour in the form of a draw-boy who opens the sheds or combinations of sheds. Finally it takes days or weeks to make the necessary tie-up for any particular pattern. It would not be too bad if we were to repeat this pattern hundreds of times, but who wants that?

On the other hand if we are willing to sacrifice some of the advantages of a full blown draw-loom, we can compromise on something which will still give us a complete freedom of pattern, which does not require a draw-boy, and which can be operated at a reasonable speed without a permanent tie-up for each pattern.