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# MASTER WEAVER

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DESIGNING MADE EASIER

## T E X T U R E .

In this article we shall use the word "texture" in its proper meaning, and not in the somenow corrupted interpretation used in the "3D" weaving. As we have explained tis elsewhere (MW 4/1) "texture" in modern weaving denotes too often only a rough, but otherwise uniform surface, when in the strict sense of this word there is as much texture in a pane of glass or a sheet of aluminum foil as in beans spread on a table top, or in corrugated iron.

It is a purely academic question, as to when a texture becomes a pattern. A small 3D pattern repeated over and over again may be called a texture, and a very rhythmical texture as the already cited corrugated iron may be called a pattern.

But the problem is more involved than this. We often call "texture effect" a perfectly smooth and uniform surface which appears to have rough texture, but really has none. We could say then that such a surface has two textures: one real, and another visual; one smooth, another rough. We have a very good example of the above case in Crepe Weave (MW 20/9). There are real Crepe fabrics, and fabrics with crepe effect only. The first can be recognised by touch, the second by sight.

In handweaving we have the following cases where the problem of texture is involved:

1. A fabric with uniform texture, whether rough or smooth. Most weaves can give smooth texture and Satins (MW 31/1) excell in this direction. The rough texture may be either rhythmical (Waffle, Corded fabrics, Halkrus, etc.) or chaotic (see "Third Dimension", MW 17/4, and "Accidental Weaves", MW 26/1).

2. A smooth fabric which appears as having heavy texture. The best example are small colour patterns in tabby, basket, or twill. See: "Colours in Simple Weaves" (MW 5/9).

3. A variety of textures in the same fabric, but without any definite pattern. For instance if we make a compound warp: one inch of 3D yarn, and one inch of smooth yarn, and then alternate the same yarns in weft in the same way - we shall have three different

textures: rough, half smooth, and smooth. Compare "Multiple Warps" - ME 26/3.

4. Variety of texture which forms a certain pattern. And this is the subject of our present discussion.

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Before we go any further we must apologise for not having enough space to go a little deeper into the theory of textures. But the reader will find a chapter on texture in practically any book about modern designing.

Our real concern now is how to get two or more textures in the same piece of weaving so that: 1-st - at least some of the blocks of texture would not go all the way across the woven piece in either direction; 2 - by changing the texture we shall not affect adversely the properties of the fabric; 3 - we would not need to resort to pick up, draw-loom and other involved techniques.

In general this problem is about the same as of getting one pure colour anywhere in the fabric without it showing in the adjoining areas. As we know this is quite a problem, and can be solved either partially or in a very limited number of ways. The technique depends very much on the nature of the pattern. For instance if the

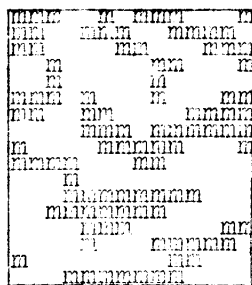


Fig.1

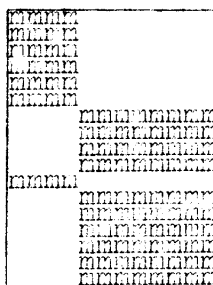


Fig.2

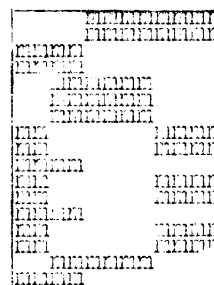


Fig.3

pattern is completely free as in fig.1, then about the only weave which can produce it is Corduroy (MW 14/3, 15/4). The dark parts will have cut pile, when the ground will remain uncut. It could be also done in double weave on 56 frames, and in Summer-&-Winter on 16 frames (only) but also on 30 treadles.

Let us then turn to a simpler case as in fig.2. We want rough texture in the shaded areas, and smooth texture in the light areas.

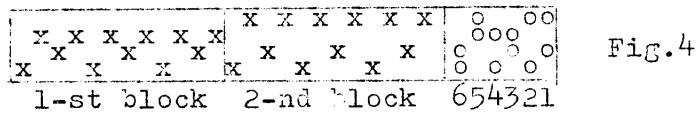
The simplest way to do that is to use a 3D yarn, and a plain binder. The pattern yarn can be chenille, boucle, or even homepun wool. The binder and warp of about the same, smooth, and finer yarn.

Now, what sort of weave are we going to use? It could be overshot, summer-&-winter, crackle, or Bronson. We must think now in terms of floats, their length, and distribution. The longer the floats the better they show the yarn used, but very long floats are

not practical. Thus we must compromise. If very short floats are permissible, then summer-&-winter is the best weave. For longer floats both Bronson (or Barley Corn) and Overshot are equally good since both can give us floats of practically any length, but overshot is easier to weave.

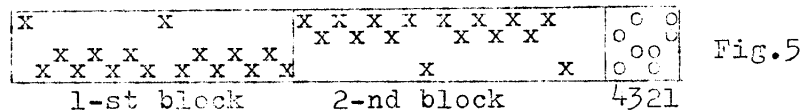
To decide what length of floats we want, we must make a small sample. We can take a sample frame, or any small or large loom with a warp already on. Make a shot of tabby, and then pick up a shot of texture weft so that it will go over three and under one and so on for a couple of inches. Repeat this until we have about one inch, so that the sample is 1" x 2". Then let us make several shots of tabby and make another sample this time with the texture weft going over 5 and under 1. And again a third sample with floats of 7, etc.

We shall soon have an idea as to which of these samples looks best. If by any chance it is the first one, then we use summer-&-winter, and the draft will be as in fig.4:



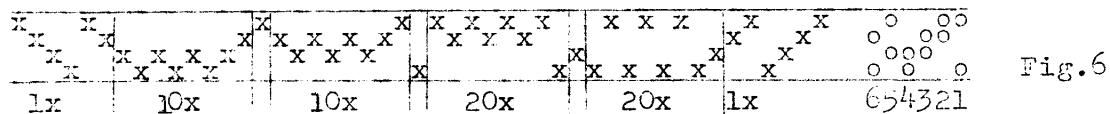
The treadling as usual for summer-&-winter with texture weft on treadles 1,2,3,4 and binder on 5 and 6.

But if the floats must be longer, for instance 7, then we must use overshot and the draft will be:



The treadling is 1314 for one block, and 2324 for the other. Texture weft on treadles 1, and 2; binder on 3, and 4. In this second case all floats will lie one under another in vertical columns. This may be an unexpected and not quite welcome addition to our design. Unfortunately we cannot get rid of it unless we go into a higher number of frames.

Now let us turn our attention to the pattern in fig.3. It has four blocks, and therefore it could be woven on a 4 frame loom only in crackle (for short floats) or in overshot (for longer floats). The draft for overshot is shown in fig.6.



The treadling: 1-st block - 435436; 2-nd bl. - 325326; 3-rd bl. - 215216; 4-th bl. - 145146. Texture weft on 1,2,3,4, and binder on 5, and 6.

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The above examples should give us an idea as to how select a weave for any simple pattern in case of two textures. When more than two textures are desired we proceed exactly as in case of more than two colours ("Modern Overshot" MW 18/1). But since different textures mean also different counts of yarn, we must be rather careful. With heavy yarns the shots of weft may be spaced too far apart to produce a uniform surface. Therefore each new project in texture should be first worked out on small samples.

So far we discussed only texture effects in weft. This is because in pattern weaving it is much easier to control the fabric in weft than in warp. For instance if we notice that a particular yarn is not suitable we can easily change it if it is weft, but not if it is warp. But once the pattern is established nothing prevents us from "turning" the draft i.e. using a mixed warp and plain weft.

The story is entirely different if we produce texture effects both in warp and weft. We shall tackle this new problem in the nearest future.

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## SYNTHETIC YARNS.

With the ever increasing variety of weaving yarns it is often difficult to distinguish between the natural and the artificial fibers. To make our task easier we shall divide all fibers into four groups:

1. Natural fibers. The term is self-explanatory. These fibers are spun in their natural state, although they may be bleached or dyed or both. Bleaching and dyeing does not or rather should not affect the original properties of the material.
2. Processed fibers. They are also natural fibers but treated chemically in such a way that their physical properties are changed. As examples may serve: mercerized cotton, and weighted silk.
3. Artificial (synthetic) fibers. In this case the fibers are made from raw materials which in their natural state could not be used as fibers at all.
4. Mixed yarns. Here we have a group of yarns which are spun from both natural and synthetic fibers, such as wool and nylon for instance.

We have already described natural fibers with the exception of wool, which you will find in the next issue. We have also discussed processed yarns. Now we are taking up the next group - synthetic fibers and yarns.

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Let us start with general considerations. First of all, why synthetic yarns at all? What is the purpose of creating completely