Marcy Petrini © 2024, photos by Terry Dwyer

Single, Four Unpaired Ties, 1:1 Ratio, “Quigley”

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

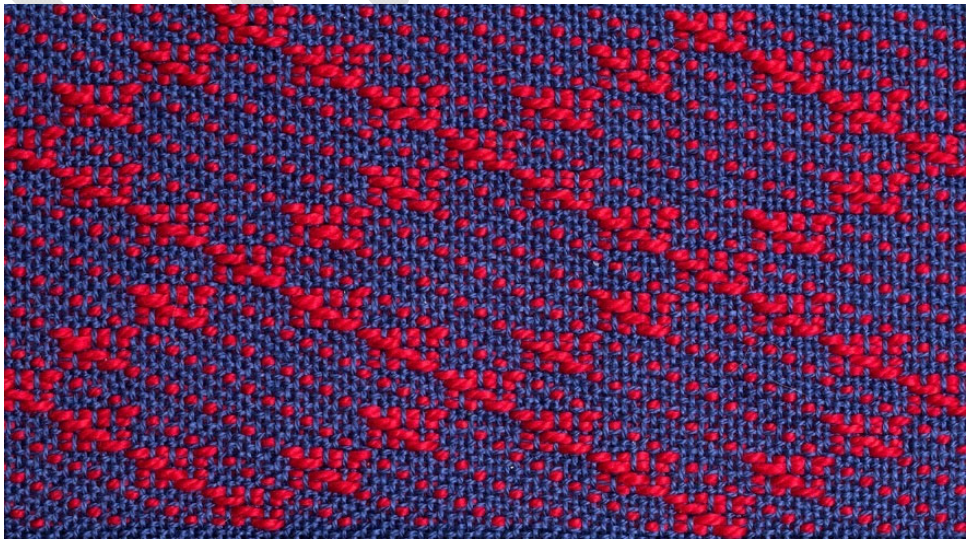
Tied Unit Weave; the supplementary element is an ***additional weft*** which forms blocks of patterning. The structure is a single, four unpaired ties, 1:1 Ratio, by the tied weave nomenclature, explained below, called “Quigley” for its originator.

Fabric Characteristics

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.

In this weave, as is usually the case with tied unit weaves, the blocks are not solid but have patterning. The background is also patterned, caused by the twill organization of the ties.

The patterning can be seen from the fabric sample, front and back.



1 Quigley

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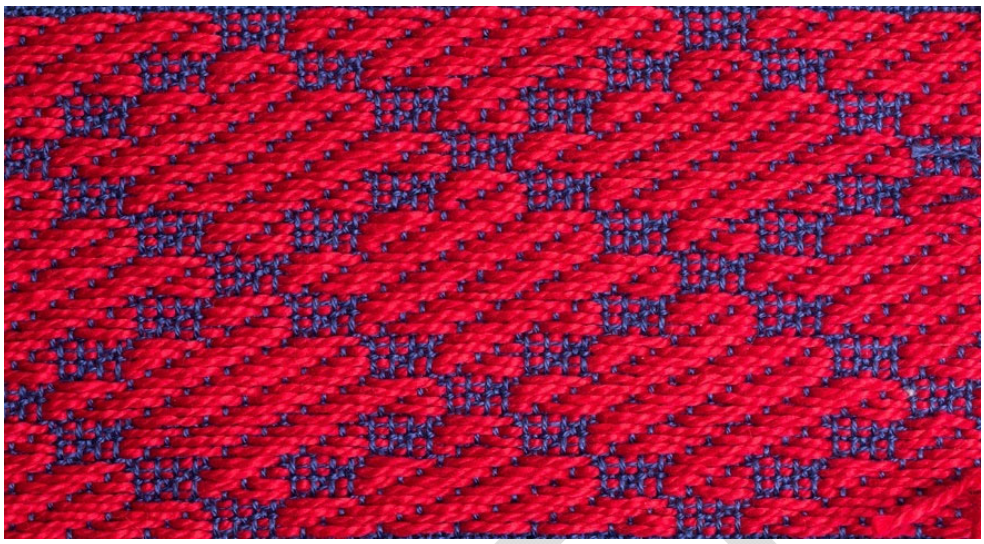

The fabric is similar to Half Satin (see entry). It is named for Viola Joyce Quigley who designed it. She founded the Memphis Weavers Guild in the forties, according to a Memphis guild member.

Drawdown

The ***sinking shed drawdown*** below explains the nomenclature of the structure: single, four unpaired ties, 1:1 ratio. The example shows four blocks on eight shafts.

Single refers to the ***single*** shaft per block. There are ***four*** ties, shafts 1 through 4. The ties are ***unpaired*** because they are separated by a pattern shaft. The ratio is 1:1 because there are four ***pattern threads*** (***not*** pattern shafts) and four ties per block.

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 tabbies are all four ties *vs.* all four pattern shafts.

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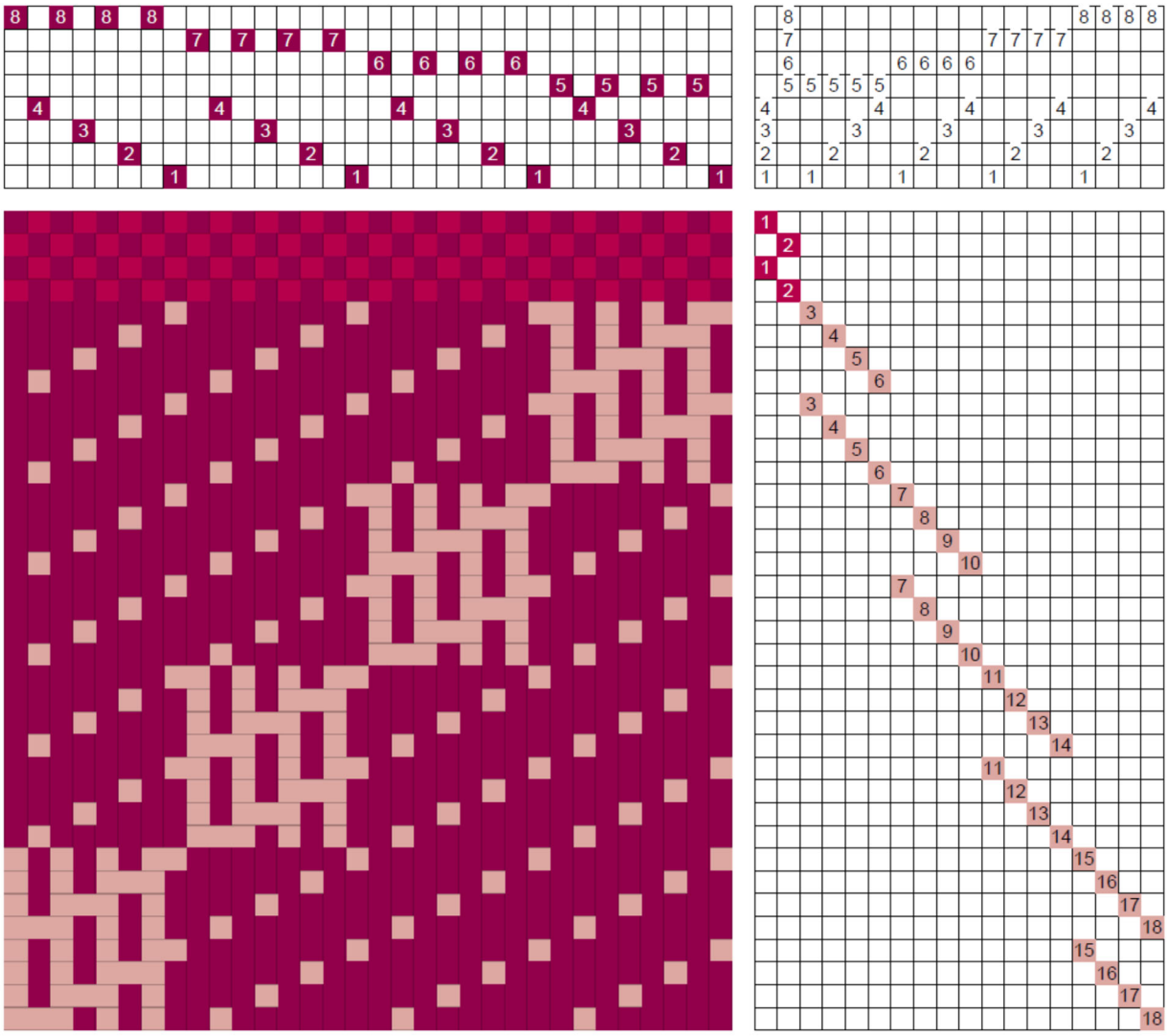
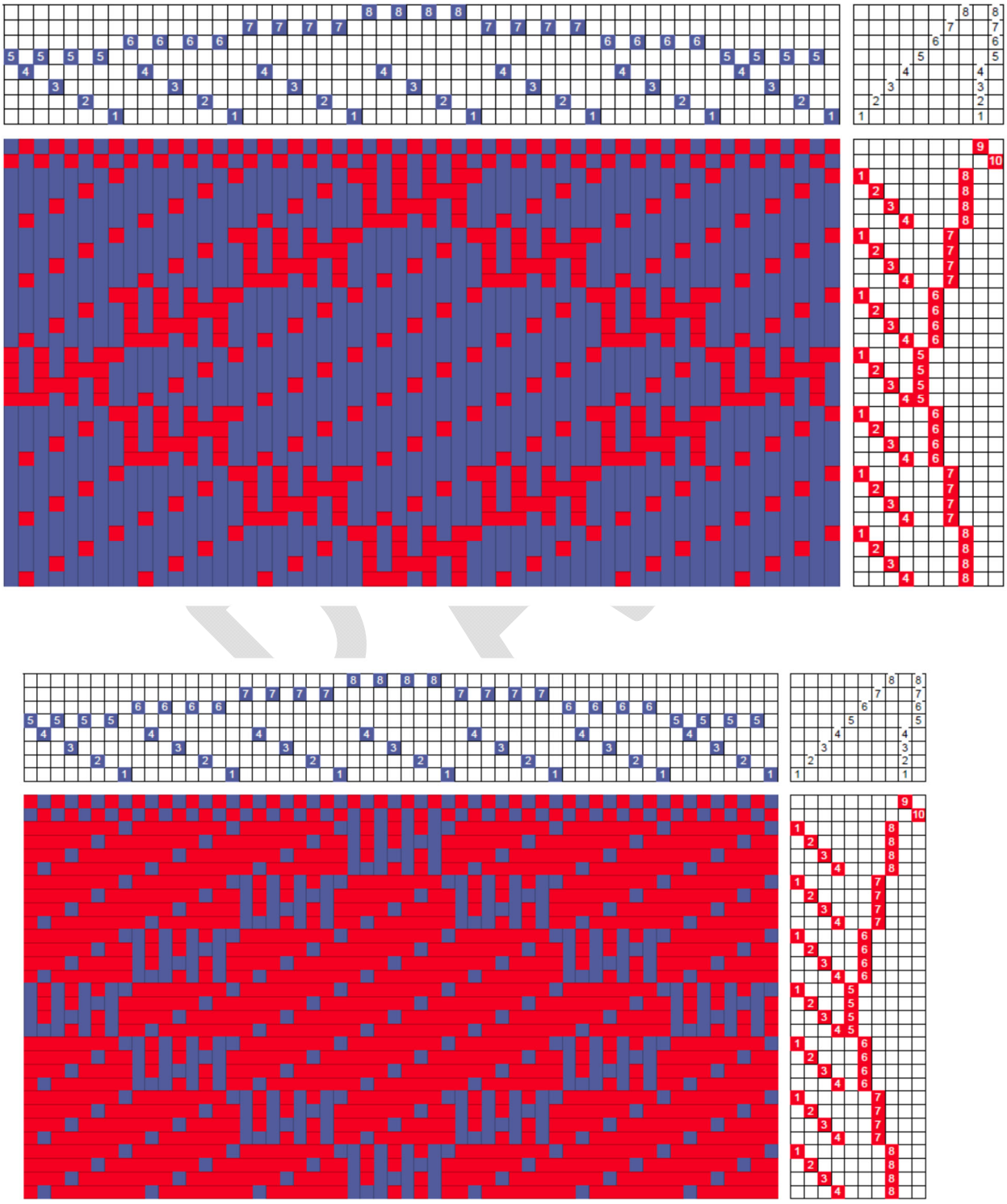
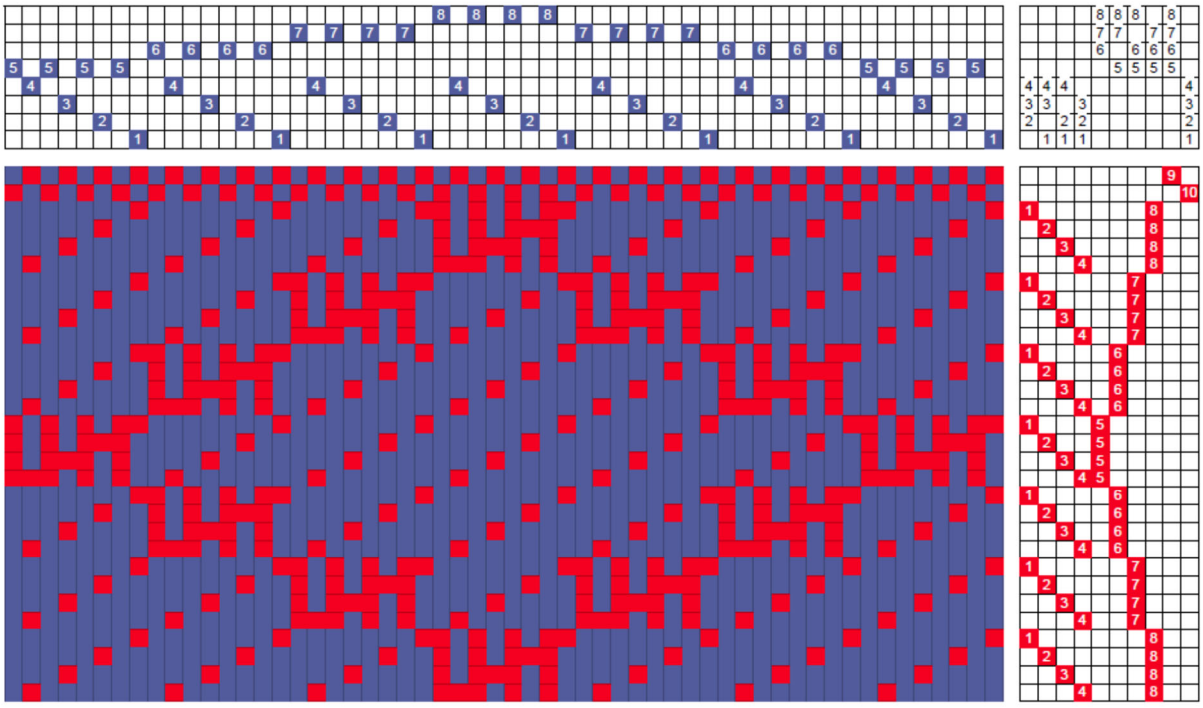


In order to weave the eight shaft fabric sample shown above, multiple treadling (two feet) was used with ten treadle. The ***sinking shed*** drawdown is shown below.

If we use the same tie-up and treadling sequence in a rising shed loom, we obtain the reverse side of the fabric as expected. The ***rising shed*** drawdown is shown next.



To weave the front of the fabric on a rising shed loom, that is the blocks with weft floats, the tie-up would have to be reversed – tie what is untied and untie what is tied. This is shown in the ***rising shed*** drawdown below.



Function

This structure makes a cushiony fabric because of the long floats, which should be used as the reverse side. Pillows would be ideal.

Sett

The ground cloth is plain weave, so the plain weave sett for the ground yarn is a good starting point. However, room must be made for the supplementary weft, by opening up the sett. How much depends on the size of the supplementary weft. In the fabric sample shown in the first page, the 10/2 mercerized cotton was sett at 18 epi, more open that the 24 epi I may use for plain weave.

Width of Blocks

The block is fixed at eight threads, four for the ties, four for the pattern.

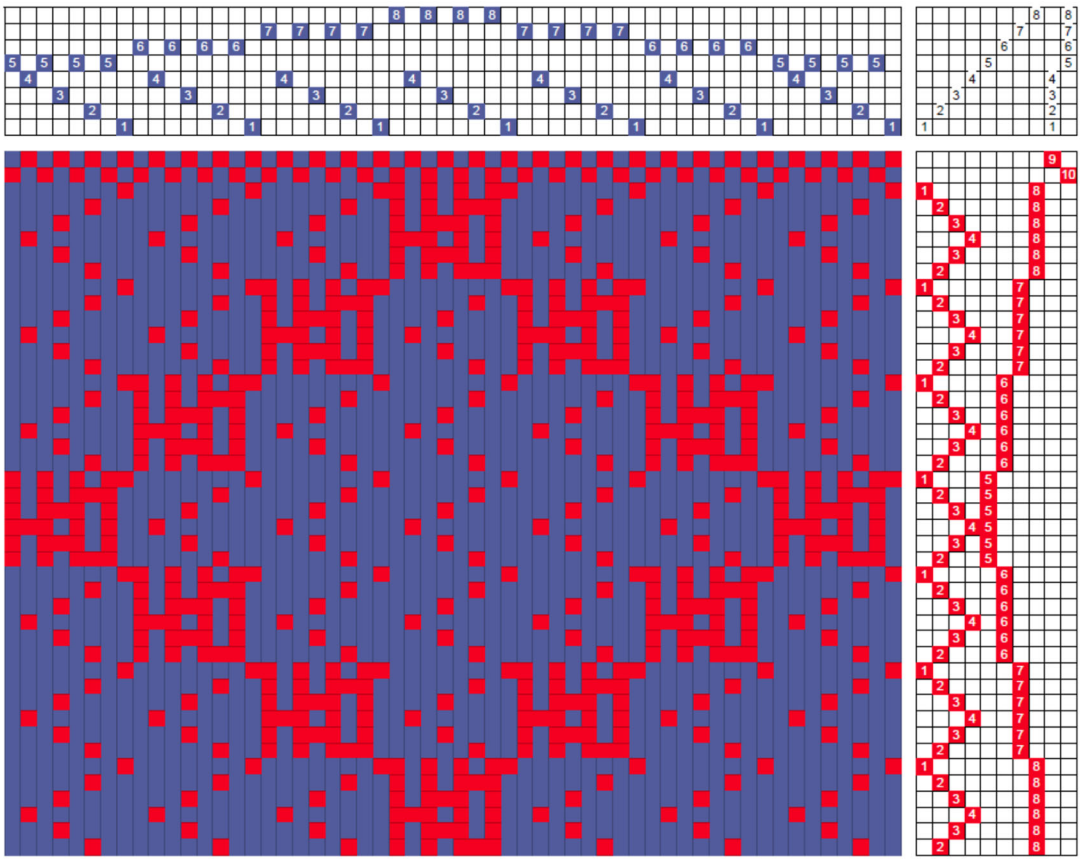
Number of Blocks Available

Each block requires one pattern shaft; the four tie shafts are used in common. Thus, after four shafts, each additional shaft is an additional block. For eight shafts, we have 8 shafts - 4 ties = 4 shafts left for four blocks.

Treadling Variations

The example I have shown is a straight twill threading with a straight twill treadling. However, any treadling that can be applied to the straight twill threading can be used, being mindful of the floats length.

Below is a ***sinking shed*** drawdown that uses a pointed twill treadling, adapted from Louise French.

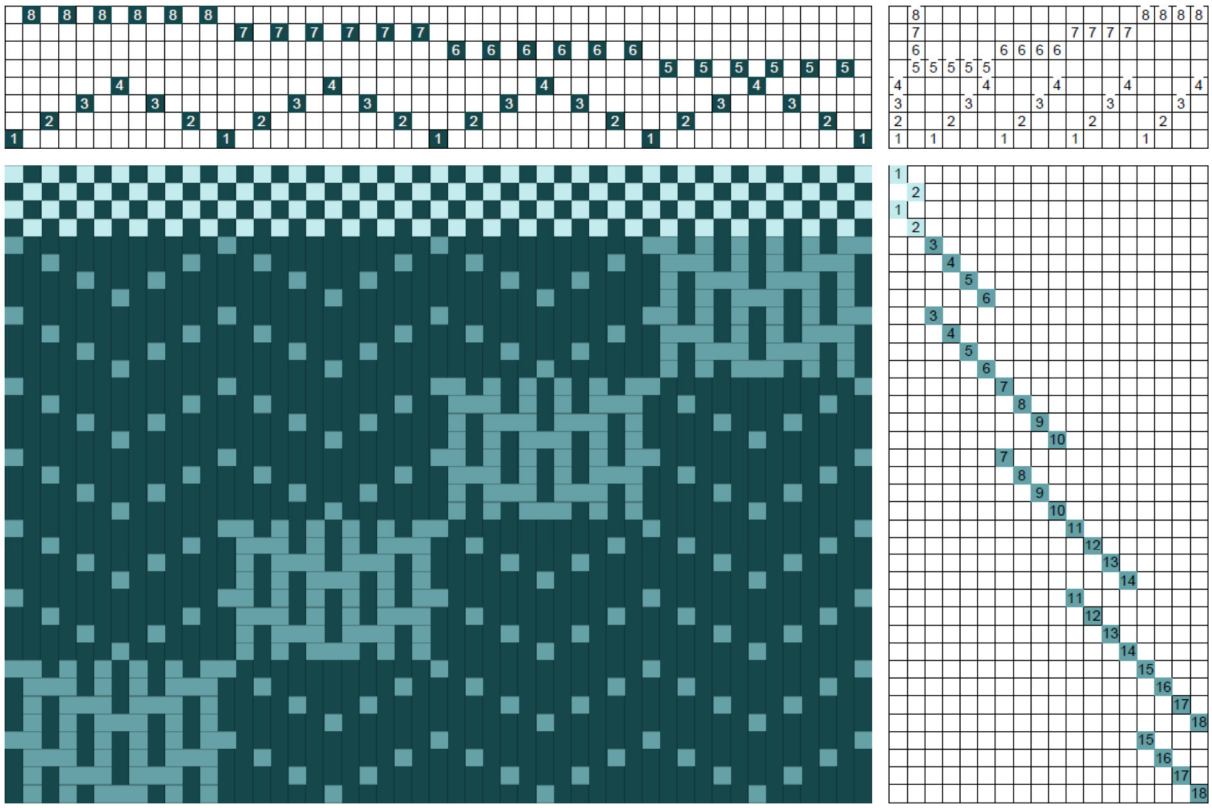


Robyn Spady describes other treadling possibilities in her ***Heddlecraft***.

Threading Variations

The examples up to now have used a straight twill threading for the ties. It is possible to use other twill threadings. In some cases, these are considered variations of Quigley, but I am not sure whether they originated with Ms. Quigley.

Below is the ***sinking shed*** for another drawdown that can also be classified as "Single, Four Unpaired Ties, 1:1 Ratio." With more ties or more pattern shaft added, the nomenclature can become ambiguous. We lift the ambiguity by specifying the differences in the threading.



The structure above is "Single, Four Unpaired Ties, 1:1 Ratio, Ties in Pointed Twill Order", while the original structure we have been discussing is more specifically "Single, Four Unpaired Ties, 1:1 Ratio, Ties in Straight Twill Order."

In order to weave the above drawdown, the tie-up can be changed as in the previous example, using multiple treadling, that is two feet.

It is easy to see how we can generate ideas to produce tied unit weaves by manipulating ties and pattern shafts. For example, if we extended the ties to five shafts, we would reduce the number of blocks to three, but we could weave a satin background. We do have to be mindful of the length of the floats.

References

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

French, Louise. *Cross Country Weavers Notebooks*, 2021.

Petrini, Marcy. https://www.marcypetrini.com/marcy-s-blogs/372-blog-122-weaving-classification

Spady, Robin. https://heddlecraft.com/index.html

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

Van der Hoogt, Madelyn. *Ask Madelyn: Quigley and Half Satin | Handwoven,* July 6, 2017

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