

Single, Two-tie, Unpaired, 1:1 Ratio, Summer and Winter

Emery Classification

Weave Compounded by Adding Sets of Elements, Supplementary: one warp, two wefts, one of which is *not* needed for the integrity of the cloth.

Weaving Category

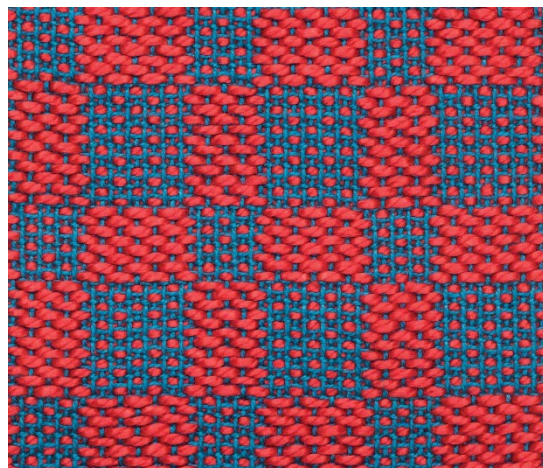
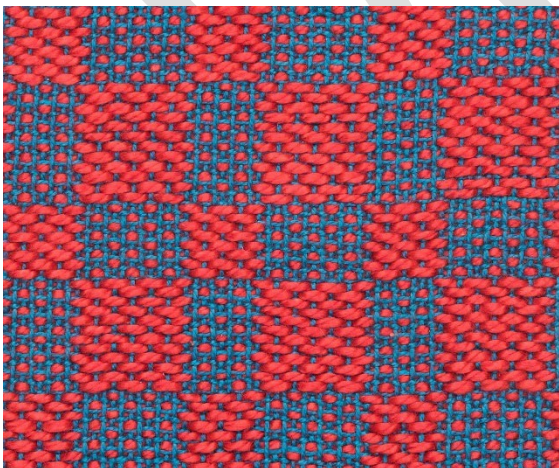
Tied Unit Weave; the supplementary element is an *additional weft* which forms blocks of patterning and is not needed for the integrity of the cloth. This structure is classified as a Single, Two Unpaired Ties with 1:1 Ratio, described in the drawdown. It is called “Summer and Winter” because it has been traditionally used to weave coverlets with dark and light yarns. The predominantly dark side was for winter, the light for summer.

Summer and Winter on Four Shafts

Fabric Characteristics

Below is the front and back of a summer and winter fabric woven in the “singles” method (see drawdown).

The blocks with weft floats have the characteristic stippled look. The alternate blocks are half-tones, showing both the ground cloth and the supplementary weft peeking through.



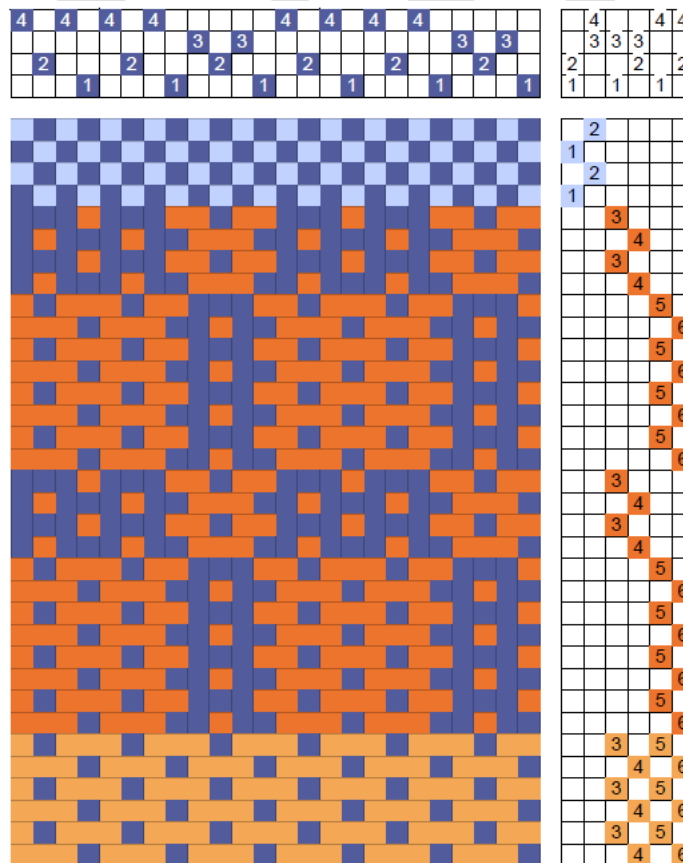
The two faces of the sample above show that when one side has weft floats, the other is half-tones and *vice versa*.

As we all supplementary weaves, the fabric is formed by a warp, a ground weft and a supplementary weft. The warp and the ground weft form the ground cloth that gives the fabric its integrity. They are usually the same size, but sometimes the ground weft is smaller. The supplementary weft is usually larger to show the pattern and loftier to pack in the web.

Drawdown

The *sinking shed drawdown* below explains the nomenclature of the structure: single, two unpaired ties, 1:1 ratio. The example shows two blocks on four shafts and was used to weave the sample.

Single refers to one shaft per block. There are *two* ties, shafts 1 and 2. The ties are *unpaired* because they are separated by a pattern shaft. The ratio is 1:1 because there are two ties per block and two *pattern threads* (not referring to pattern shafts) per block; 2:2 simplifies to 1:1.



2 Summer and Winter

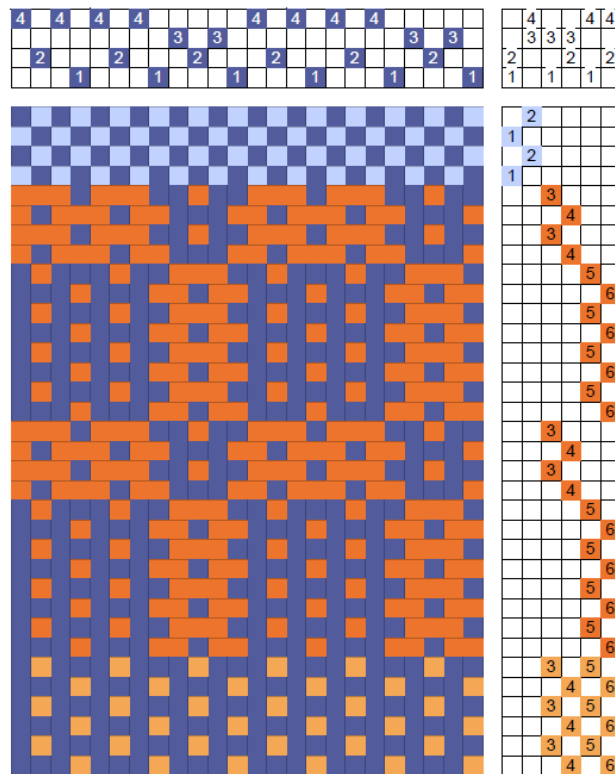
The tabbies are both ties *vs.* all pattern shafts; alternating the two picks results in plain weave as can be seen in the drawdown.

This method of treadling with two pattern picks is called “singles” For each block the first pattern pick is one tabby plus the pattern shaft. The second pattern pick is the alternate tabby plus the pattern shaft. The two pattern picks are repeated to square the block or as desired as shown in the drawdown.

Not shown in the drawdown is that *each pattern pick* used in treadling order *is followed by one of the tabbies*; they intersect with the warp to form the ground cloth.

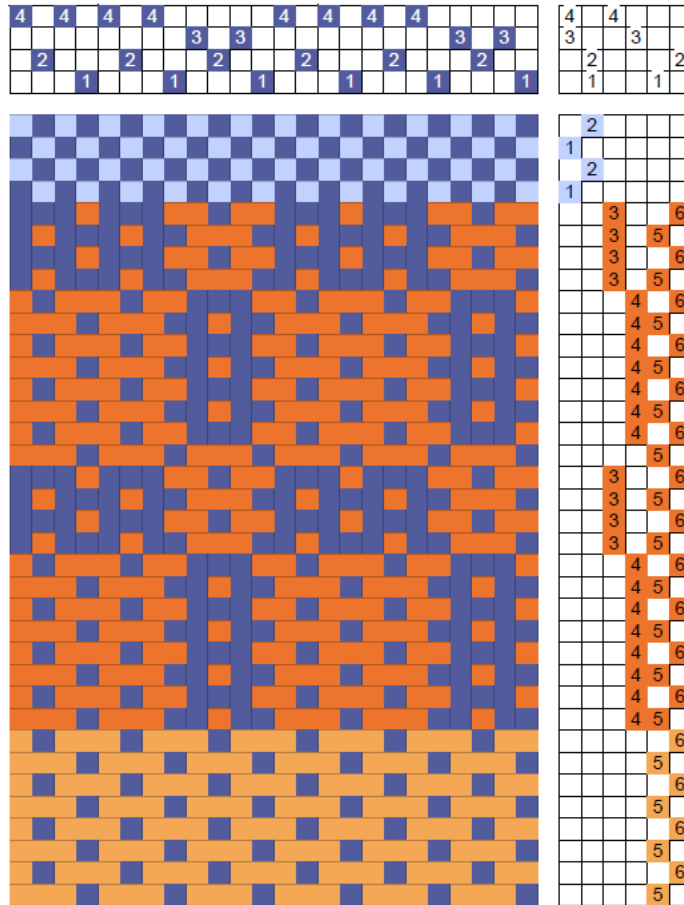
The drawdown also shows some characteristics that are shared by tied unit weaves: 1) each block is fixed; in the case of summer and winter to four threads; 2) blocks can be repeated; in this example, block A is a single block, block B is repeated; 3) the treadling of the blocks can be combined. The lighter orange in the drawdown shows multiple treadling (two feet) that would be needed to weave the two blocks together.

Below is the *sinking shed* drawdown using the same tie-up which shows the other side of the fabric.



3 Summer and Winter

To weave the first drawdown with a sinking shed loom, we “tie what is untied and untie what is tied”, as shown in the *sinking shed* drawdown below. However, the converted tie-up would require eight treadles, so it was changed to double treadling (two feet) for all of the pattern steps except the tabbies.

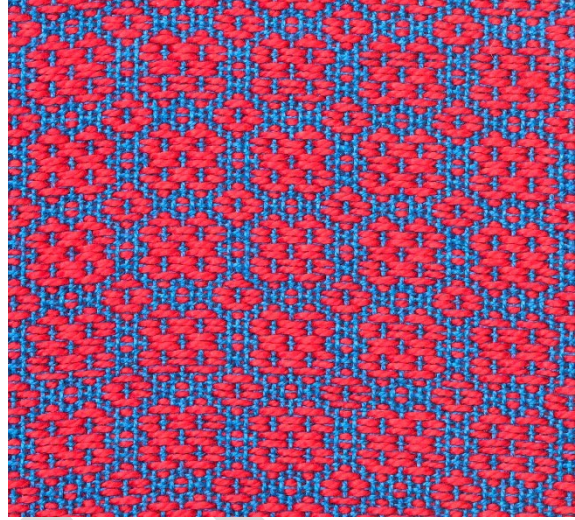
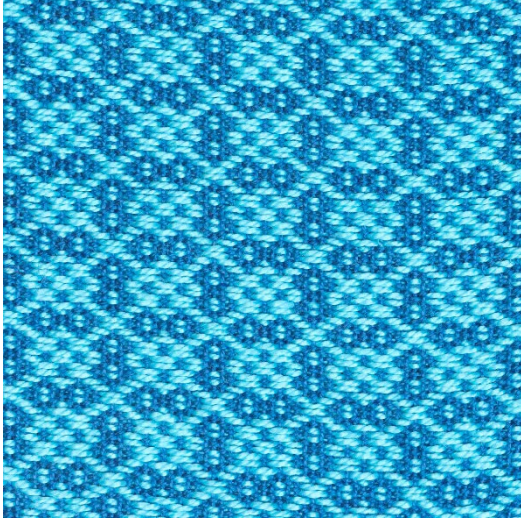


This may be a case when weaving the fabric upside down may be preferable.

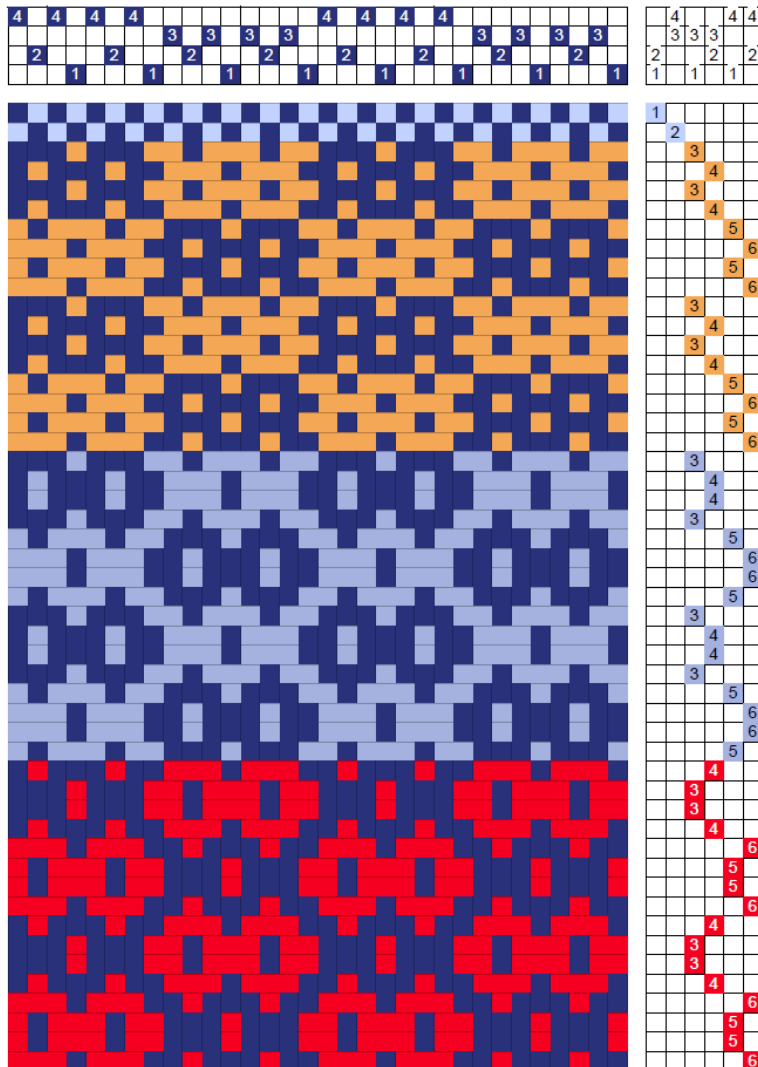
Other Treadling Options

As mentioned above, the treadling used in the sample and drawdown is called “singles.” There are many options to treadle summer and winter, but the two most popular are “in pairs x’s” and “in pairs o’s”.

The fabric samples that follow show how the looks of the motifs gave rise to the names: “x’s” on the left, “o’s” on the right.



Below is the sinking shed drawdown showing all three options for treading.



5 Summer and Winter

Each of the two blocks in the drawdown is doubled in the threading but not in the treadling. The sequence for each option is treadled twice.

Function

Coverlets is the classic use for summer and winter. With a dark warp and a light supplementary weft, the top of the fabric and drawdown is more weft dominant and thus light – summer – and the bottom warp dominant, darker and thus “winter”.

Sett

To allow room for the supplementary weft, the sett should be more open than the one for plain weave. The sample was woven using 10/2 mercerized cotton sett at 18 epi, more open than the 24 epi I may use for plain weave.

Width of Blocks

Each block is four threads wide; the float is never longer than three threads. This is ideal for repeating blocks as we see the area as one block, while there may be as many as we wish.

Number of Blocks Available

Two shafts are used for ties and are shared. Since each block uses two pattern shafts, any additional block requires two shafts. On four shafts there are two blocks.

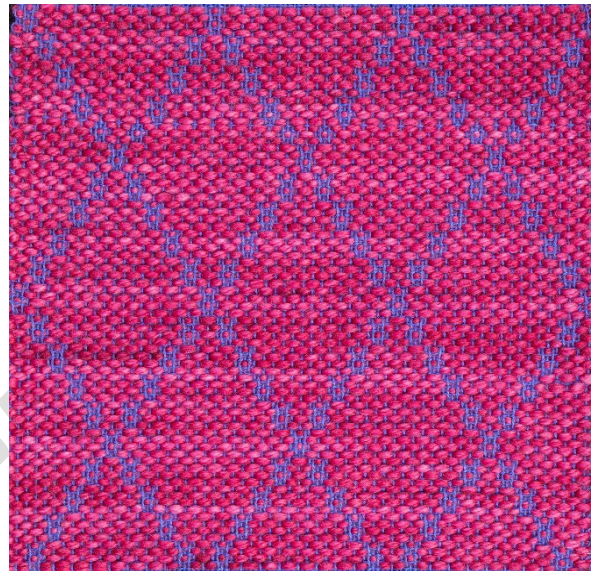
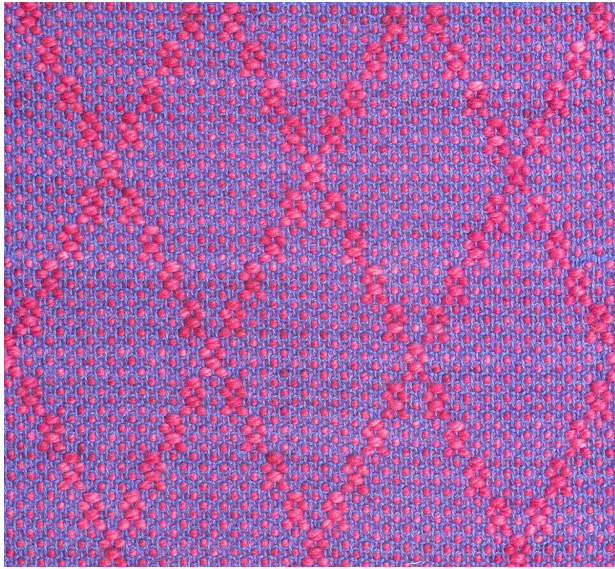
Summer and Winter on Eight Shafts

Fabric Characteristics

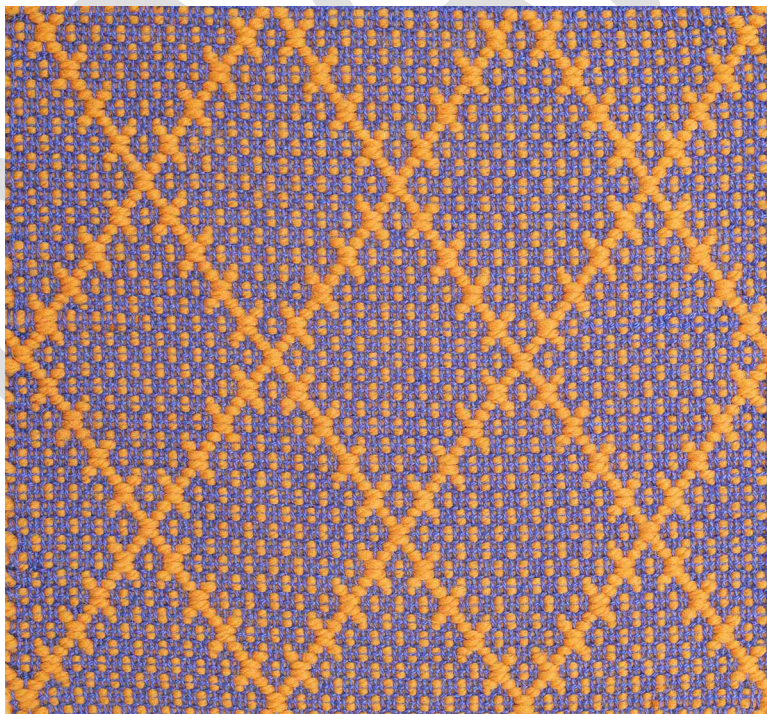
The fabrics from the three treadlings of singles, in pair x's and in pair o's are shown below, front and back of each.

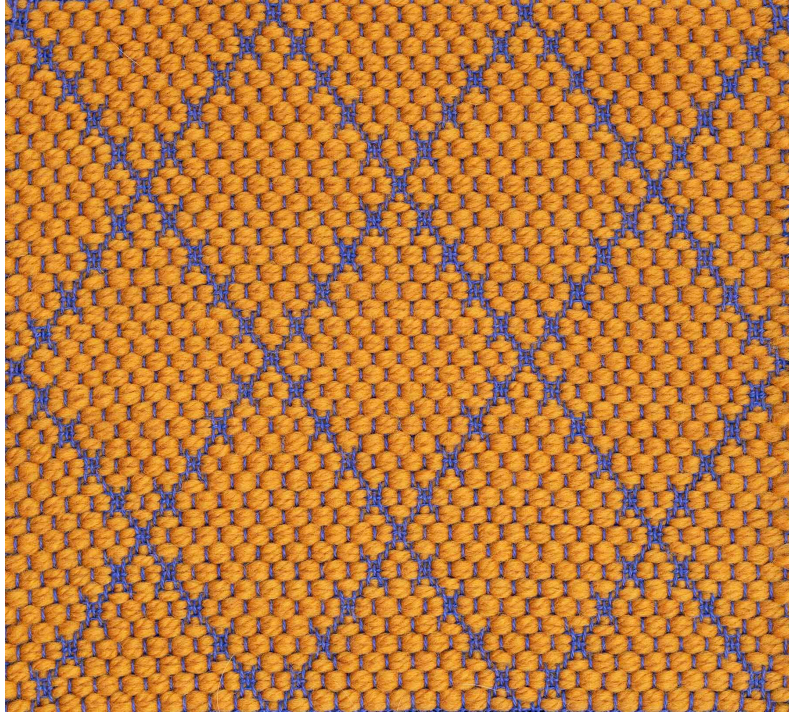
Each fabric was woven with a point motif of the six blocks available on eight shafts and treadled, a single block threading and treadling.

Singles, front on the left, back on the right.

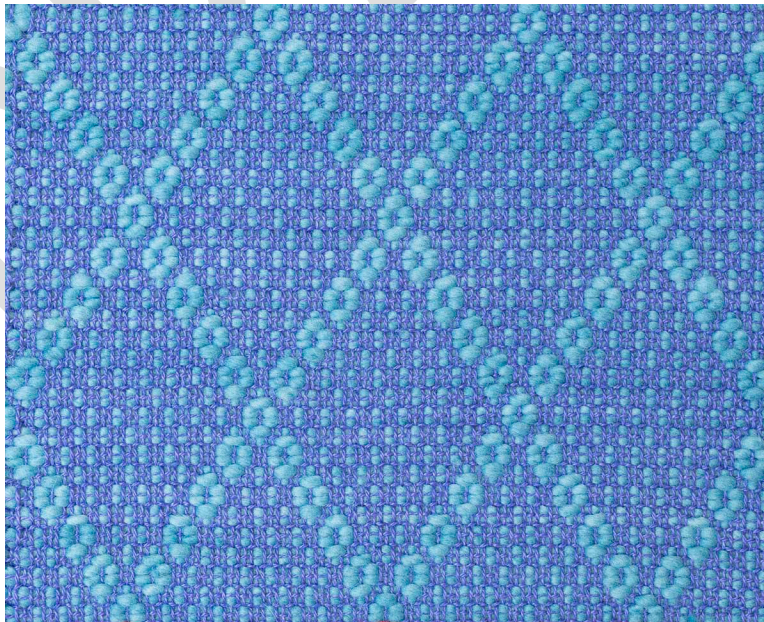


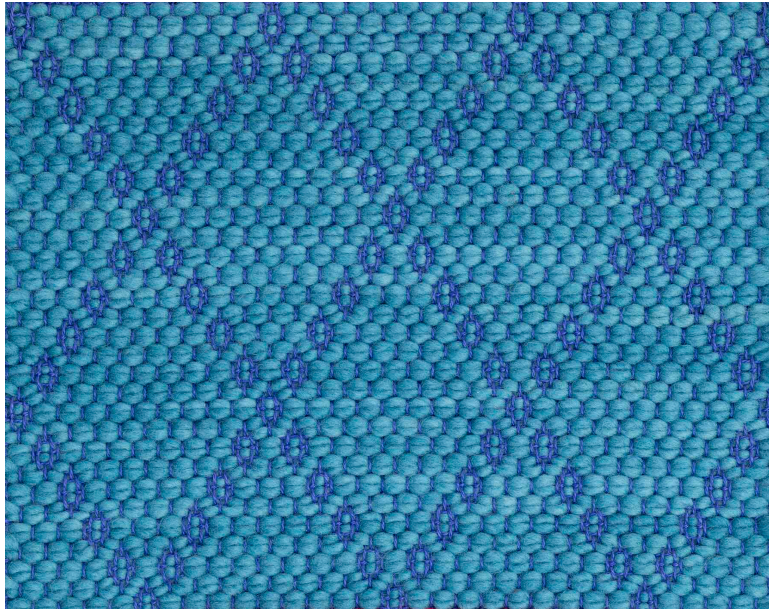
In pair x's front of the fabric, followed by the back.





In pair o's, front and then back.

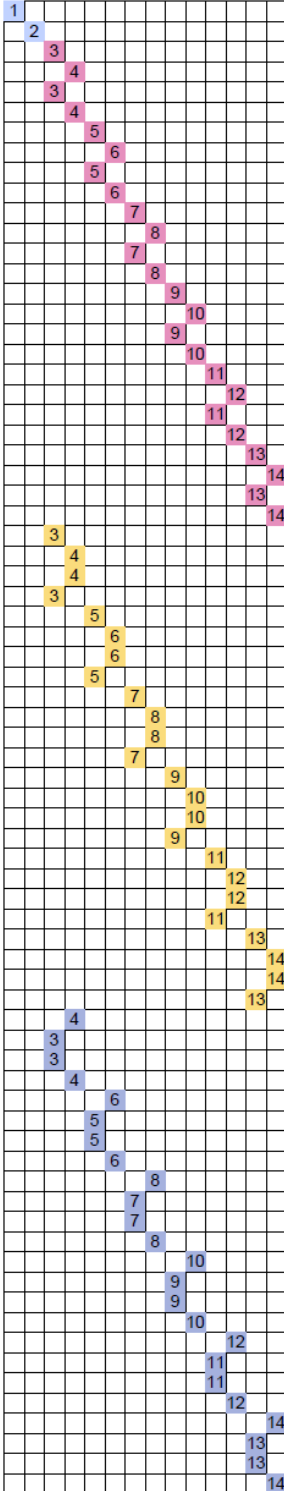
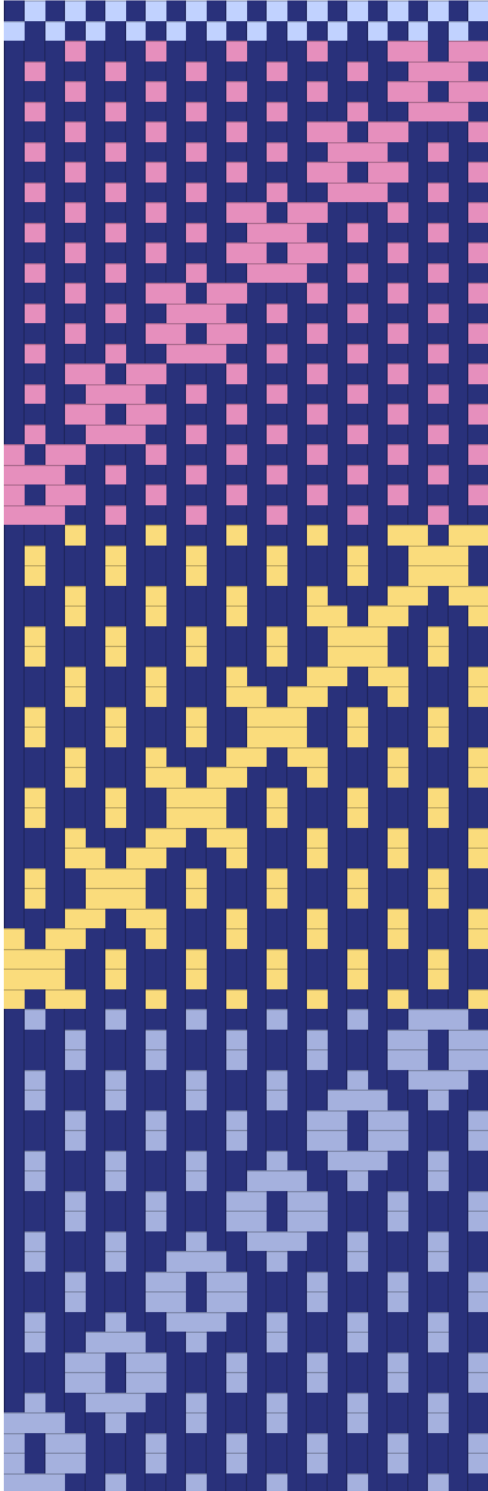
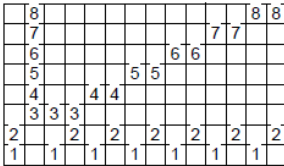
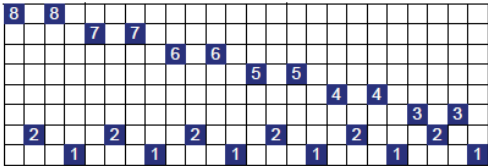




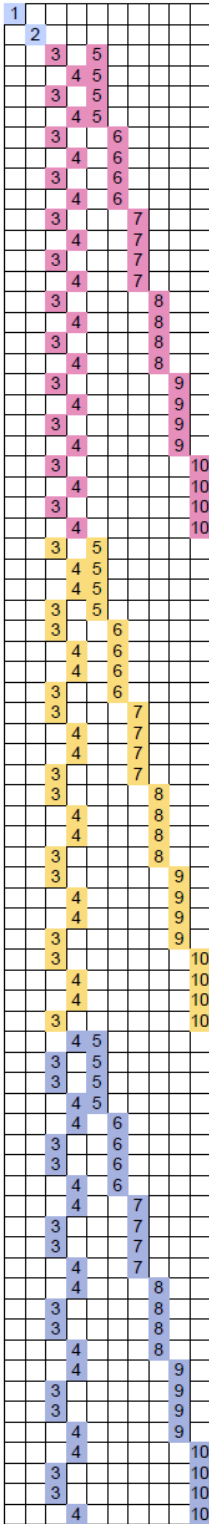
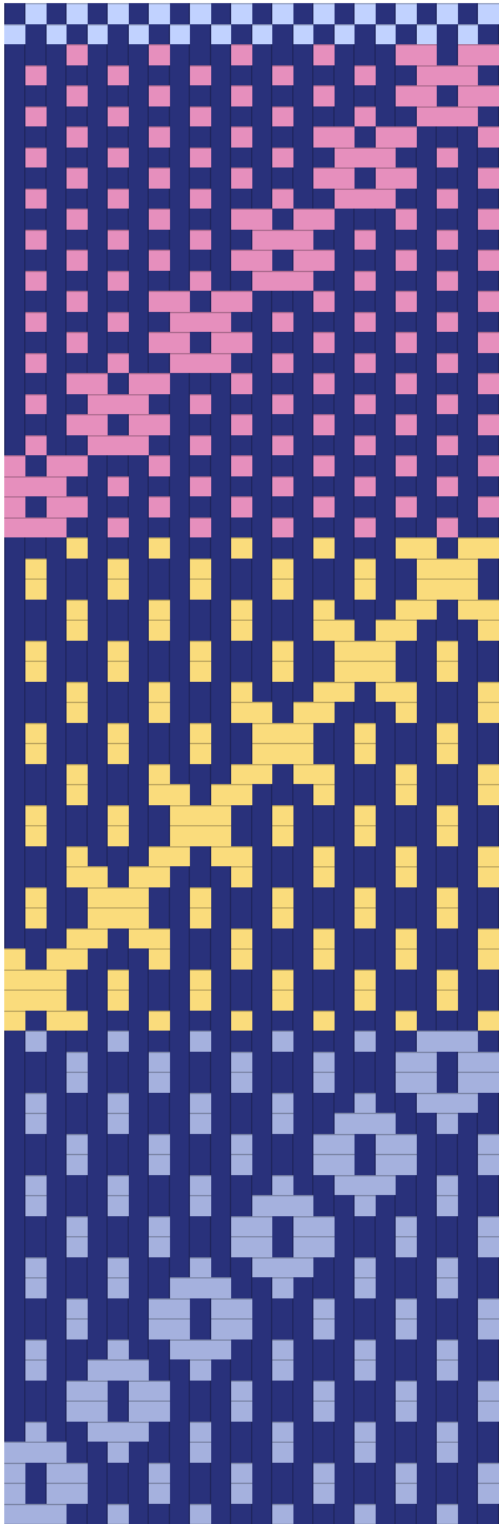
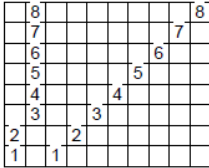
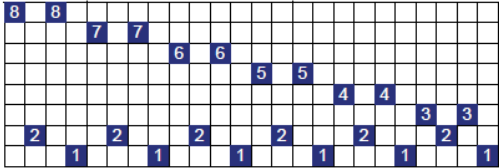
The next *sinking shed* drawdown shows all the three treadling, six blocks, threaded and treadled singly.

This requires fourteen treadles, not available on most eight shaft looms.

The drawdown that follows, also *sinking shed*, reduces the number of treadles to ten with multiple treadling (two feet).



10 Summer and Winter



11 Summer and Winter

With blocks that can be repeated and treadled together plus several treadling options, summer and winter is a great structure for designing.

References

Black, Mary E. *New Key to Weaving*. New York, NY: MacMillan Publishing Co., Inc., 1945, 1975 printing.

Emery, Irene. *The Primary Structure of Fabrics*. Washington, D.C.: The Textile Museum, 1980.

Sullivan, Donna. *Summer & Winter A Weave for All Seasons*. Loveland, CO: Interweave Press, 1991.

DRAFT