

## Single, Two Paired Ties, 1:2 Ratio

### Emery Classification

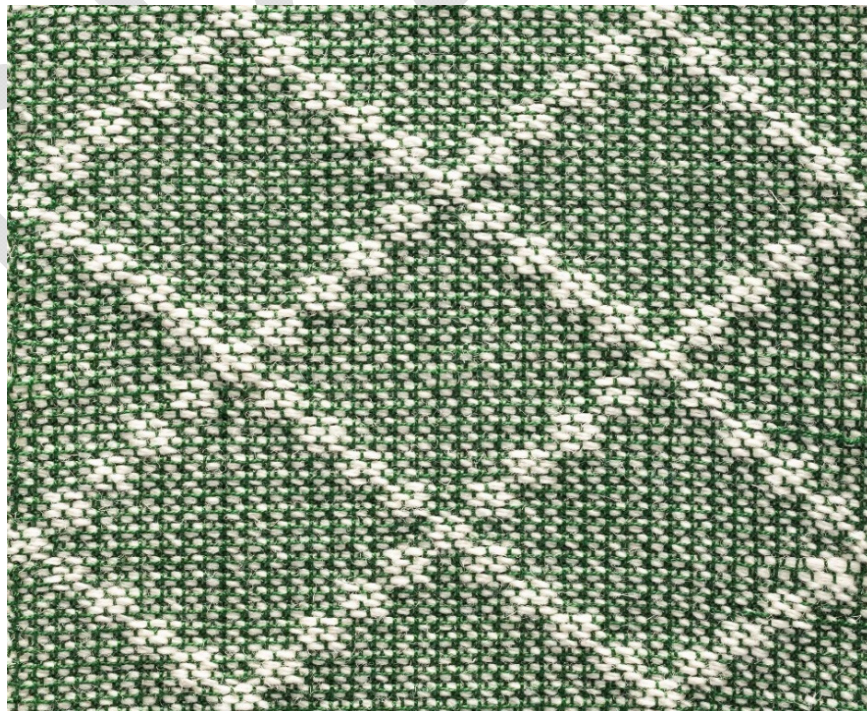
**Weave Compounded by Adding Sets of Elements, Supplementary:** one warp, two wefts, one of which is *not* needed for the integrity of the cloth.

### 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. The structure is a single, two paired ties, 1:2 ratio, by the tied weave nomenclature, explained below. It doesn't have a common name; I derived the structure by noticing that summer and winter has two unpaired ties, but an unpaired combination was missing.

### Fabric Characteristics

Below is the front of a fabric sample, weft floats, using the six blocks available on eight shafts.

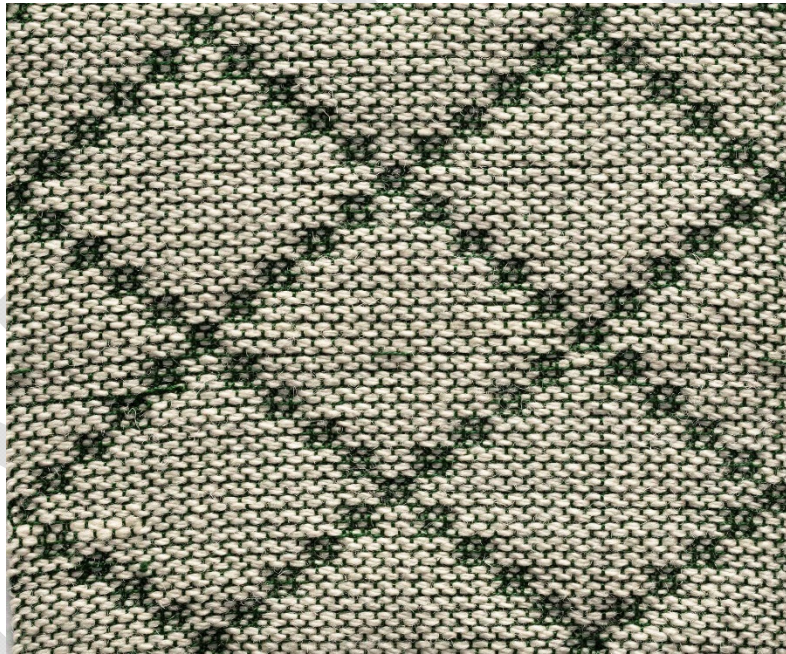


As in all supplementary weaves, the fabric is formed by a warp, a ground weft and a supplementary weft. The warp and the ground weft form the ground cloth that gives the fabric its integrity. They are usually the same size, but sometimes the ground weft is smaller. The supplementary weft is usually larger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

Since this weave has a single pattern shaft per block, it is possible to weave it on four shafts, see drawdown in the next section.

A block would look like a three-shafts twill with two paired ties and a single pattern shaft, so I repeated each threading sequence to make a more substantial block

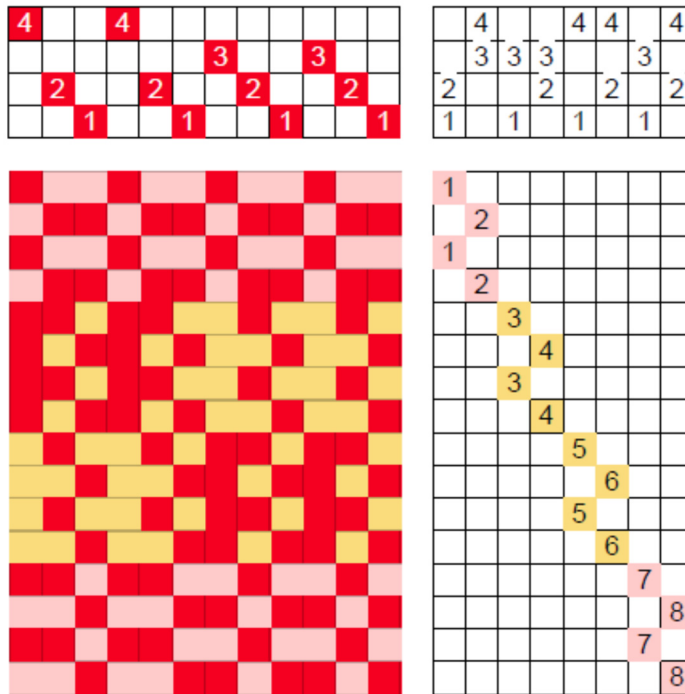
Below is the back of the fabric, warp floats.



In this weave, as is usually the case in tied unit weaves, the blocks are not solid. The background also shows patterning, resembling a knitted fabric.

## **Drawdown**

The four-shaft *sinking shed drawdown* below explains the nomenclature of the structure: single, two paired ties, 1:2 ratio.



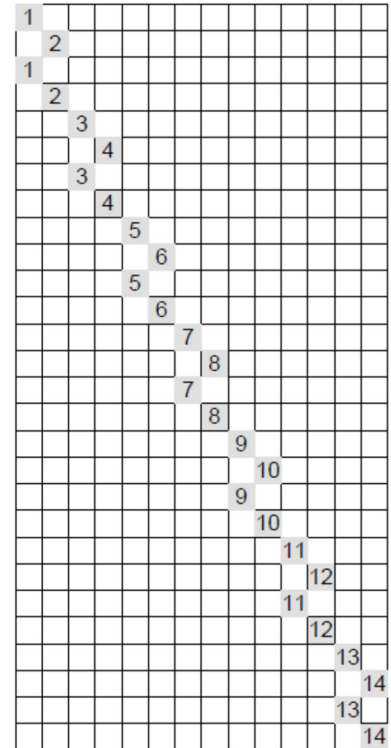
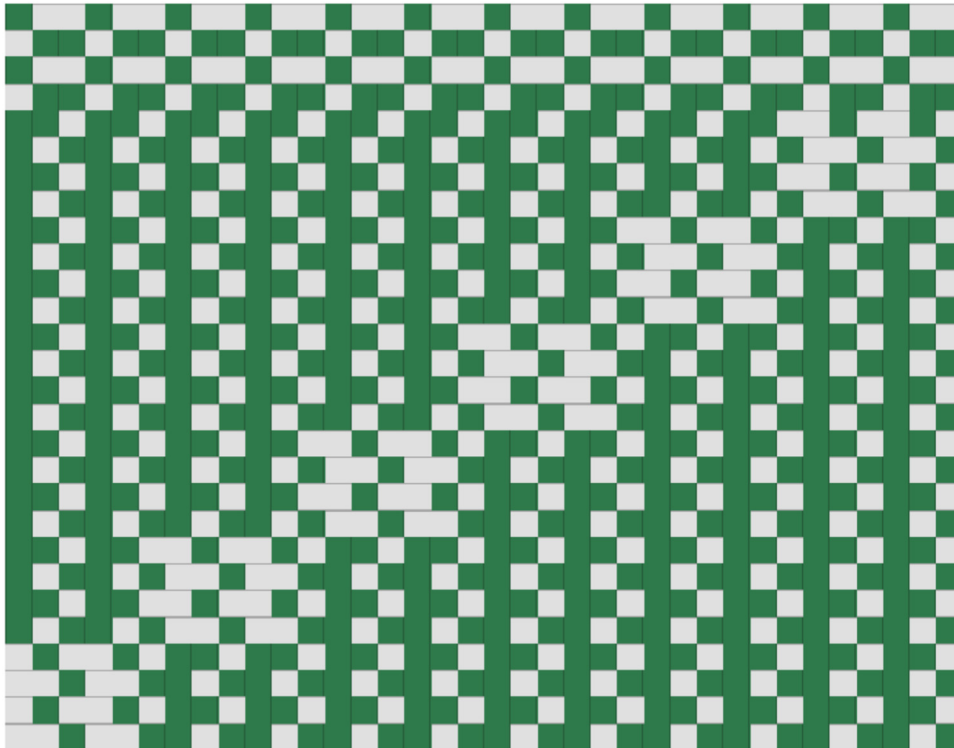
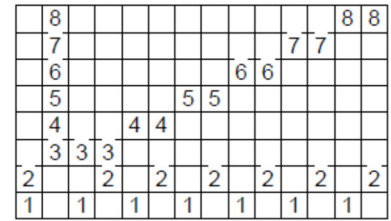
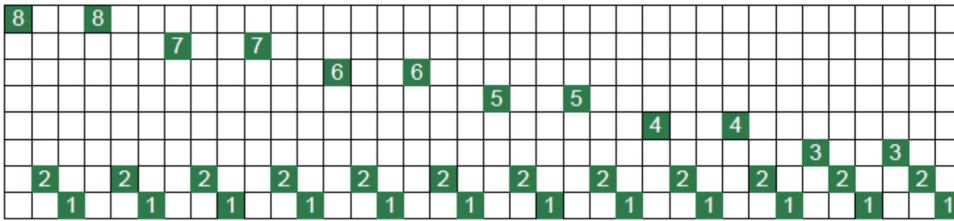
*Single* refers to the *single* shaft per block, shaft 3 for block A, shaft 4 for block B. There are *two* ties, shafts 1 and 2. The ties are *paired* because they are adjacent to one another, preceding the pattern shaft. The ratio is 1:2 because there is one *pattern thread* and two ties per block.

Not shown in the drawdown is that *each pattern pick* used in treadling order *is followed by one of the two tabbies*; they intersect with the warp to form the ground cloth. The tabbies are the ties shafts 1 and 2 vs. all pattern shafts. In this case, the tabbies do not form plain weave, but rather a pseudo-basket weave, sometimes called half-basket weave.

The threading repeats the basic unit. I like to think that the block is six-thread wide; otherwise, the threading wouldn't form much of a block.

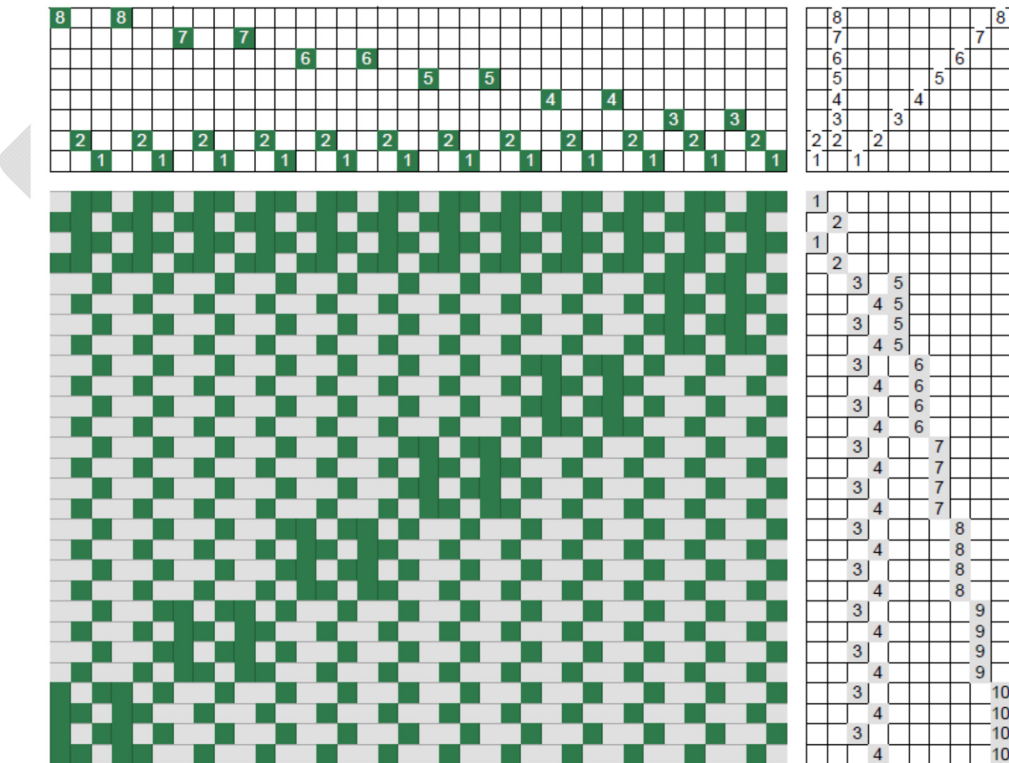
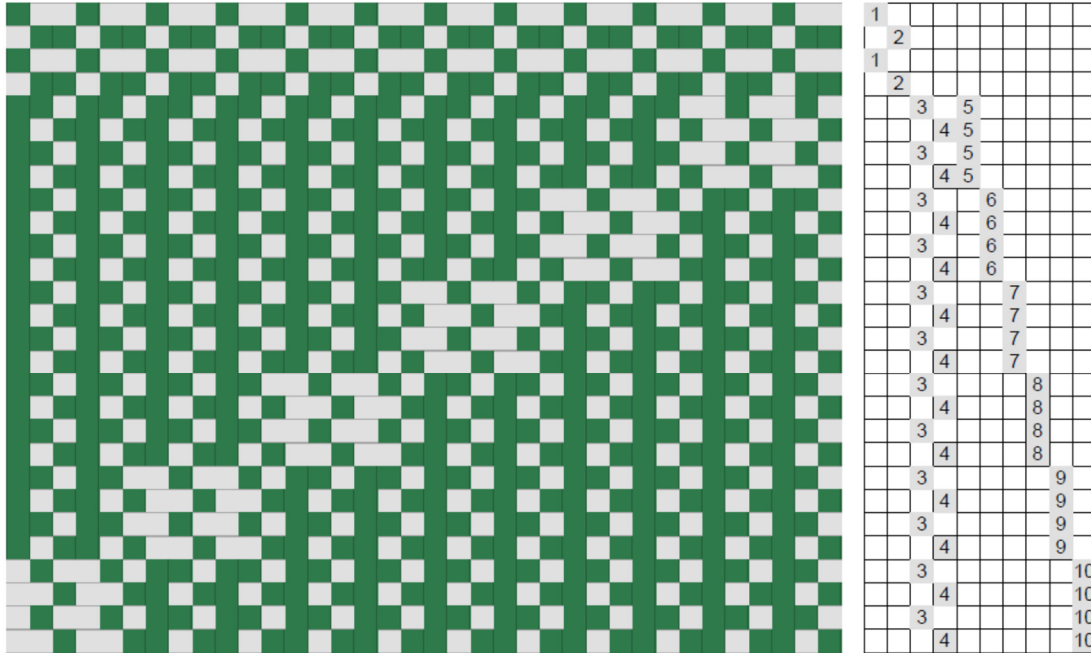
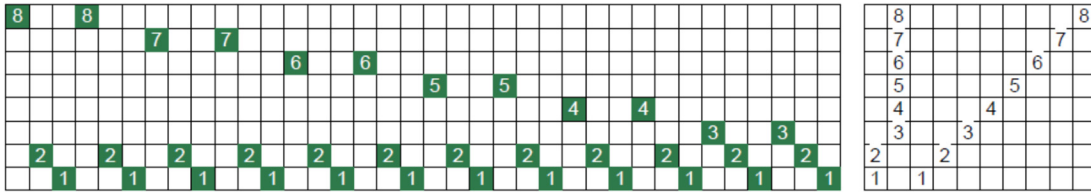
Next is the *sinking shed* drawdown for eight shafts, showing the six weft float blocks, each repeated as was the case for the four-shaft version.

The ground cloth is again not plain weave but a half basket weave as for the four-shaft version.



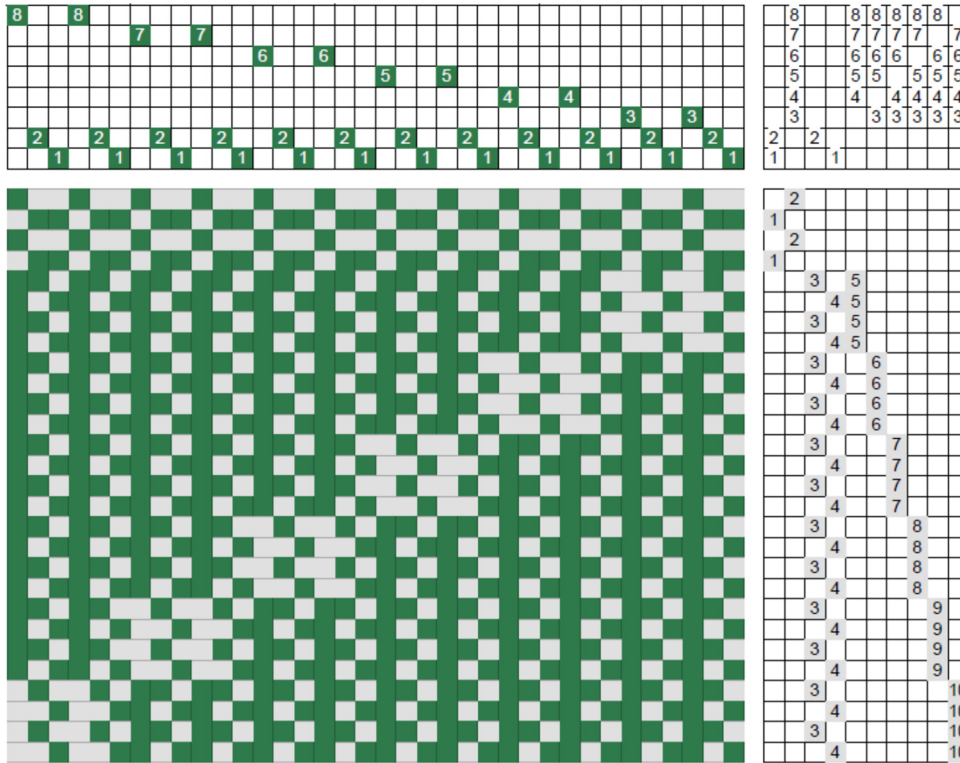
The two pick sequence to treadle each block is repeated to square the block. This results in staggered weft floats.

As shown in the drawdown, 14 treadles are required, but generally not available on most eight-shaft foot activated looms. However, the tie-up can be changed to 10 treadles by using “multiple treading,” that is, two feet. The next *sinking shed* drawdown shows the treadinging steps, followed by a *rising shed* drawdown using the same treadinging steps. This is the other side of the cloth and can be woven this way.



5 Single Two Paired Ties

With a *rising shed* loom, weft float blocks can be woven on top of the loom as shown in the drawdown that follow. It may be easier to treadle the drawdown just shown to avoid lifting multiple shafts.



**Function**

This structure, like its unpaired counterpart (summer and winter), can be used for bed covering or other household textiles that need more heft that the thicker, supplementary weft can provide.

**Sett**

Room must be made for the supplementary weft; the sett should be opened from a basic plain weave sett for the given yarn. The ground for this cloth is not plain weave, but to weave the sample shown I used the same adjustment I did for other supplementary weft structures. 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

In tied unit weaves, the width of the block is usually fixed in the number of threads. For this structure, it could be three threads.

However, blocks in unit weaves can also be repeated, so the blocks here are doubled. Blocks could be expanded in sets of three threads.

## Number of Blocks Available

Each block requires one pattern shaft and two tie shafts which are used in common. After two shafts, each additional shaft is an additional block: two blocks on four shafts, six on eight shafts.

## Treading Variations

The example here was treadled in “singles”, the method used to describe it in summer and winter. This means that in each block, there are two fixed treading steps: tabby a plus pattern shaft; tabby b plus pattern shaft. The two steps can be repeated, but they are always in that order, as a single unit.

There are other treading methods of which paired x's and paired o's are two classical ways (see summer and winter entry for methodology).

## References

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

Petrini, Marcy. <https://www.marcypetrini.com/marcy-s-blogs/331-%C2%A0blog-098-one-more>

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