

**TO SHELTER THE ENLISTED MAN:
A STUDY OF THE CONSTRUCTION OF
OTHER RANKS' TENTS DURING THE
AMERICAN WAR FOR INDEPENDENCE**



**James Mullins, 2nd Virginia Regiment
Todd Post, 2nd Virginia Regiment
Steven Rayner
Gregory Theberge, H.M. 63rd Regiment of Foot**

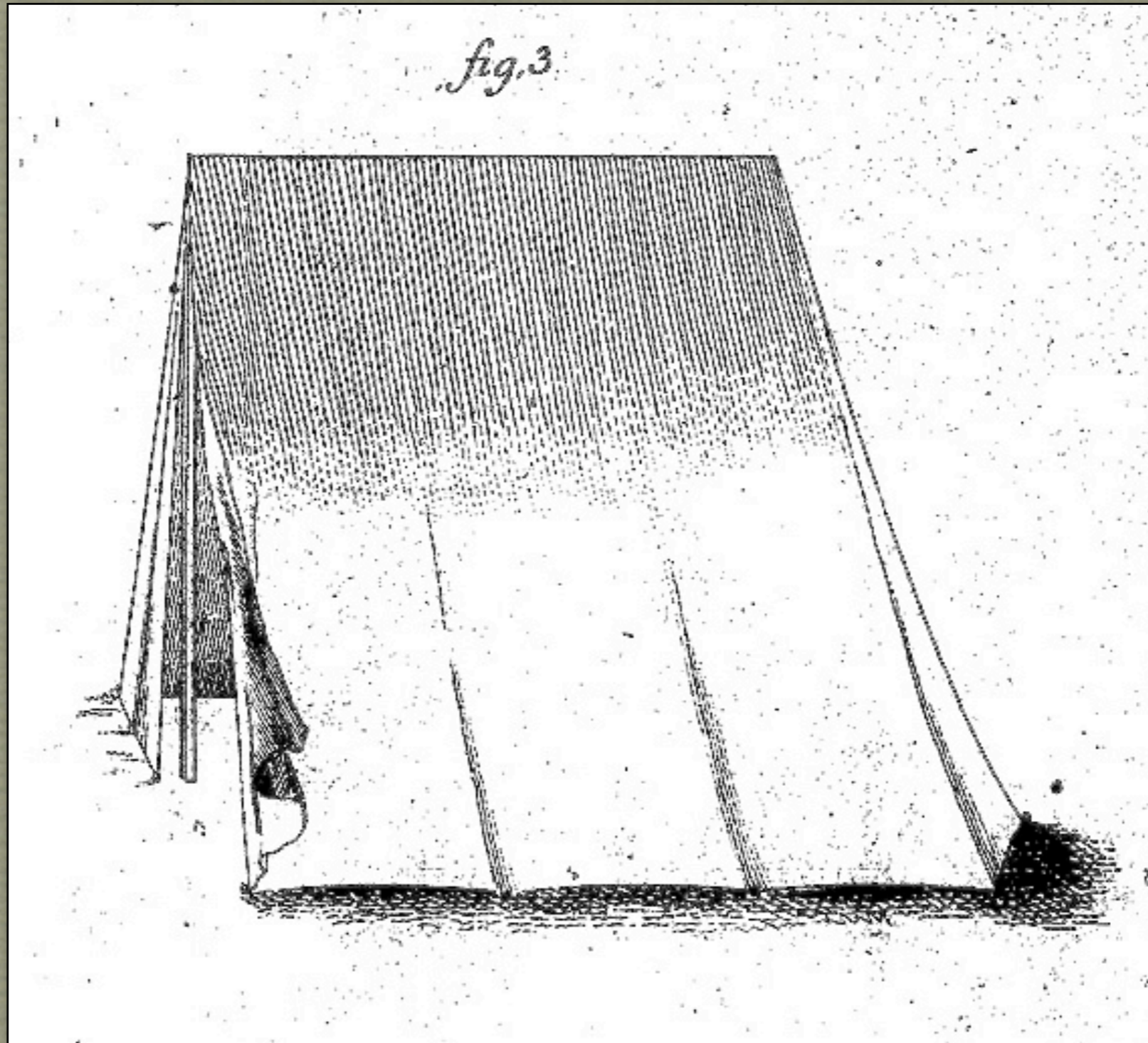
A TENT FOR EVERY MESS

During the American War for Independence, each company within a British or Continental Regiment was broken down into individual groups of 5 to 6 soldiers. These groups were collectively known as “messes”. In order to simplify the everyday routines of army life, military regulations of the day required these messes to prepare and eat their meals together as well as sleep as a common group. To do this while an army was on campaign, they were issued a tin kettle, bag to carry it in, and hatchet from the regimental stores. For shelter, a mess was assigned a common tent if, and when, tents were available in the field. With this in mind, it was the mess, the most basic unit of an 18th century army, which greatly influenced the size, shape, and construction of the tents which saw service during the American War for Independence.

In order to cover a 5 man mess, as well as their accoutrements (less their firearms which were often stored in Bell Tents), Lewis Lochee reports that the average size of an enlisted man’s (a.k.a. “Other Ranks”) tent in the British army was 7 feet long by 6 feet tall.

Lewis Lochee, “Essay on Castremetation”, 1778

“The Tents which are of various sorts and forms, serve to lodge and protect the troops against the inclemency of the weather; those of the private men are made of strong cloth, and are large enough to lodge 5 men.” (L-1)



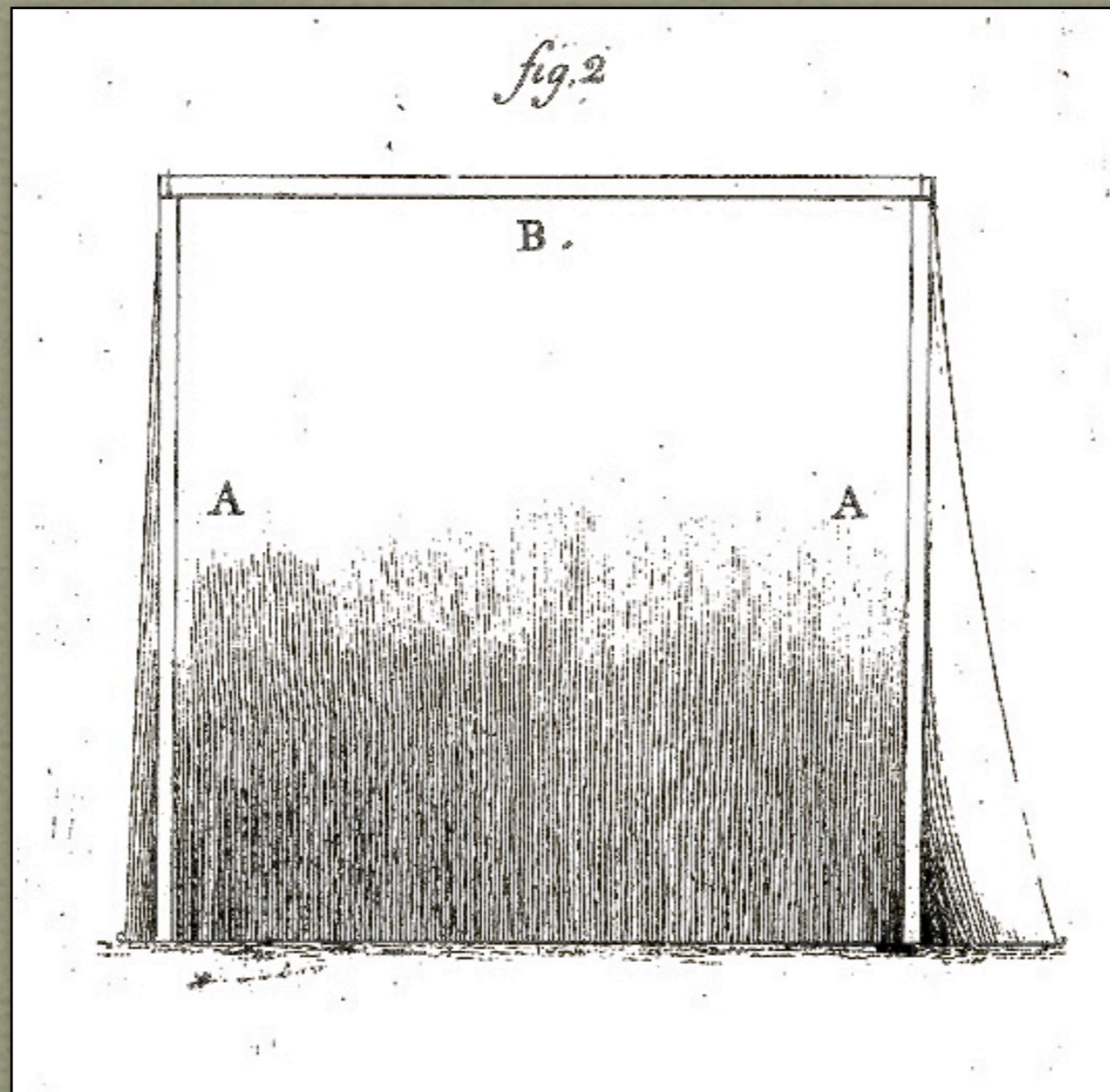
Detail from Lewis Lochee *“An Essay On Castrametation”* 1778

British Other Ranks' Tent

Revealing 3 Side Panel Construction, with 2 Panel Front Flaps, and a Bell Back

Lewis Lochee, "Essay on Castremetation", 1778

*"These tents are fixed by means of three poles and thirteen pegs: The poles A are called **Standard Poles**, and are about 6 feet high; the pole B is called **Ridge Pole**, and is about 7 feet long: The ridge and standard poles are held together by **two iron pins**, fixed in the top of the standard poles."* (L-1)



Detail from Lewis Lochee "An Essay On Castrametation" 1778

What is interesting is that these dimensions of British Army tents were the same as they were when the New Model Army was operating in the mid 17th Century:

3 Aprilis 1645

“Tents for the Trayne 200 of John Snow Tentmaker the Tents vii^{en} foote long vii^{en} foote broad and six foote high of good Lockeram according to the pattern & wth firre staves lynes & pinns & other appurtenances according to ye best Trench Tents at xx^s p Tent” (M-4)

In 1779, Captain George Smith reports different dimensions to an other ranks' tent:

“The tents of private men are 6 1/2 feet square and 5 feet high, and hold 5 soldiers each” (S-5)

Unlike their British counterparts, the size of a Continental Army tent often varied throughout the course of the war. These tents were ideally built to accommodate a mess of six men. Later in the war, they were to shelter up to 7 or 8 men.

June 1776

Returns for Captain Joseph Bloomfields Company

3rd New Jersey Regiment, Continental Line

“Tents to be Drawn for ... 72 Soldiers, which is 12 Tents allowing Six men to a tent.”

Orderly Book of the Pennsylvania State Regiment

“Head Quarters Fort Mercer May 24th 1777...

Regular Division of Tents to be made according to ye number of men in each Company - one tent for six men or 5 men and one woman...” (P-4)

At times, Continental Army tents were too small to accommodate a full mess of men. This could have been due to a variety of reasons. First, there were the contractors. Quite frequently, these men were sailmakers who did not necessarily have any set standards to go by. Secondly, in certain cases, it may have been due to the tent manufacturing process itself. To be discussed later, there is evidence that some tents were sewn utilizing a selvedge edge seam technique. Depending on the width of the canvas used, tents could have varied if the selvedge edge of the cloth dictated the location of the seams.

Quartermaster General Timothy Pickering

*“Since the army took the field I have heard great complaints of the smallness of the tents. The new common tents are not too big for four Men: upwards of 400 were made before my Appointment... The same **sail maker** I suppose have made those sent only you, which tho of very good stuff yet are ruined by the smallness of their size... Some old common tents were from 7 to 7 1/2 feet square on the ground. The ends of the new tents Complained of are little more than five feet broad. It seems that the various descriptions of tents have been misunderstood.” (W-2)*

On October 10, 1776 the Connecticut Assembly resolved:

*“That each Tent ordered to be made by this Assembly... shall contain the quantity of twenty-seven yards of cloth, **one yard wide**, or equal thereto in **cloth of different width**, well manufactured of yarn not coarser than thirty knots to the pound;” (H-2)*

In 1781, however, Quartermaster General Timothy Pickering attempted to “standardize” the *minimum* dimensions of the tents used by the Continental Army. He recommended that:

"A common, or soldier's tent should be at least 7 feet square, larger a little if it happens to suit the breath of the cloath." and should be *"7 feet square and 7 Feet Height."* (W-2)

Once again, this implies that the length of these tents could vary depending on the width of the canvas available for their fabrication.



A detail of Charles Wilson Peale’s portrait of Colonel Walter Stewart of The Pennsylvania Line revealing a typical Regimental Camp layout of the Continental Line. Note the musket rack, sparseness of the camp, as well as the individual kitchen and possible Quarter Guard with sentry at the tree line.

TENT AND SAIL CLOTH

According to current research, the fabric and techniques utilized to produce Other Ranks' tents during the American War for Independence was similar to that used in the production of sails during the 18th century. In fact, sailmakers were often contracted to produce military tents.

Nathanael Greene to Captain Maberly:

December 4, 1780 (Year Uncertain)

"All the sail and tent makers will be sent to you tomorrow. You will make up the sail and raven's duck into common tents." (G-1, p.79)

At times, actual sails were used to produce tents during the American Rebellion.

The Journal of Israel Litchfield of Scituate Massachusetts:

"July the 7th. Anno Christi 1775. This day did no great but recruit of my journey. Yester Day the vessells in the harbour and cove were stripd of their sails and the sails carried to Roxbury to make tents for soldiers" (L-3)

Like the fabric itself, sailmaking tools were also utilized in the fabrication of tents. Although he is referencing Officer's Marquees, Timothy Pickering, Quarter Master General of the American Army, confirms this.

Timothy Pickering, General Quartermaster's Return, April 1, 1782

“Return of all Public Property belonging to the Quarter Master General Department from Massachusetts to Pennsylvania & with the Main Army Species of Property....

Materials & Spare Furniture...

Marquee {Hooks

_____ {Tops...

Tent Buttons

Marquee Balls

Tent Pole Rings

Horsemans do.

Tent Sliders

Hanks Tent Cord...

Palm Irons

Sail Needles

Sailmakers Hooks...”

(W-2, p. 16)

Fabric utilized in the production of enlisted men's tents was traditionally 12 to 16 ounces per square yard (on average) with a thread count roughly of 29 x 25-30 x 32 ends per inch. For an other ranks' tent, the cloth had a Plain Weave. As an aside, there are some period examples of an Officer's Marquee (or portions thereof) being made out of a Herringbone Patterned cloth.

While no resource specifically mentions the color of the cloth used for tents, one period source states that it was Bleached. It is also quite possible that tent cloth was simply left in its natural (light brown) state which, over time, would bleach with exposure to the sun.

Depending on the reference, 18th Century Military Tent cloth was made of any of the following materials. Some differed by name alone.

1. “Duck”, “Russia Duck,” or “Raven Duck”

“Duck”, or “Dutch Duck”, was defined by Richard Rolt in 1761 as “**a kind of Dutch sail cloth....sail cloth...is a particular sort of cloth, or canvas, made of hemp.**” Rolt also refers to a statute of George II stipulating that both hemp and flax was used for sail cloth (Duck), but the yarn used “should be well cleansed, even spun, and well twisted”. More contemporary source refers to it as “strong, thick linen cloth, finer and lighter than canvas” (M-3)

To General Nathanael Greene.

“Newport, Nov. 6th, 1779...

Sir, your favour of the 30th ult. I received, and have, as you wished, laid hold of every piece of duck in the town, which is only eleven of Russia and five of Raven’s, which are now making into tents...

E. Bowen, D. Q. M. G.” (S-3, p. 248)



**An Example of Extant Unbleached 18th Century Dutch Duck Tent Cloth
“Taft Duuk”**



A Detail taken From David Morier's Painting of the British Grenadiers of the 19th and 20th Regiments of Foot as well as 21st Royal North British Fusiliers.

In this view, an Other Ranks' Tent made of Dark Brown Cloth, probably Unbleached Linen, can be seen.

c. 1751-1760

(The Royal Collection)

An order of Congress to P. Curtenius to purchase and fill a requisition for supplying the Continental Army:

'Amount of sundries, as per the order of Congress, of the 26th of February, 1776, and sundry other orders, viz.:...

	£	s	d
12 field officer's tents, at about £25,	300	0	0...
32 captain's tents,			
32 lieutenant's tents,			
16 ensign's tents,			
4 adjutant's tents. 96, at about £8 each,	768	0	0
4 quartermaster's tents,			
4 chaplain's tents,			
4 surgeon's tents,			
108 valises at about 40s.	216	0	0
108 tent bags at 5s.	27	0	0
450 soldier's tents at about 80s,	1832	0	0

*(The price depends on the price of duck. If I must give £5 10s for raven's duck they will cost full what I have estimated. A square tent takes a piece of **duck**, and making 32s. A soldier's, 21 yards at 3s per yard, and making 10s. P. T. C.)'*" (H-3, p. 487)

Here, we can see that an individual soldier's tent took 21 yards of "duck". We can also get an idea on the quantity of tent cloth required to furnish a company with tents:

Captain John Floyd to Col. William Preston

Sept. 18th 1774...

I am in hopes we shall make out pretty well about kettles we are also allowed 60 yards of tent cloth for a company.." (K-1)

On the Manufacture of Sail Cloth in Scotland:

Thomas Pennant, Montrose, Scotland, 1772:

“The town has increased one-third since the year 1745; at that time there was not a single manufacture: the inhabitants either lived by one another, or by the hiring out of ships, or by the salmon trade. At present the manufactures have risen to a great pitch: for example, that of sailcloth, or ‘sailduck,’ as it is here called, is very considerable; in one house, eighty-two thousand five hundred and sixty-six pieces have been made since 1755. Each piece is thirty-eight yards long, and numbered from eight to one. No. eight weighs twenty-four pounds, and every piece, down to no. one, gains three pounds in the piece. The thread for this cloth is spun here, not by common wheel, but by the hands. Women are employed, who have the flax placed round their wastes, twist a thread with each hand as they recede from a wheel, turned by a boy at the end of a great room.”

Extrapolating from Pennant’s description:

No. 1 - 45 lbs.

No. 2 - 42

No. 3 - 39

No. 4 - 36

No. 5 - 33

No. 6 - 30

No. 7 - 27

No. 8 - 24, per Pennant.

Width unknown.

(P-2, p. 499)

Although the following account by Isaac Titford is dated 7 years after the surrender of Cornwallis at Yorktown, it nonetheless sheds some light on the manufacturing process of sail-cloth in Boston in 1790. While it may not exactly pertain to the fabrication of sail-cloth during the American Revolution, it does reveal that English sail-cloth was **STARCHED** during this period.

Isaac Titford, in a letter of December 26, 1790:

“I am lately returned from the continent of North America, and beg leave to mention the two following remarks I made at Boston, although I must conceive them known to the Society; yet their importance will, I am sure, excuse the mentioning them to you.

*In their sail-cloth or **Duck** manufactory, which they carry on with great spirit, they publicly allege that theirs is superior to the British sailcloth, from its never being subject to mildew, which I understand is very pernicious to its wear. I observed that their weavers wet or moisten their warp in the loom, with a **decoction or jelly-like substance, made of the remains of Neat-feet, after the oil is expressed from them, and which then is of no farther use: this residuum is boiled to a jelly, or kind of glue, and used by them instead of starch made with flour and water, commonly used, if I am rightly informed, by sail-cloth manufacturers in England.**”*

(need bibliography p. 184-85. (transactions of the society))

Arthur Young also elaborated on both **BLEACHING** and **STARCHING** sail-cloth during the manufacturing process in his 1771 “A Six Months Tour through the North of England” :

Manufactures at Warrington, Cheshire.

*“At -Warrington,- the manufactures of sail-cloth and sacking are very considerable. The first is spun by women and girls, who earn about 2 d. a day. It is then **bleached**, which is done by men, who earn 10 s. a week; after bleaching it is wound by women, whose earnings are 2 s. 6 d. a week; next it is warped by men, who earn 7 s. a week; and then starched, the earnings, 10 s. 6 d. a week. The last operation is the weaving, in which the men earn 9 s. the women 5 s. and boys 3 s. 6 d. a week.*

*The spinners in the sacking branch earn 6 s. a week, women; then it is wound on bobbins by women and children, whose earnings are 4 d. a day’ then the **starchers** take it, they earn 6 s. a week; after which it is wove by men, at 9 s. a week. The sail-cloth about three hundred weavers, and the sacking an hundred and fifty; and they reckon twenty spinners and two or three other hands to a weaver.*

During the war (the Seven Years War, author’s addition) the sail-cloth branch was very brisk, grew a little faint upon the peace, but is now, and has been for some time, pretty well recovered, though not to be so good as in the war. The sacking manufacture was also better in the war; but is always brisk.

The spinners never stand still for want of work; they always have it if they please; but weavers sometimes are idle for want of yarn, which, considering the number of poor within reach, (the spinners of the sacking live chiefly in /Cheshire/,) is melancholy to think of.”

(Y-1, p. 164)

In Lord John Sheffield's 1784 "Observations on the Commerce of the American States," we gain some further insights on Russian and Raven Duck sail-cloth:

"Sail-Cloth of every kind is imported by the American States. Russia had the advantage in Russia-duck and Raven-duck, but, when charged with the duty on importation here, they were as dear as the British sail-cloth. lately, the exportation from hence of of Russia sail-cloth for America has almost ceased. Russia-duck in England is about 6s. per piece (of 36 yards) dearer than in Holland, arising from duties and other expenses, which, as far as it will not interfere with our own linen manufactures, should be lowered.

In the Spring of the present year, 1783, Russia-duck was so scarce in England, that near 3l. was given for a piece that formerly sold from 35s. to 40s. This occasioned a great demand for British sail-cloth, which has a bounty of 2d. per ell on exportation. A duty of 2l. 1s. 8 1/2d. is payable on importation of 120 ells, or 150 yards of Russia-duck or sail-cloth, no part of which is drawn back upon exportation, either to any British colony, or to any other parts whatever. It is considerably wider than English.

The number of pieces of sail-cloth exported from Petersburg for five years, was as follows:

	1774	1775	1776	1777	1778
<i>Pieces in Eng. ships</i>	11580	6757	2659	1505	401
<i>Do. in foreign ships</i>	25187	28397	38660	44156	37663
	-----	-----	-----	-----	-----
<i>Tot. numb. of pieces</i>	36767	35154	41319	45661	38054

The law that obliged all British-built ships to have the first set of sails of British canvas under the penalty of 50l. being now at an end, with regard to the ships of the American States, there will be competition for this article. Of late years considerable improvements have been made in the various species of sail-cloth in Scotland, and the price is considerably reduced, in consequence of the facility with which hemp can be brought from the Baltic, and the low price of labour in the north of Scotland. It will be in the interest of the Americans to take British sail-cloth while the present bounty is continued.

It is said, British sail-cloth is more apt to mildew; but that may be prevented, in a great measure, by pickling when new; it is also said, that the Russia sail-cloth is more pliable. France makes sail-cloth, but is much dearer and inferior. Some has been made at Philadelphia, but the quantity must be trifling." (S-2)

2. “Osnaburg”

Col. William Christian to Col. William Preston

“Camp Union Septr. 12, 1774...

*The kettles and Tents were chiefly distributed before I came I could get but 16 or 17 battered tin kettles for all Fincastle & but few Tents But I am told **oxen brigs** [unknown doodle] enough for Tents will be brought with the Pack horses to morrow If the major is not marched when you get this Intelligence I really think we ough[t] to send over the whole Country and try to beg or borrow kettles for to do without is very hard almost [im]possible It will presently make men sick to live on Roasted meat without broath.”* (T-1, p. 198)

Col. Richard Henderson

“Fort Boone, on the mouth of Otter Creek, Cantuckey River...” (H-4, p. 221)

“Friday, 5th. [May, 1775.]... Let Mr. Wm. Cocke have five yards and a half oznaburgs off my old tent, for which I charge him 5s. 6d. V. money.” (H-4, p. 225)

for every part of the morning the weather was about
the same and we went by a route towards the
this day and went over the river and we could not find the men
on the river in the canoe which were not likely to perform the purpose
by reason of being sprayed in the arches and weak in body
which were few in number and we steered our course for the water
to make a route SSE and within day march after we left the river
a route to the east and the land was low lying and full of
of white pine but not thick and of a height of ten or twelve

Monday June 23 this morning was cloudy but we saw our path
and steered a route SSE ten miles and came to Conallicut River and there
we came on land and we camped by the side of the river and it rained
all this afternoon and we kept our camp all this night the land was
this way our only food or way to be said as food as ever was seen
any where the common grub was to be seen in some places and
at all and it holds a great quantity of small rocks and this day
and the day past past a number of brooks fit for corn mill and these
are the largest of the brooks that we saw

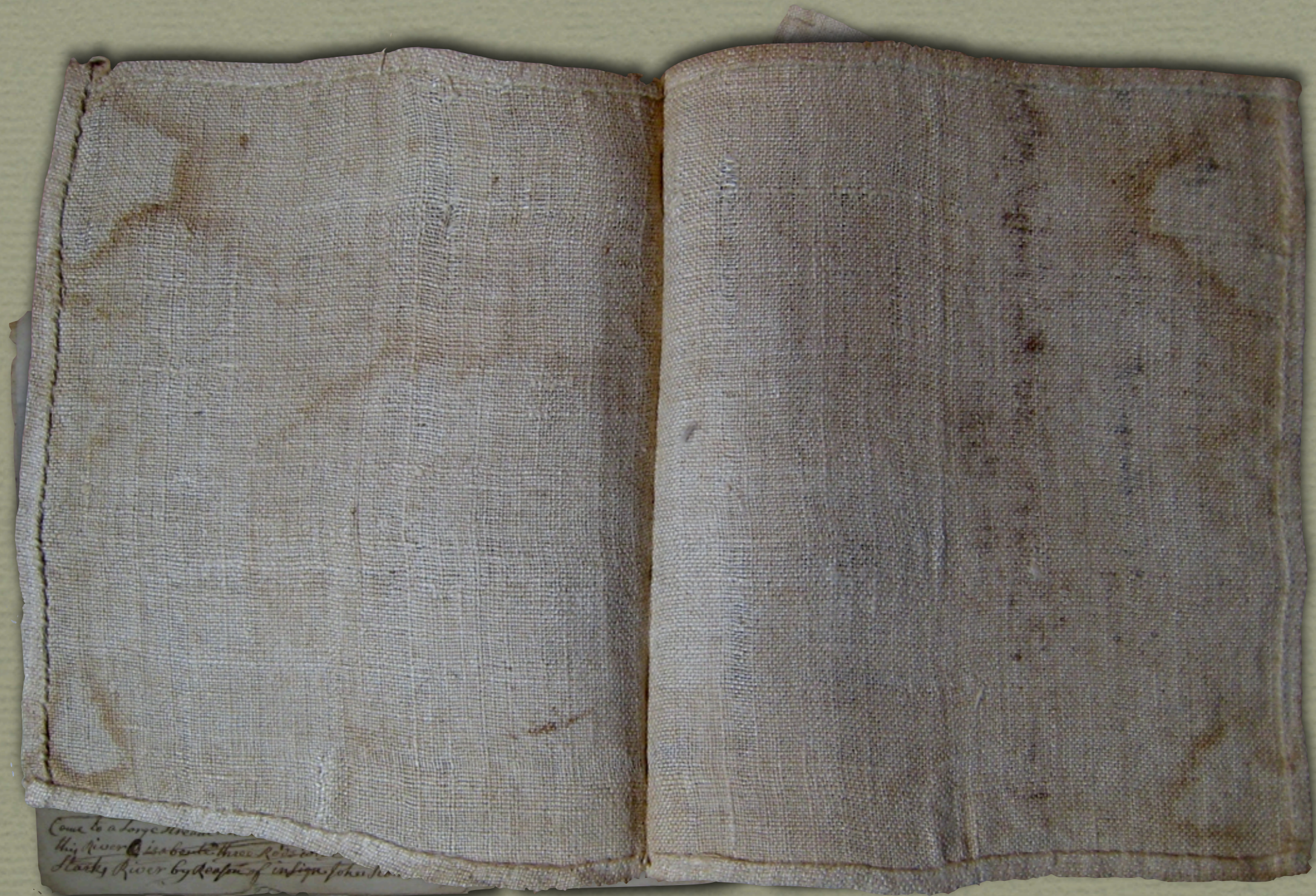
Sunday June 24 this morning & evening fairer weather
and it rained all the night past and it continued raining
until 12 of the clock this day and after that it was fair weather
and we marched along of Conallicut River and one of our men
made out the way a route SSE by 12 of five miles and there
came to a large stream which came from the south
this river is about three rods wide and we called it
Starks River by reason of its shape which Starks being

found by the Indian
River Camp in the
late brook
came to a large
and it is about
go no further will
being all most all
e ate three
at being the
ten miles and there

Tuesday June 25 this morning fairer weather
proper to march ^{our} pumps and to return homeward
ly we went about the same and whilst the men were
this way engaged the Capt with two more of his men
went to the river to see if further discovery they
could make and they traveled a route five miles and there
they discovered where the Indian had a large camping
place and had been making canoes and had not been for
a week or two days at the most and so they returned
to the rest of the men & gained a route 12 of the clock
and then we returned and marched down the river to
Starks River and there camped this afternoon it being
hard but we were forced to travel for want of provisions
The Enter-Pole is exceeding large and the further up the
the larger the general course of this river is SSE

Fragment of a tent with handwritten text, including the name "Peter Power" and other illegible words.

Diary & Tent Fragment from Captain Peter Power's Military Expedition into New Hampshire
1754
Natural Linen: 32 x 40 Threads per Inch - Private Collection



Come to a large stream
this river is about three hours
Hasty River by reason of unign. f. ch. r.

**Diary & Tent Fragment from Captain Peter Power's Military Expedition into New Hampshire
1754**

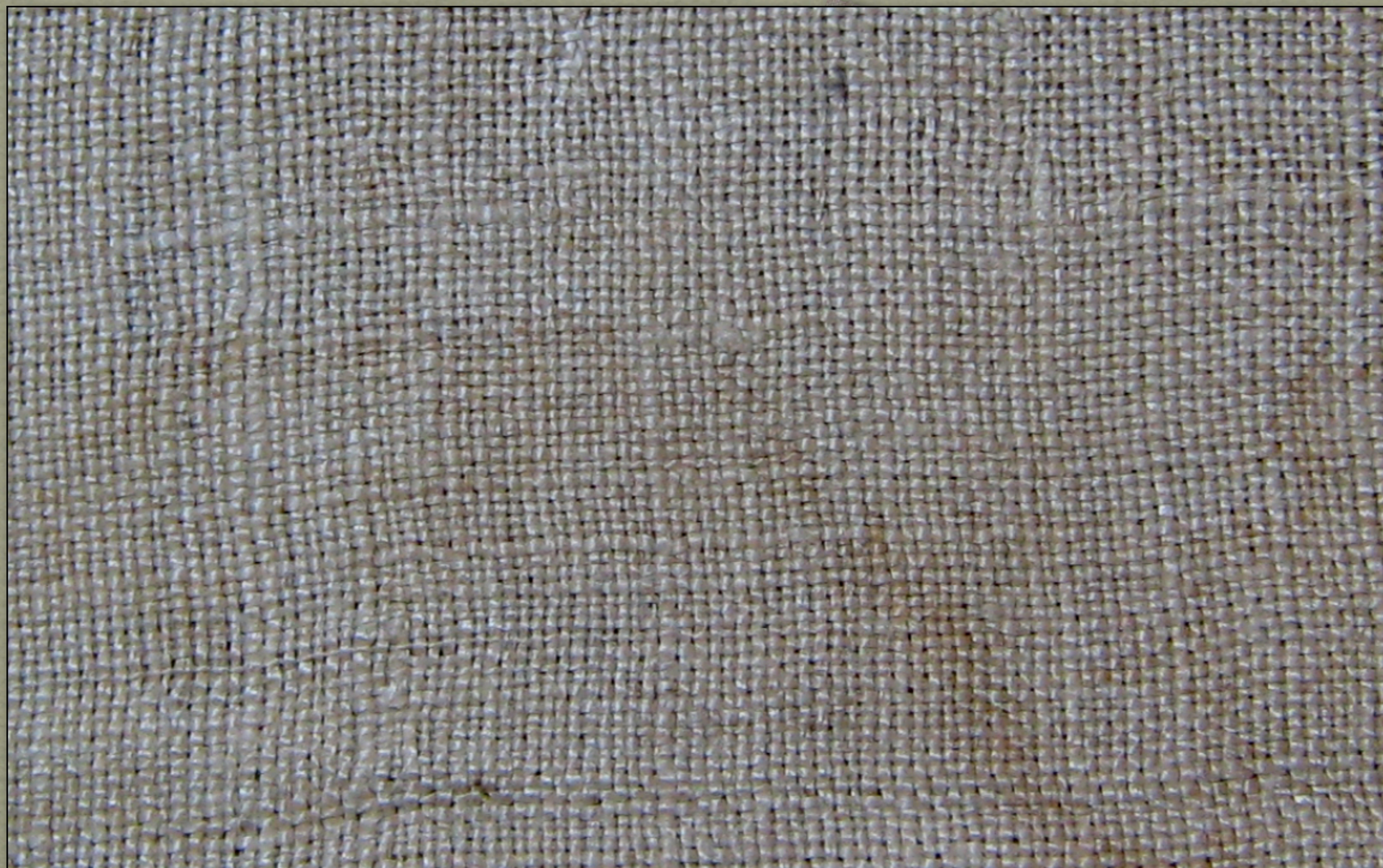
Natural Linen: 32 x 40 Threads per Inch - Private Collection

**Capt. Peter Powers' Journal on his
tour to Coos in 1754. Commission-
ed by Benning Wentworth, Gov-
enor of the Colony. It was found
1836, in the old Papers of Sam-
son Powers, late of Hollis. N. H.**

**I Grant Powers have now the
tin box which contained this
journal on the tour , and a
piece of his tent cloth which
sheltered him at night on
this very discovery.**

**Diary & Tent Fragment from Captain Peter Power's Military Expedition into New Hampshire
1754**

Natural Linen: 32 x 40 Threads per Inch - Private Collection



**Diary & Tent Fragment from Captain Peter Power's Military Expedition into New Hampshire
1754**

Natural Linen: 32 x 40 Threads per Inch - Private Collection

From various accounts, we can determine that osnaburg tents had their limitations when retarding the elements:

1760 (Pre-war):

Captain Samuel Jenks of Chelsea, Massachusetts:

“Thirsday, 4th Sept. [1760. Six miles from Chamblee, Canada.] Last night I had my tent pitcht & fixed so that I lay quite well... we shall soon I hope, be mouing homeward, for it begins to be cold nights, & our oznabrig tabernacles is but poor shelter for this cold climate.” (M-3, p. 375)

1778:

Henry Hudson, in a letter from Rhode Island, October 14, 1778.

“It would be pretty tolerable, if it was fair weather all the time, but these oznabrig houses are not so clever in rainy weather.” (C-4, p. 409)

1791 (Post-war):

Captain Samuel Newman, 2nd United States Regiment. St. Clair’s Campaign:

“Saturday Septr. 24th [1791].

Rainy, stormy morning. rain’d all Day, but absolutely pour’d in sheets & torrents all night! Tent, bed & Clothes Wet, d--d the Economy of the Contractor who for thinness of our Tents, particularly the backs & doors which are made of very coarse Oznabrigs! & thro! which the rain beat, as if thro! a Sieve! this is the Country cheated, and the Soldier imposed on...” (Q-1, p. 64)



Detail - 18th Century Horseman's Tent at Burg Forchtenstein - Otlowski Photograph
Ruth Bleckwenn Describes this as "Ungebleicht" or "Unbleached" Linen

In certain instances, tent cloth was so thin, it was made into garments for the troops:

“Fort Pitt, 18 March 1781

*As it is probable that the enemy will make some attempt on our small posts or principle ones in the course of this spring or summer, I entreat you to order the cannon and other military stores forwarded as soon as possible with out which we cannot make any considerable resistance. This fort alone ought to have 16 pieces of ordnance and present it has five. I have wrote to the QMG and his dupties frequently to forward us some tent to this district. but cannot learn that any are upon the communication, althou I have no a tent to cover my men and the season is fast approaching in which we ought to take the field, if a reinforcement from the main army is not sent, I am obliged to call out the militia. 300 tent of the best kind be necessary, **if they are made of thin linen the militia will cut them up for hunting shirts as usual.....”***



Americaner Soldat c. 1780
(Ann S.K. Brown Collection)

3. "Ticklenburg"

*"Williamsburg May 17, 1777
Commonwealth ... D
To 20 Ps Ticklenburg 2681 1/4 Yds.
deliv'd W. Davenport for makg
Tents for the soldiery belonging
to this State: also 12 ll brown
Thr.d @ 8/6 for making up the said linen
Rec'd by [signed] Amb— Davenport" (W-3)*

*"List of Camp Equipage Military Stores, Baggage &c. taken in the Brig. Symetry Capt.
[Blank.] at Wilmington Jan: 1778.-...
Sent to Faggs
Manor Meeting house
230 New Ticklenburg Tents...
117 worn do. fit for use
38 old ditto...
Moor Hall Jan. 10 1778" (W-2)*

*"Tuesday, June 13, 1780...
That the board of admiralty take order for supplying the quartermaster general with such quantity
of the duck and ticklenberg belonging to the United States, in possession of the **navy** board at
Boston, as he may have occasion for, to compleat the number of tents wanting for the army, and
which can be spared from the immediate use of the navy." (C-2, p.175)*

According to this account, it is apparent that the cloth to be used for the construction of tents was originally intended to be used for the fabrication of sails for the navy.

4. “Tow Cloth”

*“At a Meeting &c. adjourned from Yesterday. 16 July [1776.]
The Hono. Congress having requested this Colony to furnish our troops with tents,
Cloathing &c.: On consideration voted a committee be appointed to purchase and
procure all the tow cloth and other suitable cloth or materials for making tents that
can be had in the Colony.”* (H-2, p. 482)

*“This Board do appoint Messrs. Andre Huntington, Joshua Elderkin, Cauncey
Whittelsey of Middletown, Jona. Fitch, Saml Squire, and Lynde Lord, a committee to
purchase all the suitable tow cloth and other suitable cloths for tents, to be obtained
in their respective counties, and cause the same to be made up into proper tents for
the use of the troops of this Colony, in the most expeditious manner they can, and
report to his honor of what they shall respectively do in the premises.”* (H-2, p. 483)



1782 - 1783 Company Book of Captain Trask's 8th Co. of the 6th Massachusetts Regiment - Cooke Photographs
Boards Covered in Tabby Weave Close Woven Unbleached Linen - Possible Tent or Knapsack Scrap
Single Ply Z Twist Yarns (32x36 Ends Per Inch)

Again taking into consideration the relationship of sail and tent cloth, we can gain further insight on tent material by referencing Nautical manuscripts. In David Steel's, "The Elements and Practice of Rigging And Seamanship" (1794) , we see that sail cloth came in a variety of different weights based on a 38 yard long "Bolt" of 24" wide material:

"CANVAS. For the royal navy, canvas or sail-cloth is 24 inches wide; and 38 Yards are called a bolt. To distinguish the different qualities, each bolt is numbered, and should weigh as follows; No. 1, 44 lb. No. 2, 41; No. 3, 38; No. 4, 35; No. 5, 32; No. 6, 29; No. 7, 24; and, No. 8, 21 pounds: from No. 1 to 6 is termed double, and above No. 6 single, canvas." (S-4, p.86)



The Marquee of General George Washington - The American Revolution Center

Detail of General George Washington's Marquee showing the utilization of unbleached linen cloth for the sod flap. Examination of the canopy and walls of this tent reveals that it was originally made from a white and blue striped linen which has faded over time.

EXAMINATION OF EXTANT 18TH CENTURY TENTS OF THE PRUSSIAN ARMY

Nestled in the hills of Styria, Austria, is a castle by the name of Burg Forchtenstein. Within its walls resides a vast collection of early European military artifacts, a portion of which includes an assortment of rare military tents that saw service in the Prussian Army during the 18th Century. Among these tents are the only known examples of common soldier and horseman tents to survive from this time. While they cannot be considered *exact* representations of either a British or Continental Other Ranks' tent during the American War for Independence (unfortunately, none of these tents have survived), they do, nonetheless, provide an invaluable resource when studying both 18th Century tent materials and construction techniques.

In 1975, Ruth Bleckwenn made a study of the tents in the Burg Forchtenstein collection and published her findings in a book entitled "Zelt und Lager im AltPrussischen Heer." ("Tent and Camp in the Old Prussian Army. The Old Prussian Army Appearance and Essence 1713-1807"). As we proceed through the individual details of 18th Century Other Ranks' tent construction, this early study will be referenced and individual photographs from Bleckwenn's work will be shown. In addition, we will also evaluate photographs taken by Steven Otlowski of a smaller bell back tent which also resides in the Burg Forchtenstein collection. While not specifically the size of an Other Ranks' soldier's tent (it was probably used by Horsemen), it does, nonetheless, reveal many important features characteristic of tent construction in the 18th Century.



The Caste at Burg Forchtenstein

TENT SEAM CONSTRUCTION

Written orders of the day and examination of extant artifacts reveal that there were, at least, **three** different types of seams used in the manufacturing process of tents during the 18th century. Two of these seam techniques incorporate the selvedge edge of the cloth, much in the same manner in which sails were sewn at the time. These seams were known as either “Round” (otherwise known as “Single”) seams, or “Flat” (otherwise known as “Double”) seams. These techniques in construction obviously required that cloth of a specific width had to be used if a tent was to be fabricated to specific length requirements.

I. THE “ROUND” (SINGLE) SEAM

In William Falconer’s “Dictionary of the Marine” (1780) “Round Sewing” is defined as:

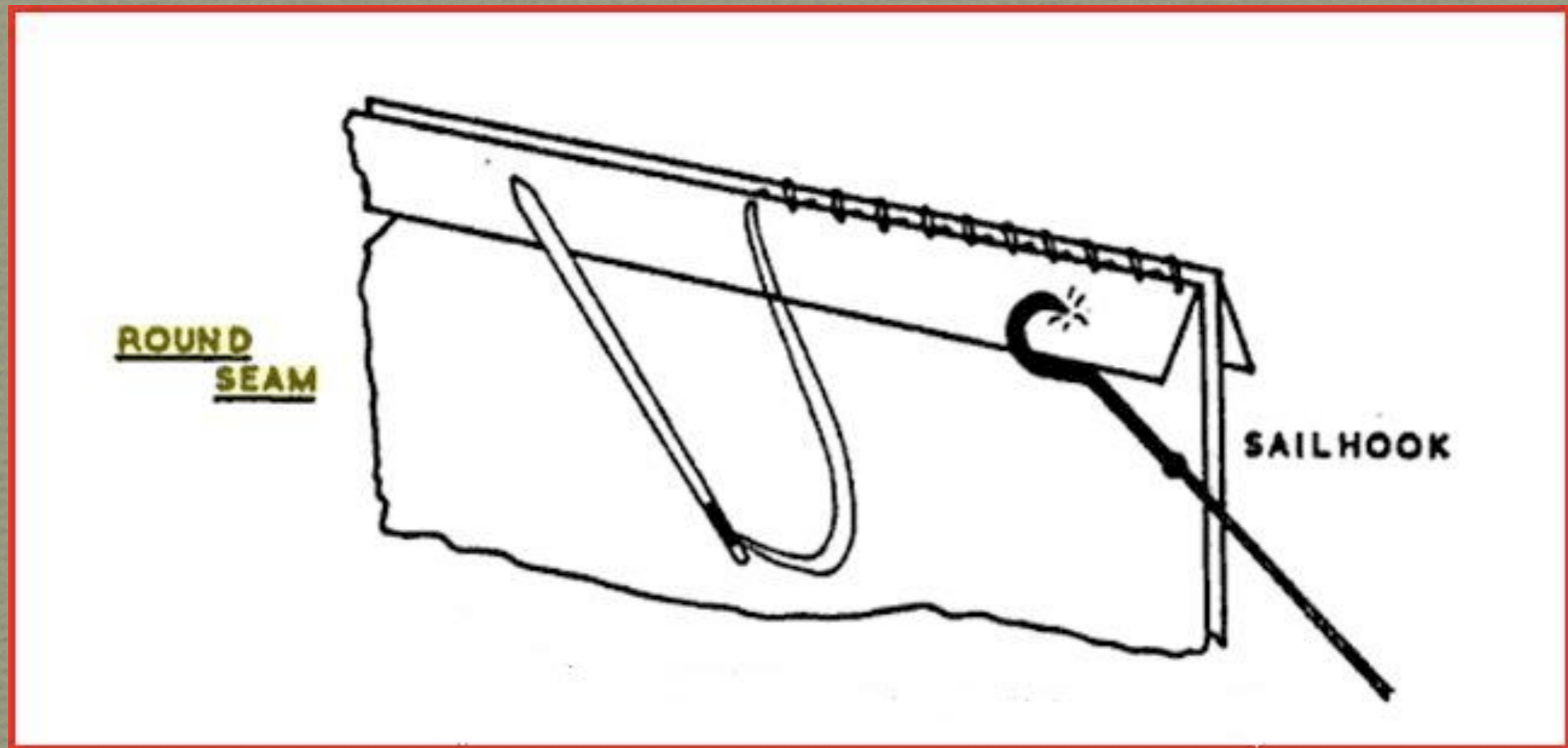
“Round sewing is used where greater strength is required, the stitches passing through four thicknesses of the cloth instead of two. There are two forms, known as single last and double last. In single last, each cloth to be joined has its edge turned in about 1.8 centimetres, the two are then placed together, held taut with a sailmaker's hook, and joined at the edge by passing the needle through all four parts about 3 centimetres from the edge and back over the top, making four stitches every 2.5 centimetres. In double last, the selvedge of one piece of cloth is placed level with the doubled edge of the other and the seam sewn as in the single last. The work is then reversed and the selvedge of the other piece is similarly stitched to the other, which is doubled at the seam line. In round sewing, the direction of sewing is always towards the hook.” (F-1)

During the American War for Independence, we can document that some of the tents fabricated in Baltimore were sewn with **Round Seams** for greater strength (at a greater cost):

Journal and Correspondence of the Maryland Council of Safety,
July 7: December 31, 1776

*“To Mr. Samuel Dorsey, Ann Arundel County
Sir. We approve your Patterns for a Tent, but cannot
give the price you ask, one of the Baltimore Tentmakers was
here and says he will make them with a round seam for two
Dollars — if you will make them with such seams on your
moddle, we would have you proceed, otherwise be pleased to
make some agreeable to the Baltimore pattern at twelve
Shillings — if you do not care to make on those terms, send
the Linen you have to Baltimore Town to William Johnson
who has agreed to make at those prices.
The Tent Poles we will pay you for according to the price
given at Baltimore, which we cannot now ascertain...
21 August 1776” (M-1, p.228)*

Although the “Round Seam” was considered stronger, this technique resulted in a thick gathering of cloth on the tent’s exterior (being four layers of cloth). It would also result in the exposure of two loose selvedge edges on the tent’s interior. This thickness most likely gave the seams their “Round” appearance.



The Round Seam Technique

II. THE “DOUBLE”, “FLAT”, or “MONK” SEAM

David Steel’s, “The Elements and Practice of Rigging And Seamanship,” (1794) sheds light on some important basics on sail and double flat seam construction:

“SEAMS. Sails have a Double Flat Seam, and should be sewed with the best English-made twine of three threads, spun 360 fathoms to the pound, and have from one hundred and eight to one hundred and sixteen stitches in every yard in length.

108 / 36 = 3 stitches per inch.

116 / 36 = 3.22 spi.”

In William Falconer’s “Dictionary of the Marine” (1780), flat seam sewing is described as a seam which did not require as much strength as a round seam:

*“Flat sewing is used to join two pieces of sailcloth or canvas where **strength is not of paramount importance**. The selvedge of one piece of material is placed along the seam line of the other, both are hooked onto a sailmaker's hook to keep them taut, and the needles passed down through the single cloth close to the selvedge and then up through both cloths, and so on until the whole seam is completed, with a back stitch to terminate the line of sewing. The normal spacing is three stitches to 2.5 centimetres (1 in.). When the first seam is completed, the work is reversed and the selvedge of the piece of cloth sewn to the seam line in the same way. The direction of sewing in flat sewing is always away from the hook.”*

Like the Round Seams, we can also document that some tents in Baltimore were sewn with **Double (flat)** seams during the American War for Independence:

Journal of the Maryland Council of Safety:

“Monday 15 July 1776.

The Council contract with William Jacob of Baltimore Town for the making of double seamed Tents at seventeen shillings each and single seamed Tents at twelve shillings each.

Ordered That the Commissary of Stores deliver to William Jacob all the Tenting linen which was delivered into the magazine by Mr Edward Parker of Caecil County...

...C. S. J.

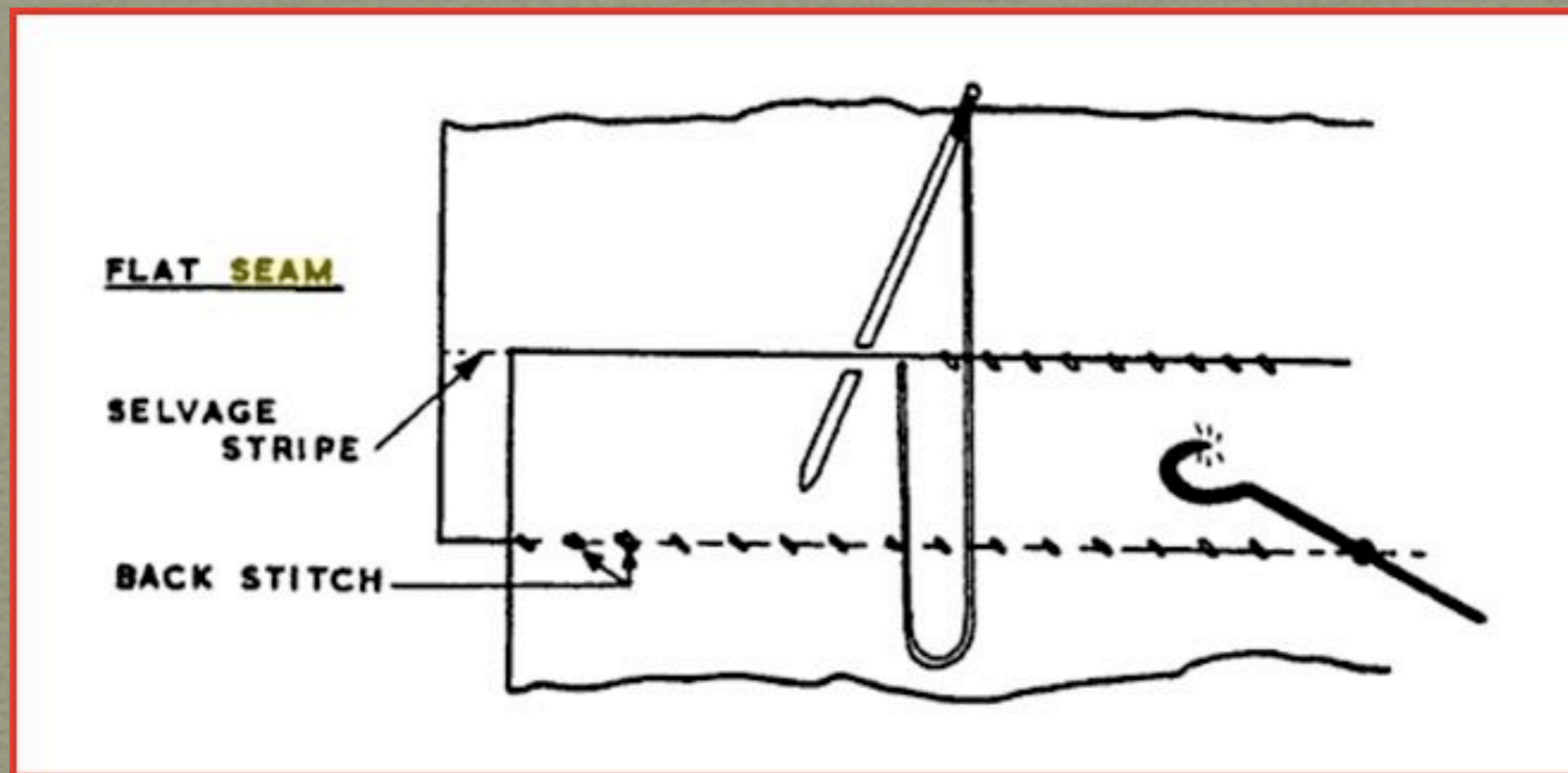
Tuesday 6 August 1776.

The Council contract with Samuel Dorsey of Elk Ridge for the making of Tents, double seamed at 17/ each, and single ditto at 12/ each.” (M-1, p. 174-175)

THE MONK SEAM (1764)

A monk seam was essentially a nautical term which described the Double Seam:

“Monk Seam... among Sailors, is the sewing the edges or selvages of sails together, over one another on both sides, to make it the stronger.” (B-1)



The Double, or Flat, Seam Technique

III. THE “BACKSTITCH” / FELLED SEAM

The third type of seam used in 18th century tent construction actually comes from an examination of both the extant Prussian tents in the Castle at Burg Forchtenstein as well as the Marquee of General George Washington now on display at the American Revolution Center located in Philadelphia, Pennsylvania.

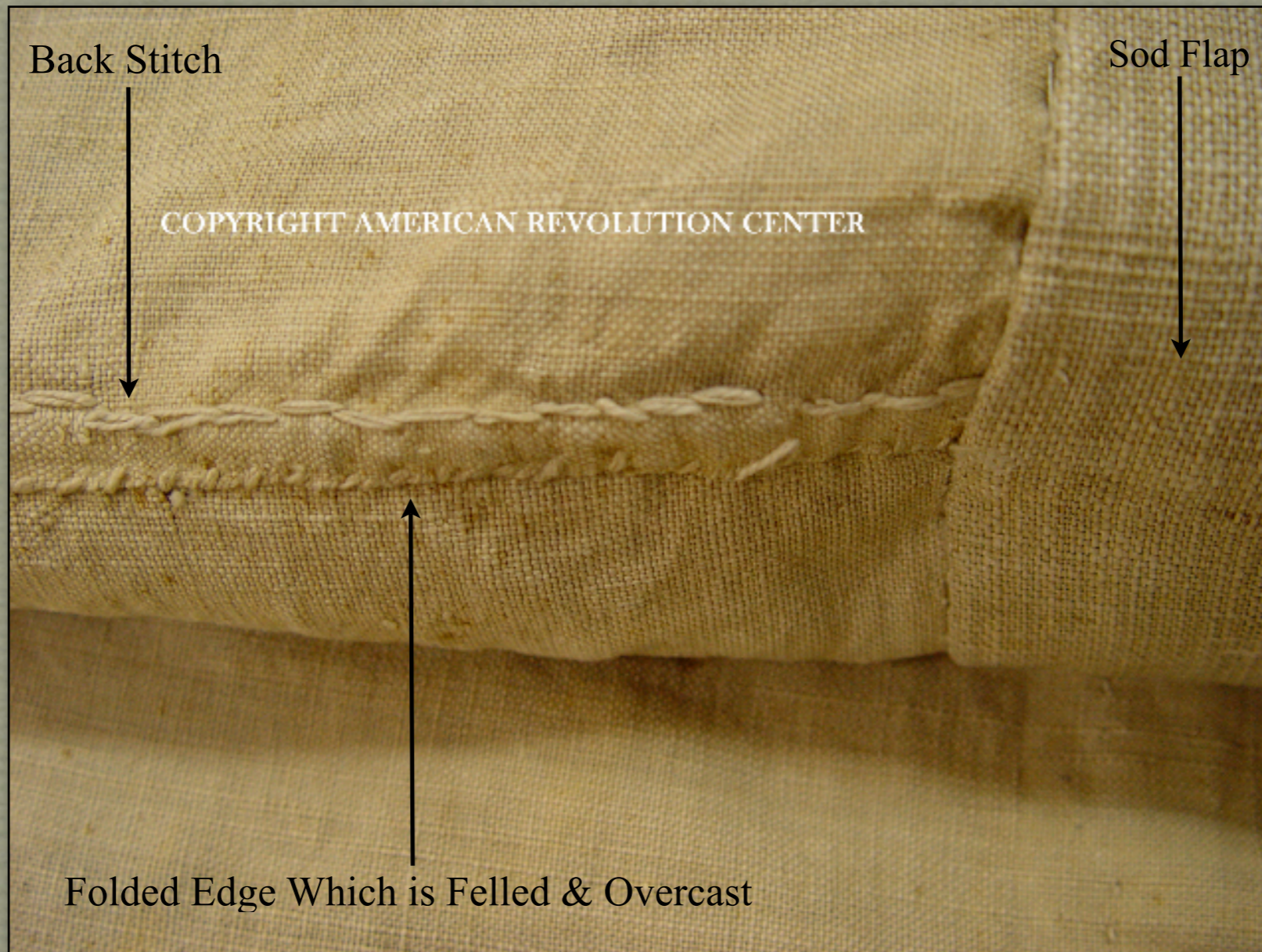
While the evidence gathered from examining a photograph in a book is far from conclusive, it does not appear that the extant Prussian tents are sewn with either a Single or Double seam technique. They do not have the appearance of being round, nor do they appear to be sewn with two rows of visible stitching. Instead, these seams appear to mimic that of 18th century clothing. It is quite possible that they were fabricated with a back stitch. This technique results in only the seam itself being visible and perhaps one row of visible stitching as a result of overcasting. Unfortunately, most of the pictorial evidence we have of this tent's seams is that of an interior lining (which will be discussed later). As such, an absolutely definitive “conclusion” cannot be ascertained, but a reasonable estimate can be rationalized.

On the other hand, an examination of General Washington's Marquee quite definitively confirms that a backstitch technique was used to fabricate the side panel seams of this tent. While it is certainly not an Other Ranks' tent, this Marquee shows conclusive evidence that this technique was used by tentmakers of the period. Unlike a “Round” or “Flat” seam which utilizes the selvedge of the tent cloth, these seams were sewn with cloth which was folded over and overcast in place. Unlike sewing tents with a selvedge edge seam, this manner of seam construction gave more leeway in the width of cloth that could be utilized in tent fabrication. Close examination of these seams reveals they were sewn with a double thread.

Seam Widths:

Wall Seams: 1.5 - 2 cm

Base Seam: 5 cm



The Marquee of General George Washington - The American Revolution Center

Detail of backstitch construction of the Marquee of General George Washington. Note how sloppy this stitching is for the tent which sheltered the Commander in Chief of the Continental Army

TWINE AND NEEDLES:

As far as the materials utilized to actually sew sails (and therefore tents) together, David Steel's, "The Elements and Practice of Rigging And Seamanship," (1794) sheds light on some important basics:

"The TWINE for large sails, in the royal navy, is waxed by hand, with genuine bees-wax, mixed with one sixth part of clear turpentine; and, for small sails, in a mixture made with bees wax, 4 lb; hogs lard, 5 lb; and clear turpentine, 1 lb. In the merchant-service, the twine is dipped in tar, softened with a proper proportion of oil."

"TWINE is of two sorts, extra and ordinary; the extra is for seaming, and runs 360 fathoms to the pound; the ordinary is used to sew on the bolt-rope, and runs 200 fathoms to the pound. Twine for the navy is of three threads." (S-4, p. 90)

"It is the erroneous practice of some sail-makers not to sew the seams any farther than where the edge is creased down for the tabling; but all sails should be sewed quite home to the end, and, when finished, should be well rubbed down with a rubber."

"NEEDLES have three sides towards the point, and are of various sizes. They bear the following names, viz. large marline, small marline, double bolt-rope, large bolt-rope, small bolt-rope, store, old work, tabling, and flat-seam, needles- The needles should be no larger than is necessary to carry the twine, and the edges should be taken off, that the canvas may not be cut." (S-4, p. 88)

SECURING THE TENT TO THE EARTH: TENT PEGS AND ROPE LOOPS

Military tents during the 18th Century were secured to the earth by wooden pegs. Also referred to as “pins” during the American War for Independence, these small stakes were driven into the ground through small loops of hemp chord located along the base seam of a tent. A review of extant artifacts reveals that there were numerous styles of wooden pins utilized by both the British and American armies prior to, and during, the war.



Tent Pin From the Marquee of General George Washington
These pins range from 7 - 9” in Length

A Post - War Dictionary defines Tent Pins:

Charles James' A New and Enlarged Military Dictionary (1805):

“Tent-pins; pieces of wood, which are indented at the top, and made sharp at the bottom, to keep the cords of a tent or marquee firm to the earth”

According to Lewis Lochee in 1778, an Other Ranks' Tent in the British Army was secured by 13 “pegs”.

Based on remaining specimens, tent pins ranged from 7 to 9 inches in length and had either a rounded or flat top, a notch to accept a cord loop, and a tapered body.

Excavations at Fort Ligonier revealed a total of 17 tent pins, or fragments thereof, found within its ruins.

In certain circumstances, it has been found that soldiers found a way to make do when they were short on tent pins, much to the chagrin of their commanding officers:

Order Book of Colonel and Brigadier General Samuel Elbert
1st Pennsylvania Regiment

Headquarters, Fort Howe, 10th May, 1778

“The pinning down the borders of tents with bayonets seems to be too prevalent in camp, and to the utter astonishment of the Genl. he saw it yesterday at a tent which by the label, appeared to belong to an officer.” (D-2, pg. 139)



British Tent Pin

This British Tent Pin was recovered from the British Sloop Boscawen. This vessel was constructed, and later sunk, off Fort Ticonderoga on Lake Champlain between the years 1767-1770.

This fragment is made of a soft grained wood resembling Spruce. It is 0.635" thick and bears a 0.375" deep notch which is 0.625" long.

(Fort Ticonderoga Collection)



Tent Pins Found at Fort Ligonier c. 1758 - 1766
From "*A Soldier-Like Way*" by R.R. Gale
(Fort Ligonier Collection)

Period accounts reveal that chords were used for tent loops during the American War for Independence. During the 18th century, cording, or rope, was made of hemp.

Orderly Book of Colonel and Brigadier General Samuel Elbert:

“General Orders.

Head qrs., Savannah, the 19th Feby., 1778...

He [the Deputy Quarter Master General] will... provide a number of bags, a quantity of cords fit for tents, and the lines, ropes and cordage necessary for four battalions.”

“1780 January 1st.

Portsmouth.

Major Genl: Baron Steuben to Col. Muter...

I must beg you to furnish Colo Davis with such articles as he may be in immediate necessity for & cannot otherwise procure - he is particularly in want of some chords to make loops for the tents he has & which without them are entirely useless-...” (P-1)



Major General Robert Monckton c. 1762 by Benjamin West

Detail of the portrait of Major General Robert Monckton
Note the Placement of a Rope Tent Loop and Notched Wooden Pin
(National Army Museum Collection)



Detail - "Military Architecture describing all parts of a Fortification" by Bowles & Carver
1770

Revealing Notched Pointed Tent Pins and a Wooden Mallet



Wooden Mallet Head Found at Fort Ligonier c. 1758
From "*A Soldier-Like Way*" by R.R. Gale
(Fort Ligonier Collection)

Examination of a Horseman tent in the Burg Forchtenstein collection reveals the presence of hemp cord peg loops. These loops are made from 1/4" thick cord.



Detail - Horseman's Tent at Burg Forchtenstein - Otlowski Photograph
Exterior View of a Linen Rope Loop Which Passes Through Two Grommets

An examination of the interior of this tent reveals that the loops were held in place by passing their ends through two small holes (known as grommets) located within the lower border of the tent. Once knotted on the back, they became secure. These grommets were fabricated with linen thread. To prevent this area from tearing out under tension, a crude linen webbing was sewn down along the interior border of the tent for reinforcement.



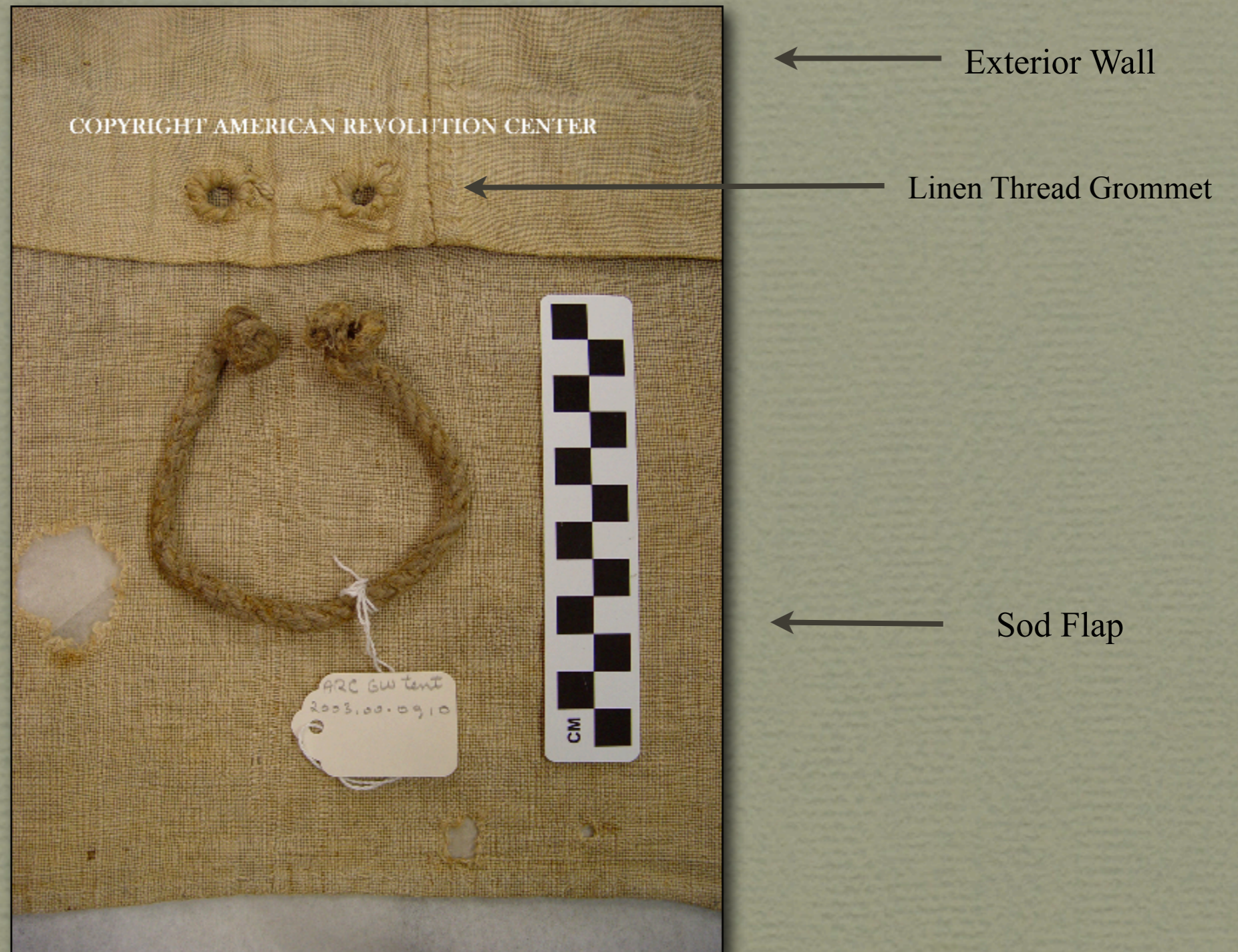
Detail - Horseman's Tent at Burg Forchtenstein - Otlowski Photograph
Interior View of Linen Reinforcement Webbing Along the Tent Base
and Two Ends of a Knotted Pin Loop on either Side of a Tent Seam



Linen Thread Grommet

Detail - Horseman's Tent at Burg Forchtenstein - Otlowski Photograph
Exterior View of a Linen Rope Loop Which Passes Through Two Grommets

It is interesting to note that this exact method of tent loop construction and attachment can also be seen on the Marquee of General George Washington.



Detail of the **Marquee of General George Washington** showing the positioning of two grommets located immediately adjacent to a side panel seam

Tent loop grommets were traditionally located along the seams of a tent, and sometimes in the middle of a panel as well. The two grommets which held a tent loop in place could be found either adjacent to a seam, or on both sides of a seam.

As previously noted, we can gain further insight on the specifics of tent construction (in this case, holes or grommets), by comparing them to those used in the process of manufacturing sails.

In David Steel's, "The Elements and Practice of Rigging And Seamanship," (1794) we see the following:

"Holes are made by an instrument called a pegging awl, or a stabber, and are fenced round by stitching the edge to a small grommet, made with log or other line; when finished, they should be well stretched or rounded up by a pricker or a marline-spike."

Steel also reveals that: *"Reef and head Holes of large sails have grommets of 12-thread line, worked round with 18 to 21 stitches; smaller sails have grommets of 9-thread line, with 16 to 18 stitches, or as many as shall cover the line, and smaller holes in proportion... The holes, for marling the clues of sails and the top-brims of topsails, have grommets of log-line, and should have from 9 to 11 stitches; twelve holes are worked in each cloth."*



The Marquee of General George Washington - The American Revolution Center

An example of a grommet sewn with thick linen thread

Here we see a linen thread grommet sewn within a hemp webbing reinforcement that extends around the base of the canopy of General George Washington's Marquee. Through a series of these grommets, tension ropes attached to wood washers would secure the tent to the earth.

In this view, we can see two stain marks left over from metal hooks and eyes used to hang the walls of the Marquee to the canopy. These were removed in the 1970s when the tent underwent professional preservation. While this is by no means a representation of an other ranks' tent during the American Revolution, it is a good representation of the techniques used for making grommets during the period. Note that the thread is double wide linen.

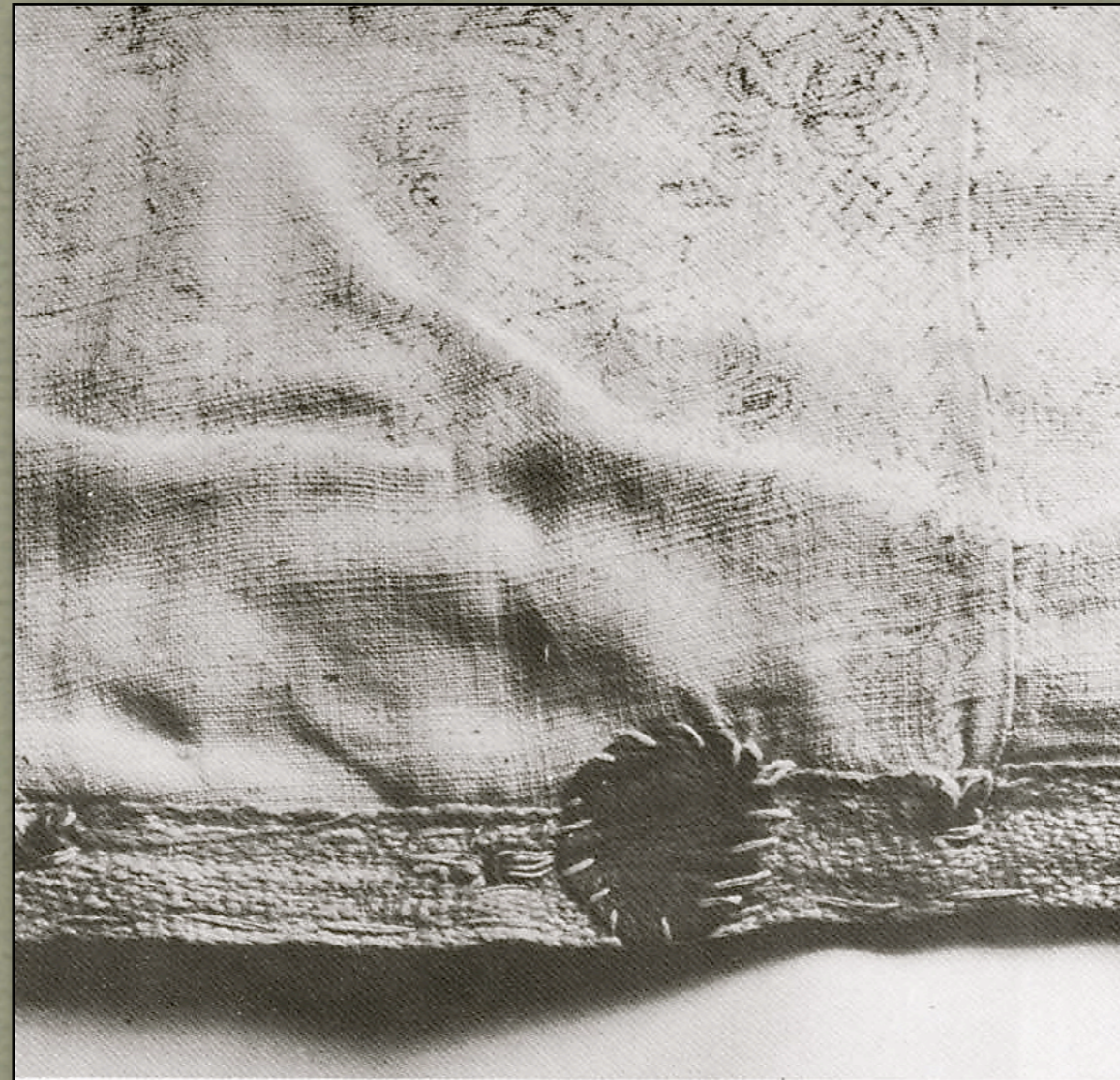
According to one contemporary source, “slit holes” (grommets) could also be reinforced with leather for extra strength. This source also mentions the use of “turned Rings” which may have been used to reinforce the tent loop itself.

S. Dorsey, Jr., to Council:

“E[lk] R[idge] Furnace Aug 20th 1776.

Gentlemen. I have at last got a Tent for a pattern which I think is by no means a suitable one for the Purpose, therefore I have sent one of my make with the patern received from Baltimore for your directions which to pattern after. If they are made with leather on the slit holes & turned Rings and double slit holes cannot be done compleat for less than Twenty Two shillings and six pence. They Lake to make one of the Linnen of that size twenty three yards and no more. I have Hands engaged to make two a day from this time. I have sent you likewise a sample of Tent poles which I will likewise engage to make if you will send me up your price for them. If I can afford to make them at it I will proceed on them immediately. As you will want some Arm Tents should be glad to know whether I shall make you any of them and how many. They will be quite different from the others, but will make them as cheap as possible. If the Tent I have sent down to you, should think it too small, I will make the rest larger; but my man says they are full as large as any the tents at England...” (M-1)

One possible explanation of “Slit Hole” reinforcement with leather MAY include sewing a small strip of leather to the border of the grommet itself, as shown in this example of an Other Ranks’ Tent in the collection of Burg Forchtenstein:



Tafel 10: Detail des Zeltes H 2; Burg Forchtenstein/Burgenland

Detail From Ruth Bleckwenn’s Text: “Zelt und Lager im AltPrussichen Heer”

An example of a Grommet reinforced with either leather or chord

Another possible method MAY have been similar to this repair to the Horse Tent at Burg Forchtenstein:



Detail - Horseman's Tent at Burg Forchtenstein - Otlowski Photograph
Exterior View of a Leather Field Repair to Reinforce the Loop Grommets

As far as the “turned Rings” are concerned, one can only speculate as to their exact appearance and function. That said, wooden rings or washers can be found on extant 18th century tents so these can be used as a cross reference when seeking out their possible identification.

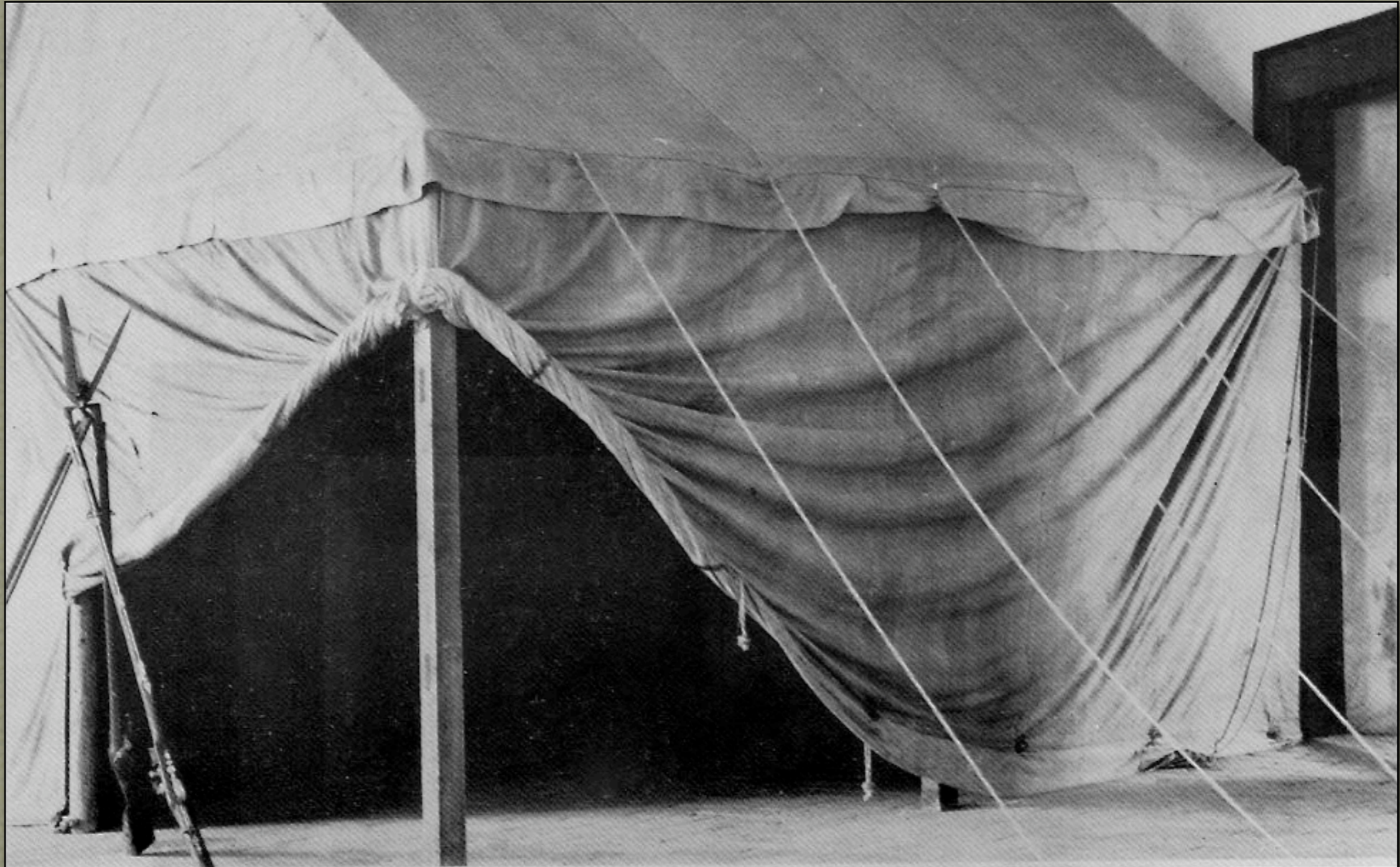
A Marquee in the collection at Burg Forchtenstein demonstrates rope peg chords that differ than the loops previously described. These chords are tied into a loop on one end and are reinforced with wooden rings on the other. Rather than passing through two grommets, these chords pass through a single grommet located within the lower border of the tent.

This more elaborate system allowed the walls of the Marquee to be turned up in order to improve circulation when weather conditions permitted.



Marquee Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussichen Heer"

A wooden washer secures a simple chord tied into a loop



Tafel 8: Zelt eines höheren preußischen Offiziers aus dem 18. Jahrhundert,
Burg Forchtenstein/Burgenland, Schausammlung

Marquee Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussischen Heer"

Wooden washers secure a simple cords tied into a loop

During the 18th century, Marquee canopies were also secured with these combinations of cords and washers. They can be seen on the Marquee in the Burg Forchtenstein collection, as well as the Marquee of General George Washington.

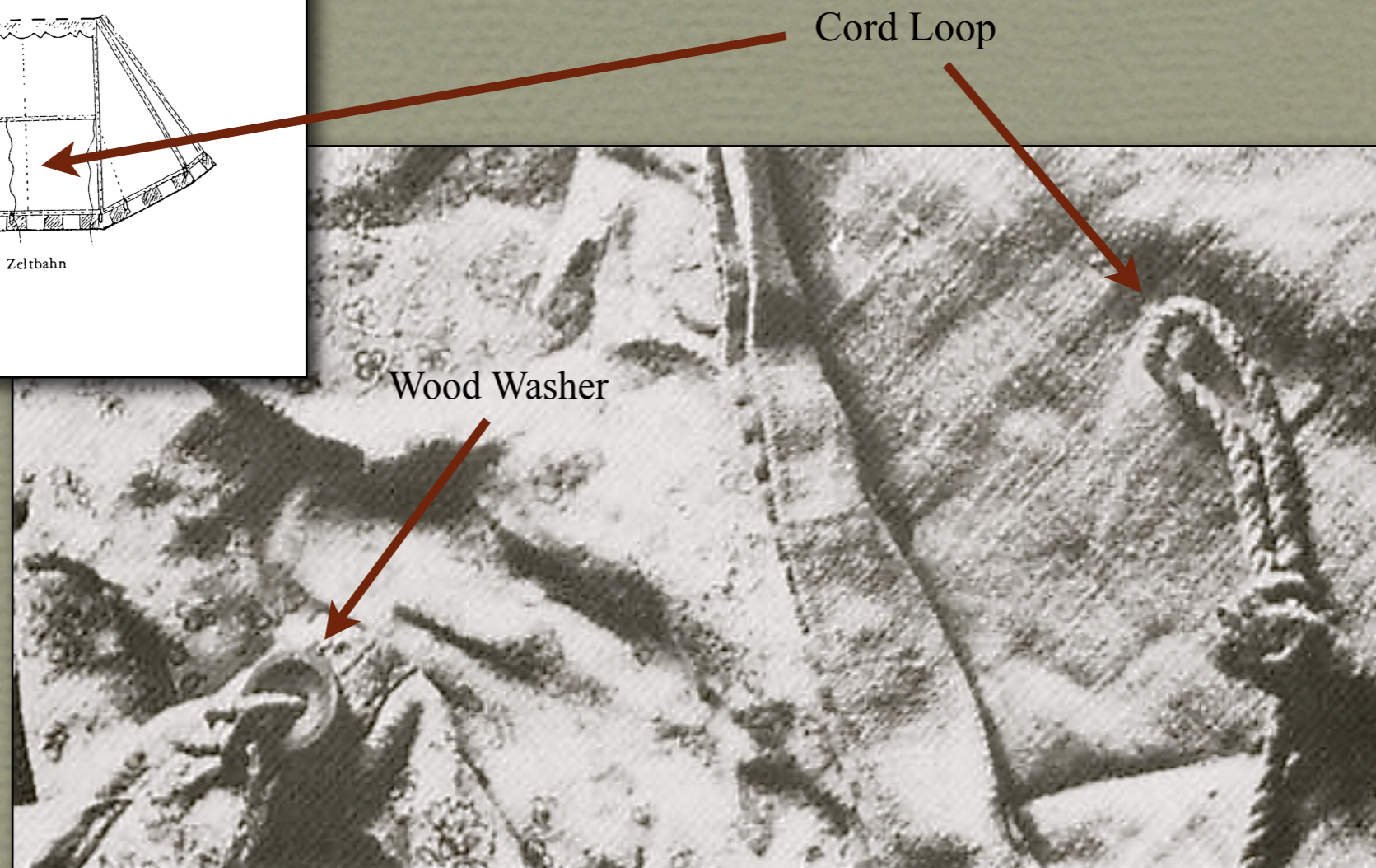
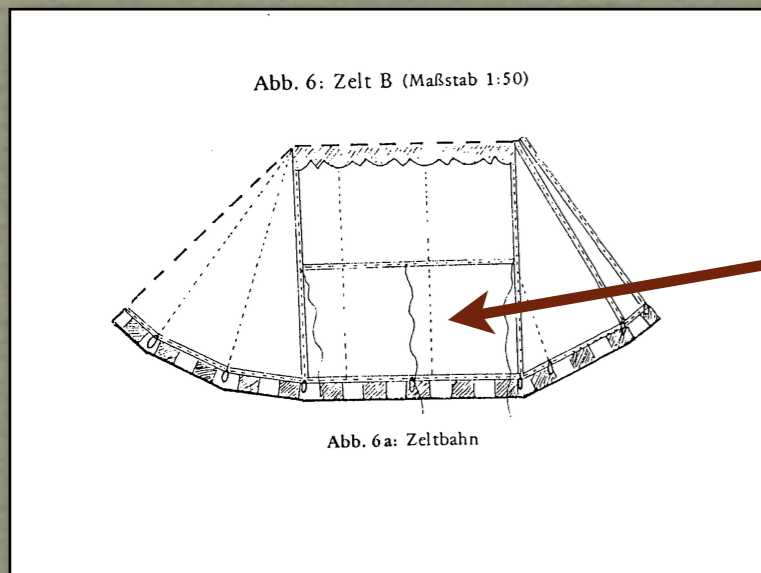


**American Revolution Center (ARC 2003.00.0868)
Washington Marquee Canopy Rope Tensioner**

“Bone” shaped hardwood (possibly oak) tensioner marked “5”
7 3/4” X 1/2” X 1 3/4”

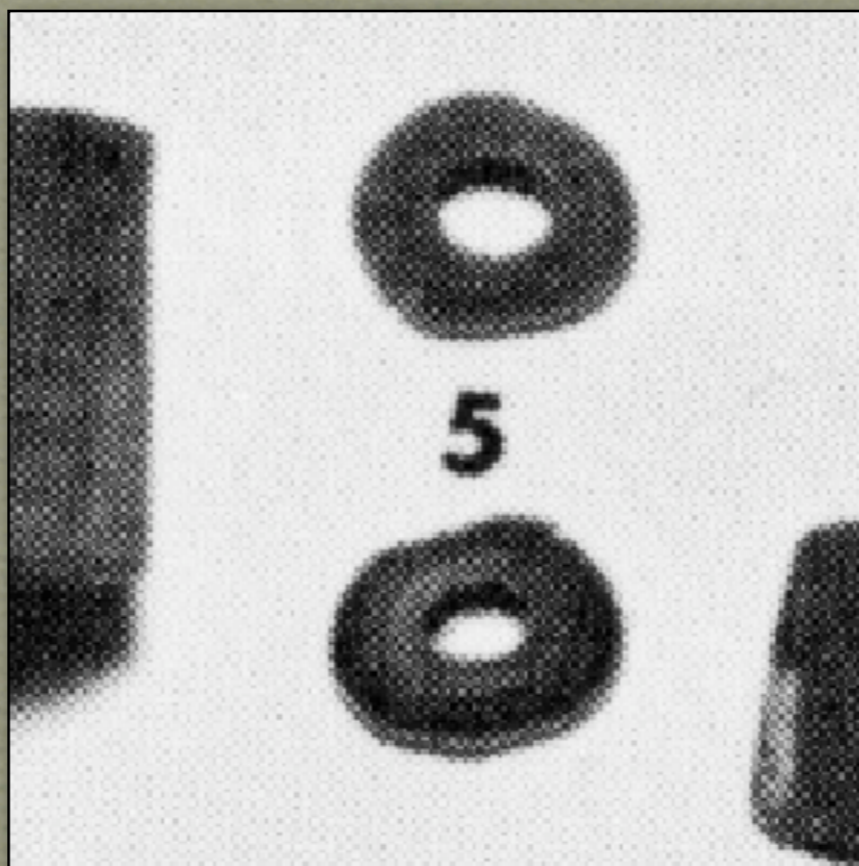
Rope cord 188” long, 3-strand, 1/4” diameter in one section with knots tied at both ends.
One turned hardwood (possibly fruitwood) 1 1/4” diameter washer/disc at one end

Although we cannot determine the exact construction of the peg loops on the Other Ranks' tent in the Burg Forchtenstein collection, we can see the same chord and washer combinations on three unusual cords which extend out the sides on this tent.



Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussichen Heer"

Detail of the Other Ranks' Tent at Burg Forchtenstein revealing a hemp cord line looped at one end with a crude knot and secured at the other end by a knot which pulls against a concave wooden washer.



Detail of Wood Washers excavated at Fort Ligonier

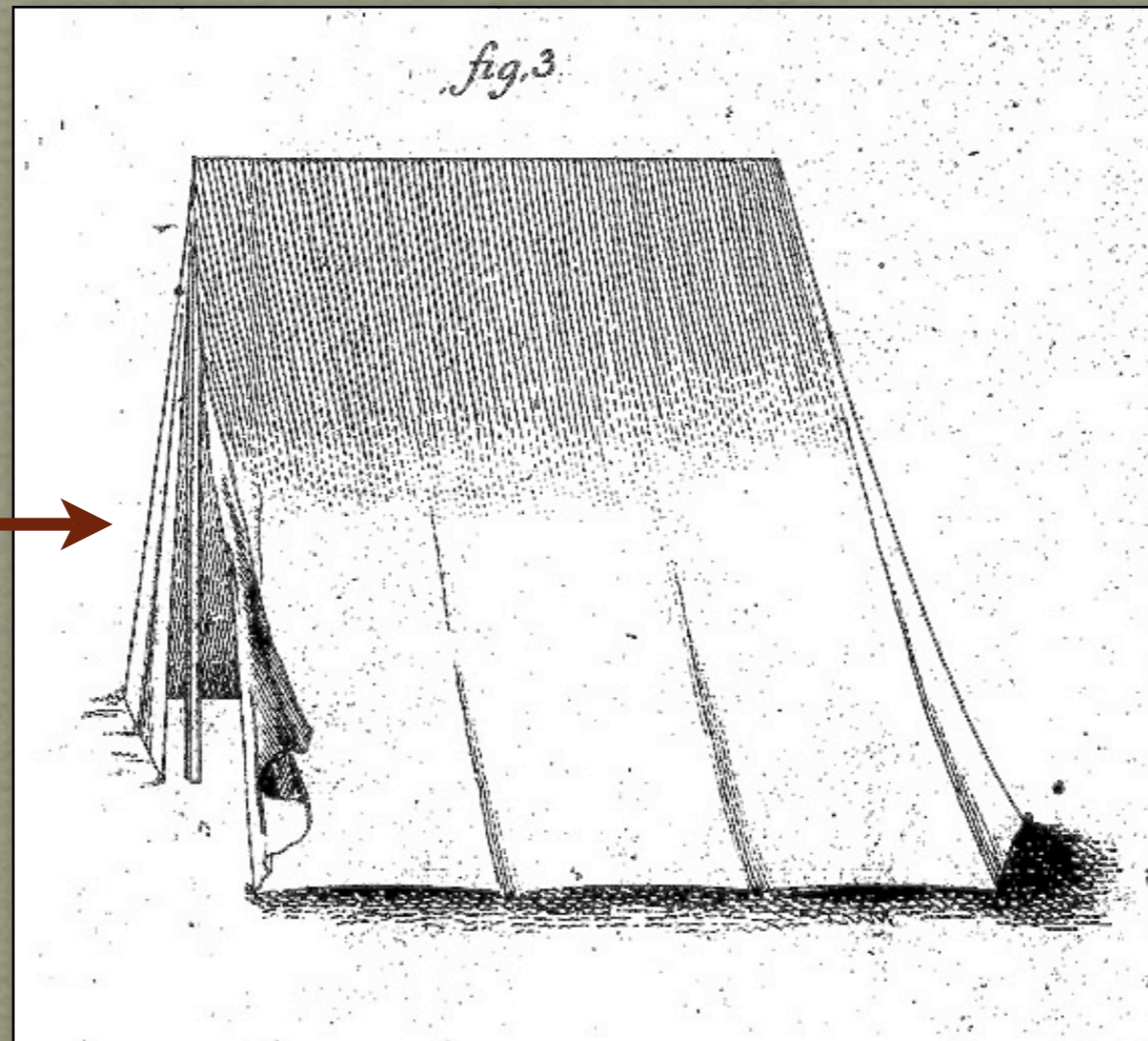
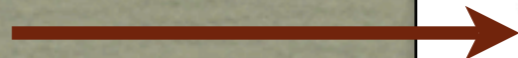
Grimm, Jacob L., "Archaeological Investigation at Fort Ligonier, 1960-1965." Plate 28, No.5)

Although the exact use of these wood washers cannot be completely determined, they may have been used in tent fabrication. These wood rings have an outside diameter of 1.1" an inside diameter 0.4". They are 0.28" thick. One side is flat while the other side is convex. "The rings did not respond well to the preservatives and changed from circular to oval after removal from the stream." (G-2)

TENT FLAPS AND CLOSURES

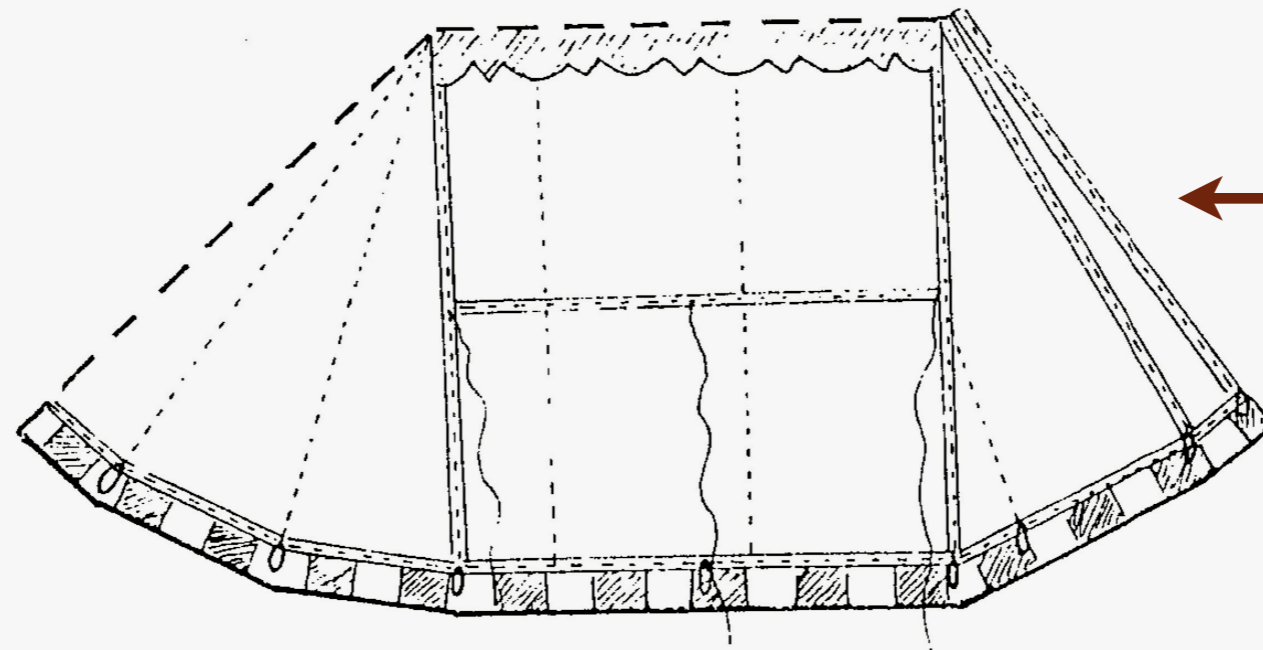
During the 18th Century, the Front Flaps of an Other Ranks' tent were constructed out of two or three panels of triangular cloth. This can be seen in both Lewis Lochee's illustration of a British Other Ranks' tent, as well as the extant Other Ranks' tents located in the collection of Burg Forchtenstein.

1 Seam
2 Panels



Detail from Lewis Lochee "An Essay On Castrametation" 1778
British Other Ranks' Tent Revealing Front Flaps Constructed with 2 Panels

Abb. 6: Zelt B (Maßstab 1:50)



Front Flap
3 Panels
2 Seams

Abb. 6a: Zeltbahn

Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussischen Heer"

Front Flap Constructed Out of Three Panels of Cloth, Two of Which are Reinforced with Webbing

According to Ruth Bleckwenn, the front flaps of the Other Ranks' tents residing in the collection of Burg Forchtenstein slightly overlap one another. The opening they created was closed by two means; rope loops located along the base of each flap and two (one possibly missing) or three sets of iron hooks and eyes set along the entrance edge.

An English translation by Mark Rogers of Bleckwenn's work describes this practice:

"On the extant one (Tent Type A), the pieced together construction of the entrance can clearly be seen: In the middle of the front opening, both flaps reach to each other and overlay. The front flap has two hooks attached to the edge that grasp into eyes of the rear flap. Below, at the corners of the flaps, are cord loops that were secured to the ground with pegs. Especially interesting - when looking from the front - some tents close left to right and others vice versa." (B-2 p.31)

Lewis Lochee also described cord loops being located at each flap corner (which shared a common pin) and down the middle of each flap at the center seam.

According to a contemporary newspaper advertisement, hooks were available for tent construction in New York.

The New- York Gazette: or, the Weekly Post-Boy

"John Ernst Juncken Needle-maker, living in Second-street, near the Dutch Vendue House, in Philadelphia: Hereby gives Notice to the Public, that he makes and hath to sell, at a reasonable Rate, the following Commodities, viz. Tent Hooks washed over with Pewter ..."



Detail - Horseman's Tent at Burg Forchtenstein - Otlowski Photograph
Exterior View of a Linen Rope Loop Passing Through Two Grommets Located at the Corner of a Front Flap



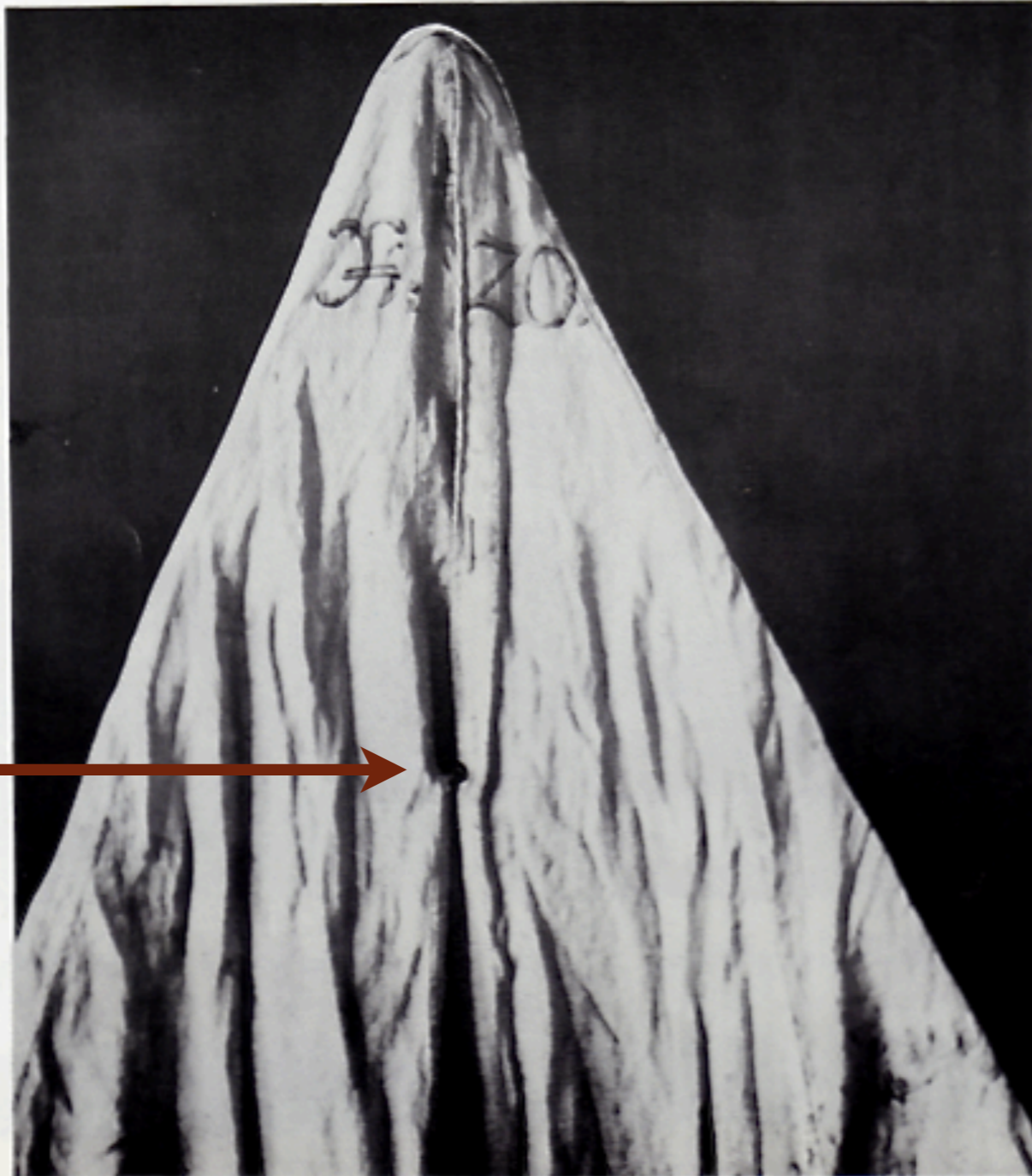
A Scene of the Camp on Hampden Green 1731

This view reveals two enlisted men placing tent pegs along the periphery of a wedge tent. Note that the pegs are being placed through loops located along the front flaps which allow their closure. Loops were traditionally located at each panel seam and occasionally along the middle of a panel. Note the wooden mallets the soldiers are using to set up their sleeping quarters.



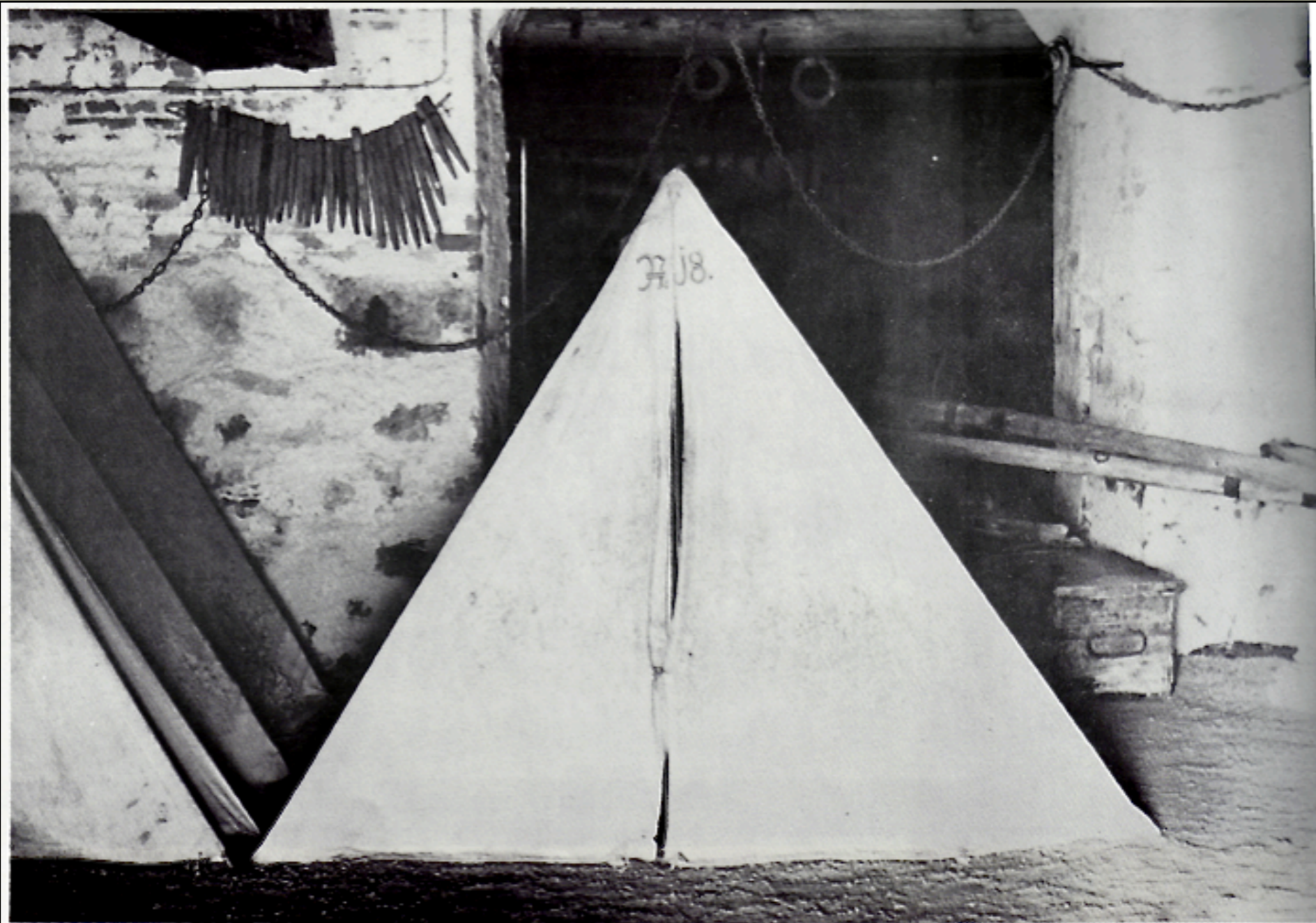
Tafel 13: Detail des Zeltes A; Burg Forchtenstein/Burgenland

Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussischen Heer"
Front Flap Closure Utilizing Two Sets of Iron Hooks and Eyes (One possibly missing)
"Zwei Paar Metallhaken und Ösen zum Schließen des Eingangs"
("Two pair metal hooks and eyes to close the entrance")



Tafel 13: Detail des Zeltes A; Burg Forchtenstein/Burgenland

Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussichen Heer"
Front Flap Closure Utilizing Two Sets of Iron Hooks and Eyes (One possibly missing)
"Zwei Paar Metallhaken und Ösen zum Schließen des Eingangs"
("Two pair metal hooks and eyes to close the entrance")



Tafel 7: Preußisches Mannschaftszelt aus dem 18. Jahrhundert,
Burg Forchtenstein/Burgenland, Magazin

Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussichen Heer"
Front Flap Closure Utilizing Two Sets of Iron Hooks and Eyes (One possibly missing)
"Zwei Paar Metallhaken und Ösen zum Schließen des Eingangs"
("Two pair metal hooks and eyes to close the entrance")



Iron Hooks and Eyes

Excavated at Saratoga, New York, in the Camp of the 21st or Royal North British Fusiliers
Who were Encamped there from 21 September to 7 October, 1777
Archaeologic Dig by Dean Snow, PhD, then Professor of Archeology at SUNY Albany
Saratoga National Historic Park

Based on both contemporary illustrations of 18th century tents, as well as the characteristics of the extant Prussian tent, we can also determine that there were two basic means by which the flaps of a tent came together to form the opening.

In one manner, the front flaps simply met edge to edge from the base of the tent to its peak along the ridge pole. This method would entirely expose the end of the ridge pole when the flaps were pulled open.



London: Printed for Bowles & Carver,

A Perspective VIEW of an ENCAMPMENT.

No. 69, St. Pauls Church Yard.

52

GB-P1790 mf-2

**“A Perspective VIEW of an ENCAMPMENT”
Printed by Bowles and Carver**

Illustration revealing tent flaps which extend to the height of the ridge pole.



Colonel Thomas Musgrave, H.M. 40th Regiment of Foot, at Germantown

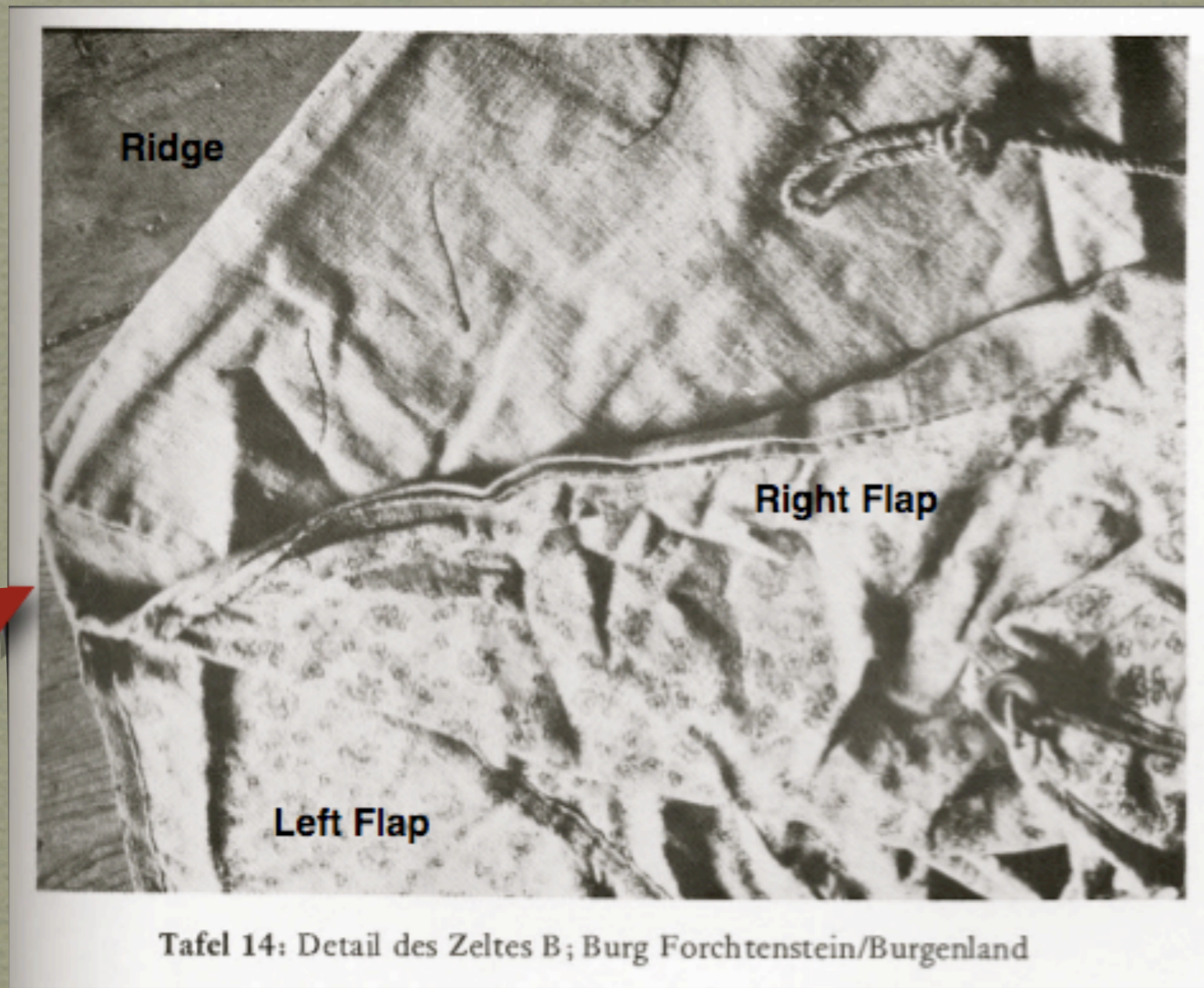
In this portrait of Colonel Thomas Musgrave, we see a portion of the camp of His Majesty's 40th Regiment of Foot. Note the presence of two Bells of Arms and four other ranks' tents. The front flaps of these tents extend to the height of the ridge poles. In the rear of this painting is Cliveden, home of Benjamin Chew, where a detachment of Battalion Company men of the 40th Foot held off a much larger division of Continental forces during the Battle of Germantown, Pennsylvania, on October 4, 1777.

Another manner to create the front opening of a tent was to connect and sew together the front flaps for short distance from the peak. This method would completely enclose the ridge pole when the flaps were pulled open. This method of construction would also create a slight overlap of the front flaps.



British Encampment Detail - Paul Sandby

In this view of a possible Quarter Guard of the British Army, we can see an other ranks' tent with a front flap opening which begins a short distance down from the peak of the ridge pole.



Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussischen Heer"

This view shows the front flaps of a Prussian Enlisted Man's Tent which are sewn together for the first 6 inches or so down from the top of the ridge pole.

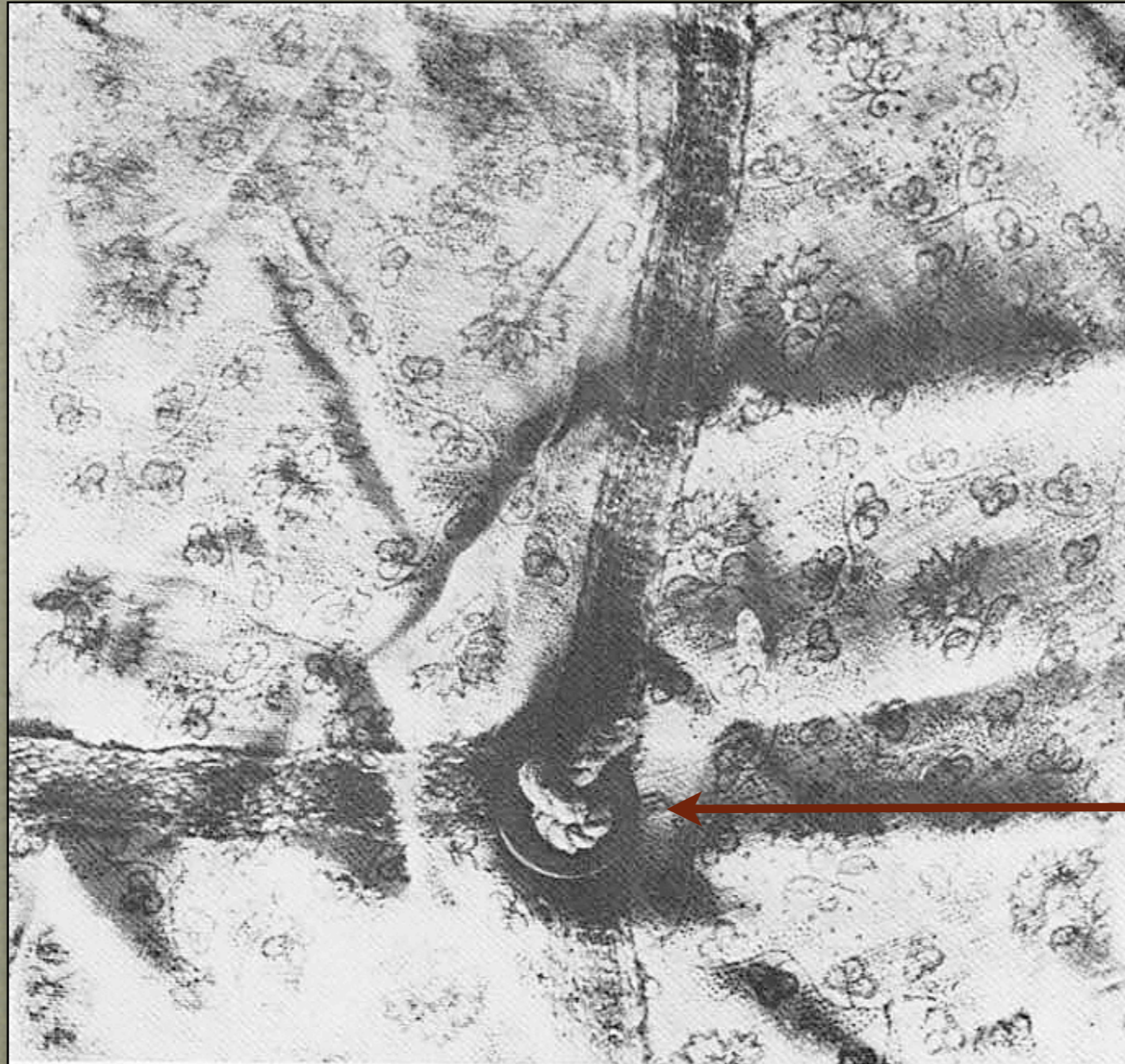
TENT INTERIORS

The only evidence we have of the appearance of the inner aspect of an enlisted man's tent comes from the extant tent in the collection of Burg Forchtenstein in Austria. Whether or not this can be considered representative of the tents which saw service during the American War for Independence has yet to be determined.

Examination of this enlisted man's tent reveals some very interesting findings.

First, the entire interior has been lined with with a fine linen which has been printed with a floral pattern. The sides of the tent are made up of separate top and bottom panels. The front panel flaps and (presumably) the back wall of the tent are also lined with this material

Second, all of the seams of the interior panels, including the base of the tent, have been reinforced with a webbing material that appears to be between 3/4 to 1" in width. This material was (presumably) added to reinforce those areas which would be under greater strain due to the positioning of the grommet and tent loop configurations.

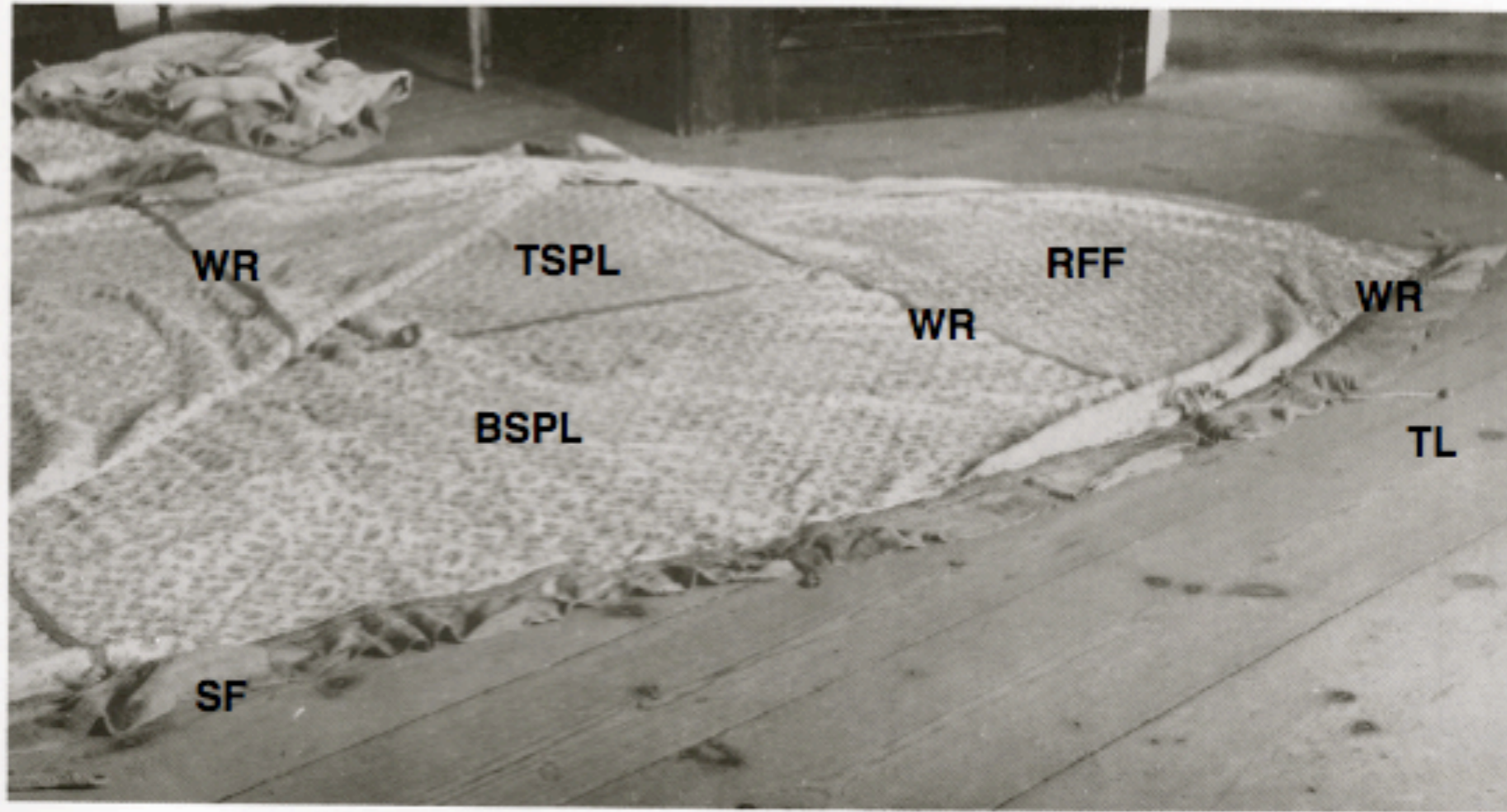


Wood Washer and Line
Extending out the Side
of the Tent. This is
NOT a Tent Loop

Tafel 15: Detail des Zeltes B; Burg Forchtenstein/Burgenland

Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussichen Heer"

Detail revealing a hemp webbing sewn as a reinforcement over the interior seams



Tafel 17: Zelt B, ausgebreitet; Burg Forchtenstein/Burgenland

Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussichen Heer"

In this view of the extant tent laid open, we can see the following:

- RFF** - Right Front Flap
- WR** - Webbing Reinforcement
- TSPL** - Top Side Panel Lining
- TL** - Tent Loop
- BSPL** - Bottom Side Panel Lining
- SF** - Sod Flap

SOD FLAPS

Examination of the Other Ranks' tent in the collection of Burg Forchtenstein, Austria, reveals the addition of external sod flaps along the base of the tent to aid in the reflection of mud and water. Based on black and white photographs as well as an artist's rendering, these flaps are highly decorated in an alternating pattern of dark and light panels.

Examination of the numerous illustrations of other ranks' tents for either the Continental or British forces serving in the American War for Independence reveals no such conclusive evidence that sod flaps were used. The open tent illustrated in "A Scene of the Camp at Hampden Green 1731" clearly shows that there are no sod flaps. That said, we cannot rule out their use.

It is quite possible that the following reference is referring to sod flaps, albeit open to interpretation.

"Friday, August 4th, 1780...

Ordered, That so much of Mr. J. Bradford's letter, of July 12th, as relates to linen for tents and sod cloath, and sales of sugars, be referred to a committee of commerce..."

(C-2, p. 242)

We also have a "shopping list" put together by John Laurens in 1781:

Estimate of Clothing to be purchased in Holland by John Laurens for the American Army.

"1000 pieces of strong oznaburghs for the borders of tents - each piece to contain 100 yds. a 8d." (S-1)

Unfortunately, this entry is also wide open for interpretation. Could this be material for sod flaps, or simply a lining for the tents? Given the quantity of material requested (1000 pieces of 100 yard long material), could this be more of a webbing material? We just don't know.

What we do know is that the side panel walls of General George Washington's Marquee definitively shows the presence of sod flaps that are 22 cm wide.



A Scene of the Camp on Hampden Green 1731

This view of a camp on Hampden Green dated 1731 shows a mess of men sleeping in their canvas quarters. Note that they sleep side to side. Their accoutrements and hats are laid out within an extension, or bell, at the rear of the tent. It is interesting to note that the flaps of the tent begin to open a short distance down from the peak of the ridge pole. When the flaps are open, the ridge pole would be completely covered. Note also that there are **NO** sod flaps on this tent.



The Marquee of General George Washington

Detail of General George Washington's Marquee showing the utilization of unbleached linen cloth for a sod flap.

CROCUS BORDERING

In the 18th Century, “Crocus” was a term interchangeable for course linen. Although the exact interpretation of “Crocus Bordering” has yet to be determined, it may possibly refer to the sod flaps or linen webbing loop reinforcements previously described. On the other hand, it may imply something entirely different, such as a decorative or functional tent adornment.

“War Office 10th Feby 1776

Sir

I have the honor to acquaint you I have received thro’ H. M’s. Secy of State a Copy of a Letter from the Board of Ordnance, wherein they report that a field Officer and two Captains of Artillery who had served in N. America, having been ordered to examine the Foot Tents now in Store, had recommended that the Tents for the Infantry shall in future be made of the same Cloth as what is at present used for the Cavalry Tents wt the Addition only of the Crocus Bordering.

As You, Sir, Commanded so long in North America, and must be so perfectly acquainted with the Nature of the Service there, I should be exceedingly glad to be favored with your Sentiments hereupon, before I take upon me to move His Majesty to direct an Alteration which must bring a very considerable Expence on the Public both now & in future.

*I have the honor &c
Barrington*

Sir Jeffrey Amhurst

&c &c &c” [WO 4/96 p. 74]

“War Office 13th Feby 1776

My Lord

I have the honor to acknowledge the receipt of your Lordships Letter of the 3d instant enclosing the Copy of a Letter from the Board of Ordnance relative to the Tents for the Infantry.

Unwilling without sufficient Grounds to propose to the King an Alteration which must have brought a very considerable Expence on the Public both now and in future, I judged it necessary to consult Sir Jeffrey Amherst who had so long commanded in North America, and must necessarily be perfectly acquainted with the Nature of the Service there.

Enclosed I have the honor to transmit a Copy of Sir Jeffrey Amherst’s Letter on this head and beg leave to submit to your Lordship my Opinion that the Infantry Tents should continue to be made of the same cloth as heretofore with the Addition of the Crocus Bordering. I am only to desire you Lordship will be pleased to recommend to the Board of Ordnance that the Cloth be the best of the sort, and that no Tents be issued which are not in every respect fit for service.

*I have the honor &c
Barrington*

Lord Visct. Weymouth

&c &c &c” [WO 4/94 p. 86]



**“Encampment of the Loyalists at Johnston, a New Settlement on the Banks of the River St. Lawrence in Canada”
Peachy 1782**

Loyalist Tents revealing Red Ridge Decorations



**“Encampment of the Loyalists at Johnston, a New Settlement on the Banks of the River St. Laurence in Canada”
Peachy 1782**

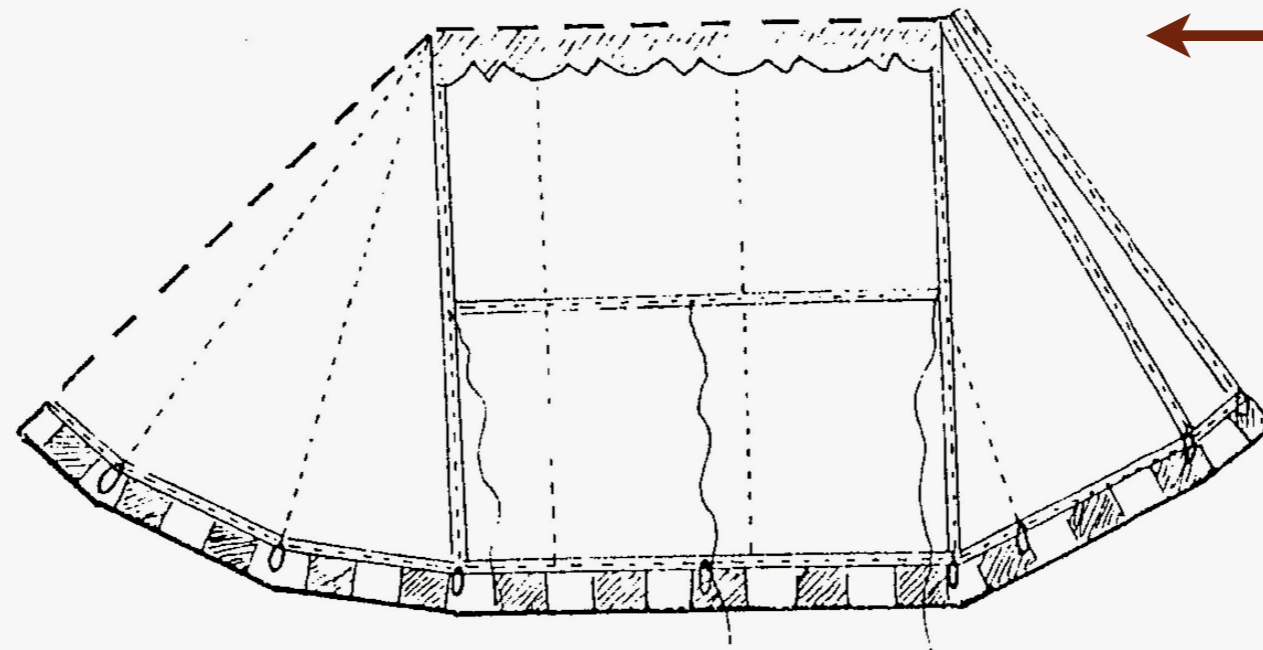
Loyalist Tents revealing Red Ridge Decorations



Green Park Encampment 1780

At the right, an Other Ranks' Tent with makeshift poles sports a Blue Ridge Decoration

Abb. 6: Zelt B (Maßstab 1:50)



Scalloped
Ridge
Decoration

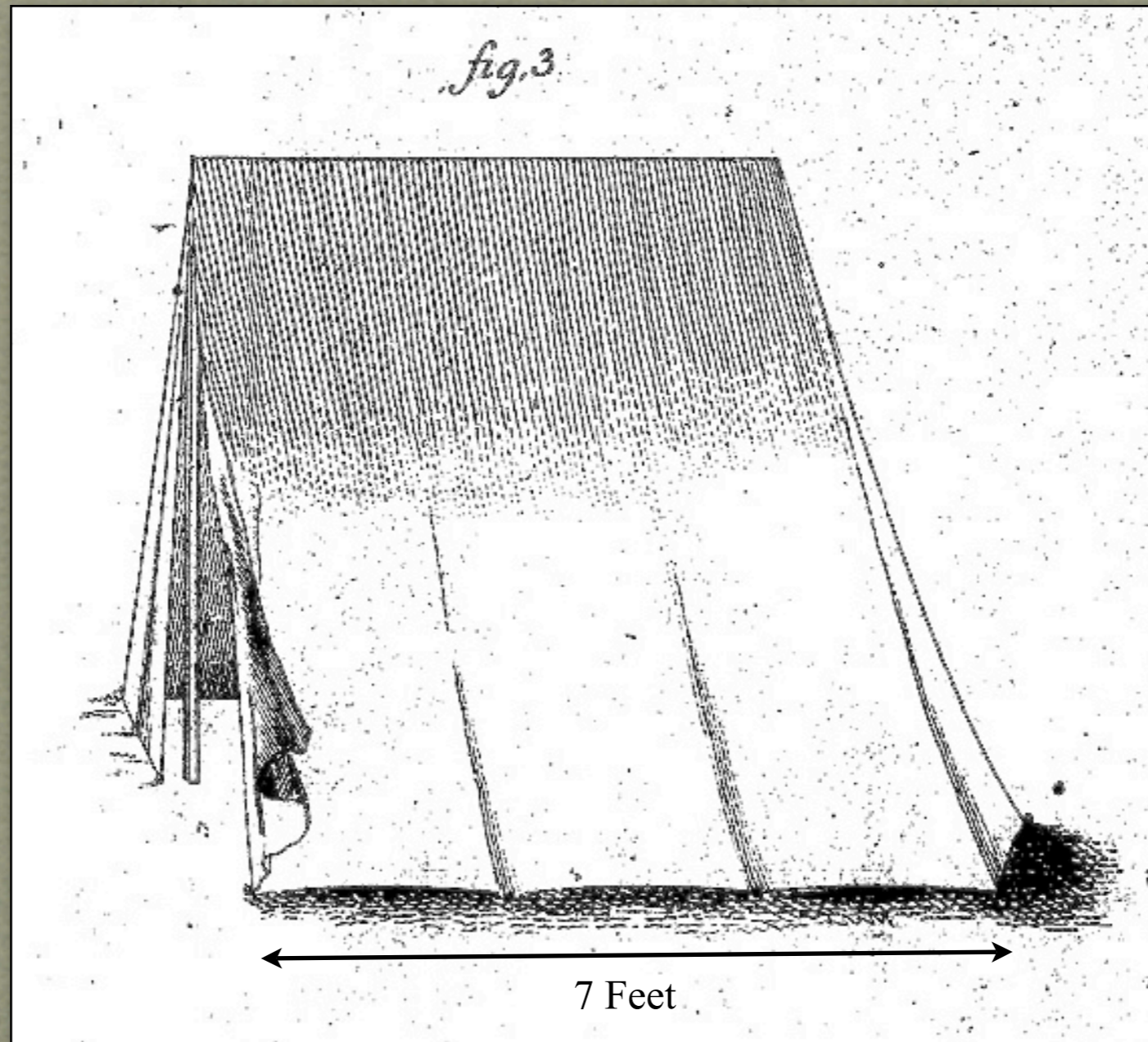
Abb. 6a: Zeltbahn

Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussischen Heer"

Prussian Tent Scalloped Ridge Decoration

SIDE WALL CONSTRUCTION

In general, Other Ranks' tents during the American Revolution were fabricated with three panels of cloth per side. For a seven foot tent, this would mean that each panel was roughly 28" wide, not including an allowance for seams.



Detail from Lewis Lochee "An Essay On Castrametation" 1778

TENT BACK DESIGNS

During the American Revolution, there were three distinct designs to finish off the rear of an Other Ranks' tent.

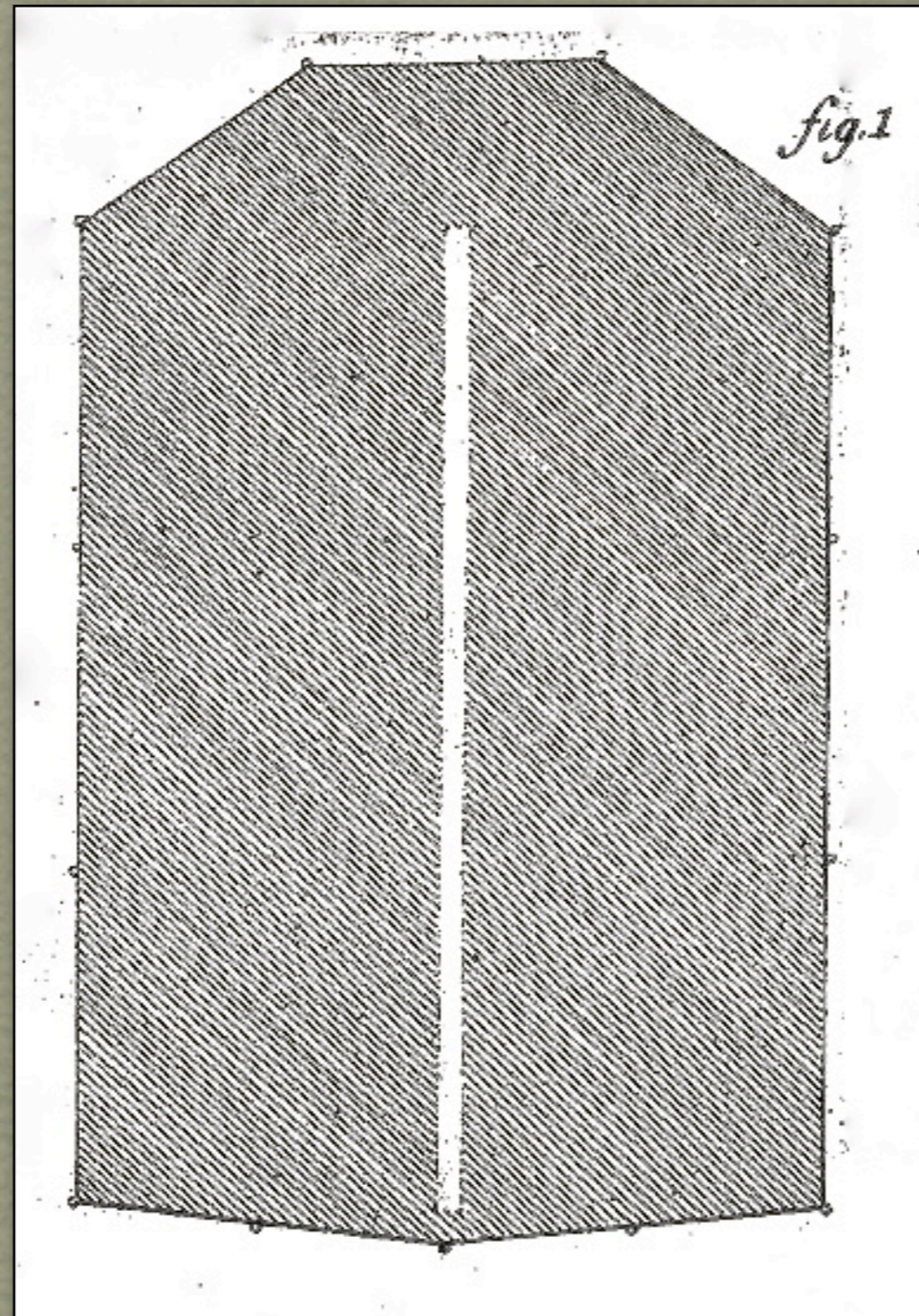
“Bell” back tents incorporated an extension off the body of the tent to allow for the housing of a mess' accoutrements, kettle and hatchet. A “Flat” back tent on the other hand had no such extension which made it a much smaller shelter.

Current research reveals that messmates actually slept side to side and perpendicular to the length of the tent itself. With this in mind, a “Bell” extension had many advantages over it's counterpart.

The three designs of tent back construction which can be documented include:

1. The 3 Panel Bell Back Tent
2. The 6-7 Panel Bell Back Tent
3. The Flat Back Tent

The 3 Panel “Bell” Back Tent



Detail from Lewis Lochee “An Essay On Castrametation” 1778

Three Panel British Bell Back Tent. Note the 13 loop locations, including those on the two front flaps which are closed by a single peg shared in the center

The 6-7 Panel “Bell” Back Tent

Abb. 6: Zelt B (Maßstab 1:50)

6 Panel “Bell” Back

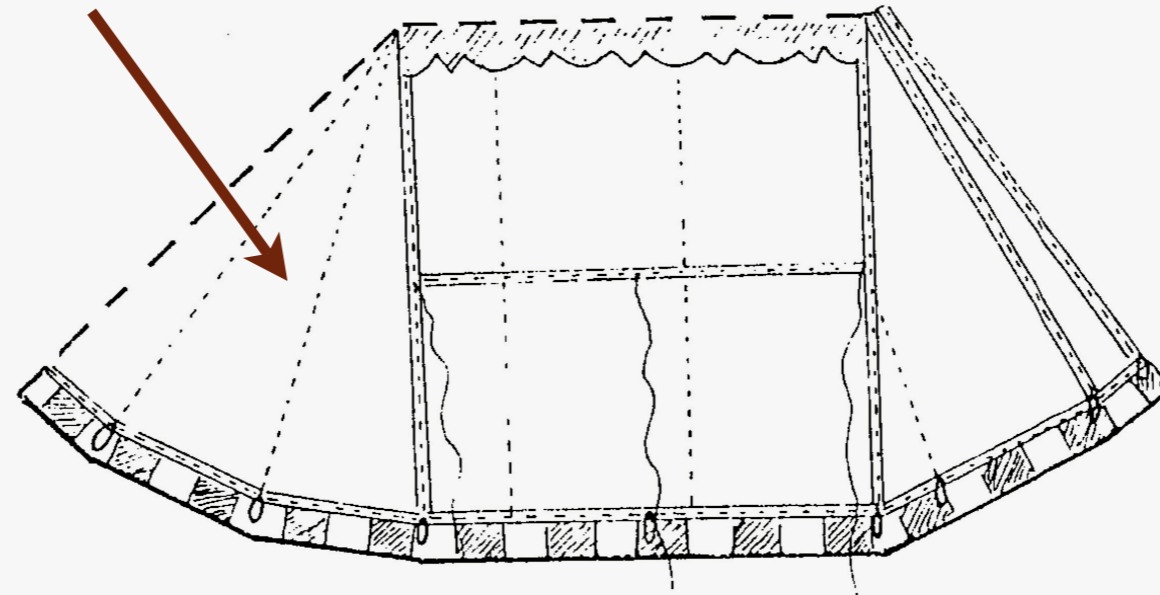
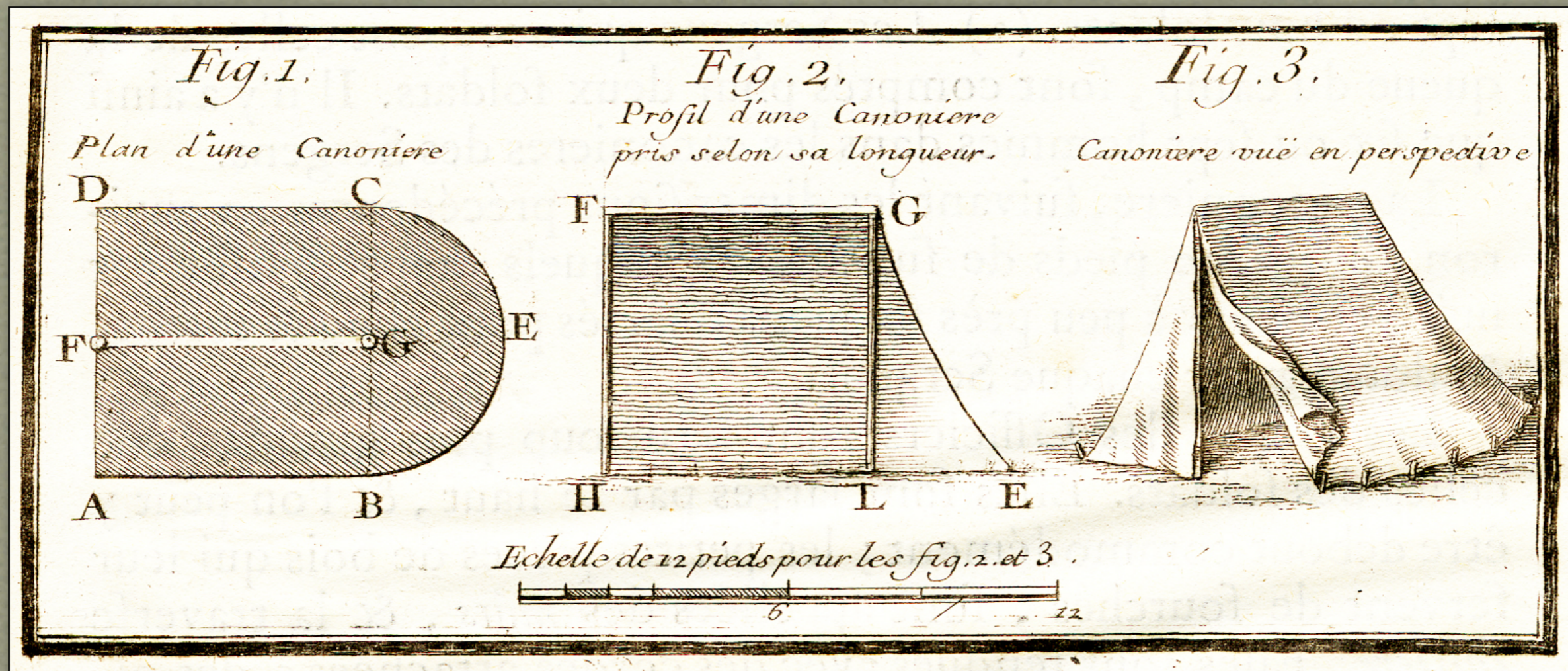


Abb. 6 a: Zeltbahn

Detail From Ruth Bleckwenn's Text: **“Zelt und Lager im AltPrussichen Heer”**

The 6-7 Panel "Bell" Back Tent

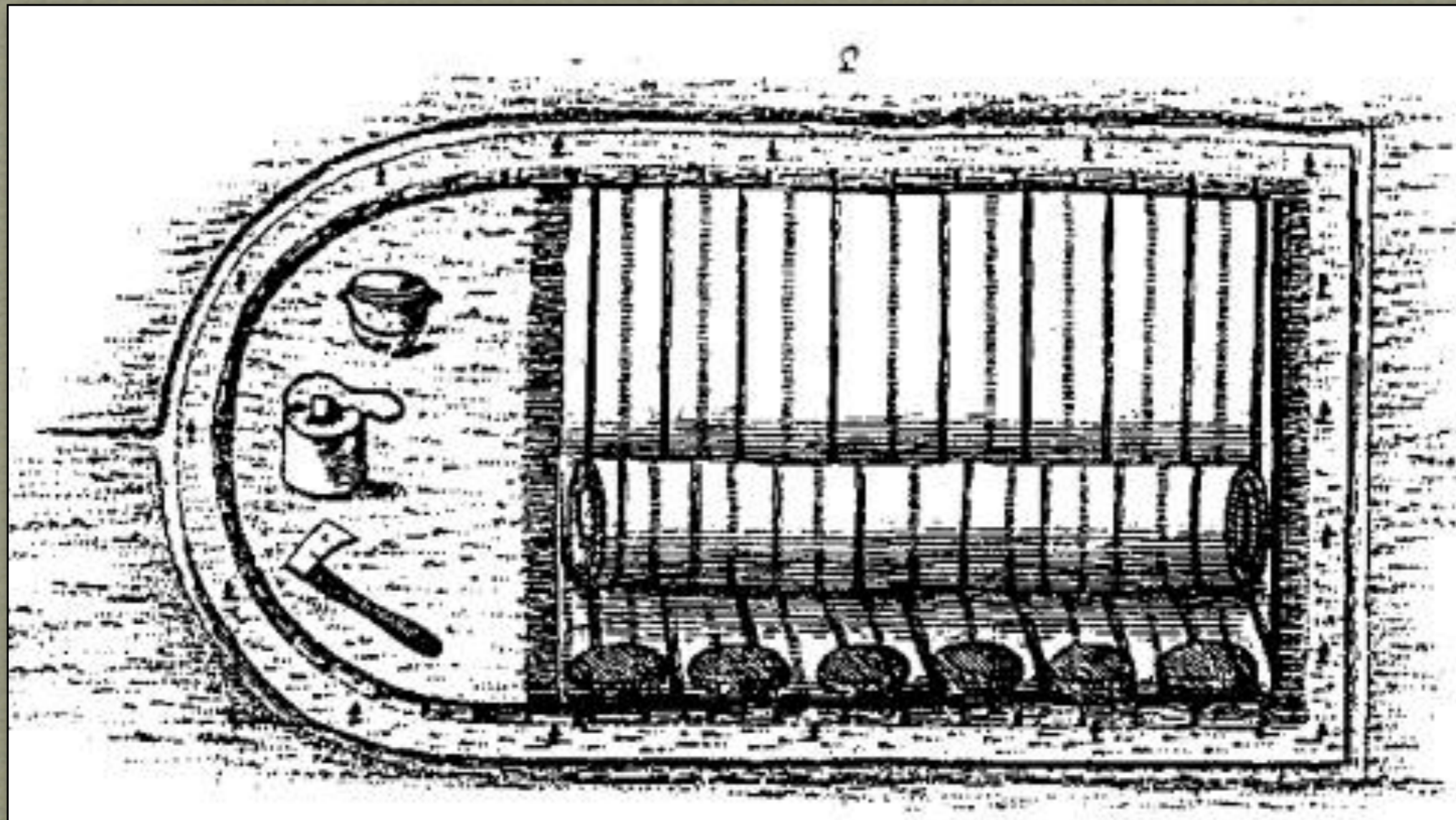


“Encyclopédie, Ou Dictionnaire Raisonné Des Sciences, Des Arts et Des Métier”

Denis Diderot

A depiction of a French Other Ranks' tent with a bell back extension as seen in Dennis Diderot's "Encyclopedia" c. 1751-1772

The 6-7 Panel “Bell” Back Tent



**“Was ist jedem Officier wahrend eines Fedzugs zu wissen nothig”
(What Every Officer Needs To Know During A Campaign)
1788**

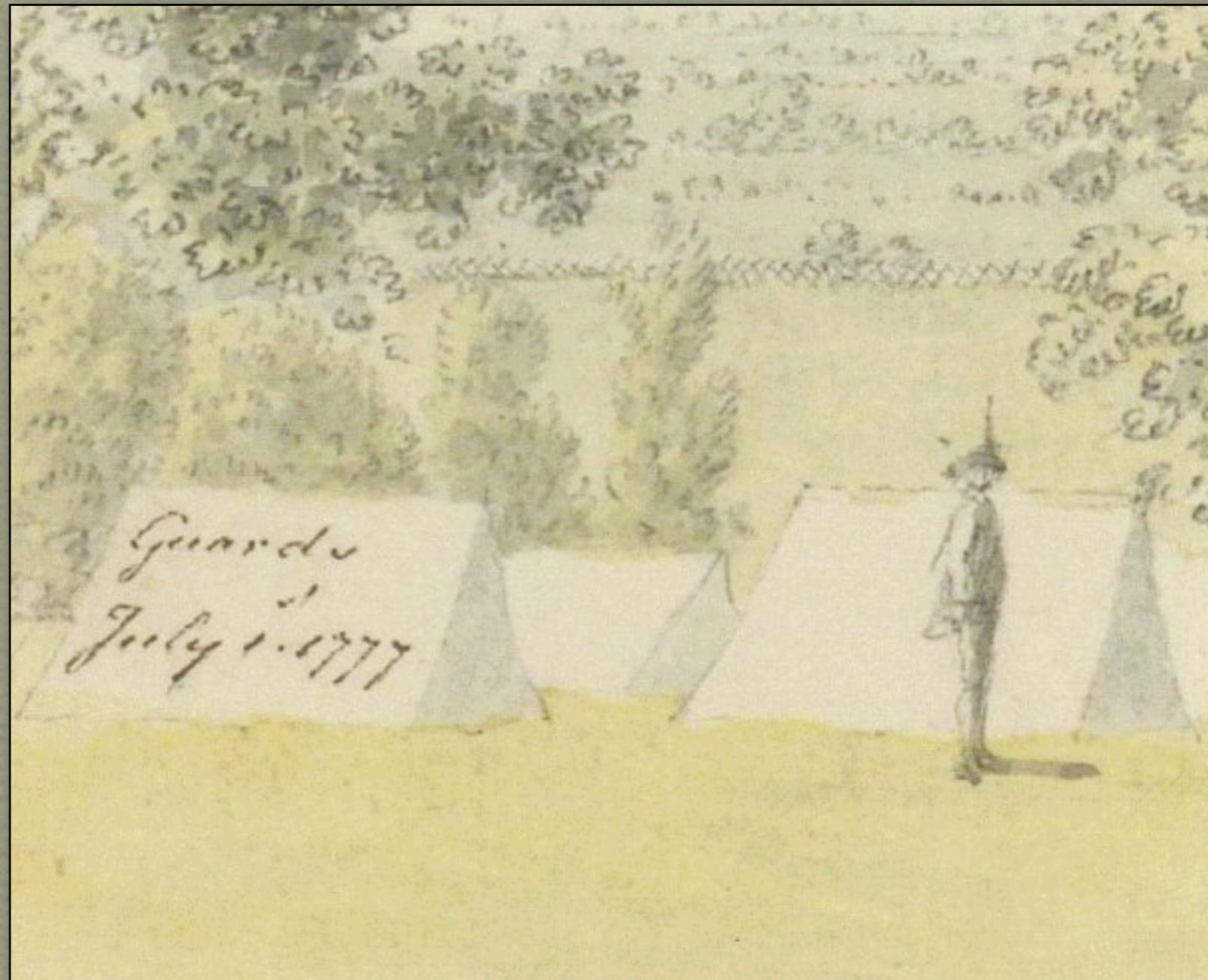
German Officer Manual revealing a cut away 6 panel “Bell” Back extension. Note the trench dug around the periphery of the tent, as well as the mess kettle, tin water bottle (canteen), and mess hatchet.

The 6-7 Panel “Bell” Back Tent



Detail - Horseman's Tent at Burg Forchtenstein - Otlowski Photograph
Exterior View of the Bell Back at the Ridge Pole

The Flat Back Tent



Brigade of Guards Flat Back Tents
July 1, 1777

The Flat Back Tent



London: Printed for Bowles & Carver,
52

A Perspective VIEW of an ENCAMPMENT.

No. 69, St. Pauls Church Yard.

GB-P1780 MF-2

“A Perspective View Of An Encampment” by Bowles and Carver

This view of a British encampment reveals Other Ranks’ tents with a flat back design.

TENT MARKINGS

In order for a camp to be set up in an efficient manner, a regiment serving during the American War for Independence frequently marked its tents so that they could be easily identified. Distinguishing one regiment's tents from another's not only assured that these valuable commodities were accounted for, it also created a well organized system of castremetation.

In addition to being marked with a regimental number, a tent was also marked for the company to which it belonged. In the British army, companies were traditionally known by the name of the Captain who commanded them. They were also known by either a designated number or letter. Marking tents with these company distinctions assisted the regimental Quarter Masters when they laid out and established the camps into company "streets". On occasion, the word "Grenadier" was also used to distinguish the tents of those elite troops.

As each tent within a company sheltered an individual mess of 5 or 6 soldiers, it was also marked with the number of the mess to which it belonged.

This system of marking tents can be seen in Bennet Cuthbertson's "A System for the Complete Interior Management and Economy of Battalion of Infantry" (London, 1768) in which he recommends:

"All the Tents of a Regiment should, before the opening of the Campaign, be distinctly marked, with the number of the Regiment, Company, and tent; this exactness, exclusive any other consideration, will prevent considerable trouble, by never having the Tents changed or intermixed with those of other Corps." (C-5)

In addition, tent marking can also be found in numerous orderly book entries written during the war. Taking this into consideration, it is apparent that prior to these orders being written, these specific tents were not marked.

Brigade of Guards Orderly Books (July 15, 1778):

". . .it is Recommended to them [Commanding Officers of Companies] to Cause the New Tents & Camp Kettles to be Immediately Mark'd Neatly & Uniformly. & emdash; distinguishing Each Company by the Number of it & Each Tent & Camp Kettle by the Number of the Mess to which it belongs." (B-4)

Orderly Book of the British 40th Regiment of Foot (May 23, 1777):

"The Qr. Mrs. will have all the mens tents Uniformly markd: the Numr. of the Regt; 40th to be first done for fear of a sudden move..." (W-2)

Whether Adjutant Frederick Mackenzie of H.M. 23rd Regiment of Foot was following Cuthbertson's recommendations is uncertain, but an (undated) entry in his journal reads:

“The Sergeant's and private Men's tents were marked as follows, on the side next to the front

No. of the Regiment

No. of the Company

No. of the tent

Note, instead of the Grenadr Companies number, their tents were marked, Grenadiers.” (M-5)

Tent markings can also be seen in contemporary illustrations. A painting of H.M. 25th Regiment of Foot on service in Minorca by Guiseppe de Chiesa c. 1770 reveals a tent with markings quite similar to those previously mentioned (although they are in a different order). They appear to be done in either black ink or paint and are located in the top left hand corner of the left front side panel. These markings read:

A	(For Company “A”)
N^o 1	(For Mess Number 1)
XXV	(For the 25th Regiment of Foot)



H.M. 25th Regiment of Foot in Minorca

Giuseppe de Chiesa c. 1770



H.M. 25th Regiment of Foot in Minorca

Guiseppe de Chiesa c. 1770



A
Nº. 1
XXV

H.M. 25th Regiment of Foot in Minorca

Guiseppe de Chiesa c. 1770

Like their British colleagues, certain Loyalist regiments also marked their tents:

Orderly Book of Three Battalions of Loyalists Commanded by Brigadier General Oliver Delancy (8 June, 1778):

“...The tents to be immediately Lettered and Numbered beginning with the Colonels Company...” (L-4)

The Continental Army was no different than the British when it came to castremetation and the use of tent markings. The manner in which they were marked, however, differed to some degree.

General Orders Issued by General Israel Putnam (29 June, 1777):

“The Tents of every Regt should be marked with the name of the Colo to prevent their being lost, or disputes about them. Such of them as are torn or rotten to be returned to the Qr Mr. Genls Store. Whenever the Brigade is ordered to strike Tents or Decamp, the Tents will be compactly made up without any Poles or any kind of Baggage within them; and tied with a s String on order that they be not chaffed. The Poles also tied & put into a Waggon under the Tent. Every mess will immediately provide themselves with bark strings sufficient for these purposes. No kind of Baggage or Lumber shall be put above the Tents, but Beds or Matrasses...” (P-5)

Baron Von Steuben also commented on the markings of tents in his “Regulations for the Order and Discipline of the Troops for the United States (1779):

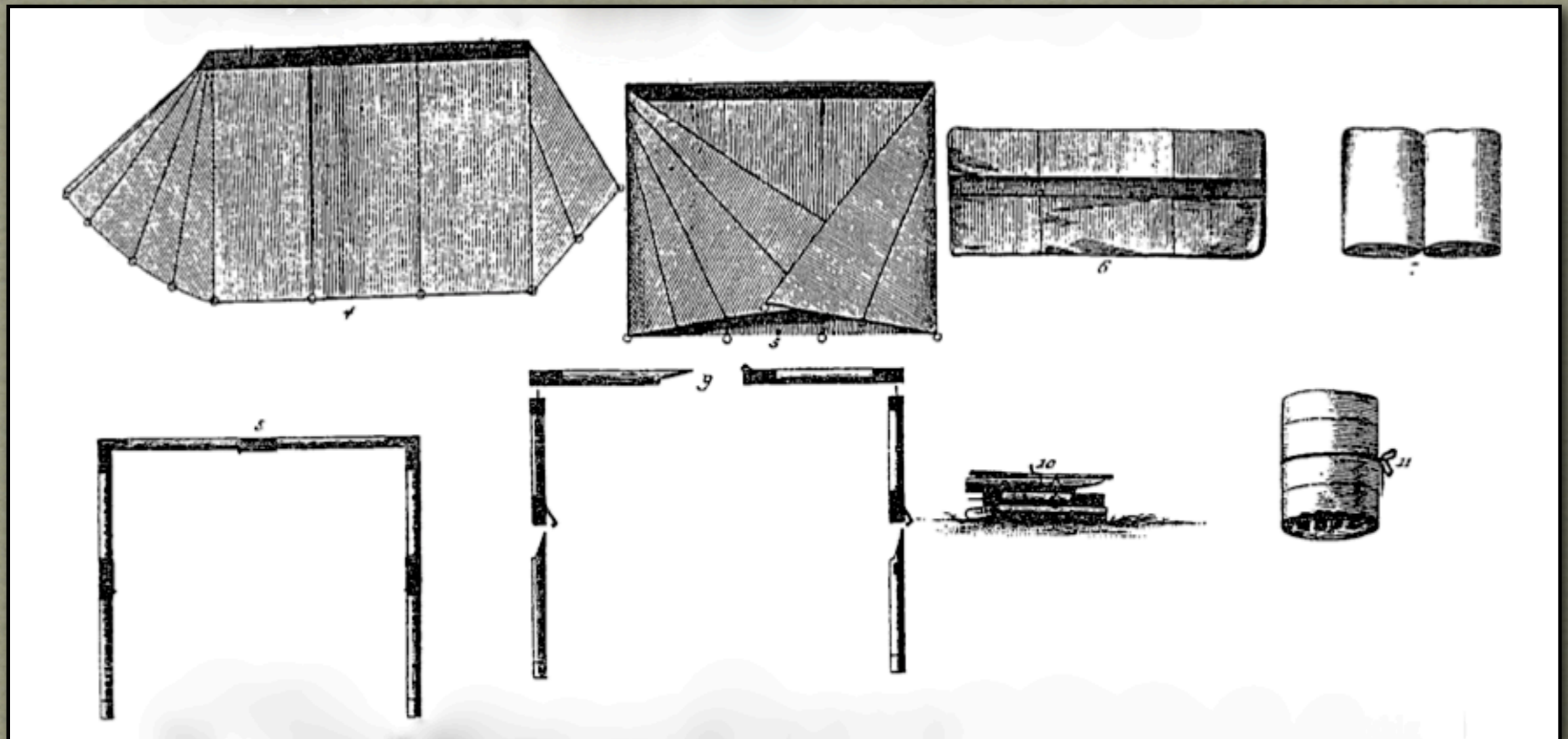
“The tents should be marked with the name of each regiment and company, to prevent their being lost or exchanged, and the tents of each company numbered, and each non-commissioned officer should have a list of the tents, with the men’s names belonging to each tent” (V-1)

Orderly Book for the 4th New York Regiment 1778 - 1780

& the Second New York Regiment 1780 - 1783, Canajoharie, NY 13 June 1780:

“The old Tents are All to be Marked with the Capt. Name and Numbered the orderly Serjt are to take Notice that this is Done...” (N-2)

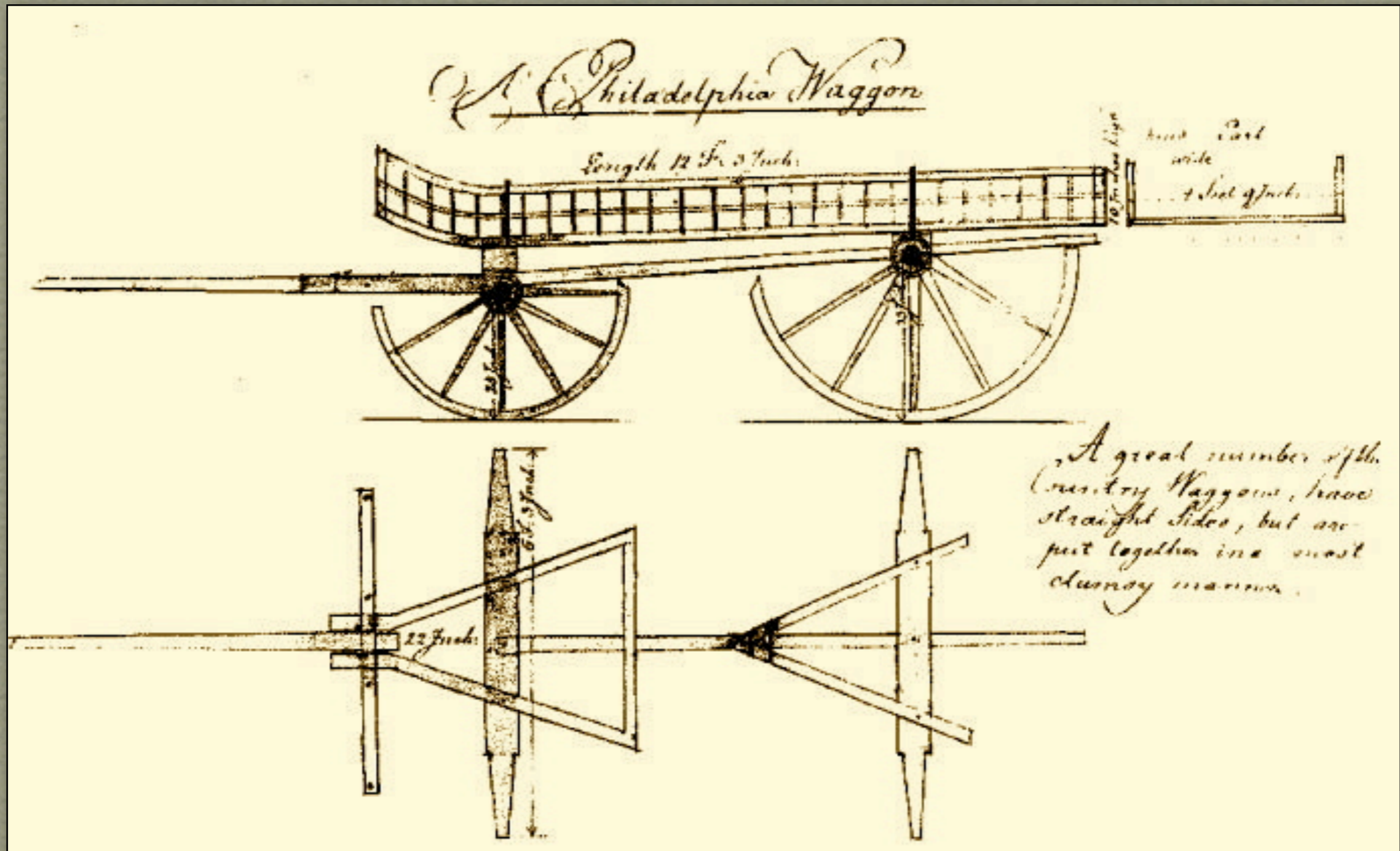
When tents were not in use by either the British or Continental Army, they were to be rolled up and tied for ease of transport. When properly executed, this practice allowed the markings on each tent to be clearly visible for ease in identification. Quite frequently, the tents of a regiment were transported on the march by wagons.



The Means of Folding, Rolling, and Tying a Tent for Storage or Transport in the 18th Century

**“Was ist jedem Officier wahrend eines Fedzugs zu wissen nothig”
(What Every Officer Needs To Know During A Campaign)**

1788



**A Philadelphia Style Wagon Commonly Employed
For the Transportation of Tents**

TENT POLES

1781

February 3d.

Chesterfield Co.

Col. Wm Davies to the Governor:

“It will be a great saving in the end to have tent poles made. Without them the tents will be ruined in a fortnight...” p. 488. (P-1)

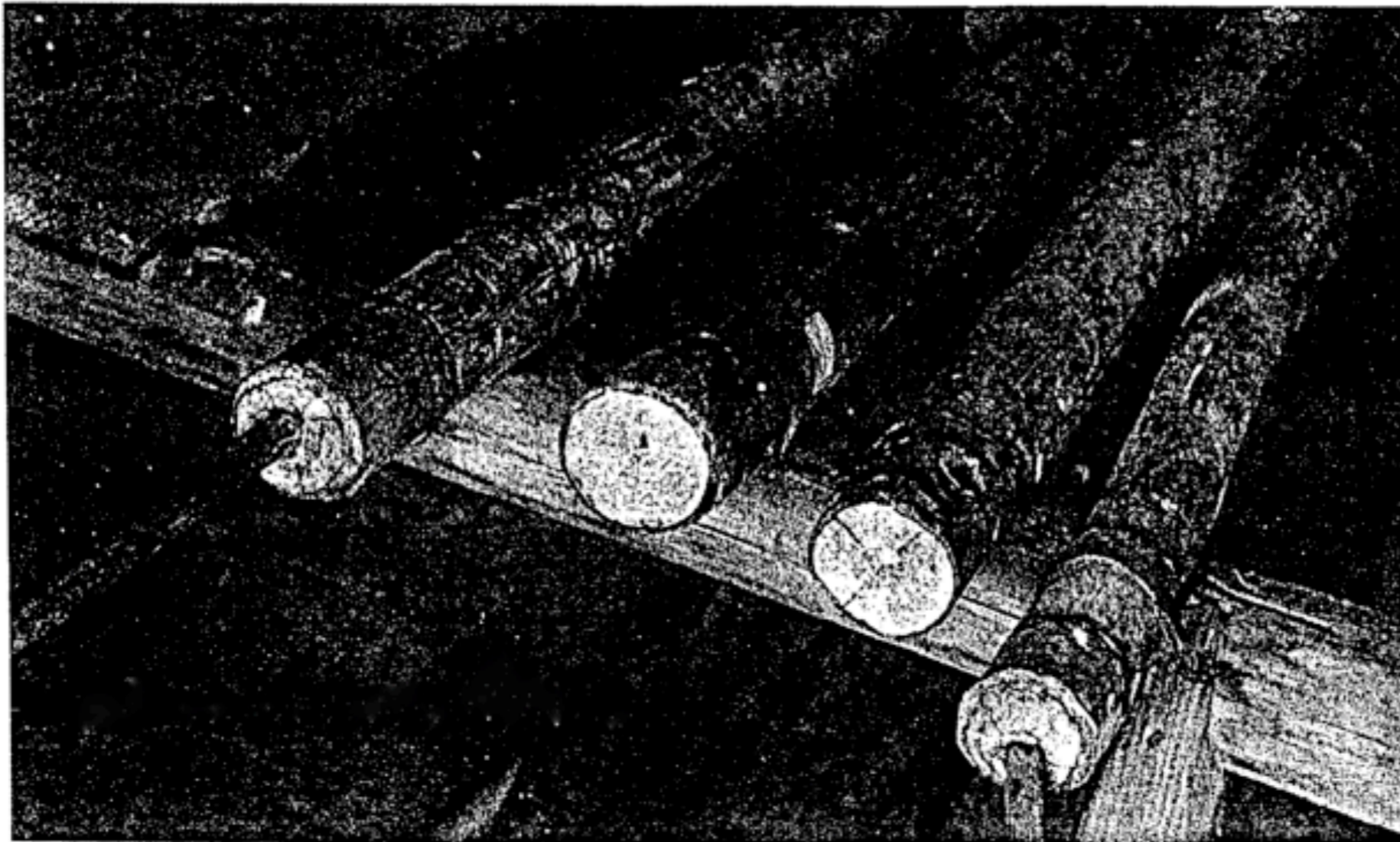
Other ranks' tents during the American Revolution were held up by three tent poles. This included two upright, “Standard” Poles (traditionally 6 feet in height in the British Army) and one horizontal “Ridge” Pole (traditionally 7 feet in length in the British Army) that would rest upon the former and be held in place by two iron pins.

Lewis Lochee, “Essay on Castremetation”

1778

*“These tents are fixed by means of **three poles and thirteen pegs**: The poles A are called **Standard Poles**, and are about **6 feet high**; the pole B is called **Ridge Pole**, and is about **7 feet long**: The ridge and standard poles are held together by **two iron pins**, fixed in the top of the standard poles.”*

According to pictorial and archaeologic evidence, the shape of the standard poles varied. Some resources show that they were round. Others show that they were square, or even slightly rectangular in shape. Although it is hard to determine their exact diameter, we know from extant tent ferrules (see below) that the diameter of the square or slightly rectangular standard poles varied between 1.5 to 2”. It is reasonable to believe that round standard poles were shaped by a draw knife. Extant round standard poles from the 18th century other ranks' tent in the collections of Burg Forchtenstein reveal that they are round and fairly crudely carved, but others may have been more refined.



Tafel 41: Zeltstangen; Burg Fürchtenstein/Burgenland

Detail from Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussischen Heer"

Extant round tent poles in Burg Forchtenstein



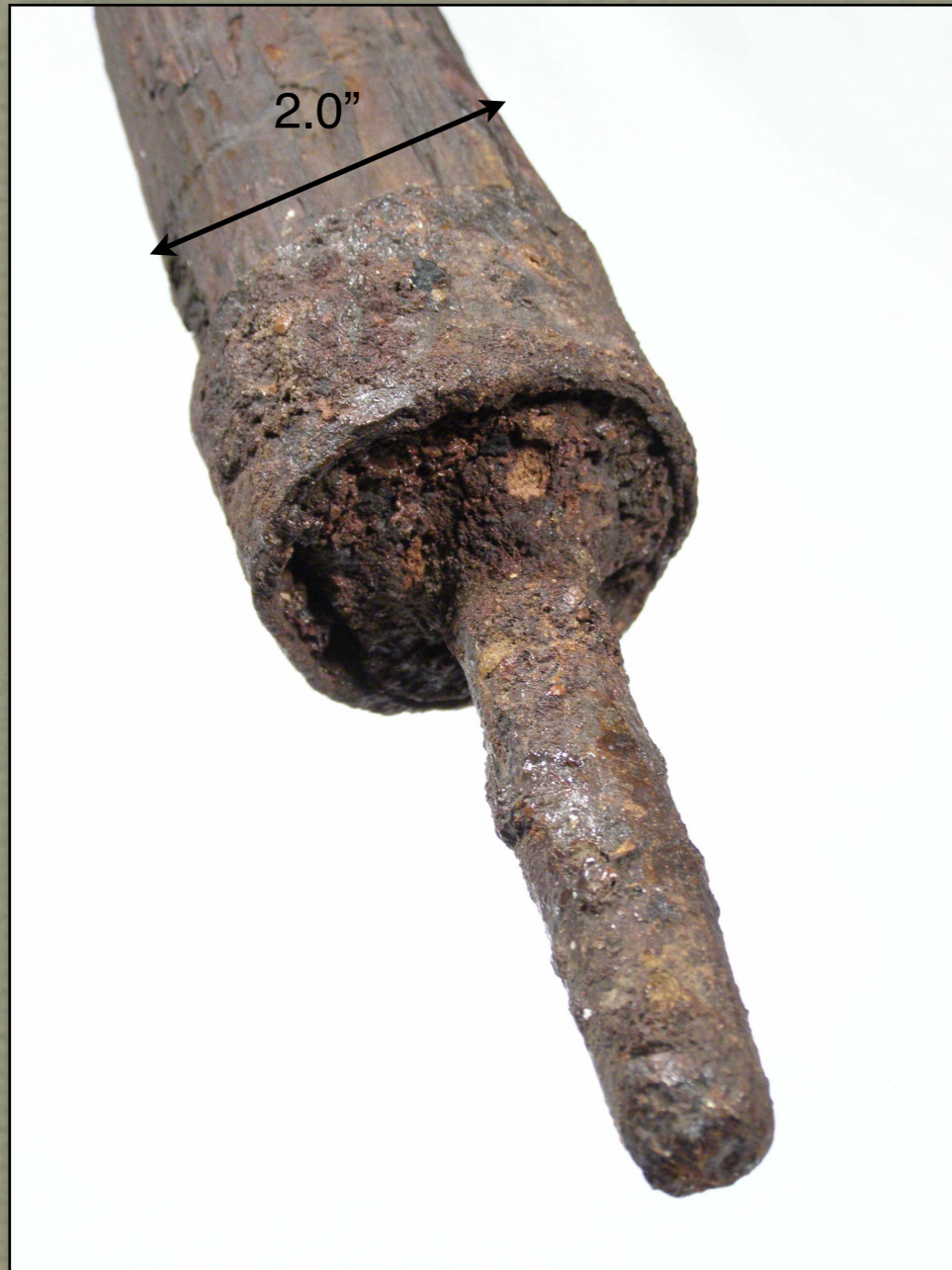
“The March of the Guard to Finchley” by William Hogarth

Round tent poles with iron pins can be seen in the transport wagon c. 1750



Extant Round Other Ranks' or Marquee Tent Pole Fragment - Fort Ticonderoga Collection

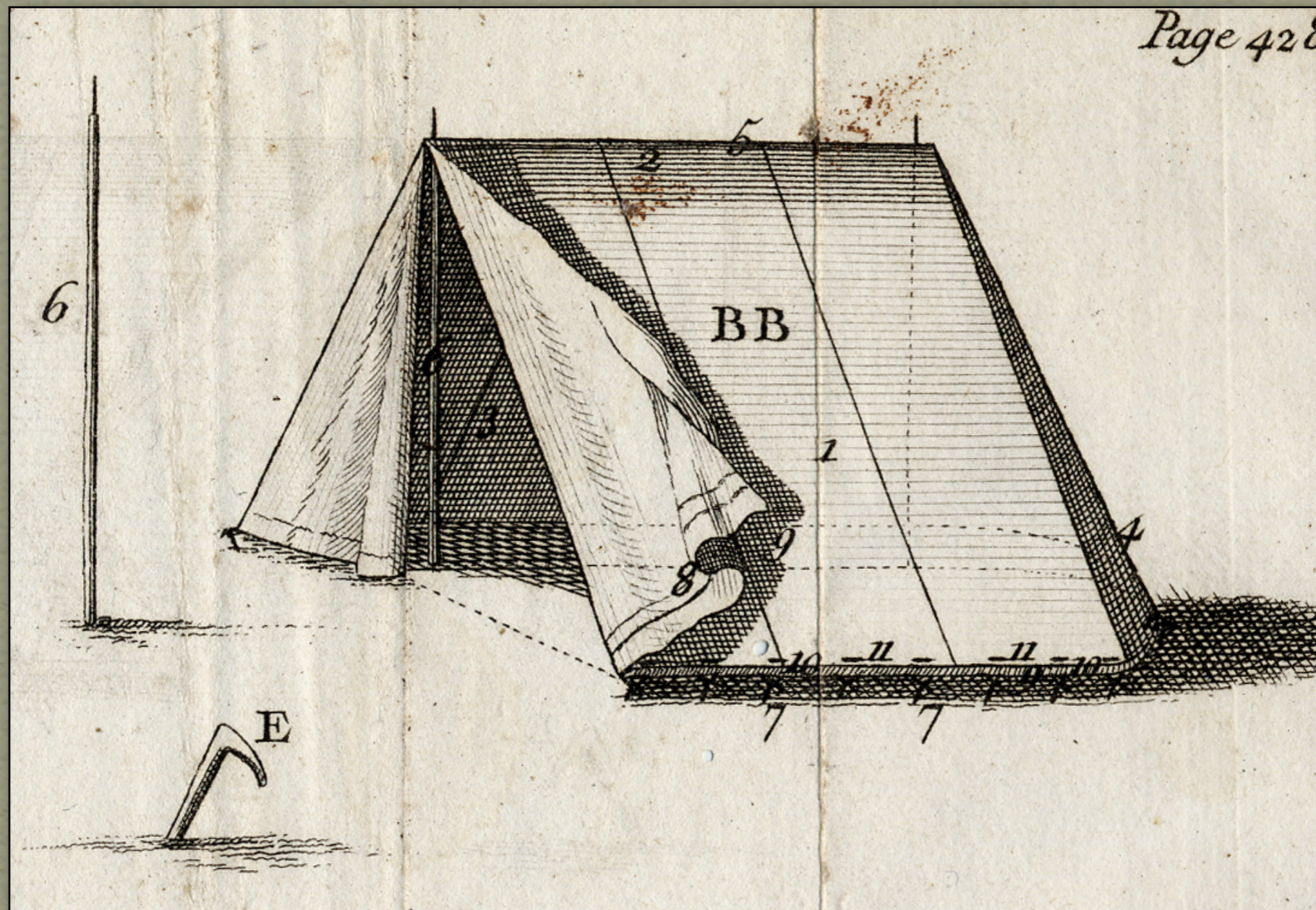
A remnant of a 2.0" diameter round standard tent pole of soft wood (possibly pine) which retains a 3.25" long iron pin and a 1.25" wide iron ferrule which has a 0.5" overlap



Extant Round Other Ranks' or Marquee Tent Pole Fragment - Fort Ticonderoga Collection

A remnant of a 2.0" diameter round standard tent pole of soft wood (possibly pine) which retains a 3.25" long iron pin and a 1.25" wide iron ferrule which has a 0.5" overlap

Quite frequently, Ridge Poles were shaped like the letter “D.” As previously mentioned, the flat portion of the Ridge Pole rested against the top ends of the two standard poles and was retained by iron pins. Based on the many illustrations of tents during the period, it is apparent that this pin did NOT extend through the ridge pole on either British or Continental tents. Pictorial evidence of French tents from the mid 18th century, however, reveal that this pin did extend through the ridge pole.



“Encyclopédie, Ou Dictionnaire Raisonné Des Sciences, Des Arts et Des Métier”

Denis Diderot

Tent poles during the time of the American Revolution were constructed out of wood. While there is very little written documentation regarding the TYPE of wood that was utilized, a 17th CENTURY English account for tents lists their accompanying poles being made out of “Firre” (Fir)

"3 Aprilis 1645

Tents for the Trayne 200 of John Snow Tentmaker the Tents viien foote long viien foote broad and six foote high of good Lockeram according to the pattern & wth firre staves lynes & pinns & other appurtenances according to ye best Trench Tents at xxs p Tent" (M-4)

As seen above, an extant other ranks' tent or marquee pole in the collection of Fort Ticonderoga is constructed out of a soft wood, possibly pine.

While there is evidence that some Marquee poles were painted, there is NO EVIDENCE that other ranks' tent poles were painted.

Order Book of Colonel and Brigadier General Samuel Elbert

"Headquarters, Fort Howe, 10th May, 1778...

The Genl. disapproves of the manner in which many of the men, pitch their tents, the heads of the poles are so sharp that they will soon force their way thro. the roofs. That this circumstance should escape the observation and correction of the officers of companies and quarter masters of regiments, is a matter of surprise to the Genl." ??/p. 139.

TENT POLE FERRULES

TENT POLE FERRULES were thin iron bands, or straps, which were wrapped around the end of a tent pole to prevent the wood in that region from splitting. They were often secured in place by a small iron nail. There are numerous examples of tent pole ferrules which have been excavated from archaeological sites of the American War for Independence. Many are square to slightly rectangular in shape. Given this, it is reasonable to assume that the poles to which these ferrules were fitted were also of the same dimension. Extant tent pole ferrules range in diameter from 1.5 to 2 inches. “D” shaped ferrules have also been excavated, giving evidence that ridge poles were also reinforced.

Below is an assortment of iron tent pole ferrules that have been excavated from various encampments sites that were located at Washington Heights, New York:



Tent Ferrules of the Encampments of Washington Heights

Tent Pole Ferrules have also been excavated from Forts Ligonier and Stanwix in Pennsylvania.

Jacob Grimm describes the Ferrules excavated at Fort Ligonier (dating from the period 1758-1766):

“Pl. 46. 3, 4.

Brackets recovered: 46, Studied: 42.

These are small oblong or square collars (like a box without top and bottom) made of iron band. (Plate 46, No. 4.). They were probably used as fasteners to bind joints between overlapping ends of two lengths of wood, possibly wagon parts. Lengths are from 1.2 inches to 1.8 inches, and widths from 0.8 inch to 1.5 inches. Lengths do not exceed widths more than 0.8 inch. The bands are from 0.4 inch to 0.6 inch wide and from 0.1 to 0.15 inch thick. Two large brackets, 1.6 inches by 4 inches, were recovered. These are 0.8 inch wide and 0.12 inch thick.

Twenty of the better preserved specimens have two nail holes on opposite sides and some had nails in place. Ten have nail holes on the short side, and 10 on the long side. Two brackets have one slightly convex side (Plate 46, No. 4).” Grimm, p. 53.

Three representative examples are shown:

Oblong-convex,

Oblong. This artifact has two small nails remaining on the long sides; they are driven slightly off-center.

Square.

Length: 1.2” to 1.8.”

Width: 0.8” to 1.5.””

Hanson and Hsu describe the ferrules at Fort Stanwix:

“Wrought iron ferrules were used to reinforce pieces of wood, especially ends, to prevent them from splitting. Also, they were used to keep wood or bone handles clinched tightly over the tangs of metal implements. They were all made from strips of metal cut to the desired length, bent to the desired shape and the ends welded together. The welds were skillfully done and on some specimens are very difficult to detect. Specimens identical to these types were found at Fort Ligonier.” (G-2)

Type 1. Rectangular.

Variety a. Large with rounded corners. Two specimens were found (fig. 76a). They are seven to eight times larger than the other ferrules. One fitted on a piece of wood approximately 2-1/4 by 3-3/8 inches and the other on one 2-1/4 by 4 inches. The smaller ferrule is 5/8 inch wide and 3/16 inch thick; the larger specimen is 1 inch wide and 1/8 inch thick.

Variety b. Small with no attachment holes. Two specimens were found. One is square and the other rectangular. The rectangular ferrule measures 1-1/4 inches long and 3/4 inch wide. The strap is 1/2 inch wide and 1/16 inch thick. The other is 1-3/8 inches square made from a strap 1/2 inch wide and 1/16 inch thick.

Variety c. Small with one attachment hole. Five specimens were found (fig. 76b). Four are square and one is rectangular. Three of the square ferrules measure 1-1/8 inches on a side, the other is 1-1/4 inches on a side. They are made from 3/8-inch-wide strips, 1/16 inch thick. Three still have nails up to 1/2 inch long through a hole bored in the center of one side. The rectangular specimen measures 3/4 by 1-1/4 inches and is made from a strip 1/2 inch wide and 1/16 inch thick. A nail hole is in the middle of one short side.

Type 3. Round.

Variety a. No attachment holes (fig. 76d). There is a wide range of diameters and widths for these 29 ferrules. The diameters range from 7/8 inch to 2-7/8 inches, width of the metal 3/8 to 1 inch and thickness of the metal 1/16 to 3/16 inch.

Variety b. One attachment hole. The three specimens range in diameter from 1-1/4 to 1-5/8 inches, width of strip 5/8 to 7/8 inch and thickness of strip 1/16 to 3/16 inch.

Variety c. Two attachment holes. Two specimens were found. One is 2-7/8 inches in diameter and the other is 1-1/2 inches. They are made from strips 3/4 inch wide and 1/16 inch thick. The holes are bored approximately 180 degrees from each other.”

In order for an army to be equipped with tent poles, the services of both the Regimental **Carpenters** and **Smyths** (presumably to fashion Ferrules and pole pins) were called upon.

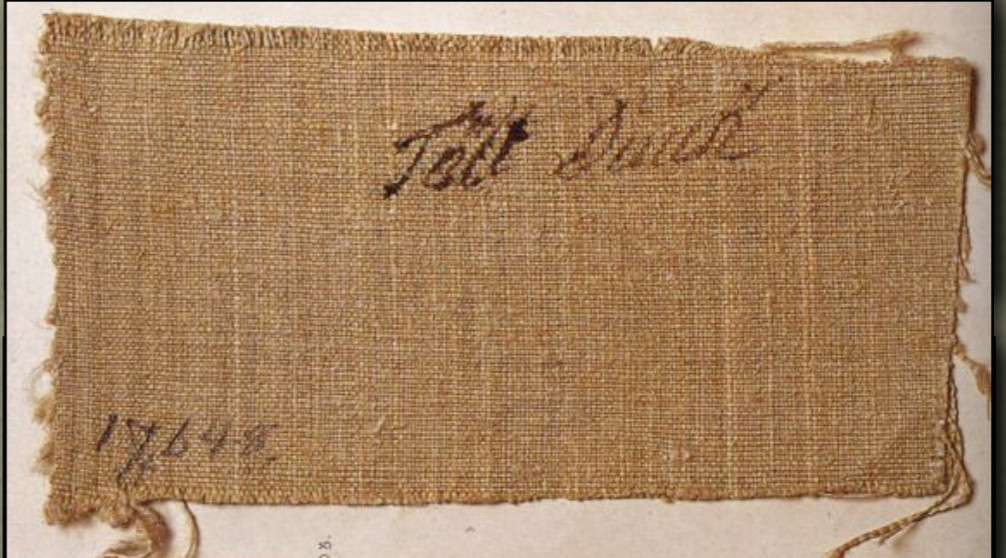
Orderly Book of H.M. 40th Regiment of Foot

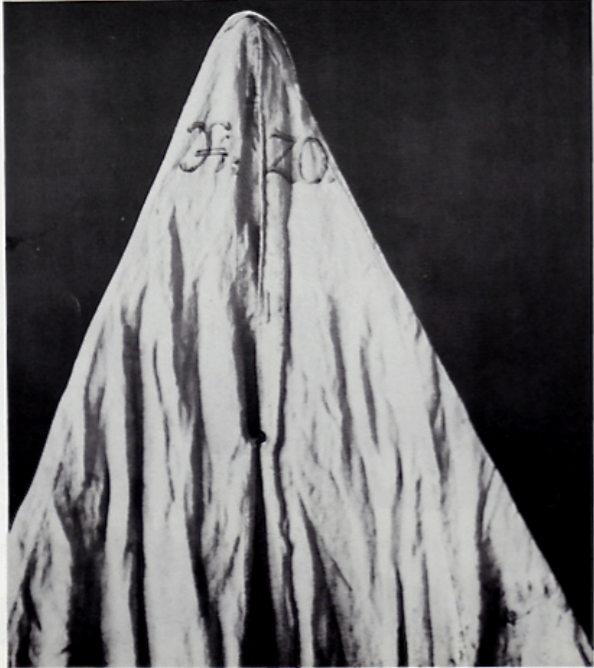
“Morning Garrison Orders 9th: May 1777 [Amboy, New Jersey.]

Are return to be given in Immediately to the Adj: of the day of the names of the Carpenters and Smyths in the several Corps in a Garrison they are to be Employ’d in making tent poles —”

RECREATING THE OTHER RANKS TENT







Tafel 13: Detail des Zeltes A; Burg Forchtenstein/Burgenland



Front Flap Closures

Double/Flat Seams, Sewn Closed at Ridge



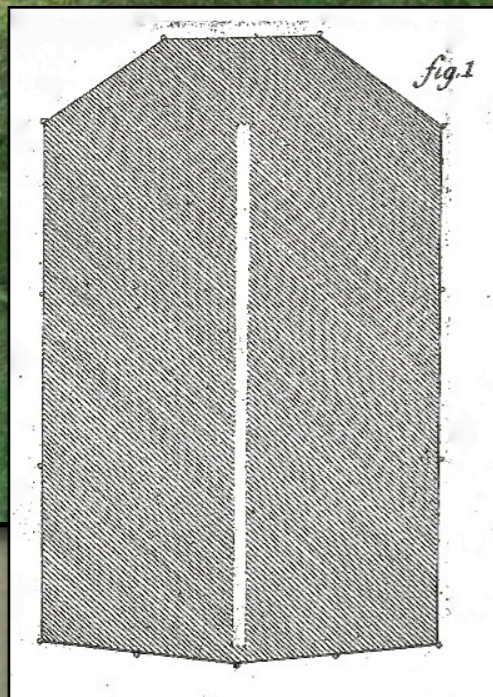
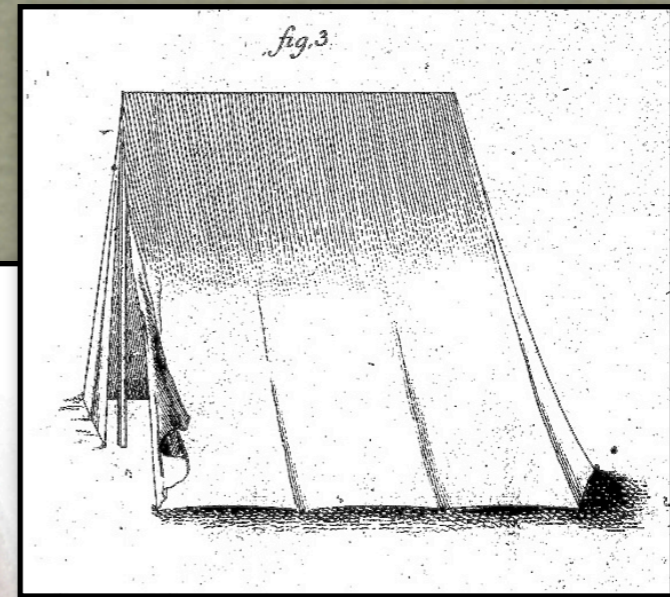
Tafel 13: Detail des Zeltes A; Burg Forchtenstein/Burgenland

Front Flap Closures

Front Flaps have a middle seam and loop. Both Flaps share a common peg.



Rear Bell
Double/Flat Seams



ShallowRear Bell

Double/Flat Seams



Rope Loop Detail, Pegs, & Beetle with Rings



Interior Loop Detail



Interior Details

Note the Rope Loop Knots



Tent Pole Details
2 Inch Wide Pole & Iron Pin

ACKNOWLEDGEMENTS

The authors are indebted to the following individuals and organizations for their generous input and support. Without their professional knowledge and invaluable resources, this project, and the depth to which it has been achieved, would not have been possible.

Joel Bohy

Mathew Brenckle

Chris Fox - The Museum at Fort Ticonderoga (www.fort-ticonderoga.org)

Henry Cooke

Don Hagist

Neal Thomas Hurst

Roy P. Najecki

Thomas Nesbitt

Steve Otlowski - Burg Forchtenstein Tent Photographs

John U. Rees

Mark Rogers

Gregory Sandor

Eric Schnitzer

Scott Stephenson - The American Revolution Center (www.americanrevolutioncenter.org)

Tim Terrell

Professor Gregory Urwin

With special appreciation to William Rose and Darrell A. Martin for their editing talents

BIBLIOGRAPHY

B-1

Bellamy, Daniel; “A New, Complete, and Universal English Dictionary; for the Improvement of of all Those who have not had the Benefit of a Learned Education.” Fourth Edition. J. Fuller, London. 1764.

B-2

Bleckwenn, Ruth: “Zelt und Lager im AltPrussischen Heer.” (“Tent and Camp in the Old Prussian Army. The Old Prussian Army Appearance and Essence 1713-1807”), 1975

B-3

The Brigade Dispatch:

- Volume XXI No. 2 (Summer 1990): “Markings on Tents (company and regimental markings on tents, from period sources)”
- Volume XXIII No. 2 (Spring 1992): “Notes on Tents (period accounts of making, transporting, and pitching tents; bedding; officers’ tents)”
- Volume XXIX No. 3 (Autumn 1999) “Applying Tent Markings”
- Volume XXX No. 3 (Autumn 2000): “Material and Construction of 18th Century Soldiers’ Tents”
- Volume XXXII No. 4 (Winter 2002): “Tent Pins”

B-4

Brigade of Guards Orderly Book:

"Receipt Books and Guards Orderly Book" Lt. Col. Sir John Wrottesley's Company, Guards Detachment in America. Newbold - Irvine Papers, General William Irvine Box 5, Historical Society of Pennsylvania, Philadelphia; and "Orderly Book: Brigade of Guards. Commencing 29th January 1778." Library of Congress, Presidential Papers Microfilm, George Washington Papers Series 6 B, Volume 4, Reel 118.

C-1

Carlsruhe; “Was ist jedem Officier waehrend eines Feldzugs zu wissen noethig” (“What it is necessary for each officer to know during a campaign”), Mit zehen Kupferplatten (trans. "with ten copper plates"), 1788

C-2

Claypoole, David: “Journals of Congress, from January 1st, 1780, to January 1st, 1781.” Philadelphia. Not dated. [Google Book Search.]

C-3

Commons, John R., et. al. “A Documentary History of American Industrial Society. Volume II. Extracts from the journal of Col. Richard Henderson. MS. in the possession of the Wisconsin Historical Society, Draper Collection, CC, vol. i, 23ff.] Arthur H. Clark Company, Cleveland, Ohio. 1910. [Google Book Search.]

C-4

Coffin, Joshua, A. B. S. H. S.; “A Sketch of Newbury, Newburyport, and West Newbury, from 1625 to 1845.” Samuel G. Drake, Boston. 1845.-1

C-5

Cuthbertson, Bennet, “A System for the Complete Interior Management and Economy of Battalion of Infantry” London, 1768

D-1

Danton, Graham: "The Theory and Practice of Seamanship." 11th Edition, Antony Rowe Ltd., Eastbourne, 1962

D-2

DeRenne, Wymberley Jones; "Order Book of Samuel Elbert, Colonel and Brigadier General in the Continental Army." In "Collections of the Georgia Historical Society." Vol. V. Part 2. The Morning News Print, Savannah, Georgia. 1902. [Google Book Search.]

D-3

Diderot, Denis: "Encyclopedie, Ou Dictionnaire Raisonne Des Sciences, Des Arts et Des Metier". 1751 - 1772

F-1

Falconer, William: "An Universal Dictionary of the Marine." 1780.

<http://southseas.nla.gov.au/refs/falc/title.html>

G-1

Greene, George Washington; "The Life of Nathanael Greene, Major-General in the Army of the Revolution." Houghton, Mifflin and Company, Riverside Press, Cambridge, Massachusetts. 1897.

G-2

Grimm, Jacob L., "Archaeological Investigation at Fort Ligonier, 1960-1965." Annals of Carnegie Museum, Vol. 42. Pittsburgh, PA, 1970.

H-1

Hanson, Lee, & Hsu, Dick Ping; "Casemates & Cannonballs: Archaeological Investigations at Fort Stanwix National Monument." U. S. Department of the Interior, National Park Service, Washington, 1975. p. 150-51

H-2

Hoadley, Charles J., LL.D., ed.; "The Public Records of the State of Connecticut, from October, 1776, to February, 1778, Inclusive, with the Journal of the Council of Safety from October 11, 1776 to May 6, 1778, Inclusive, and an Appendix." Case, Lockwood and Brainard Company, Hartford, Connecticut. 1894. [Google Book Search.]

H-3

Holabird, Bvt. Brig.-Gen. S. B.; "Army Clothing." In "Journal of the Military Service Institution of the United States." Volume II. By authority of the Executive Council, New York. 1881. [Google Book Search.]

H-4

Extracts from the journal of Col. Richard Henderson. MS. in the possession of the Wisconsin Historical Society, Draper Collection, CC, vol. i, 23ff.

K-1

Kellogg, Louise Phelps and Thwaites, Reuben Gold, Documentary history of Dunmore's war, 1774, State Historical Society of Wisconsin; 1905

L-1

Lochee, Lewis "An Essay on Castrametation" , 1778

L-2

"Transactions of the Society Instituted at London for the Encouragement of Arts, Manufactures, and Commerce; with the Premiums offered in the Year 1791." Volume IX. T. Spilsbury, London. 1791.

L-3

Litchfield, Israel "The Journal of Israel Lichfield, Scituate Massachusetts

L-4

Orderly Book of Three Battalions of Loyalists Commanded by Brigadier General Oliver Delancy, 1776 - 1778

M-1

Journal and Correspondence of the Maryland Council of Safety, July 7: December 31, 1776. Volume 12,

M-2

Montgomery, "Textiles in America", 1984

M-3

"Proceedings of the Massachusetts Historical Society." Second Series. Vol. V. 1889 - 1890." Published by the Society, Boston, Massachusetts. 1890.

M-4

Munroe, G.I. 'Contracts for the supply of equipment to the New Model Army in 1645', Journal of Arms and Armor Society, Vol. VI, no. 3, 1969, pp. 53 - 115.

M-5

MacKenzie, Frederick, Record Book of Frederick MacKenzie, William L. Clements Library

N-1

"The New-York Gazette: or, The Weekly Post-Boy". 12-23-58; p.4

N-1

“The New-York Gazette: or, The Weekly Post-Boy”. 12-23-58; p.4

N-2

Samuel Talmadge et. al.; “Orderly Book for the 4th New York Regiment 1778 - 1780 and the Second New York Regiment 1780 - 1783, Canajoharie, NY 13 June 1780”: Lauber, Almon W., ed. Albany, NY: The University of the State of New York, 1932

P -1

Palmer, Wm. P., M.D.; "Calendar of Virginia State Papers and other Manuscripts, 1752 - 1781, Preserved in the Capitol at Richmond." Vol. I. R. P. Walker, Superintendent of Public Printing, Richmond. 1875. pg, 408

P-2

Pennant, Thomas; "A Tour in Scotland, and Voyage to the Hebrides, 1772. Simmons, Andrew, ed; John Monk, Chester, Part 1, 1774, Part 2, 1776. Birlinn Ltd., Edinburgh, 1998.

P-3

"The Pennsylvania Magazine of History and Biography." Vol. XXII. Publication Fund of the Historical Society of Pennsylvania. Philadelphia, Pennsylvania. 1898. [Google Book Search.]

"Head Quarters, Roxborough, August 4, 1777.

In the present marching state of the Army every encumbrance proves greatly prejudicial to the service, the multitude of women in particular, especially those who are pregnant or have children are a clog on every movement." p. 307.

P-4

Pennsylvania Archives, Second Series Vol. IX. Clarence M. Busch, Harrisburg, Pennsylvania. 1896
Linn, John B. and Egle, Wm. H.

"The Orderly Book of the First Pennsylvania Regiment. Col. James Chalmers. July 26, 1778 - December 6, 1778."

P -5

Palmer, General Orders Issued by Major-General Israel Putnam When in Command of the Highlands in the Summer and Fall of 1777, Worthington Chauncey Ford, ed.: Brooklyn, NY: Historical Publishing Company, 1893

Q-1

Quaife, Milo M.; "A Picture of the First United States Army: The Journal of Captain Samuel Newman." In: "The Wisconsin Magazine of History." Vol. II. 1918-1919. Publications of the State Historical Society of Wisconsin. 1919.

R-1

Rees, John U. "'We... got ourselves cleverly settled for the night... ' Soldiers' Shelter on Campaign During the War for Independence: Tents in the Armies of the Revolution, Part I'" *Military Collector & Historian*, vol. 49, no. 3 (Fall 1997)

R-2

Rolt, Richard: "A new dictionary of trade and commerce: compiled from the information of the most eminent merchants, and from the works of the best writers on commercial subjects, in all languages. By Mr. Rolt, with the assistance of several eminent merchants. The second edition, with the addition of a new and accurate set of maps of the world, ... by Mr. Bowen printed for G. Keith; S. Crowder, and H. Woodgate and S. Brooks, London: 1761

S-1

Salley, A. S., ed.; "The Mission of John Laurens to Europe in 1781." ; "The South Carolina Historical and Genealogical Magazine." Volume II. South Carolina Historical Society. Walker, Evans & Cogswell Co., Charleston, South Carolina. 1901. [Google Book Search.]

S-2

Sheffield, John, Lord; "Observations on the Commerce of the American States." New Edition. J. Debrett, London. 1784.

S-3

Stone, Edwin Martin; "The Invasion of Canada in 1775: including the Journal of Captain Simeon Thayer, describing the Perils and Sufferings of the Army under Colonel Benedict Arnold, in its March through the Wilderness to Quebec: with Notes and Appendix." Knowles, Anthony & Co. 1867.

S-4

Steel, David; "The Elements and Practice of Rigging and Seamanship", 1794

S-5

Smith, Captain George; "An Universal Military Dictionary", London, 1779

T-1

Thwaites, Reuben Gold, LL.D., and Kellogg, Louise Phelps, Ph.D.; "Documentary History of Dunmore's War 1774. Compiled from the Draper Manuscripts in the Library of the Wisconsin Historical Society and published at the charge of the Wisconsin Society of the Sons of the American Revolution." Wisconsin Historical Society, Madison, 1905.

V-1

Von Steuben; "Regulations for the Order and Discipline of the Troops for the United States. Philadelphia, PA: Styner & Cist, 1779

W-1

Miscellaneous Numbered Records (The Manuscript File) in the War Department Collection of Revolutionary War Records 1775-1790s, no. 31492, 1971, (National Archives Microfilm Publication M859, reel 111), U.S. War Department Collection of Revolutionary War Records, Record Group 93, NA (hereafter cited as Pickering to Hatch (two letters, same date), 12 July 1781, Numbered Record Books, NA, vol. 127, reel 26, 134-136, 252-253.d

W-2

George Washington Papers at the Library of Congress, 1741-1799: Series 4, 6B (40th Foot Orderly Book) General Correspondence. 1697-1799 Clement Biddle, January 10, 1778, Cargo List of the Symetry (Brigantine)

W-3

Records of the Public Store in Williamsburg, 1775 - 1780, Virginia Public Library

Y-1

Young, Arthur; "A Six Months Tour through the North of England." 4 Vols. London, W. Strachan et al., 1771. Facsimile reprint, Augustus M. Kelley, NY, 1967

vase

slippers rope tensioners



“Tent Bag” for the Marquee of General George Washington

Tent Bag constructed using the same techniques as those used in the fabrication of the Marquee itself, including multiple Rope Grommets and Seams