

Double, Two Paired Ties, 1:1 Ratio, Three-Thread Twill Pattern Shafts and Ties, “Boulevard”

Emery Classification

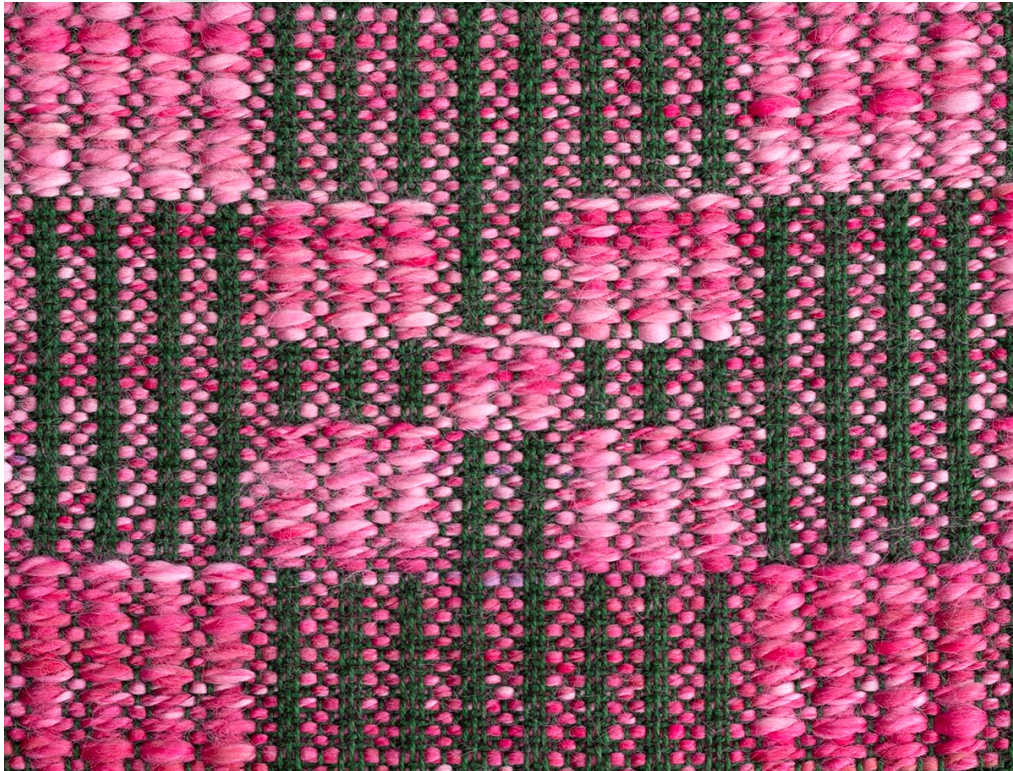
Weave Compounded by Adding Sets of Elements, Supplementary: one warp, two wefts, one of which is *not* needed for the integrity of the cloth.

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 Double, Two Paired Ties, 1:1 Ratio, Three-Thread Twill Pattern Shafts and Ties. The classification is explained below with the drawdown. The structure was named “Boulevard” by Dr. Bateman, a retired scientist who developed inventive weaving structures and gave them whimsical names.

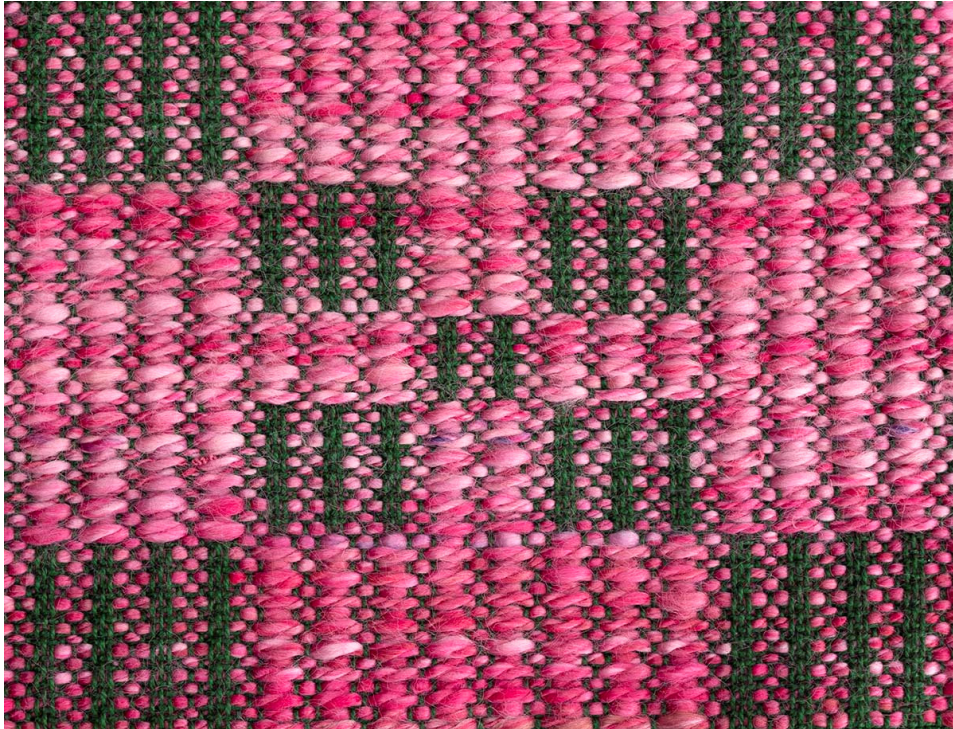
Fabric Characteristics

Below is one side of the fabric.



1 “Boulevard”

Here is the reverse side.



The fabric is unusual in that the weft floats of each block are solid, alternating floats over three threads and five threads. Repeated blocks are separated by columns of plain weave formed with the ground warp and the pattern weft.

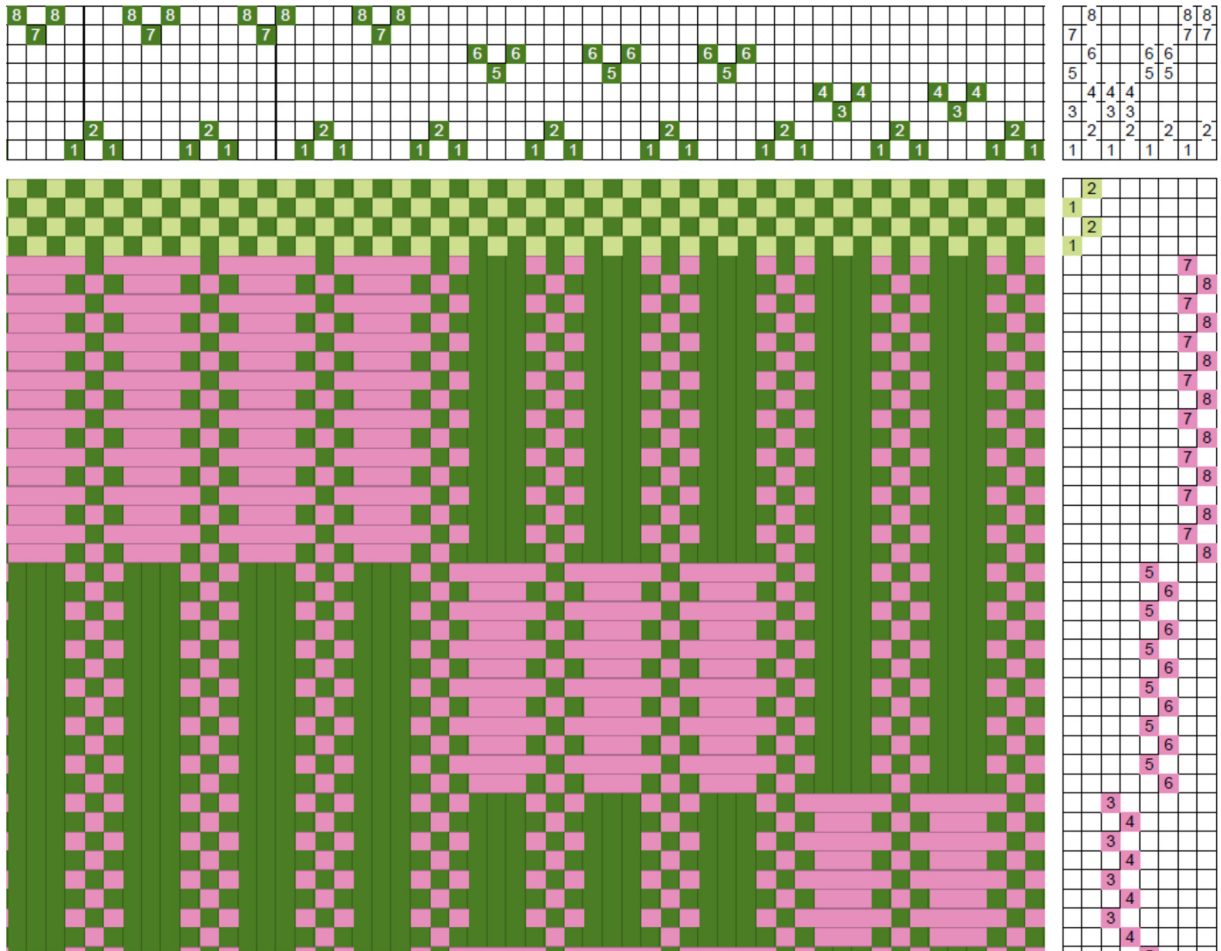
The background is formed by plain weave ridges formed by the warp and the ground weft. Each ridge is three threads. Repeated blocks are separated by the same plain weave as the weft floats, ground warp with pattern weft.

What is also unusual is that both sides of the fabric are the same as a result of the twill arrangement of both the ties and the pattern shafts. A block that has weft floats in ridges on one side of the fabric has warp ridges on the other 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: double, two paired ties, 1:1 ratio, three-thread twill pattern for shafts and ties. There are three blocks on eight shafts. In this particular example, block A is repeated twice, block B three times and block C four times.



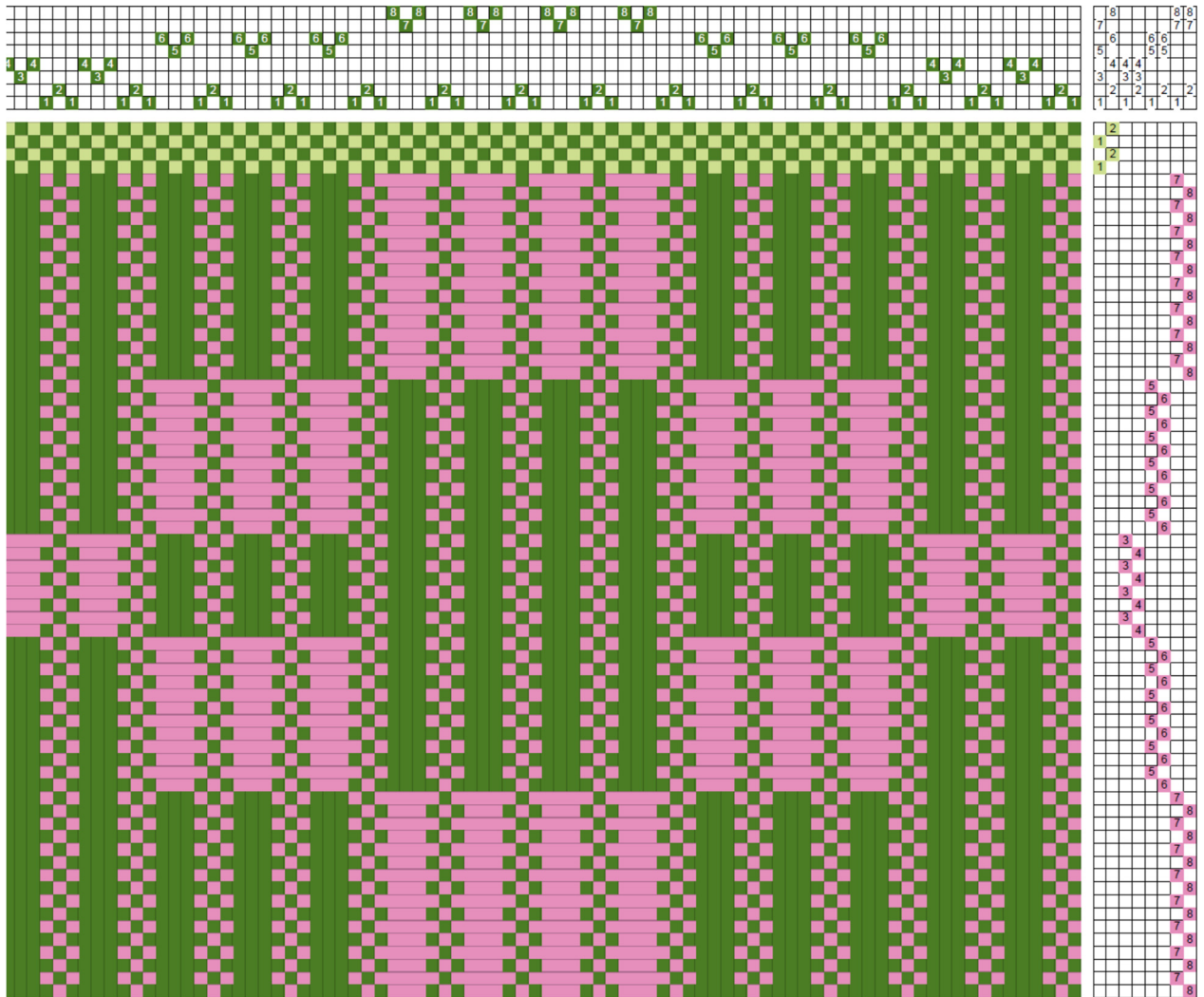
Double refers to two shaft per block. There are *two* ties, shafts 1 and 2. The ties are *paired* because they are adjacent to each other. The ratio is 1:1 because there are three *pattern threads* (*not* pattern shafts) and three ties per block. The tie-down threads are organized in a pointed twill: 1, 2, 1. The pattern shafts are organized in reverse pointed twill: 4, 3, 4 for block A.

The tabbies odd vs. all even.

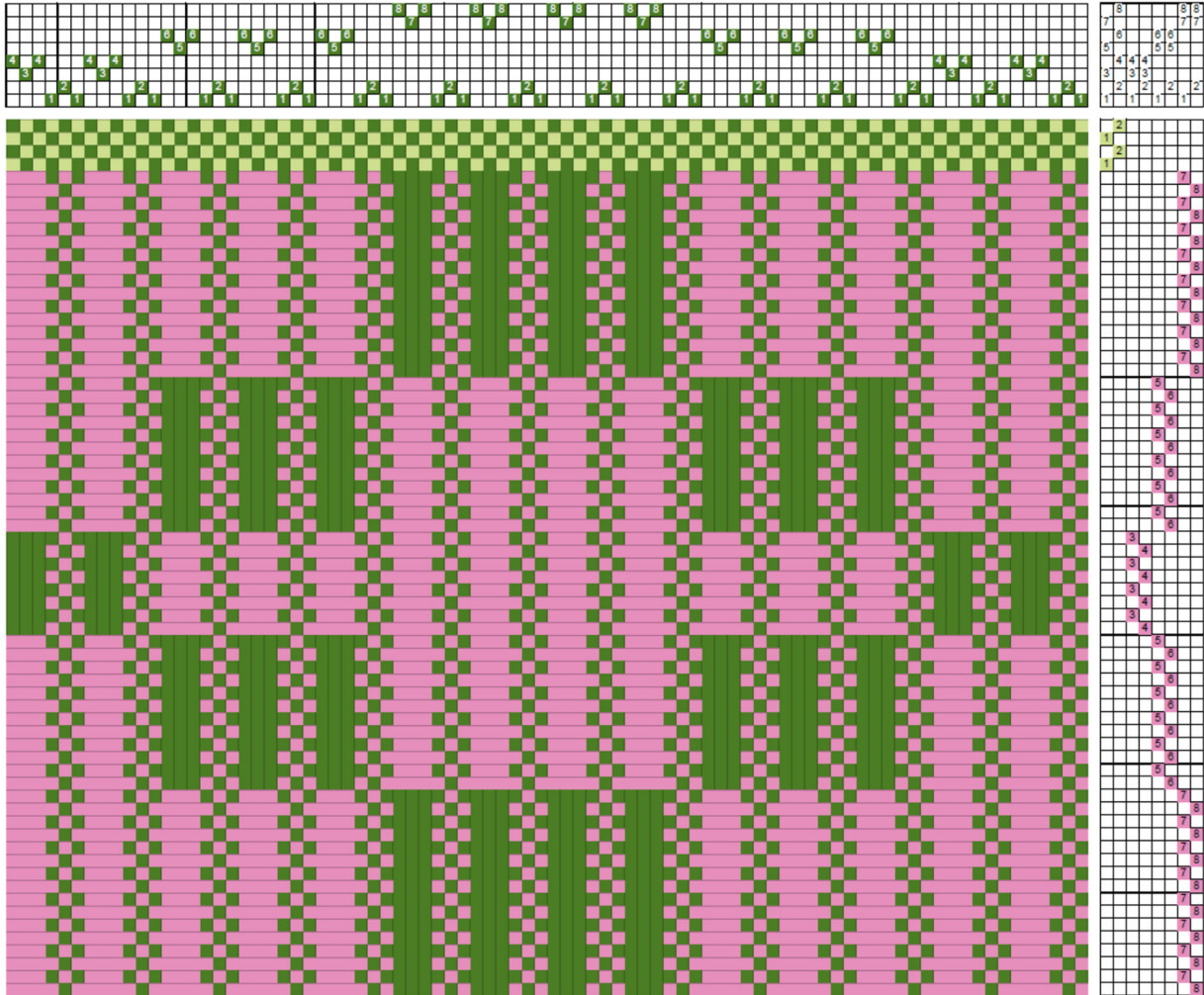
Not shown in the drawdown is that *each pattern pick* used in treadling order *is followed by one of the tabbies*; they intersect with the warp to form the ground cloth.

The block treadling is the method called “singles” in summer and winter. The first pick is a tabby with two pattern shaft. The second pick is the other tabby with the two pattern wefts. The two picks are repeated to square the blocks. In the case of repeated blocks, as in the sample here, the two-pick treadling is repeated to square the motif.

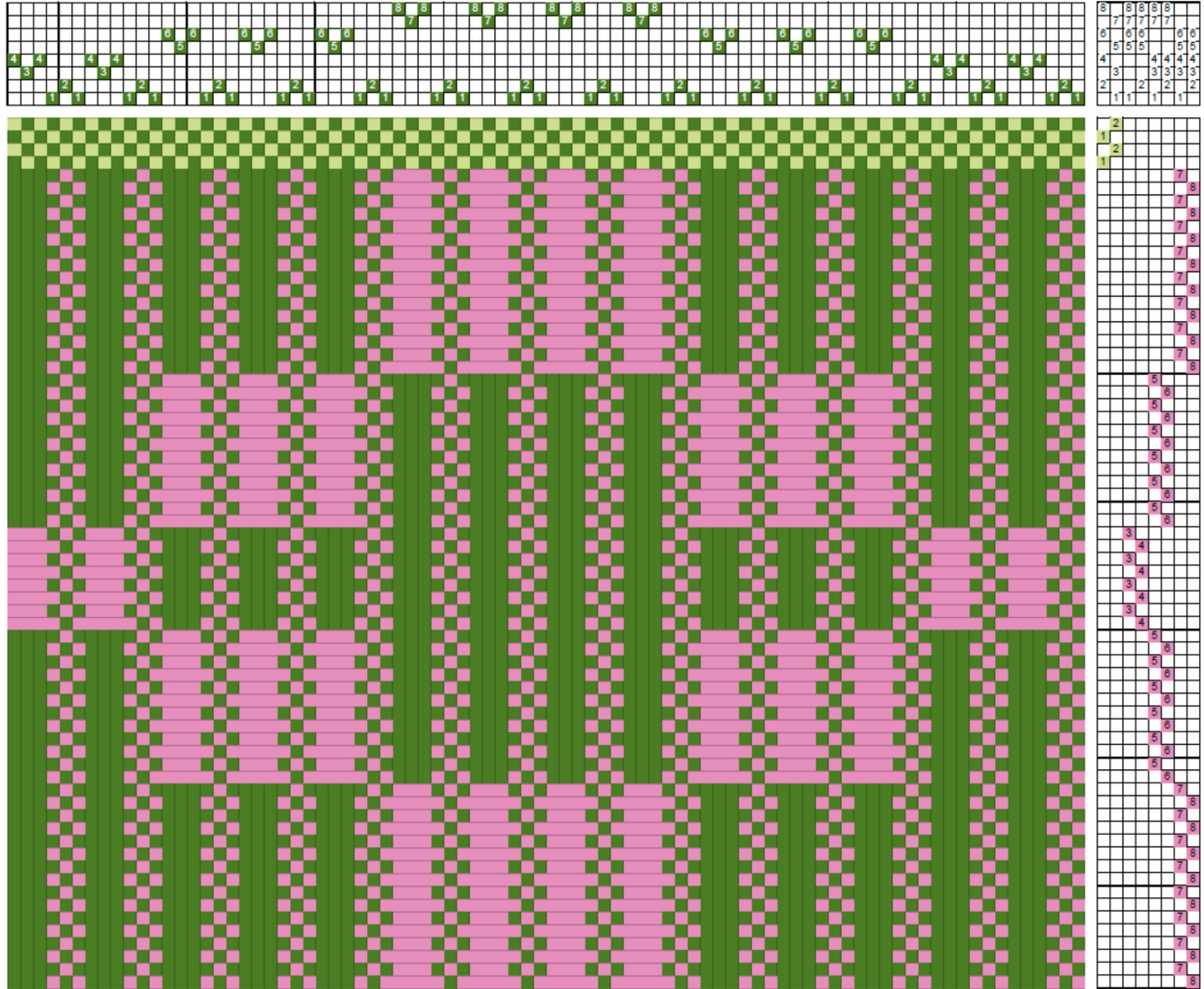
The full drawdown for the sample is below (*sinking shed*).



The *rising shed* drawdown that follows shows the other side of the sample.



To weave front side of the fabric (as seen on the loom) on a rising shed loom, the following *sinking shed* drawdown can be used.



Function

This structure produces a spongy fabric from the supplementary weft in blocks; it is ideal for household textiles like blankets and pillows.

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

The width of the block of this example is six thread, three tie threads and three pattern threads. Repeating blocks in the threading makes interesting motifs. The width of the floats alternates between three and five threads.

Number of Blocks Available

Two shafts are used for the ties and are shared. Each block uses two shafts, resulting in three blocks on eight shafts. Each additional block needs two additional shafts.

Treadling Variations

The treadling here is “singles” in parallel to summer and winter. The ‘pair’ options of summer and winter can be used.

References

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