

The Quilt Detective: Clues in Techniques #10

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The theme for this last grouping is construction, including the batting and the backing, which can be of some use in dating a quilt.

Week #41 Batting: Cotton, Wool, and Miscellaneous Fillings

Quilts and comforters are generally made of three layers, the top and the backing plus the filler between, which varies in thickness. The most common filler is batting, a fluffy layer of non-woven fiber. Batting is also called a batt, and in England it is called wadding. The English distinguish between patchwork covers that are quilted and unquilted by calling the three-layer pieces wadded quilts. The American textile studies textbook from Hollen and Sadler defines batting as made from new fiber, wadding as recycled waste fiber, an interesting dichotomy.

Cotton Batting: Before the introduction of polyester batting about 1960, cotton was the most common batting, with wool another option. Wool and cotton batting themselves are not clues to date. Early quilts were filled with both. Seventeenth-century Indian chintz quilts had cotton batting. The English wool bedquilts in those years were filled with wool and both fibers are still used for quilt batting.



Here's a case in which you can be assured that the batting is cotton because you can actually see it through the ripped areas. The machine quilting lines are so far apart that the batt has reverted to its natural state as "wads of cotton ... in bunches." I recently found this poor thing in my home for orphan quilts in my attic. I cannot remember where I got it. I hope I didn't pay for it, but assume someone gave it to me as an alternative to the trash can. It looks to have been made about 1900, a low point in both fabric and stitching standards. The brown was once green, a good example of the fugitive nature of the synthetic green dyes about the turn of the last century. It is machine quilted only in the alternate plain blocks as an echo of the block's seam. Once the quilt was used and washed, the batting lumped up into wads the size of golf balls, putting so much stress on the seams that the small seam allowances frayed out all over the quilt.

The first commercial cotton batting was produced in 1846. According to historian Merikay Waldvogel in an *Uncoverings 1995* article, Seth Foster and George Stearns built a mill in Cincinnati to produce "cotton wadding" after their development of cotton batting stabilized with flour paste. Stearns & Foster tried various types of packaging over the years, from bulk-50-pound bales to individually wrapped packages in dark-blue tissue paper, which were then marked with quaint names by various retailers. In 1928, Stearns & Foster began packaging a new brand, Mountain Mist, in a printed paper wrapper featuring full-sized quilt patterns, a very successful marketing idea. Stearns & Foster still sells cotton and polyester battings, recently adding wool and silk batts to their line.

Good Housekeeping in October, 1891 gave instructions for making a bed comfortable with a "patent cotton batting, which comes in even layers, stitched in place by machine." This seems to indicate that before cotton batting was bonded, as it is today, to prevent slippage, some battings were machine stitched.

Wool batting is found inside wool quilts and comforters, but it was occasionally used inside cotton, silk and combination fabric quilts. Some wool batts inside otherwise washable cotton quilts have shrunk dramatically, resulting in a significantly smaller quilt with a puckered top. To those unfamiliar with the effects of a hot machine wash on a wool batt, the quilt looked to be a style of "gathered" quilt, but many puckers in an otherwise conventional quilt style probably indicates a shrunken wool batt rather than a novelty piecing technique.

Some heavy comforters contain a wool batting that is enclosed in a piece of cheesecloth or light cotton. Reworking a comforter would include snipping the ties, removing the binding, washing the top and backing, airing out the wool batting and possibly reworking it to lie flat inside the cheesecloth, and then reassembling the whole thing.

Cotton Seeds in the Batting: There is some discussion in the quilt literature about cotton seeds in the batting being a useful clue to date. In her 1929 book, Ruth Finley gave a formula for dating quilts by counting the number of seeds per square inch, based on conclusions about the invention of the cotton gin and a comparison of ginned cotton to hand cleaned cotton. Most of her information about quilts was gathered near her New York home, and her understanding of southern quilts, hand carded batts and cotton seeds in general was limited. Her formula for determining a date was only wishful thinking.

Many novice collectors are quick to point out any seeds visible in a batting when the quilt is held up to the light. The conventional wisdom is that visible seeds mean a quilt is rather old. Some neophytes believe that seeds mean the quilt dates from before the invention of the cotton gin in the 1790s.

Such notions are based on three misconceptions. The first is that the spots visible inside a quilt are actually cotton seeds. Cotton seeds are about the size of navy beans, much larger than the dark specks apparent inside quilts. What is visible is cotton refuse, fragments from the hulls, stems and other parts of the plant.

The second misconception is that cotton cleaned by machine is refuse-free. Commercially produced batting was available in all grades. An ad from the 1897 Sears catalog, a century after the invention of the cotton gin gives an idea of the variety available.

“Our bats are patent folded and are not simply a wad of cotton to be repacked and put into the quilt in bunches; each batt is nicely papered, is folded and will open up the to the same thickness. 36 inches wide and 7 feet long
8 cents per roll---fair quality
9 cents per roll----good quality
12 1/2 cents per roll---fine quality
15 cents per roll---clean white”

Sears also sold “snow white cotton batting...used for medical purposes, baby quilts, etc. Extra long staple, no specks. Per roll 25 cents.” Each of the batts weighed 16 ounces, so the differences in quality were probably due to whiteness and cleanliness. From the catalog description it is apparent that the 8 cent per yard batting was neither snow white nor speck-free. It is also apparent that competitors’ battings might be nothing more than “wads of cotton to be repacked and put into the quilt in bunches”. It is likely that the more inexpensive batting was used in many of the thick utility quilts and comforters of those years. When such quilts are held up to the light the 8 cent or even the 15 cent batting might contain quite a few brown specks.



Turkish man removing cotton seeds with a wooden apparatus about 1875. Collection: Library of Congress.

The third misconception is that once the cotton gin was invented all batting thereafter was ginned by machine. Quiltmakers continued to clean cotton by hand. Interviews conducted with quilters during the state quilt projects indicate that many people recalled making their own batting as children in southern states. In a 1982 interview, Mississippi quiltmaker Pecolia Warner described a process that was fairly common. “When they’d go to the gin, they would save out a sack of cotton. And they’d pull some out and put it out on the floor.

And with a switch they'd just whip that cotton---they'd beat it out thin." About twenty years ago a Texan wrote me of a quilt she'd made in the 1930s, "filled with trash cotton as we called it."

Many of the inaccurate family stories about homespun cotton backing may have originated as stories about home-produced batting, because it was far, far more common than homespun cotton.

Miscellaneous Filling: Quiltmakers used filler other than batting for their quilts. They commonly used woven blankets, thin sheets of flannel and sometimes worn out quilts. Exceptionally poor or exceptionally frugal quiltmakers recycled clothing as a filler. I once saw a quilt that was filled with men's long underwear, layered into a rectangle.

Paper inside a quilt is probably a remnant of a construction technique rather than a filler. Seamstresses who used the paper template or foundation piecing methods generally removed the paper before the quilt's layers were assembled. Some left the paper inside, however, possibly for added warmth or a crisp look.

Polyester Batting: The presence of a polyester batt under an old quilt top is reliable evidence that the top was quilted after 1960 and the introduction of polyester batting. Mountain Mist began producing polyester batting in 1962.

To determine if an invisible batting is polyester, rely on the look and the feel of the quilt. Polyester has a distinctive loft that looks puffier than cotton. Polyester springs back after being compressed and has a slippery feel if the quilt is rubbed between two fingers. Polyester batting, because it is a continuous synthetic filament, requires less quilting than short-staple cotton that balls up after washing. If the quilting lines are more than three inches apart the batting may be polyester or a combination poly/cotton. But do remember that the only way to be sure of a batt's fiber content is to do a fiber test on the batt; something that is usually not an option.

Week # 42 Quilt Backing: Muslin & Domestic Cloth

Backing, or to use an old-fashioned word---lining---may be more related to quilt style or quilt fabric rather than to the topic of quilt techniques, but examining the backing is an important part of closely studying a quilt, so the topic probably belongs here in a newsletter dedicated to techniques. Quilt linings are typically of a single fabric seamed to cover the surface. White or unbleached cotton is the most common backing material for antique quilts, especially for quilts with fancy quilting since the white back showed off the stitches and design.

Defining Muslin. A subscriber recently asked the question: “When was muslin first introduced into quilts? The background in some Baltimore Album quilts appears to be a type of muslin.”

It’s a tough question, made more difficult by the problems with the definitions of the word “muslin.” Hollen and Saddler in their 1952 textile textbook defined muslin as “a general name applied to any plain-woven, balanced fabric which ranges in weight from lawn to heavy bed sheeting. Muslin is also a specific name used for medium weight fabrics which are starched or given a slightly crisp finish. They may be white, colored or printed, but the name is most frequently used for the white or unbleached fabrics.” That technical definition of muslin is a bit vague. In the vernacular, the everyday definition seems narrower.

Today in the vernacular, it seems there are two general kinds of cotton weaves: muslin and percale, with percale being a better quality fabric of higher thread count and finer yarns. Muslin implies a cheaper cloth, either bleached or unbleached. Sometimes it has slubs and specks in the yarns, but not always.

Meanings change dramatically over the years but again the terms are vague. In the late eighteenth and the nineteenth century “muslin” implied a high quality cotton woven at first in India. Florence Montgomery in her historical dictionary of textile terms, notes that in 1833 there were 25 different kinds of muslins listed, including printed muslins. Some varieties were “mull” and “book muslin” or “book calicos,” a high quality cloth that was defined by the way the yardage was folded and marketed, sort of the way we describe flat folds today. And then there was muslinet, “a thick variety of muslin.”

White Backing. Over the centuries most quiltmakers chose plain white cotton for the back of their quilts, and the subtleties in the differences in the fabrics require an experienced eye to distinguish among them. In general, we find three kinds of white cotton backs. One is a fine cotton weave, the same kind of fabric with fine yarns and a relatively high thread count that is found on the front of the quilt, something we might call cotton broadcloth or white percale today. This particular backing doesn’t offer any clues to the quilt detective looking for a possible date.

A second type, most often found on quilts made before 1890 or so, is a coarse woven cloth, a fabric of low thread count woven of rather coarse but soft yarns. This factory-woven cloth is often mistakenly called homespun. It seems to have been called domestic cloth at the time, and it is a good clue to an older quilt.

The third type, most commonly seen after 1890 or so, is what we call unbleached muslin, a slightly yellow rather crisp fabric with a low thread count and coarse yarns that sometimes are spotted with slubs and specks of cotton refuse. In general, these backings tend to indicate a twentieth-century date.



A scan of two quilts backed with domestic cloth. The one along the bottom with the fringe looks a little brighter than the other, possibly a bleached domestic while the top one is unbleached. The quilt without the fringe is dated 1837 and I'd imagine the other is roughly the same age. I've lined up the seams. Both are both joined by hand with the selvages inside the seams. In looking at the backing carefully, I see that one of the characteristics of domestic cloth is that some of the yarns vary from thin to thick, creating heavy visible lines in the weave.

Domestic cloth. As the United States struggled to become a textile producing country independent of England, Americans in 1814 took pride in a new factory in Waltham, Massachusetts, that was the first in the United States, if not the world, to mechanically process raw cotton into woven cloth at a single site. The cloth was described in the U.S. Census of industrial manufacturers as "heavy unbleached sheetings...a class of goods, which under the name of 'domestic,' have ever since formed the staple of American cotton manufactures." This domestic cloth, sometimes called factory cloth, was cheaper than imported cottons of higher quality. It was the common cotton textile used for toweling, underwear and bedding.

In 1839, Abraham Lincoln described an interesting use for domestic cloth. He forgot his coat in Tremont, Illinois, and wrote the tavern owner there a note. "Will you please get a

yard or so of coarse domestic (for which I will pay you the first time I see you) and fold the coat in it and...hand the bundle to the Stage Driver on his trip towards Springfield?" Cloth was apparently more available than paper or card board to wrap the package.

Domestic cloth, a class of heavy unbleached sheeting, was quite commonly used for quilt backs. We can recognize it not only by its weave, but by its selvage edges, rather narrow, tightly woven edges that were frequently left exposed on the surface of the back because they were butted up against each other and secured with an overcast stitch, rather than hiding in seams stitched with a running stitch (see issue # 7 for more about the overcast stitch.) Sometimes domestic cloth is seen in its yellowish or tannish unbleached state, but it is frequently bleached a bright white. Whether the manufacturer or the purchaser bleached the cloth is unknown. Some versions are coarser than others, and occasionally one comes across a piece with slubs or cotton refuse in the yarns.

Domestic cloth is an excellent clue to a nineteenth-century quilt. It seems to have gradually lost popularity towards the end of the century, replaced by different kinds of sheeting, but one occasionally comes across quilts with domestic cloth backs that are pieced of fabric obviously printed in the 1890s.

It is important to emphasize that domestic cloth is not homespun, and that homespun or homewoven fabric is quite rare in American quilts. When we do come across it, the homespun is usually a combination of cotton and wool or an all-wool fabric.

Unbleached Muslin. The coarse, crisper cotton we tend to call unbleached muslin today seems to have replaced domestic cloth for quilt backs and other household uses toward the end of the nineteenth century. We see many references to the words "unbleached" and "muslin" as meaning a cheap cotton throughout the century, but determining exactly what cotton the writer was discussing is difficult. For example, a 1839 Pennsylvania inventory lists "1 piece of muslin for quilt lining (value 50 cents)." Rebecca Primus wrote to her parents on March 16, 1868: "I hope cotton is not going up again. I was really in hopes 'twas falling, for I wanted you to get me a real nice piece of bleached. The unbleached I will keep as I shall want some chemise for next winter." She may be talking about domestic cloth, a class of unbleached sheeting, as was Angeline Mitchell Brown in her diary entry for September 25, 1870. Living on the frontier, she'd been ridiculed for wearing clothes too fancy for a mining town and vowed that the next time she went to town, "I'll wear nothing but dark calico and unbleached sheeting for underclothes!"

Once mail-order catalogs began selling sheeting by mail, we get a few more clues into the type of cloth being sold. The 1890 Montgomery Ward's catalog offered "Bleached Cotton, 1 yard wide" from 5 to 14 cents a yard, and "unbleached sheeting, 90 inches wide, 25 cents a yard."

Prices increased slightly over the decade. The 1897 catalog from Sears, Roebuck and Company has many descriptions under "Domestics," in which there are two main categories: "Sheeting, heavy unbleached" from 4-1/2 to 6-1/2 cents per yard and "sheeting, fine unbleached" from 6-1/2 cents to 7 cents." Descriptions include "select first

picking of domestic cotton, nice, clean...[will] wear well, wash easy and bleaches out nice and white...another make we get under very favorable circumstances direct from the south." Related cloth included "wide sheetings" up to 88 inches wide for 19 -1/2 cents and heavier cotton drillings, advertised for linings, pockets and boat sails for six cents.

One reason (and this is pure speculation here on my part) for the change in fabric style that we note on the back of quilts might be the increasing competition that the New England mills were getting from the Southern mills that sprang up after the Civil War. By 1890 Southern mills, focusing on inexpensive cottons, were undercutting Northern mills, which tended to abandon the cheap cloth and specialize in prints, something at which the Southern mills had no expertise. The fabric that looks to us like unbleached muslin MIGHT be the Southern answer to the old New England domestic cloth. Once Southern muslin could be sold cheaper than New England domestic cloth, the domestic cloth disappeared. It's a lovely theory, especially at this point when no one has yet brought up any facts to dispute it.

So what are those backings that look like muslin on the back of Baltimore Albums and other mid-century quilts? Probably, a class of sheeting that is of little help in determining a date.

The quilt detective should probably spend some time developing a photographic file of white backings on quilts that are date-inscribed. Careful examination of the varieties across the nineteenth-century could be very useful in dating beyond the domestic cloth vs. unbleached muslin that is discussed here.

Miscellaneous Quilt Backs. Checks, plaids and prints are not an unusual backing, especially for utilitarian quilts with minimal quilting and for tied comforters. An occasional quilt has a patchwork lining of randomly sized scraps, probably the quiltmaker's solution to a shortage of the fabric necessary for a unified back. For more on two-sided quilts and backs striped of lengths of fabric see issue #27.

Pre-quilted Satin Linings. Seamstresses making late-nineteenth century show quilts of silks sometimes took a short cut and mounted the quilt top on a backing of manufactured pre-quilted satin. These machine-quilted linings for garments came on the market soon after the Civil War and remained popular, described in mail-order catalogs at the end of the century. Montgomery Ward in 1890 advertised "quilted satin linings for cloaks and suits," 22" to 24" wide at \$1 a yard or 18" wide for 65 cents. "Our success last year has tempted us to buy heavily for this winter in these goods." At the end of the decade prices on this item too had dropped but the pre-quilted linings still cost about ten times more than a yard of cotton sheeting. In 1889, Sears sold "Quilted Linings---quilted sateens, extra quality goods, 27 inches wide, colors, black, cardinal, pin k, old gold, light blue, wine or brown. 52 cents per yard."

Week #43: Quilt Assembly Quirks

Quilts are generally made as three layers, a patchwork top, a middle layer of padding and a backing. The three pieces are each finished full-size and then sandwiched together and finished with tying or quilting. While examining the back of a quilt, you may come across an exception to this technique, a quilt in which the three layers are joined together as smaller units and then stitched together. In 1888, Mrs. J.C. suggested that fellow readers of the *Housekeeper* magazine cut their quilt tops into quarters and machine quilt them a fourth at a time, to make them easier to handle. “When the four pieces are done, I sew the right sides together and fell down the lining over the seams and bind the edges.” I don’t recall ever seeing a quilt that looked to be joined front and back in quarters, so it may be that no one ever took Mrs. J.C.’s advice.

Quilt As You Go. Just the other day several women in my sewing group were making lists of projects they were going to finish and a few of them mentioned finishing up their first quilt, a sampler done in the method called “Quilt As You Go.” It always sounds good. Each block is quilted as it is finished. The blocks are then joined face to face with a running stitch on the front of the quilt and felled (hemmed over) on the back, just as Mrs. J.C. suggested. Each batting square butts neatly up against the next square in the best of all possible worlds and the seam on the back looks as good as the seam on the front.

No quilt frame, no long-term commitment to quilting a full-size piece! The only flaw is that these quilt as you go samplers rarely got finished. The seaming on the back was a complicated task for the beginning seamstress and the concept of a border was terribly daunting. I finished my only attempt up a few years ago by begging Terry Thompson to finish it for me. I have no idea why she said she’d do it, but she did. We just forgot about the border.

The name “Quilt As You Go” probably goes back to a Bonnie Leman book in 1972. Her *Quick and Easy Quilting* featured techniques for “no frame quilting” and “instant patchwork.” The technique is much older; one occasionally sees it in nineteenth-century quilts. Sometimes the back seams are hemmed under; other seamstresses used tape to cover the seams and in a third variation each block is bound and whipped to the next.

The International Quilt Study Collection has an 1864 quilt done in the last method with each blocks quilted and bound individually. The signature nine-patch with a Union shield in the center was probably made as a Civil War Sanitary Commission quilt to donate to a hospitalized soldier. The blocks are bound with tape, finished sort of like potholders. The finished blocks are then stitched together. The quilt was included in the exhibit *Partisan Pieces* with a photograph of period instructions for making quilts using this bound block method. This quilt is obviously a Civil War soldier’s quilt as it is dated November, 1864, and features the Union shield. There may be other group quilts made for the same purpose using this method that are not as easily identifiable as soldier’s quilts. [Lately people have been calling these Potholder Quilts.]

Clues You Can Count on

- Polyester batting dates to 1960 or later.
- Domestic cloth backing is an excellent clue to a nineteenth-century quilt, and probably one made before 1875.
- What we call unbleached muslin, a natural colored loosely woven cotton of coarse yarns, often with specks and slubs, is a good clue to a quilt made after 1900.

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