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# WEAVING TODAY™

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*presents*

## How to Weave with Cotton

# Double-Faced Twill Table Mats

KATE LANGE-MCKIBBEN

**H**ow does a weaving project take form? While recovering from a knee injury this winter, I was weaving twill pot holders on my table loom (not able to treadle the floor loom) using 3/2 cotton and Sugar 'n Cream. Then I remembered a warp-faced twill I had woven for a demo, warped by Robyn Spady. Might this make good heat-resistant serving mats, too? Yes, and let's make large pot holders for warm serving dishes. Thanks, Robyn, for the inspiration.

Double-faced twills are a good way to make thicker cloth. On eight shafts, the warp is sett very close to create a warp-faced twill with two layers stitched together by a

single weft under the 3-thread floats. Substitute your favorite colors for your personal use or as gifts.

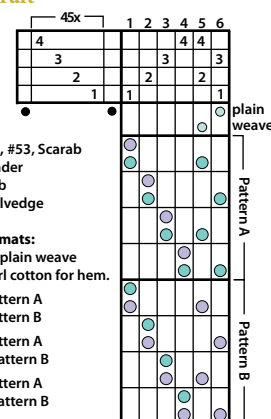
The 4-shaft version is a straight-twill threading with one warp and two wefts: one weaves 1/3 twill on the upper layer and the other weaves 3/1 twill on the back. The colors can be interchanged to create weft stripes on each face. The 8-shaft version is a straight twill threading with two warps, one threaded on the odd shafts and the other on the even shafts.

I hope these mats find a home on your holiday or everyday table.

## 1. 4-shaft warp color order

6 2 2 2 2 ● #27, Purple  
176 43 20 82 31 ● #48, Dark Turk  
182 ends (includes floating selvages)

## 2. 4-shaft draft



### Weave plan for mats:

- Weave 1 1/2" of plain weave using 20/2 pearl cotton for hem.
- Weave 3" of Pattern A
- Weave 1" of Pattern B
- Weave 2" of Pattern A
- Weave 3/8" of Pattern B
- Weave 1" of Pattern A
- Weave 3/8" of Pattern B
- Weave 11" of Pattern B
- Weave 1 1/2" of plain weave using 20/2 pearl cotton for hem.

**Weave plan for hot pads:** Weave 12", alternating patterns as you choose.

Where more than one mark appears in a row of treadling, depress all treadles to make the shed.





## 4-SHAFT TABLE MATS STRUCTURE

Double-faced twill.

## EQUIPMENT

4-shaft loom, 13" weaving width; 15-dent reed; 2 shuttles, 3 bobbins.

## YARNS

**Warp:** 3/2 cotton (1,260 yd/lb, UKI), #48 Dark Turk, 528 yd, #27 Purple, 18 yd. **Weft:** 3/2 cotton (1,260 yd/lb, UKI), #93 Lavender and #53 Scarab, 310 yd each; 1 strand of 6-strand embroidery floss (4,000 yd/lb; DMC), 36 yd for hems.  
(Yarns available as a kit from Cotton Clouds.)

## WARP LENGTH

182 ends 3 yd long (includes 2 ends for floating selvages; allows 4" for take-up, 36" for loom waste).

## SETTS

**Warp:** 15 epi (1/dent in a 15-dent reed). **Weft:** Pattern: 26 ppi (13 ppi per layer); plain weave: 15 ppi.

## DIMENSIONS

Width in the reed: 12-4/15".

Woven length (measured under tension on the loom): 68" (22" each table mat; 12" each pot holder).

Finished size after washing: 2 hemmed mats 10" x 18", 2 pot holders 4½" x 5".

## RESOURCES

Alderman, Sharon. *Mastering Weave Structures: Transforming Ideas into Great Cloth*. Loveland, Colorado: Interweave, 2004, pp. 42-44.

—"Double-Faced Cloth: One Cloth, Two Appearances." *Handwoven*. September 1982, pp. 61-63 and 95.

—"A Fresh Look at Double-Faced Twills." *Handwoven*, September/October 1995, pp 63-65.

## 4-SHAFT MATS

**1** Wind 182 warp threads 3 yd long, using the color sequence indicated in the warp color order, Figure 1. Use your preferred method to warp the loom. Thread following the draft in Figure 2. Weight the floating selvages behind the back beam of the loom.

**2** Wind a bobbin with 1 strand of 6-strand embroidery floss for the hems and a bobbin for each of the weft colors for the body of the mats. Weave the first table mat according to the weave plan in Figure 2, beginning and ending with 1½" of plain weave. Weave 2 picks of scrap yarn, then weave a second hot mat following the same weave plan. Weave 2 picks of scrap yarn, then weave 12" alternating Pattern A and Pattern B as you like for a pot holder, weave 2 more picks, and weave another 12" of pattern for a second pot holder. Finish with a few picks of scrap yarn to protect the edge.

**3** Remove fabric from the loom. Machine zigzag to protect the ends, machine wash in warm water, tumble until almost dry, then press with a hot iron.

**4** Cut pieces apart along scrap yarn. For the table mats, turn hems under ½", press, turn under ½" again, press, and then handstitch hems. For the pot holders, fold pieces in half, one with the Scarab side out and one with the Dark Turk side out. Machine stitch 2 sides with a ¼" seam, then fold the open edges to the outside ¼" and press. Turn the pieces inside out and handstitch the open edge closed.



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# “Pinwheels Redux” Napkins

CHRISTINA GARTON

WHY CHOOSE ONE WHEN YOU CAN HAVE THEM ALL?

**W**hile working on the January/February 2012 issue, I fell in love with Rebecca Winter's delightful star scarf and all the alternate tie-ups that could be used to create different variations of stars and pinwheels. For my own interpretation, I wove a set of napkins, each with a different design, so I could try out each tie-up, because why choose just one design when you can weave them all? (That said, the yarn amounts given here are for 6 napkins because that's what you can weave with a cone of each color.)

I wove a header for this project using mint

green 8/2 cotton for the weft, and the triangular pattern it created looked so lovely that I considered weaving another variation using a mint green weft for the whole napkin. Consider playing with color to expand your design options even further.

## RESOURCES

“Pinwheel Video.” YouTube video posted by 3kidswaterford. <http://www.youtube.com/watch?v=MZ7E6pxDBcY>

Winter, Rebecca. “Reach for the Stars with Color and Weave.” *Handwoven* January/February 2012, pp. 48–50.


**1** Wind 408 warp threads 4 yd long following the color order in the draft, Figure 1. Use your preferred method to warp the loom, and thread following Figure 1. Sley 2 ends per dent in a 12-dent reed, centering for a weaving width of 17". Measure 2 floating selvages in natural, sley them through the reed, and weight them over the back beam.

**2** Weave 6 napkins, each 19" long, choosing from the 8 tie-ups and following the treadling and weft color order in Figure 1. (If you choose to weave all 8 tie-ups, increase yarn amounts by a third.) Weave 2 picks of scrap yarn between each napkin. Begin and end each napkin with a stripe of natural.

**3** Remove fabric from the loom. Machine zigzag the raw edges and on both sides of the scrap yarn. Machine wash with warm water, and machine dry on low heat with a terry-cloth towel until almost dry. Press with a warm iron.

**4** Cut the napkins apart. Turn the hems under ½" twice, press again, and hem by hand or machine.

## NOTES

- Some interlacements are more difficult to beat in than others, so pay attention to the picks per inch for each tie-up.
- The yarn amounts given are for 6 napkins. If you would like to weave all 8 variations, add 20" of warp for each additional napkin.
- If you prefer to weave towels instead of napkins, weave 4 towels 28" long. Add an extra 30" of warp for each additional towel. 

## STRUCTURE

Twill with color-and-weave effects.

## EQUIPMENT

8-shaft loom, 18" weaving width; 12-dent reed; 2 shuttles.

## YARNS

**Warp:** 8/2 unmercerized cotton (3,360 yd/lb; UKI), natural, 840 yd; Denim, 800 yd.  
**Weft:** 8/2 unmercerized cotton, natural, 700 yd; Denim, 676 yd.

## WARP LENGTH

410 ends 4 yd long (includes 2 floating selvages; allows 3" for take-up, 27" for loom waste).

## SETTS

**Warp:** 24 epi (2/dent in a 12-dent reed).

**Weft:** Varies with the tie-up: Napkin 1: 22 ppi; Napkin 2: 20 ppi; Napkins 3–6: 24 ppi.

## DIMENSIONS

**Width in the reed:** 17".  
**Woven length (measured under tension on the loom):** 114" (19" for each napkin).

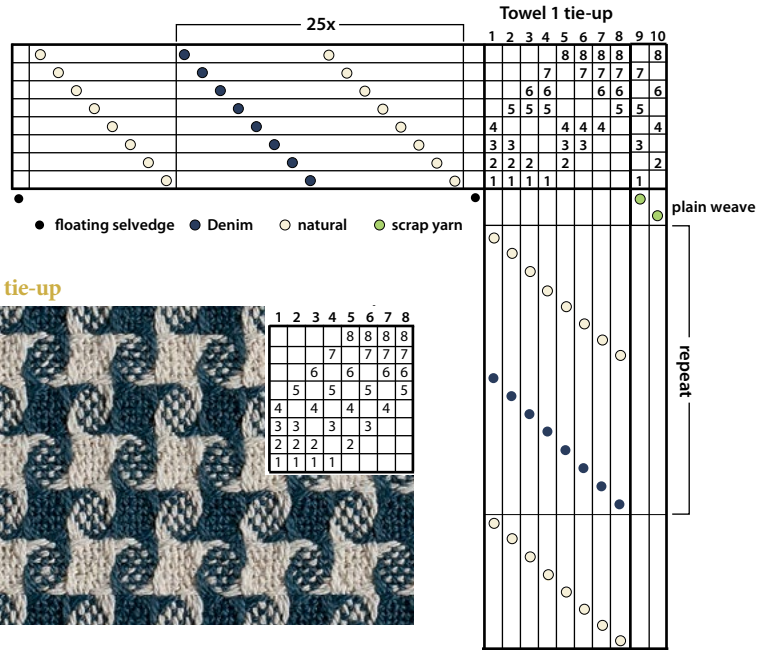
**Finished size after washing:** six hemmed napkins, 14½" x 14¾".



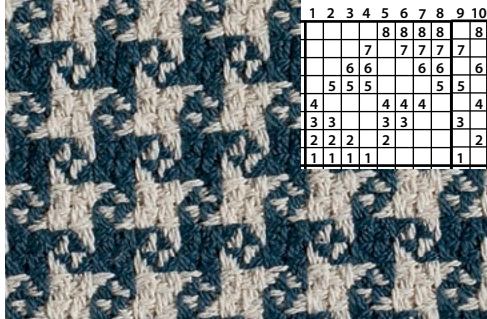




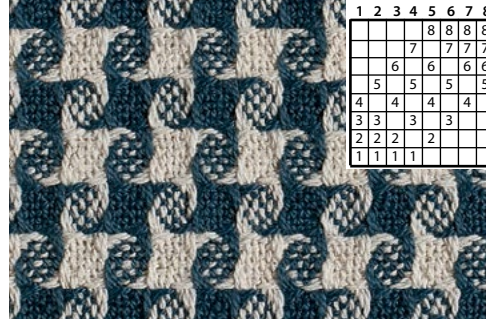
## 1. Draft



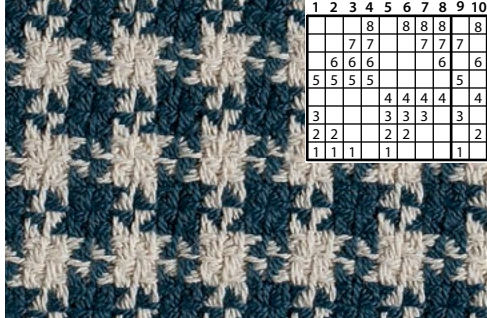
Towel 1 tie-up



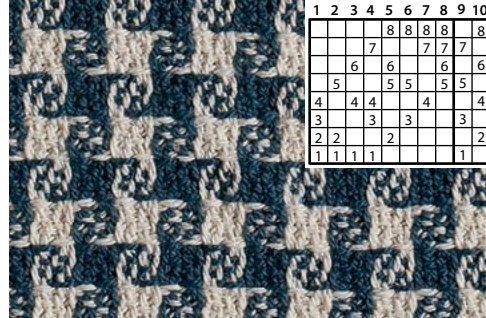
Towel 2 tie-up



Towel 3 tie-up



Towel 4 tie-up



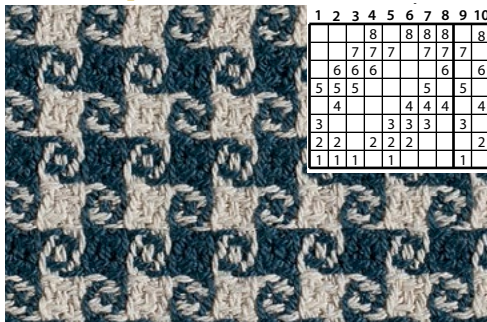
Weaving notes:

Yarn amounts given are for 6 towels. You can choose 6 of the 8 drafts or add 20" of warp for each additional napkin.

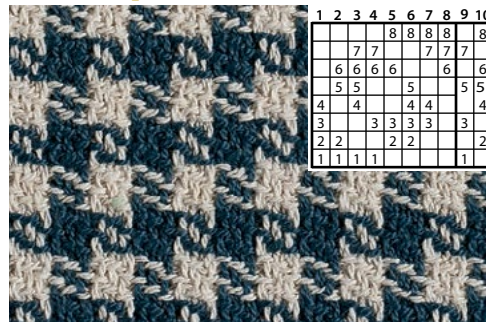
Weave 19" of chosen draft for each towel.

Note that on drafts 2 and 8, only 8 treadles are needed because plain-weave treadling is on treadles 4 and 5.

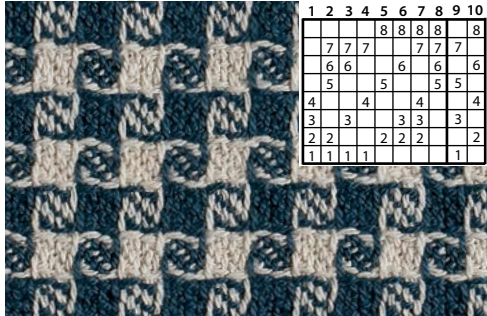
Towel 5 tie-up



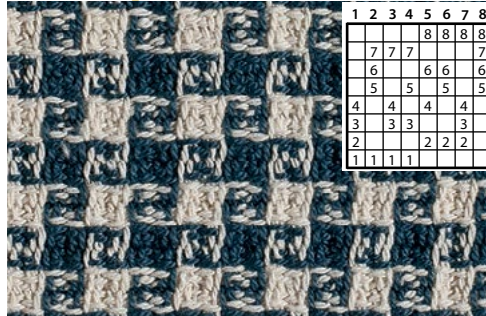
Towel 6 tie-up



Towel 7 tie-up



Towel 8 tie-up



# Finishing Handwoven Cotton Fabrics

SHARON ALDERMAN

If I have said it once, I have probably said it hundreds of times: “You are not finished until the cloth has been finished.” Except for tapestries, that are blocked and steamed, finishing means wet-finishing.

To understand what cotton needs in the finishing process, it helps to think a little about the fiber itself. Cotton is a seed-hair fiber. It is attached to the cotton seed, which is a bit smaller but just as hard as an olive pit. This fiber helps the plant to propagate because wind catches it on the ground and moves it along to another location. The fiber itself is absorbent (although not as absorbent as linen or wool) and holds the water, probably helping the seed to germinate. When the fiber has been removed from the seeds in a process called ginning, it may be combed, if it is long enough, or carded to make the yarns we use in weaving. The fiber itself is smooth (no crimps or scales) so it is easy to clean and may be boiled for sterilization if necessary.

Although the sett and structure of the cloth are important factors in shrinkage, I generally plan for 10% to 15% loss in length and width. If the sett is very dense and the cloth is balanced (ends per inch equal picks per inch), there will be little shrinkage because there is no place for the threads to move. Some weave structures, such as waffle weave, become three-dimensional when cut from the loom, so after washing they are far narrower than the width in the reed.

When I have made the first sample of a cotton cloth, I handwash it in very hot water with detergent and work the cloth by squeezing it, pulling it crosswise, lengthwise, and on the bias. This working is essential for finishing lace weaves because it makes the threads shift to create the lacy open spaces in the finished cloth.

I pay attention to the color of the water as I wash the first sample. If one of the colors runs, I make a second sample and wash with an agent such as Synthrapol, which keeps the loose dye molecules in the water, preventing them from depositing on the cloth. I find that mill-end yarns are more likely to run, and red, dark green, or blue seem to be more likely to run than other colors. Once I had a large cone of red that never stopped bleeding color. I washed the sample several times, and it never finished running. In that case, it is better to get rid of the yarn. Mine was welcomed by a group working with children who were pretending to be spiders making webs. Never pass yarn that runs along to another weaver!

I use water as hot as my hands can stand because I want all of the shrinkage to occur during the finishing and not after the cloth has been made into something where size matters. I like to use a dishwashing liquid. Just stir the water after you put it in; don't put the detergent in first and then spray water on it to make lots of bubbles. You'll just have to rinse those bubbles out later.

Sometimes plain-weave cloth changes while being washed, producing tracking. If the plying twist of the yarn does not balance the initial twist in the spinning, or if the spin has not been set for a singles before use, the threads “squirm” making diagonal ridges in the cloth. These ridges make the cloth less smooth, and if you intend to create a cloth with smooth color blending between the warp and weft colors, tracking can be dismaying. There are two choices with tracking: either love it or prevent it from happening. If you love it, you can make it permanent by letting it be or by pressing (as opposed to ironing) to flatten the cloth and make it smoother to the touch. To avoid



Wet finishing handwoven cloth makes a dramatic difference in the end result.


Samples by Laura Fry.

PHOTO BY ANITA OSTERHUAG

tracking, you have to handle the wet-finishing differently. When it is time to wash the cloth, fill a plastic container with very hot water and a little liquid detergent to aid in the wetting (add Synthrapol if there is any doubt about the fastness of the colors), and simply set the cloth on the surface. Do not push it down! The whole point is to get it wet in hot water without moving the cloth at all. It's very hard to resist pushing it down under the water, so I put the fabric onto the water the last thing at night so that I won't be tempted! When the water has gone cold, drain it, and then the cloth can be machine washed without tracking. If some tracking does occur, it can be removed by ironing the cloth while stretching it. Before I learned the method above, I always removed tracking by ironing, but the wet-finishing approach is much easier.

I always iron cotton cloth after the initial washing. Ironing while the cloth is still damp ensures a smooth finish. Even if the cloth will never be ironed again (as for kitchen towels), I iron it. That first ironing helps it look smoother for its entire lifetime of machine washing and drying.

## RESOURCES

Fry, Laura. *Magic in the Water: Wet Finishing Handwovens*. Prince George, British Columbia, Canada: Laura Fry Weaving Studio, 2002.  
———. *Wet-Finishing for Weavers* DVD. Loveland, Colorado: Interweave, 2014. 

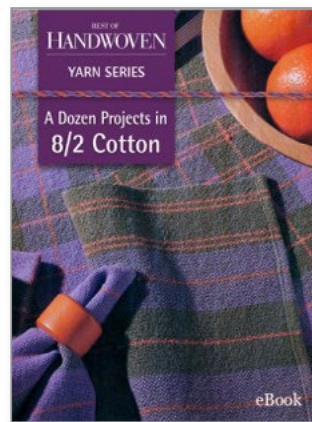


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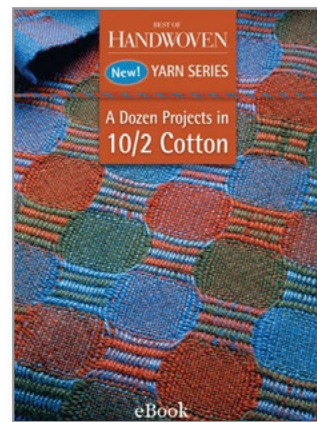
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