Notes on the Federal-Issue Civil War Blanket

AUTHOR'S INTRODUCTION:

This article, prepared specifically for ***The Watchdog****, is a synopsis of a portion of a more detailed monograph in process, which reviews the history, and use of blankets before and during the Civil War (the War) by the regular branches of service of the U.S. Army. The conclusions presented here are based on the examination of forty-five original blankets that retain the letters "US" stitched in them (the "database"), analyses of yarns from eleven of those examples, extensive review of Quartermaster Department (QMD) records (Record Group 92) in the National Archives and examination of all extant QMD contracts for the War years in the Treasury Department, 2nd Auditor's records (RG 2117), also in the Archives.*

Endnotes and citations have been omitted in the interest of maximizing the available space for text. A short bibliography, however, has been provided for the benefit of those who wish to read further in published sources.

For their thoughtful reviews of this article as it moved to publication, I wish to particularly thank Steve Osman, Bill Brewster, Jerry Coates, Charles Childs and Larry Strayer; and for their research assistance, Bryce Workman and Jim Hutchins. Thanks are also due to Ben Tart, Dr. Brent Smith and Jim Liles for various textile notes and the yarn analyses. Finally, I appreciate the numerous institutions and private collectors who provided access to their blankets.

Looking back on the American Civil War from the vantage of over 130 years, and as "living history" enthusiasts, we tend to look at the state of uniforms, equipage and accoutrements from the perspective of the end of the War. This is quite natural. By 1864 the Quartermaster Department finally had an organization that could in large measure supply what the Army needed, largely standardized, in the quantities it needed, and at acceptable levels of quality. Indeed, so much materiél was in the pipeline at the end of the War that much of the surplus ended up in the hands of dealers like Stokes Kirk, Bannerman, and White; and from thence into our collections. With more original artifacts, images and documentation surviving from the last twelve to fifteen months of the War than from its earliest days, it is not surprising we tend to be not only fitted out better than soldiers of the period, but more likely in the patterns that were in use as the conflict ended.

Interestingly, some of these generalizations do not hold up when the QMD-issue blanket is considered. Despite the level of in-depth research on the material culture of the War that has been underway for at least four decades, the issue Federal blanket has received scant attention. Only fairly recently have accurate reproductions become available that have a context for their use. The intention of this article is to provide some detail on the blanket issued by the QMD to Federal infantry forces during the War, to guide you in your selection of a reproduction blanket and its possible personalization. It will not address the variations encountered in state-procured or issued blankets, nor those privately procured or issued to other branches of service.

Just as for our forebears, a good blanket is important. Especially at the beginning of the War, the foot soldier had only his greatcoat and blanket as items for personal protection from the elements. The poncho, shelter tent and rubber (tent) blanket, almost universally present in the modern living historian's kit, would be introduced in 1862 and only gradually become items of general issue. However, for us it is more a matter of presenting a certain impression than it is to ward off rain, sleet, snow or the cold with our blanket. For us the accuracy of a blanket reproduction is of paramount importance as we recreate that certain "look," especially if it is of a particular unit or time of the War.

Once the context of the impression (if any) is established, one's initial selection is critical. It is difficult to dramatically change the appearance of a blanket once it has been woven and finished. Its texture and size are essentially established at the time of manufacture, although dyeing can alter its color. Further, personalization of a poorly reproduced blanket does not make it a better reproduction. So, how does one know what characteristics make a particular reproduction acceptable? Are there characteristics particular to early-War, or later-War, blankets? Or to locale? Although these questions perhaps cannot be definitively answered in the space allowed here, some generalizations are offered.

For most items that touched the lives of the foot soldier there tended to be a process of evolution that reflected technological improvements, feedback from experience in the field, tighter procurement procedures by the QMD and a better sense of value on the part of department personnel as the War progressed. Such was not the case with blankets. Unlike many other items, the QMD never made any of the blankets it issued: all were procured through contract. However, the domestic capacity to produce blankets, especially on short notice at the beginning of the War, was inflexible to rapid expansion. As noted in the 1865 Quartermaster General's report, often that meant going to overseas sources: "The only domestic branch of manufacture which has not shown capacity to supply the army is that of blankets. The department has been obliged throughout the war to use a considerable proportion of army blankets of foreign manufacture." Although 10,000 French Army blankets [What color were they? asks the **DOG**.] were bought in October 1861, this meant primarily British manufacturers, which galled Quartermaster General Montgomery C. Meigs because of their government's support for the Confederacy.

The Army even suggested as late as August 1862 that "...all citizens who may volunteer or be drafted are advised to take with them to the rendezvous, if possible, a good stout woolen blanket...as it is impossible for the United States to supply all the troops immediately." This was after, by Meigs' own report, 1,458,808 blankets had been purchased for the fiscal year 1 July 1861 through 30 June 1862!

The result was a QMD that, throughout the War, felt fortunate if it could just get enough blankets of reasonable quality. Indeed, the need was so great and the alternative sources of supply so limited that frequent deviation from the regulation blanket specifications were allowed throughout the War, not just at the beginning. This should not surprise ***Watchdog*** readers, as previous product reviews and articles have explored variations from the *Regulations* for other issue items. As the War progressed it cannot be said that the quality of the issue blanket improved. Indeed, with "shoddy" allowed in the yarns of blankets that passed inspection once the War began in earnest, it could

be said the quality of the issue blanket actually declined. That said, there is no written substantiation for the term "emergency issue," and it certainly does not serve as a justification for odd color or poorly woven reproduction blankets.

Despite what the contracts reveal about what was actually being bought, the official specifications should be, nevertheless, the starting point for our evaluation. However, as we will see, how precisely the reproduction conforms to the *official* specifications is only in limited terms critical to its acceptability. Colonel George H. Crosman, assigned to the Schuylkill Arsenal in 1847 and in charge of that facility during the War, noted in 1856 that "In the regulations of June 1851, at my suggestion, amongst other changes, was that of the Soldier's Blanket; which was then increased to five pounds; to be grey; with U.S. in the centre,...and to measure seven feet in length by five and a half in width." Indeed, that description of the blanket in the Army's *Regulations* of 1851 (paragraph 143) is echoed fourteen years later in the galley proofs of the "Quartermaster's Manual" of 1865: "*Blankets* – woolen, gray, with letters U.S. in black, 4 inches long, in the centre; to be 7 feet [84 inches] long and 5 ½ feet [66 inches] wide, and to weigh 5 pounds each; made according to specifications; see table of textile fabrics, chapter eleventh."

There are only two documented pre-War blankets that conform to those specifications still in existence. Both were given to the Danish government in 1858 as part of an official exchange of arms, clothing and equipage. One was to have been for foot soldiers and a lighter weight one for mounted, at a time when the blanket for mounted troops was also gray. However, the descriptions provided for these blankets suggest they are very similar. Indeed, these two originally may have been from the same lot of blankets, and one probably does not represent the proper blanket for the mounted branches of service at the time of the exchange.

Procured by the QMD and never having been used, these "Danish Exchange" blankets should exhibit acceptable characteristics of the Army's issue blankets at the beginning of the War, even if they do not conform precisely to the regulation description given above. One blanket was described in 1977 by Ms. Inga Fl. Rasmussen, Curator of the Tøjhusmuseet in Copenhagen, Denmark, as being 206 centimeters [81.1 inches] long and 174 centimeters [68.5 inches] wide, "with a black stripe, 9.5 centimeters [3.74 inches] broad, running along both sides [ends] of the blanket 15 centimeters [5.9 inch] from the edge...The colour I would describe as greyish-brown...The "U" is 11 centimeters [4.3 inches] and the "S" 12 centimeters [4.7 inches] high. They both are 2.5 centimeters [1 inch] broad." FIG 1 and FIG 2 show this blanket with the familiar stitched three-line US letters, confirming that configuration as regulation (stamped or stenciled US letters were in vogue from 1821 until, apparently, 1851, and not re-approved until the 1870s). The second blanket, described in 1984 by Ms. Rasmussen, was the same 174 centimeters (68.5 inches) wide, but only 190 centimeters (74.8 inches) long. The stitched three-line US is comparable to the first blanket, although the stripes are somewhat closer to the ends. Although neither blanket was weighed, because their characteristics are similar, my speculation is both blankets were intended for foot soldiers and came from the lot of 13,500 blankets imported (probably from Great Britain) by Cronin, Hurxthal & Sears in 1857.

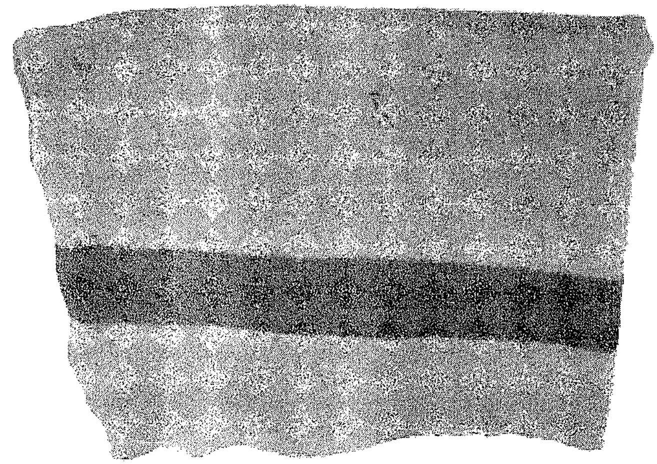


FIG 1. The first of the Danish Exchange blankets described, folded, showing how the fulling and napping processes conceal the 2/2 twill construction, except in the stripes (Courtesy the Tøjhusmuseet Collection, Denmark)

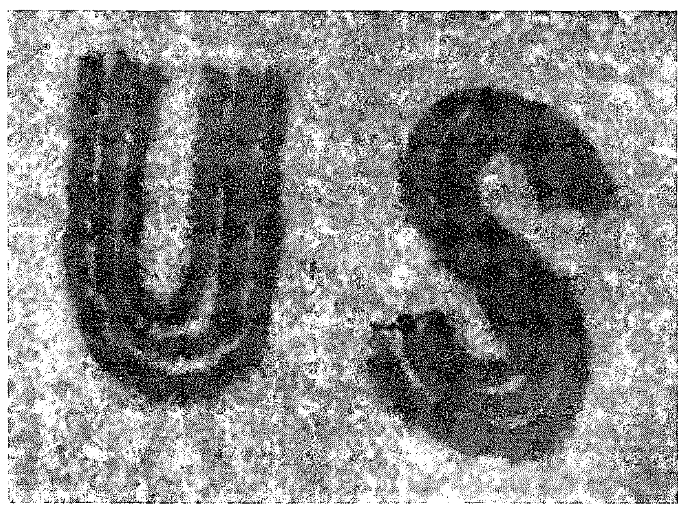
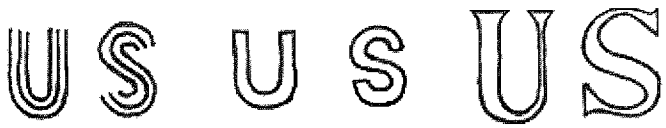


FIG 2. Detail of the three-line US stitched into the above blanket

If these Danish Exchange blankets did come from the same lot, it helps us appreciate that even in the peacetime Army, variation was anticipated. Indeed, Crosman went on to note in the 1856 letter already quoted from that "In the manufacture of Blankets, I am informed, it is very difficult to finish them of exactly equal weight and dimensions, owing to the variability of the effects of fulling, [illegible], and other processes; but we have endeavored [illegible] to avoid light weights or short measures, and the Inspectors condemn all that fall within this description." Interestingly, he does not mention adherence to the color gray as [illegible] aspect of the inspection process.

One [illegible] of these blankets was the fact that they were [illegible] construction. Without getting too far into the technical [illegible] makes twilled goods, suffice

it to say the final product has diagonal "ribs" (as seen on modern cotton drilling or blue jeans) across its surface. These ribs are particularly evident in FIG 4. Because from the time of the American Revolution (and no doubt before) the 2/2 setup was used for white "point" blankets (used by the Army prior to 1851 and the ones with which Crosman would have been familiar), those diagonal ribs are at about a fifty-five to sixty degree angle to the edge of the goods. Tabby, or plain woven, blankets (such as "rose" and "duffil") were purchased during the War of 1812, but only because of the exigency of the situation. All of the forty-five blankets examined in preparation for this article are twill woven, confirming that construction for the issue blanket during the War. There are other fine points related to construction, such as the occasional use of worsted warp yarns in some blankets, which are not readily apparent in the reproductions likely to be encountered, and they will not be discussed here. Already mentioned, the use of 'shoddy' (recycled woolen, and to a lesser degree cotton, materials) will be addressed in more detail later in this article.



1. "3-LINE US" 2. "BLOCK US" 3. "SERIF US"

FIG 3 . The three most common types of US letters found stitched into issue blankets

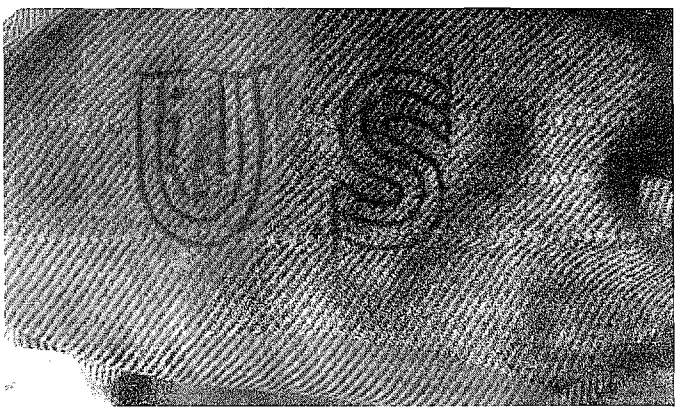


FIG 4. A good example of a combination of 3-line and block letters, with the ends of the 3-lines forming the "U" and the "S" being closed off as in the block type. Note, too, the pronounced twill weave visible in this example, as well as two weaving errors

Another universally present feature of military blankets during this period was that of stripes at either end. Perhaps they were so universally expected, they are not mentioned in any of the official descriptions! The stripes were narrow (less than three inches) and dark blue until 1851, when, along with the change to the gray color, Crosman apparently got their width increased to about four inches. The stripes in the Danish Exchange blankets, as noted, are black, but only about 3.75 inches wide. However, in the database of forty-five blankets they vary from two inches to five inches, with the average of all examples being 3.25 inches wide. In all but two of the blankets in the database, the stripes are distinctly darker than the body of the blanket, whether its current color is gray or brown.

Measuring the distance of the stripe from the end of the blanket is difficult for two reasons, both related to the fact that the ends of military blankets were unbound until about 1900. First, blankets were woven and finished as one long, continuous piece of goods; then cut into pairs; and finally baled. They were issued without the ends being bound. Fraying, the natural result from the loss of weft (crosswise) yarns and revelation of warp (lengthwise) yarns, resulting in "fringe" at the ends, makes determination of the original end (and overall length) of the blanket difficult. Second, because of that tendency for the ends to fray, some blankets have had the ends bound. For most this did not occur until they entered civilian use, although the possibility that some were bound by soldiers exists. Using the bound edge or longest warp yarn as the 'end', the stripes in the database ranged from 3 to 9.5 inches from that point, with the average being about 5 inches. As noted above, it is just shy of six inches for the first of the Danish Exchange examples.

Goods woven of natural materials usually require some type of finishing, if only a washing to remove dirt, greases and other residues, before use. Woolen goods, such as kersey and blankets, generally were napped in addition to being fulled. These processes add body to the piece, as well as giving it a softer surface and more uniform appearance. They also generally diminish the initial visibility of the twill pattern (take another look at FIG 1 and FIG 2), until use wears off the nap and makes the twill more pronounced. However, it is clear some blankets received virtually no finishing, with one extant blanket that has had virtually no usage (the "Weissert" blanket, in the Wisconsin Veterans Museum, Madison, Wisconsin) retaining intact seed burrs in its yarn! Such poor quality yarns and lack of finishing would never have been accepted in a pre-War blanket, but do show the pressure the QMD was under to acquire blankets during the War.

The presence of a stitched US in the Danish Exchange blankets provided the rationale for limiting blankets for inclusion in the database and analysis to those which retain the same. It is unlikely that soldiers took the time to stitch letters indicating Federal ownership into their blankets; therefore, it has been assumed the presence of a stitched US indicates the blanket came into service through the U.S. Government's QMD procurement process, rather than through a state one or by private purchase. It should be noted here that there is at least one extant example, not included in this database that has stamped or stenciled US letters. (See *Echoes of Glory, Arms and Equipment of the Union,* 214, for the blanket of Private Edgar S. Yergason, 22nd Connecticut Infantry.) Given the database is only forty-five examples, compared to the millions of blankets purchased, as long as we do not become too dogmatic about the percentages I think they can still give us some useful information about the US letters.

Although the Danish Exchange blankets both have three-line letters, two other versions for the letters were observed in

some quantity: "block" and "serif", shown in FIG 3. As might be expected, the three-line version predominates, with twenty-two examples (48.9 percent). Twelve examples have the block (26.6 percent), and three (6.7 percent) have a combination of them (three-line letters with the ends closed off, such as seen in FIG 4). Five examples have serifs (11.1 percent) on the letters, and just three (6.7 percent) have completely unique versions of the letters. For the three-line letters, the distance across the three lines that make up the letter is generally about one inch.

The height and "spread" (overall outside distance from left to right) of the letters range from 3.5 and six inches to seven and 23.5 inches, respectively, for the three-line letters; from 3.5 and 6.75 inches to seven and 11.5 inches, respectively, for the block; and from four and seven inches to seven and 11.5 inches, respectively, for the serif examples. As a comparison, the spread of the Danish Exchange blankets is seven inches in both cases. Two three-line examples had the extreme spreads of 21.5 and 23.5 inches. Although an acceptable reproduction would most likely use one of these three versions for the stitched US letters, obviously a few blankets did not conform to that stricture and your blanket could be made a bit more unique through the addition of a different US, if you can obtain it without letters. However, I would recommend the US letters be stitched into the blanket, and not stenciled or stamped (despite the existence of the Yergason blanket, with such lettering) as the former is by far the most common mode of application.

Several of the original blankets exhibit other markings. One blanket has what appears to be part of a maker's name on it, "...& CO", no more of which can be deciphered. Another one in this database also has block printed letters, which do conform to a contractor's name in the 2nd Auditor's records. Other than the fact that the contractor supplied blankets between September 1862 and August 1864, details about the second blanket are withheld at the owner's request. I might note that after July 1862 all items supplied by contract were to bear the maker's name, and after August 1864 the date of the contract. Although the rigors of campaigning could have worn off any such stamped or stenciled names, along with the nap, it would appear most manufacturers were able to avoid the extra expense of marking their blankets individually. Importers may have been allowed to mark only the burlap covering of each bale of one hundred blankets (fifty pairs) with their name or other identifying stenciled patterns.

A number of other blankets still very clearly bear the names of their owners, sometimes accompanied by unit designations. The Milwaukee Public Museum, Milwaukee, Wisconsin, has several so marked, although only one from their collection will be illustrated here (FIG 5 and FIG 6) to show the typical placement of such letters. Although such markings are more often seen placed close and parallel to one of the end stripes, occasionally they are seen in the body of the blanket. One has been observed just below the US letters (FIG 7). Generally these letters are no more than 1.5 to two inches tall, and have been stenciled in black ink. (No significance should be taken from the fact that both blankets illustrated have a block US.)

Others have been observed with embroidered names, unit markings and other memorabilia on them. One blanket, not in this database because of the lack of US letters, but noted because it is identified to Private Benjamin Smith of the 5th Wisconsin Infantry, has the soldier's name, "1862" and "Seven Days Before Richmond" embroidered in script letters about ten inches tall. Also, in the Vermont Historical Society there is an image of members of Company B, 3rd Vermont Volunteer Infantry taken at the end of April 1862 near Lee's Mill, Virginia, which showswhat appears to be a gray blanket with black stripes behind the lounging soldiers. Parallel and next to one of the end stripes

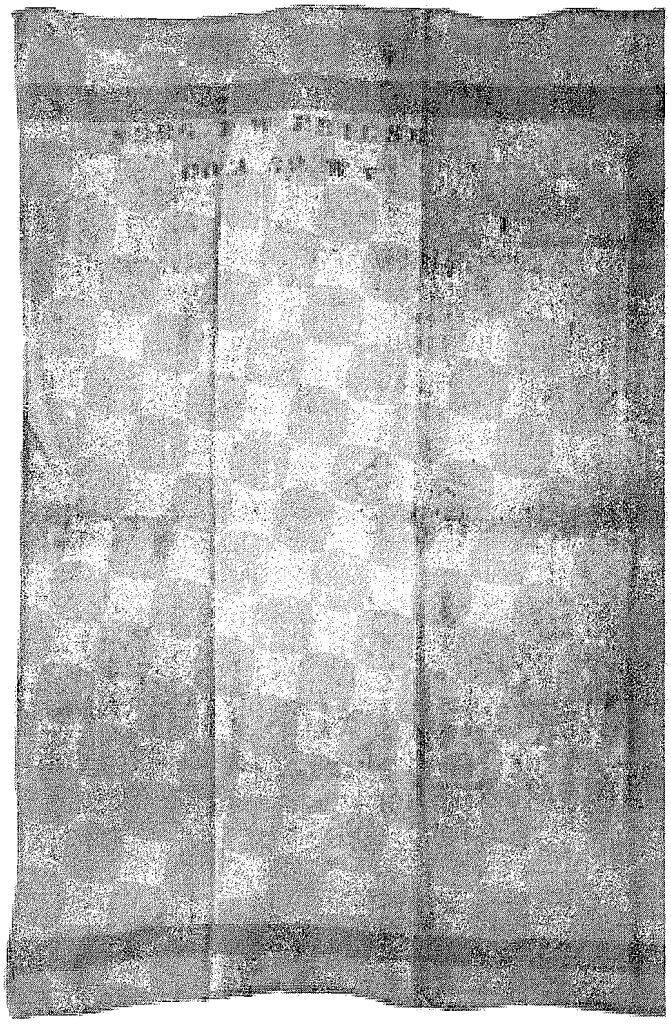


FIG 5 Overall view of a wartime blanket with a block US. Note the typical stenciled markings of "SERG F W FRIESE / CO A 39 W V", placed parallel to and near an end stripe (Courtesy the Milwaukee Public Museum, Wisconsin)

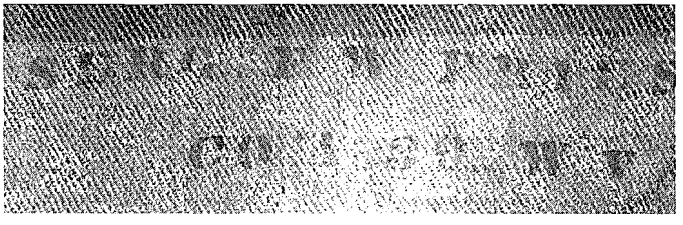


FIG 6 Detail of the markings on Sergeant Friese's blanket in FIG 5

is a long series of white letters that begin "CO..." about five or six inches tall.

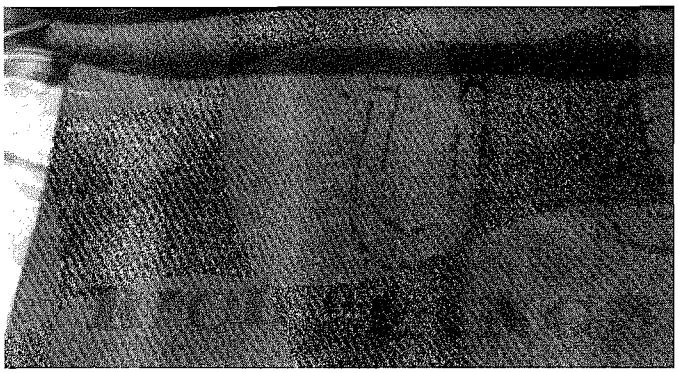


FIG 7. Detail of the block US and stenciled name of "RICH D KINGSLEY.", a private who served with Co. I, 169th Ohio Volunteer Infantry during the summer of 1864 in the defenses of Washington, D.C. (Courtesy the L.M. Strayer Collection, Ohio)

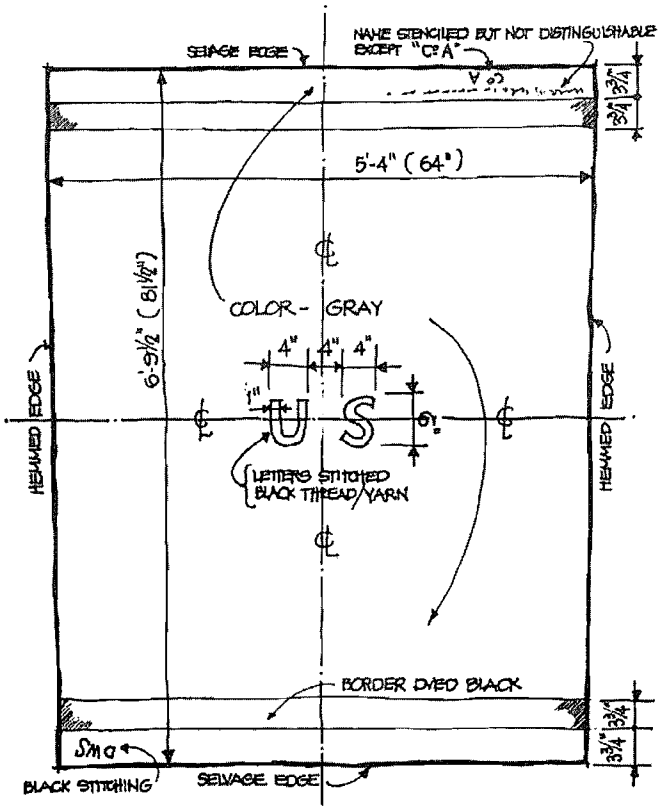


FIG 9 Drawing of an atypical blanket, in that it has the stripes parallel to the selvage edges and the sides, rather than the ends, of the blanket are hemmed. This is the only example in the database observed made this way. Note the stenciled name (unknown) and "Co A" are again near an end stripe. The soldier has stitched his initials "DWS" near the opposite end (Courtesy Donald Heckaman, Ohio)

EDITOR'S NOTE:
All illustrations have been provided by the author with sources noted. Some images have been computer enhanced for clarity. Copies of the images in this article are posted on the **DOG's** web site < http:www.rust.net/~watchdog/ >.

FIG 8. Detail from a tintype of Private George Meech, 21st Connecticut Volunteers, taken at Suffolk, Virginia on 20 April 1863, showing the 3-line US letters in his blanket roll (Courtesy Connecticut State Library, Hartford and Dean Nelson)

The personalization of a blanket is both a legitimate and an enjoyable project. Also, it can help establish your ownership in the event the blanket is lost or stolen. Personalization can be as simple as stitching your initials in a corner of the blanket (see the "DWS" in FIG 9 as just one example). Stenciled letters representing both the soldier's initials and his company's letter are also known. However, care should be used when using a commercial, pre-cut stenciling kit to be sure the style of the letters is appropriate for the period. Most modern brass Army stencils, for example, do not use the correct size or style of letters for the War period. There are ways to cut your own stencil(s), which can be used over again, if you cannot find appropriate pre-cut ones. Check with your local arts and crafts store for assistance.

The one characteristic avoided to this point in this article has been the color of issue blankets. For most of us the subtleties of weave and 'hand' are transcended by what the color of the final product is. Indeed, to many of us this can be *the* most important characteristic. In broad terms, what does it look like? For myself, confusion over the "gray" of the *Regulations* and the brown of almost all of the blankets examined over the years started this serious interest in the issue blanket.

I must confess, too, at one time I accepted the idea first put forth in 1972 in *The Skirmish Line* by my good friend, Jerry Coates, that "gray" (or grey) referred less to the blankets' actual color during the War than it did to the trade term for undyed or unprocessed wool. Thus it became relatively easy to explain why so many surviving blankets now have an overall brown appearance, or at least the "greyish-brown" of the Danish

Exchange examples: the mixing of various colored natural fleeces could have resulted in yarns of various hues of brown, and the original color (or something like it) has survived until today. Add in other rendered woolen materials and their colors (the 'shoddy', characteristic of poorer quality material) and the final appearance of many blankets could, under this line of thinking, have at times approached a brown or gray-brown color.

However, I now believe the word "gray" truly refers to the color of the issue blanket in the 1850s, perhaps to that of many blankets early in the War and for some for the balance of the War. Probably starting in 1862, "gray" would come to refer more to the *preferred* color of the blanket and less to the actual color of blankets accepted by the QMD. Blankets actually gray in color no doubt were received by the QMD throughout the War, but certainly fewer of the quality of the Danish Exchange pair as the War progressed and QMD personnel reconciled themselves to the fact that blankets with shoddy had to be accepted if the soldiers in the field were to have anything. The extent of the shoddy that could be accepted is shown by that in both the Weissert and Thomas blankets the latter in a private collection.

Certainly soldiers' recollections and other records mention gray as the color of blankets that actually arrived in the field. Only two will be included here. A board of survey convened on 18 February 1862 on behalf of the 22nd, 24th and 30th Regiments, New York Volunteers, found "many of the blankets that have been issued are light, and very inferior gray blankets." Private W.B. Smith of Company K, 14th Illinois Volunteer Infantry, recorded the process of his company being uniformed at Springfield, Illinois: "After each of us received his knapsack, canteen, and haversack, and its belongings, we drew the following articles of clothing: two pairs of gray woolen socks, one pair of heavy sewed brogans, two pairs of heavy drilling drawers, one pair of light blue woolen pants, one each dark blue woolen blouse, dress coat, and cap, one light blue woolen overcoat with cape, two gray woolen shirts, and one pair of gray woolen blankets with the large letters U.S. woven in the center of each."

Interestingly, a brown blanket, complete with a three-line US, is shown wrapped around the shoulders of abolitionist John Brown in a painting featured on the cover of the August 1996 issue of *The Smithsonian Magazine*. Although the date that painting was done is unknown to me, by 1862 brown blankets were being described in the field. Walt Whitman, for example, noted on 21 December 1862, when visiting hospitals in the aftermath of the battle of Fredericksburg, that "Several dead bodies lie near, each cover'd with its brown woolen blanket." In addition, the American artist Winslow Homer depicts brown blankets in several of his ca. 1863 paintings, and continued to illustrate brown blankets for the remainder of the War.

A few paragraphs before I said gray was the "preferred color" for blankets because it should already be clear the QMD made many exceptions besides that of color in its efforts to obtain reasonably acceptable blankets. The extant QMD contracts contain the following notes in various blanket contracts, all of which would have been unacceptable prior to the War, and certainly qualified as exceptions during the War: "inferior;" "not standard;" "pairs of 8 pound[s];" "irregular" and "like sample marked 'A' blue mixed." Several contracts allow "brown grey" blankets, but none of them mention stripes.

Two of the largest contracts for blankets were with the importers, Cronin, Hurxthal & Sears. One for 100,000 dated 19 September 1862 has the usual size, weight and lettering requirements, but notes "A slight variation in the shade of color or variation of less than 2 inches in size will not be noticed provided they are equal in quality and weight to sample." And again, after the usual requirements (but omitting to mention lettering), their contract of 17 May 1864 for another 100,000 blankets allows them even more latitude, to "furnish any of the shades of brown, mixed or a gray mixed color."

Some blankets that were undoubtedly substandard were intended for prisoners of war, but only a few of the contracts state their purpose. All state the depot of destination, but there appears no correlation between the notations of color or other characteristics and the depot which received a particular contract, other than the imported blankets understandably went to New York or Philadelphia.

Despite these exceptions, which could account for some of the brown blankets seen today, many more contracts spanning the entire War note simply the color will be "gray", just as included in various official specifications. And, despite the experience of the War, which changed the specifications for other items (like the corrugated canteen, for example), Crosman included just the word "gray" in the 1865 "Quartermaster's Manual", which he authored but the QMD never published. Actually, he goes on to refer to a table of textile fabrics, which adds that blankets were "to be made of pure, long staple wool, gray in color." However, in 1867 Crosman replied to criticism of the "old peace standard" Army blanket by noting "The sealed sample enclosed herewith, is the kind issued to the Army in 1858, '59 and '60; and will on examination, I think, clearly prove this fact [of its excellent quality]. Prior to 1851, many white imported blankets, of small size and weight, were furnished to the Army; but then, on recommendation of a board of officers, a new standard gray blanket, was adopted for our service; measuring 7 feet by 5 feet, six inches, and weighing 5 pounds. This has ever since continued to be the standard at this Depot, by which to contract for them. The general opinion is, altho' made of coarse wool, they are of good quality, and very strong and serviceable."

While Crosman gamely tried to assert that the standards of the *Regulations* and "Quartermaster's Manual" guided contracts for blankets during the War, these quotes indicate what he really wanted was to *return* as quickly as possible to the color and quality of the pre-War blankets. His own admission that "peace standard" blankets were unavailable early in the War (he does not even include 1861 or 1862 for their being issued to the Army) confirms just how quickly the QMD was forced to deviate from its own standards in order to obtain blankets. Unlike many other items, the interesting point about blankets is that the QMD was never able to enforce those pre-War standards for the remainder of the War. Only when the enormous War surplus of blankets, well over a million pieces, was depleted was the QMD able to enforce again its strict pre-War inspection procedures.

As part of this review of the issue blanket it was thought dye analyses of yarns from several original blankets might reveal if dye breakdown could account for a color change in some blankets, from gray to brown. Jerry Coates' work on "brown thread" provided the impetus to look at that possibility, even though woolen fibers were not used for thread, and therefore his conclusions were not readily transferable to this project. A letter from Crosman to the board of officers that recommended the uniform changes of 1851 suggested the need to investigate that possibility as he stated "a grey blanket, like that used by the French Army, dyed in the wool [i.e., the raw wool is dyed before mixing, carding, spinning and weaving are done], would, I think, be the best..."

Interestingly, a contemporary dye analysis was found in a letter from Assistant Surgeon General J.J. Woodward to Surgeon General J.K. Barnes dated 18 December 1875. Woodward was asked to compare two blankets, a "sealed standard blanket" and a "sample blanket" of undisclosed origin. He performed microscopic examinations, tearing tests and chemical analyses. The latter are most pertinent here: "1. The sealed standard blanket is shown by microscopic examination to be composed entirely of sheeps' wool, without a mixture of cotton or other foreign fibres...The gray color of the blanket is obtained by mixing undyed wool with wool colored by a dye-stuff which makes the fibres appear nearly black to the naked eye, blue-black under the microscope, and which turns red on the addition of muriatic acid, the blue color being restored on the addition of an alkali." These tests are very suggestive that logwood had been the dye for the colored fleeces mixed for use in that blanket as it responds in the same way to acidic and alkali tests, and can be used to create both black and blue colors in natural fibers, depending on the mordant (the agent needed to fix the dye to the natural fiber) used.

However, it need not be restated that these results were from a blanket that met Crosman's standards of pure, gray wool. This 1875 analysis specifically notes no cotton was present in the gray sealed sample. And, indeed, the legacy of the poor quality of some (if not a majority) of the blankets received during the War can be seen in the 9 January 1885 QMD *Specifications for Woolen Blankets*, which state the blankets were "To be pure long staple, free from shoddy, re-worked wool or cotton, or any impure materials."

The speculation has been that logwood would have been the primary dye used for dyeing yarns and/or blankets. This is not surprising, as logwood had been known to be a cheap dye for grays, blues and blacks for hundreds of years before the War. It was perfect for Army contracts! However, it was also light unstable and could break down within months of being exposed to sunlight. Advances in the early nineteenth century in the mordanting of dyes, including logwood, had improved its stability considerably, and many items dyed with logwood retain their richness of color to this day. Those dyed with a chrome or copper-chrome mordant are not so fast to light (i.e., resistant to fading), and can turn (olive) drab or green. On the other hand, logwood dye used with an iron mordant is more light fast, but still can turn brown, especially if the item is fulled. It will remain unknown how extensively those advances were incorporated into the manufacturing processes used by the various contractors for QMD goods, or by the makers of the blankets which were imported, and what effect(s) they may have had on blankets we can examine today.

The yarns from only one of the eleven blankets tested provided an unambiguous connection between a gray blanket and logwood dye. The results came, not surprisingly, from the first of the pre-War Danish Exchange blankets. This blanket, at least in the eyes of an observer twenty years ago, appeared to some degree gray; and the dye analysis indicated clearly that logwood dye had been used in the coloring of its yarns, both for the body and stripe.

One problem readily became apparent when yarns were received and tested from the ten other blankets in the database, all of which now would be described as brown or sandy in color. In several cases shoddy was visible to the naked eye, and all to some degree could contain shoddy, which The *Merchant's Magazine* commented on in 1851: "A great demand has arisen for old rag wool: large sales have been made at 6-7 ½ c[ents]. The wool is obtained from taking old made up clothing and reducing it to a state of wool, which manufacturers buy to mix with new wool, so as to reduce the price of cloth, but at the expense of its strength. The appearance of the cloth so made is equally good to that made entirely of new wool. This rag wool is technically called 'shoddy'."

A large industry for the production of shoddy arose in England in the 1840s and 1850s. In the fiscal year which ended 30 June 1862 we imported "6,930,196 pounds of blankets, valued at $1,945,707...[In addition,] Among the imports were 6,291,077 pounds of wool flocks, waste, or 'shoddy,' which has been much used in the manufacture of army and navy cloths and blankets in the United States, as it has been in England...These shoddy cloths, on account of their cheapness and deceptive appearance, have been very much used in the United States, to the injury of our cloth manufactures, being, in some respects, better adapted to produce a close, short nap than American wool, this material has also entered into our domestic manufactures of late years..." Here we have a direct connection between shoddy and army blankets, published when the War had been underway for less than a year!

While these quotes suggest shoddy to be an exclusively woolen product, cotton threads and colored cotton material remnants have been found in database blankets. The Weissert blanket may even have had cotton bailing twine incorporated into its yarns! Thus it is clear that, in the American market at least, the working definition of shoddy probably included any kind of material available for reuse. A microscopic analysis of blanket yarns may well reveal the presence of rendered fabrics in addition to those of woolen and cotton.

Despite the fact that mordant residues were found in all eleven weft yarn samples tested, indicating dye had been introduced to the yarns at some point in their history, the results were not as conclusive as anticipated, for a number of reasons. First, the sample size, as already noted, is admittedly very small. Caution needs to be exercised before extrapolating conclusions from eleven blankets to the millions purchased as these eleven could not represent a completely accurate cross section of all

those blankets. Second, shoddy, even if not visible to the naked eye, contaminated samples from blankets that contained it, which in this case may have been all besides those from the Danish Exchange example. The reused fibers would have contributed to positive readings for dye and not exclusively to the residue of a dye used to color either the weft yarns or the entire blanket, if it was intended to mask the presence of shoddy. Third, it is possible the blankets were dyed (again?) during or after their War service for other reasons. At least one blanket (FIG 7) included in the database, but not in the dye analyses, retained an overall and unusual red hue, suggesting it may have been dyed to indicate use in the artillery branch of service during the War (at least one QMD request was made for "artillery blankets"), or to help disguise its military origins after the War. Last, after 130 years the dye(s) on the majority of the samples simply could not be identified. They had either broken down to such a degree that, while their presence could be detected, they could not be specifically identified with the tests used; or if the blanket was originally an undyed brown blanket, the only source of the weakened dye and mordants detected was from the shoddy in the yarns.

Unfortunately the factors noted above make it impossible to determine with certainty the degree to which logwood was used or not used in the samples tested, or in issue blankets as a group. For the majority of samples only the presence of a chrome or iron mordant could be detected. While those were typically the ones used with logwood, just four samples from three different blankets still tested for and indicated unequivocally the presence of logwood dye. As mentioned above, two of those samples were from the gray warp and black stripe weft of the pre-War Danish Exchange blankets, and the other two were from blankets now of a brown color.

Although this long-term study and these empirical tests were conducted, in part, to help put to rest the question of blanket color during the War, they were unable to do so. It was hoped the effort could explain inconsistencies between and within the written and archival record, and what we can see in collections today, for the benefit of both collectors and historians. However, flaws in the methodology chosen by the author, which became apparent only after the tests were underway, and the lack of knowledge about the specific manufacturing techniques used by QMD suppliers, continue to limit conclusions about the color of blankets.

Nevertheless, in the most general of terms, for QMD-issued blankets it appears gray blankets may have predominated only during the first year of the War, although they were certainly in evidence throughout the War. Even if gray in color, their quality did not approach those of pre-War blankets as the inclusion of shoddy undoubtedly increased during the course of the War. Brown blankets certainly appeared in the field in 1862, and possibly earlier. Although some may have changed to that color during use, it is clear the QMD's relaxation of its standards in its desire to obtain any kind of acceptable blanket resulted in blankets that were originally brown being received, possibly for the majority of the War.

Undoubtedly new examples and new information will add to this overview of the characteristics of the Federal-issue blanket. What this study has done is to capture data from forty-five survivors of the rigors of field and post-War use, and add to that information details gleaned from the archival record. Even with such a limited database the variety of the Civil War QMD-issue blanket is evident. Once again we must caution ourselves not to be too dogmatic in our assumptions of what is 'correct'! However, hopefully this article has provided you with characteristics on which to base your decision when buying a reproduction blanket, or customizing it to your personal taste.

Frederick C. Gaede

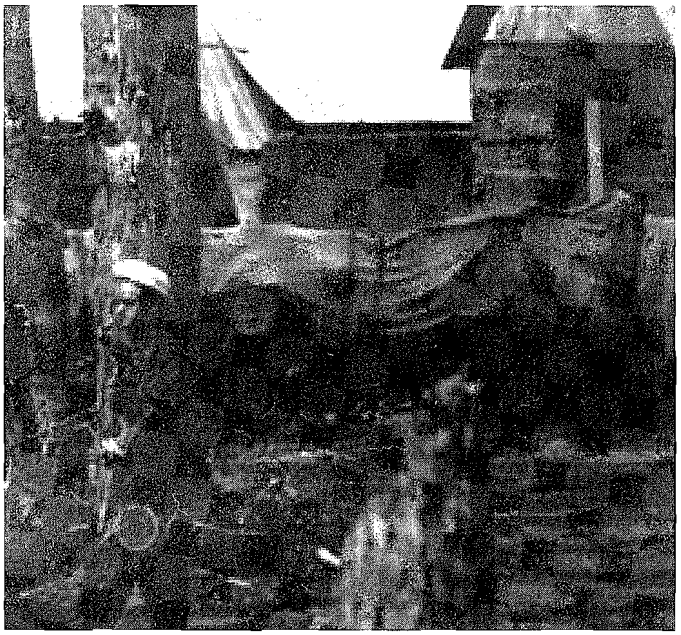


FIG 10. Uncut pairs of blankets are visible in a number of images taken during the War. Two will be noted here, but only one illustrated. In the Library of Congress, Brady-Handy Collection #268, an image of the "Swamp Angel" taken in 1863 shows a pair draped over a pile of materiél. The detail included here is from a photograph in the Connecticut State Library, Picture Group 85, #7302. This 1862 image of Collis' Zouaves shows a pair draped over a fence in the background, possibly drying.

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(**Fred Gaede's** Bio is on page 19)