

OLATHE UNION GUARD

Mid and Late War Federal Shelter Tent Construction Instructions and Specifications



The shelter tents described herein are based on the mid war (ca. Oct. 63 – Sep. 64) versions and late war (Jul 64 – Jul-65). They are two panel, cotton duck shelters referred to in Frederick Gaede's monograph as a Type III-a. and Type III-b, respectively. See *End Notes*. Instructions herein are for the mid-war version, with modifications for a late war version in *(parenthesis)*.

Materials:

- Four yards of 8 oz cotton duck, natural color, not bleached. Authentic construction suggests the use of 33 ½" wide "blue line" duck, currently obtainable from [Family Heirloom Weavers](#). A less expensive shelter can be made from commercial cotton duck (e.g. JoAnn, Etc.). If the duck is 70" wide, two yards are adequate. Otherwise, four yards are required.
- A one foot square of unbleached linen tow. Available from [Family Heirloom Weavers](#).
- 10 feet of ¼" hemp line.
- 23 bone or reproduction bone buttons. *(Tinned or zinc buttons for the late war version)*.
- Heavy waxed cotton or linen thread for grommets.
- Medium weight cotton or linen thread for buttonholes - preferably waxed. You can wax your thread by dragging it through paraffin or beeswax.
- Medium weight cotton thread for hems and seams.

Cutting:

Duck:

- Cut two panels 33 ½" wide by 64 ½" long. *(For the late war version, the length should be 66 ½")* Leave the selvedge along the long edge of these pieces. It saves making a hem. The blue line duck is already 33 ½" fabric, so it only needs to be cut to length.

Linen:

- Cut 4 reinforcements 4 ¼" square. Make sure that one edge is the selvedge edge. This doesn't have to be exact – the originals weren't. *(For the late war version, add one 3" x 4 ½" reinforcement, with the selvedge on the long edge)*.



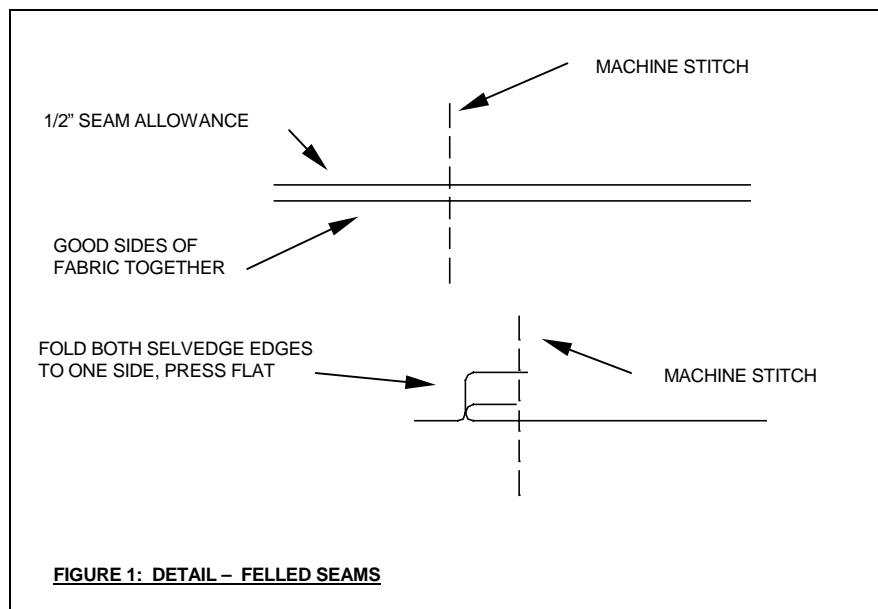
Hemp Rope:

- Cut one piece 6' – 10" long for guy lines.
- Cut 2 pieces about 12" long for tent loops. *(For the late war version, add a 3rd piece).*

ASSEMBLY:

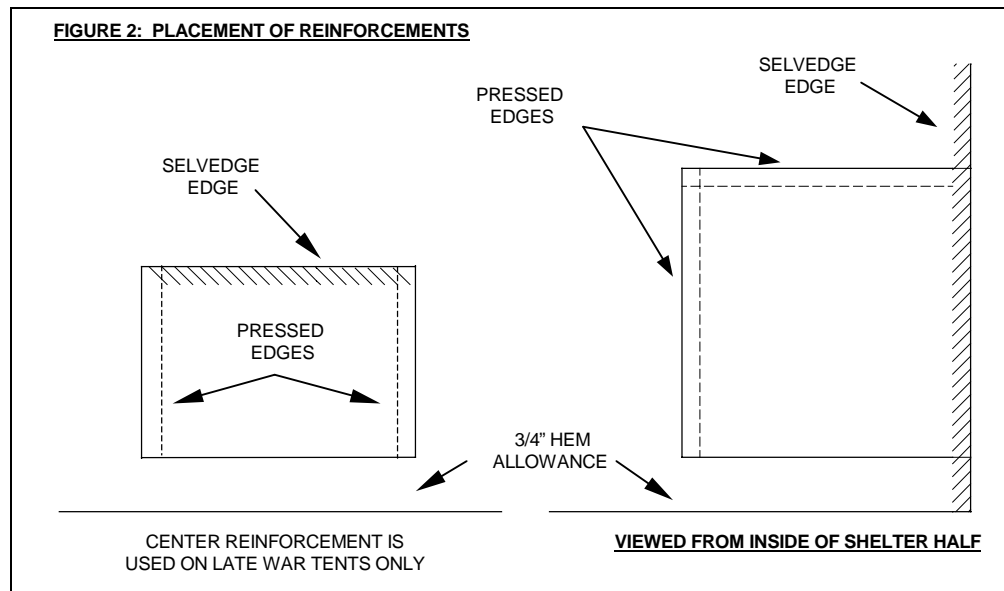
Machine sewing is used in all construction unless otherwise noted. This specification assumes the use of 33 ½" blue line duck. If you are using "fabric store" duck, you may need to adjust your cutting and assembly somewhat. Fabric store duck will not have selvedge edges along both edges of the fabric.

1. With the good sides facing each other, align and pin the edges of the panels together, ensuring that the overall length of the shelter is 66 inches. Machine stitch the panels together.
2. Fell the seam. (Figure 1).
 - a. Fold both selvedge edges to one side and press flat. No exotic seam technique is needed, since the selvedge will prevent fraying. *(If using "fabric store" duck, the center seam needs to be flat felled – see instructions in end notes.)*
 - b. Machine overstretch through all 4 layers of fabric.

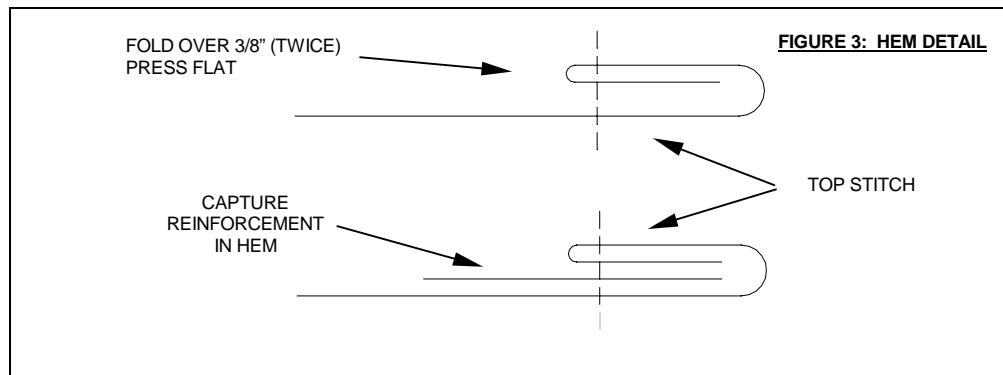


3. Prepare the reinforcement squares.
 - a. With the selvedge edge to your left, press over a ¼" hem on the top and right sides of two (2) squares.

- b. With the selvedge edge still to your left, press over a $\frac{1}{4}$ " hem on the bottom and right sides of the other two (2) squares.
 - c. *(For the late war version, place the selvedge edge of the 3" x 4 1/2" reinforcement at the top, and press over $\frac{1}{4}$ " hems on the right and left sides.)*
4. Attach the reinforcement squares (See Figure 2).
 - a. Place the selvedge edge of the four corner reinforcements along the selvedge edge of the shelter. Position the raw edge of the reinforcement along the raw edge of the shelter, but $\frac{3}{4}$ " away to allow for the hem to be sewn later. Make sure that the two pressed edges are to the center of the shelter and are turned under.
 - b. *(For the late war version, the 5th reinforcement is placed at the bottom center, $\frac{3}{4}$ " from the edge, selvedge to the top.)*



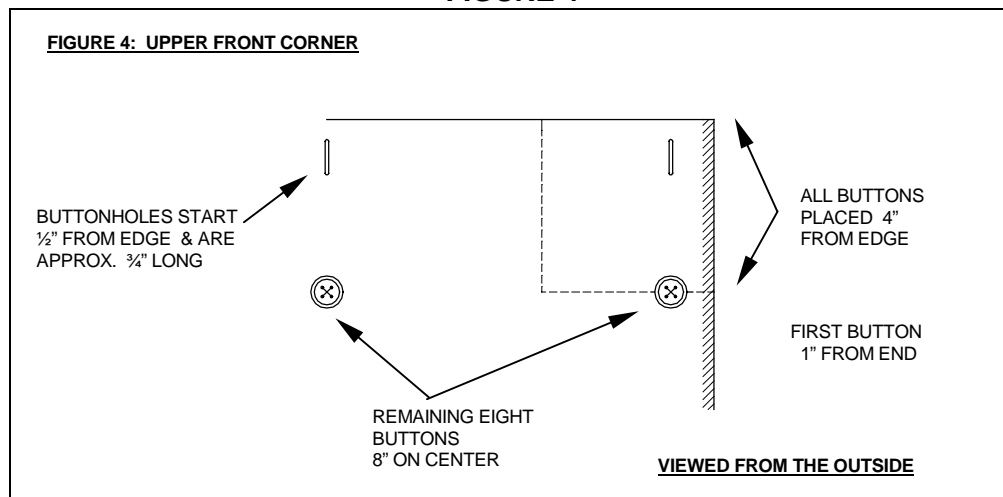
- c. Machine sew the three sides of the reinforcements that will not be captured by the hem.
5. Hem the ends of the shelter half (See Figure 3).
 - a. Fold the raw edges up $\frac{3}{8}$ " and press flat.
 - b. Fold again, same $\frac{3}{8}$ " and press flat.
 - c. Make sure that the raw edges of all reinforcements are captured in the hem. (See Figure 3).
 - d. Machine stitch the hems $\frac{1}{4}$ " from the edge.



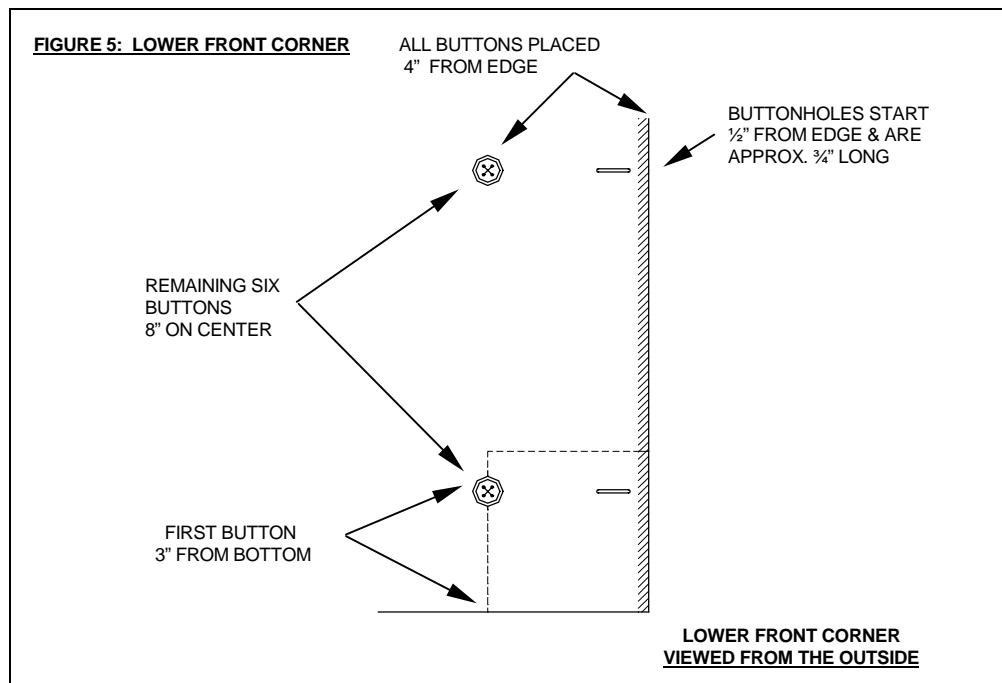
6. Mark locations of buttons.

- a. All buttons are spaced 4" in from the edge of the shelter half.
- b. Along the top edge (ridge line), mark nine (9) button locations. (See Figure 4). The end buttons are 1" from the end of the shelter half. Mark the remaining buttons on 8" centers.

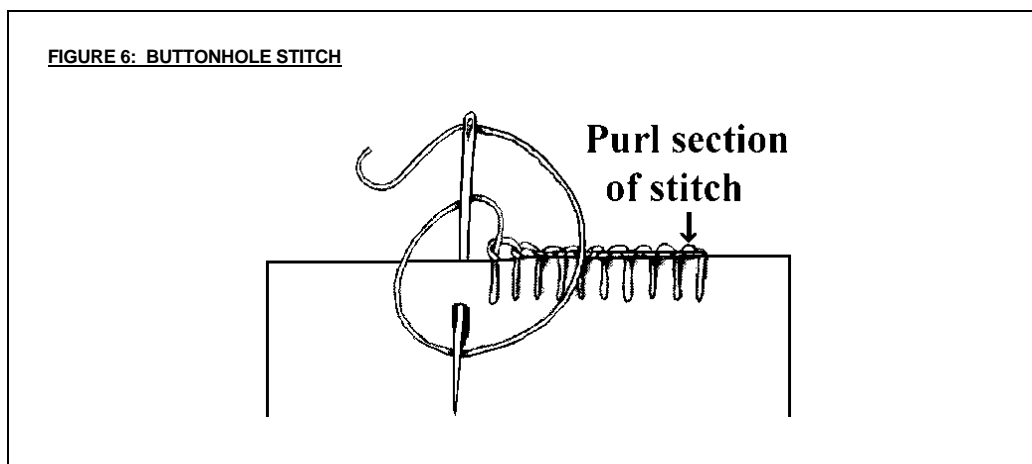
FIGURE 4



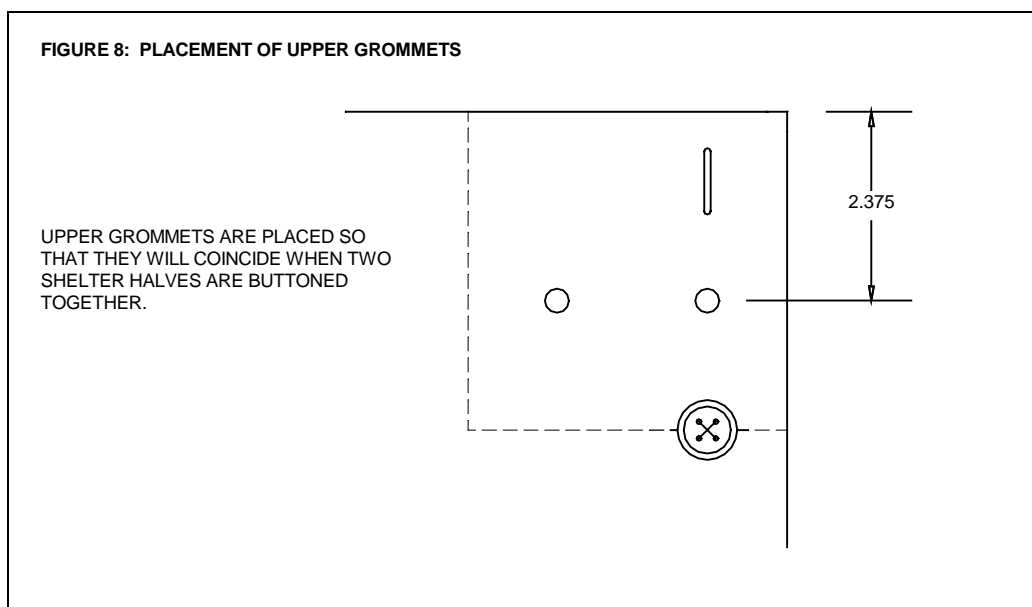
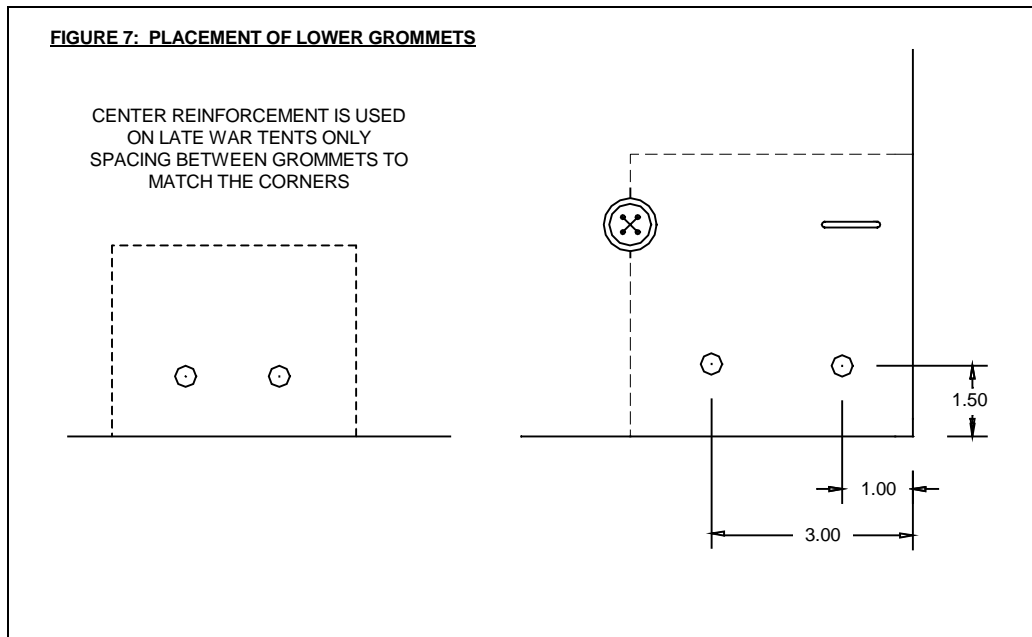
- c. Along the ends, mark the first button 3" from the foot of the shelter half. Mark the remaining 6 buttons on 8" centers. (See Figure 5).



7. Mark the locations of the buttonholes. (See Figures 4 and 5)
 - a. Buttonholes should start 1/2" from the edge of the shelter half.
 - b. Buttonholes should be approximately 3/4" long – but check your button size before cutting.
8. Cut the buttonholes with an X-acto knife and hand finish. There are a couple of stitch types, but one of the strongest is shown in Figure 6. Use a moderately heavy, waxed cotton or linen thread. Some buttonholes were done with a simple overcast stitch.



9. Locate Grommets for tent loops. See Figures 7 and 8.



10. Hand finish the grommets.

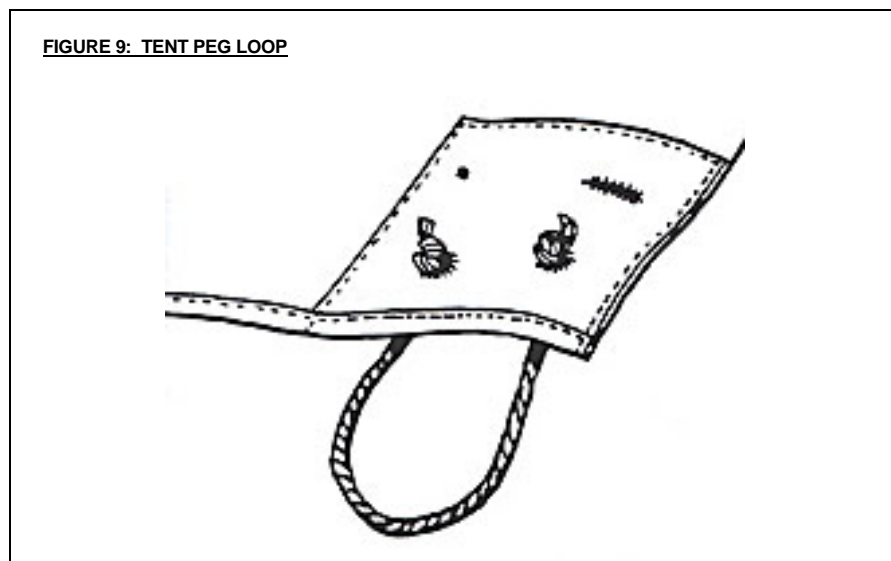
- a. Cut out grommet holes in all four corner reinforcements (*and the center for the late war version*). The holes should be cut to approximately $\frac{1}{4}$ " diameter. They will enlarge as they are hand finished. They can be cut by hand, but it is best to use a sharpened tool such as a leather punch.
- b. Hand work all of the grommets with a heavy, waxed cotton twine. Use a simple overcast stitch, no buttonhole or other fancy stitching.

11. Sew on the buttons.

- a. Use a good strong waxed linen or cotton thread.
- b. Attach the buttons using an "X" pattern.

12. Install the tent peg loops.

- a. Tie a simple overhand knot near the end of the 12" hemp rope.
- b. Insert the rope through a grommet from the inside of the tent then back through the other grommet.
- c. Tie another overhand knot.
- d. The loop should appear as in Figure 9.



13. **STAND BACK AND ADMIRE YOUR WORK** . . . It was worth it, wasn't it?

END NOTES

General Comments:

Mid war: This type of tent was apparently produced from approximately March 1862 through September 1864. It is designated Type III-a in Gaede's monograph. I have utilized his nomenclature for simplicity and consistency. This tent is characterized by the use of two panels, with the seams running vertically, four corner reinforcements and two tent peg loops. The panels were approximately 33 ½" in width.

(Late war: This type of tent was produced from approximately July 1864 through July of 1865. Construction is the same as the mid war type, except for the addition of a third reinforcement at the center of the bottom edge, and a third tent loop. The size was slightly different also.)

Because of the wide variety of tents, this specification represents a "common use" tent – not necessarily a reproduction of a specific original tent.

Size:

Mid war: These specifications are for a tent 66" long by 63" wide. This was the *DESIRED* size - within one-half inch - of shelter tents prior the issuance of General Order 60 in December, 1864. G.O. 60 inadvertently changed the size specification due to two typographical errors. The real size of the original tents is difficult to determine because of shrinkage (both before and after issue) and because of the use of many contractors. I specified a length of 66" instead of 66 ½" so that all of the tents in our unit would match up. It would be a simple matter to adjust these specifications to produce a tent of 66 ½" length.

(Late War: GO 60 changed the standard size to 66" long by 65" wide.)

Materials:

Mid War: These tents were commonly made from cotton duck, per this specification, although drill was also used. The corner reinforcements were often made from linen tow – with some exceptions. Buttons were bone or zinc, with bone more common. Guy lines and tent loops were mostly hemp, although some Manilla (sic) was used. Thread for sewing was waxed cotton or linen.

(Late war: Materials were the same, except that virtually all were made of duck, and buttons were tinned or zinc.)

Reinforcements:

Mid war: Reinforcements were placed on the inside of the tent at each corner, a total of only four. They were approximately 4" x 4" in size - although by no means uniform.

(Late war: A 5th reinforcement was added at the center bottom. It was typically rectangular – approximately 3” x 4” - but again, not uniform.)

Grommets:

Mid war: Eight grommets were made in each tent, two in each corner reinforcement. The grommets in the top of the tent were placed so that the holes would coincide when two halves were buttoned together. The outermost grommet hole was approximately one inch from the end of the tent. Innermost grommets varied somewhat. Some grommets were more like slits than circles, in order to accommodate tent poles.

(Late war: Two more grommets were added – in the reinforcement at the bottom center. They should be centered, and of the same spacing as those in the two bottom corner reinforcements.)

Buttons:

Each shelter half had twenty-three buttons, arranged as follows:

Along the top (ridge line) of the shelter half, nine buttons. The line of buttons is four inches from the top. The first button is placed one inch from the end, and subsequent buttons at eight inch intervals, placing the 9th button one inch from the other end.

Both ends of the tent have the same seven button configuration. As on the top, the buttons are set in four inches from the edge. The first button is placed three inches from the bottom, and the remaining six are at eight inch intervals.

Buttonholes:

The buttonholes are set in line with the buttons, with the edge of the buttonhole approximately one-half inch from the edge of the fabric. Buttonholes are about three-fourths inch long.

Construction:

Almost all tents of this vintage have machine sewn long seams, hems and reinforcements. The selvedge edges of the fabric were used to reduce manufacturing labor. The only seams in the body were for joining the two panels. The only hems were at the top (ridge pole edge) and the bottom edge. The grommets and buttonholes were hand sewn. Buttons were sewn using an “X” pattern in the stitching.

Other Notes:

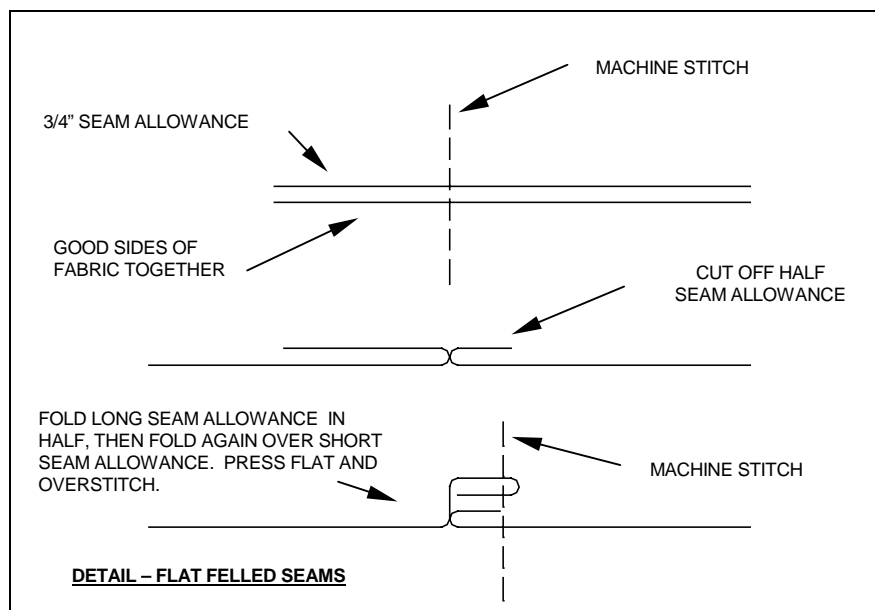
This specification is based on the use of 33 ½” wide “blue-line” duck. If common “fabric store” duck is used, the center seam must be flat felled, since no selvedge edge would be available. (See instructions below.)

Both hemp and Manilla (sic) line were used with shelter halves, but it appears that hemp was accepted and the most common prior to the revised specifications of 1864. Therefore, this specification uses hemp line.

I cannot verify the spacing of the grommet holes in the corner reinforcements. However, based on the buttonhole and button spacing, the grommets in the upper corners must be placed at the specified dimension in order for the grommets to match when the halves are buttoned together. The grommets may have been closer together than the 2.0" specified, but the outside grommet always appeared to be about 1" from the edge.

Instructions for Flat Felled Seams

- a. Press seam open.
- b. Cut off half of one seam allowance.
- c. Fold long seam allowance slightly less than in half and press flat.
- d. Fold long seam allowance over cut seam allowance and press flat.
- e. Machine overstitch through all 4 layers of fabric.



One valuable reference for this “how-to” specification was: “The Federal Civil War Shelter Tent,” Frederick C. Gaede, O’Donnell Publications, 7217 Popkins Farm Road, Alexandria Virginia 22306. I highly recommend this monograph to anyone wishing to do further research.

Jack Cox
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 9 July, 2001



FIGURE 10: DETAILED DIMENSIONS

