

## Overshot and Monk's Belt

### 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

**Supplementary Weft Float Weave:** the supplementary element is an additional weft which forms solid blocks of weft that are not needed for the integrity of the cloth. Overshot is based on a straight twill for four blocks on four shafts. Monk's Belts has two blocks on four shafts, using the two opposite blocks of overshot.

### Overshot on Four Shafts

### Fabric Characteristics

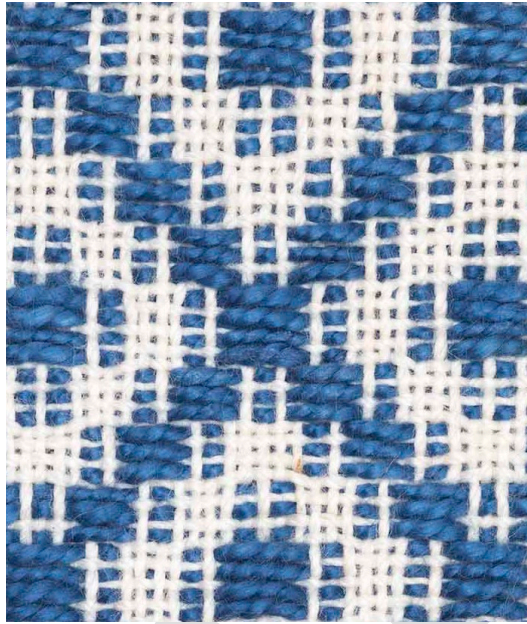
Below is an overshot fabric showing the classical three areas: the solid weft blocks; the half-tones surrounding the weft blocks; and the plain weave blocks. Where there is a weft block on one side of the fabric, it is plain weave on the other.

This particular fabric is woven in what is called rose fashion.



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The fabric below was woven in star fashion. The rest of the characteristics are the same.



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.

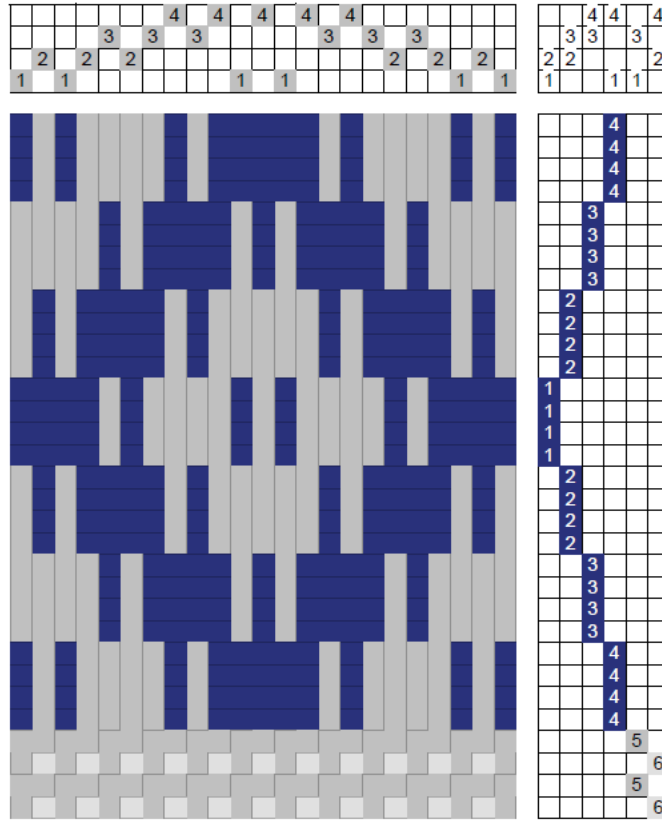
### **Drawdown**

The *sinking shed* drawdown that follows shows how overshot is derived from a straight twill. Shafts 1 and 2 are repeated and become block A. Each block can be as long as desired. Adjacent blocks share a shaft. Block B is 2, 3, with the first thread on shaft 2 shared with block A.

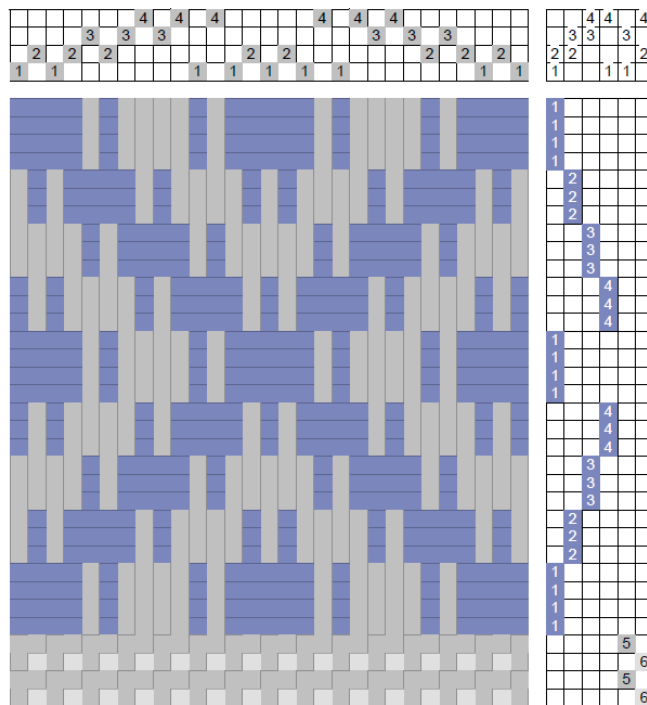
To form the rose, the straight twill is pivoted on block D, with the twill becoming a pointed threading. Block D at the turning point has an odd number of threads.

Each block is treadled using its threading shafts: block A is threaded to cover threads on shafts 1 and 2 and form the block. Not shown in the drawdown is that each pattern pick is followed by a tabby pick.

The tabbies are all even vs. all odd. At the bottom of the drawdown the treadling is shown forming the plain weave.

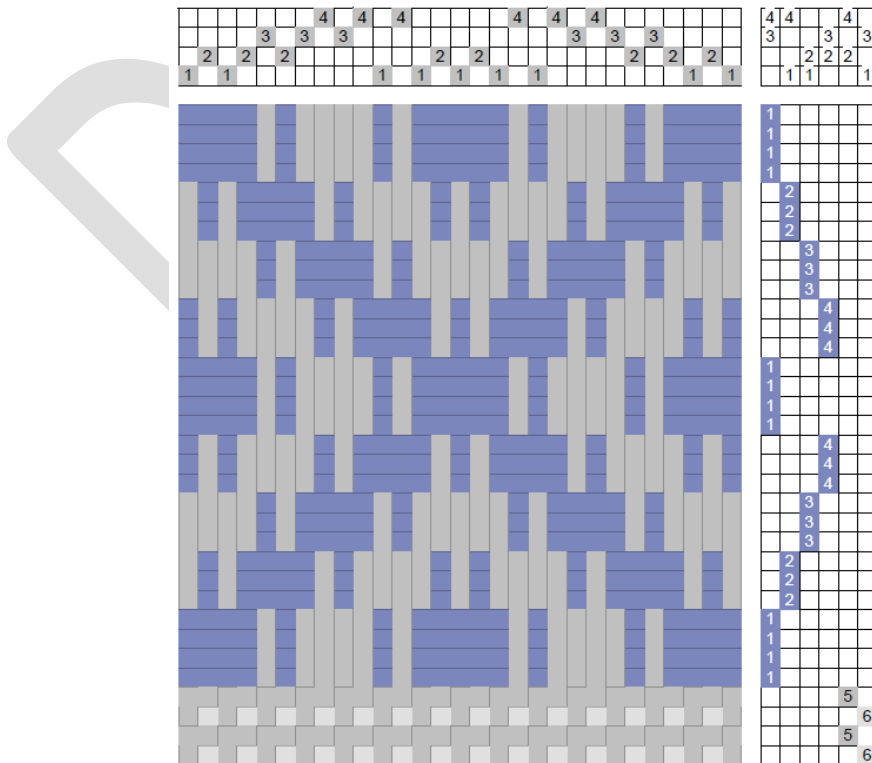
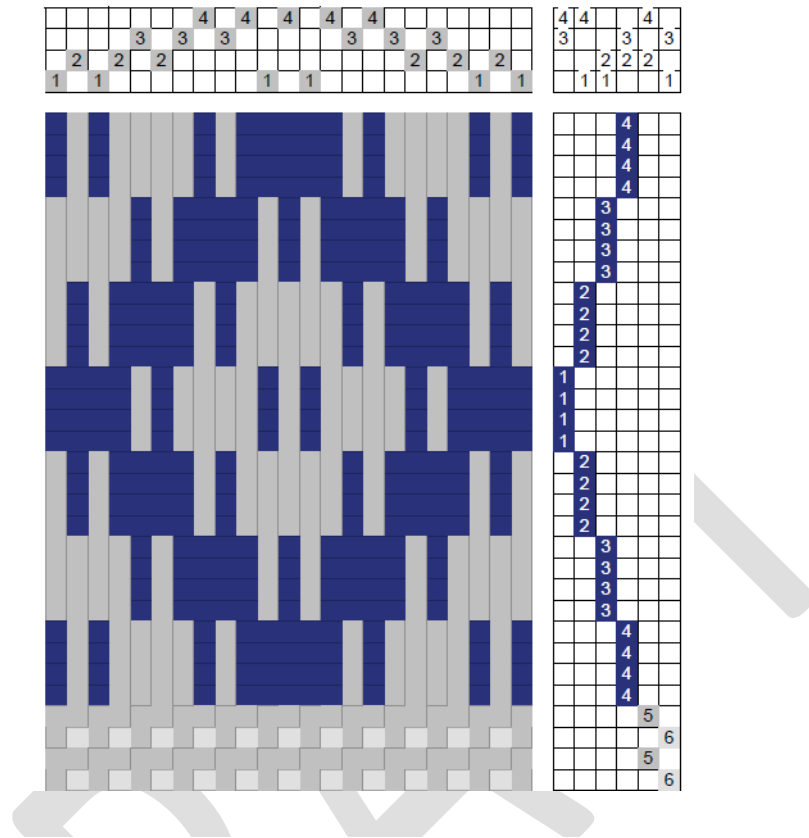


Below is the *sinking shed* drawdown for the start fashion. The other characteristics are the same.



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Below are the two drawdowns for a *rising shed* loom, rose fashion followed by star.



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## **Function**

Overshot has a long history in the weaving of coverlets. Some of the designs that have been developed over the years have been given names. Sometimes the same design is called differently in different parts of the country, and the same name applies to different designs in different regions. Several publications provide old overshot patterns. *A Handweaver's Pattern Book* by Marguerite Porter Davison has many.

## **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 Block**

Blocks are of variable width. They generally have an even number of threads, but threads are shared with adjacent blocks. Blocks at the pivot point can have an odd number of threads.

The weft float is the width of the block, including the shared thread. The float is delimited by the non-shared pattern shaft of the adjacent block.

Two adjacent blocks cannot be combined in the treadling as the two blocks would be covered by one continuous float.

## **Number of Blocks Available**

Each block requires two shafts, but the shafts are shared; thus, there are four blocks on four shafts and each additional two shafts provide two blocks. There are eight blocks on eight shafts.

Four blocks on four shafts is the exception with a variety of structures. This has made overshot very popular resulting in many motifs and designs, some of which have specific names.

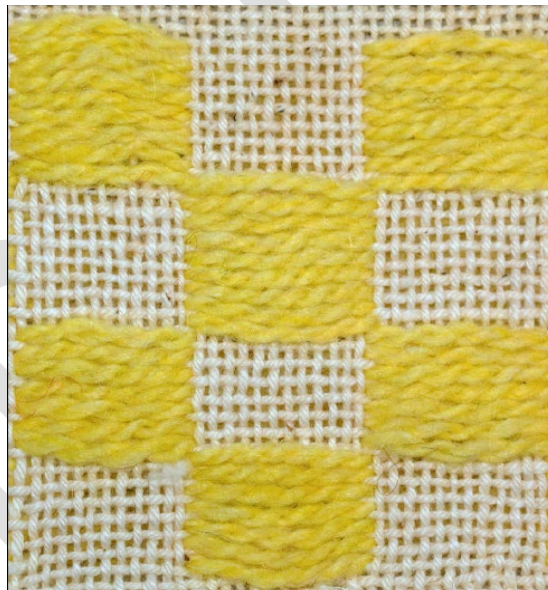
## Monk's Belt on Four Shafts

### Fabric Characteristics

A fabric sample of monk's belt is below. Compared with overshot, it has the same solid blocks of weft floats and blocks of plain weave. The other side of the fabric is the opposite: weft blocks on one side are plain weave on the other and *vice versa*.

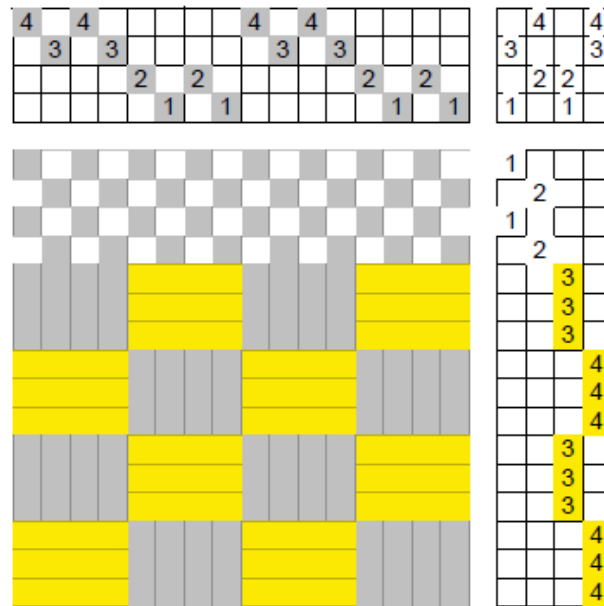
What is different from overshot is the missing half-tones. Since those are a characteristic of overshot, it is easy to see why we would want to consider monk's belt a separate structure.

However, this difference blurs with more shaft as described in the section below.



### Drawdown

The sinking shed drawdown below shows why there are no half-tones in monk's belt. There are two blocks on four shafts with no shared shafts.



The tabbies are as in overshoot, odd vs. even. To cover each block with weft floats, all the shafts of the block are lowered; since there aren't any in common with the next block, there are no half tones.

The treadling proceeds with picks alternating between the two tabbies and the pattern pick. This is not shown in the drawdown to make the blocks clearer.

The length of the float is the width of the block, and it ends when the adjacent block starts.

All other parameters are similar to overshoot, but because there are two blocks on four shafts, the design possibilities are limited, compared to overshoot.

Two shafts are needed for each block. Thus, there are two blocks on four shafts and four on eight shafts.

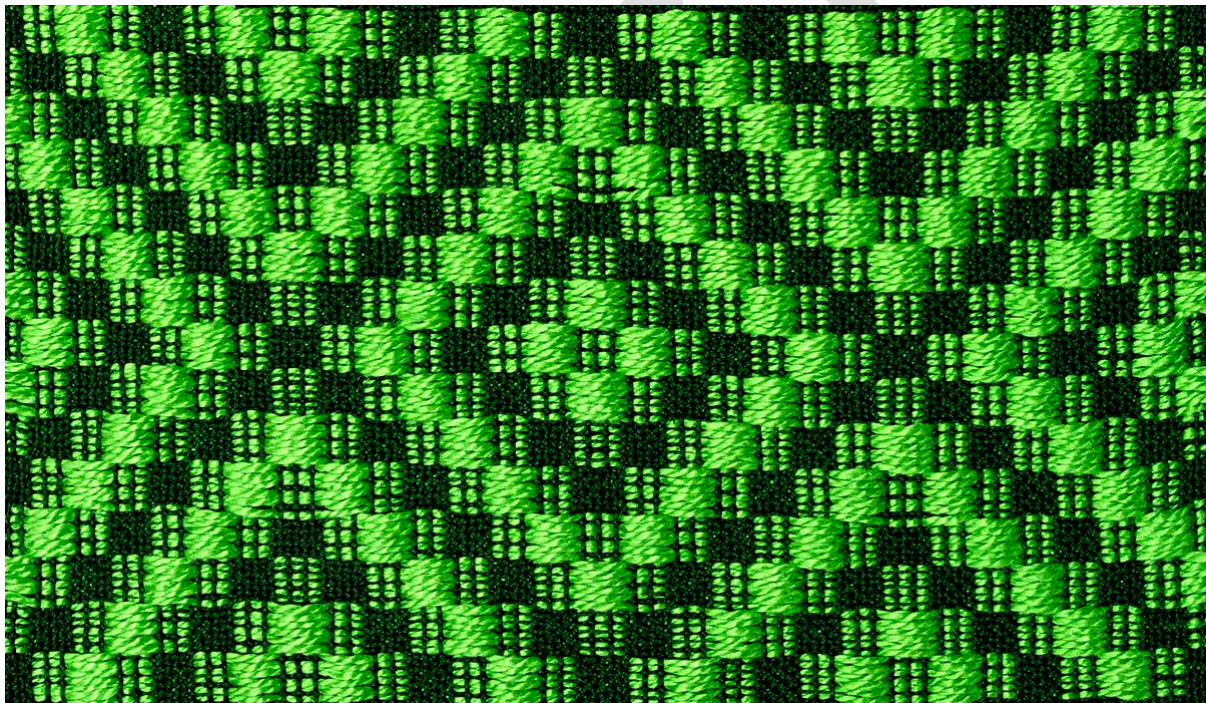
## Overshot of Eight Shafts

### Fabric Characteristics

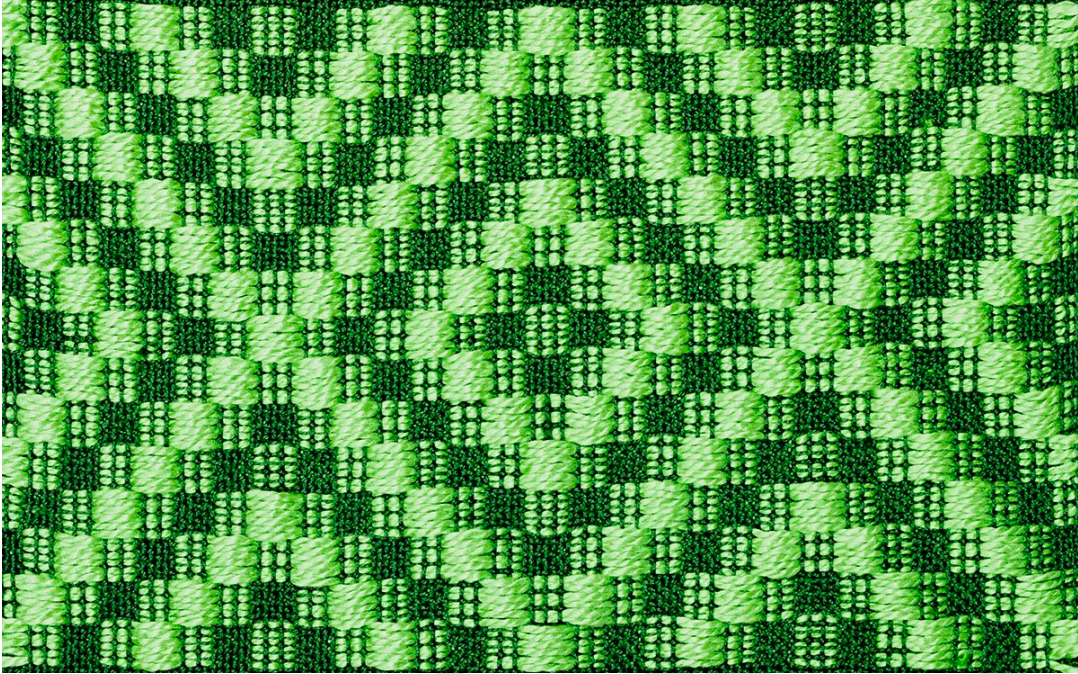
There are eight blocks on eight shafts in overshot. To avoid long floats, we have to organize the blocks and the background in some way (see drawdown).

Here are the front and back of three possible strategies to avoid long floats.

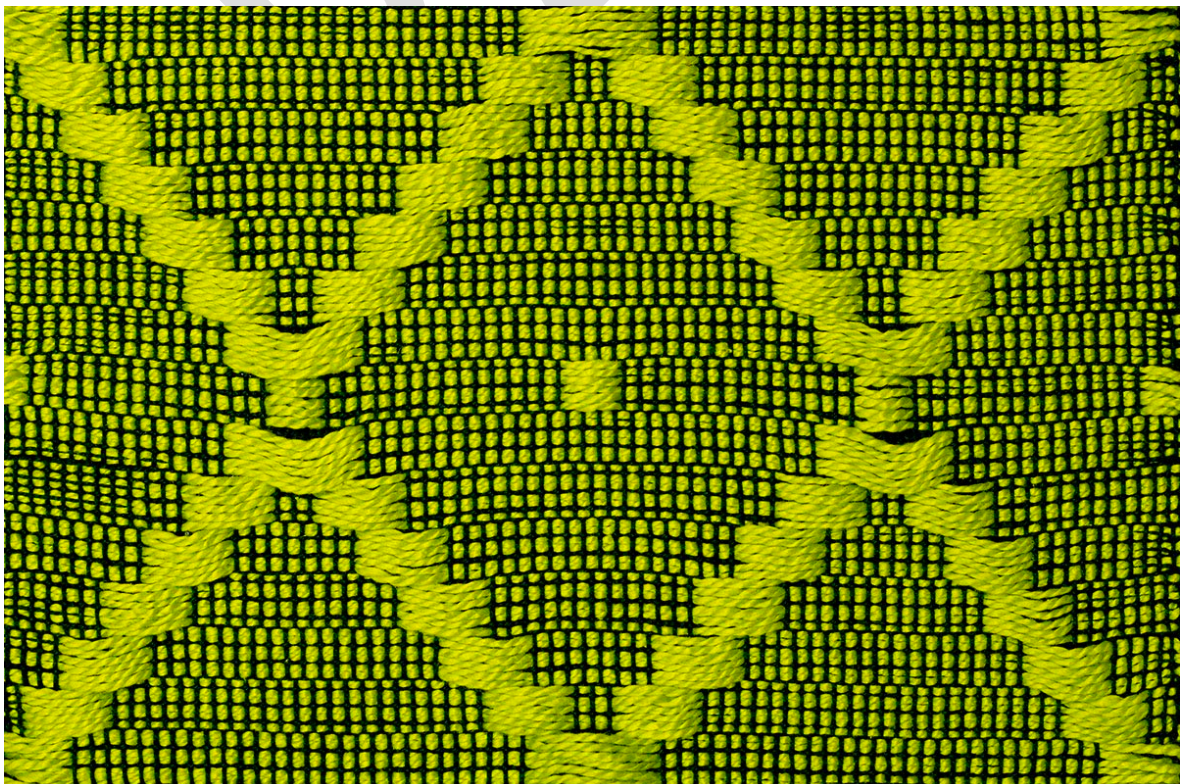
In the fabric sample that follows, the blocks have been combined.



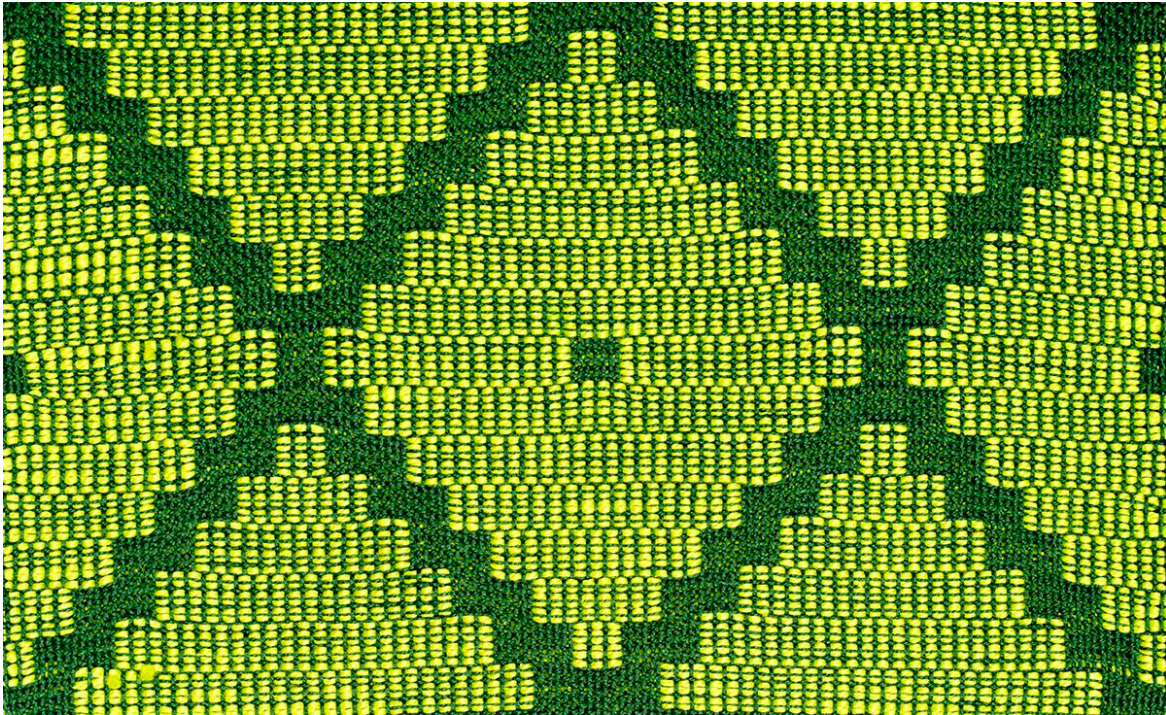




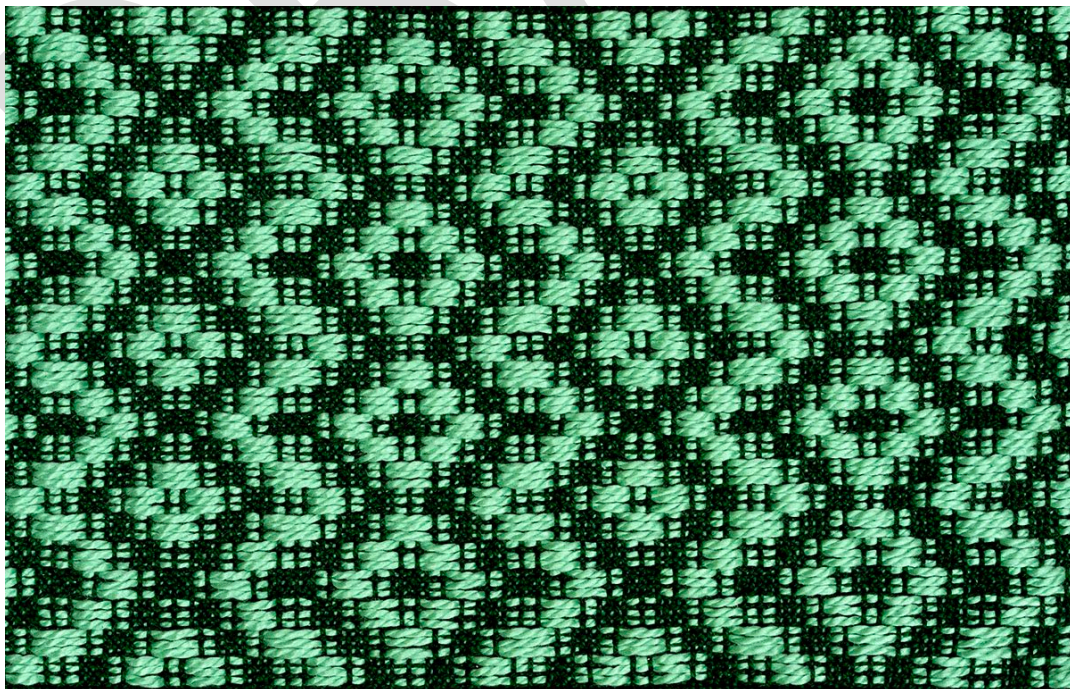
Another way to avoid long floats is to have a block motif with floats and the rest of the fabric as a background of half tones, as shown in the fabric sample below, front and back.

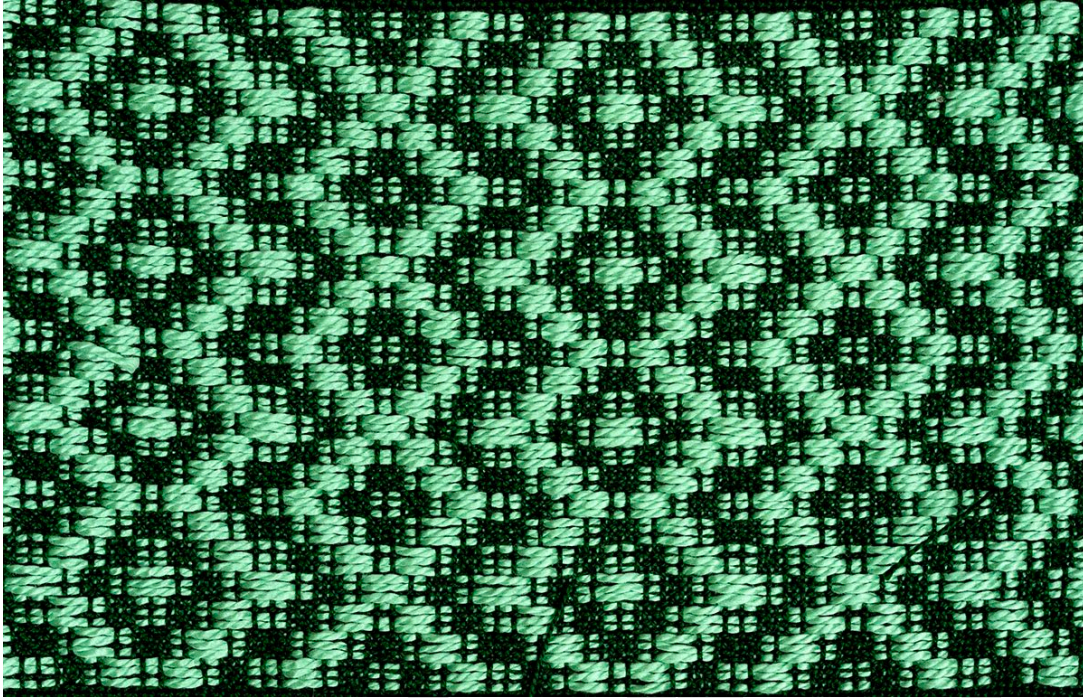


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A third way is to choose two four-shaft motifs, one threaded in the front four shafts, the other in the back four shafts. The treadling of each is then combined. The sample below, front and back, is an example.

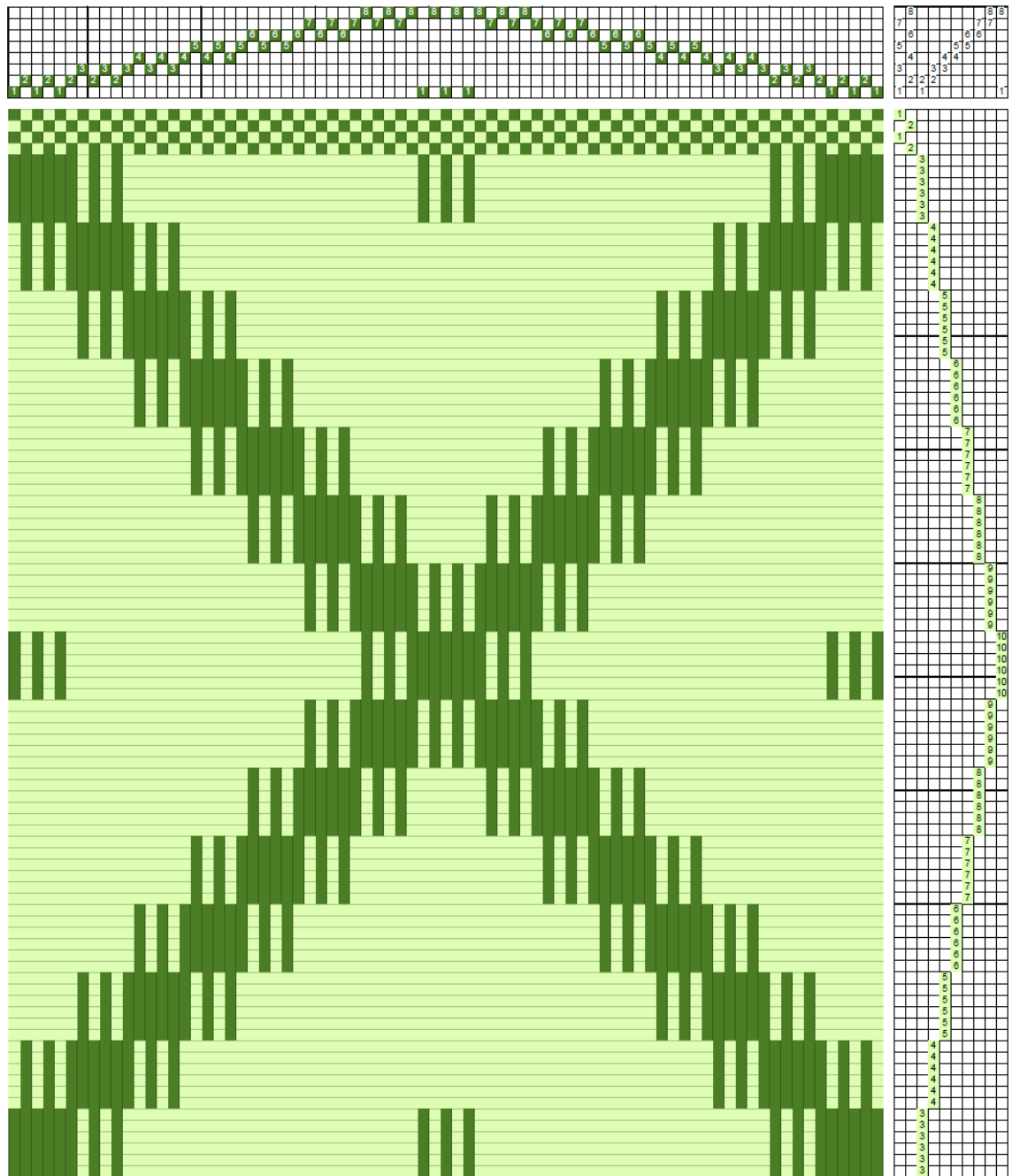




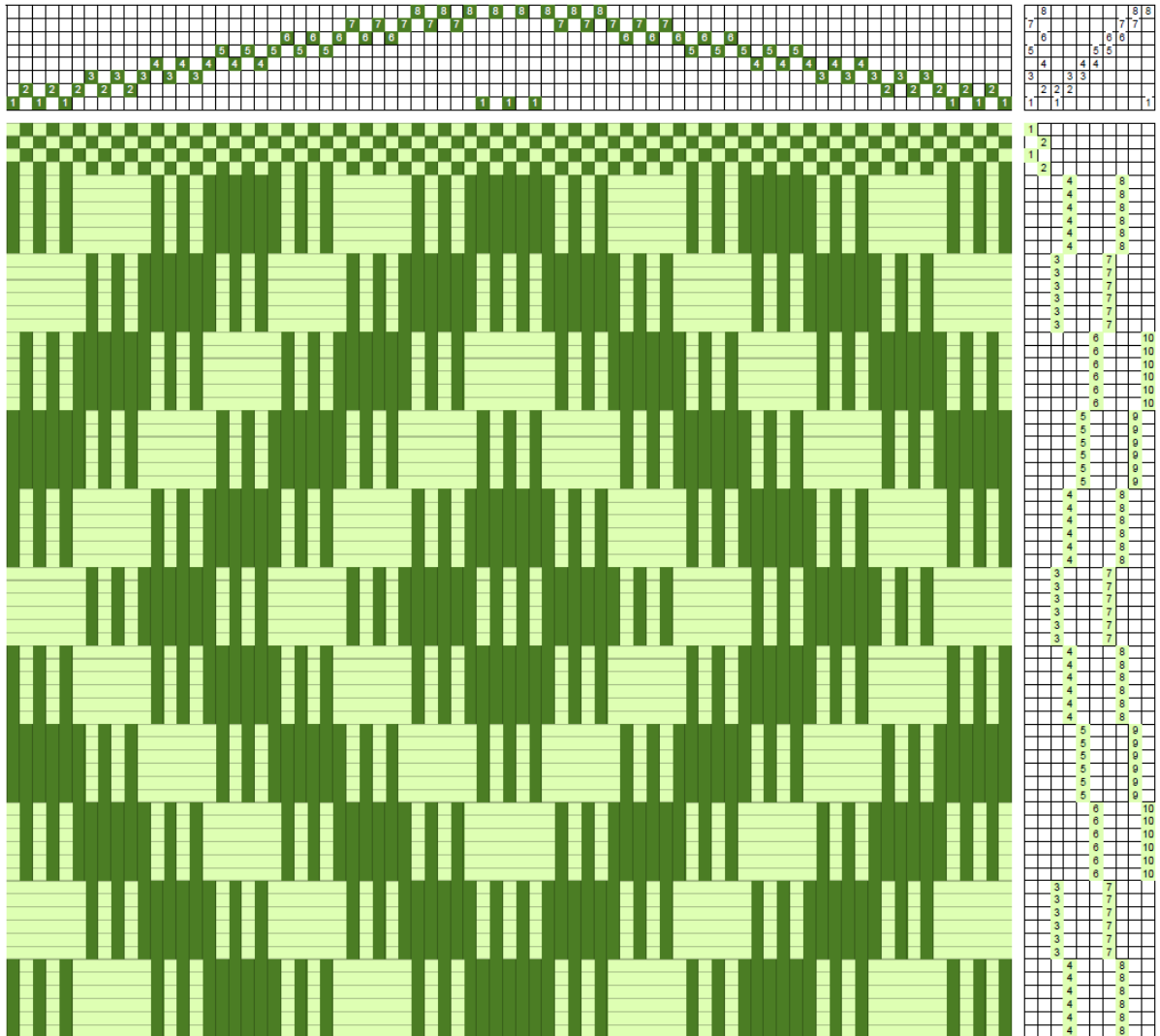
In the last fabric different motifs appear on the two sides of the cloth, it's hard to say which is the front and which is the back.

### **Drawdown**

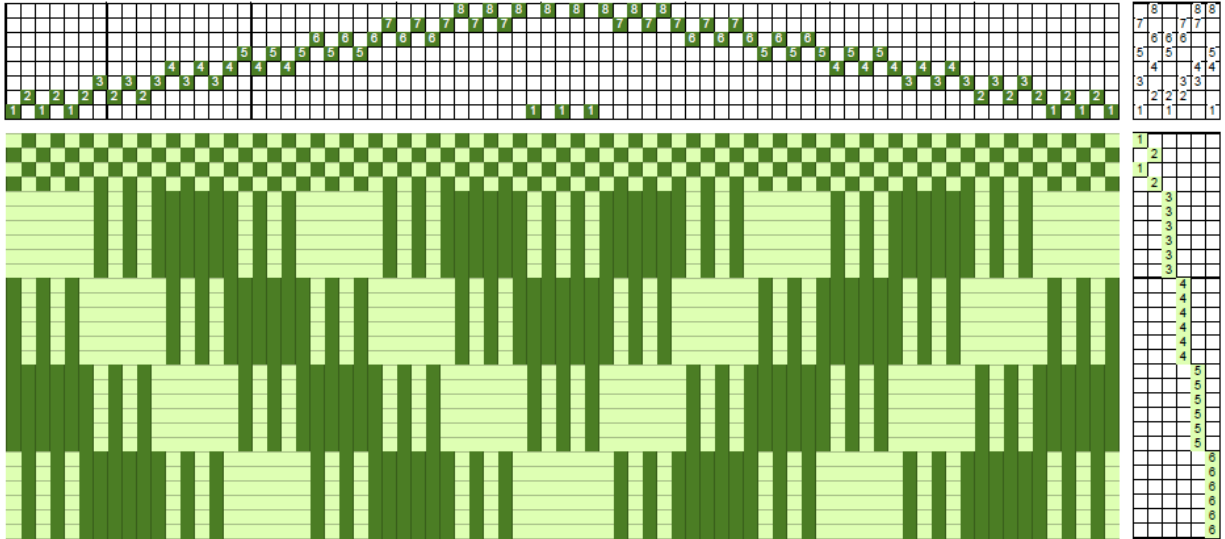
The *rising shed* drawdown below shows the long floats in the back of a fabric which was designed using the same approach as on four shafts. This is the reason why the strategies to avoid these blocks were developed in the fabric samples just shown.



The next *sinking shed* drawdown was used to weave the fabric that avoids floats by combining their treadling. The ten treadles use multiple treadling (two feet) which clearly show which blocks were woven together.

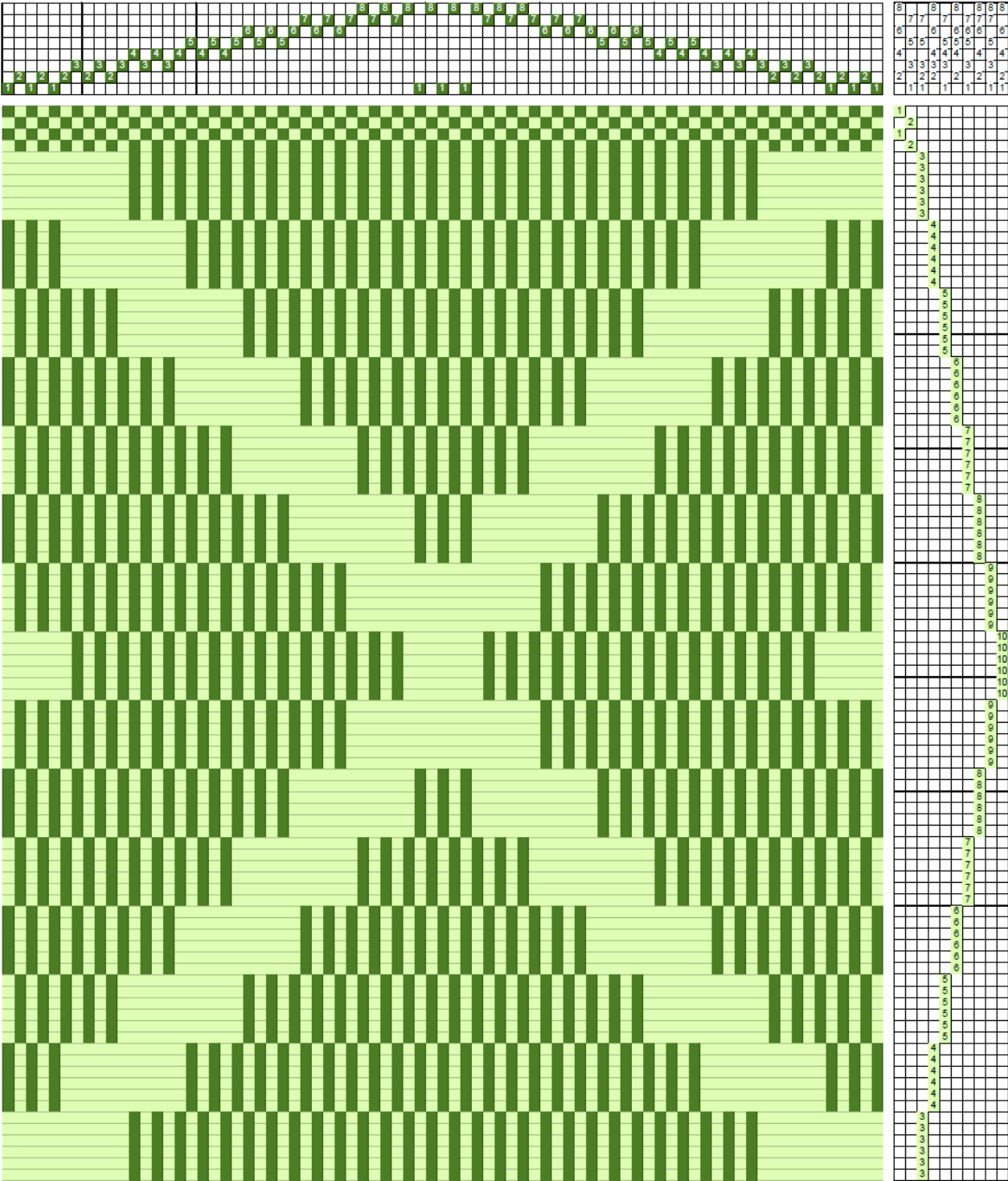


The blocks can also be combined in the tie-up making it easier to weave. This is next, showing a portion of the *sinking shed* drawdown with the treading for all the combined blocks.



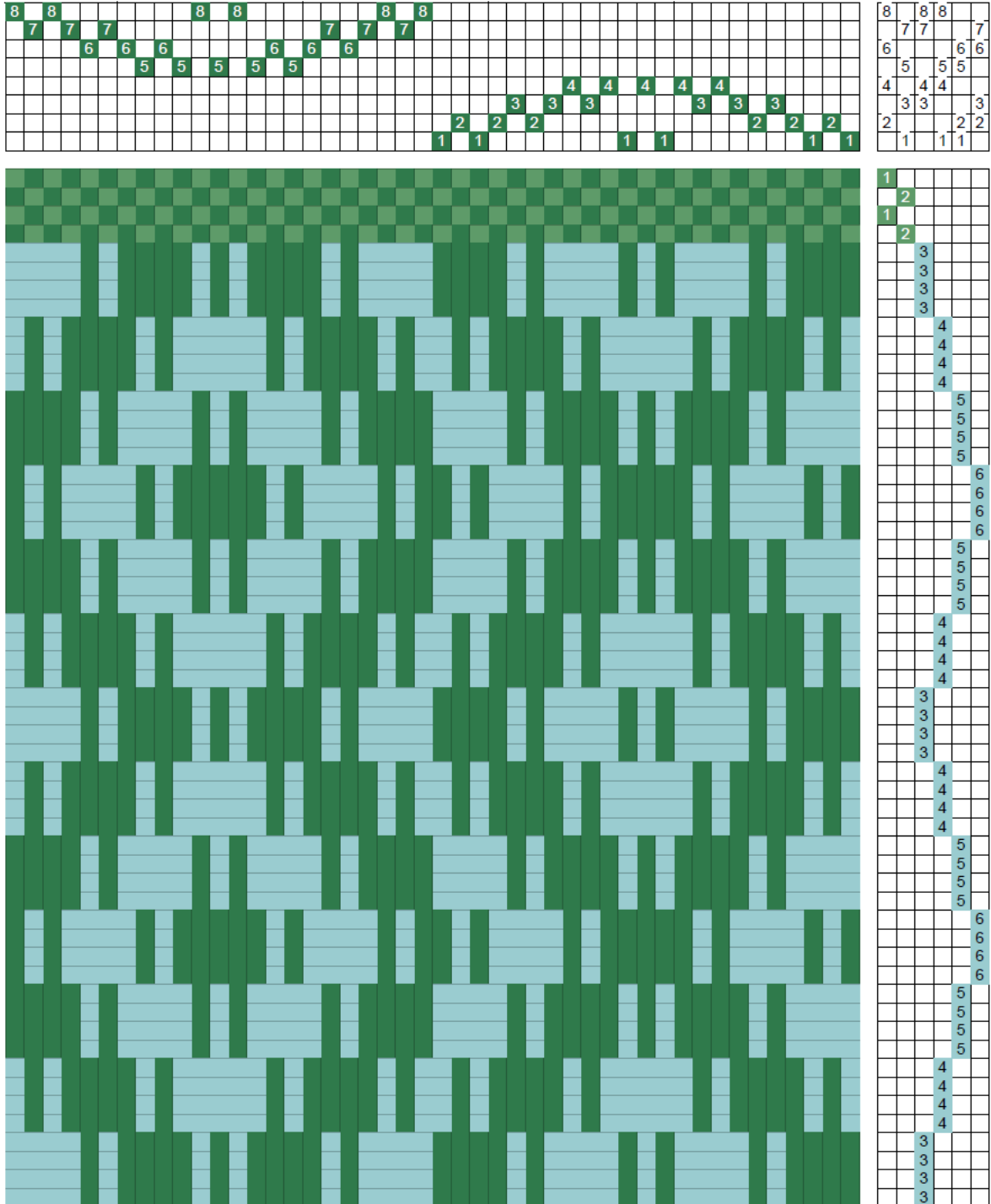
The following *sinking shed* drawdown is for the fabric that has blocks and half-tones. In the drawdown the weft floats are very long; in the fabric shown previously, the weft was sagging in places, especially in the middle where three blocks were joined.

DRAFT



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The next *sinking shed* drawdown uses the strategy of combining two motifs in the threading and then combining them in the treadling. It was used to weave the third sample in the section.



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The two motifs in this sample have mirror images in the front and back shafts. The treadling maintains the traditional overshot structure of floats, plain weave and half-tones. The treadling is a combined straight twill for the two sets of shafts.

Using the above treadling directions for all three samples in a *rising shed* loom will produce the other side of the fabric.

To weave the fabrics as shown, change the tie ups to tie what is untied and untie what is tied.

The other characteristics of overshot on eight shafts are not different than those on four shafts.

The float of a block ends with the pattern shaft of the adjacent block. Combining two adjacent blocks in the treadling produces floats over both, as was shown in the second sample.

The tabbies are all odd vs. all even, as shown in all the drawdowns.

The blocks are woven by alternating the two tabbies with the pattern pick. The length of the block can be woven as long as desired.

## **Monk's Belt on Eight Shafts**

### **Fabric Characteristics**

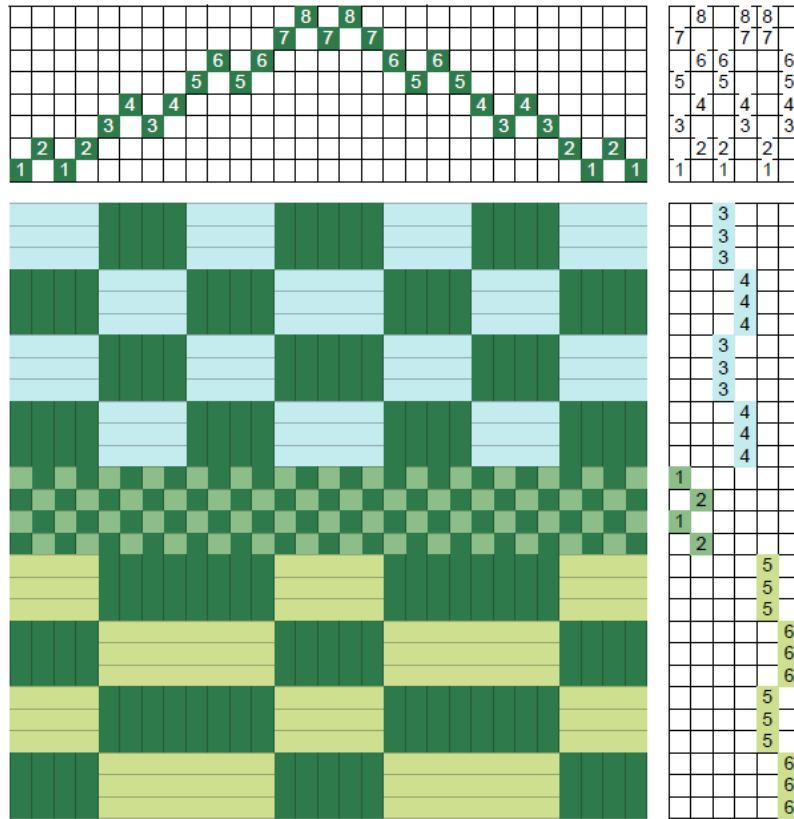
Monk's Belt on eight shafts has the same float problem as overshot. Simply combining blocks doesn't offer much of a design option. In the fabric sample below, blocks were treadled with shafts from other blocks to limit the float. This fabric has half tones.



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the last four shafts are treadled in parallel to those on the first four, although blocks could be threaded with different numbers of threads.

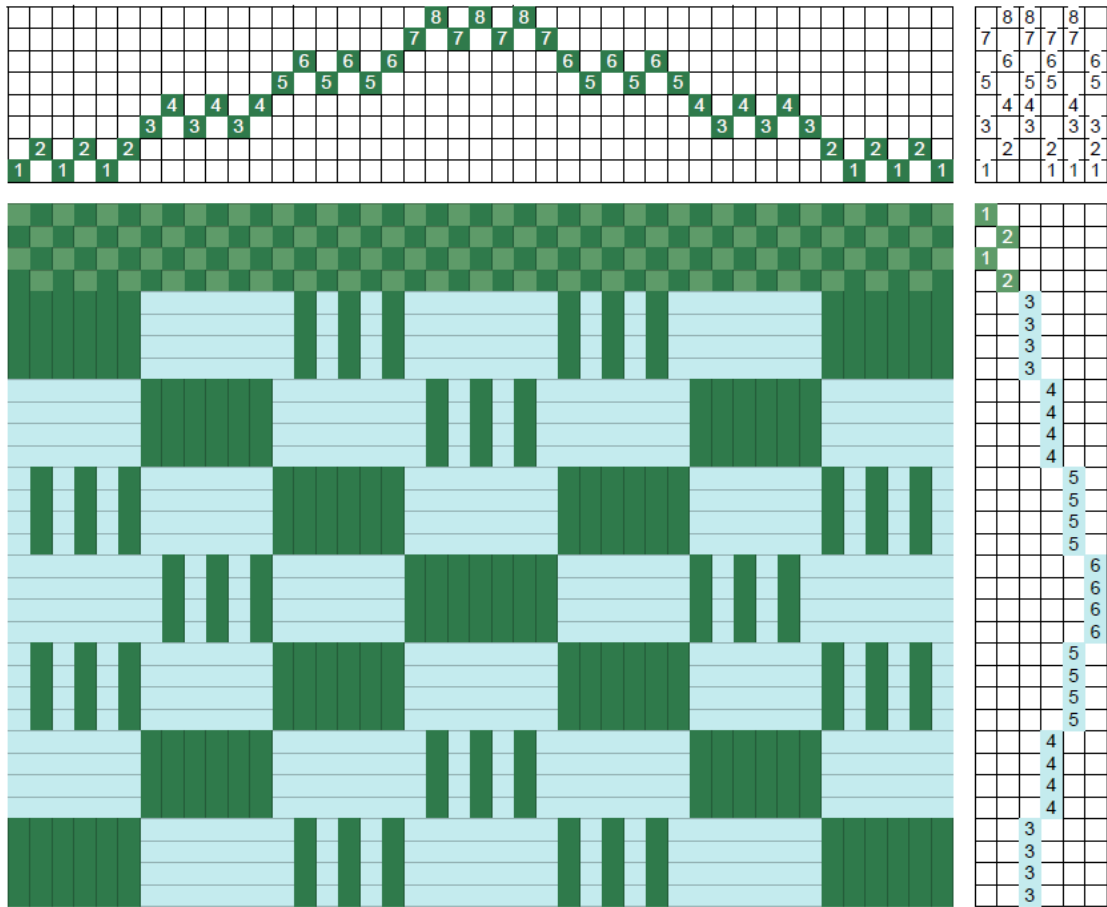


In the second motif opposite blocks are combined in different ways, but this results in long floats.

The *sinking shed* drawdown that follows is the one used to weave the fabric in the first part of this section.

As was clear in the fabric photo, blocks are treadled with shafts from other blocks to limit the float. This results in half-tones.

The difference between the half tones in overshot and those in monk's belt is that in overshot they are always adjacent to the block with floats because of the shared shafts. With eight shafts monk's belt the half tones where floats need to be anchored.



As in the four-shaft version, tabbies are all odd vs. all even. Pattern picks alternate with the tabbies to square the block or as long as desired.

The weft float of a block ends with the first pattern shaft of the adjacent block.

## References

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

Davison, Marguerite Porter *A Handweaver's Pattern Book*. Swarthmore, PA: Marguerite P. Davison, 1994.

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

Sullivan, Donna Lee. *Weaving Overshot. Redesigning the Tradition*. Loveland, CO: Interweave Press, 1996.