

To Shelter the Enlisted Man: A Study of the Construction of Other Ranks Tents During the American War for Independence

by James Mullins, Todd Post, Steven Rayner & Gregory Theberge



In Memoriam

This research paper is dedicated to the memory of our friend and colleague, Steve Allie.
You left us far too soon and we will be forever grateful for your contribution to this project.
We never could have done it without you.



The Enlisted Man's Tent

The Enlisted Man's Tent

The American Journal of Ambrose Serle, Secretary to Admiral Richard Howe 1776 - 1778

“Wednesday, 7th August. [Staten Island.]...

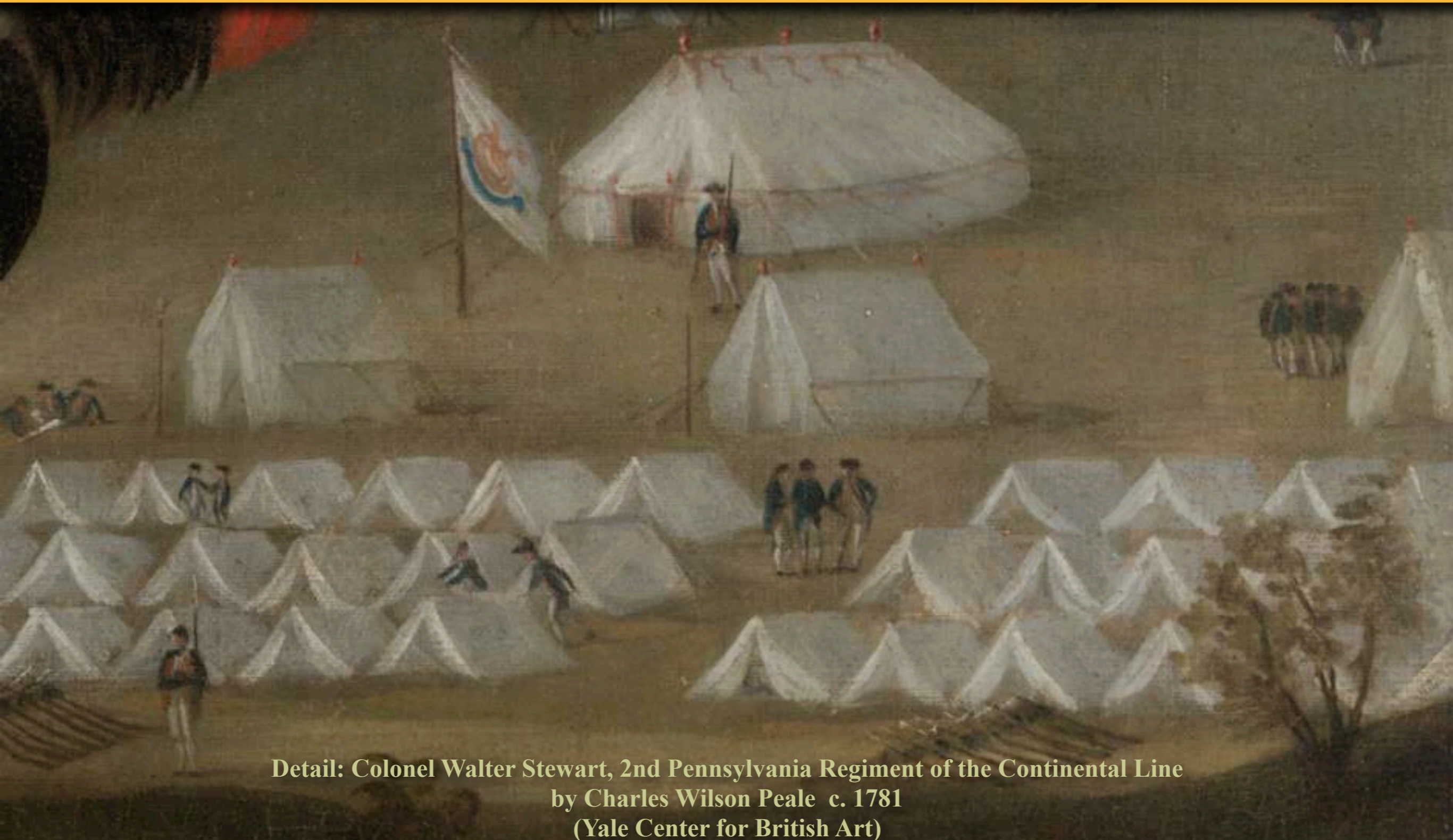
Went on Shore in the Evening, and walked up to the new Incampments. 'Tis a hard unpleasant Life this of a Soldier's, which is passed in a little paltry Tent which will neither keep out Wind, Rain, or Vermin, and which seems to have little other Solace on this dusty Island than the association of multitudes in the same Condition. The Ship is a House or a Palace compared with the Accommodations of the military.”



A View from Richmond on Staten Island 1777

by Lieutenant and Captain Patrick Bellew of the Grenadier Co., 1st Battalion, 1st Regiment of Foot Guards
(The British Library)

The Enlisted Man's Tent



**Detail: Colonel Walter Stewart, 2nd Pennsylvania Regiment of the Continental Line
by Charles Wilson Peale c. 1781
(Yale Center for British Art)**

The Enlisted Man's Tent

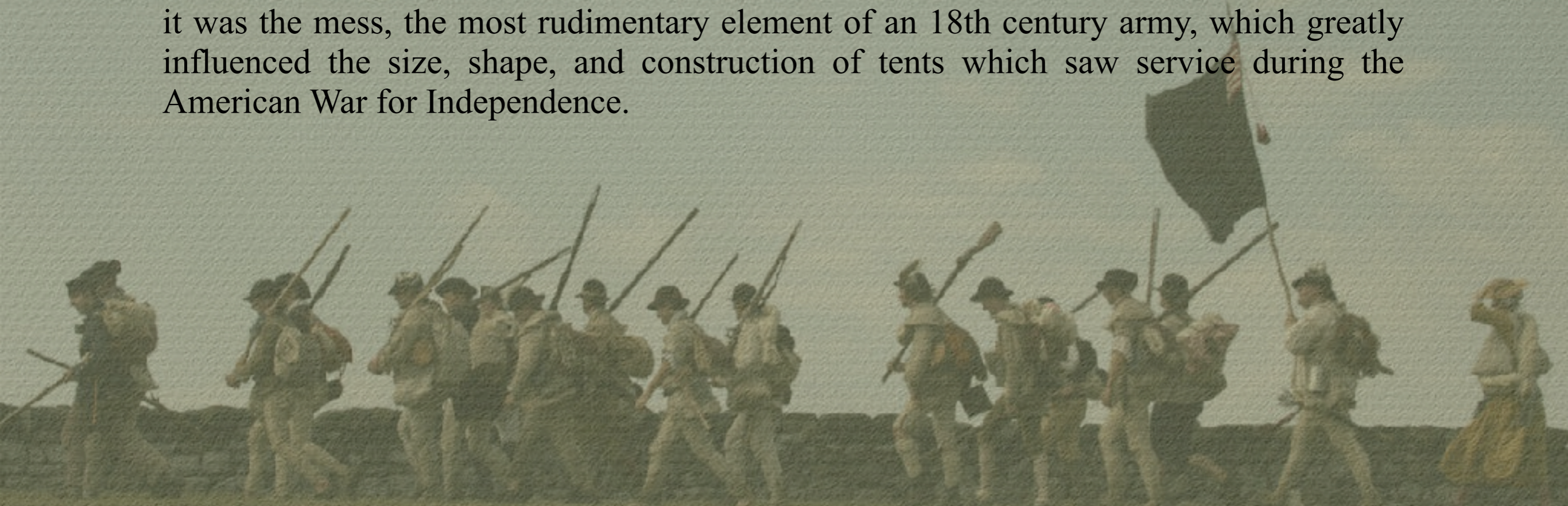
Nestled in the hills of Styria, Austria, is a castle by the name of Burg Forchtenstein. Within its walls resides a vast collection of early European military artifacts, a portion of which includes an assortment of rare military tents that saw service in the Prussian Army during the 18th Century. Among 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.

A Tent
For Every Mess

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 each mess to draw, cook and eat its rations together as an independent group. To do this while an army was on campaign, a tin kettle, bag to carry it in, and hatchet(s) from the regimental stores were issued to each mess. A mess was also required to sleep together. It was assigned to and shared a common tent if, and when, tents were available in the field. With this in mind, it was the mess, the most rudimentary element of an 18th century army, which greatly influenced the size, shape, and construction of tents which saw service during the American War for Independence.



A Tent for Every Mess

A Tin Kettle, Recreated Bag & Hatchet for a British Mess



(Ex. Tom Wnuck Collection)



(Fort Ticonderoga)

A Tent for Every Mess

A Mess Cooking in a Company Kitchen



**Detail: Colonel Walter Stewart, 2nd Pennsylvania Regiment of the Continental Line
by Charles Wilson Peale c. 1781
(Yale Center for British Art)**

A Tent for Every Mess

Lewis Lochée

“Essay on Castrametation” 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.”

A Tent for Every Mess



Major Joseph Bloomfield, 3rd New Jersey Regiment
by Charles Wilson Peale 1777

**Returns: Capt. Joseph Bloomfield's Co.
3rd New Jersey Regiment
June, 1776**

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

**Orderly Book
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)*

A Tent for Every Mess

A Scene of the Camp on Hampden Green

1731

5 British Soldiers Sleeping Together as a Mess



A Tent for Every Mess

Lewis Lochée

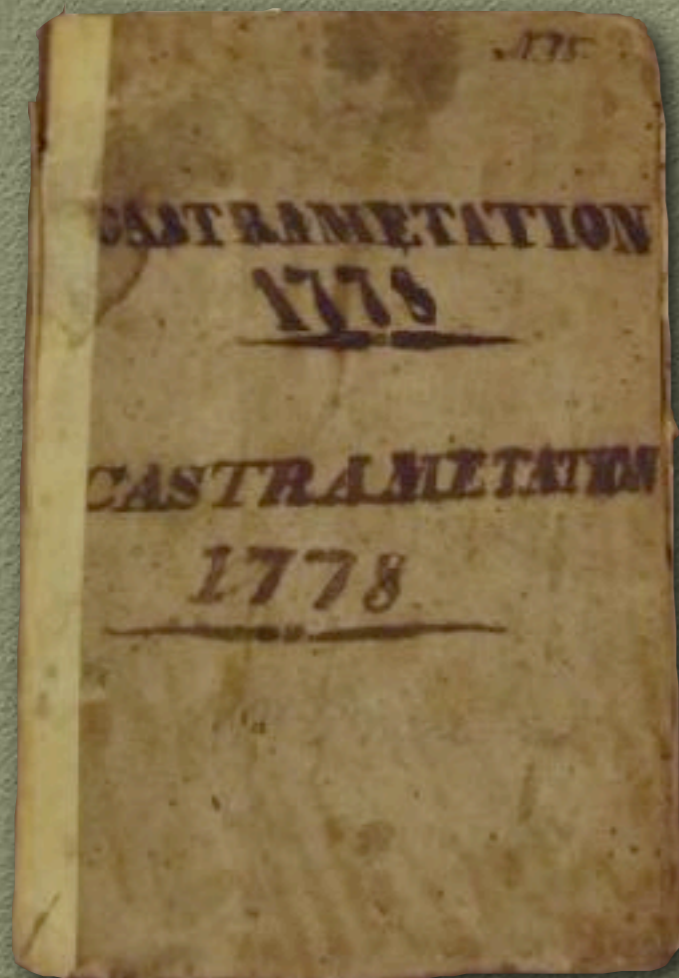
“Essay on Castrametation” 1778

“In the French and German service, each tent serves for seven or eight men, and sometimes even for nine”

Tent Construction: Dimensions

Tent Dimensions

In order to cover a 5 man mess, as well as their accoutrements (less their firearms which were stored in Bell Tents), Lewis Lochée 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. It was made with a Side Body of Three Panels and a Rear Bell of Three Sides.



"Essay on Castrametation"
by Lewis Lochée 1778
(Private Collection)

Tent Dimensions

Lewis Lochée

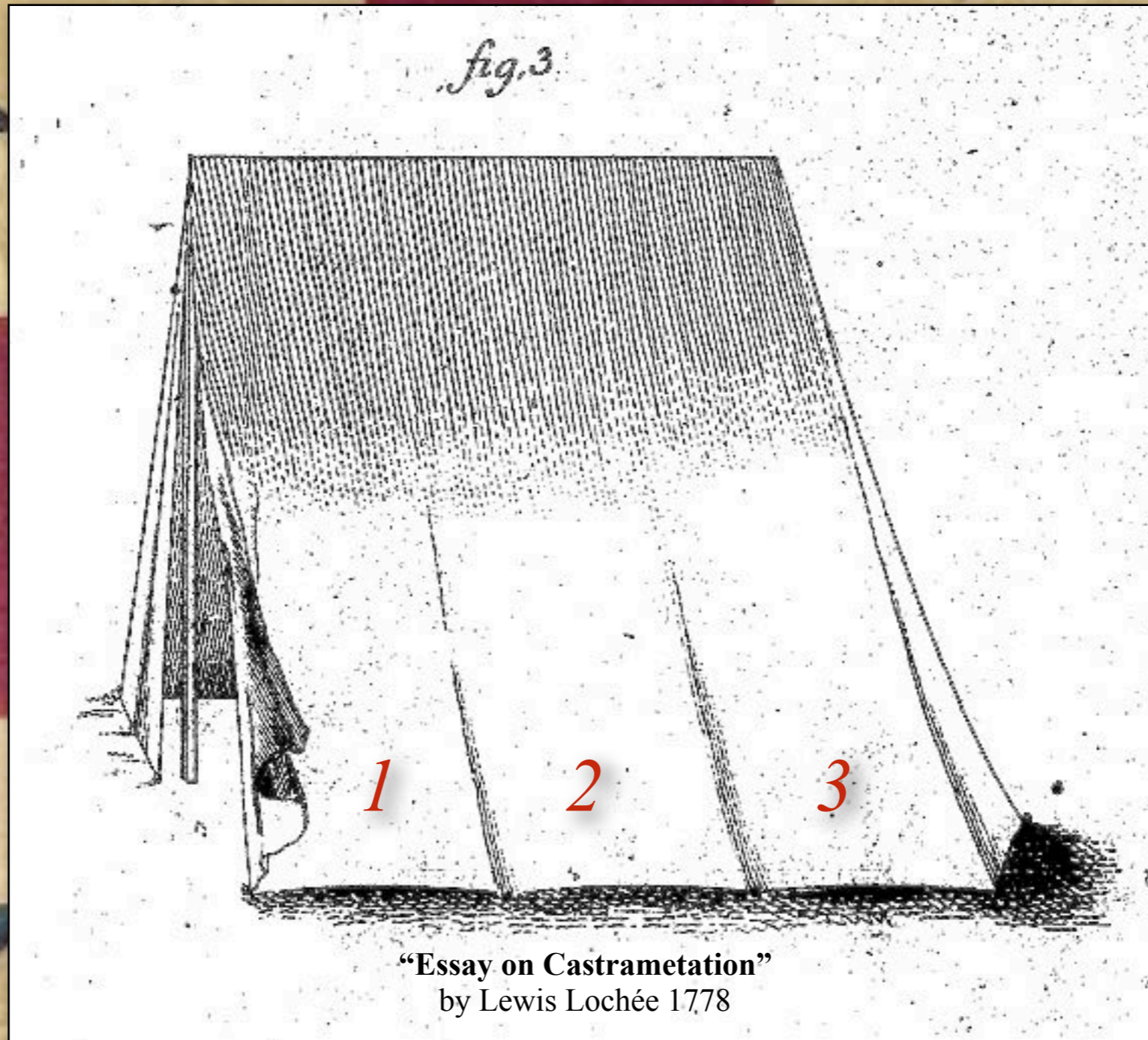
“Essay on Castrametation” 1778

“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.”

Tent Dimensions



Tent Dimensions



Tent Dimensions

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

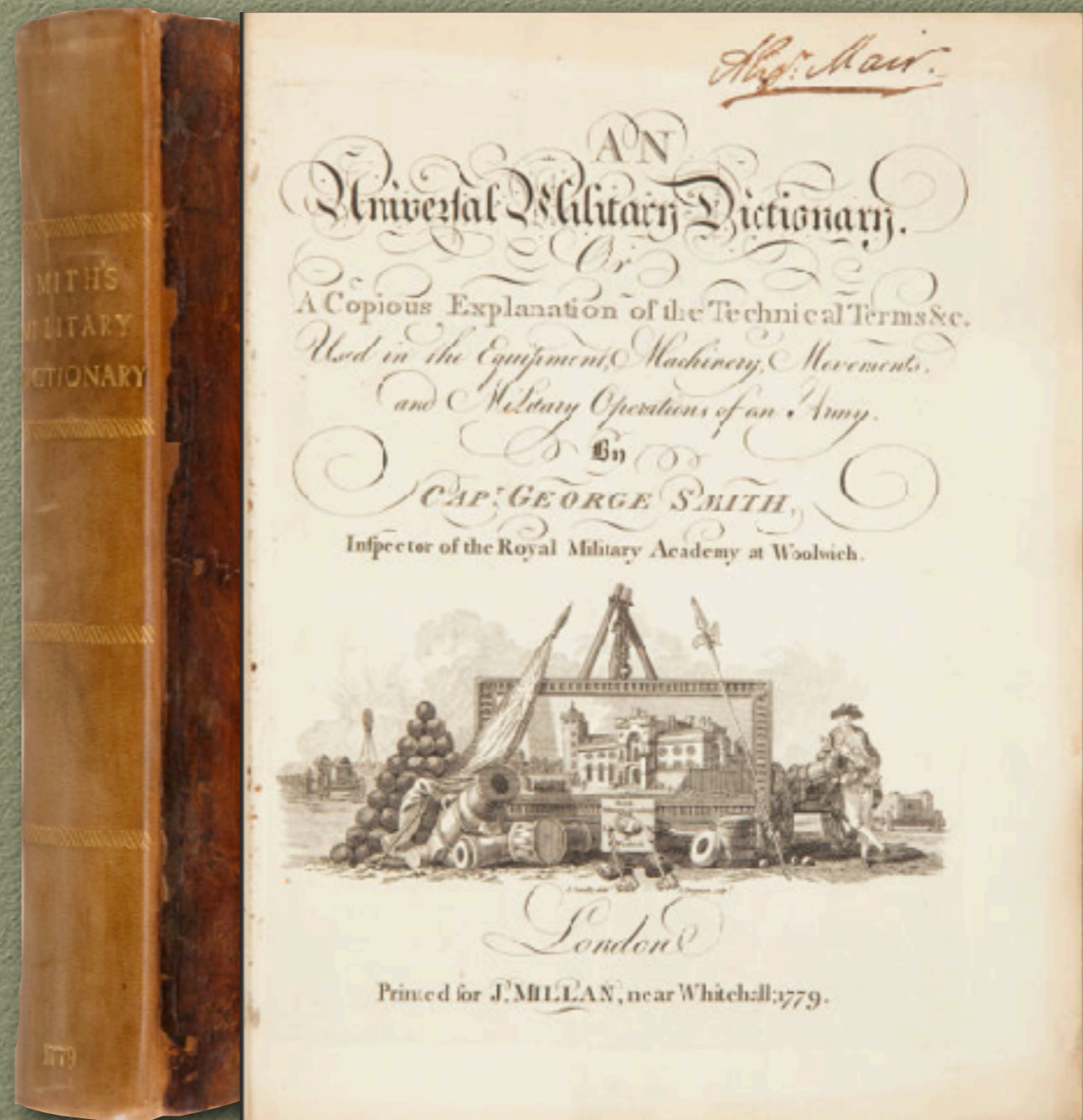
*“Tents for the Trayne 200 of John Snow Tentmaker the Tents **vii^{en} foote long vii^{en} foote broad and six foote high** of good Lockeram according to the pattern & wth firre staves lynes & pinns & other appurtenances according to ye best Trench Tents at xx^s p Tent” (M-4)*



Tent Dimensions

In 1779, Captain George Smith reported a slightly smaller Other Ranks' Tent to hold a 5 man British Mess in his "An Universal Military Dictionary", London, 1779:

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



"An Universal Military Dictionary"
by Captain George Smith, London, 1779
(Heritage Auctions)

Tent Dimensions

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.

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.

In 1781, Quartermaster General Timothy Pickering attempted to “standardize” the minimum dimensions of the tents used by the Continental Army.

Tent Dimensions

Quartermaster General Timothy Pickering 1781

"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.



Tent Dimensions

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)



Tent Dimensions

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)*



Tent Construction: Tent Cloth

Tent Cloth

Fabric utilized to produce enlisted men's tents during the 18th century was a stout plain-weave linen canvas. In many cases, it was the same material used to fabricate sails for the shipping industry and navy. In fact, sails were often put into service to serve as or make tents by the Continental Army during the American Revolution. The weight of this cloth ranged, on average, from 12 to 16 ounces per square yard and had, on average, a thread count of 29 x 25-30 x 32 ends per square inch.

In comparison to the known fabrics used to construct enlisted men's tents, there are period examples of Officer's Marquees (or portions thereof) being made out of a Herringbone Patterned cloth. The Inner Sleeping Chambers of General George Washington is one such example of a tent made from this material.

While no resources specifically mention the color of the cloth used for enlisted men's tents during the American Revolution, most illustrations of the period suggest that their shade was white to off white. A resource from 1751 indicates that they were light brown. A 1771 document for sailcloth states that the canvas was bleached to achieve a lighter color. It is also quite possible that once natural light colored brown tent canvas was exposed to the sun, over time it would bleach to an off white or light grey color. Most of the extant artifacts of tent cloth are tan to light grey.

Tent Cloth

Depending on the reference, 18th Century Military Tent cloth was made of any of the following materials. Depending on the resource and location, some of these canvases differed by name alone.

“Sailcloth” - “Sailduck”

“Duck” / “Dutch Duck” / “Raven’s Duck”

“Russia” / “Russia Drab”

“Osnaburg”

“Ticklenburg”

“Tow”

Tent Cloth

“Sailcloth” - “Sailduck”

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.” (P-2)



Tent Cloth

“Sailcloth” - “Sailduck”

Extrapolating from Pennant’s description:

No. 1 - 45 lbs.

No. 2 - 42 lbs.

No. 3 - 39 lbs.

No. 4 - 36 lbs.

No. 5 - 33 lbs.

No. 6 - 30 lbs.

No. 7 - 27 lbs.

No. 8 - 24 lbs.

Width unknown.

(P-2)



Tent Cloth

“Sailcloth” - “Sailduck”



Irish Sail Linen Manufacturing - “All the Bubbles” Playing Cards

Tho. Bowles, Print Seller in St. Paul’s Churchard & Eman. Bowen Next to the King of Spain’s Head c. 1720 - 1745
(Games et al.)

Tent Cloth

“Sailcloth” - “Sailduck”

**“A Six Months Tour through the North of England.” 4 Vols.
by Arthur Young, London, 1771**

*“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.

Tent Cloth

“Sailcloth” - “Sailduck”

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)



Unbleached vs. Bleached Reproduction Tent Linen
(The First Oval Office)

Tent Cloth

“Sailcloth” - “Sailduck”

Journals of Continental Congress, 1774 - 1789
September 4, 1776

"Mr. J. Mease having, in consequence of the resolution of the 30th August, made a report, that he cannot find there is any cloth in this city, fit for making tents, except a parcel of light sail cloth, which is in the hands of the Marine Committee:

Whereupon,

Resolved, That the Marine Committee be directed to deliver to Mr. J. Mease all the light sail cloth in their hands: And that Mr. Mease be directed to have the same made into tents, as soon as possible, and forwarded to General Washington:

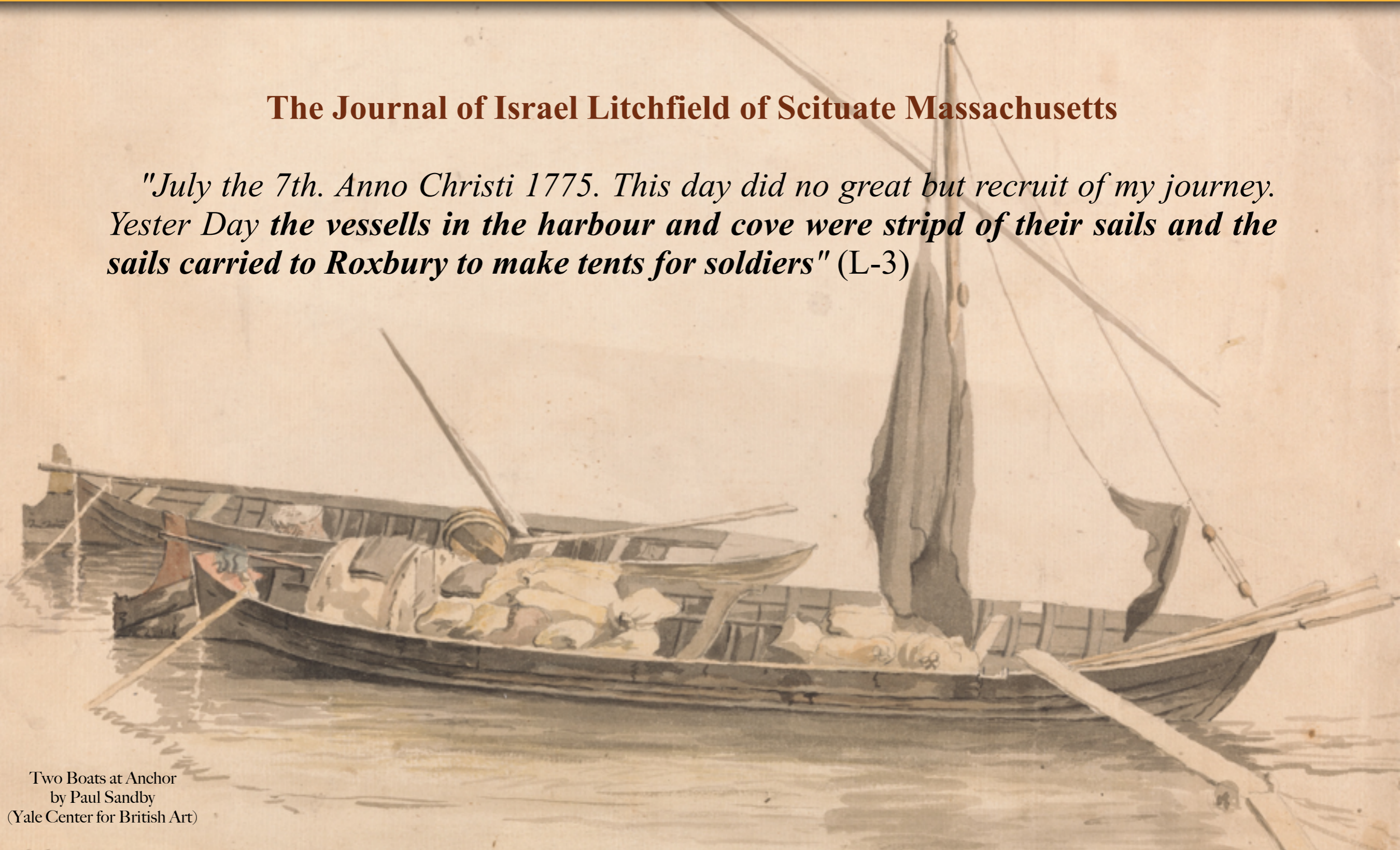
That the Secret Committee be directed to write to the continental agents in the eastern states, desiring them to purchase all the duck and other cloth fit for tents, which they can procure in their respective states, for the use of the continent."

Tent Cloth

“Sailcloth” - “Sailduck”

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)



Tent Cloth

“Sailcloth” - “Sailduck”

Orderly Book
4th Pennsylvania Battalion
Colonel Anthony Wayne

“August 14, 1776

Headquarters, Ticonderoga

The commanding officers of corps are desired to see that all the sails belonging to the public which have been used as tents be immediately delivered to Mr. Lane, Conductor of Naval Stores...”



The Recreated 4th Pennsylvania Battalion at Ticonderoga
(Fort Ticonderoga)

Tent Cloth

“Sailcloth” - “Sailduck”

**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.”



Major General Nathanael Greene
by Charles Wilson Peale 1783
(National Portrait Gallery)

Tent Cloth

“Duck” / “Dutch Duck” / “Raven’s Duck”



Richard Rolt defined “Duck” or “Dutch Duck” in 1761 as “a kind of Dutch sail cloth... a particular sort of cloth, or canvas, made of hemp.” The yarn used “should be well cleansed, even spun, and well twisted”.

“A New Dictionary of Trade and Commerce”
Richard Rolt 1761

Tent Cloth

“Duck” / “Dutch Duck” / “Raven’s Duck”



**An Example of Extant Unbleached 18th Century Dutch Duck Tent Cloth “Taft Duuk”
(Professor Anders Berch)**

Tent Cloth

“Duck” / “Dutch Duck” / “Raven’s Duck”

Elbridge Gerry

Letter to Massachusetts Delegates, June 4, 1775

"We have stripped the seaports of canvass to make tents; and it is of great importance to possess ourselves of about five hundred pieces of Ravens duck to keep the soldiers in health."



Tent Cloth

“Duck” / “Dutch Duck” / “Raven’s Duck”

In Congress, 26 February 1776

An Order to Commissary Peter T. Curtenius
To Purchase and Fill a Requisition for
Supplying Tents to the Continental Army:

Tent Cloth

“Duck” / “Dutch Duck” / “Raven’s Duck”

‘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 **ravens 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.)” (K-1)*

Tent Cloth

“Duck” / “Dutch Duck” / “Raven’s Duck”

WANTED immediately for the army, **CAMPKETTLES**, either of tin or brass, to hold about three gallons; a large quantity of **DUCKING**, or **RUSSIA DRAB**, for tents; **OSNABRUGS**, for hunting shirts; **CHECKS**, *coarse white* **LINEN**, or *country made* **LINEN**, for under shirts; also **BLANKETS** and *coarse* **STOCKINGS**. Any person who has any of the above articles for sale will be pleased to inform me by letter, per post, directed to be lodged at the post-office, *Aylett's*,--**CANTEENS** are also much wanted, and it is requested of the respective committees to make immediate inquiry after those taken from the magazine, and contrive them to the head-quarters; not omitting these that are damaged, which may be repaired.---I will also give ready money for any quantity of **SALTPETRE**, **SULPHUR**, or **LEAD**.

* * * **SPADES**, **SHOVELS**, and **MATTOCKS**, are also wanted. Those who have them will apply as above.

WILLIAM AYLETT, contractor.

Advertisement Placed in Alexander Purdie's Virginia Gazette by William Aylett of the Virginia Public Store
To Supply the 1st & 2nd Virginia Regiments and Minute Battalions of Virginia

6 October, 1775 page 3

Tent Cloth

“Duck” / “Dutch Duck” / “Raven’s Duck”



Major General Nathanael Greene
by Charles Wilson Peale 1783
(National Portrait Gallery)

Letter From E. Bowen D.Q.M.G.
To Gen. Nathanael Greene
1779

“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.”

Tent Cloth

“Duck” / “Dutch Duck” / “Raven’s Duck”

**Commissary Peter T. Curtenius
Letter to the New York Provincial
Congress June 28, 1775**

"Pursuant to your order, I have purchased, on the publick credit, 261 Ravens Duck that is in Town; also, 26 bell-tents, and 635 haversacks, of Mr. Levy; one bell and one officers' tent, from Captain Devereux. I have delivered, 137 pieces duck to the tent-makers, out of which they have made 250 tents, which are finished, and in my store. There remain 124 pieces duck in my hands, which will make about 227 soldiers' tents more."



British Linen Haversack

(Col. J. Craig Nannos Collection - Photograph by Roy P. Najecki)

Tent Cloth

“Duck” / “Dutch Duck” / “Raven’s Duck”

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. To keep the yarn from un-spinning itself on the loom when under tension, weavers often applied starch (a.k.a. “Sizing”) to the warp threads to make them more resistant to abrasion. This sizing was removed from the finished fabric once it was washed.

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.**”*

Tent Cloth

“Raven’s Duck” / “Russia”

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.

Tent Cloth

“Raven’s Duck” / “Russia”

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)

Tent Cloth

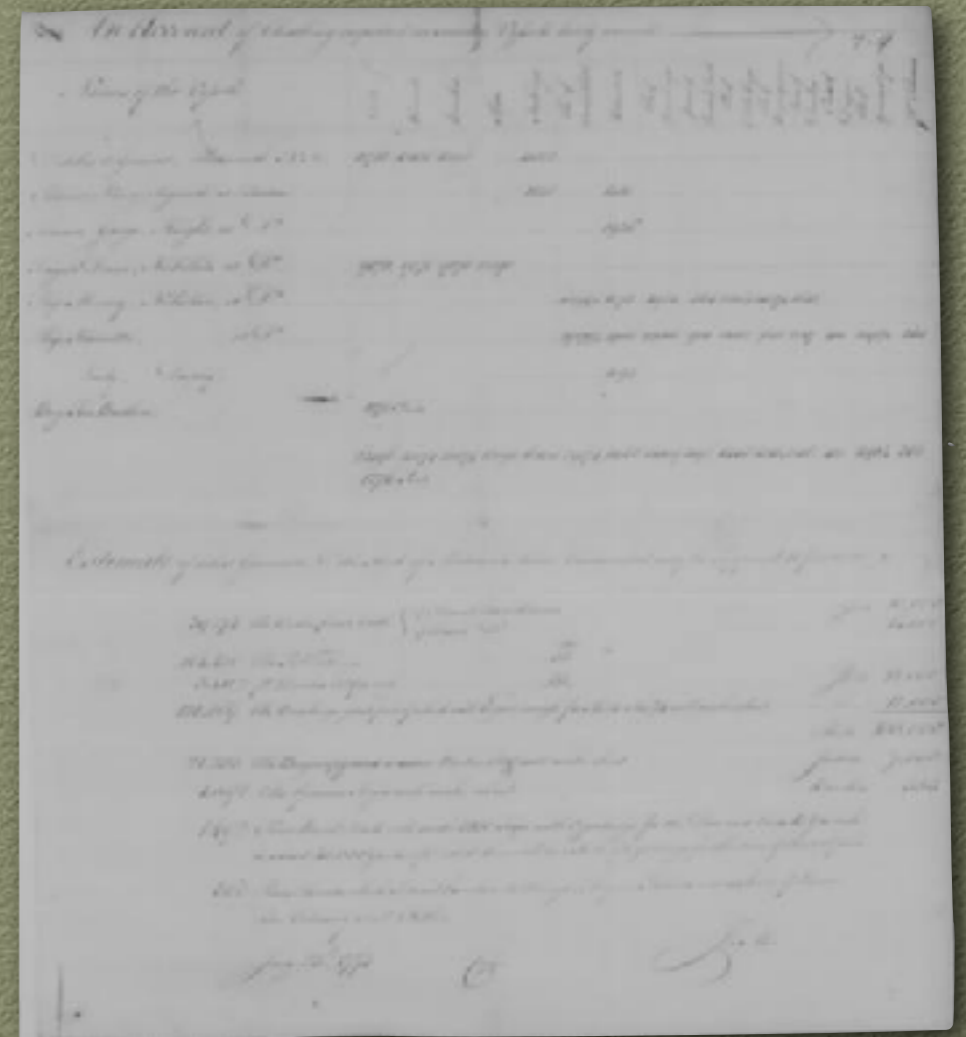
“Raven’s Duck” Combined With “Oznaburgs”

An Account of Clothing Imported in Sundry Vessels lately arrived, Continental Congress – Papers, Clothing Dept. Page 7-9.

"23 July 1778, Thursday: Estimate of what Garments &c the Stock of Materials below Enumerated may be supposed to produce

...

1492 Pieces Raven Duck will make 3180 Tents with Oznaburgs for the Door and Ends 13 Yds each is about 40,000 Yards, after which there will be a Stock of Oznaburgs for other uses of 80,000 Yards."



Tent Cloth

“Osnaburg”

- A Course Plain Woven Textile Fabric.
- Named for the City of Osnabrück in Lower Saxony, Germany, where it may have been first imported to English-Speaking Countries.
- Originally Made from Flax Yarns. It has also been made with Tow, or Jute Yarns, Sometimes with Flax or Tow Warp with Mixed or Jute Weft.
- The Cloth Varied from 20 to 36 Yarns per Inch and 10 to 15 Picks per Inch.
- In the Late 1730s, Osnaburg began to be Woven in Scotland as an Imitation to the German Import. Scotland produced 0.5 Million Yards of Osnaburg in 1747 and 2.2 Million Yards by 1758.
- Exported from Scotland Primarily to England, the Netherlands, and the British Colonies in North America.

(Encyclopedia Britannica (11th ed.). Cambridge University Press)

Tent Cloth “Osnaburg”

Captain Samuel Jenks (From 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)



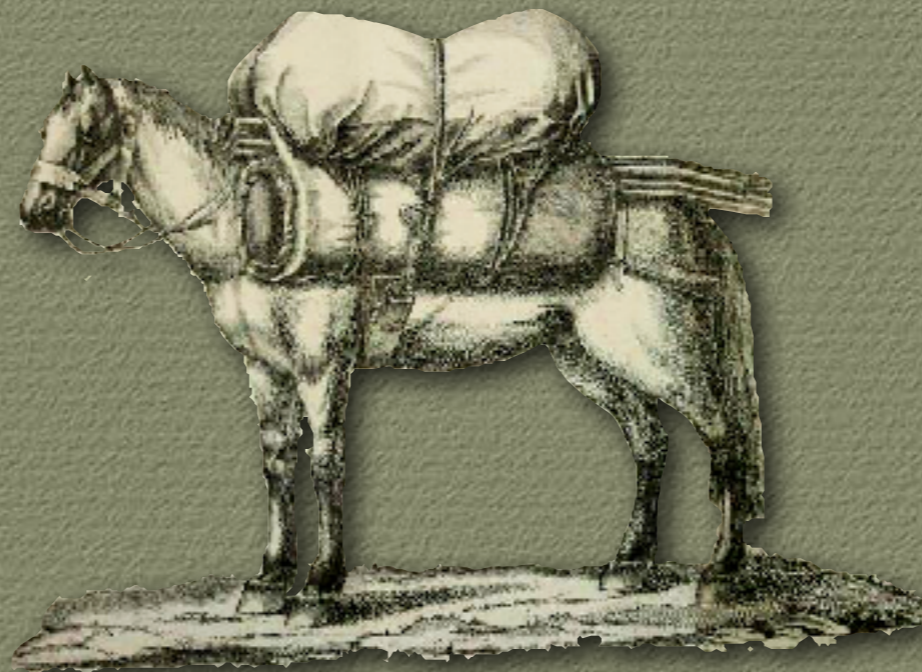
Unknown Massachusetts Militia Officer
by Joseph Blackburn 1756

Tent Cloth “Osnaburg”

Colonel William Christian to Colonel William Preston

“Camp Union Sepr. 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)



Tent Cloth “Osnaburg”

Colonel Richard Henderson

“Fort Boone, on the mouth of Otter Creek, Cantuckey River...”
“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)

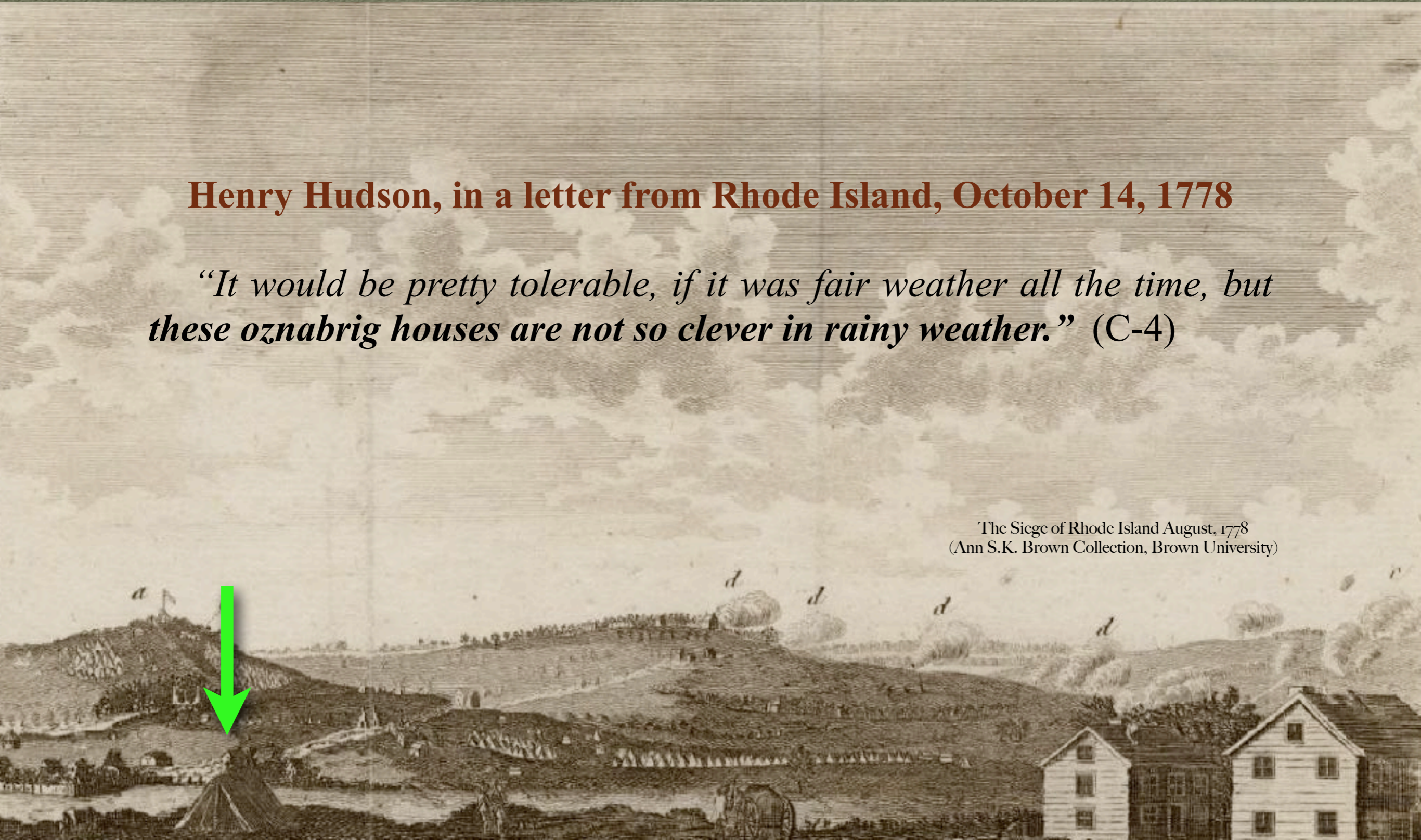


Tent Cloth “Osnaburg”

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)

The Siege of Rhode Island August, 1778
(Ann S.K. Brown Collection, Brown University)



Tent Cloth “Osnaburg”

“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 ordiance 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)

Tent Cloth “Osnaburg”



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)

Tent Cloth “Osnaburg”

WANTED immediately for the army,
CAMPKETTLES, either of tin or
brass, to hold about three gallons; a
large quantity of DUCKING, or RUSSIA
DRAB, for tents; OSNABRUGS, for
hunting shirts; CHECKS, *coarse white*
LINEN, or *country made* LINEN, for
under shirts; also BLANKETS and *coarse*
SUNSHIRTS.

*“a large quantity of DUCKING, or RUSSIA DRAB, for tents;
OSNABRUGS, for hunting shirts;”*

omitting these that are damaged, which
may be repaired.---I will also give ready
money for any quantity of SALTPETRE,
SULPHUR, or LEAD.

* * * SPADES, SHOVELS, and
MATTOCKS, are also wanted. Those
who have them will apply as above.

WILLIAM AYLETT, contractor.

Advertisement Placed in Alexander Purdie's Virginia Gazette by William Aylett of the Virginia Public Store
To Supply the 1st & 2nd Virginia Regiments and Minute Battalions of Virginia

6 October, 1775 page 3

Tent Cloth “Osnaburg”

“30 August 1775

New York City Commissary Peter T. Curtenius to the Provincial Congress of New-York

Gent

Agreeable to your order of yesterday I have enclosed a list of the Tents delivered of what remain in my possession also an acct of what remains in my possession also an acct of what Osnabrigs I have on hand. For particulars I refer you to the enclosed...

Tents delivered by Peter Curtenius Viz.

2 Genl. Officers tents for the first regiment

7 companies, at 13 to each compy is 91 tents

7 Bell ditto. 7 Capts - 7 Subalterns

1 Surgeons, 1 Adjutant, & 1 Quartermasters,

2 field Officer do. Second Regimt.

10 companies, 12 to a company 120. do

10 Bell & 15 Officers do.

Third Battalln.

7 companies, 13 to a company 91 Do

2 officers & 7 bell tents

Tent Cloth “Osnaburg”

*Capt. Lambs company of Artillery 17 —
& the officers tents belonging to that compy.*

Total

319 tents

Tents remaining in my possession 193

512

The whole quantity of tents to complete the 4 New York Regiments is 520 soldiers tents, so that we want only 8 tents to complete our 4 regiments.

The number of tents wanting to cover Col. Hinmans (4th Connecticut) Regimt. of 1000 men, if you allow 6 men to a tent, will be 167 tents, to make which, I have remaining of oznabrigs in my store, which was brought of Robt. and Jas. Murray 3207 yards, which will make about 133 tents. I have also 175 yds. tow cloth, which will make about 8 tents more, so that we want stuff for only 20 tents, to complete our 4 regiments.

Besides the above I have delivered to Col. Waterbury (5th Connecticut Regiment) 170 soldiers tents, & to Genl. Wooster (1 Connecticut Regiment). I have received of Genl. Wooster for 60 tents 162Ls. Col. Waterbury has not paid me anything for the tents he had, which amount to 459 Ls.

Enclosed papers respecting tents delivered by Peter Curtenius.”

Tent Cloth

“Russia” / “Russia Drab”

WANTED immediately for the army, **CAMPKETTLES**, either of tin or brass, to hold about three gallons; a large quantity of **DUCKING**, or **RUSSIA DRAB**, for tents; **OSNABRUGS**, for hunting shirts; **CHECKS**, *coarse white* **LINEN**, or *country made* **LINEN**, for under shirts; also **BLANKETS** and *coarse* **STOCKINGS**. Any person who has any of the above articles for sale will be pleased to inform me by letter, per post, directed to be lodged at the post-office, *Aylett's*,--**CANTEENS** are also much wanted, and it is requested of the respective committees to make immediate inquiry after those taken from the magazine, and contrive them to the head-quarters; not omitting these that are damaged, which may be repaired.---I will also give ready money for any quantity of **SALTPETRE**, **SULPHUR**, or **LEAD**.

* * * **SPADES**, **SHOVLES**, and **MATTOCKS**, are also wanted. Those who have them will apply as above.

WILLIAM AYLETT, contractor.

Advertisement Placed in Alexander Purdie's Virginia Gazette by William Aylett of the Virginia Public Store
To Supply the 1st & 2nd Virginia Regiments and Minute Battalions of Virginia

6 October, 1775 page 3

Tent Cloth “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)*

Tent Cloth “Ticklenburg”

Papers of General George Washington

*“List of Camp Equipage Military
Stores, Baggage &c. taken in the
Brigt. 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)



Tent Cloth “Ticklenburg”

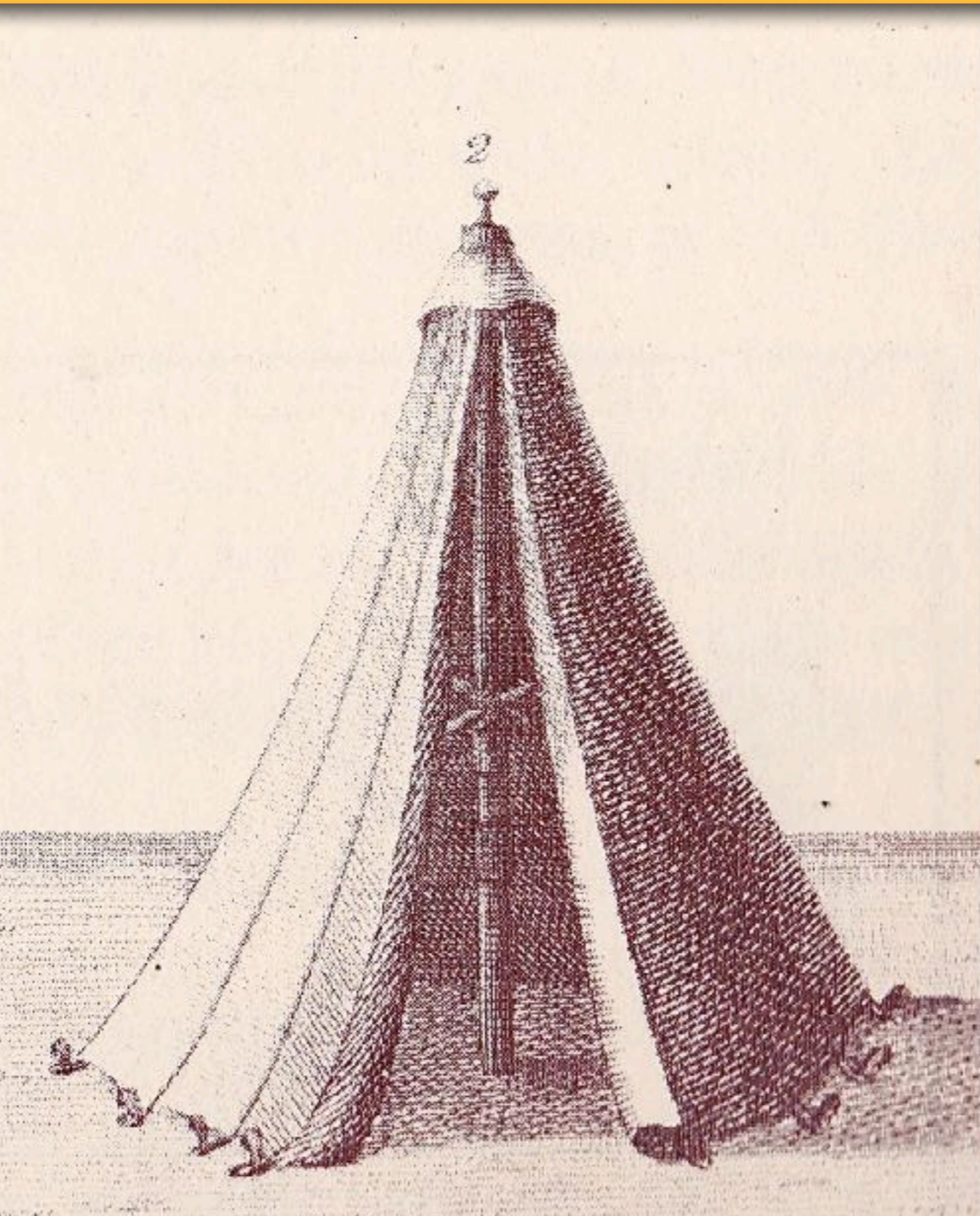
Journals of Congress, from January 1st, 1780, to January 1st, 1781

“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)*



Tent Cloth “Ticklenburg”



**Orders. New York Congress
June 16, 1775**

"Ordered, That Mr. Peter T. Curtenius, as Commissary of this Congress, be desired to purchase the following quantities of Ravens Duck, Ticking, and Bell Tents, of such persons as will sell the same on the publick credit, to wit: 427 pieces of good Ravens Duck; 182 yards of Ticking, fit to make Bell Tents; and twenty-six Bell Tents, which are at Hayman Levy' s, if they are of a proper fashion, good, and of a cheap or reasonable price."

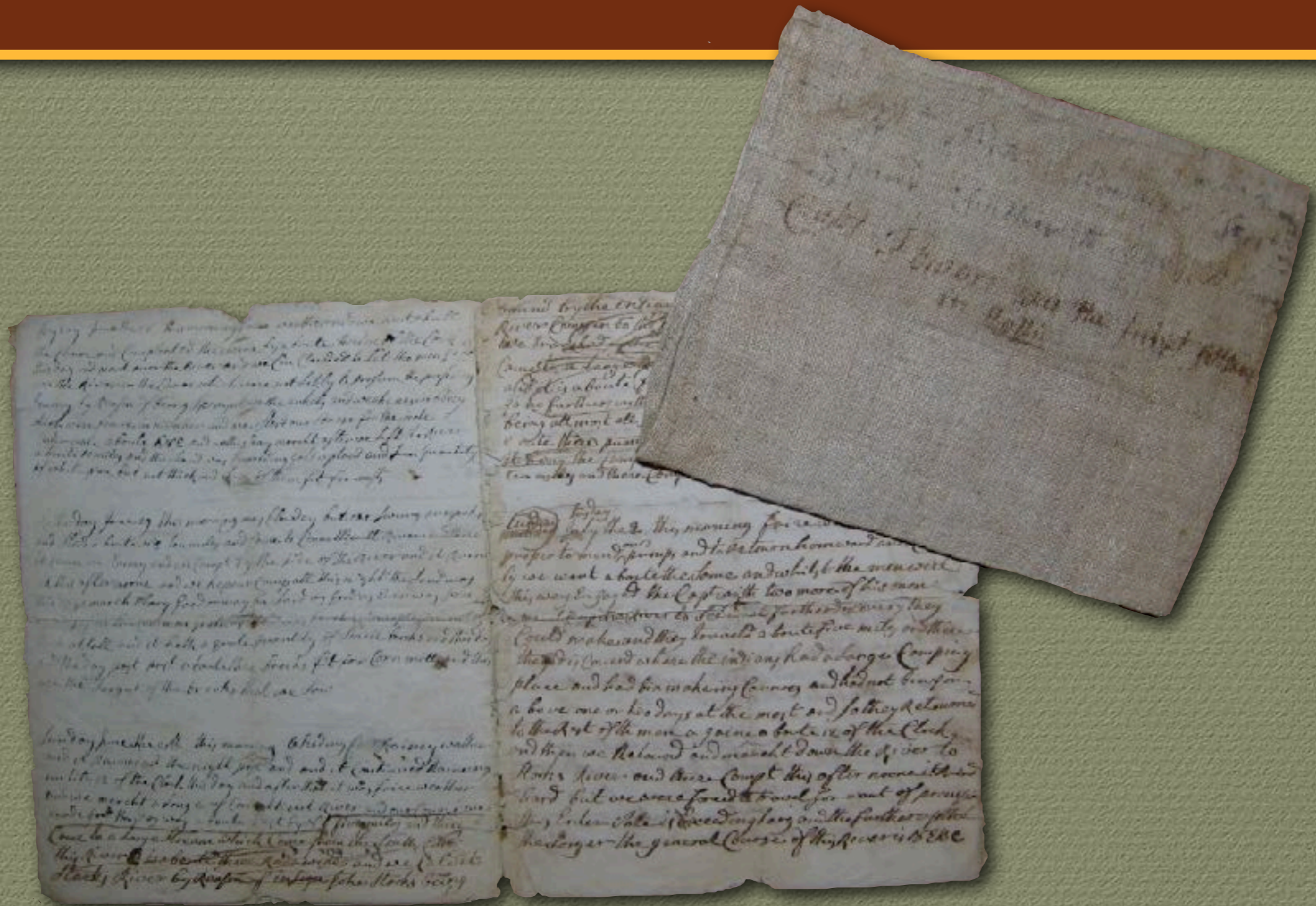
Tent Cloth “Tow Cloth”

State of Connecticut
Journal of the Council of Safety
October 11, 1776 to May 6, 1778

*“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”*

*“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)*

Extant Tent Cloth



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

Natural Linen: 32 x 40 Threads per Inch

(Private Collection)

Extant Tent Cloth

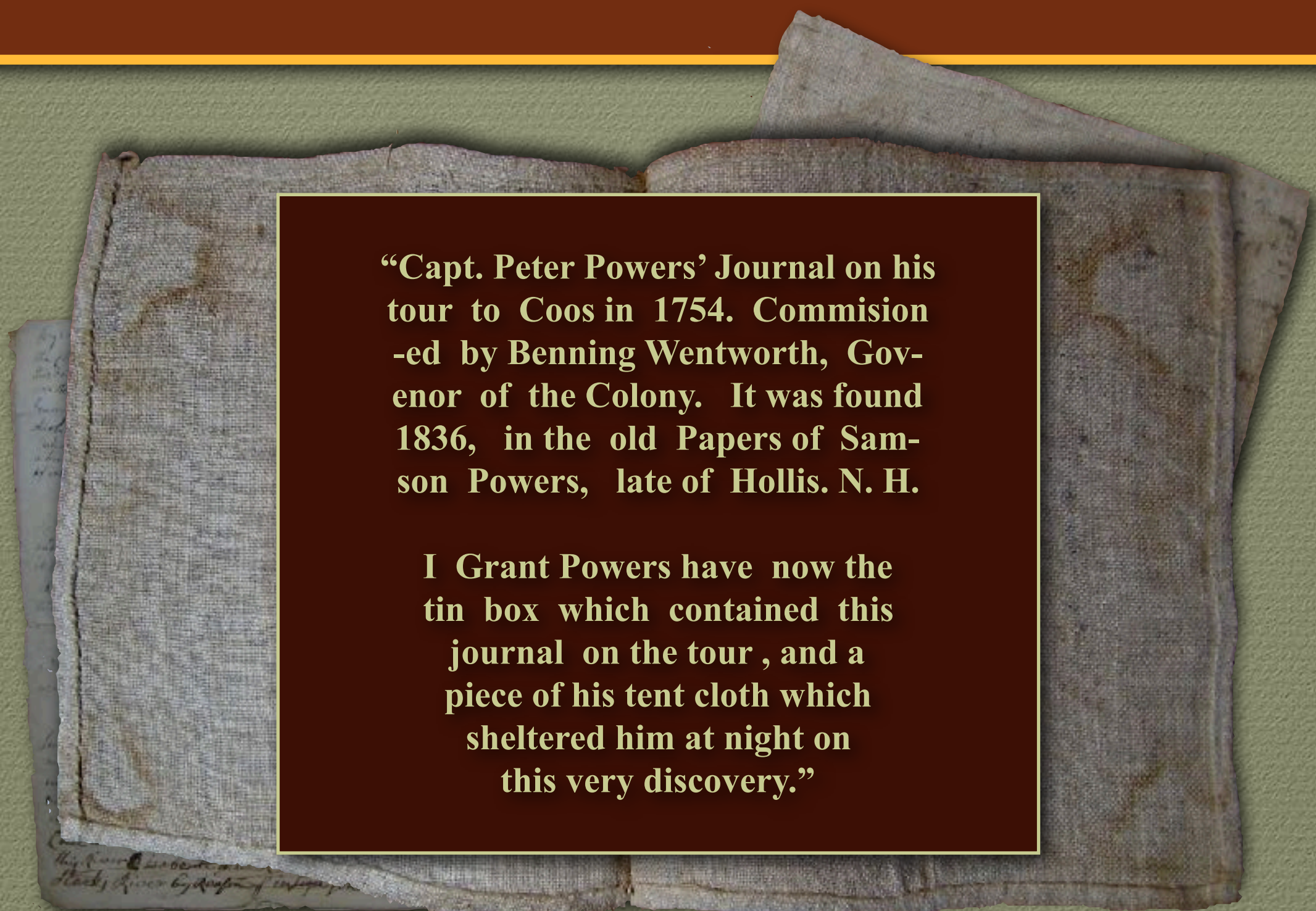


1754 Diary & Tent Fragment from Captain Peter Power's Military Expedition into New Hampshire

Natural Linen: 32 x 40 Threads per Inch

(Private Collection)

Extant Tent Cloth

A piece of aged, natural linen tent cloth is displayed against a light green background. The cloth is rectangular with irregular, torn edges and shows signs of wear, including discoloration and faint stains. A central text box with a dark background and a thin gold border contains white text. The text describes the cloth's historical significance, mentioning its use by Captain Peter Powers in 1754 and its discovery in 1836. The cloth is laid flat, with some folds and creases visible.

“Capt. Peter Powers’ Journal on his tour to Coos in 1754. Commission-ed by Benning Wentworth, Governor of the Colony. It was found 1836, in the old Papers of Samson Powers, late of Hollis. N. H.

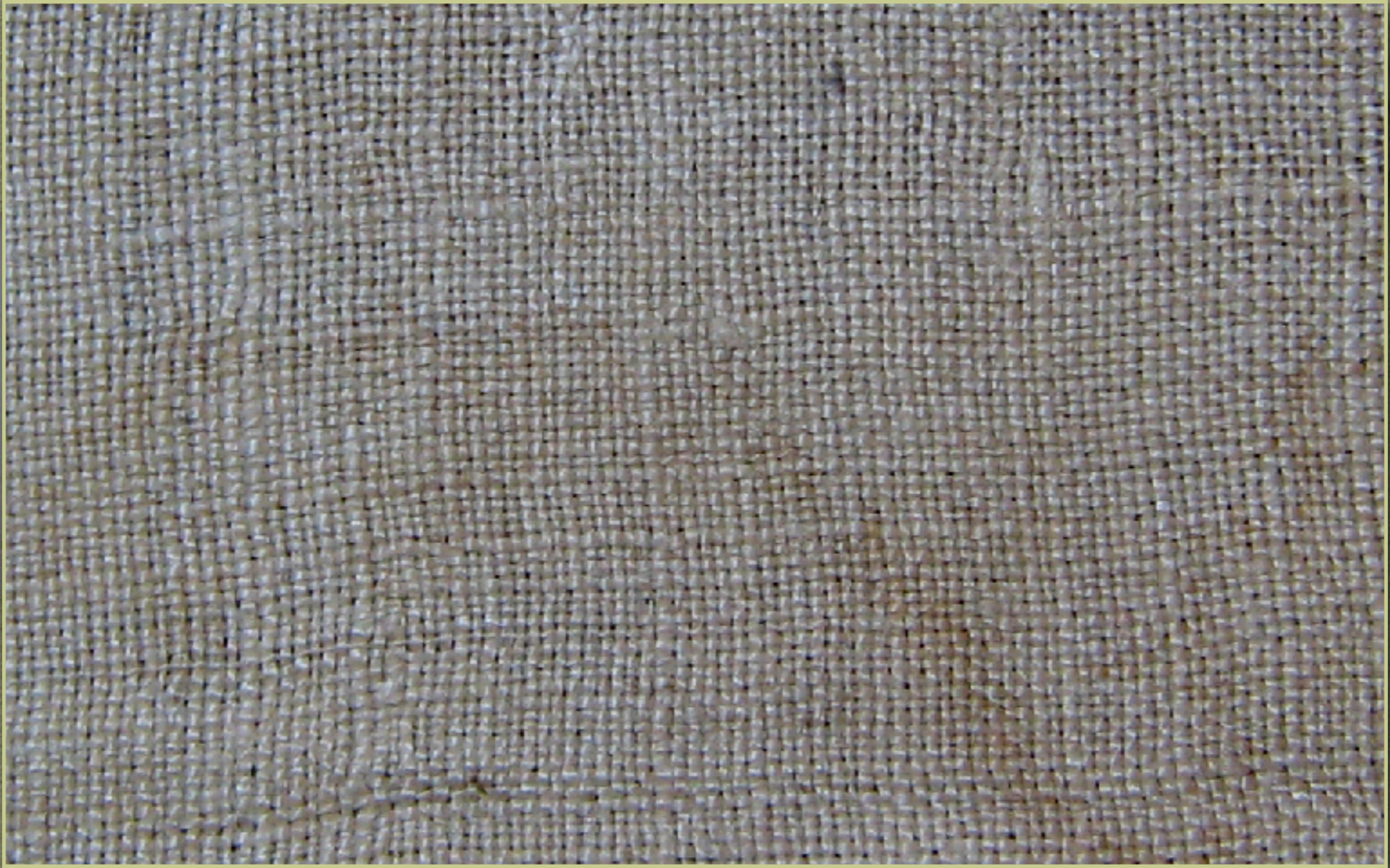
I Grant Powers have now the tin box which contained this journal on the tour , and a piece of his tent cloth which sheltered him at night on this very discovery.”

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

Natural Linen: 32 x 40 Threads per Inch

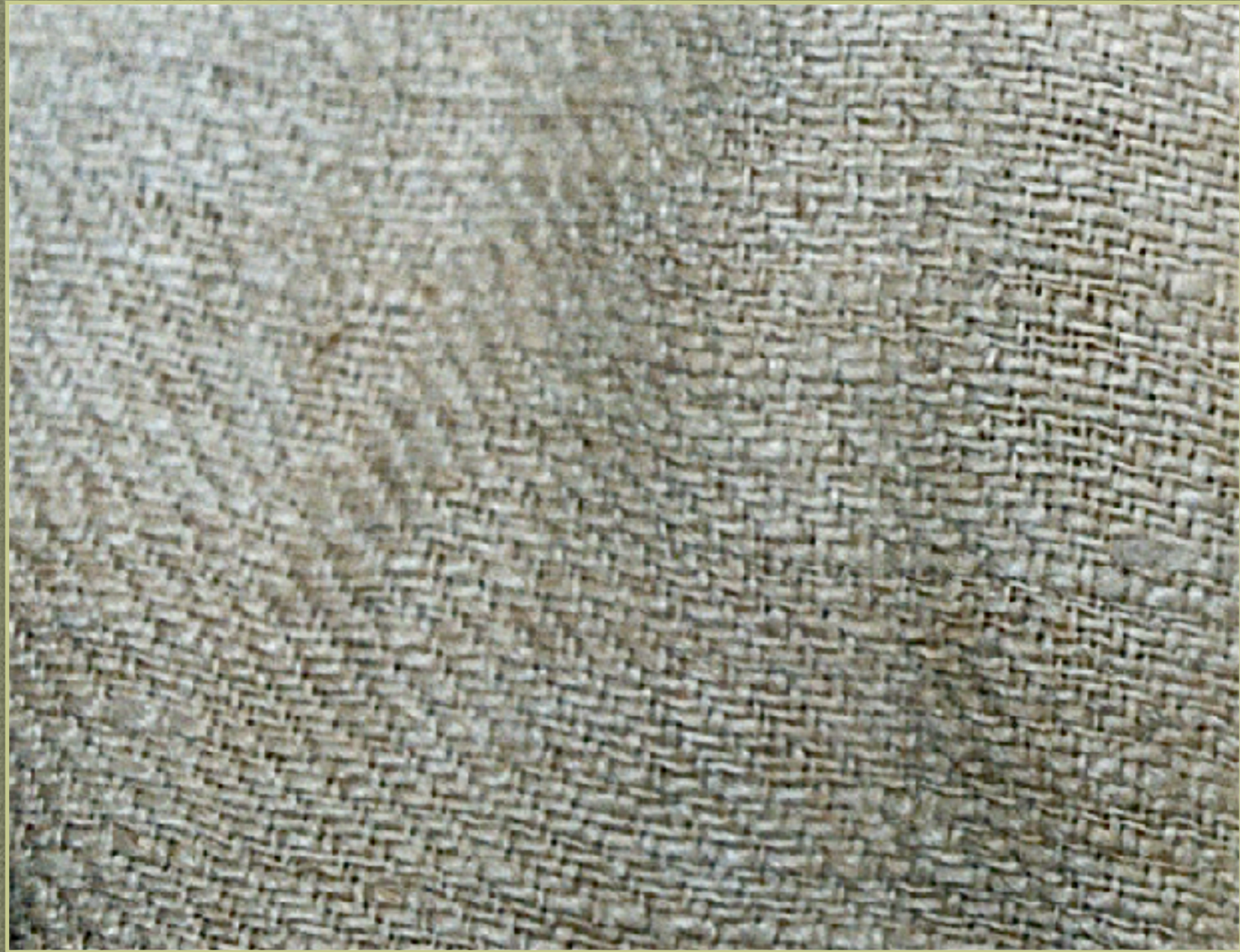
(Private Collection)

Extant Tent Cloth



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

Extant Tent Cloth



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

Extant Tent Cloth



1782 - 1783 Company Book of Captain Trask's 8th Co., 6th Massachusetts Regiment - Henry 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)

Tent Cloth Color



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. c. 1751 (The Royal Collection)

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



Tent Construction: Seams

Tent Seams

There are three documented methods to construct a tent seam in the 18th century. Two of these three methods were also used to fabricate sails during the period. Since sailmakers were often employed to manufacture tents during the American Revolution, it is understandable that sails and tents frequently (but not necessarily always) shared similar characteristics. This relationship becomes significant when rationalizing the use of period sailmaker's guides to corroborate material found in tent making references.

Sail and Tent makers in the 18th Century often utilized the selvedge border of a panel of sailcloth for its strength and durability. By definition, selvedge is the finished edge of a piece of woven fabric that prevents it from unraveling and fraying. Being slightly denser in consistency, it is the strongest component of any panel of cloth. The two seams which incorporated this selvedge included the "Round" or "Single" Seam, and the "Flat" or "Double" Seam. As tents were often required to be a certain dimension, it was essential for all sailcloth panels to be a consistent width when using these seams in order to preserve the selvedge.

The third type of seam found in 18th century tent fabrication is the "Felled" seam. Similar to seams used in the fabrication of clothing during the period, these seams incorporated the use of both a backstitch and overcast stitch to join pieces of cloth together either at the selvedge or where panels have been cut to size a specific pattern. Felled seams can be found on the Marquee of General George Washington currently on display at the Museum of the American Revolution and the tents at Burg Forchtenstein.

Tent Seams

While the evidence gathered from examining a photograph in Ruth Bleckwenn's book, "Zelt und Lager im AltPrussischen Heer." 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.

Seams

The “Round” Seam

**Journal of the Maryland Council of Safety
7 July - 31 December, 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)

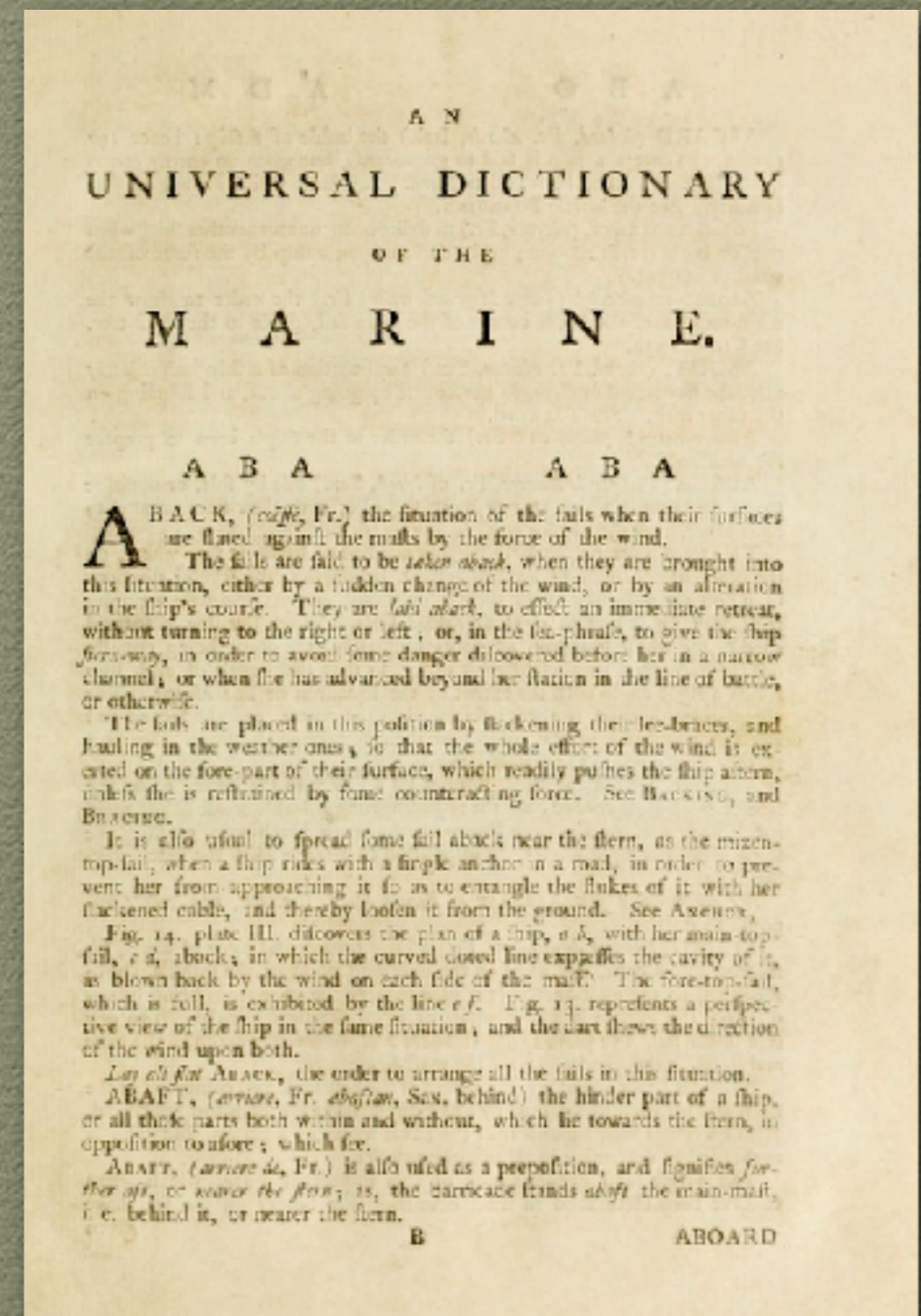


Seams

The “Round” Seam

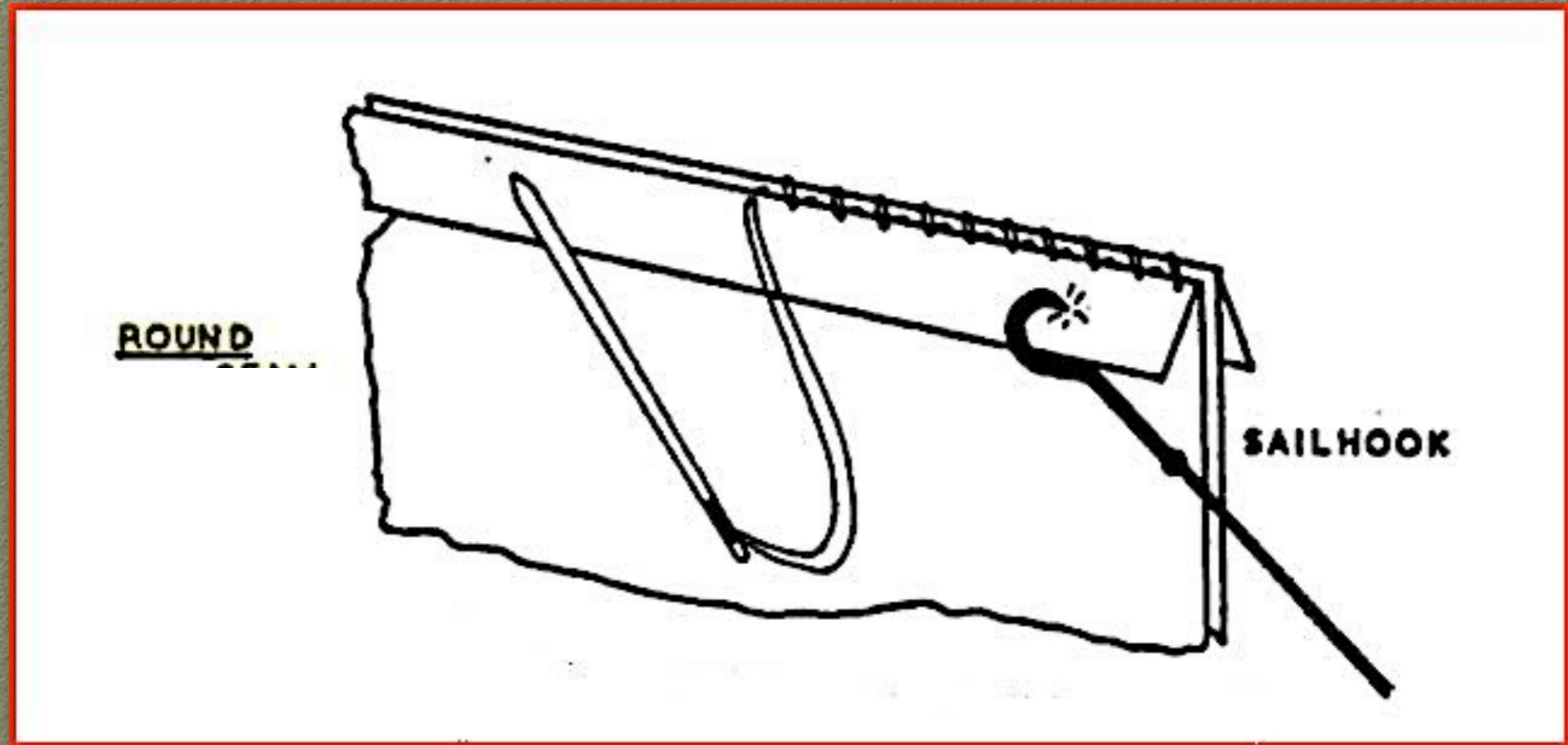
“An Universal Dictionary of the Marine.”
William Faulkner, 1780

“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)



Seams

The “Round” Seam



“Round sewing is used where greater strength is required, the stitches passing through four thicknesses of the cloth instead of two.”

Seams

The “Flat” or “Double” Seam

Journal of the Maryland Council of Safety
7 July - 31 December, 1776

“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)*

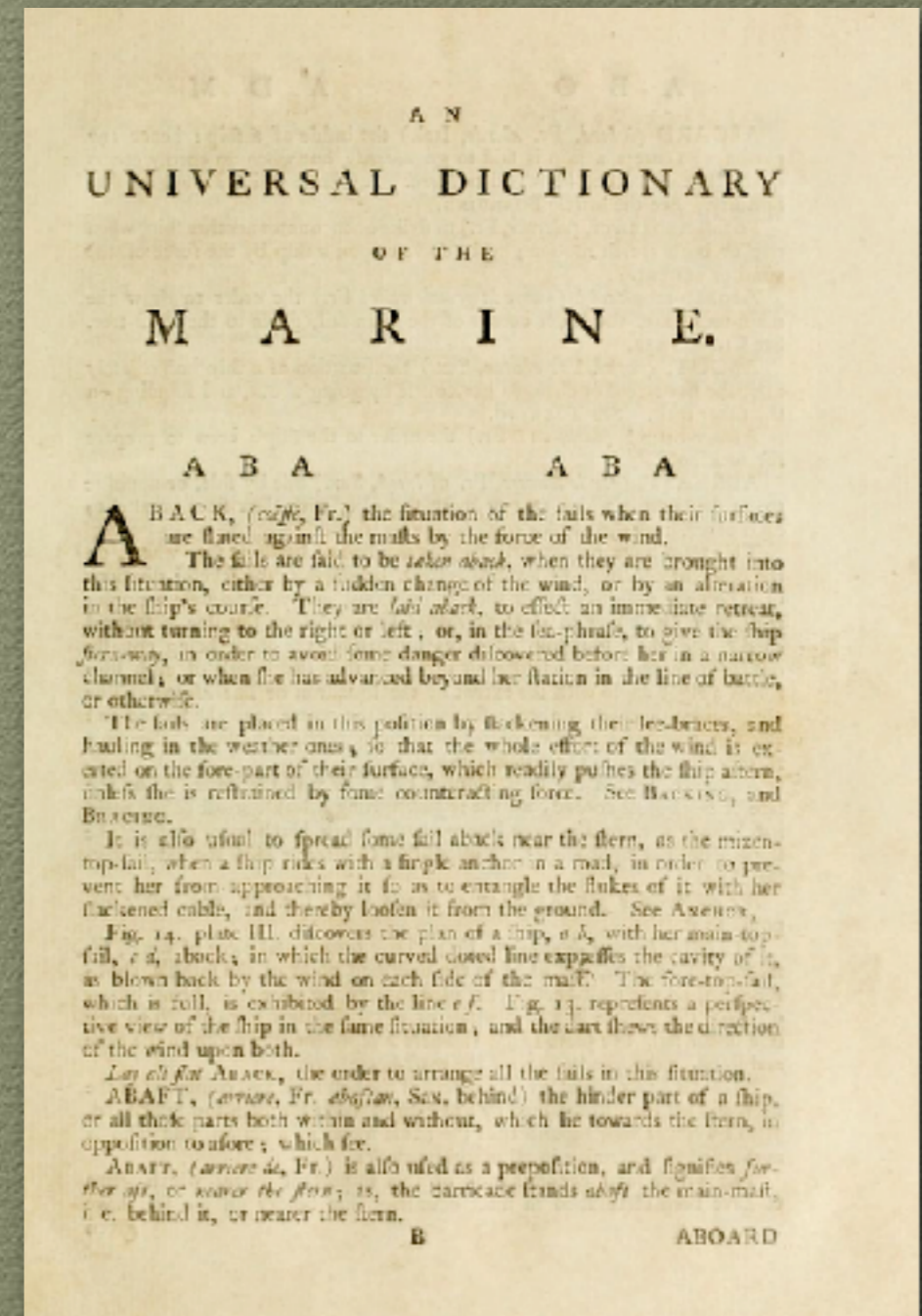


Seams

The “Flat” or “Double” Seam

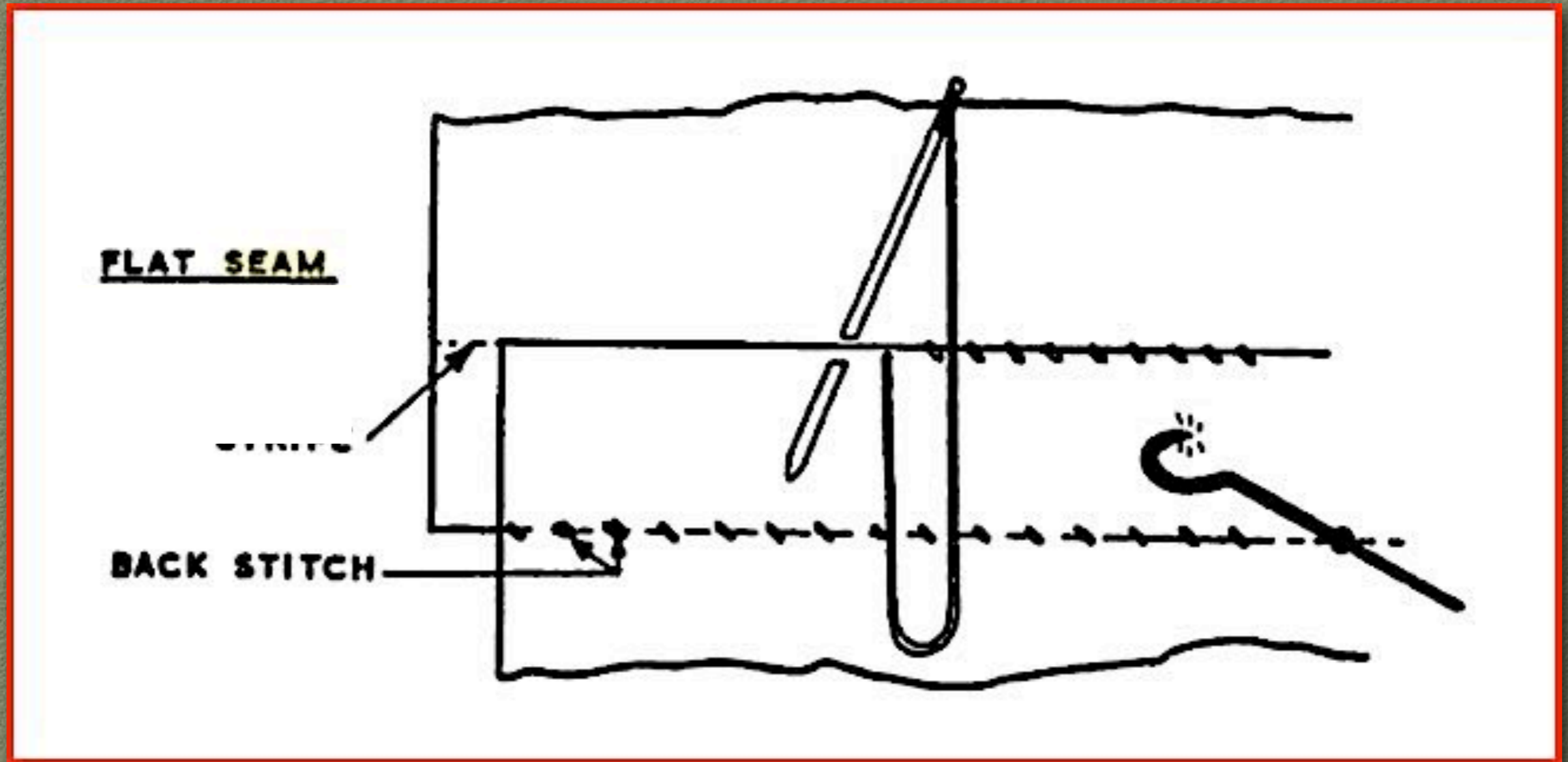
“An Universal Dictionary of the Marine.”
William Faulkner, 1780

“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.” (F-1)



Seams

The “Flat” or “Double” 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, ...”

Seams

The “Flat” or “Double” Seam



Canvas Fragment from the 1785 Wreck of the General Carlton
(Polish Maritime Museum - Photograph Courtesy Matthew Brenckle)

Seams

The “Flat” or “Double” Seam



Canvas Fragment from the 1785 Wreck of the General Carlton
(Polish Maritime Museum - Photograph Courtesy Matthew Brenckle)

Seams

The “Flat” or “Double” Seam



“Double” or “Flat” Seam on the Marquee of General George Washington with Linen Maker’s Mark
(Museum of the American Revolution - The First Oval Office)

Seams

The “Flat” or “Double” Seam



Fig. 8. The bag from *General Carleton*,
initialled “RN” (photo by B. Galus).

1785 Naval Bag or Pillow from the Wreck of the General Carlton
(Polish Maritime Museum)

Seams

The “Flat” or “Double” Seam



Recreated Sailor's Bag
Stitching Details Based on a Canvas Fragment Recovered from the Wreck of the General Carlton

Seams

The "Felled" Seam

A



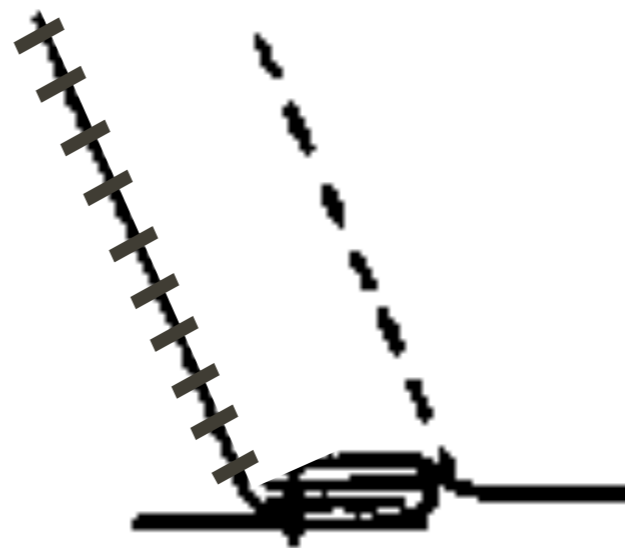
B



C

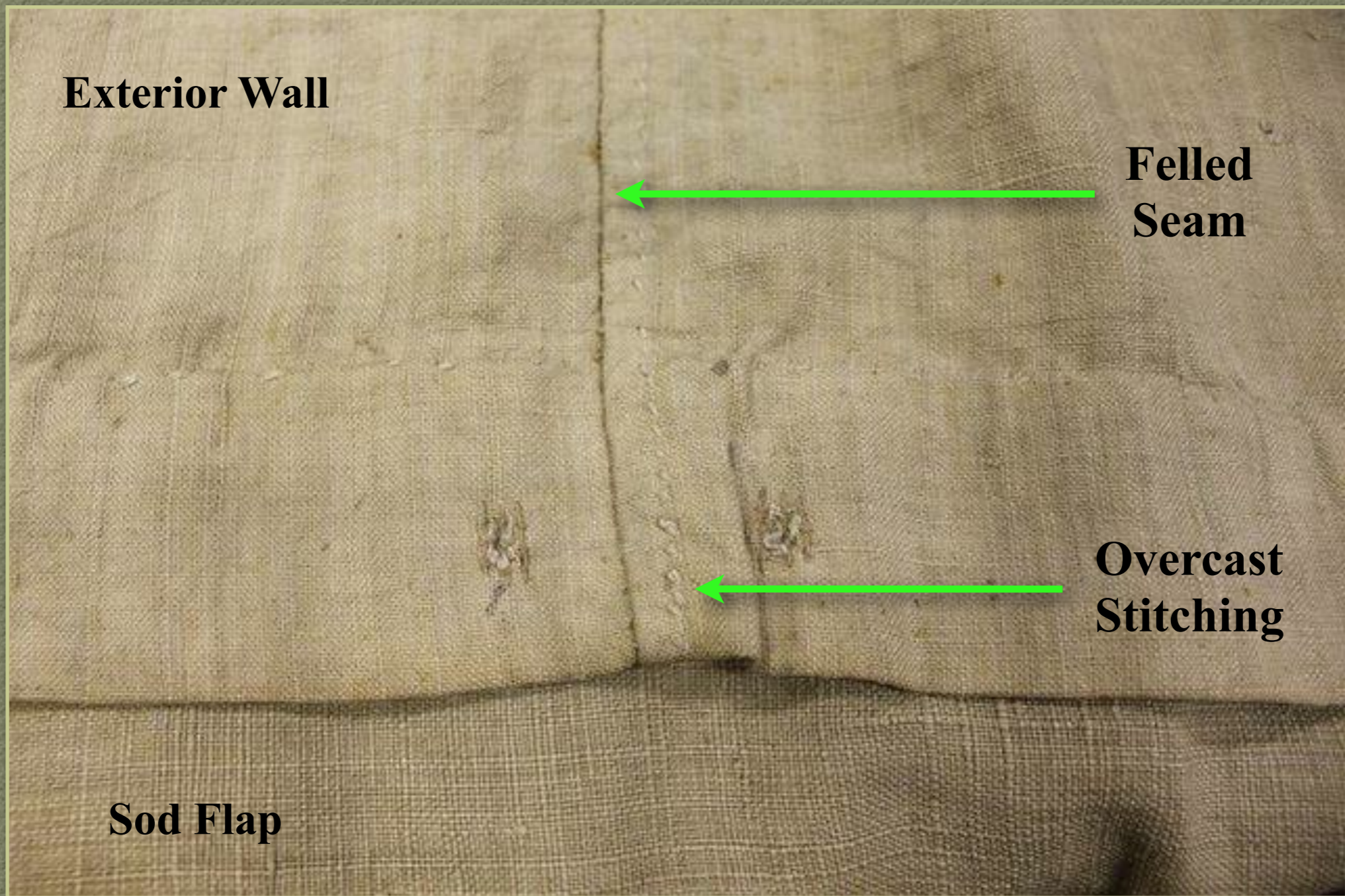


D



Seams

The “Felled” Seam



The Marquee of General George Washington: Exterior View
(Museum of the American Revolution - The First Oval Office)

Seams

The "Felled" Seam



The Marquee of General George Washington: Exterior View
(Museum of the American Revolution - The First Oval Office)

Seams

The “Felled” Seam



Seam Widths:

Wall Seams: 1.5 - 2 cm

Base Seam: 5 cm

The Marquee of General George Washington: Interior View
(Museum of the American Revolution - The First Oval Office)

Seam Fabrication

As sails and tents were constructed in much the same fashion during the 18th century, it stands to reason that the tools required for performing the task would be one in the same. This applied not only to the canvas cloth itself, but the Needles, Twine, Hooks and Palm Irons that were used in the process.

**“The Elements and Practice of Rigging And Seamanship”
David Steel 1794**

“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)

Seam Fabrication

“The Elements and Practice of Rigging And Seamanship” David Steel 1794

“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.**” (S-4)*

Seam Fabrication

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

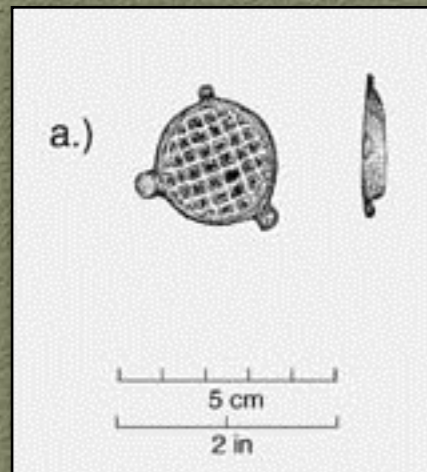
Hanks Tent Cord...

Palm Irons

Sail Needles

Sailmakers Hooks...”

Seam Fabrication

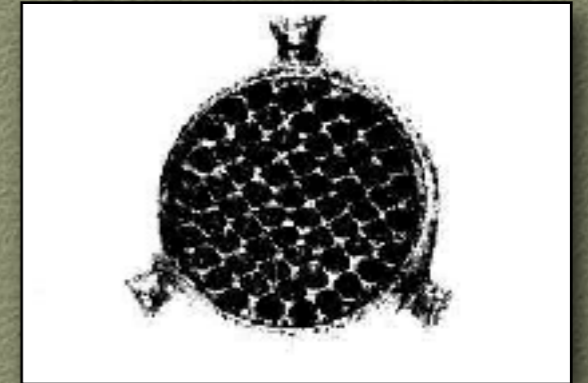


1748 Wreck of the HMS Fowey



1733 Spanish Wreck off Florida
(State Archives Florida)

1760 Wreck of the Machault
Sunk in the Battle of Restigouche
Bay of Gaspé - Quebec Province
(Parks Canada)



1785 Wreck of the General Carlton
(Polish Maritime Museum)

Sailmaker's Palm Irons

Seam Fabrication

CONCLUSION

While there are no surviving extant tents with a history of use during the American War for Independence, we can see from period accounts, the extant enlisted men's tents at Burg Forchtenstein, and the Marquee of General George Washington, that tent makers and sail makers employed in the service of making tents used the following seam techniques:

- 1. The "Round" Seam*
- 2. The "Flat" or "Double" Seam*
- 3. The Felled Seam*

The Tent & Sail Maker

The Tent & Sail Maker

**Orders. New York Congress
June 17, 1775**

"Mr. Van Zandt, from the Committee appointed to get as many Tents made as they shall think necessary, reported, that they had agreed with sundry Upholsterers to make two hundred and fifty Tents, and to furnish all materials (Duck excepted) for making the said Tents, with Tent Poles, Mallets, and other necessaries for the said Tents, at the rate of fifteen Shillings for each Tent. That the said Upholsterers have agreed with them to have the said two hundred and fifty Tents finished by the latter end of next week..."



The Tent & Sail Maker



Major General Nathanael Greene
by Charles Wilson Peale 1783
(National Portrait Gallery)

**Nathanael Greene to Captain Maberly:
December 4, 1780 (Year Uncertain)**

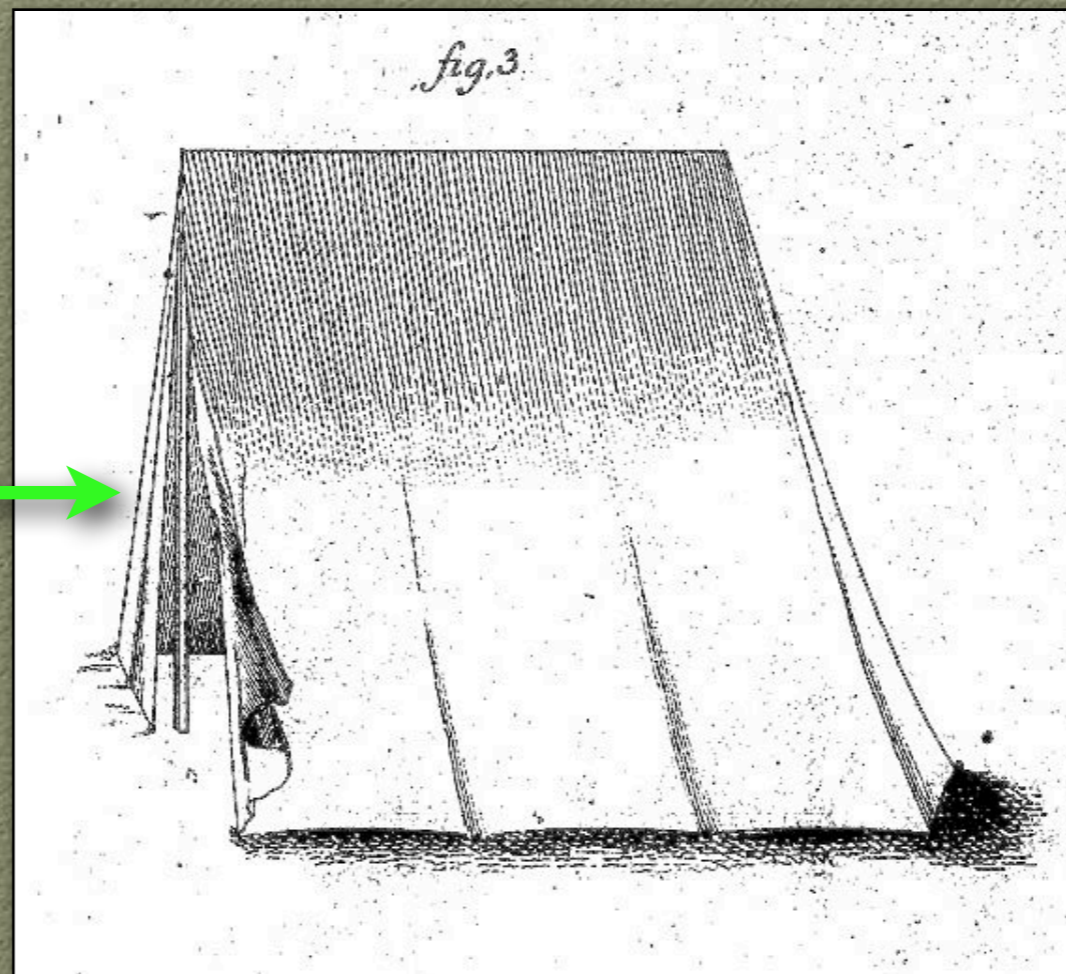
“All the sail and tent makers will be sent to you tomorrow. You will make up the sail and raven’s duck into common tents.”

Tent Construction: The Front Flap Opening

The Front Flap Opening

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 the Lewis Lochee illustration of a British Other Ranks' tent, as well as an extant Other Ranks' tents located in the collection of Burg Forchtenstein.

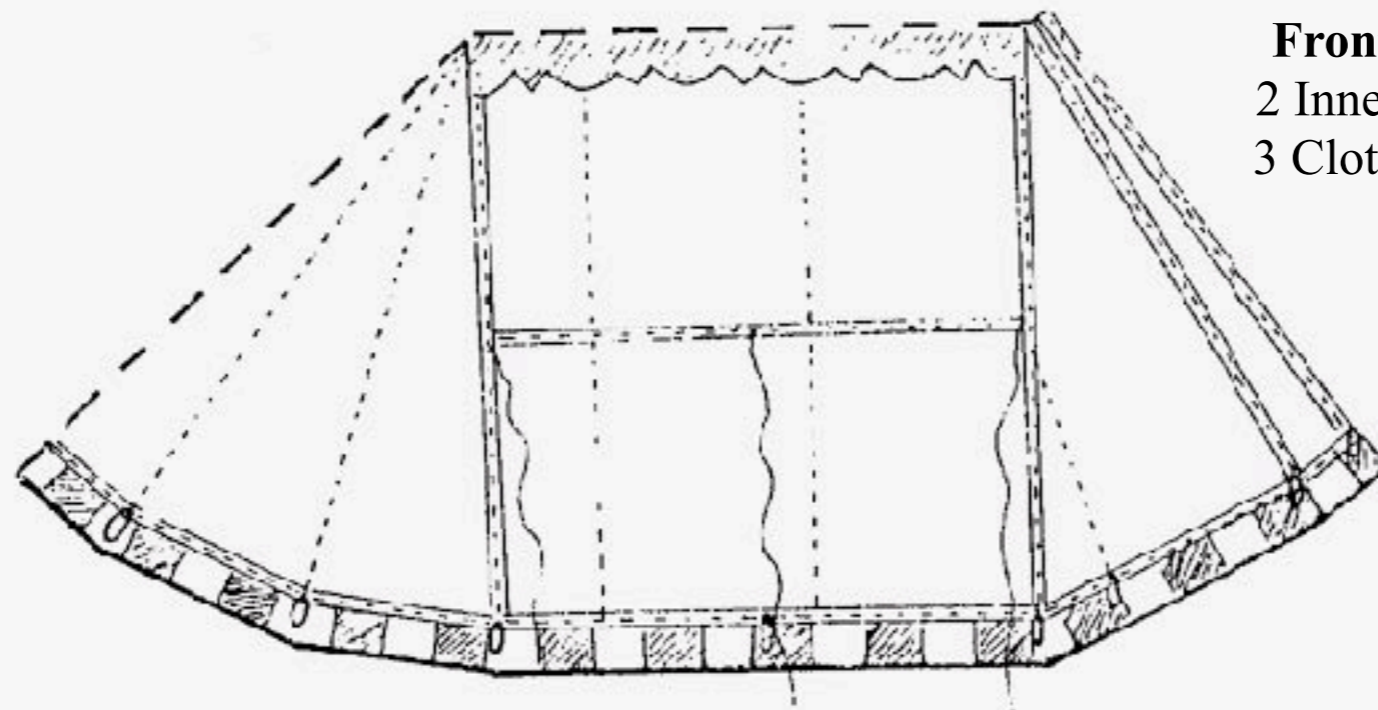
Front Flaps
1 Inner Seam
2 Cloth Panels



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

The Front Flap Opening

Abb. 6: Zelt B (Maßstab 1:50)



Front Flaps
2 Inner Seams
3 Cloth Panels

Abb. 6a: Zeltbahn

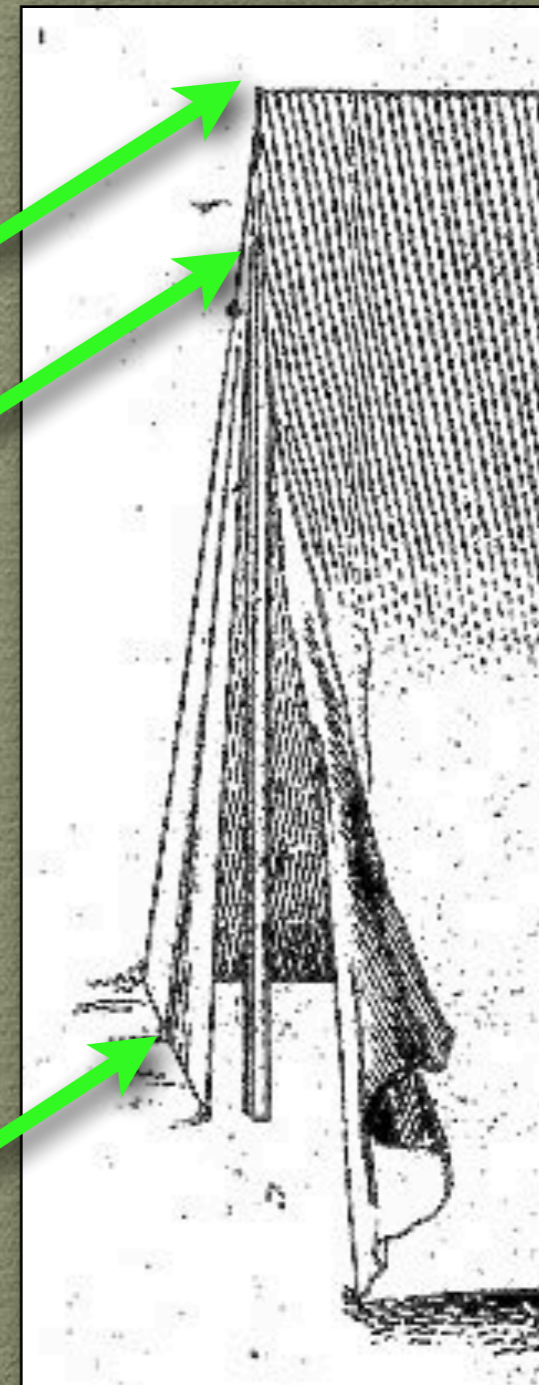
Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussischen Heer"

The Front Flap Opening

On the Lewis Lochee tent, the two Front Flaps are constructed out of two panels of triangular shaped cloth which are sewn together on the diagonal. This allows for the placement of the center seam towards the middle of the base of the flap. The two flaps meet, and are sewn to one another approximately 8 inches below the peak of the tent. When closed, the two front flaps approximate one another along their edges. They do not overlap one another. When closed, the front flaps are held in place solely by rope loops located at the middle seam and corner of each flap. There is no evidence of ties or hooks and eyes being used to secure the front flaps together on the Lochee tent. This manner of front flap closure can be seen on numerous British tents depicted during the period.

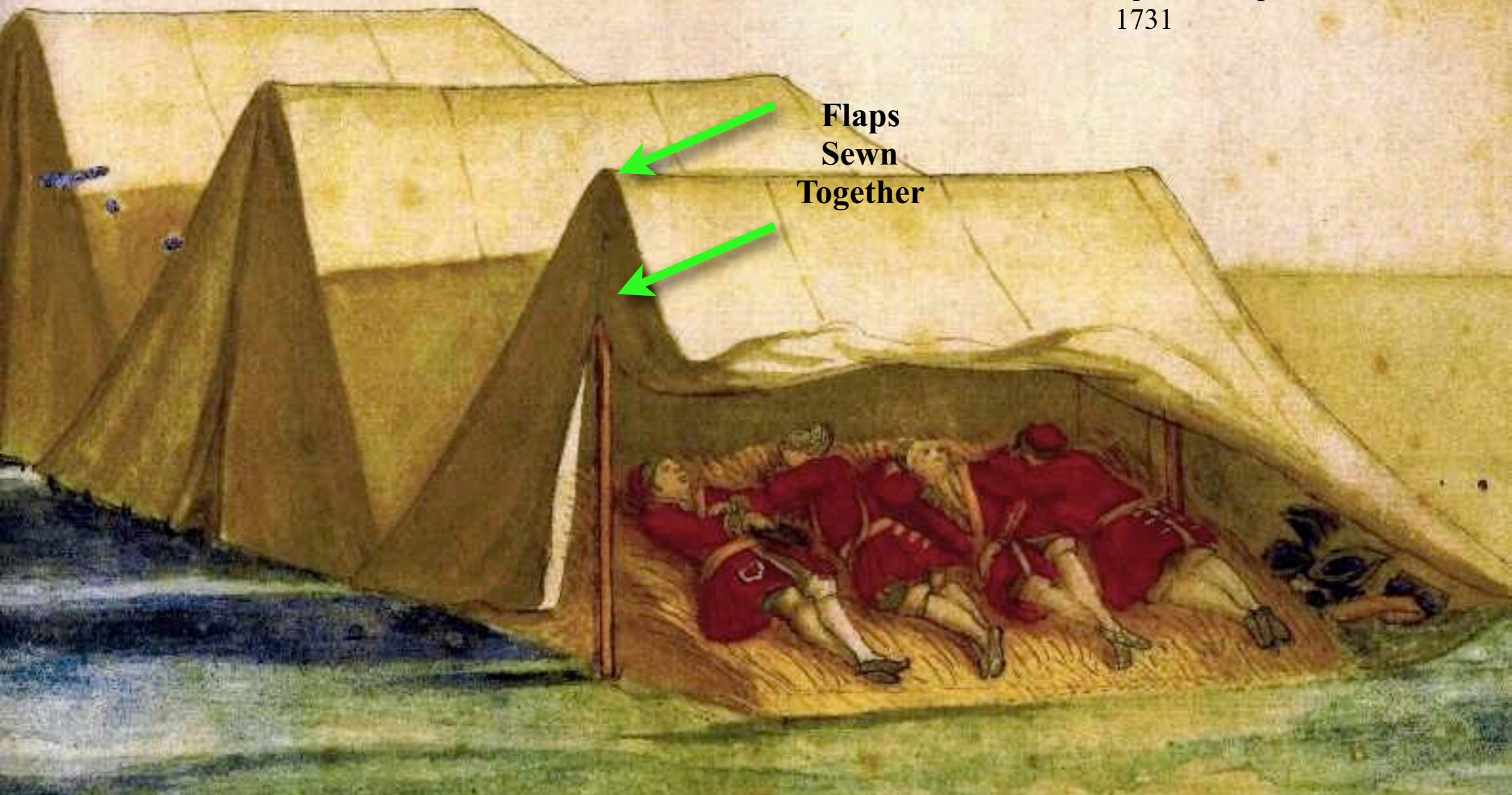
**Flaps
Sewn
Together**

**Center
Seam**



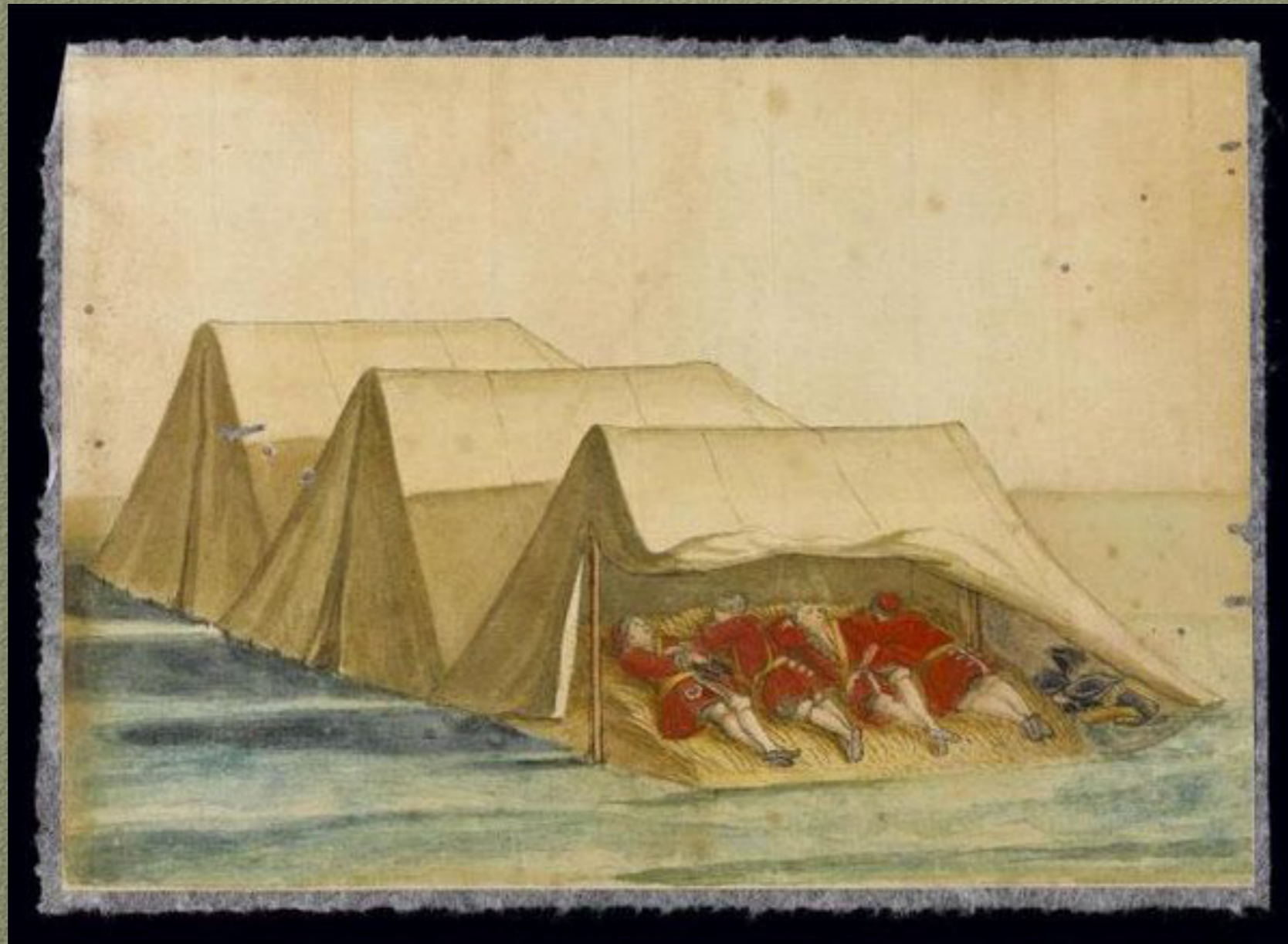
The Front Flap Opening

A Scene of the Camp on Hampden Green
1731



Flaps
Sewn
Together

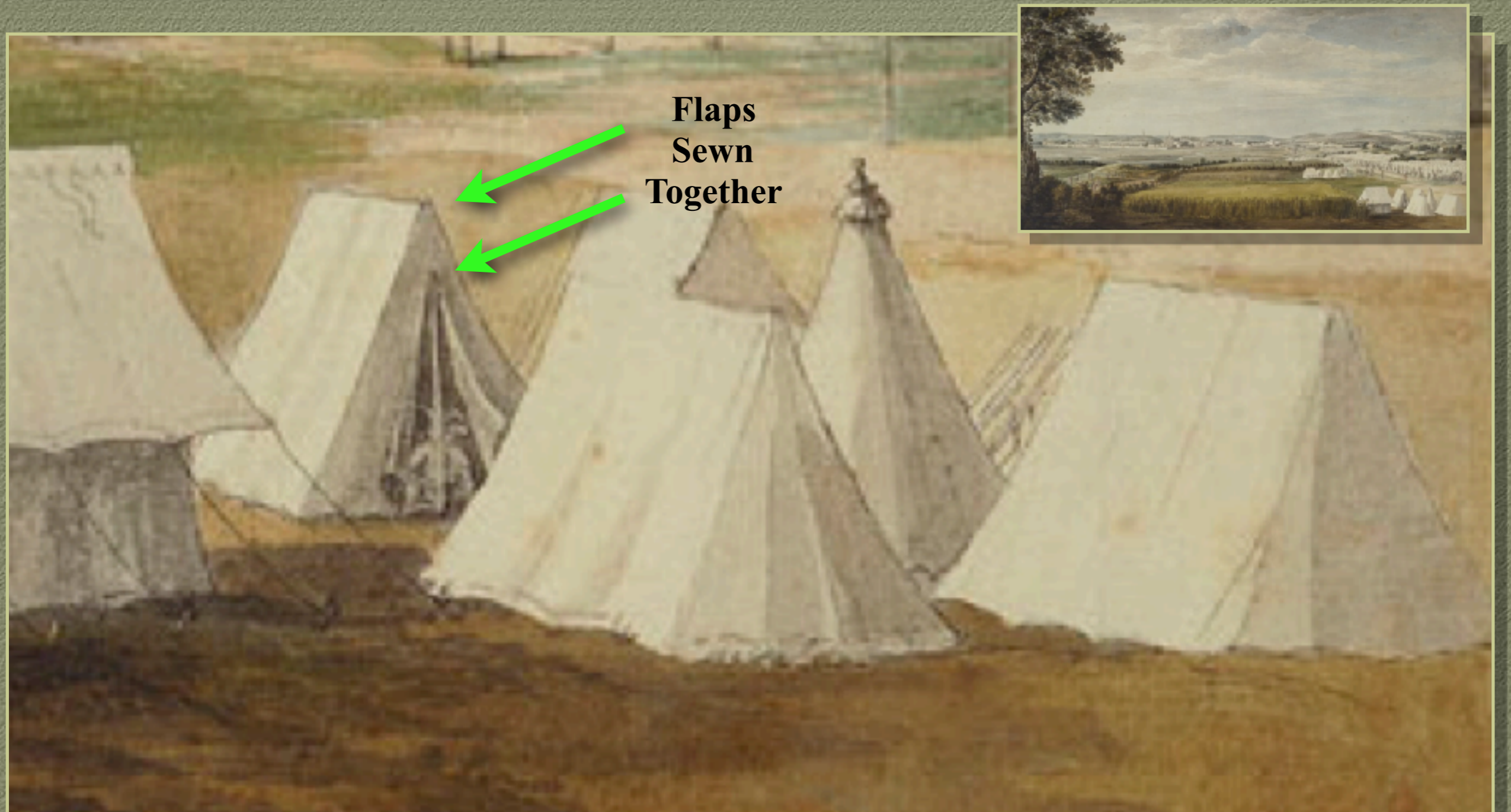
The Front Flap Opening



**A Scene of the Camp on Hampden Green 1731
(National Museums Scotland)**

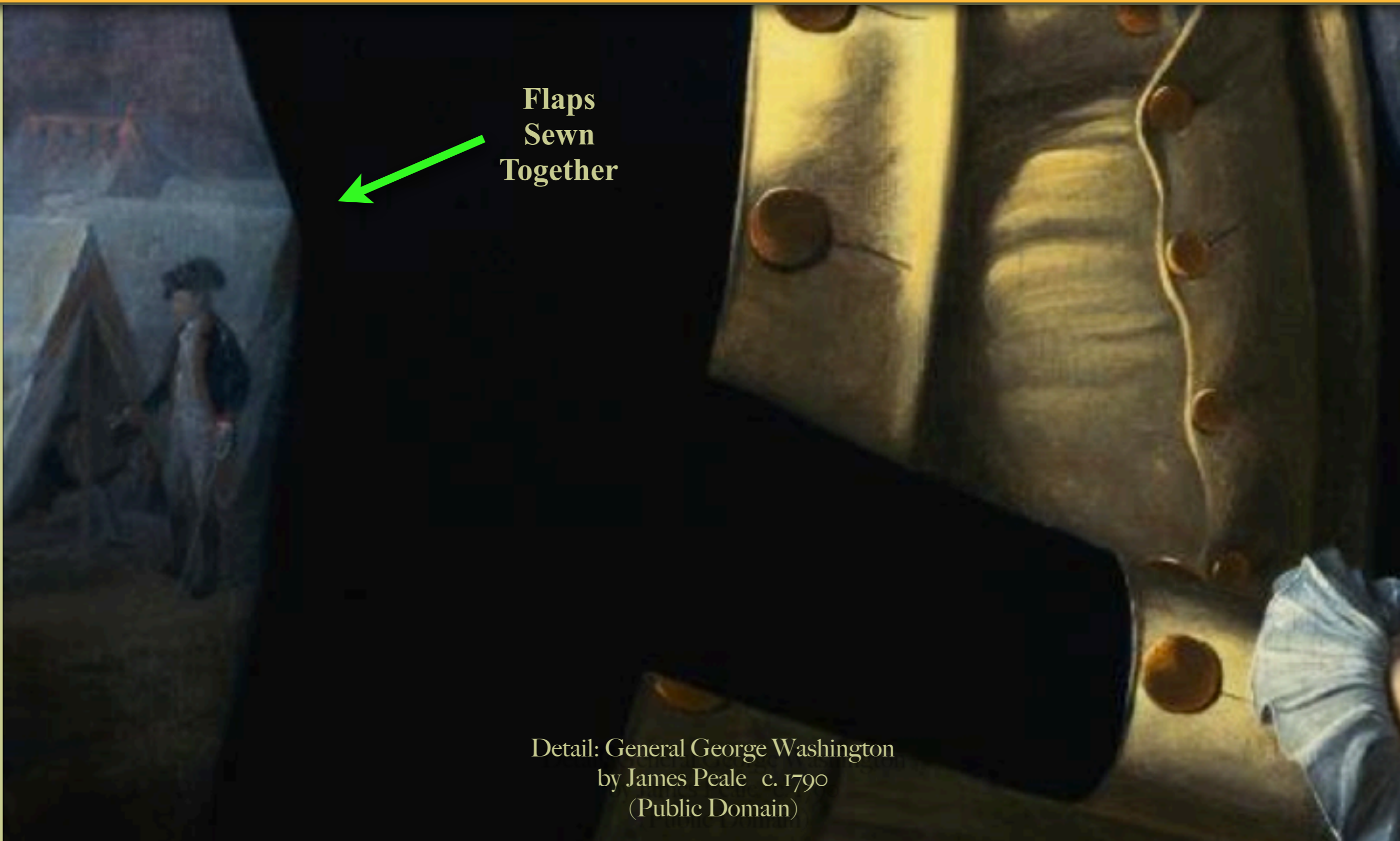
A Mess of Soldiers sleeping in a tent with straw bedding. Note the bell used for the storage of accoutrements

The Front Flap Opening



Detail: "A View of Diest from the Camp at Meldart"
Thomas Sandby 1747

The Front Flap Opening



**Flaps
Sewn
Together**

Detail: General George Washington
by James Peale c. 1790
(Public Domain)

The Front Flap Opening



Detail: General David Forman
by Charles Willson Peale 1784
(Berkshire Museum)

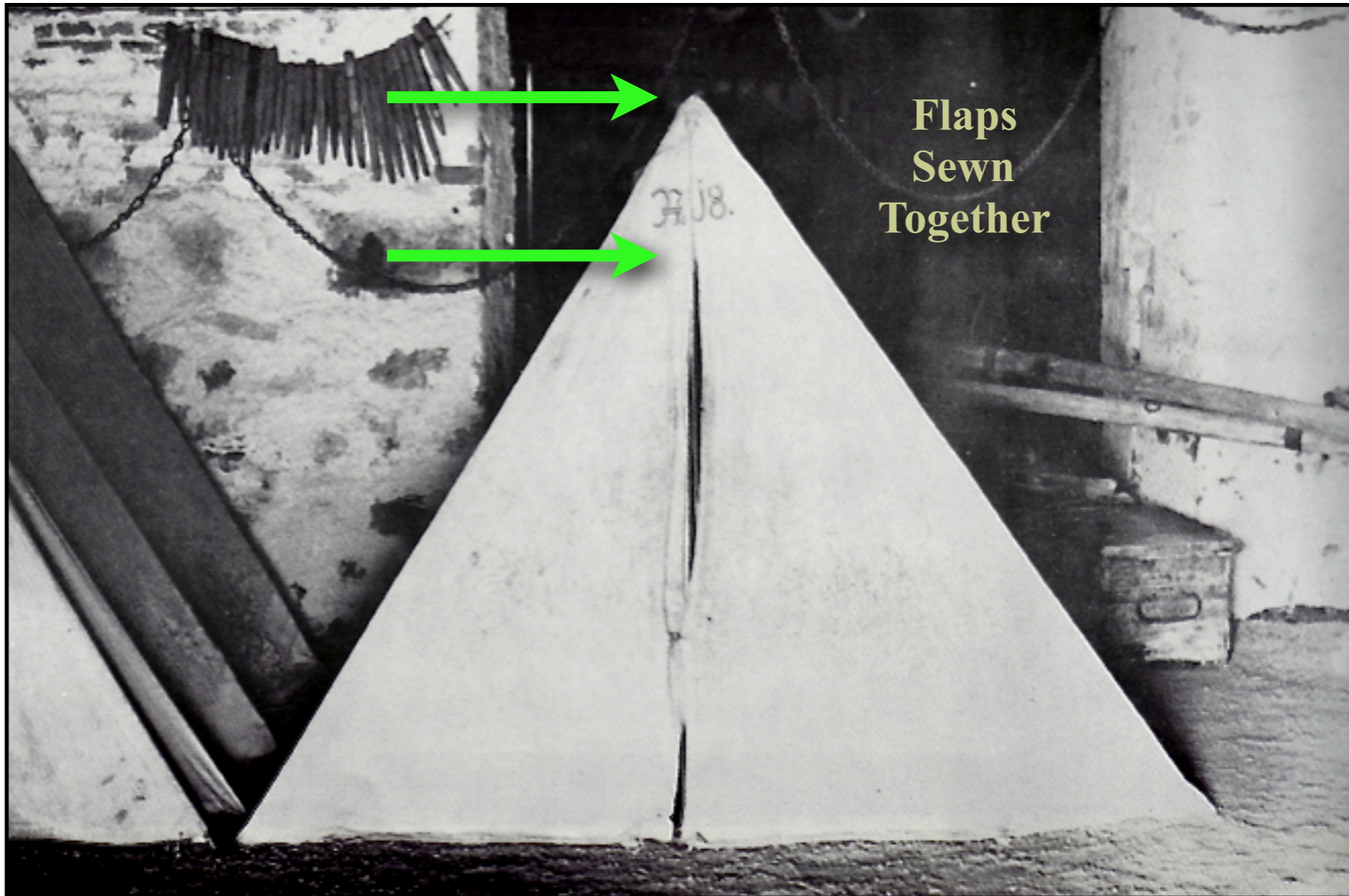
The Front Flap Opening

According to Ruth Bleckwenn, the front flaps of the Other Ranks' tents residing in the collection of Burg Forchtenstein slightly overlap one another. Like the Lewis Lochee tent, these tents also have front flaps which are sewn together approximately 8 inches from the peak of the tent.

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

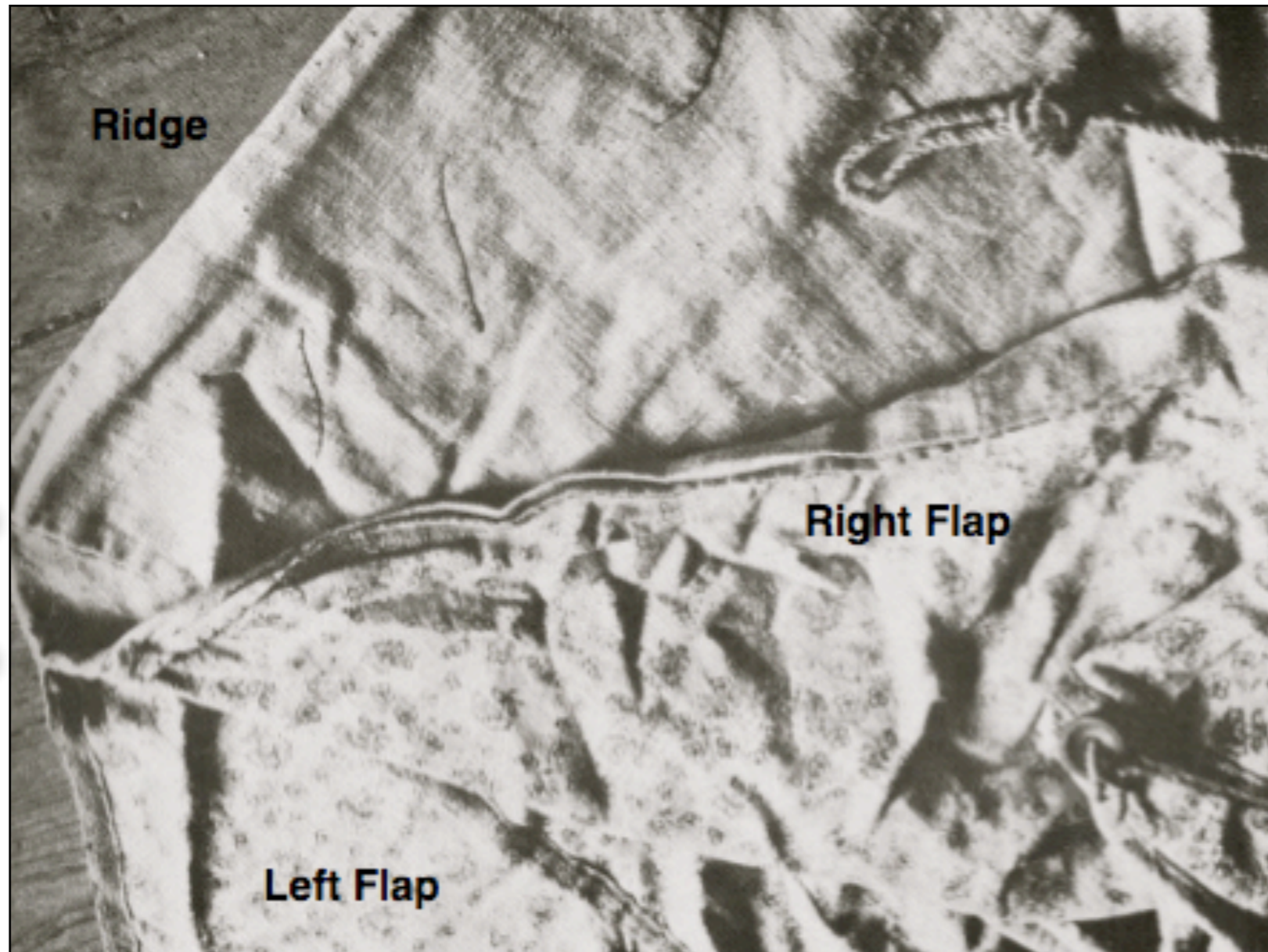
"On the extant one (Tent Type A), the pieced together construction of the entrance can clearly be seen: In the middle of the front opening, both flaps reach to each other and overlay. The front flap has two hooks attached to the edge that grasp into eyes of the rear flap. Below, at the corners of the 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)

The Front Flap Opening



Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussischen Heer"
(Burg Forchtenstein)

The Front Flap Opening



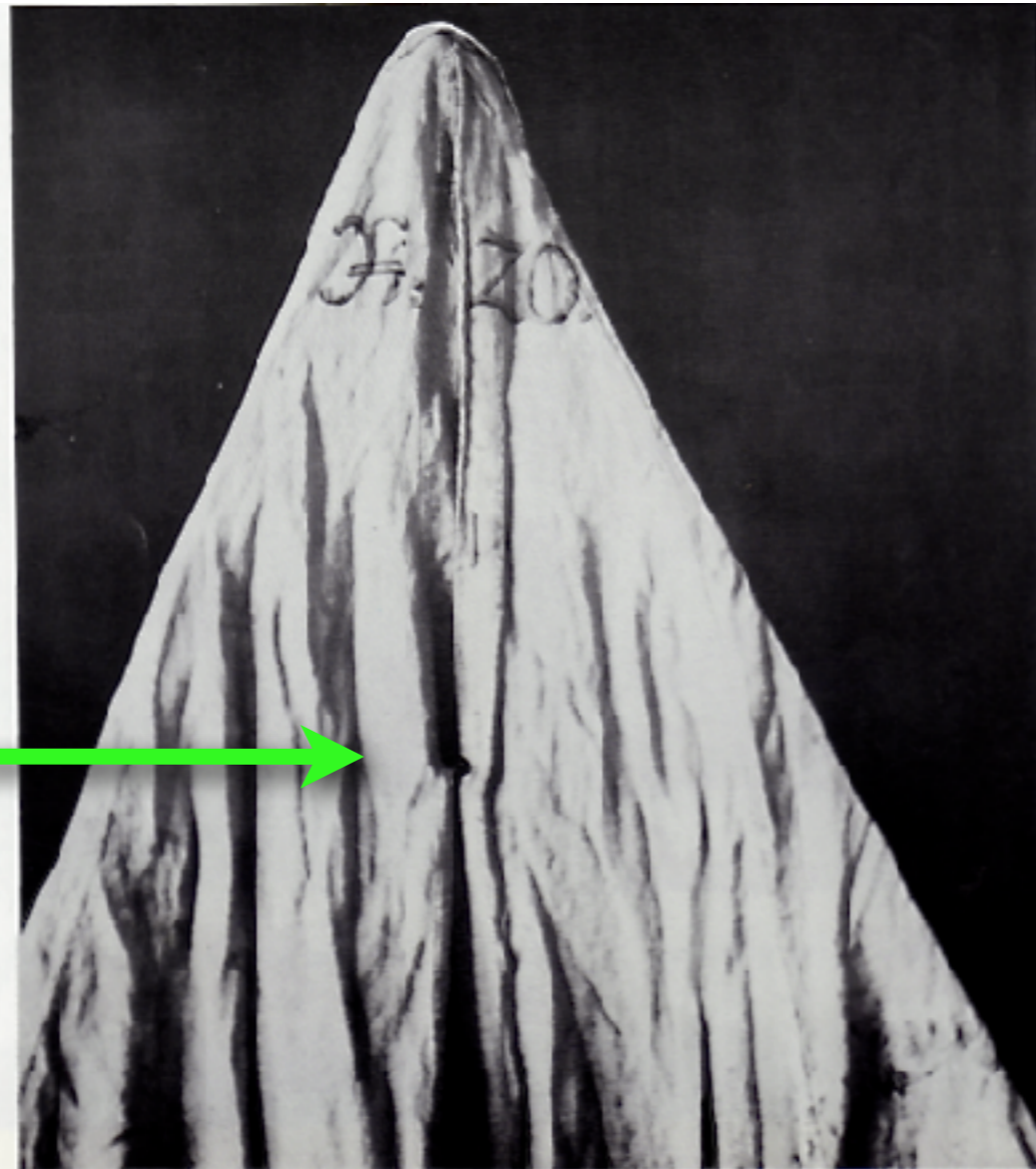
**Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussichen Heer"
(Burg Forchtenstein)**

The Front Flap Opening Hook & Eye Closures

Examination of the Enlisted Men's Tents located at Burg Forchtenstein reveals that the front flaps are closed by a series of metal Hooks & Eyes. While this is the case for 18th Century Prussian tents, there is no reference to these devices being used on British or Continental Army tents during the American War for Independence. Although there is archaeological evidence of hooks and eyes being found on North American sites from the war, their specific use is unclear. Due to their size, it is quite probable they were used to hang the walls on an officer's marquee.



The Front Flap Opening Hook & Eye Closures



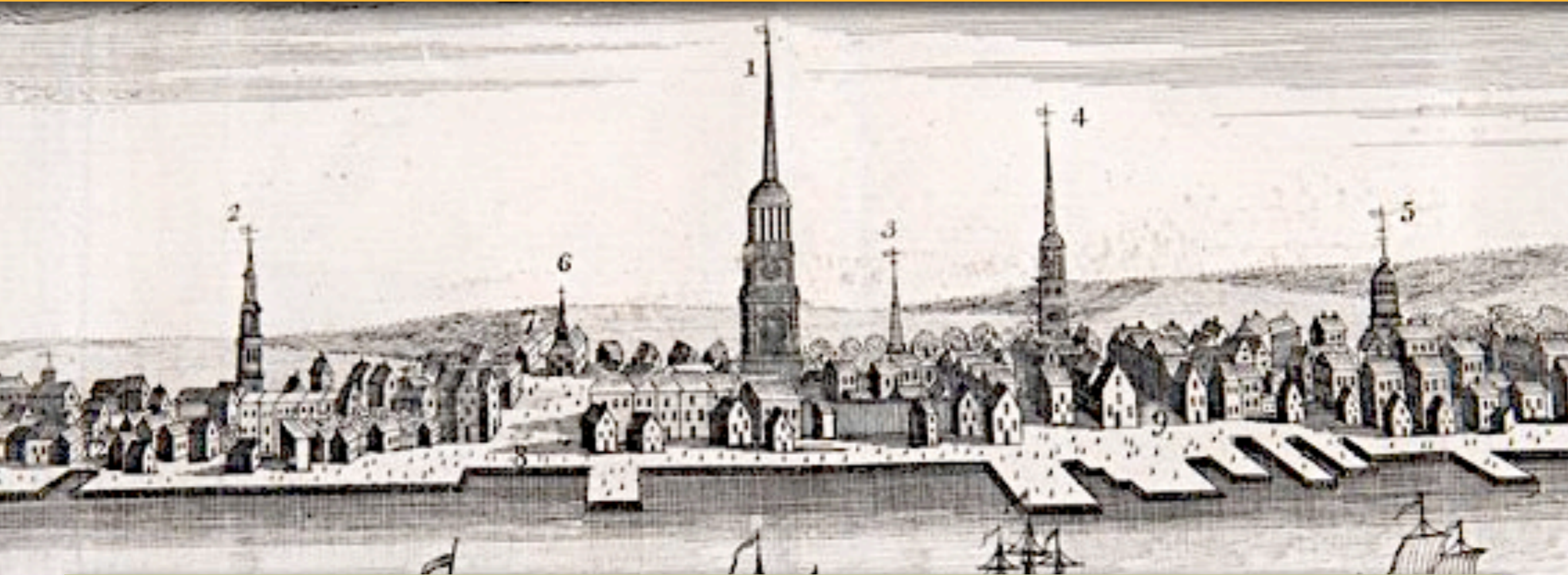
Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussischen Heer"

"Zwei Paar Metallhaken und Ösen zum Schließen des Eingangs"

"Two Pair Metal Hooks and Eyes to Close the Entrance"

(Burg Forchtenstein)

The Front Flap Opening Hook & Eye Closures



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 ...**”*

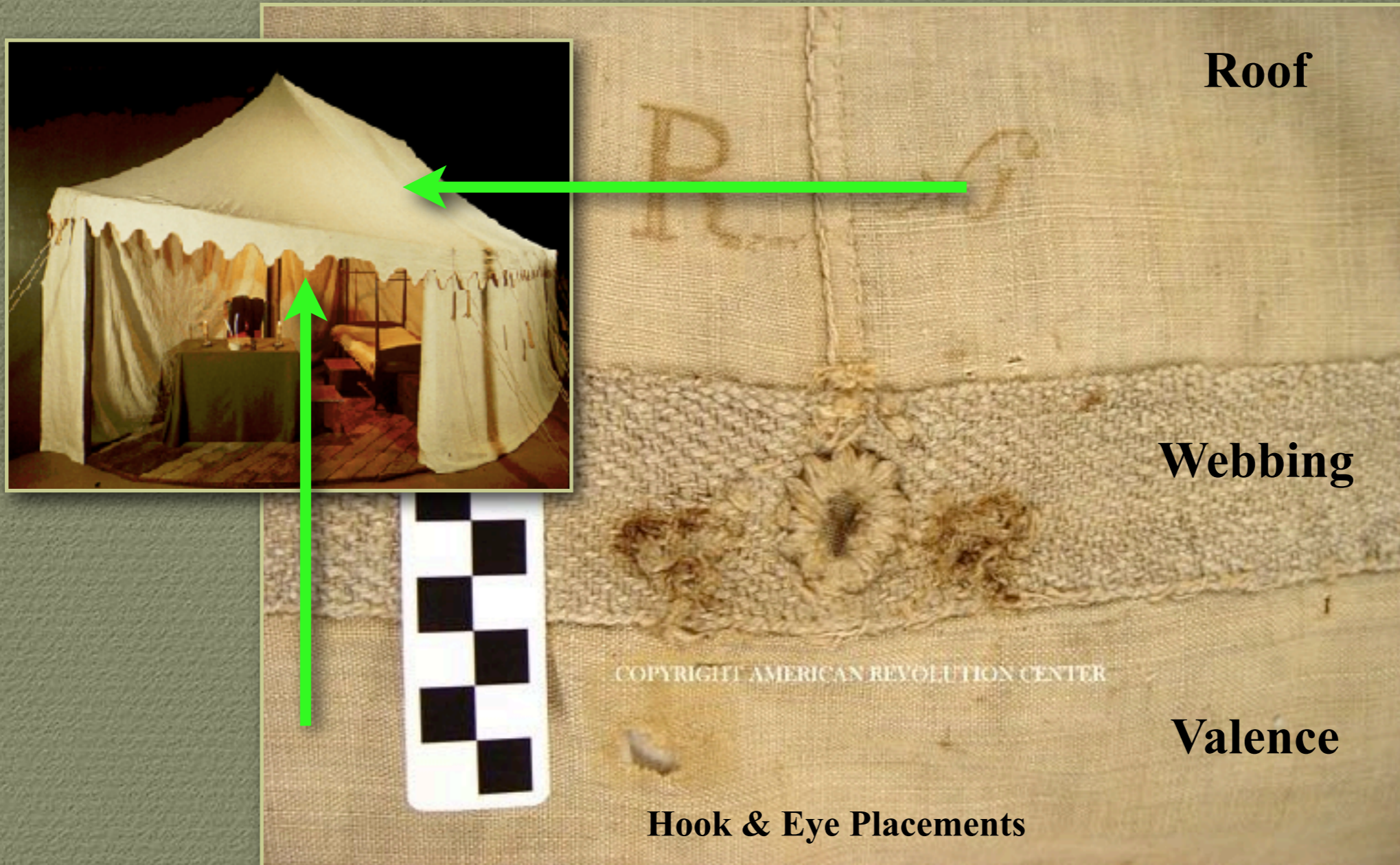
The Front Flap Opening Hook & Eye Closures



Iron Hooks and Eyes

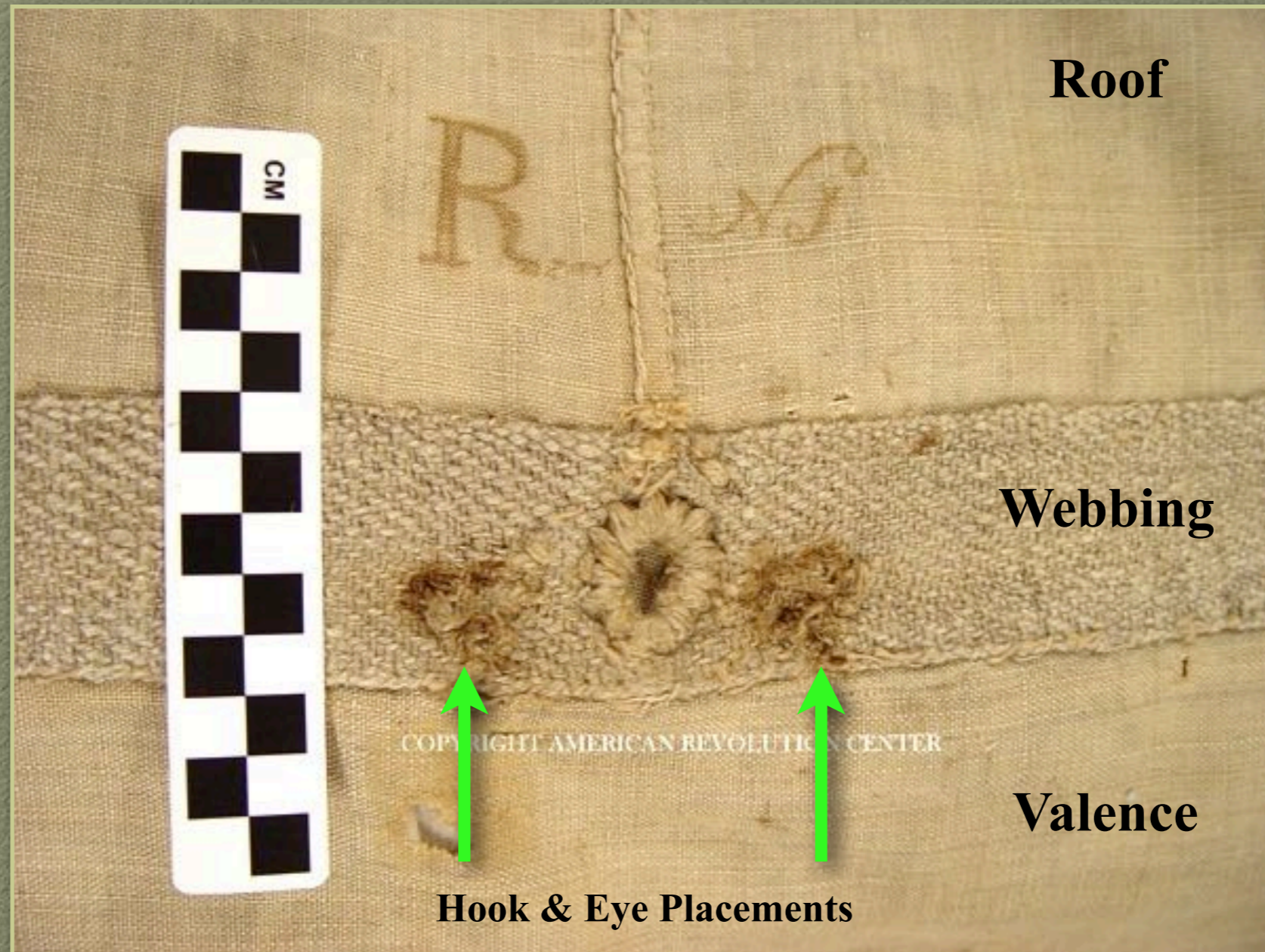
Excavated at Saratoga, New York, in the Camp of the 21st or Royal North British Fusiliers
Who were Encamped there from 21 September to 7 October, 1777
Archaeologic Dig by Dean Snow, PhD, then Professor of Archeology at SUNY Albany
(Saratoga National Historic Park)

The Front Flap Opening Hook & Eye Closures



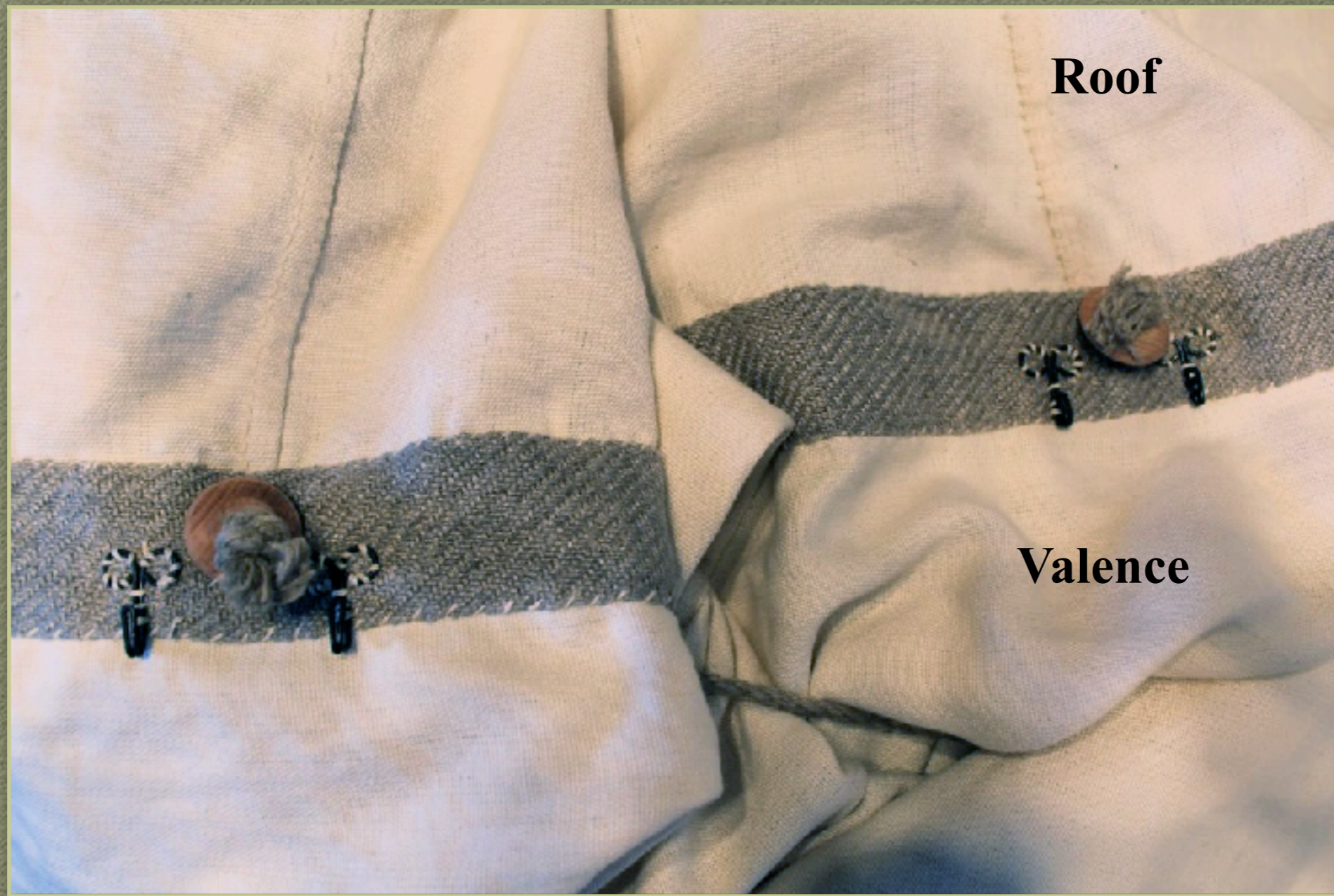
The Marquee of General George Washington: View of Inner Roof and Valence
(Museum of the American Revolution)

The Front Flap Opening Hook & Eye Closures



The Marquee of General George Washington: View of Inner Roof and Valence
(Museum of the American Revolution)

The Front Flap Opening Hook & Eye Closures



The Recreated Marquee of General George Washington: View of Inner Roof and Valence
(Museum of the American Revolution - The First Oval Office)

The Front Flap Opening Hook & Eye Closures



The Recreated Marquee of General George Washington: View of Inner Roof and Valence
(Museum of the American Revolution - The First Oval Office)

The Front Flap Opening Hook & Eye Closures

CONCLUSION

While Hook & Eye Front Flap Closures can be found on extant Prussian Enlisted Men's Tents from the 18th Century, there is NO DEFINITIVE documentation which can currently support that they were used on either British or Continental Army Tents during the American War for Independence.

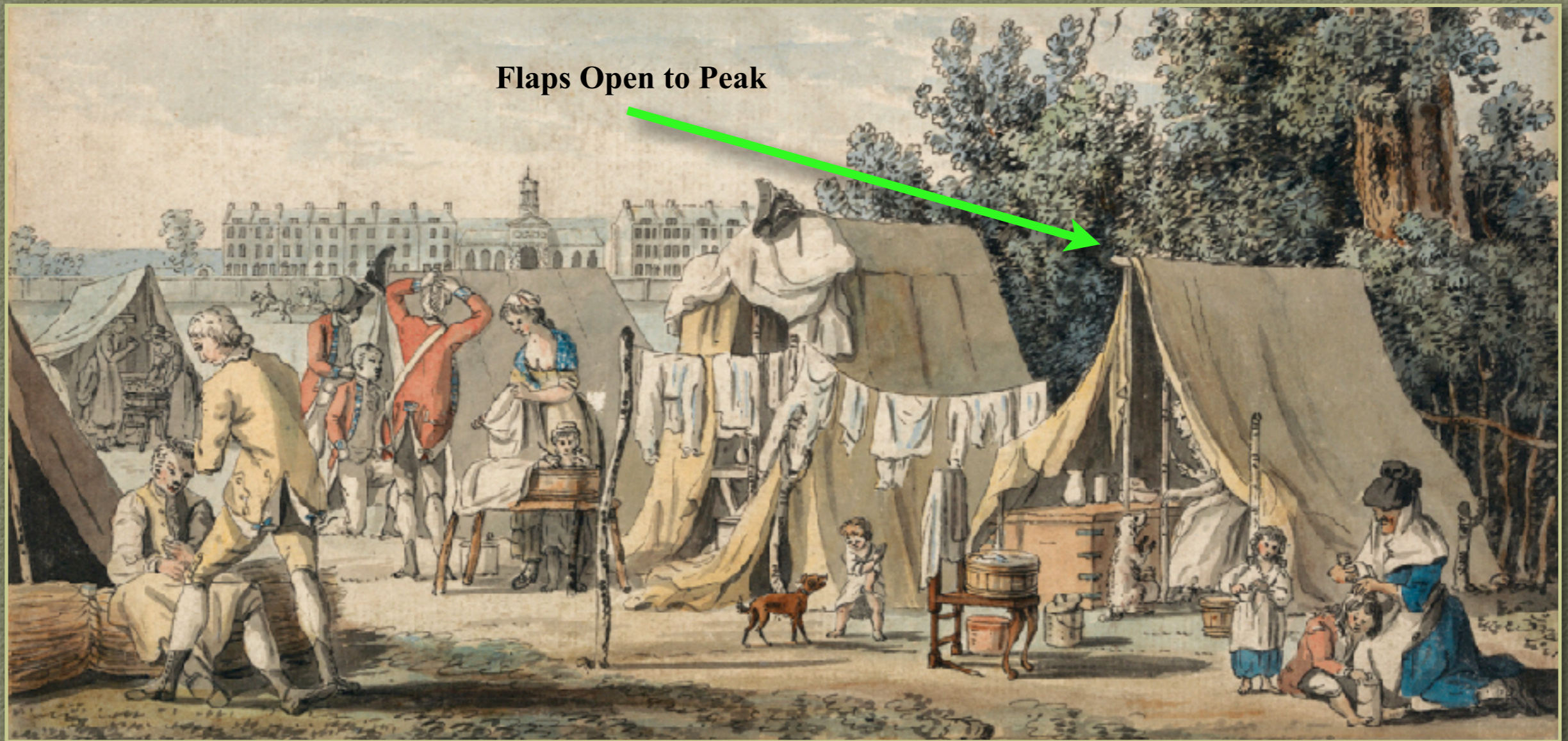
The Front Flap Opening

Other period illustrations of British enlisted men's tents show that the tent flap opening could extend to the peak of the tent itself. Unlike the Lochee tent, this would allow the entire Standard Pole and Ridge Pole to be accessed from the front opening.



Detail of Front Flaps to Tent Peak
“A Perspective VIEW of an ENCAMPMENT”
Printed by Bowles and Carver
(Ann S.K. Brown Collection, Brown University)

The Front Flap Opening



Detail of Front Flaps to the Tent Peak
“A Military Encampment in Hyde Park, London”
by James Malton after Paul Sandby c. 1780 - 1785
(Yale Center for British Art)

The Front Flap Opening



Colonel Thomas Musgrave of H.M. 40th Regiment of Foot
by Lemuel Francis Abbott
(The Schwarz Gallery, Philadelphia Collection)

Tent Construction: Back Designs

Tent Back Designs

During the American Revolution, there were three distinct designs to 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' clothing, hats, accoutrements, canteens, kettle, provisions and hatchet(s). A “Flat” back tent on the other hand had no such extension which made it a much smaller and inconvenient shelter.

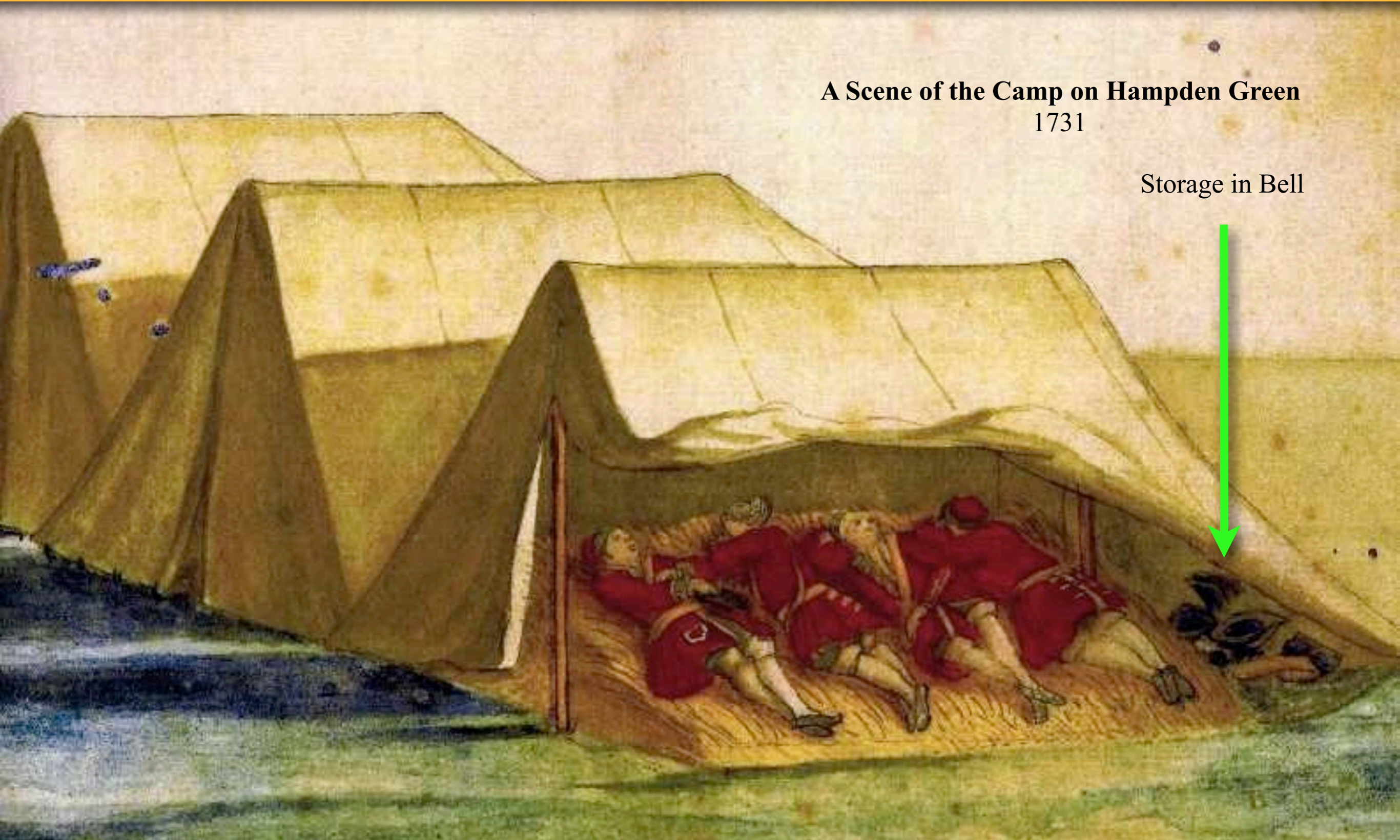
The three designs of tent back construction which can be documented include:

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

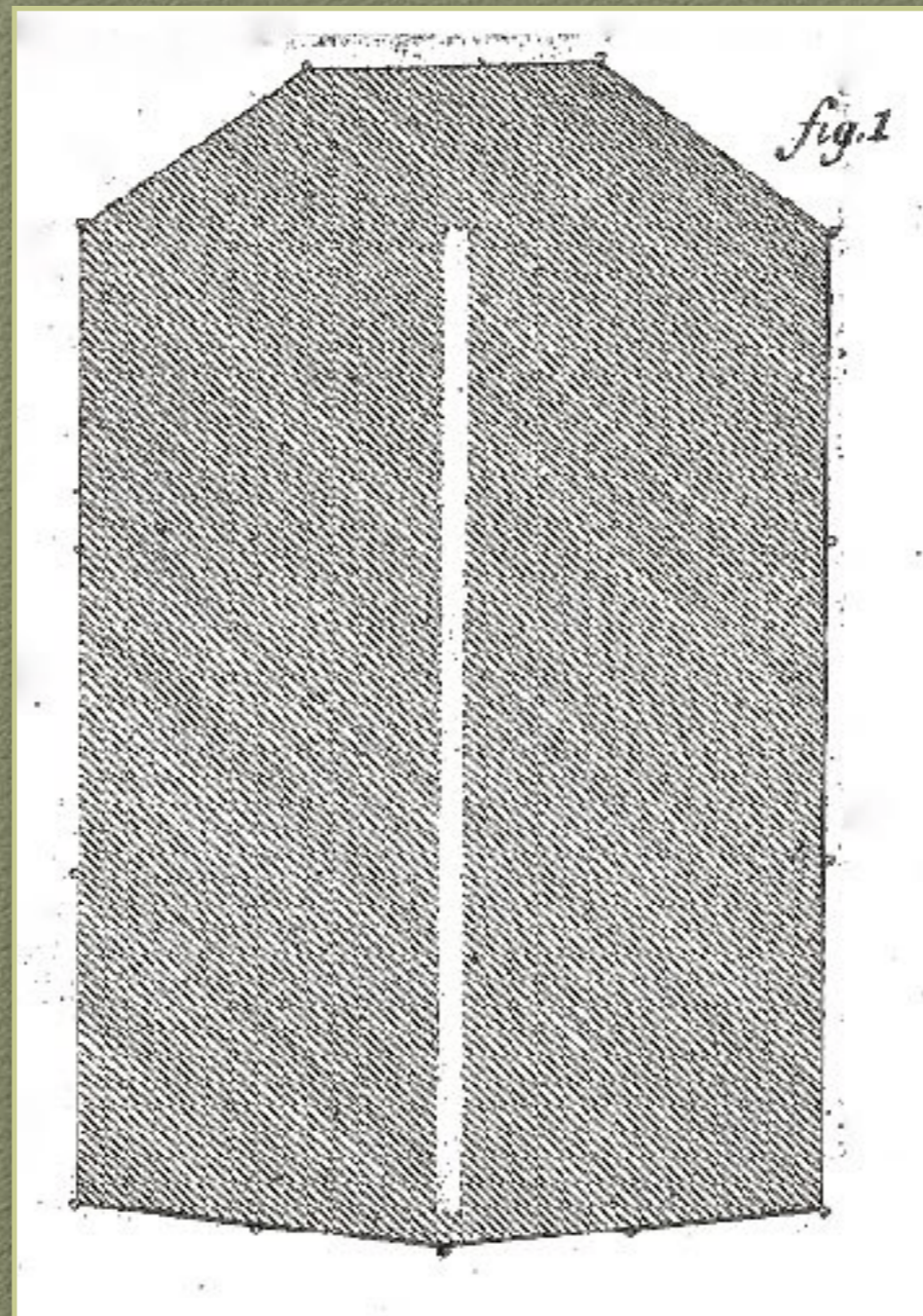
Bell Back Tent

A Scene of the Camp on Hampden Green
1731

Storage in Bell

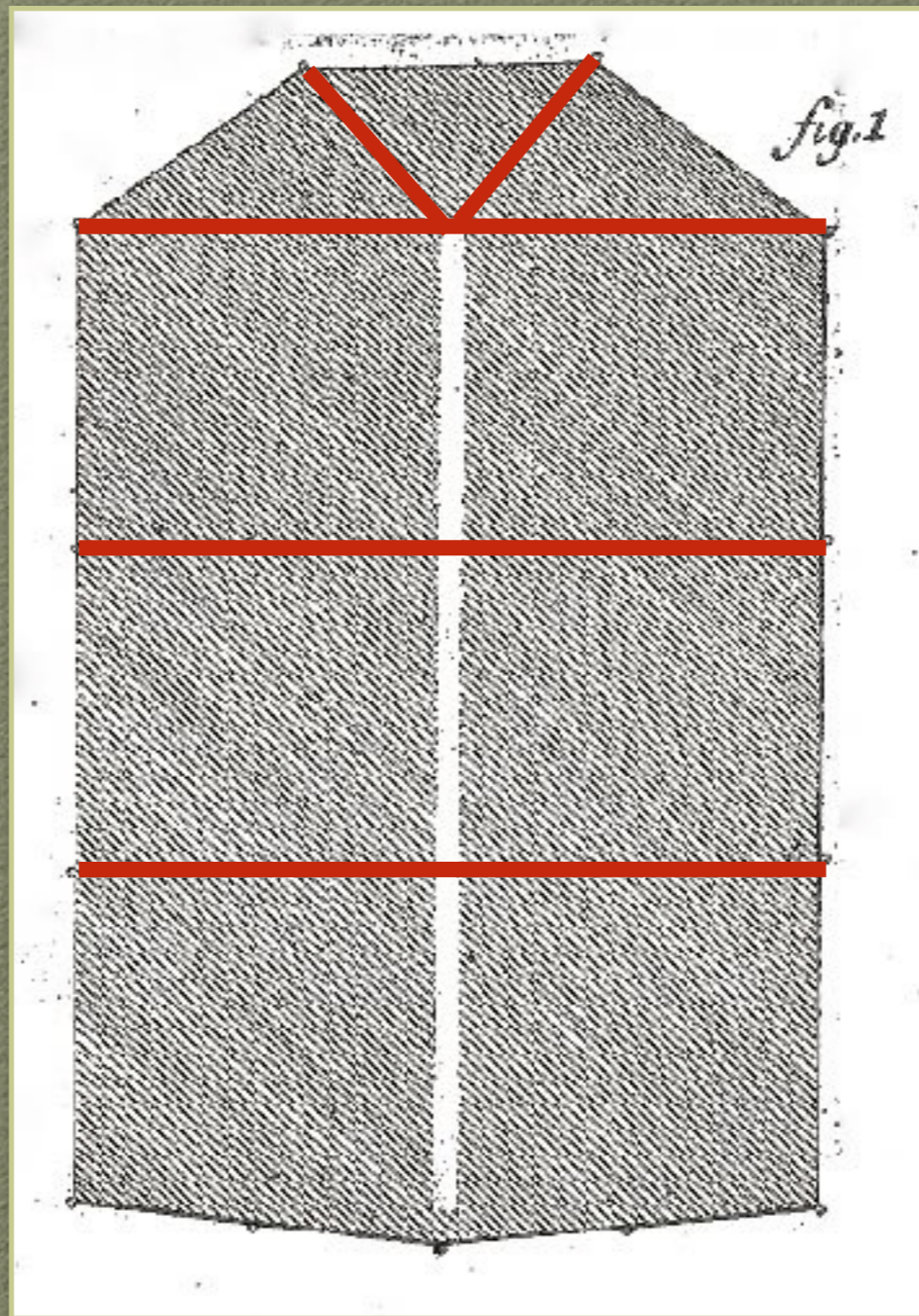


3 Side Bell Back Tent



From: *An Essay On Castrametation*
by Lewis Lochee 1778

3 Side Bell Back Tent



From: **An Essay On Castrametation**
by Lewis Lochee 1778

5 Side Bell Back Tent



"A View of Diest from the Camp at Meldart"
Thomas Sandby 1747

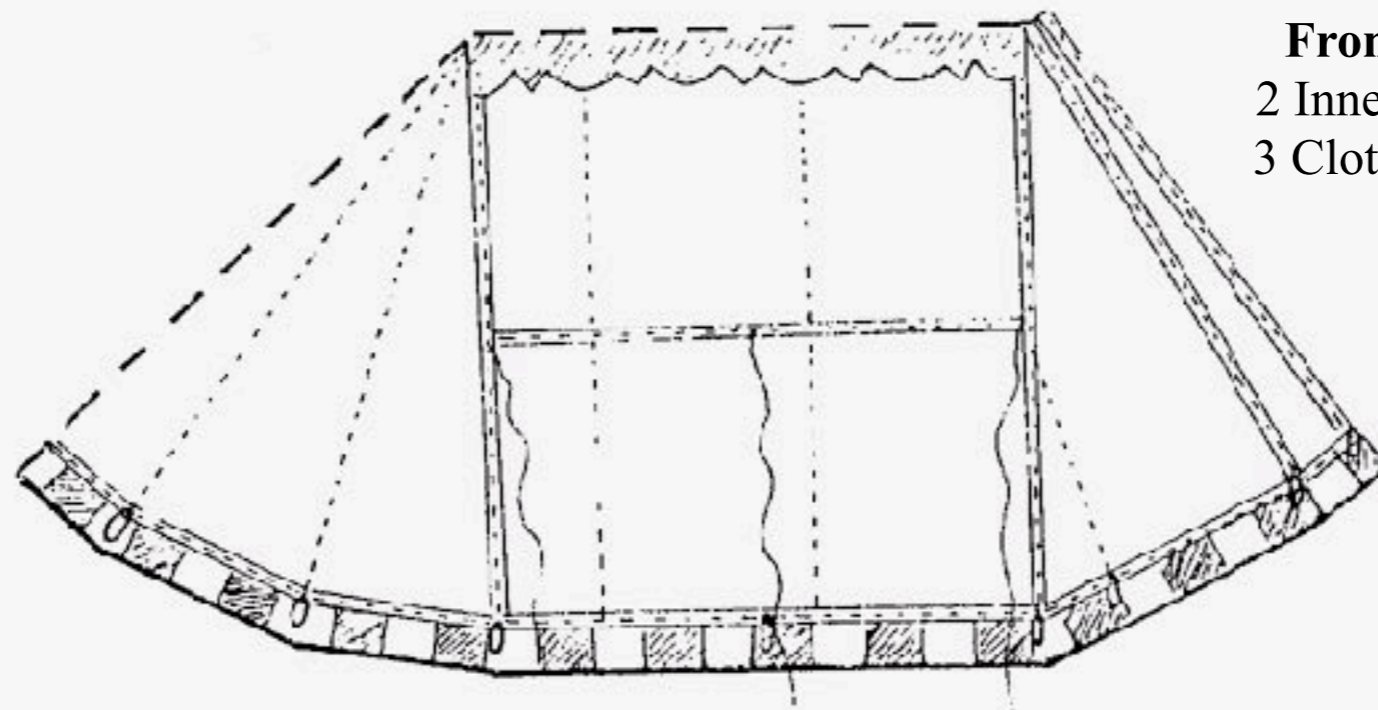
5 Side Bell Back Tent



"A View of Diest from the Camp at Meldart"
Thomas Sandby 1747

6 Side Bell Back Tent

Abb. 6: Zelt B (Maßstab 1:50)

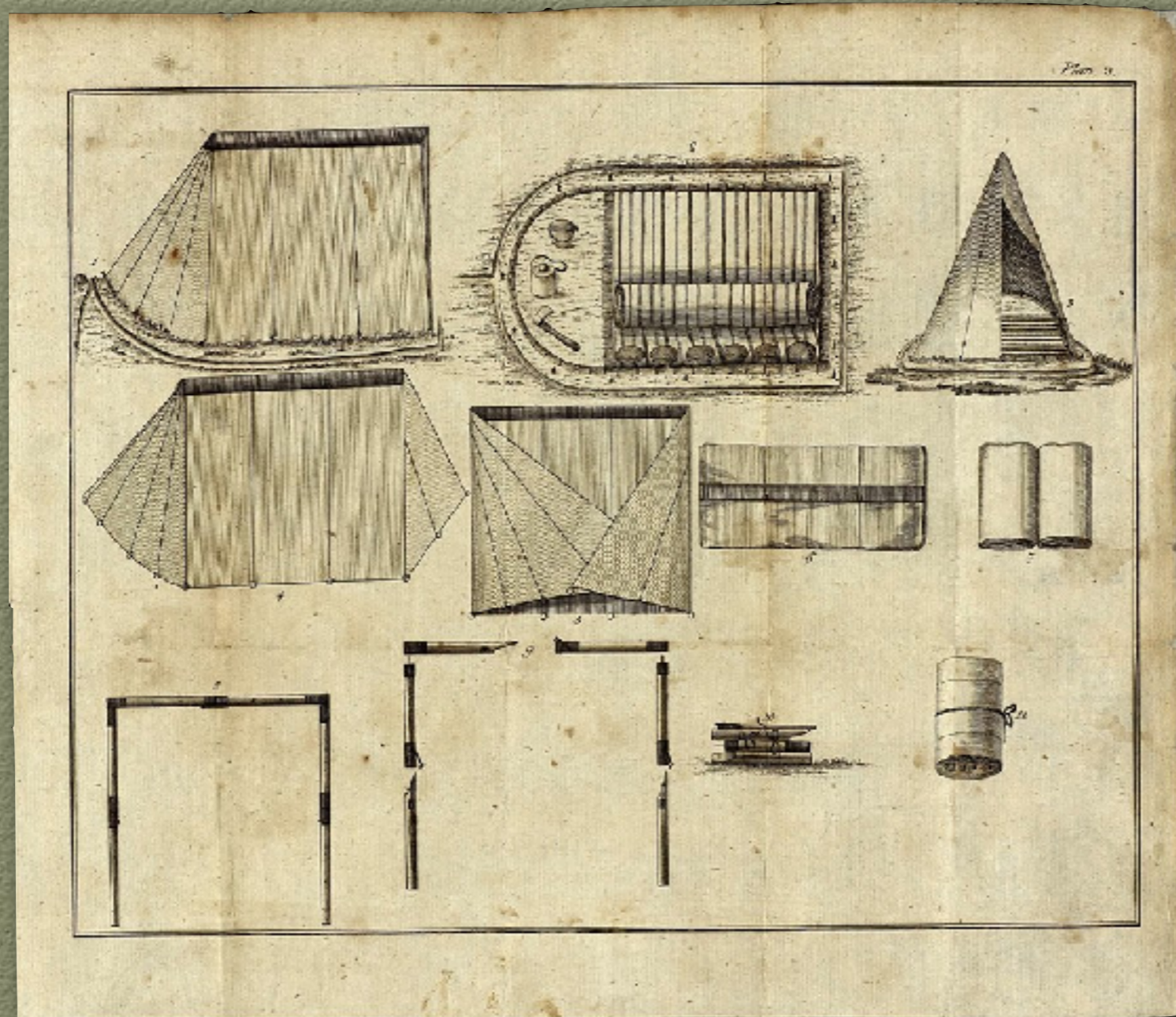


FrontFlaps
2 Inner Seams
3 Cloth Panels

Abb. 6 a: Zeltbahn

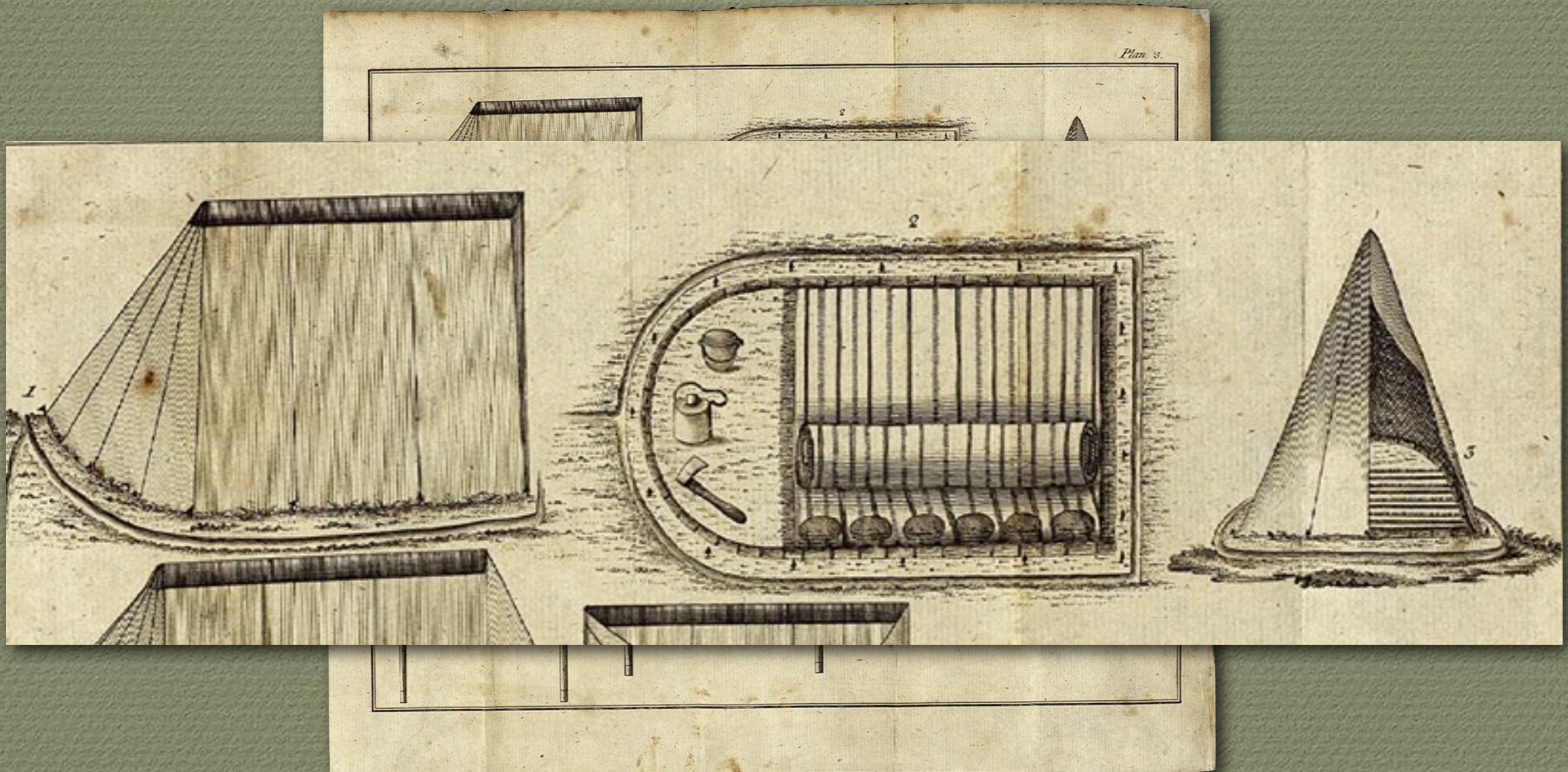
Detail From Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussischen Heer"

6 Side Bell Back Tent



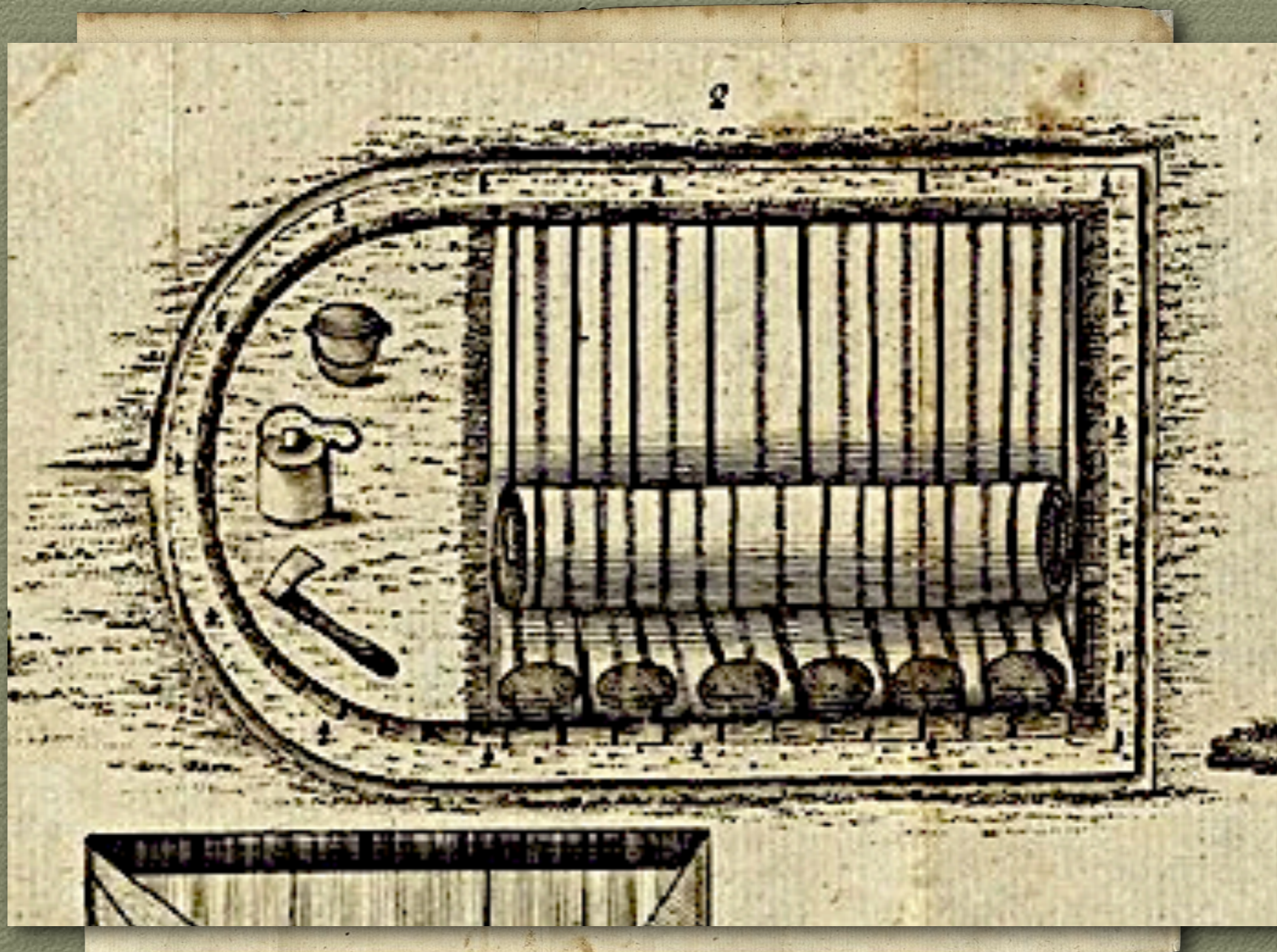
Zelte - "Was jedem Offizier Waehrend eines Feldzuges zu Wissen"
(What Every Officer Needs To Know During A Campaign)
(Goettingen, Karlsruhe 1788)

6 Side Bell Back Tent



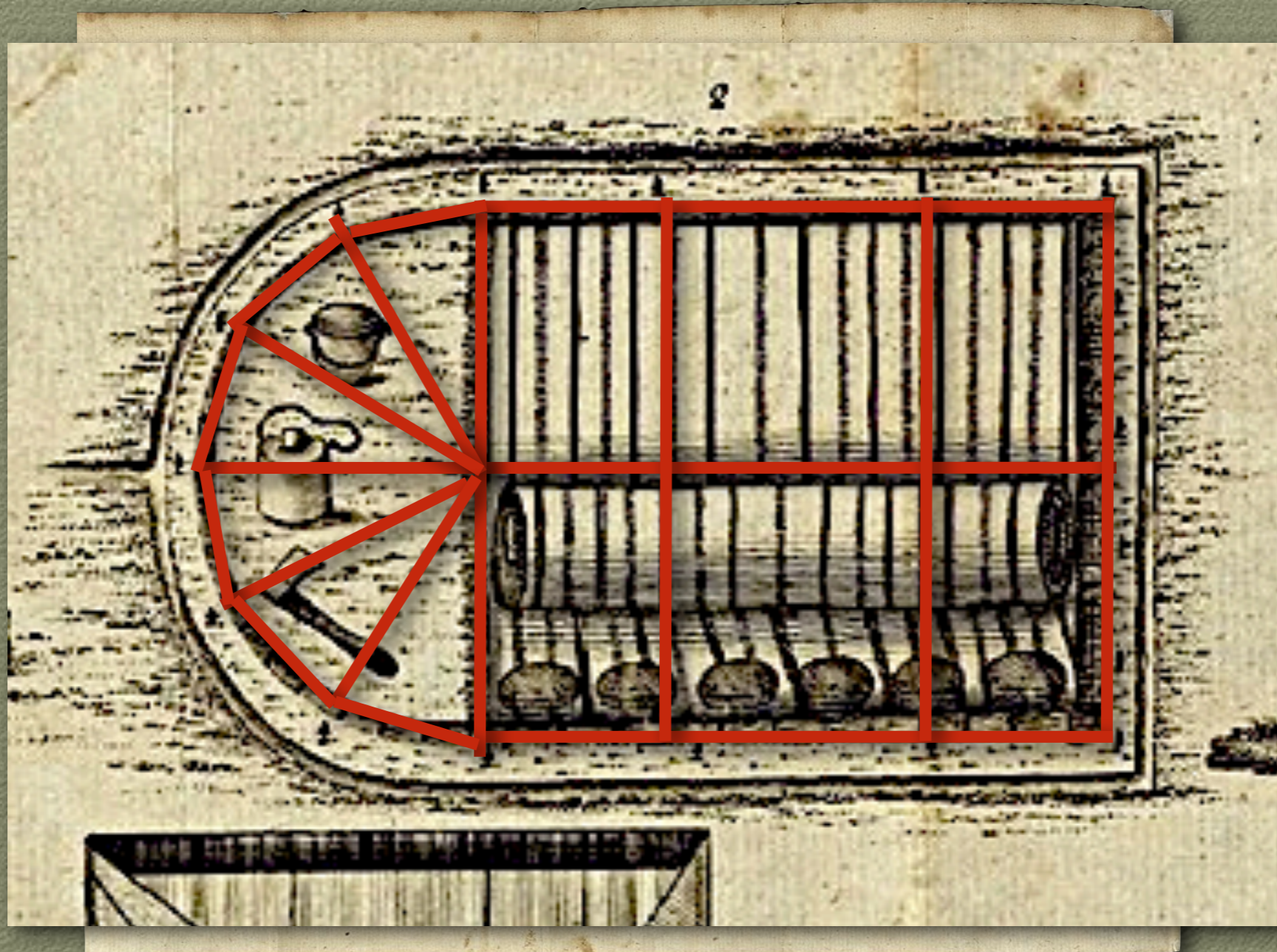
Zelte - "Was jedem Offizier Waehrend eines Feldzuges zu Wissen"
(What Every Officer Needs To Know During A Campaign)
(Goettingen, Karlsruhe 1788)

6 Side Bell Back Tent



Zelte - "Was jedem Offizier Waehrend eines Feldzuges zu Wissen"
(What Every Officer Needs To Know During A Campaign)
(Goettingen, Karlsruhe 1788)

6 Side Bell Back Tent



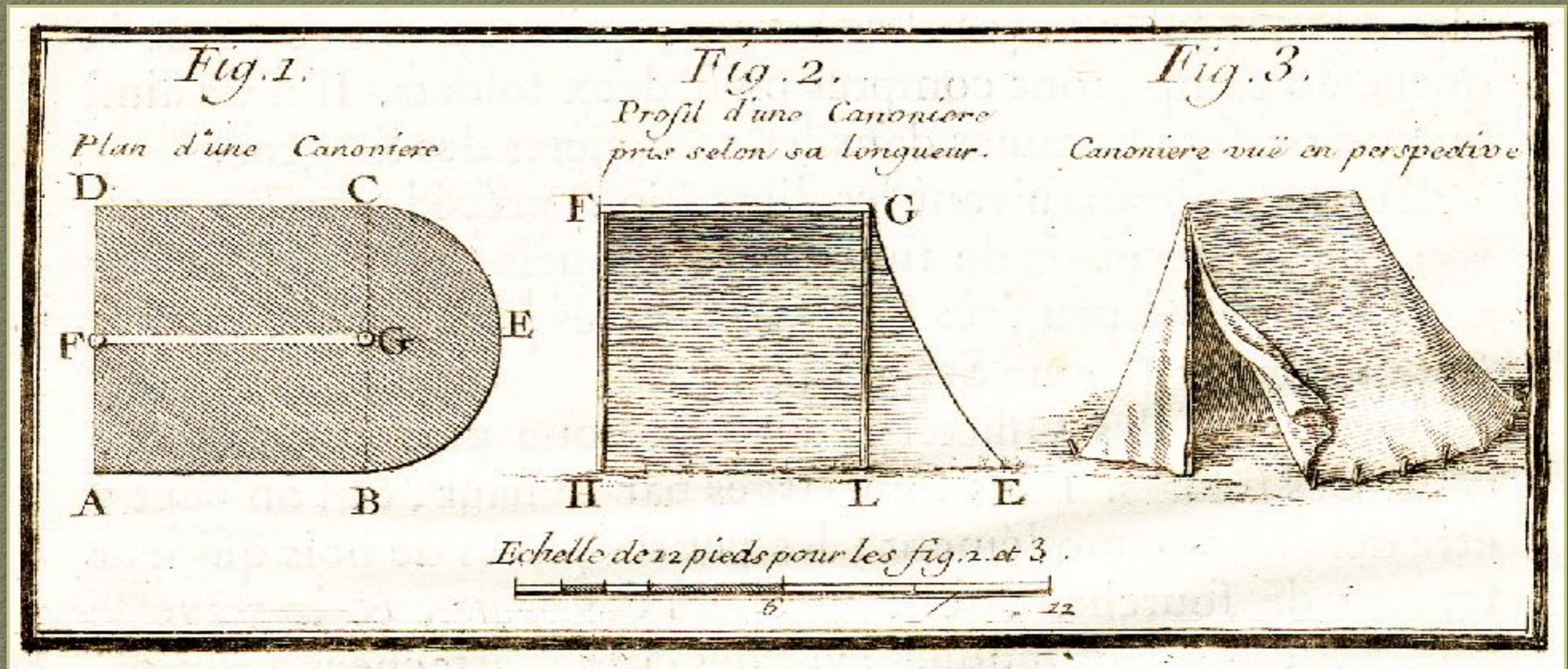
Zelte - "Was jedem Offizier Waehrend eines Feldzuges zu Wissen"
(What Every Officer Needs To Know During A Campaign)
(Goettingen, Karlsruhe 1788)

6 Side Bell Back Tent



**Bell Detail - Horseman's Tent at Burg Forchtenstein - Otlowski Photograph
(Burg Forchtenstein)**

Bell Back Tent

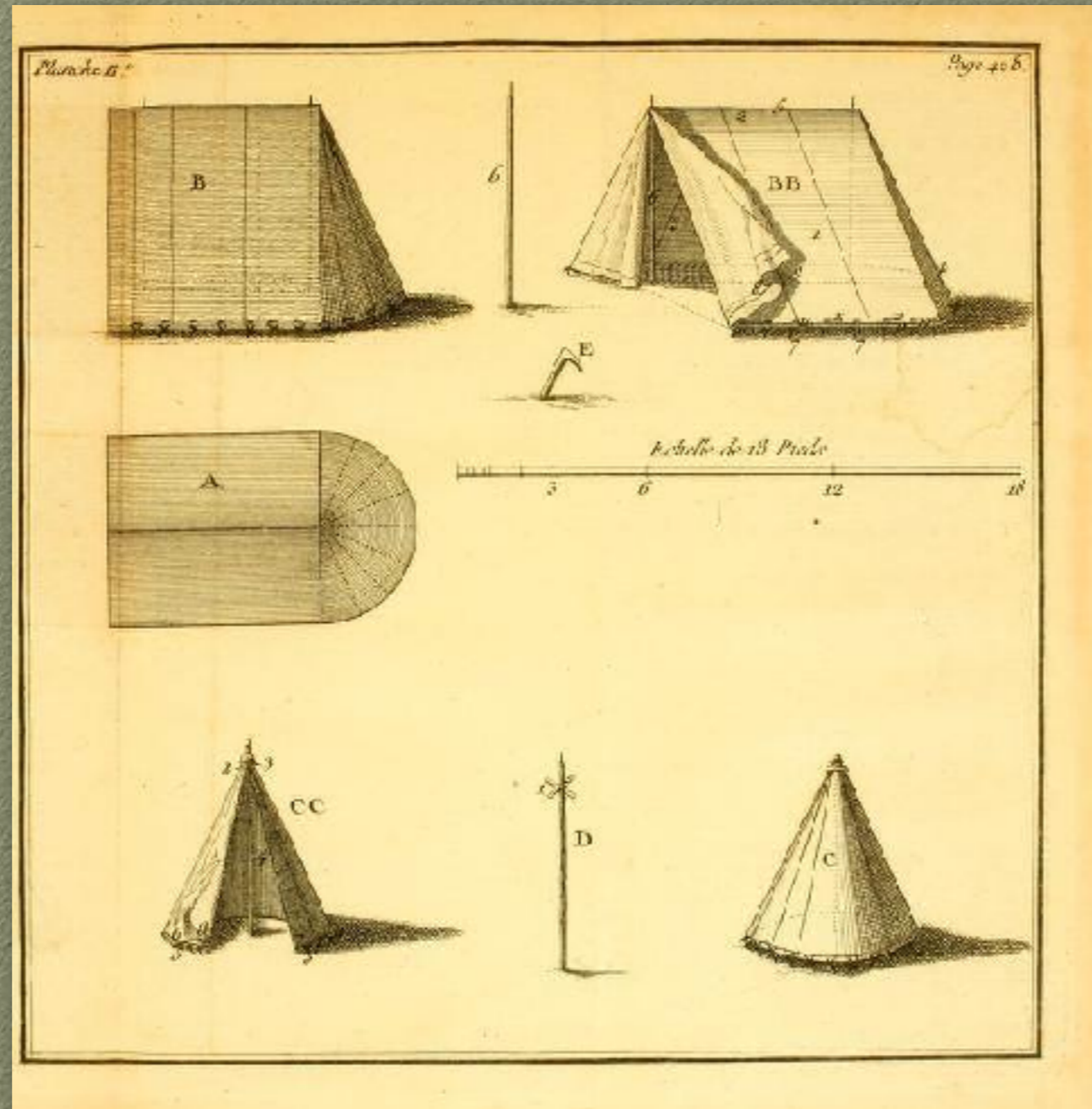


“Institutions Militaires pour la Cavalerie, et Les Dragons”

by François de La Porterie 1754

(Internet Archives)

Bell Back Tent



“Institutions Militaires pour la Cavalerie, et Les Dragons”

by François de La Porterie 1754

(Internet Archives)

Flat Back Tent



“A Perspective VIEW of an ENCAMPMENT”
Printed by Bowles and Carver
(Ann S.K. Brown Collection, Brown University)

Flat Back Tent

A View from Richmond on Staten Island 1777

by Lieutenant and Captain Patrick Bellew of the Grenadier Co., 1st Battalion, 1st Regiment of Foot Guards
(The British Library)



Flat Back Tent

A View from Richmond on Staten Island 1777

by Lieutenant and Captain Patrick Bellew of the Grenadier Co., 1st Battalion, 1st Regiment of Foot Guards
(The British Library)



Flat Back Tent



2nd West Yorkshire Light Infantry Militia, Camp at Old Montague House
by Samuel Hieronymus Grimm c. 1780
(The Royal Collection)

Flat Back Tent



2nd West Yorkshire Light Infantry Militia, Camp at Old Montague House
by Samuel Hieronymus Grimm c. 1780
(The Royal Collection)

Tent Construction: Loops & Grommets

Loops & Grommets

During the 18th Century, English, American and German enlisted men's tents were secured to the earth by a series of Linen Rope Cord Loops. These loops were located at each tent seam. In their most rudimentary form, these loops were secured to the base of a tent by simple knots located on the tent's interior. They passed through the tent through linen grommets.

While an Officer's Marquees demonstrates the presence of rope loops secured by a single rope loop attached by a wooden washer, there is no evidence that this style of loop was present on enlisted men's tents.



Horseman's Tent
(Burg Forchtenstein)

Loops & Grommets

Lewis Lochée

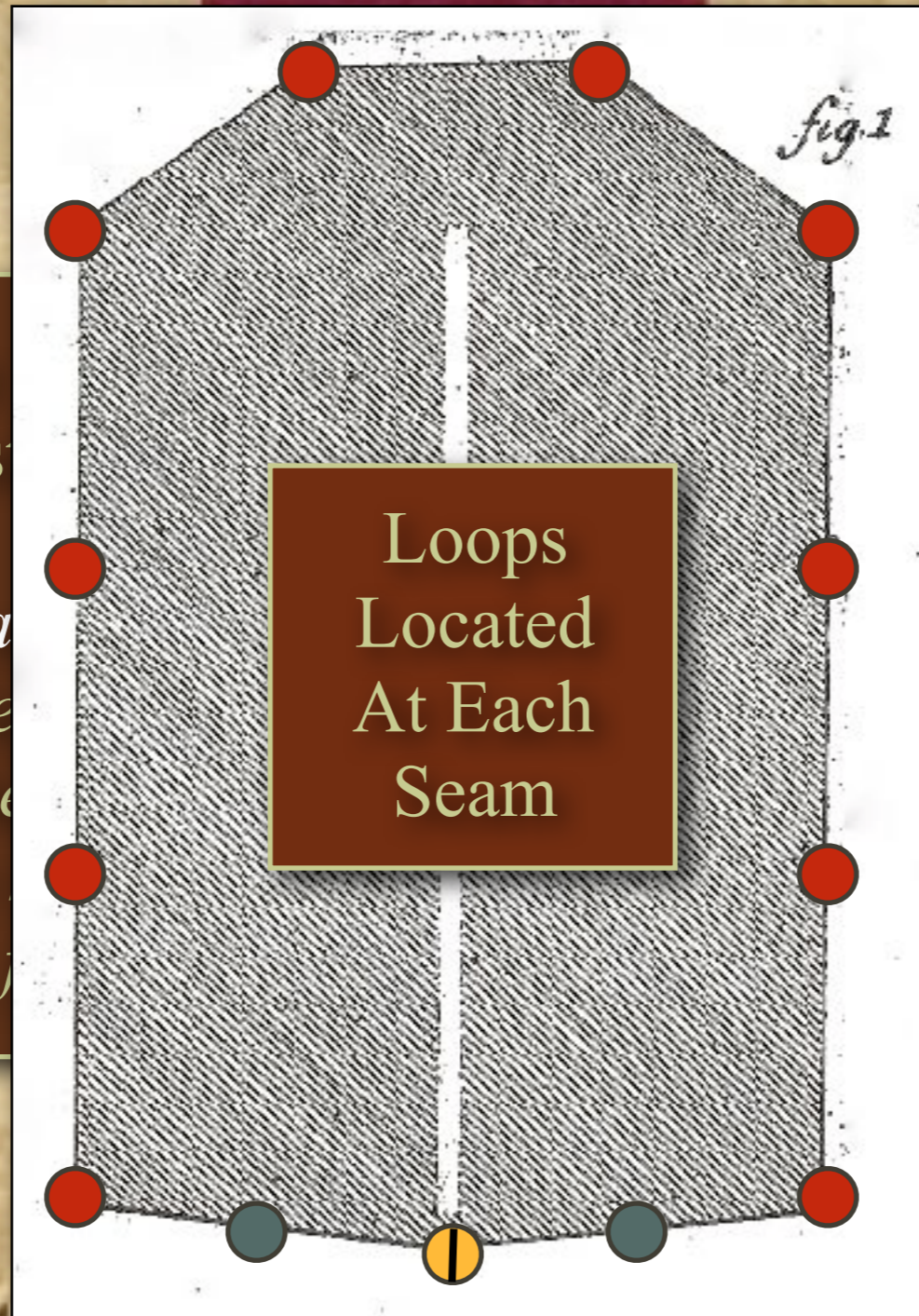
“Essay on Castrametation” 1778

“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.”

Loops & Grommets

Lewis Lochée
“Essay on Cas

“These tents are
pegs: The pole
6 feet high; the
feet long: The
two iron pins, j



es and thirteen
and are about
and is about 7
eld together by
poles.”

Loops & Grommets



**A Scene of the Camp on Hampden Green 1731
(National Museums Scotland)**

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.

A View of the Camp on Hampton Green 1731 (National Museums Scotland)

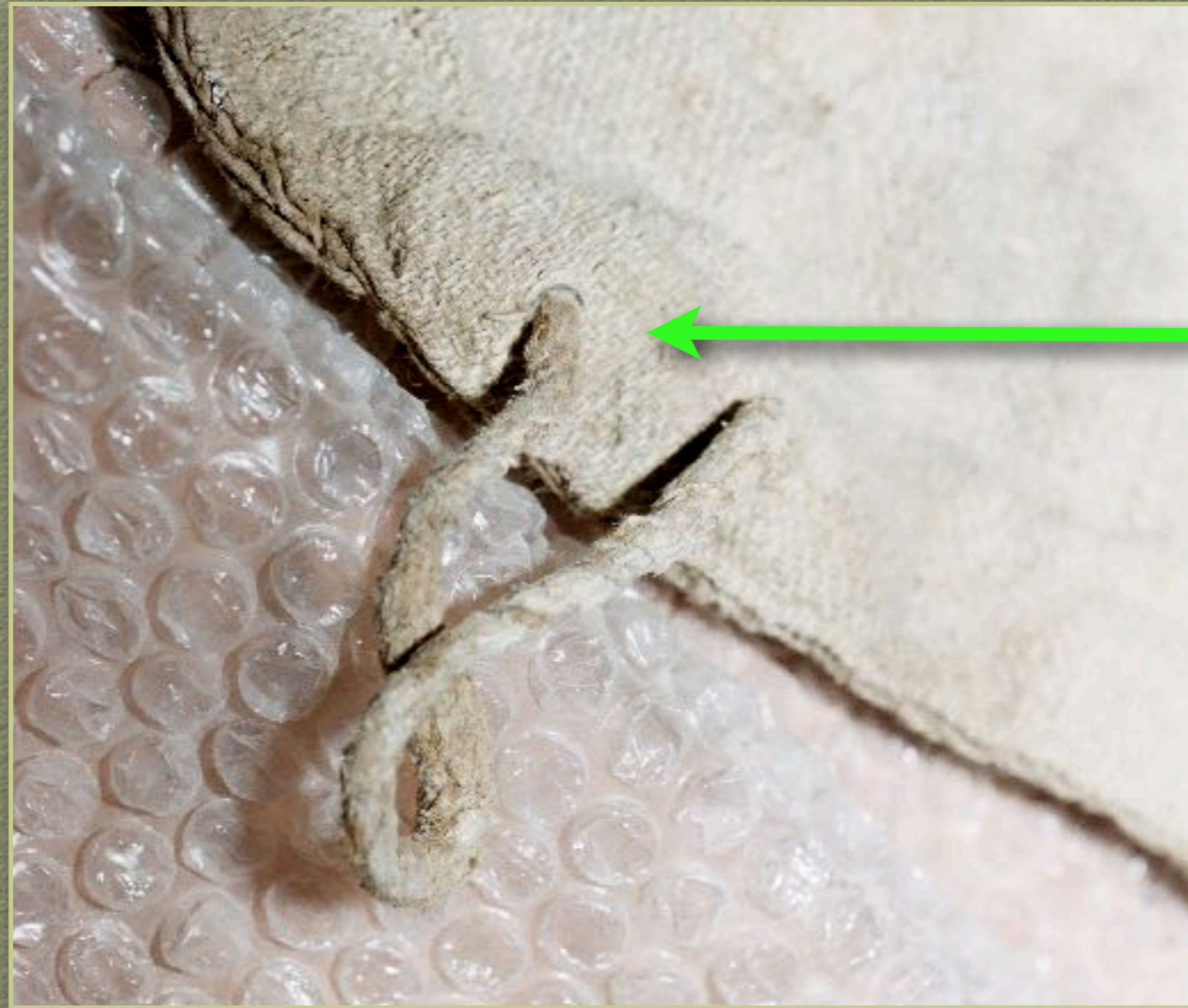


Loops & Grommets



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

Loops & Grommets



**Linen Thread
Grommets**

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

Loops & Grommets



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
(Burg Forchtenstein)

Loops & Grommets



Detail of the Inner Chamber Tent of General George Washington
Two Ends of a Knotted Pin Loop on either Side of a Tent Seam
(Museum of the American Revolution)

Loops & Grommets



Detail - Horseman's Tent at Burg Forchtenstein - Otlowski Photograph
Front Flap Loop
and Two Ends of a Knotted Pin Loop on either Side of a Tent Seam
(Burg Forchtenstein)

Loops & Grommets



Orderly Book **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.”*

Attributed to:

“Colonel & Brigadier General Samuel Elbert”
(Descendent Richard Elbert Whitehead)

Loops & Grommets

**Major General Baron Von Steuben
to Colonel Muter
1 January, 1780**

“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-...”

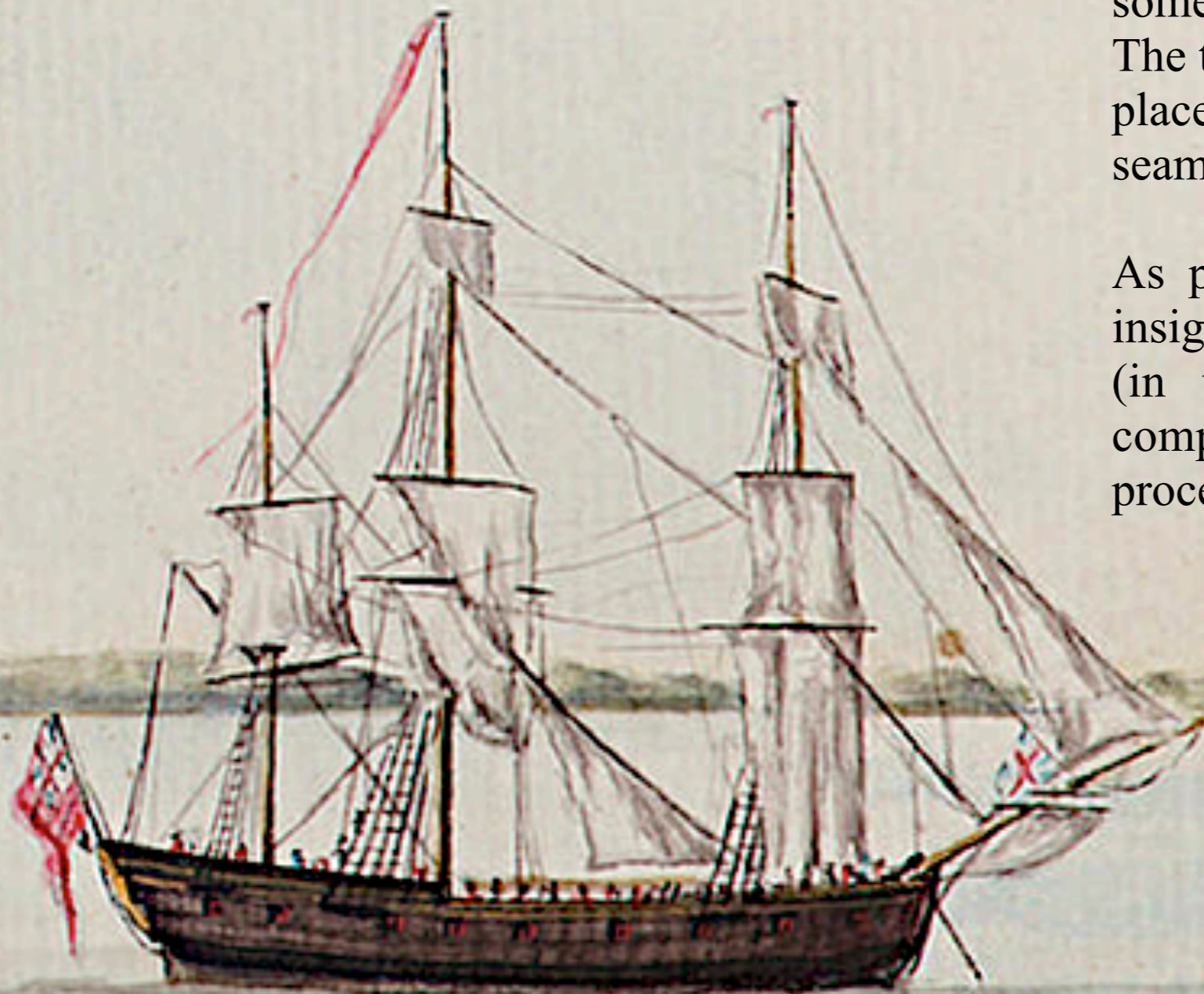


Baron Von Steuben
by Charles Wilson Peale c. 1781 - 1782
(Independence National Historic Park)

Loops & Grommets

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.



Loops & Grommets

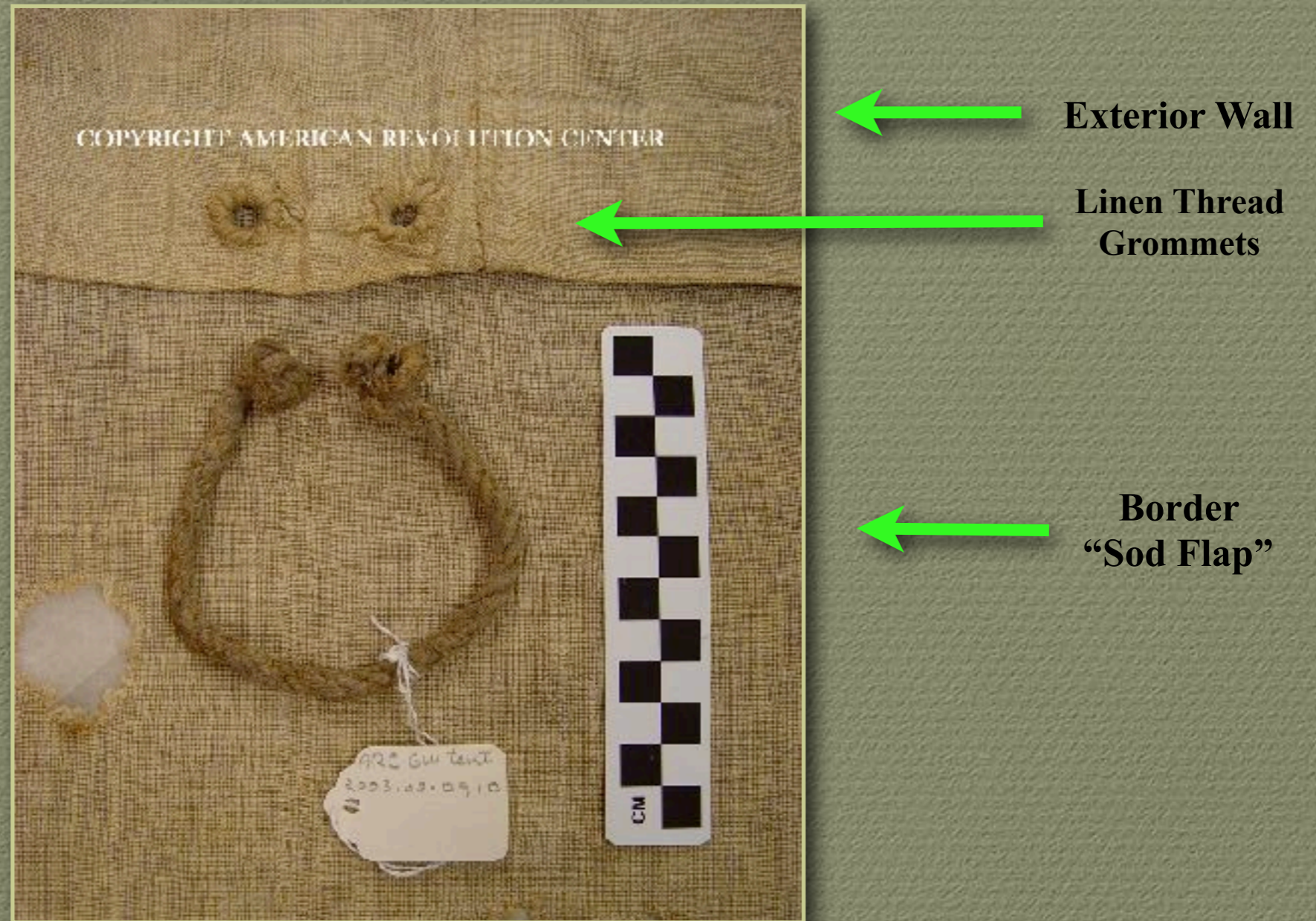


“The Elements and Practice of Rigging And Seamanship” David Steel 1794

*“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.”*

“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.”

Loops & Grommets



Detail: The Marquee of General George Washington: two grommets located adjacent to a side panel seam
(Museum of the American Revolution)

Loops & Grommets



COPYRIGHT MUSEUM OF THE AMERICAN REVOLUTION

Grommet Detail: The Marquee of General George Washington
(Museum of the American Revolution)

Loops & Grommets



Major General Robert Monckton
by Benjamin West c. 1762
(National Army Museum Collection)

Loops & Grommets



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

Loops & Grommets

**Journal and Correspondence of the Maryland Council of Safety
July 7 - December 31, 1776
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...”*

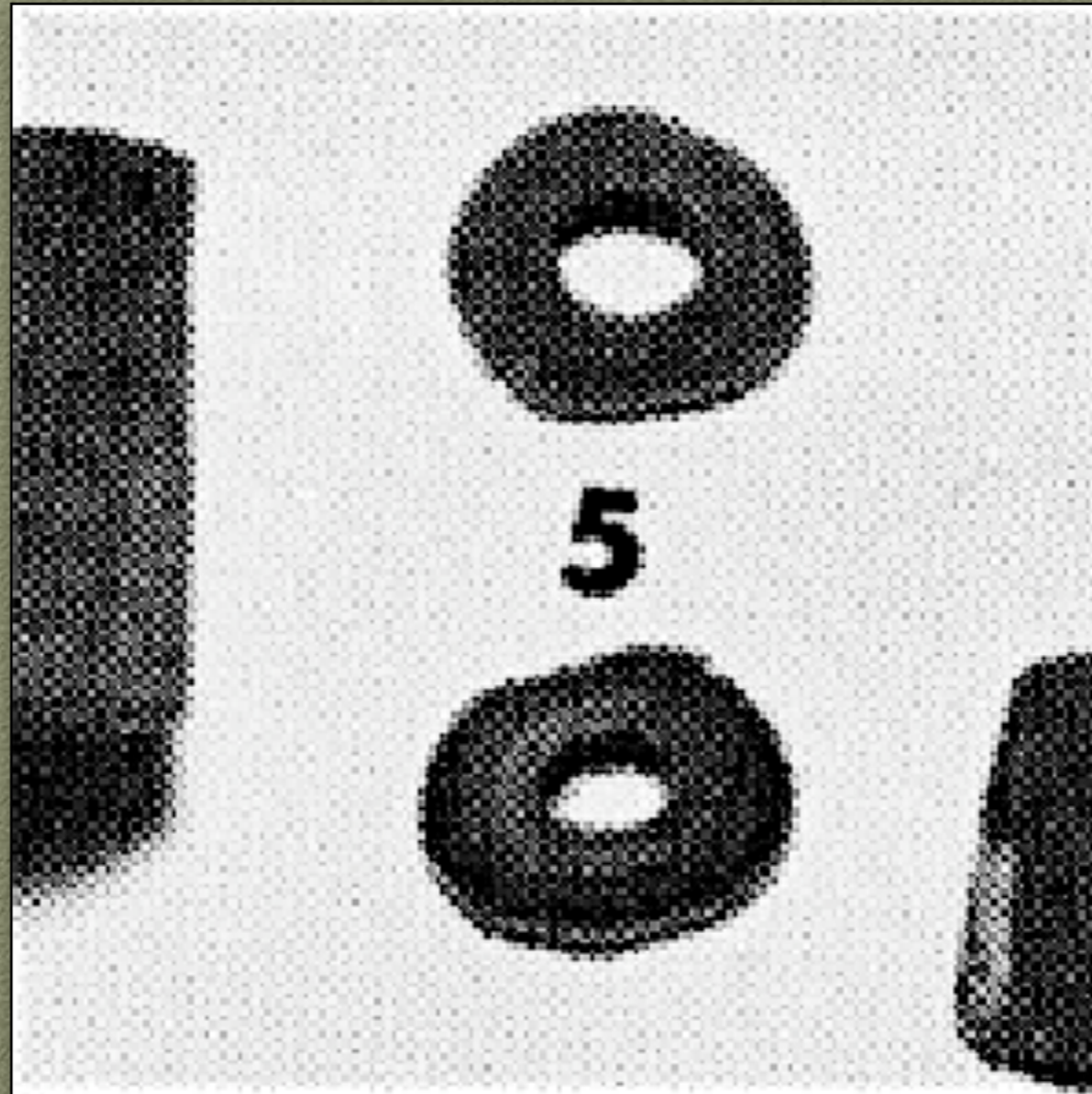
Loops & Grommets

In regards to the “turned Rings”, one can only speculate as to their exact appearance and function, but wooden rings or washers have been found in the excavations of Fort Ligonier.

Cord loops with rings can also be found on an extant 18th century marquee in the collection at Burg Forchtenstein.

These loops are attached to the tent by a singular, not double, grommet system. A knot reinforced by a wooden ring on the interior of the tent keeps it in place. This more elaborate system allowed the walls of the Marquee to be turned up in order to improve circulation when weather conditions permitted. Whether enlisted men’s tents employed this system is purely conjecture at this point in time.

Loops & Grommets

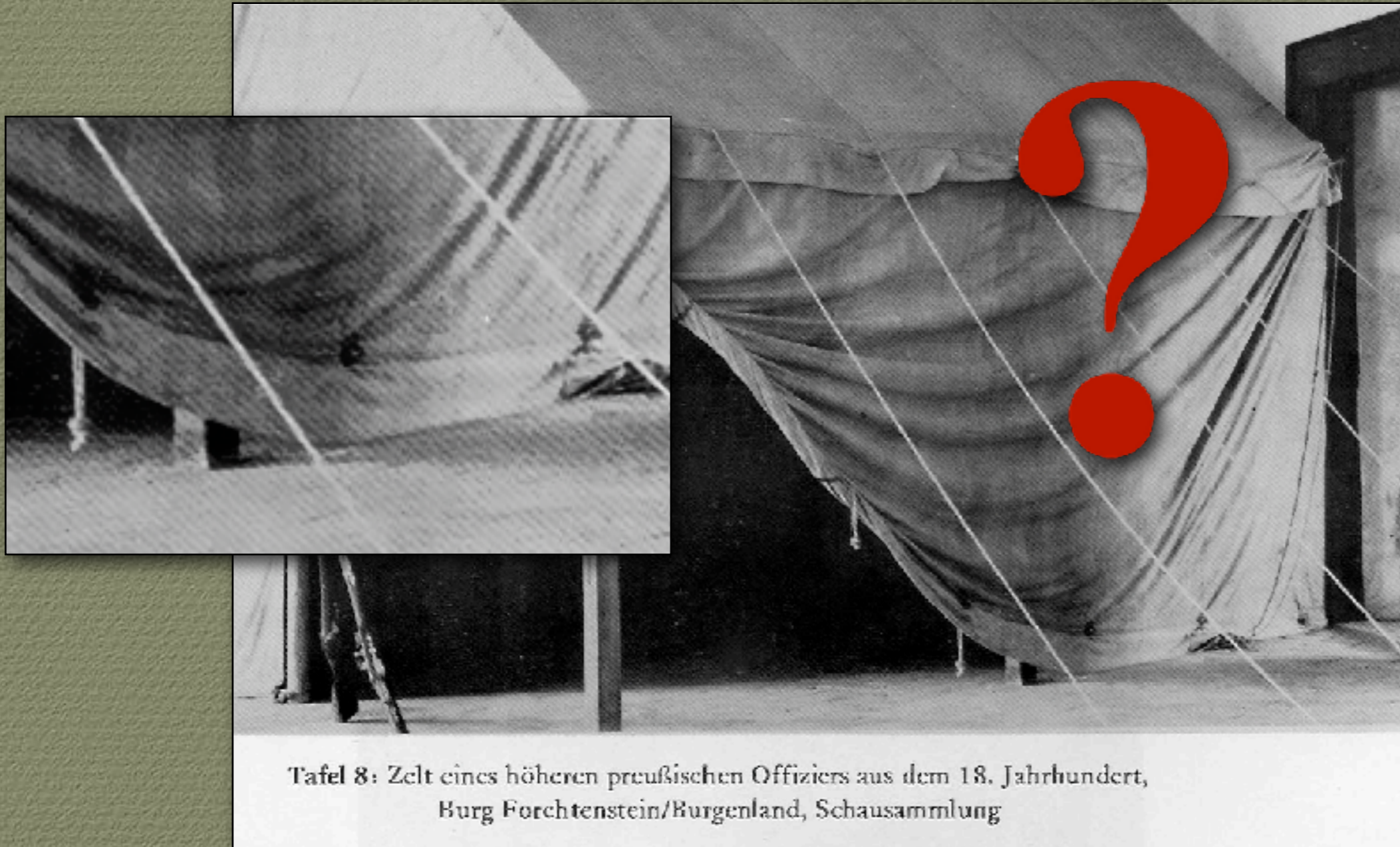


Detail of Wood Washers or “Turned Rings” Excavated at Fort Ligonier

Outside diameter: 1.1”, Inside diameter 0.4”, Thickness 0.28”

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

Loops & Grommets



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

Wooden washers or "Turned Rings" secure Simple Cords tied into a Loop

Loops & Grommets

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 AltPrussischen Heer”
An example of a Grommet reinforced with either leather or cord
(Burg Forchtenstein)

Tent “Pins” or Pegs

Tent “Pins” or Pegs

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.

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.

Tent “Pins” or Pegs



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

Tent “Pins” or Pegs



Tent Pins Found at Fort Ligonier c. 1758 - 1766

From *“A Soldier-Like Way”* by R.R. Gale

(Fort Ligonier Collection)

Tent “Pins” or Pegs

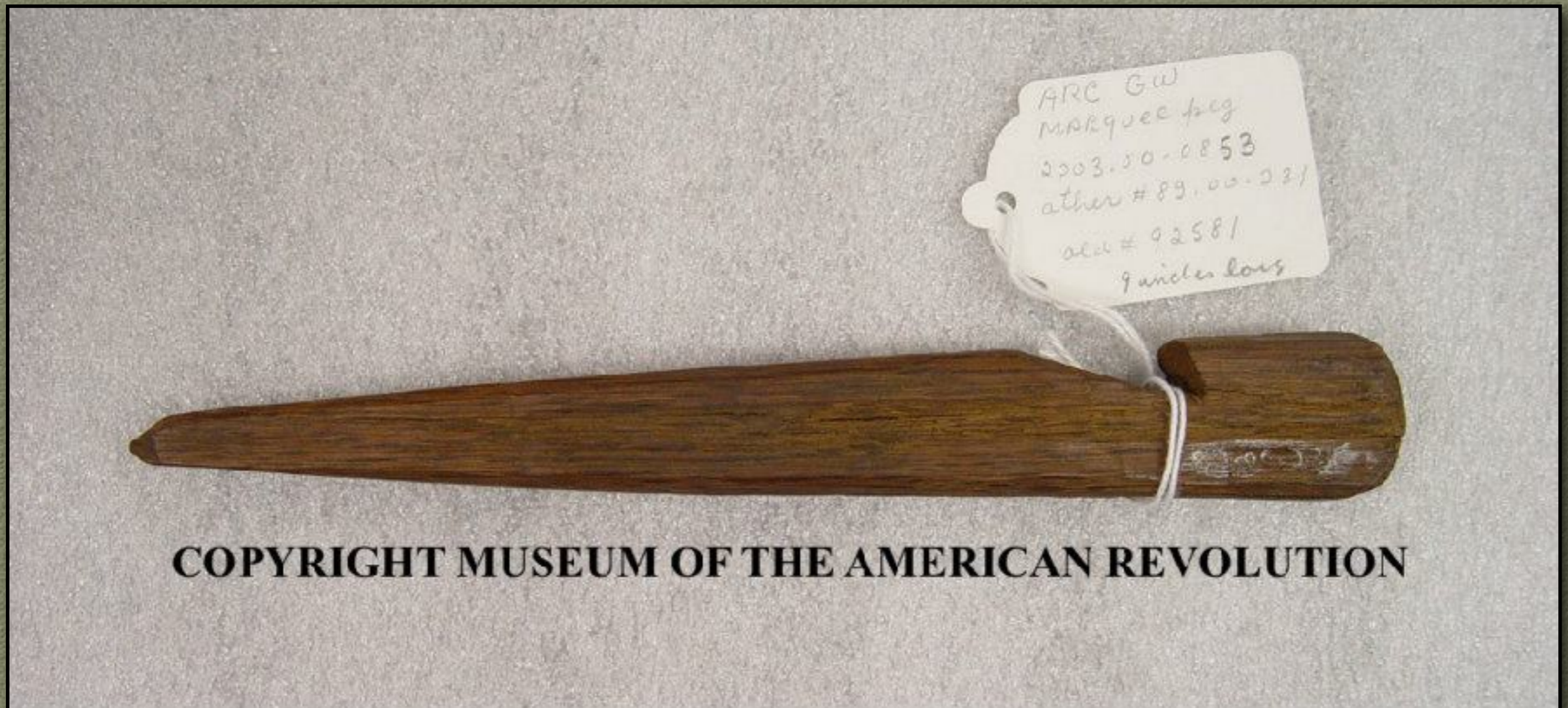


British Tent Pin

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" or Pegs



9" Tent Pin From the Marquee of General George Washington
These pins range from 7 - 9" in Length
(Museum of the American Revolution)

Tent “Pins” or Pegs



9” Tent Pin From the Marquee of General George Washington
These pins range from 7 - 9” in Length
(Museum of the American Revolution)

Tent “Pins” or Pegs



**Large Tent Pins within the Castle at Burg Forchtenstein
(Burg Forchtenstein)**

Tent “Pins” or Pegs

**Orderly 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.”



American Bayonet & Shoulder Carriage
(Don Troiani Collection)

Tent “Pins” or Pegs



Major - General Anthony Wayne
by James Peale (Painted Post - War)
(Smithsonian)

Colonel (Anthony) Wayne to Colonel Penrose

"TICONDEROGA 23rd August, 1776

We remain in the same state as when I wrote you last, ...

- but that is Impossible here for it appears to be the last part of the world that God made & I have some ground to believe that it was finished in the dark - that it was never intended that man shou'd live in it is clear - for the people who attempted to make any stay - have for the most part perished by pestilence or the sword.

I believe it to be the ancient Golgotha or place of skulls - they are so plenty here that our people for want of Other Vessels drink out of them whilst the soldiers make tent pins of the shin and thigh bones of Abercumbies men”

Mallets

“Beetles and Rings”

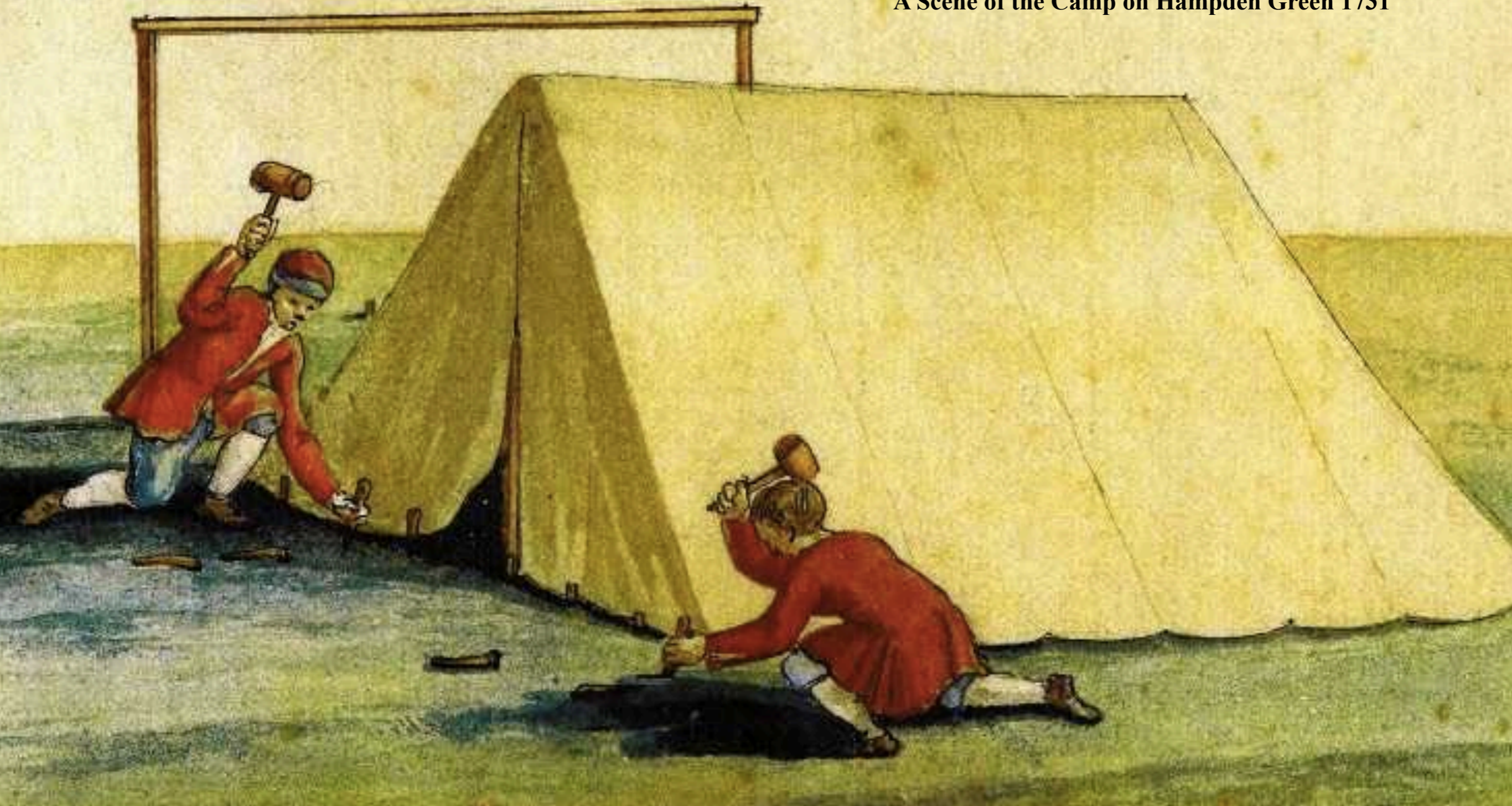
Mallets or “Beetles and Rings”



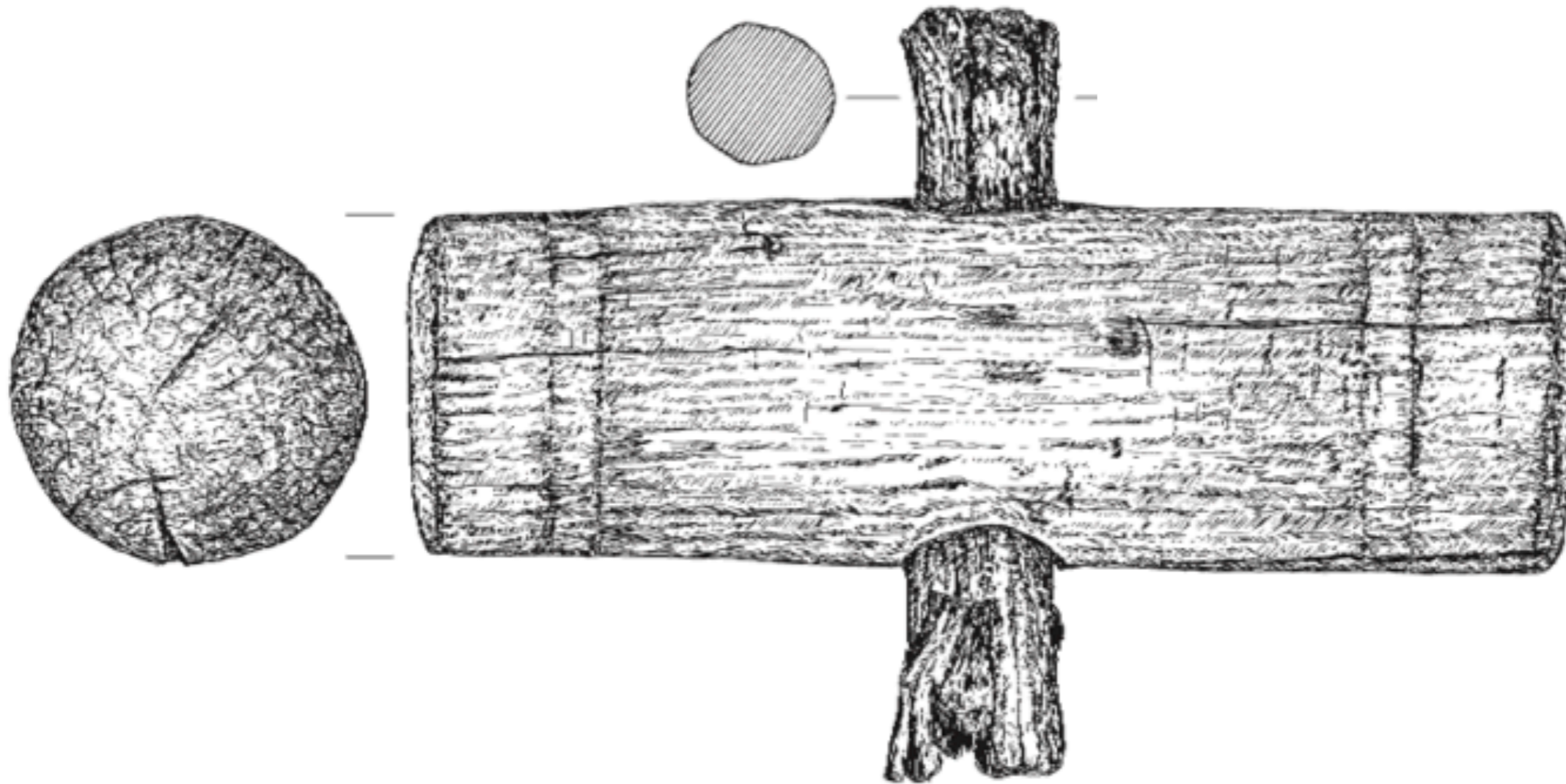
Wooden Mallet Head Found at Fort Ligonier c. 1758
From *“A Soldier-Like Way”* by R.R. Gale
(Fort Ligonier Collection)

Mallets or “Beetles and Rings”

A Scene of the Camp on Hampden Green 1731



Mallets or “Beetles and Rings”



Mallet. Recovered from the Wreck of the General Carleton of Whitby 1785

From: Ossowski, Waldemar, ed.; "The General Carleton Shipwreck, 1785."

Archaeological Research of the Polish Maritime Museum. Vol. 1. Maritime Museum in Gdansk. Gdansk, Poland. 2008

Tent Construction: Sod Flaps - “Borders”

“Sod Flaps” or “Borders” (?)

Examination of the Other Ranks’ tents in the collection of Burg Forchtenstein, Austria, reveals the presence of external “Sod Flaps” to retard the entry of mud and rain. Based on the black and white photographs and artist’s renderings in Ruth Bleckwens’s text “Zelt und Lager im AltPrussichan Heer”, we can see that these flaps are highly decorated with an alternating pattern of dark and light panels. “Sod Flaps” is actually a 20th Century term. It is used here solely for the purpose of description. There is no evidence that the term was used in any 18th Century context.



“Sod Flaps” or “Borders” (?)

Abb. 6: Zelt B (Maßstab 1:50)

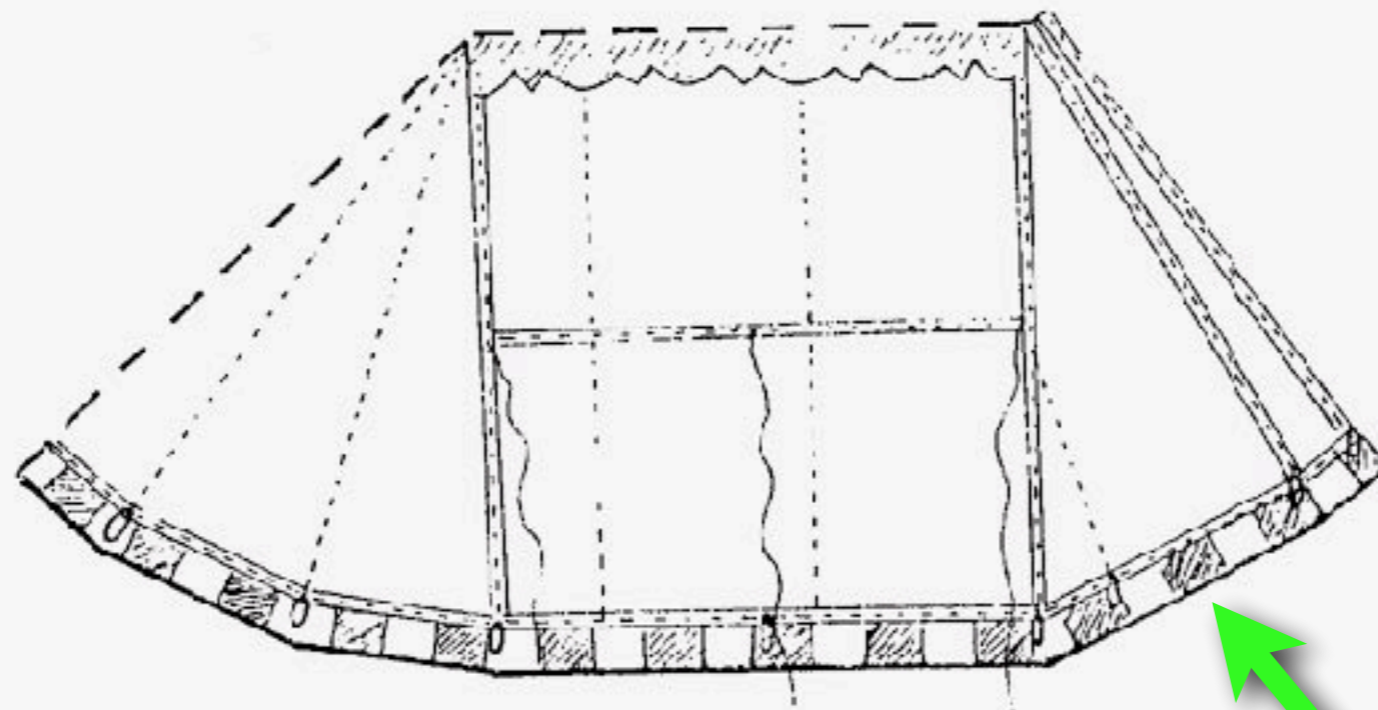
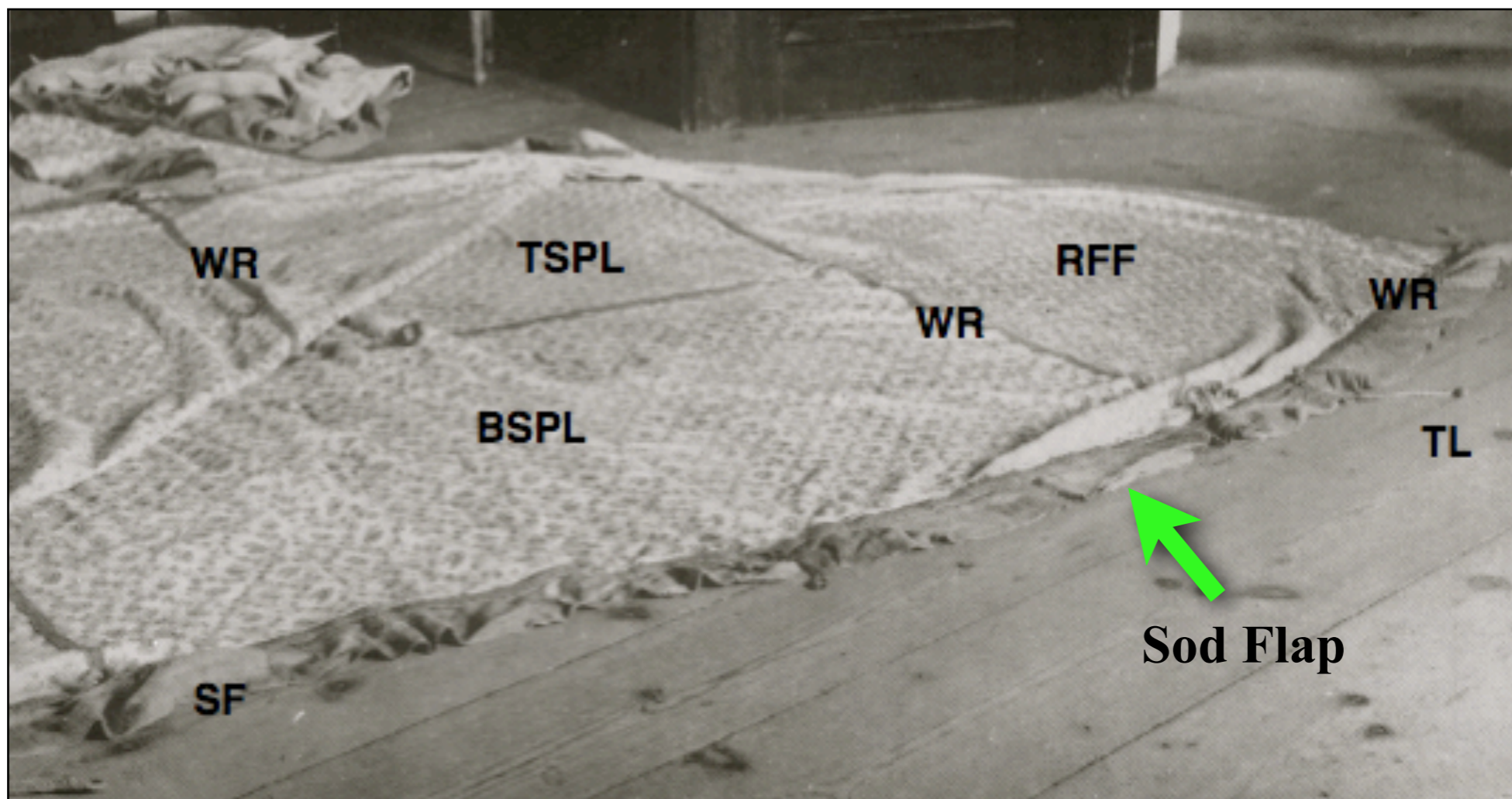


Abb. 6 a: Zeltbahn

Sod Flap

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

“Sod Flaps” or “Borders” (?)



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

“Sod Flaps” or “Borders” (?)



← Exterior Wall

← Sod Flap

**Example of a Sod Flap on The Marquee of General George Washington
(Museum of the American Revolution)**

“Sod Flaps” or “Borders” (?)

Linen “Sod Cloaths” are mentioned in the Journals of Congress in 1780. This entry may not, however, refer to sod flaps attached to tents. Since the reference implies that tents and sod cloaths were separate entities from one another, it may refer to something along the line of cloths (oil cloths?) to be laid over the earthen floor of a tent to keep its occupants dry. Without further evidence and corroboration with other material, it is hard to speculate on the true definition of the term.

Journals of Congress January 1st, 1780, to January 1st, 1781

“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...”*

“Sod Flaps” or “Borders” (?)



Colonel John Laurens
Aide - de - Camp for General George Washington 1777
by Charles Wilson Peale 1780

While the definition is somewhat open for interpretation, it is quite possible that the term “Borders” was the equivalent of “Sod Flaps” during the American Revolution. Then again, it may have nothing to do with it:

Estimate of Clothing to be Purchased in Holland by John Laurens for the American Army in 1781

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

Even more ambiguous is the term “**Crocus Bordering**”...

“Sod Flaps” or “Borders” (?)

“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”*

“Sod Flaps” or “Borders” (?)

“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”*

“Sod Flaps” or “Borders” (?)

But What is a “Crocus” ?

By Craig M. Carver
Drawing on the Research of Walter S. Avis

“Crocus is a coarse, loosely woven material once worn by slaves and laborers and common in colonial New England. It probably took its name from the sacks in which crocus or saffron was shipped.” Though the term crocus sack virtually disappeared from New England by the end of the 19th century, it survives in the South.”



“Sod Flaps” or “Borders” (?)

Was “Crocus Bordering” a course linen sod flap? Playing the Devil’s Advocate, could it be something else such as the course linen reinforcement webbing as seen on the tents at Burg Forchtenstein? We simply don’t know.



“Sod Flaps” or “Borders” (?)

If we look at the slang for Crocus in Francis Grose’s 1785 “Dictionary of the Vulgar Tongue”, we can see that “Crocus” also referred to “A nick name for a surgeon of the army and navy.”. The coarse linen webbing on the tents at Burg Forchtenstein do look very similar to a surgeon’s tourniquet of the period, but, again, this is completely speculative....

CROCODILE’S TEARS. The tears of a hypocrite. Crocodiles are fabulously reported to shed tears over their prey before they devour it.

CROCUS, or CROCUS METALLORUM. A nick name for a surgeon of the army and navy.

CROKER. A goat, or four pence.

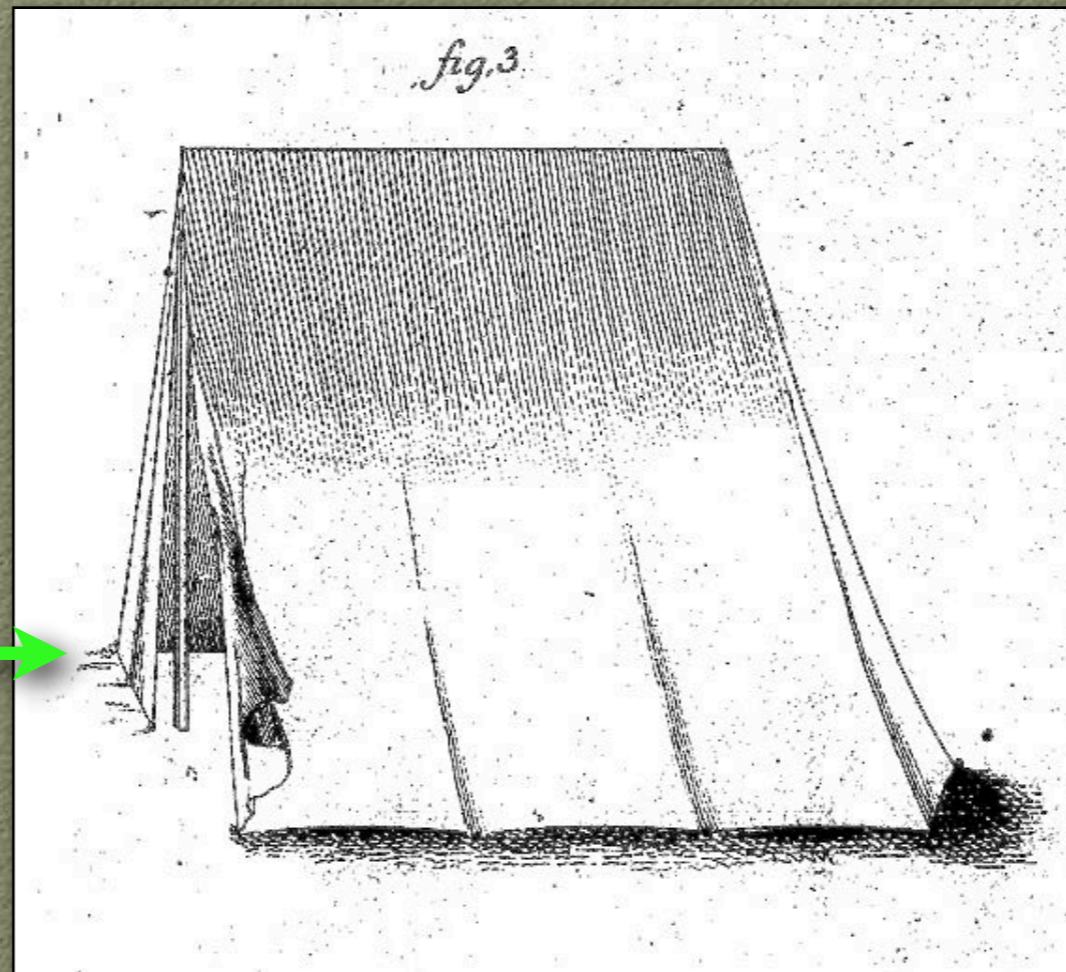
“A Dictionary of the Vulgar Tongue”
by Francis Grose 1785
(Public Archives of Canada)

“Sod Flaps” or “Borders” (?)



“Sod Flaps” or “Borders” (?)

Irregardless of the ambiguous interpretation of “Borders” or “Crocus Bordering”, what we do know for CERTAIN is that the tent illustrated in Lewis Lochee’s “Essay on Castremetation” does NOT have “sod flaps”. They are also not present on the tent depicted in “A Scene of the Camp at Hampden Green” (1731)



NO
“SOD FLAPS”

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

“Sod Flaps” or “Borders” (?)

A Scene of the Camp on Hampden Green
1731

NO Sod Flaps



“Sod Flaps” or “Borders” (?)

CONCLUSION

While the Prussian Other Ranks Tents surviving at Burg Forchtenstein show evidence of “Sod Flaps”, and they are present on the Marquee of General George Washington, they are clearly absent on the tents depicted by Lewis Lochee and in the Camp at Hampden Green. As such, there is not enough evidence to support that they were used on British Other Ranks Tents during the period. Whether they were used on American Other Ranks Tents during the period is highly speculative as there is too much ambiguity to the limited number of references which may support them.

Tent Construction: Ridge Decorations

Ridge Decorations

Numerous illustrations of 18th century tents show the presence of painted ridge decorations on enlisted men's tents. While they certainly not the norm, they do show up and therefore must be recognized. The Prussian tents at Burg Forchtenstein also show such decorations. Could these be what are referenced as "Crocus Borders"? We simply do not know.



"Military Encampment in the Green Park"
by Edward Eyre c. 1780
(Yale University)

Ridge Decorations



"Military Encampment in the Green Park"

by Edward Eyre c. 1780

(Yale University)

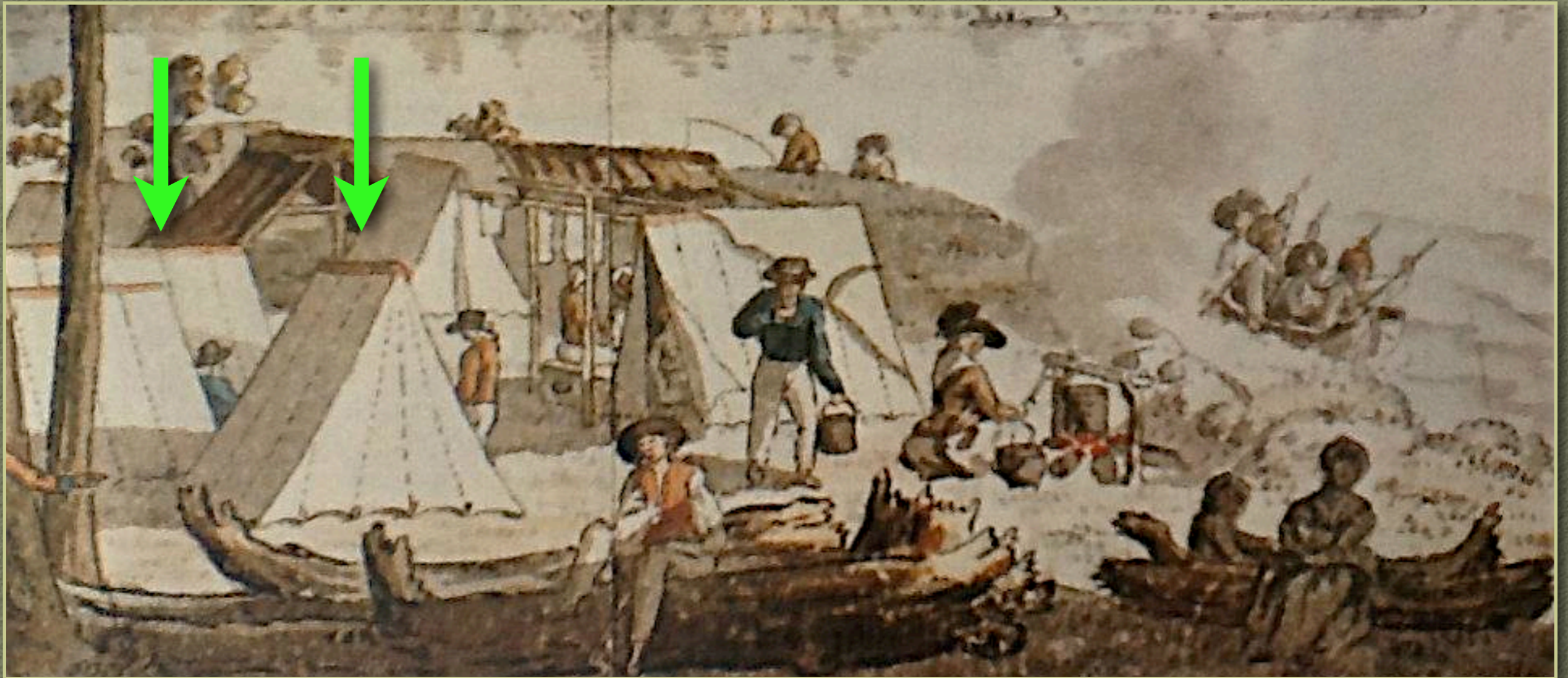
Ridge Decorations



*Encampment of the Loyalists at Johnston, a New Settlement, on the Banks of the River St. Lawrence in Canada, taken June 6, 1784
taken from the map marked on the Plan*

“Encampment of the Loyalists at Johnston, A New Settlement on the Banks of the River St. Lawrence in Canada”
by James Peachy June 6, 1784
(Public Archives of Canada)

Ridge Decorations



**“Encampment of the Loyalists at Johnston, A New Settlement on the Banks of the River St. Lawrence in Canada”
by James Peachy June 6, 1784
(Public Archives of Canada)**

Ridge Decorations

Abb. 6: Zelt B (Maßstab 1:50)

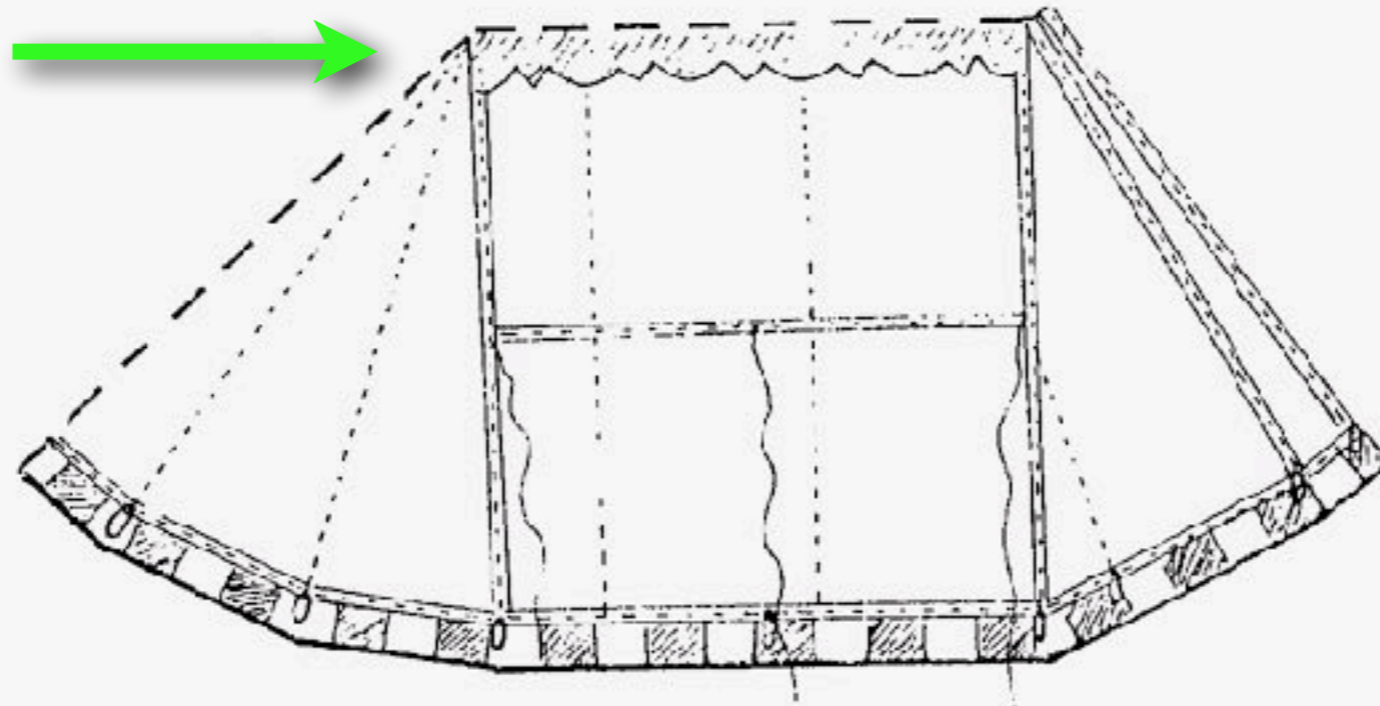


Abb. 6a: Zeltbahn

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

Tent Markings

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.

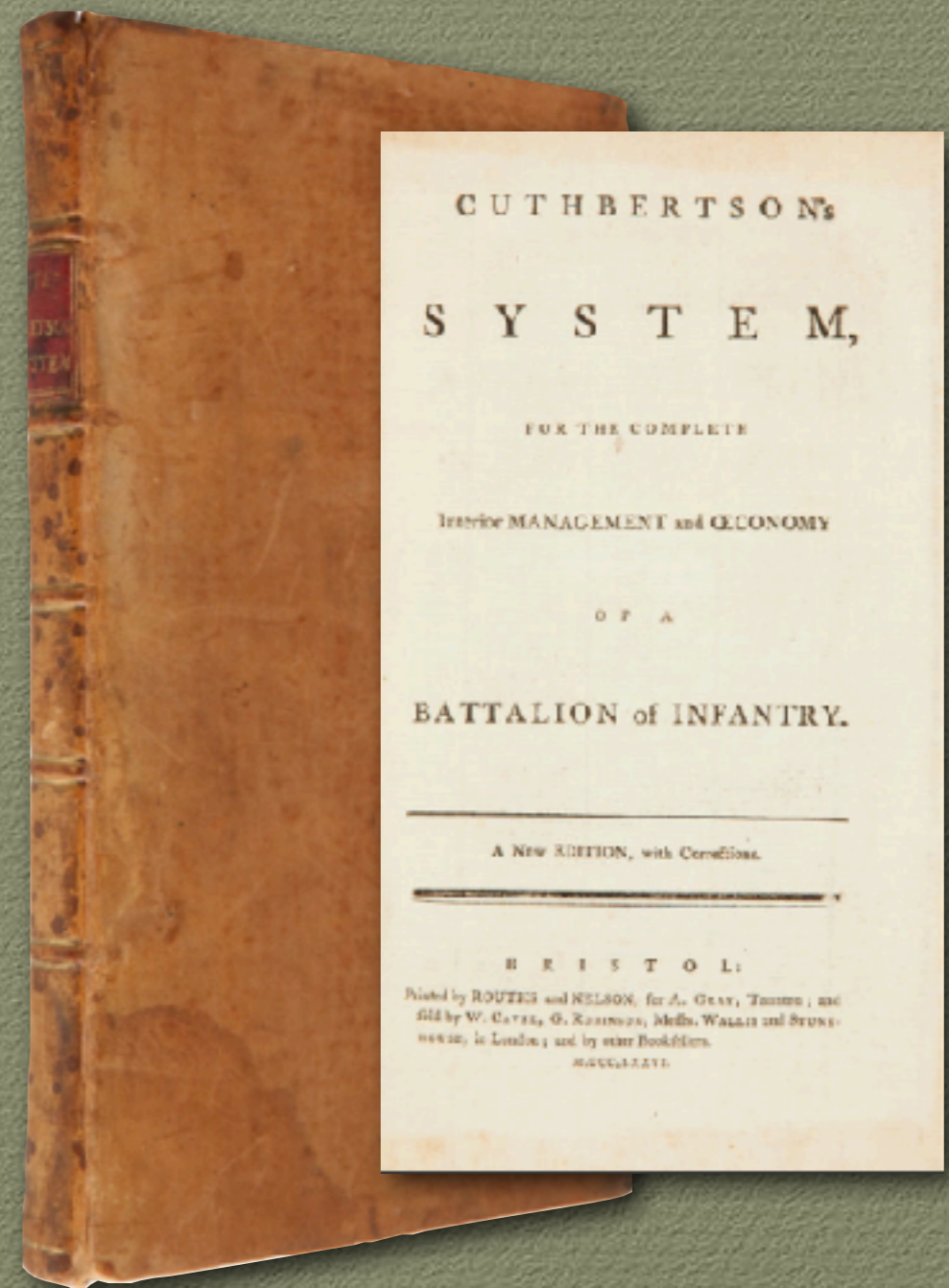
Orders for marking tents can be found in numerous orderly book entries written during the course of the war. Taking this into consideration, it is apparent that prior to these orders being written, these specific tents were not marked.

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:

Tent Markings

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

“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.”



Tent Markings



Lieutenant Colonel Thomas Dowdswell
H.M. 1st Regiment of Foot Guards
by Joseph Blackburn c. 1776 - 1777
(Guards Museum of London)

**Brigade of Guards Orderly Book
15 July, 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."*

Tent Markings

Orderly Book of H.M. 40th Regiment of Foot
23 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...”

Orderly Book of H.M. 37th Regiment of Foot
28 August 28, 1778



“Regimental Orders
The Major desires that all the Tents delivered out this day may be mark'd by the Companies which Recd them and that the Commanding Offrs of Companies will give the long Arms to the strongest front Rank men of their Companies”

Tent Markings

The Journal of Adjutant Frederick Mackenzie H.M. 23rd Regiment of Foot

“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.”



Tent Markings

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 . 1	(For Mess Number 1)
XXV	(For the 25th Regiment of Foot)



H.M. 25th Regiment of Foot in Minorca
by Guiseppe de Chiesa c. 1770

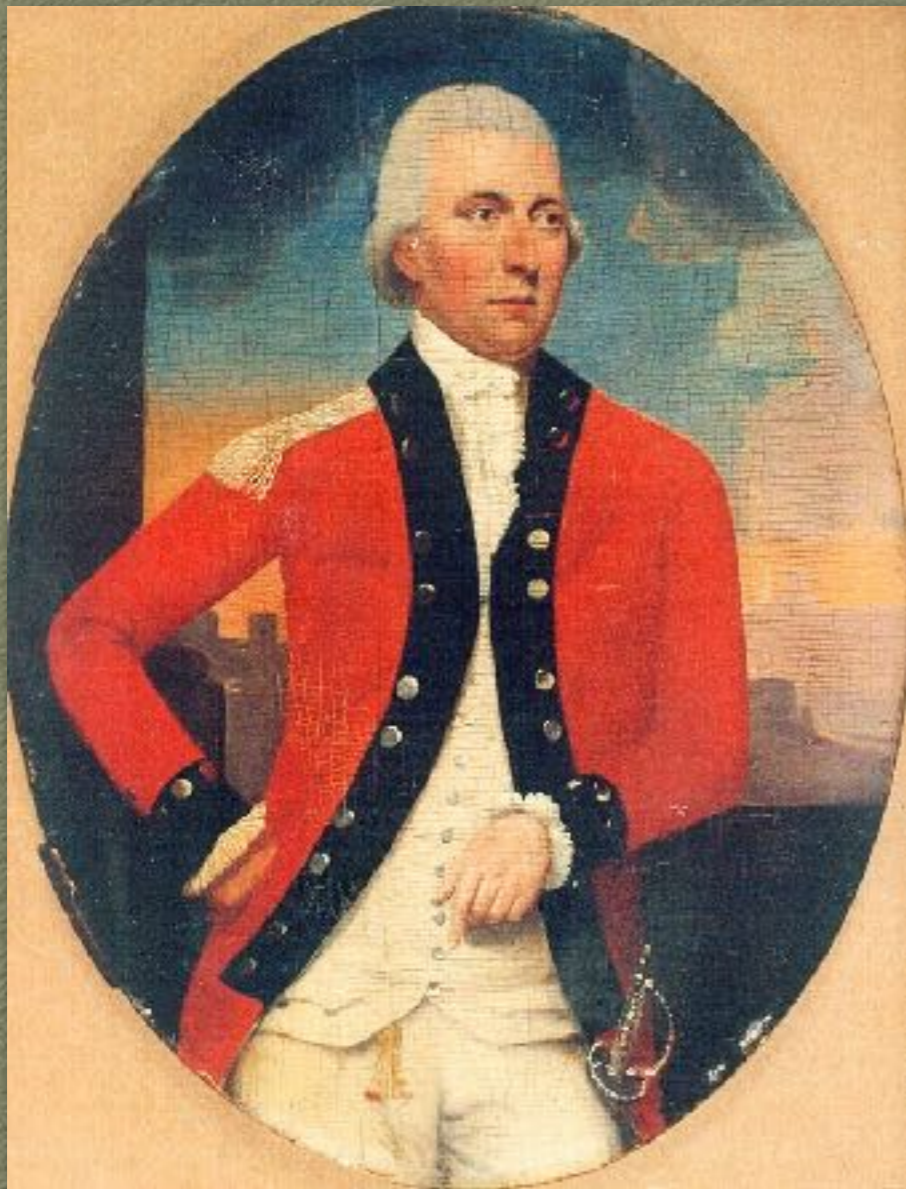
Tent Markings



A
N^o. 1
XXV

H.M. 25th Regiment of Foot in Minorca
by Guiseppe de Chiesa c. 1770

Tent Markings



**Orderly Book of Three Battalions of Loyalists
Brigadier General Oliver Delancy,
Commander
8 June, 1778**

*“...The tents to be immediately Lettered and
Numbered beginning with the Colonels
Company...”*

Colonel James DeLancey
Painted in London between June, 1783 & July, 1784
(Private Collection)

Tent Markings

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)



The Honorable Israel Putnam
c. 1775

(Ann S.K. Brown Collection, Brown University)

Tent Markings

**“Regulations for the Order and Discipline
of the Troops for the United States”
Baron Von Steuben (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”



Baron Von Steuben
by Charles Wilson Peale c. 1781 - 1782
(Independence National Historic Park)

Tent Markings



Colonel Henry Beekman Livingston, 4th New York Regiment
by Charles Wilson Peale c. 1778 - 1780
(Smithsonian Institution)

Orderly Book

4th New York Regiment 1778 - 1780
2nd 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...”*

Linen Maker Marks



Horseman's Tent
(Burg Forchtenstein)



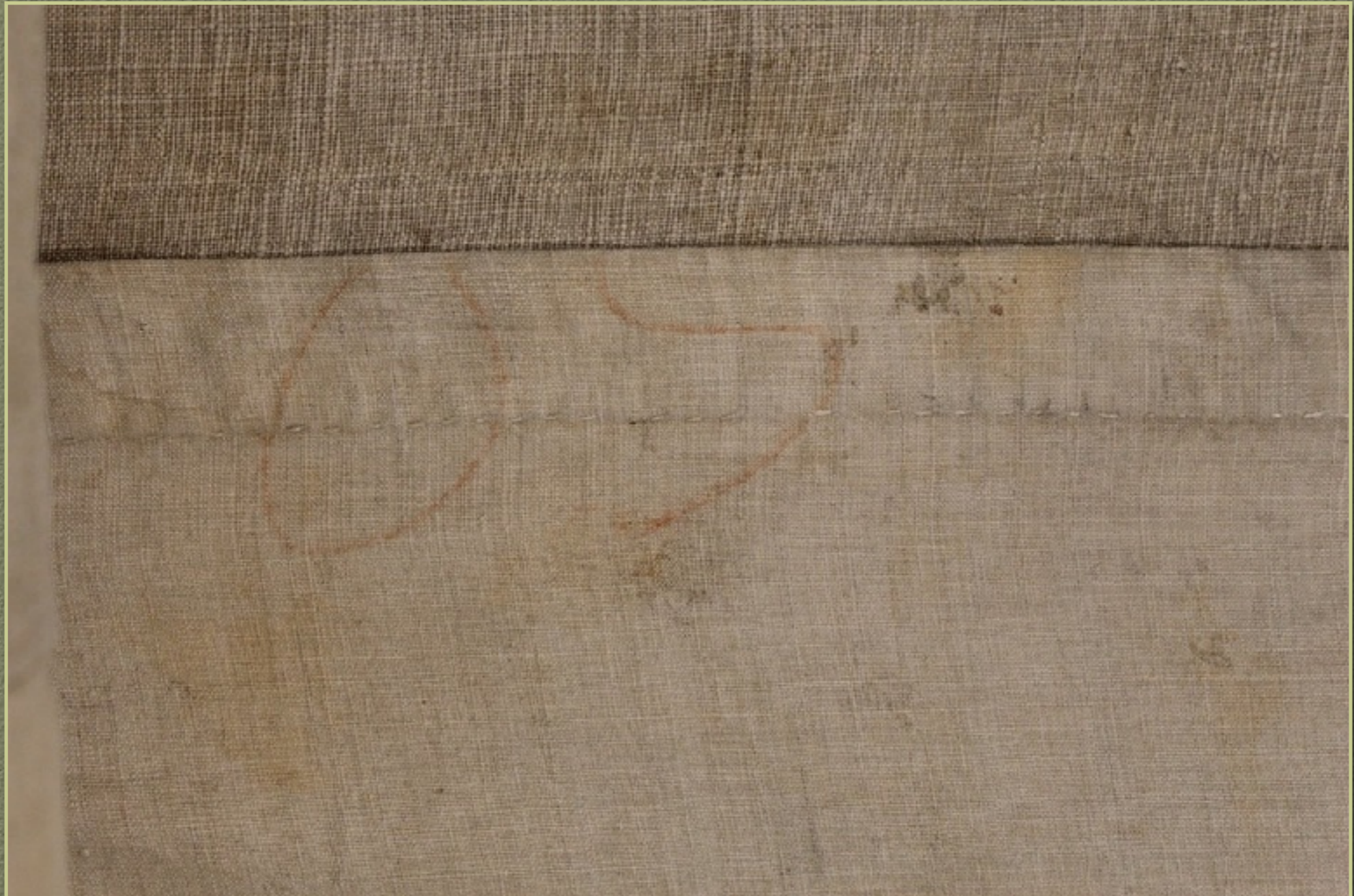
Marquee of General George Washington
(Museum of the American Revolution)

Linen Maker Marks



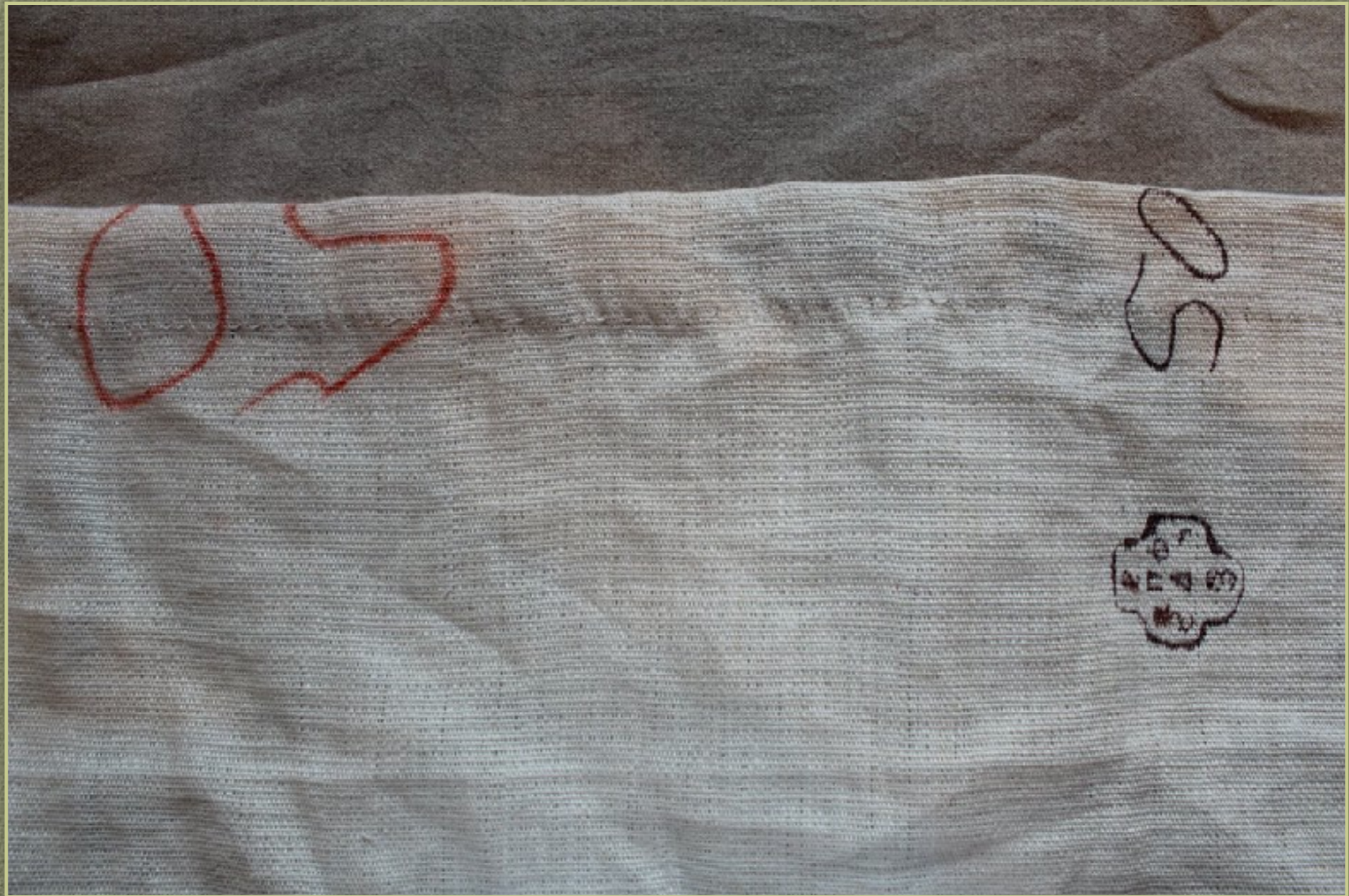
**Dining Marquee of General George Washington "50" in Reddish Brown Ink
(Smithsonian)**

Linen Maker Marks



**Dining Marquee of General George Washington “50” in Reddish Brown Ink
(Smithsonian)**

Linen Maker Marks



Reproduction Dining Marquee of General George Washington "50" in Reddish Brown Ink
(Smithsonian)

Linen Maker Marks



**Reproduction Dining Marquee of General George Washington “PC” or “PG” on Sodcloth
(Smithsonian)**

Tent Poles

Tent Poles

Other ranks' tents during the American Revolution were held in place by three wooden poles: two upright "Standard" poles (traditionally 6 feet in height in the British Army) which held an iron pin, and one horizontal "Ridge" pole (traditionally 7 feet in length in the British Army).

While there is very little written documentation regarding the TYPE of wood that was utilized in fabricating tent poles, a 17th Century English account lists them as 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)

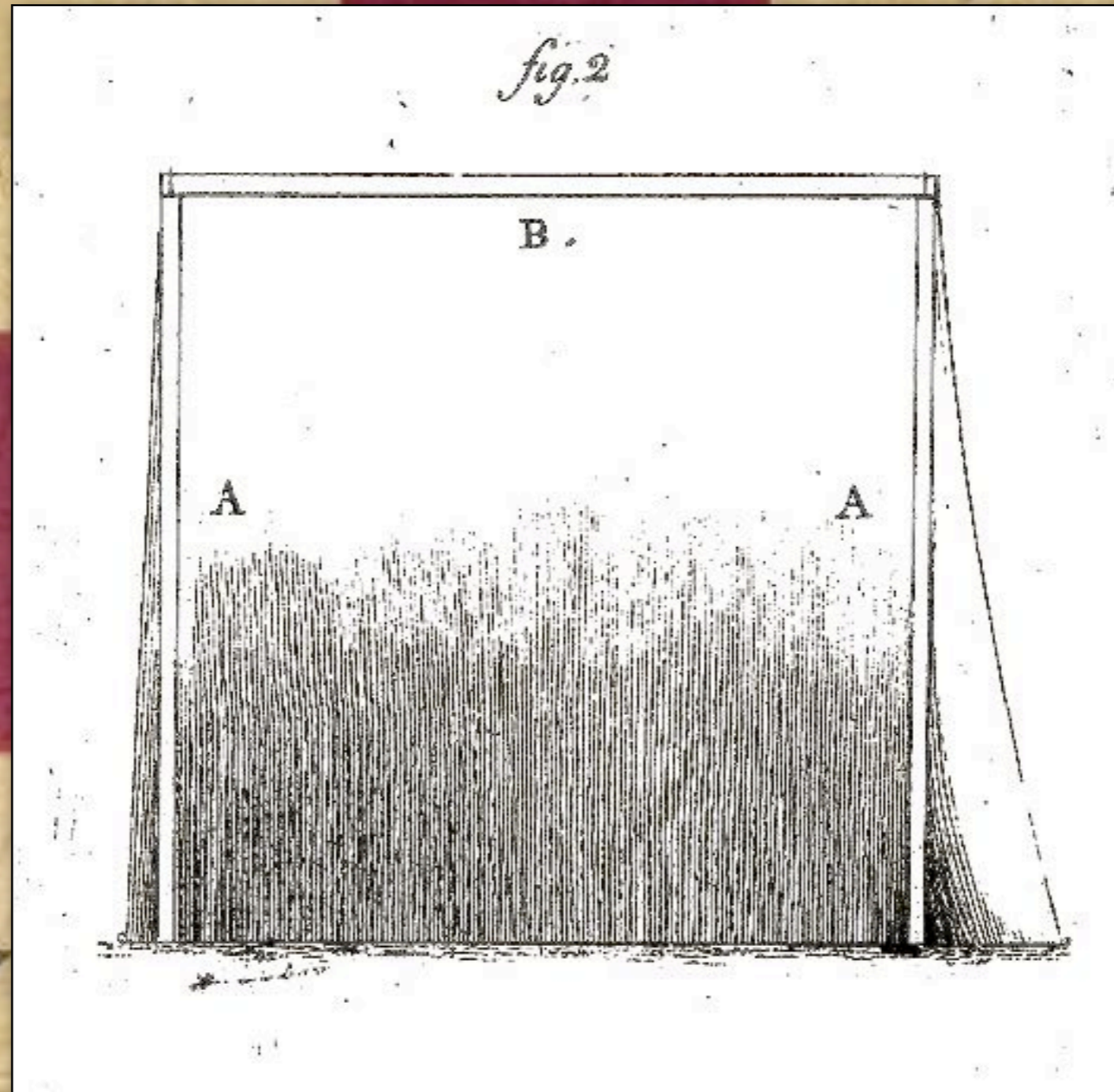
Tent Poles

Lewis Lochée

“Essay on Castrametation” 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.”

Tent Poles



Tent Poles

According to pictorial and archaeological evidence, the shape of 18th century standard poles varied. Some resources reveal that they were round. Other resources show that they were square, or even slightly rectangular in shape. Frequently, an iron ferrule was placed on the end of a standard pole which held the iron pin to keep it from cracking. Many of these iron ferrules were secured to the pole by a small nail. Although it is hard to determine the exact diameter of the standard poles, we know from extant iron tent ferrules that the diameters varied between 1.5 to 2”.

Quite frequently, ridge poles were shaped like the letter “D.” A hole through each end of the ridge pole allowed the tent to be erected by the iron pin located in each standard pole. Based on an extensive examination of ALL of the illustrations of American and British tents during the period of the American Revolution, it is evident that the two iron pins holding the tents together (in either army) did NOT extend through the ridge pole itself. Pictorial evidence of French tents from the mid 18th century, however, reveal that the pins did extend through the ridge pole and likely passed through the canvas of the tent by a grommet. Whether this was universal is unknown.

Tent Poles



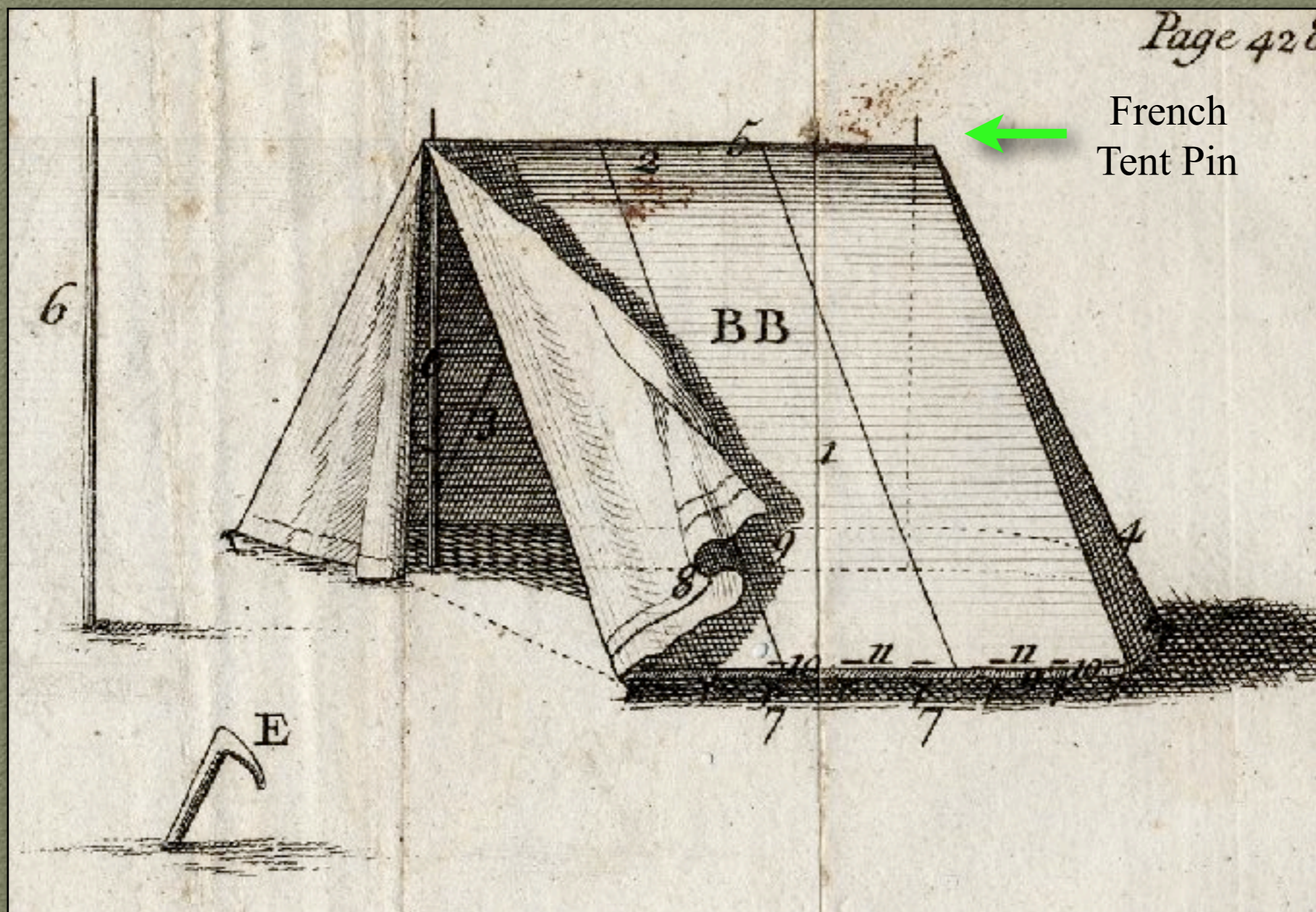
**A Scene of the Camp on Hampden Green 1731
(National Museums Scotland)**

This view reveals two enlisted men erecting the tent pole assembly. Note the iron pins to attach the ridge pole to the standard poles.

A View of the Camp on Hampton Green 1731 (National Museums Scotland)



Tent Poles



“Institutions Militaires pour la Cavalerie, et Les Dragons”

by François de La Porterie 1754

(Internet Archives)

Tent Poles

It is reasonable to believe that tent poles were shaped by a draw knife. The extant round standard poles in the collection of Burg Forchtenstein reveal that they are fairly crudely drawn. A tent pole fragment in the collection of Fort Ticonderoga, reveals, however, that it is somewhat refined.

Tent poles and their iron pins and ferrules were supplied to the army either through contractors or Regimental carpenters and smiths as the need arose. While there is evidence that some Marquee poles were painted, there is NO EVIDENCE that other ranks' tent poles were painted. It is quite probable that tent poles, like the canvas they supported, were marked for the Regiment, Company and Mess they belonged to. A return for H.M. 60th Regiment of Foot (Royal Americans) in 1757 - 1758 reveals "One Set of Brands to Mark Tent Poles...". While this is an earlier account, it may be representative of the practices carried out by the British Army during the American War for Independence as well.

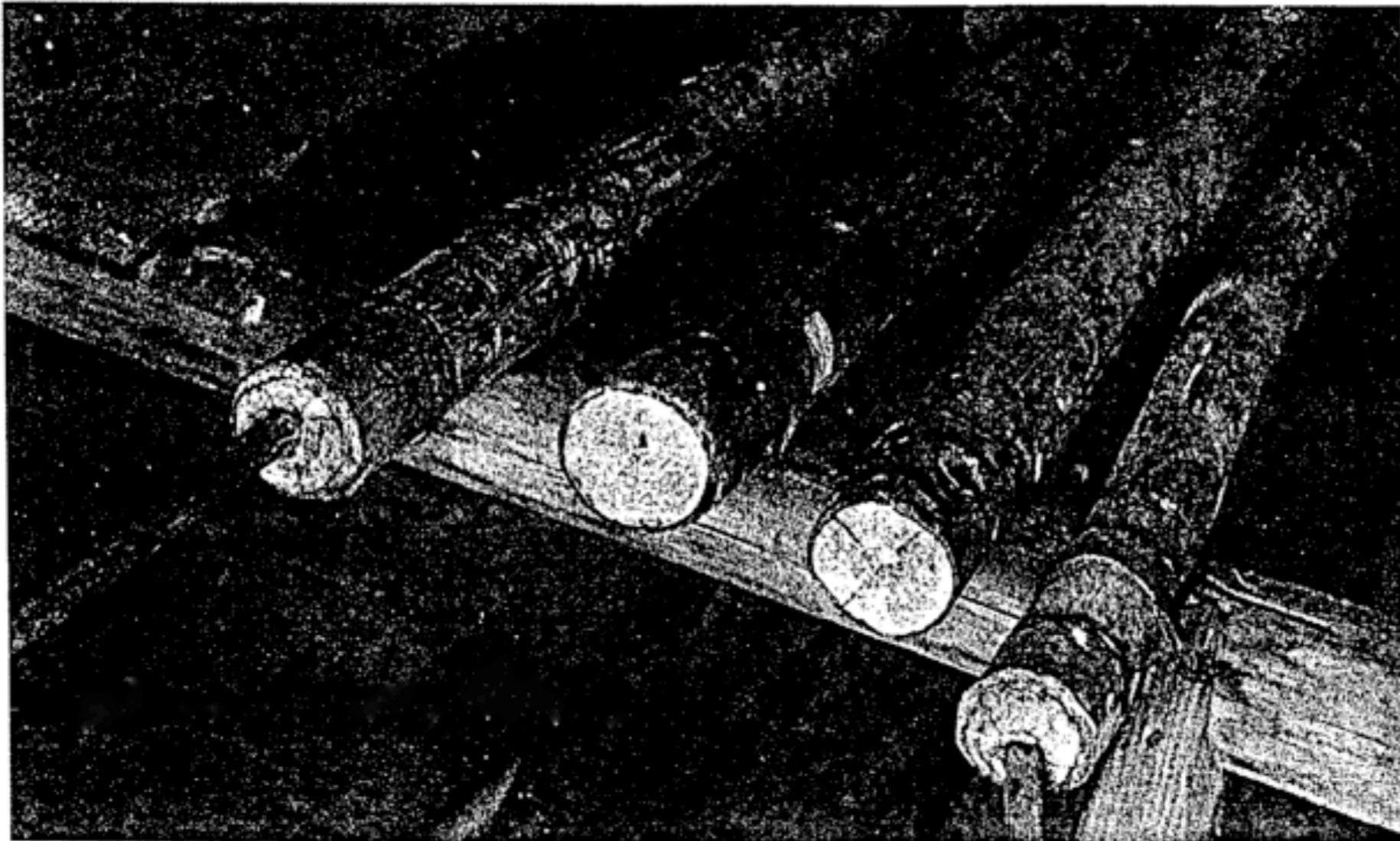
Tent Poles

Orderly Book 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 —”*



Tent Poles



Tafel 41: Zeltstangen; Burg Forchtenstein/Burgenland

Round Pole Details from Ruth Bleckwenn's Text: "Zelt und Lager im AltPrussischen Heer"
Extant round tent poles in Burg Forchtenstein

Tent Poles

Round
English
Poles



“The March of the Guard to Finchley”
by William Hogarth c. 1750
(The Foundling Museum)

Tent Poles



**Extant Round Other Ranks' or Marquee Tent Pole Fragment
(Fort Ticonderoga)**

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

Tent Poles

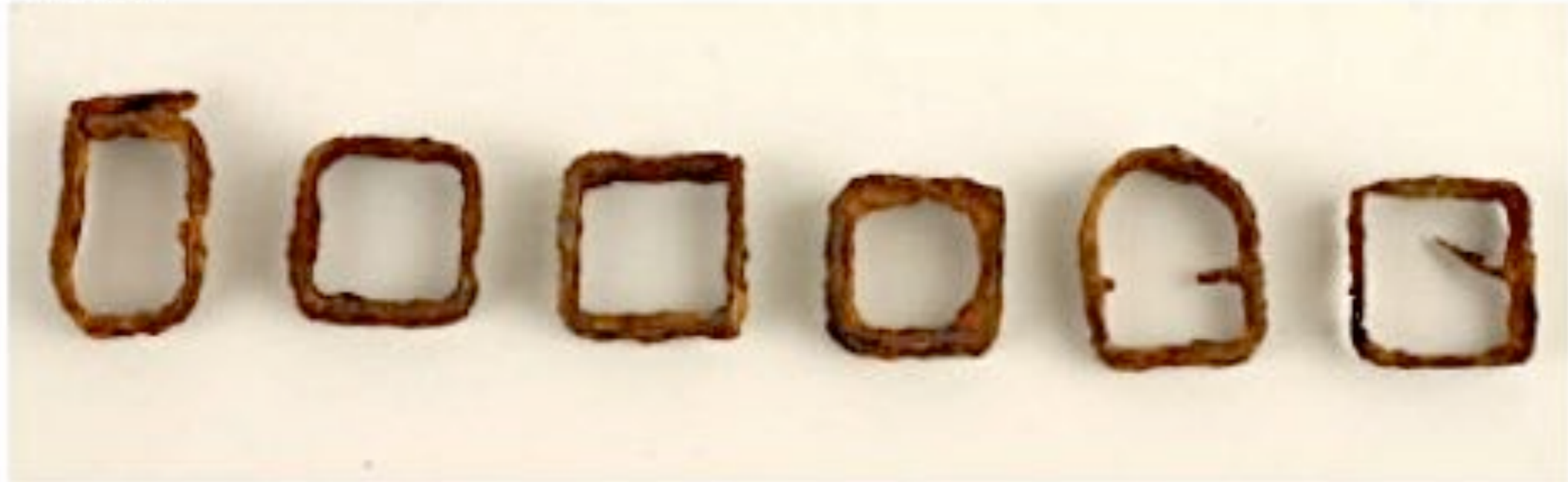


**Extant Round Other Ranks' or Marquee Tent Pole Fragment
(Fort Ticonderoga)**

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

Tent Poles

Photo 2



1.5" - 2"

Photo 3



Tent Pole Ferrules Recovered the Encampments on Washington Heights
(New York Historical Society)

Tent Poles

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.”

Tent Poles

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.””

Tent Poles

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.

Tent Poles

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.

Tent Poles

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 $\frac{7}{8}$ inch to $2-\frac{7}{8}$ inches, width of the metal $\frac{3}{8}$ to 1 inch and thickness of the metal $\frac{1}{16}$ to $\frac{3}{16}$ inch.

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

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

Tent Poles

Detail Showing Tent Poles Possibly Painted Red



Detail: General David Forman
by Charles Willson Peale 1784
(Berkshire Museum)

Tent Poles

On occasion, tent poles were not available. When this was the case, the army often made do with crudely constructed poles likely fabricated by the soldiers with the hatchets issued to each mess. These poles often damaged the tents themselves.

Col. Wm Davies to the Governor:

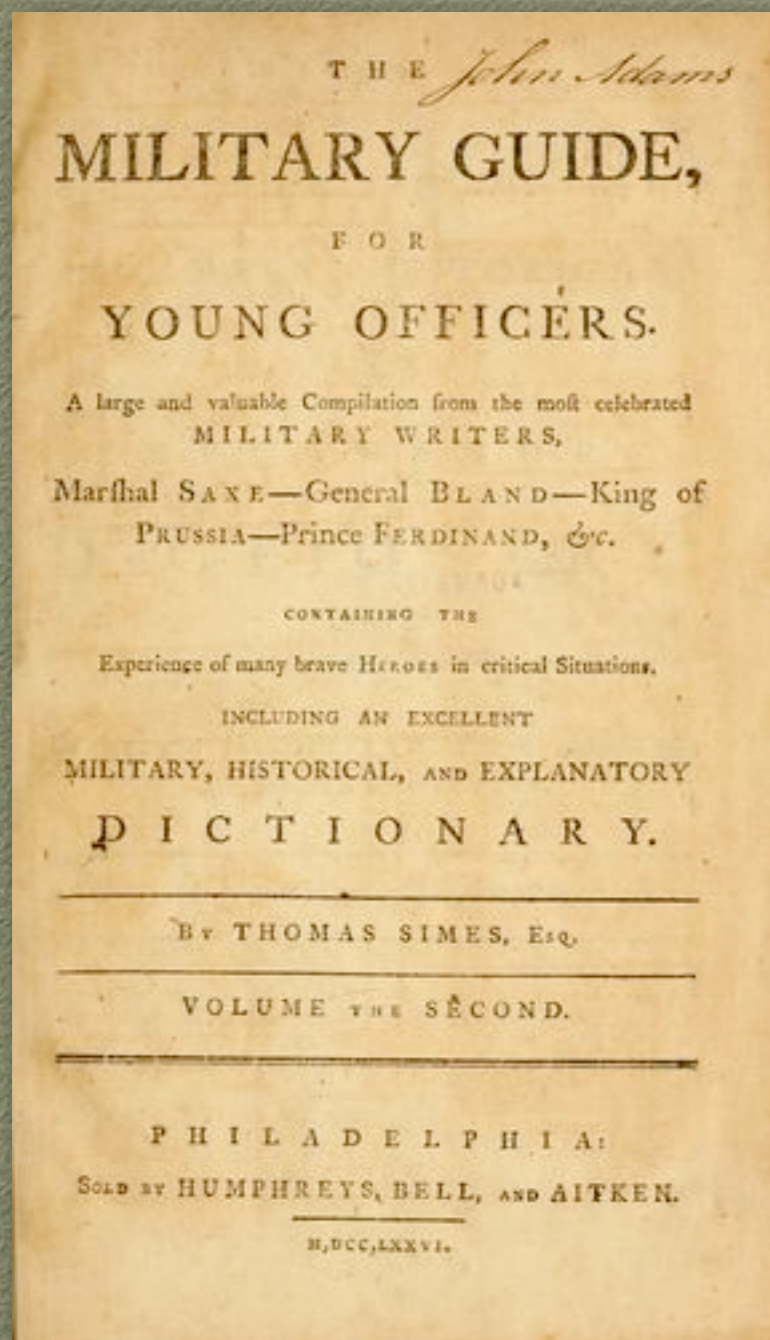
1781

February 3d.

Chesterfield Co.

“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)

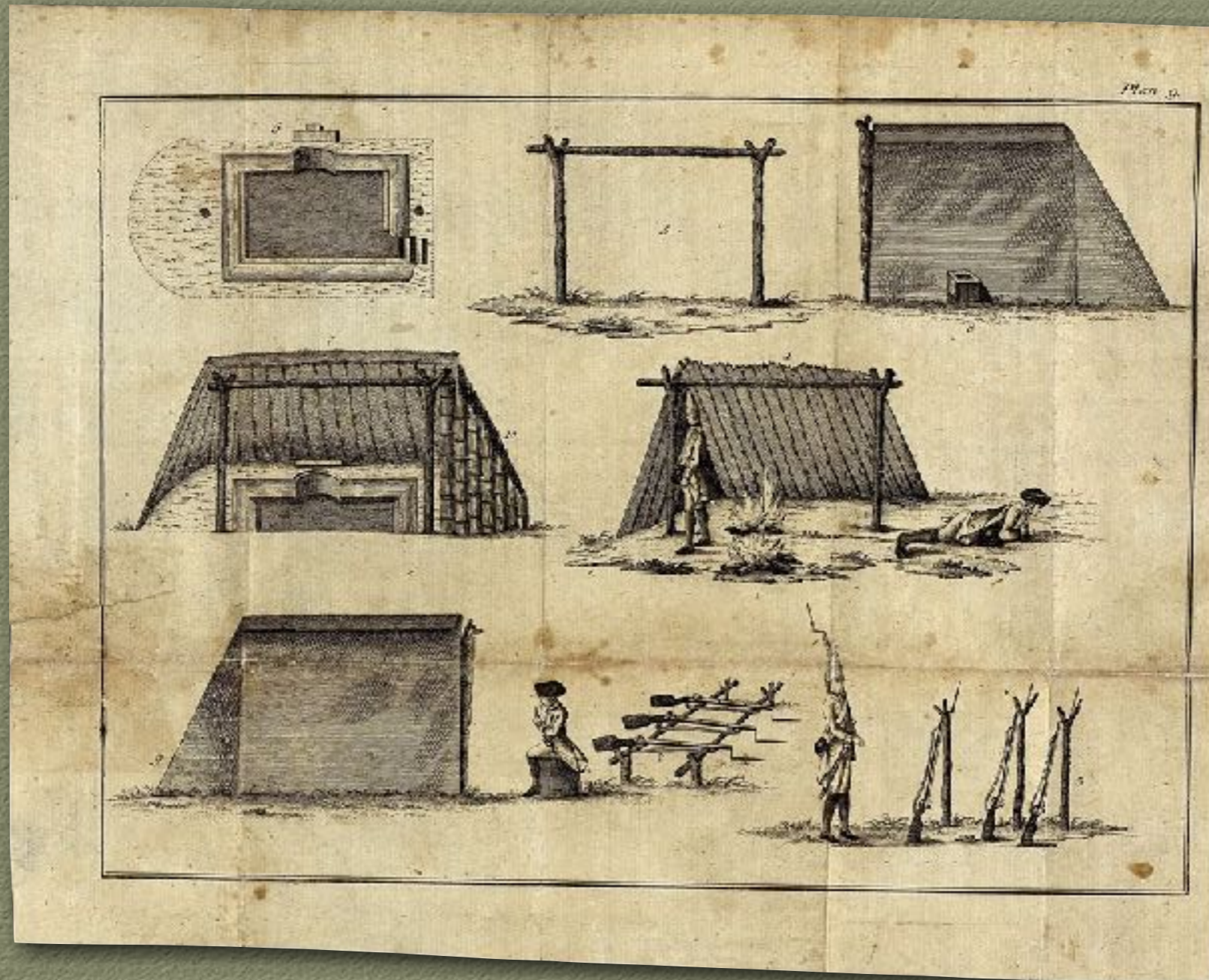
Tent Poles



**"The Military Guide for Young Officers"
by Thomas Simes
2 Vols. Humphreys, Bell and Aitken,
Philadelphia, 1776**

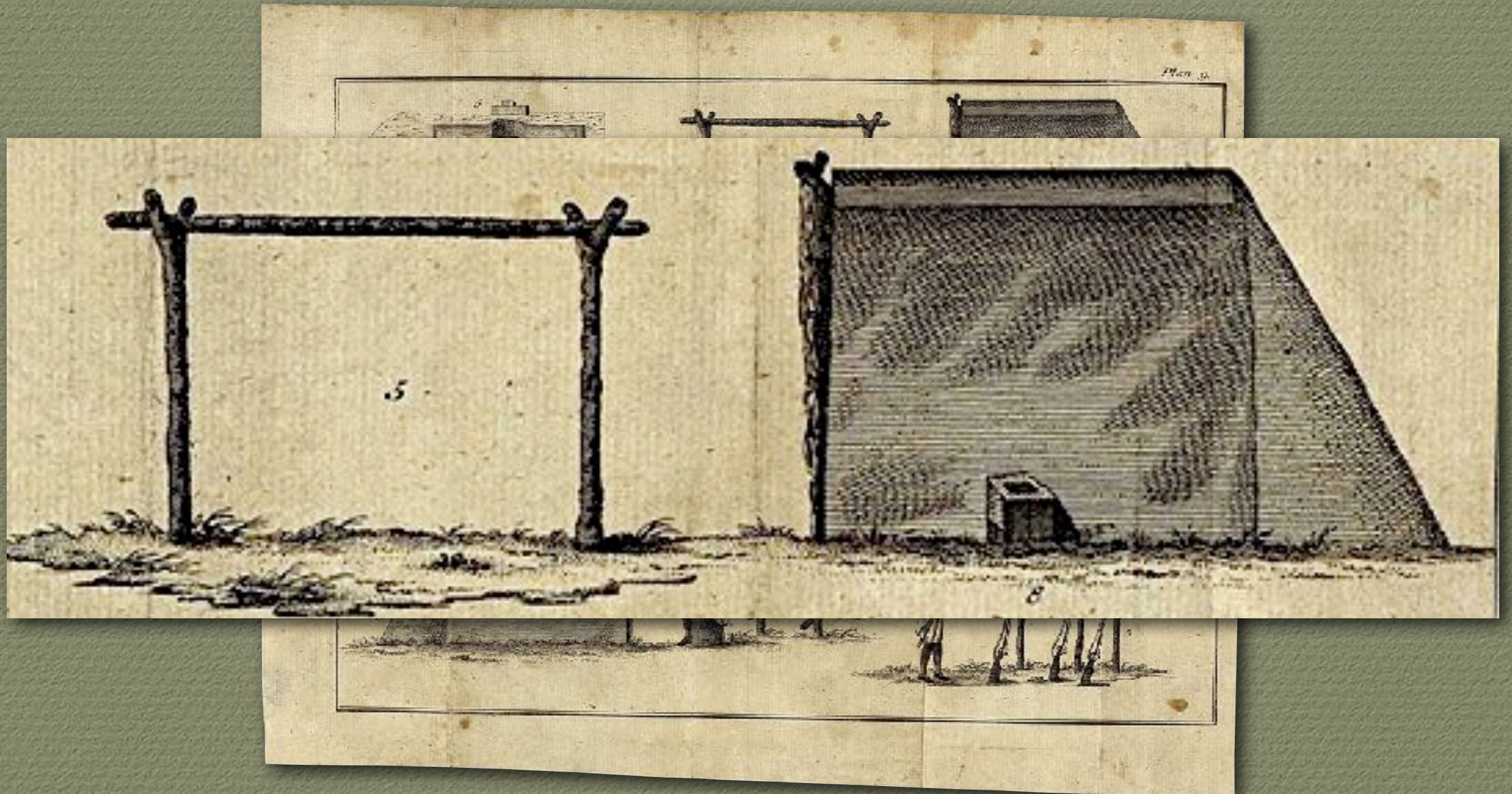
"The loss of the tent poles is attended with great inconveniences to a battalion for several days, but particularly on the night of the action, several wounded which remain with a regiment, being exposed to the air, for want of poles to pitch a tent, and for some days before poles can be made; the sticks the men cut, or standards to support the ridge pole being forked, for want of iron spikes, do more damage to the tents than can be replaced that campaign."

Tent Poles



Zelte - "Was jedem Offizier Waehrend eines Feldzuges zu Wissen"
(What Every Officer Needs To Know During A Campaign)
(Goettingen, Karlsruhe 1788)

Tent Poles



Zelte - "Was jedem Offizier Waehrend eines Feldzuges zu Wissen"
(What Every Officer Needs To Know During A Campaign)
(Goettingen, Karlsruhe 1788)

Tent Poles



Orderly Book

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.”*

Attributed to:

“Colonel & Brigadier General Samuel Elbert”
(Descendent Richard Elbert Whitehead)

Tent Poles

Memoirs of Hessian Conscript: Johann Gottfried Seume Upon His Arrival to Halifax, Nova Scotia, 1782

*"We came to shore very late, and it was almost night before we had straightened out everything and got settled. The tents were brought up and had to be pitched. They had made me sergeant and I was to be in charge of the pitching of our tent. The trouble was that I had only seen one tent in my whole life, and I knew absolutely nothing of the mechanics of setting it up. 'Schlippe,' I said to an old Prussian grenadier who had been assigned to me, 'I understand Latin and Greek rather well. But I know nothing about practical military things. You must help me and maybe I can help you sometime with something.' The old rascal smiled, took the hatchet and a few men along and acted as if he was executing my very wise commands. Within an hour the tent was standing as well as the rocky ground permitted. **It had not been at all easy, since we had to get our tent poles and pegs from the woods, where we first had to cut down the trees.** With the night came a storm like a hurricane, which mocked our architectural product of linen. The following morning only ten tents were left standing in the whole camp. Our was only half erect. Many of the tents had been pushed into the swamps. Now we started again, fixing them more solidly this time, to which we were forced also because of the terrible cold...*

Floor & Tent Coverings

Sleeping & Floor Coverings

During the American Revolution, a soldier sleeping in his tent with his messmates relied on the blanket he was issued and the clothing on his body to keep him warm. In the British Army, woolen caps were often issued to the men to cover their heads at night and when doing fatigue duty. These caps had a falling cape to cover their ears and neck. By sleeping close together across the width of a tent, each man provided a source of body heat to the man laying beside him.



Detail of a British Army Cloth Cap - "A Linen Market in the West Indies" by Agostino Brunias
(Yale Center for British Art)

Sleeping & Floor Coverings



“Point” Blanket reported to be carried by Private Henry Marble of Massachusetts during the American Revolution
White Wool, 2 3/4” Indigo Blue Stripes and Points
(Museum of the Fur Trade)

Bedding & Health

At certain times, bedding was supplied to the messes to cover the floor of their tents. Not only did this supply comfort and warmth, but it preserved the health of the men as well. By far, the most common form of bedding issued was Straw. Straw was supplied to the armies by local farmers in bundles called “trusses”. Each truss weighed approximately 36 pounds. When an army went on campaign, straw was often transported in wagons.

“Two trusses (bundles) of straw, 36 lb. each, for every 5 men in a tent on taking the field.”

After the British Army captured the American fortification at Breed’s Hill in Charlestown on June 17, 1775, a camp was established to secure the hard won ground. To preserve the men’s health they were issue boards to cover the floors of their tents.

Straw Bedding

[179]

Allowance of B R E A D.

A loaf weighing 6lb. every four days to every officer and soldier to pay not more than 5d for it out of his subsistence.

The requisition to be signed and given in to the Residing Commissary two days before it becomes due.

W O O D, for four Days.

	Ratio of 12lb each.
Lieutenant-General, Commandant	200
Major-General	120
Major of Brigade	4
Physician General	8
Commissioned Officers of each Company	1
Non-commissioned Officers and Soldiers	1
Women (3) of each Company	3

S T R A W.

Two trusses of straw, 36lb. each, for every 5 men in a tent or taking the field. A single truss every 8 days, with a double allowance the same as at first, once in 24 days. No straw allowed for regimental Commission Officers, but the General and suite, according to effective horses, 12lb. of straw for each horse every 8 days.

A double allowance of wood and straw for men in hospital.

Straw Bedding

A Scene of the Camp on Hampden Green

1731

Straw Piled High on One End to Elevate the Head



A Truss of Straw



Grenadiers, 22nd, 23rd (Royal Welch Fusiliers), and 24th Regiments of Foot
by David Morier 1751
(The Royal Collection)

A Truss of Straw



Grenadiers, 22nd, 23rd (Royal Welch Fuzileers), and 24th Regiments of Foot Regiments of Foot
by David Morier 1751
(The Royal Collection)

A Truss of Straw



A Military Encampment in Hyde Park
by James Malton 1785
(Yale Center for British Art)

A Truss of Straw



A Military Encampment in Hyde Park
by James Malton 1785
(Yale Center for British Art)

A Truss of Straw



MUSIKZUG EINES PANDUREN-REGIMENTS MARCHIERT MIT KLINGENDEN SPIEL DURCH DAS LAGER
(Austrian) 1796
(Ann S.K. Brown Library, Brown University)

A Truss of Straw



MUSIKZUG EINES PANDUREN-REGIMENTS MARCHIERT MIT KLINGENDEN SPIEL DURCH DAS LAGER
(Austrian) 1796
(Ann S.K. Brown Library, Brown University)

Straw Bedding

Orderly Book of Major William Heth 3rd Virginia Regiment

*“ CAMP M. BROOK, June 13th, 1777.
REG'L ORDERS.*

*The Orderly Sergeants must examine the
Tents of their respective Companies & if
any **Straw** shou' d be wanting they will
mention it when they deliver their returns.*

January 15, 1778

*The Qr. Mr. Genl. is positively ordered
to provide **straw** for the use of the troops
and the surgeons to see that the sick when
they are removed to huts assigned for the
hospital are plentifully supplied with this
article.”*



Standard of the 3rd Virginia Regiment
Captured by Banastre Tarleton at the Battle of the Waxhaws
May 29, 1780
(Sotheby's Auction House)

Straw Bedding

**General Orders, Rhode Island
22 May, 1777**

“The 22nd and 43rd Regiments and the Landgrave's Regiments, will encamp on Sunday the 25th Instant. The two flank Companies of the 54th Regiment will encamp the same Day... Straw will be ready to be delivered to the Troops at the Camp on coming to their ground, at the rate of 35 pounds per Tent, allowing 80 Tents to a British, and 100 to a Hessian Battalion.”



**Belt Plate
(DonTroiani)**

Straw Bedding



General Orders, Rhode Island 17 June, 1777

“The 22nd Regiment to change their Ground on Thursday morning. They will strike their Tents at 7 o’Clock; and march at 8... Particular care is to be taken of their Straw, as a sufficient number of Waggon’s will be allowed to carry that and their Baggage... The Troops encamped will receive 10 pounds of Straw per Tent on Monday next; except the 22nd, who will receive 15 pounds per Tent, when they come to their new Ground.”

Straw Bedding

**General Orders, Rhode Island
28 June, 1777**

“Fifteen pounds of Straw per Tent to be delivered to the Troops on Monday next.”

14 August, 1777

“Twenty pounds of Straw per Tent, will be delivered to the Troops as soon as possible.”

2 September, 1777

“Ten pounds of Straw per Tent to be delivered to the Troops tomorrow; and in future five pounds per Tent will be issued weekly.”



Straw Bedding

General Orders, Rhode Island 16 September, 1777

“The Detachment of the Landgraves' Regiment employed on the works at Newport to be relieved tomorrow, by 1 Captain, 1 Subaltern, 2 Serjeants, 2 Corporals, 1 Drummer, and 60 Privates of the 43rd Regiment. They will take their Tents and Straw with them, and will march at 5 o'Clock in the morning.”



English Caricature of a Hessian Grenadier
1778
(Ann S.K. Brown Collection)

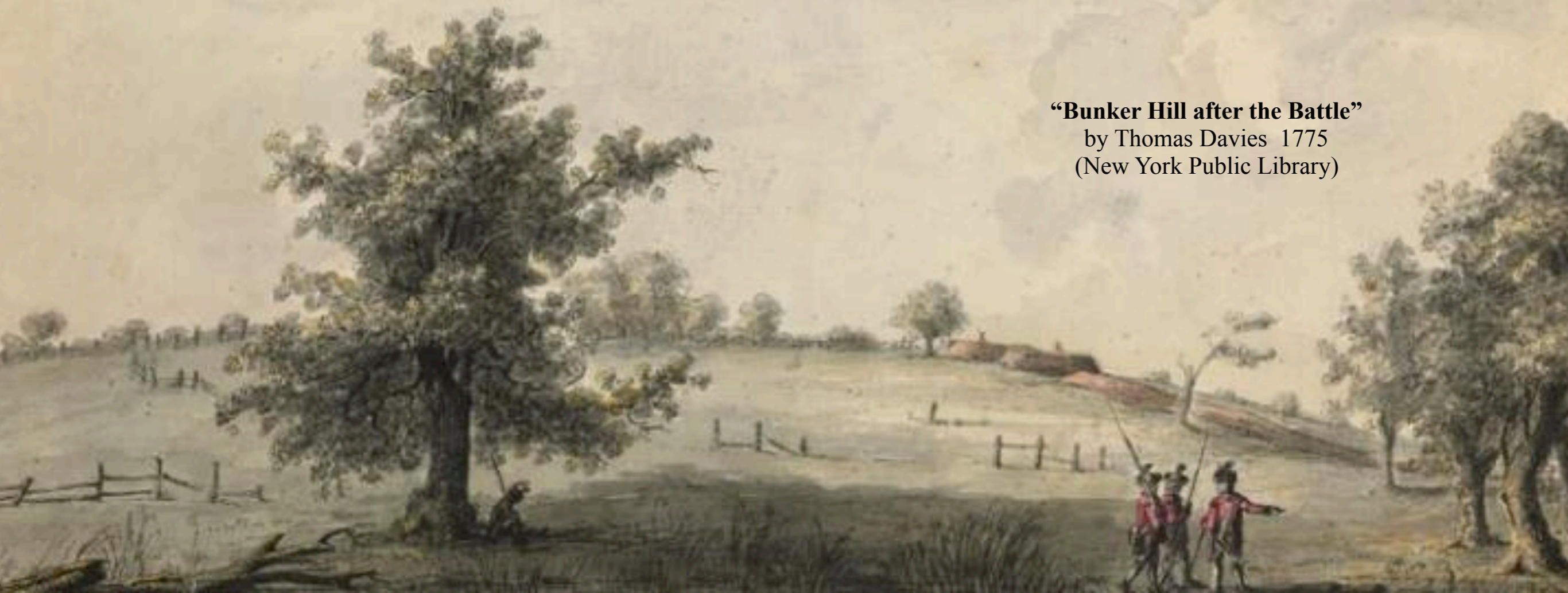
Floor Boards

Orderly Book of General William Howe, 1775

“General Howe’s Orders

*Camp on the Heights of Charlestown. Wednesday Morning at 6 O’Clock, 21st June, 1775
The Men’s Tents being Floor’d wth Boards will much Contribute to preserve Health, as many Boards therefore as can be Collected to be brought to the front of the Encampment, and afterwd proportion distributed for that purpose” (H-5)*

“Bunker Hill after the Battle”
by Thomas Davies 1775
(New York Public Library)



Covers for Tents

**Orderly Book
4th Pennsylvania Battalion
Colonel Anthony Wayne**

“August 14, 1776

Headquarters, Ticonderoga

The commanding officers of corps are desired to see that all the sails belonging to the public which have been used as tents be immediately delivered to Mr. Lane, Conductor of Naval Stores. A number of oil cloaths belonging to the artillery have been used as covers of tents. These likewise are to be immediately deliver'd to Major Badlam, Commanding Officer of Artillery.”



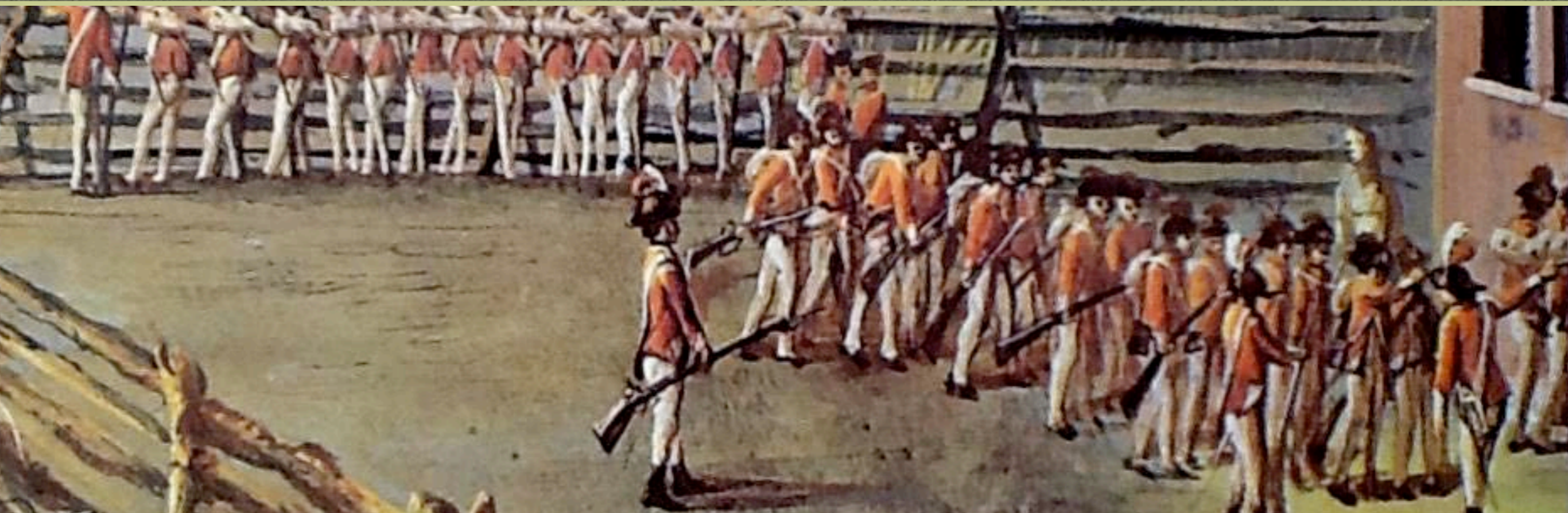
**American Artillery Linstock found at Ticonderoga
c. 1775
(Fort Ticonderoga)**

Tent Transportation

Tent Transportation

**Orderly Book, H.M. 40th Regiment of Foot
May 20, 1777**

“The Regt: to Parade to morrow Morning at Half past Eight: with Armes Accoutiments and Necessarys the last to be Properley Packd: & Slung in their Blanketts / the men to Carrey their tents and Other camp Equipage as the Waggonns will be Employd: in Carriing straw”



Tent Transportation

The Papers of General George Washington

*“Head Quarters, New York,
September 2, 1776*

*...When regiments march away in future,
the officers are to see that the men take
their tent-poles in their hands— All their
Tin-Camp-Kettles, and see the Tents tied
up carefully, and a sufficient guard left
to take care of them.” (W-2)*



General George Washington
by James Peale 1782
(Metropolitan Museum of Art)

Tent Transportation

The Papers of General George Washington

“Head Quarters, Harlem Heights, October 17, 1776...

The Tents are to be struck, and carefully rolled, the men to take the Tent poles in their hands—two Men out of a Company with a careful Subaltern, to go with the Baggage, and not leave it on any pretence—No Packs (unless of Sick Men) Chairs, Tables, Benches or heavy lumber, to be put on the Waggon—No person, unless unable to walk, is to presume to get upon them—The Waggon to move forward before the Regiments, the QuarterMaster having first informed himself from the Brigadier, or Brigade Major, where they are to pitch—” (W-2)



General George Washington
by Charles Wilson Peale

Tent Transportation



Brigadier General Stephen Kemble
by English School c. 1781

Orderly Book
Lieutenant - Colonel Stephen Kemble
Adjutant General
Deputy Adjutant General
to the British Forces in America
General Orders:

*“Head Quarters,
North River, Dobb’s Ferry, Nov. 11th., 1776.
The Tents to be struck, the Waggon’s loaded,
and the Army to be in readiness to move by
break of Day to-morrow.” (K-2)*

Tent Transportation



General Orders Issued by General Israel Putnam 29 June, 1777

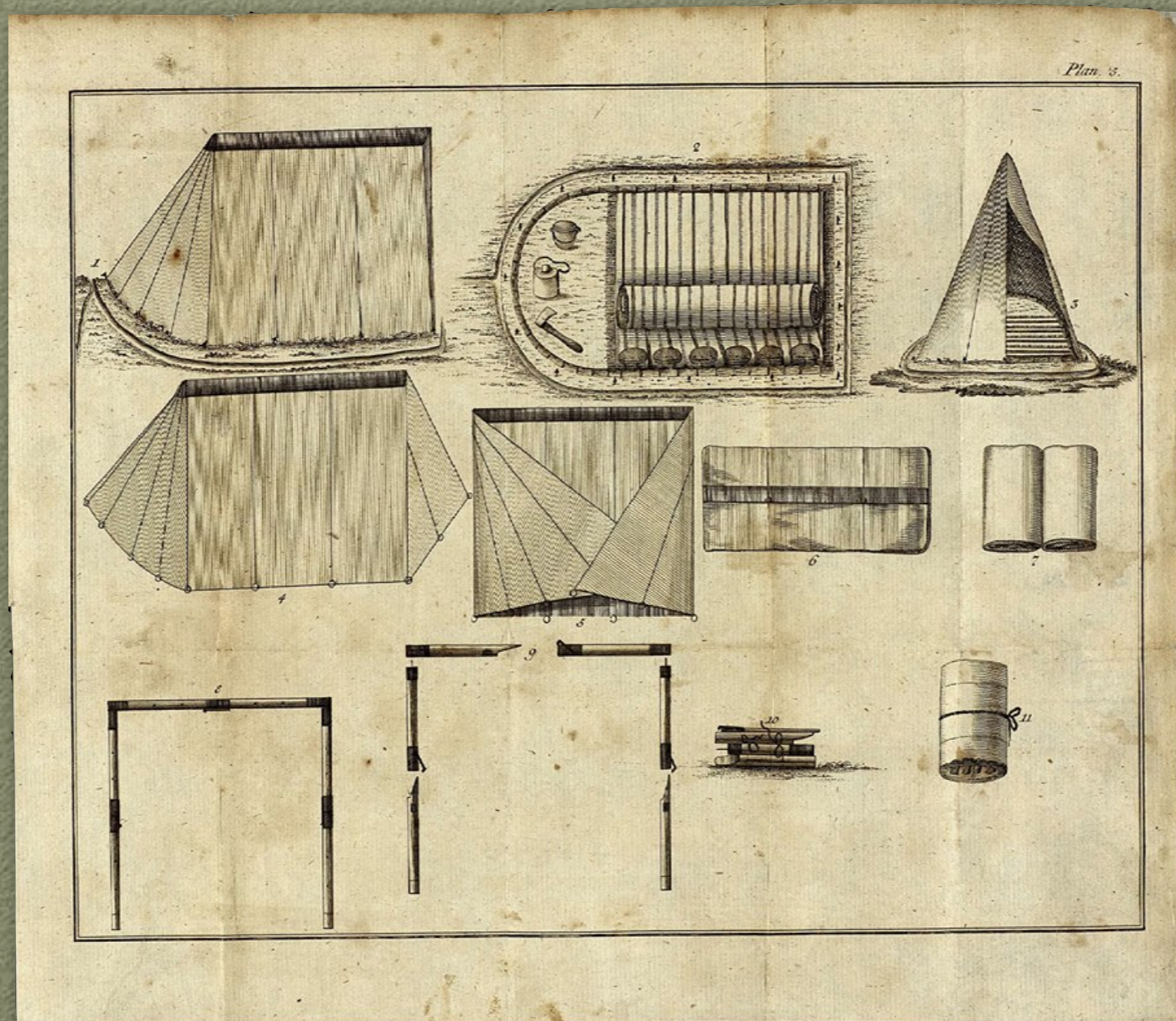
“Whenever the Brigade is ordered to strike Tents or Decamp, the Tents will be compactly made up without any Poles or any kind of Baggage within them; and tied with a String on order that they be not chaffed. The Poles also tied & put into a Waggon under the Tent. Every mess will immediately provide themselves with bark strings sufficient for these purposes. No kind of Baggage or Lumber shall be put above the Tents, but Beds or Matrasses...”

“ISRAEL PUTNAM Esqr.”

by C. Shepherd after J. Wilkinson 1775

(Ann S.K. Brown Collection, Brown University)

Tent Transportation



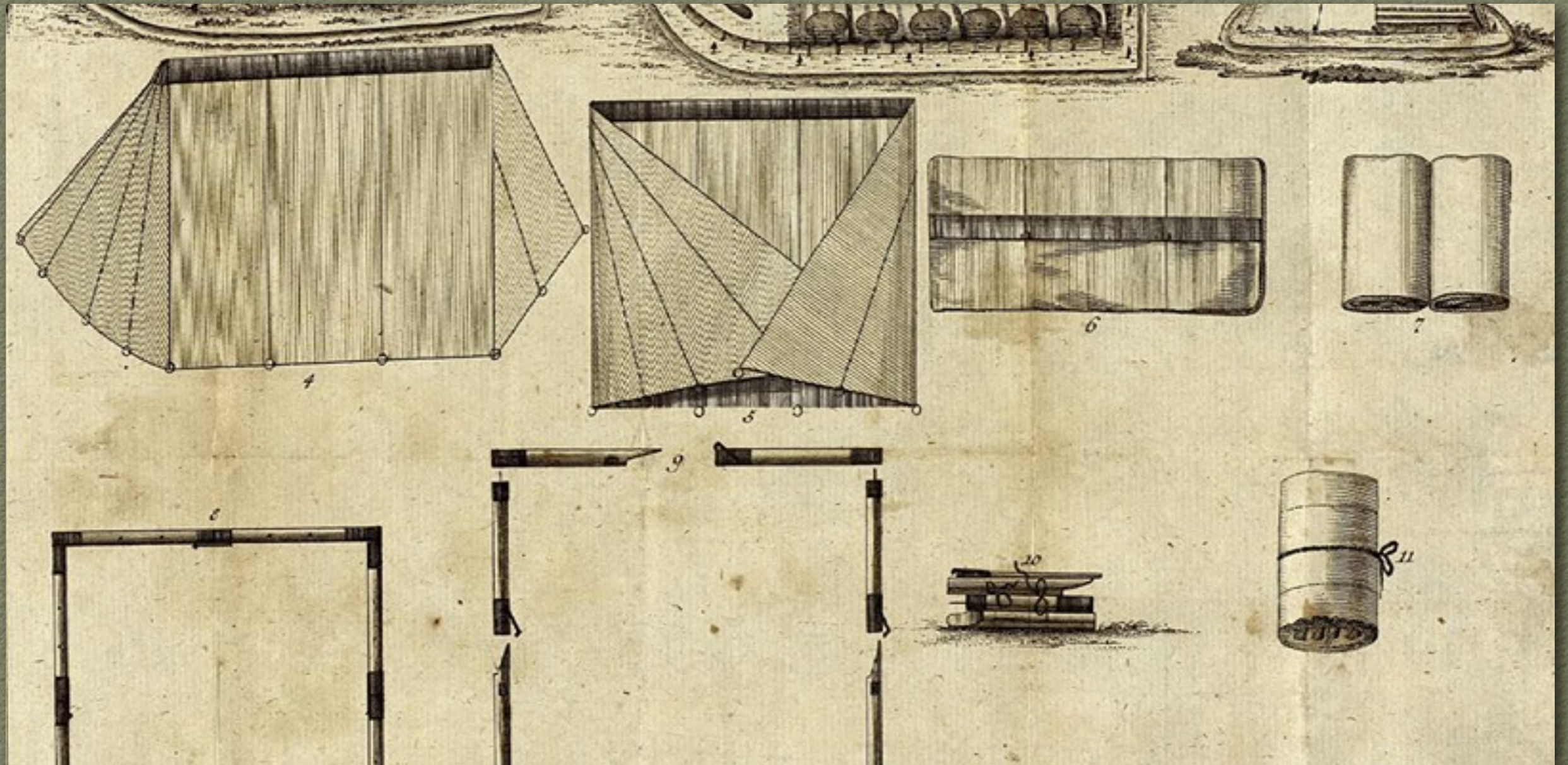
Folding a Tent

Zelte - "Was jedem Offizier Waehrend eines Feldzuges zu Wissen"

(What Every Officer Needs To Know During A Campaign)

(Goettingen, Karlsruhe 1788)

Tent Transportation



Zelte - "Was jedem Offizier Waehrend eines Feldzuges zu Wissen"
(What Every Officer Needs To Know During A Campaign)
(Goettingen, Karlsruhe 1788)

Tent Transportation

“The Tents are to be struck, and carefully rolled”

“...tied with a String”



Tent Transportation



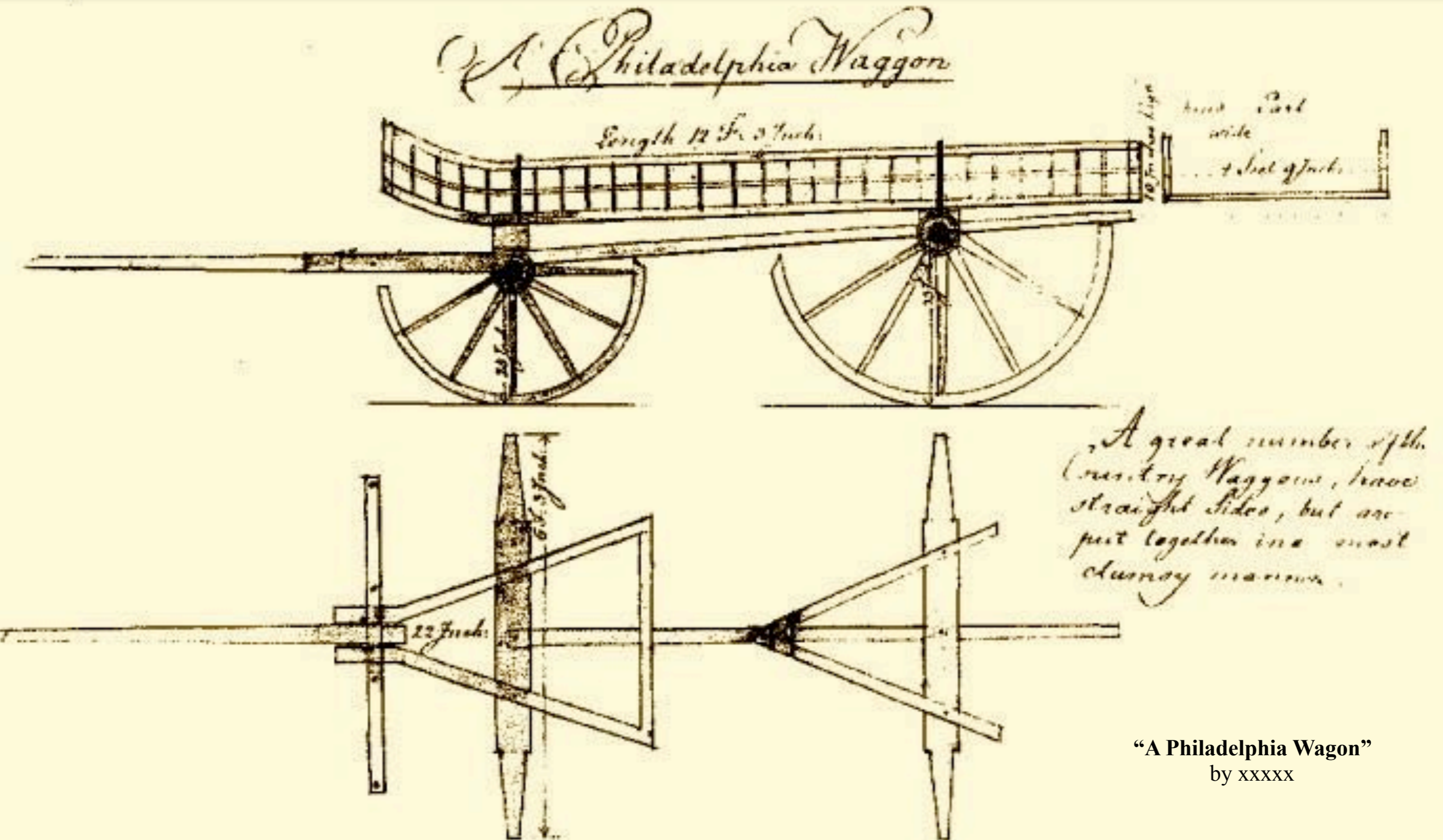
General George Washington
by Charles Wilson Peale

The Papers of General George Washington

*“Head Quarters, Ramapough,
July 23, 1777.*

...The march of the army, whenever it begins, will be made with the utmost dispatch: This renders it indispensibly necessary to divest it of as much baggage as possible.—Each Brigadier is therefore immediately to cause certain waggons to be prepared for the tents of his brigade; And when orders are given to march, they are to suffer nothing to be put into those waggons but the tents; and see that they are not heavy loaded even with them...” (W-2)

Tent Transportation



Tent Transportation

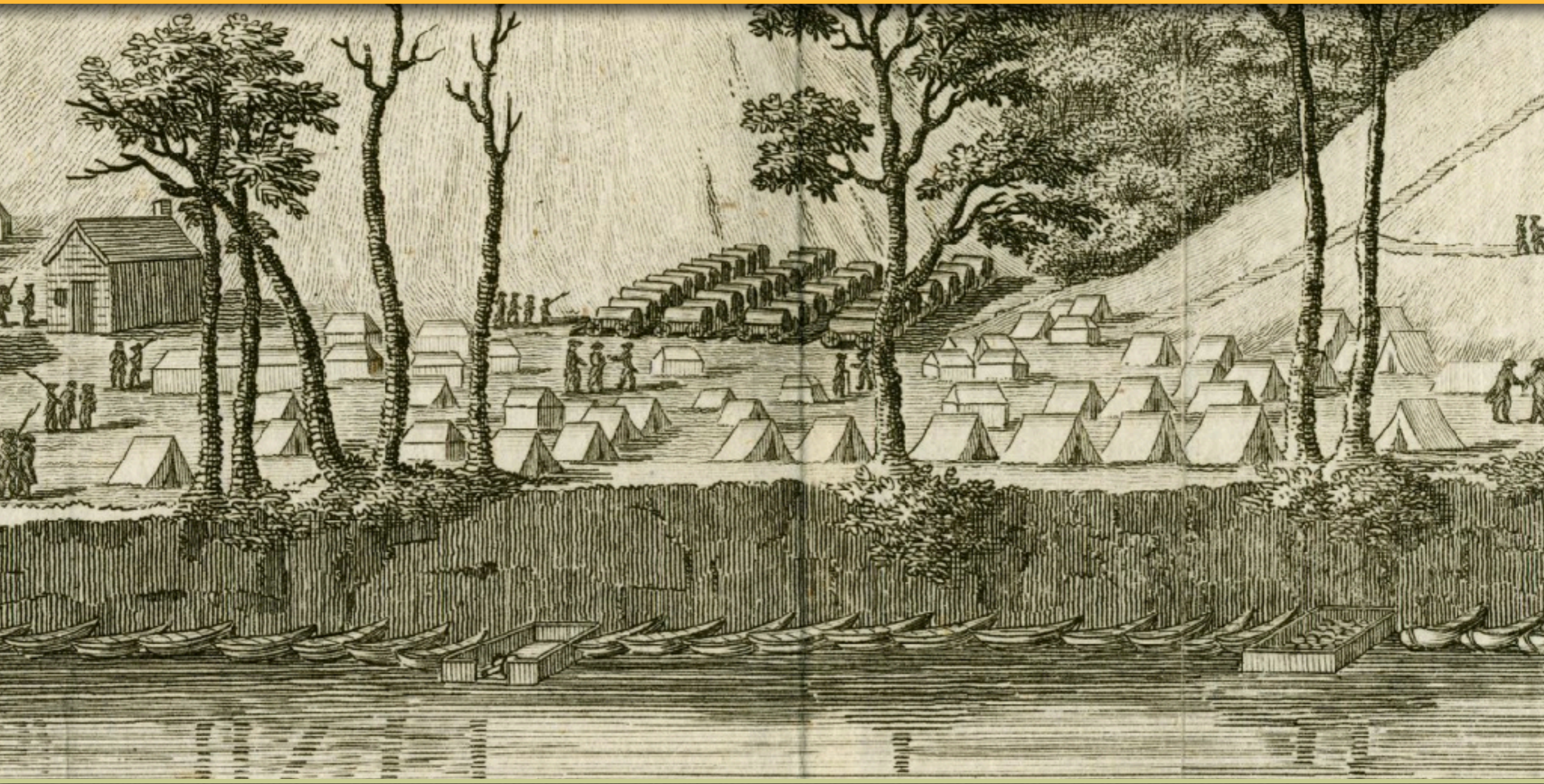


“To His Royal Highness George Prince of Wales - View of an ENCAMPMENT AT FORNHAM”
(The British Museum)

Tent Transportation



Tent Transportation



“View of the West Bank of the Hudson's River... under the command of Lt. General Burgoyne.. Sepr. 1777”

by William Lane, 1789

(Ann S.K. Brown Collection, Brown University)

Tent Transportation

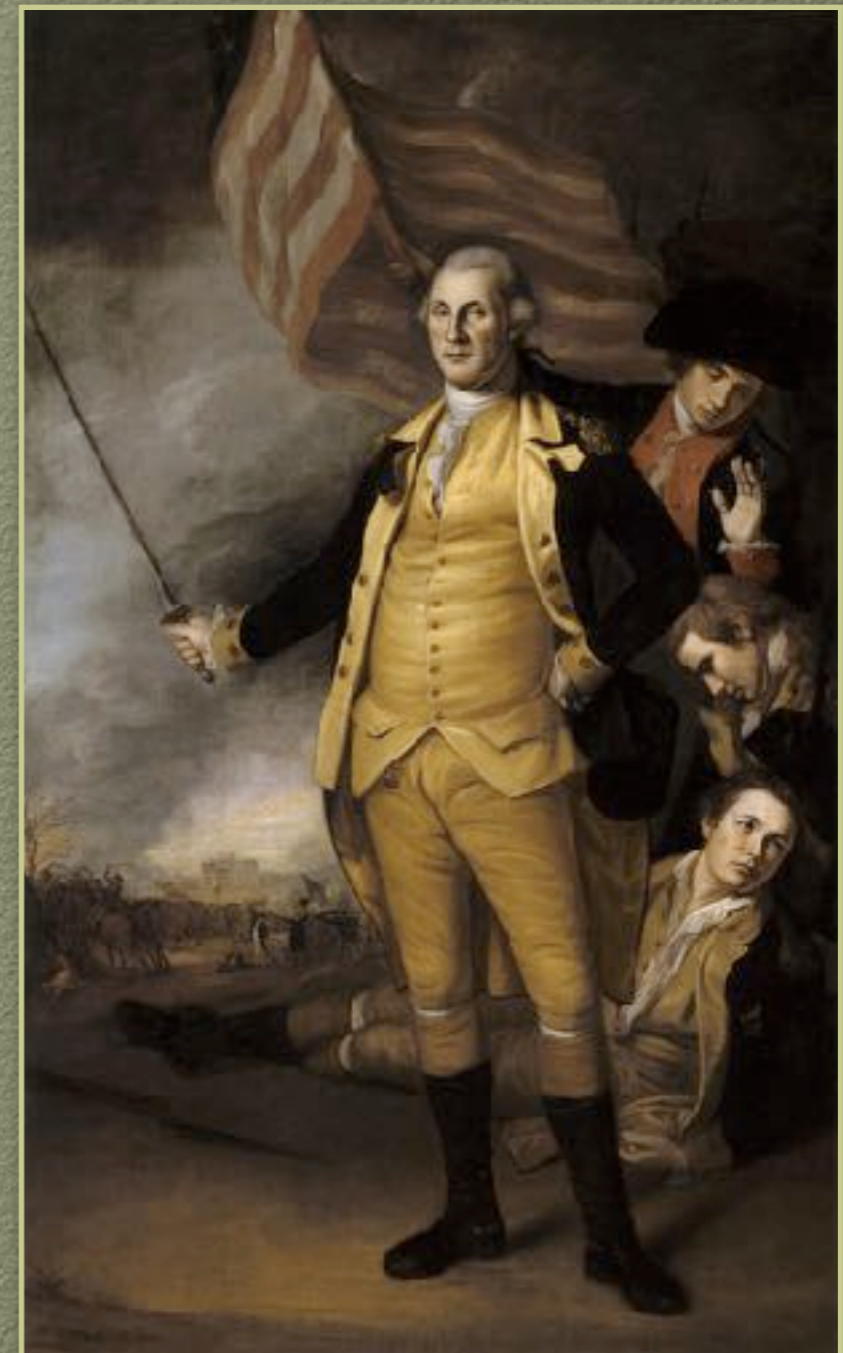
The Papers of General George Washington

*“Head Quarters, at Skippack, October 1,
1777.*

...

*The whole army are to strike their tents to
morrow morning at 8 o'clock, and get ready
to march. At nine the march is to begin,
Genl. Sullivan's division leading, followed
by Lincoln's, McDougall's, Greene's; these
form the first line; then the park of artillery,
then the second line in this order, Stirling's
division, Nash's, Stephen's. ...*

*The waggons to go in the rear of the army,
in the order of the brigades to which they
belong; All the tent waggons first.” (W-2)*



General George Washington
by Charles Wilson Peale

Tent Transportation

John Peebles 4th Battalion of Grenadiers Orderly Book

“Nov. 12th. The army put in motion early in the mornng. which was clear & cold, but the arrangement of the Baggage & accidents happening to ye Waggon retarded us much in the forepart of the day. We left the Column march'd the road we came from White plains as far as the Saw Mill Bridge which is about 1 1/2 miles, then turn'd short to the right & marched along the East bank of sd. River (in a fine Valley with high ground on each side) for 6 or 7 miles when we halted at a very good house, took our Tents &ca. out of the waggons & carried them 3 or 4 miles, thro bad road & a narrow pass which had been stop'd with a work lately made, Encamp'd on good ground within a few miles of Kings Bridge but don't know what name they gave it, almost dark when we got to our ground & the waggons did not arrive for 3 hours after.” (P-6)

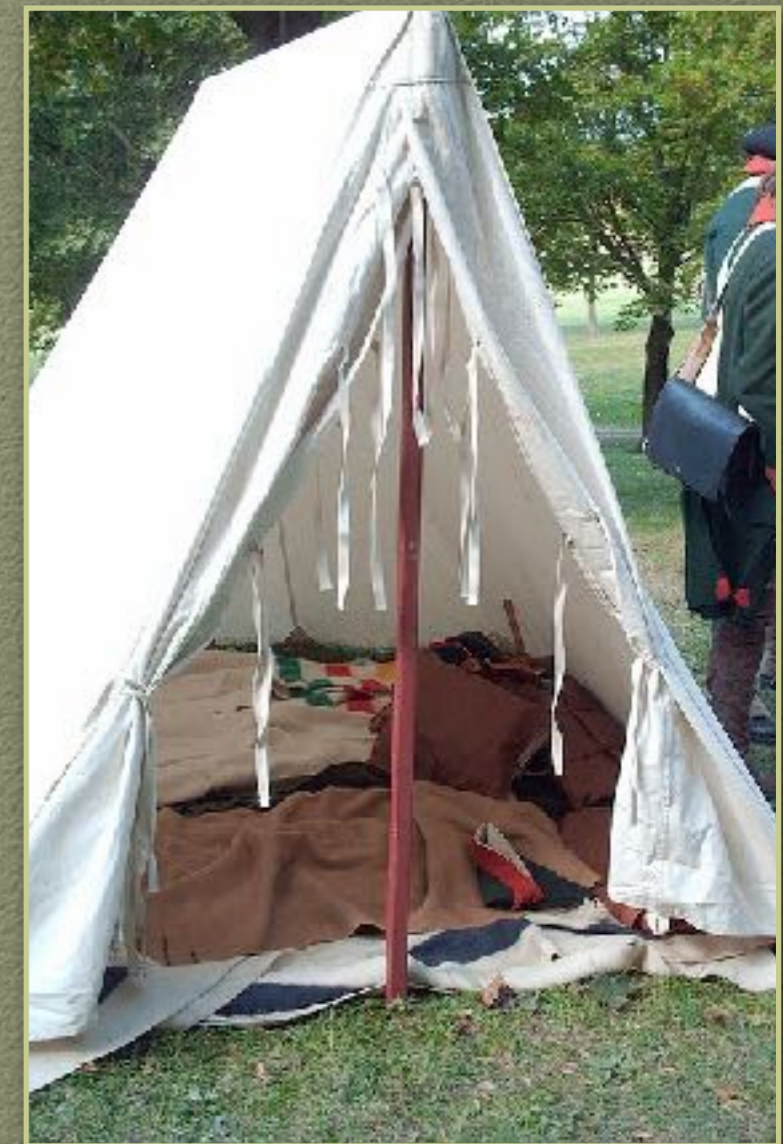
Captain John Peebles
H.M. 42nd Regiment of Foot
c. 1778



Reconstruction of The Other Ranks' Tent

Raising the Bar to Properly Educate

Which is Correct?



Should We, Can We, and are we OBLIGED to Tell the Story of their Sacrifices Properly?

Regardless of the Conflict We Study, We are OBLIGED to do Our Best
To Respect and Honor
Those who Gave Some and Those who Gave All



Tent Reconstruction Details



Tent Reconstruction Details

The reconstructed tents pictured in this presentation were entirely hand sewn by Mr. Steven Allie using the details and techniques described in this paper. Using proper linen canvas and thread, Steve's amazing talents were responsible for recreating the very first authentic other ranks' tents based on the Lewis Lochee pattern since the 18th century.

The recreated tent poles and "beetle with rings" pictured in this slideshow were fabricated entirely by hand by the very talented woodworker, Mr. Eric Swanson.

All of the recreated tent pegs seen in this presentation were made by H.W. Morgan and Sons of Herefordshire, England. Each peg was made of English ash and drawn by hand as were the originals. They were custom made based off information provided of the tent peg found at Fort Ligonier.

The authors are eternally grateful to these exceptionally talented craftsmen for making our dream of properly recreating 18th century military tents a reality.

Tent Reconstruction Details



Tents by Stephen Allie, Poles by Eric Swanson, Pegs by H.W. Morgan & Sons of Herefordshire, England

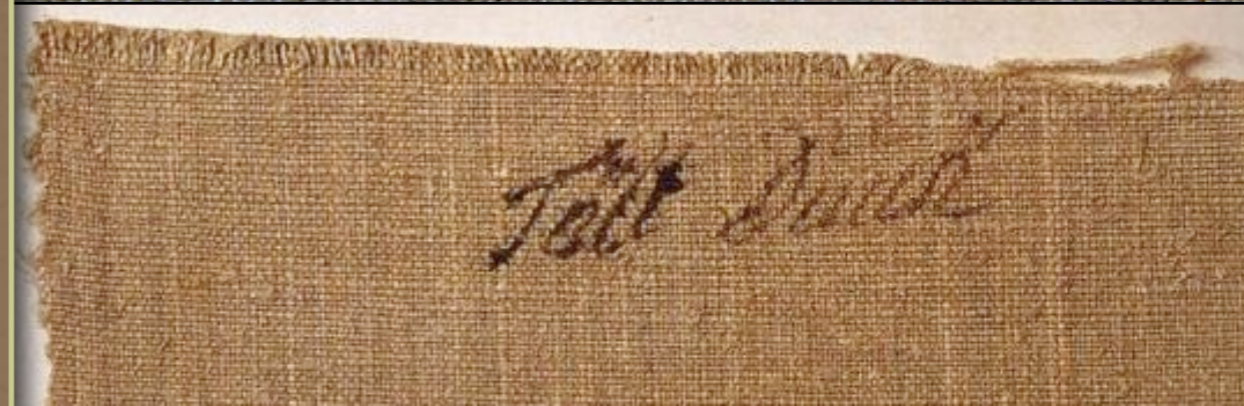
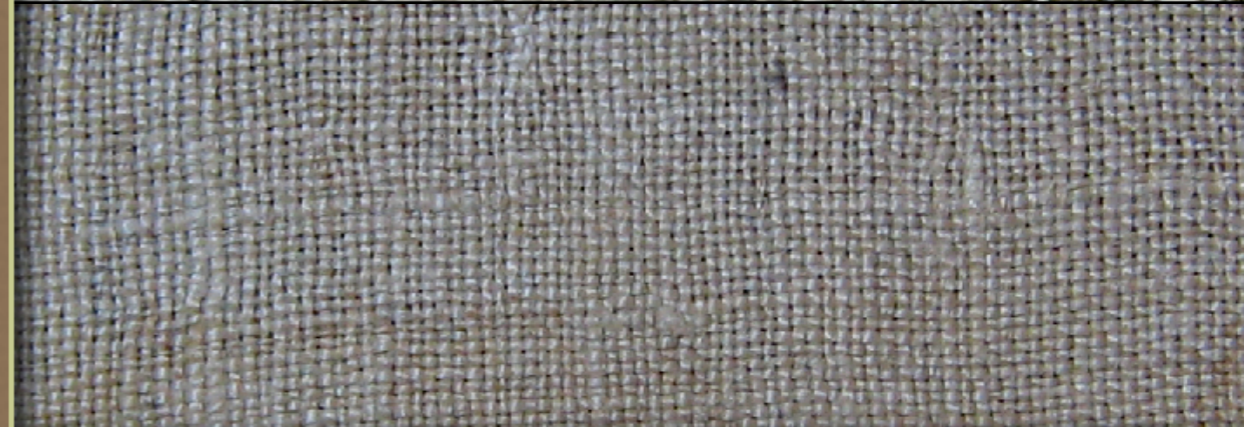
Tent Reconstruction Details



UTRECHT LINEN CANVAS # 215

All of the reconstructed tents pictured within this article were constructed out of **UTRECHT LINEN CANVAS # 215**. This painter's canvas closely approximates the weight, warp and weft of the original extant tent cloth samples known to exist. As with original cloth, this canvas sheds water but does not necessarily retard it. Being natural linen, is not treated with a fire retardant. It may be purchased online through Utrecht Art Supplies at:

<http://www.utrechtart.com>

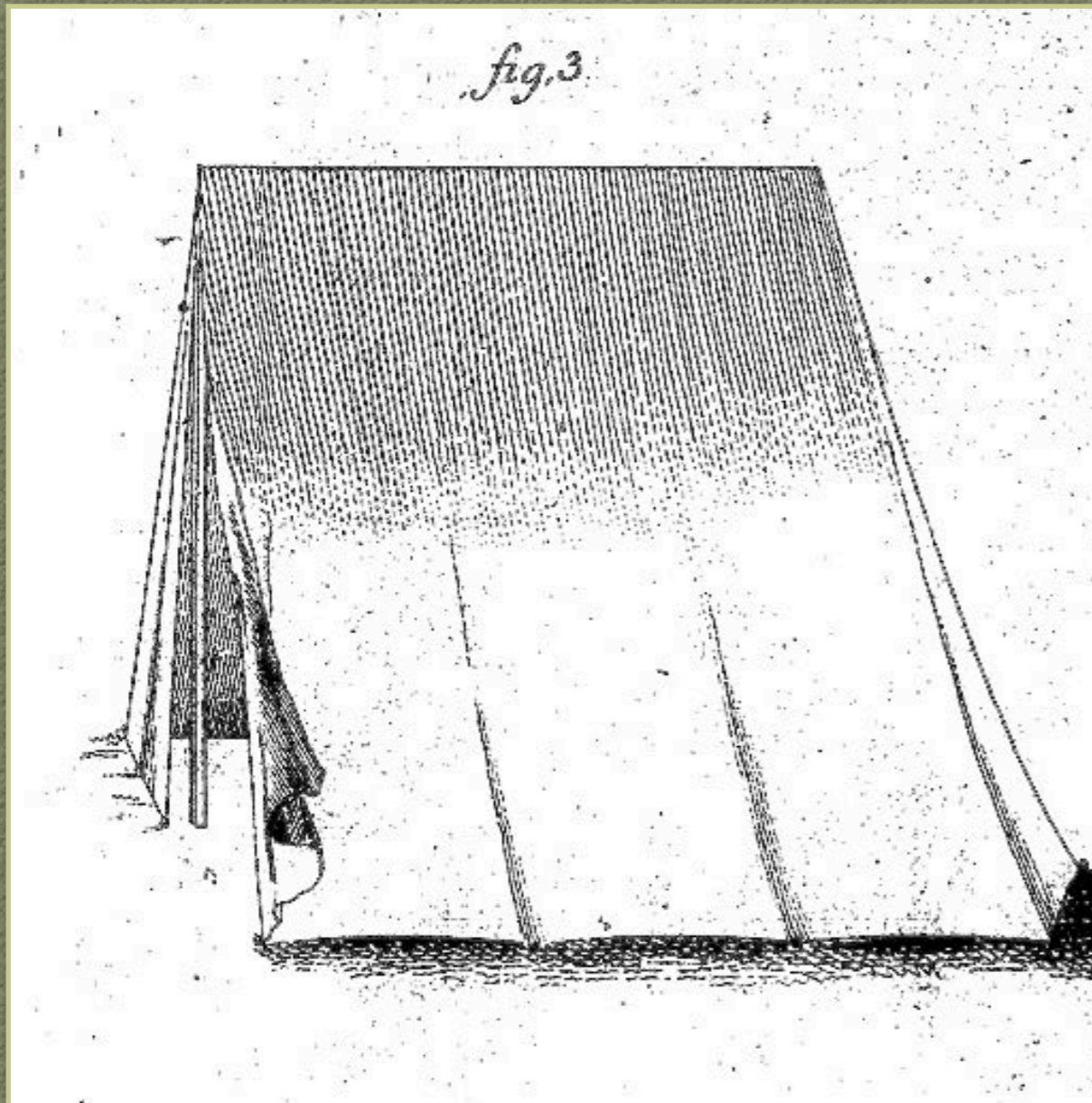


Tent Reconstruction Details



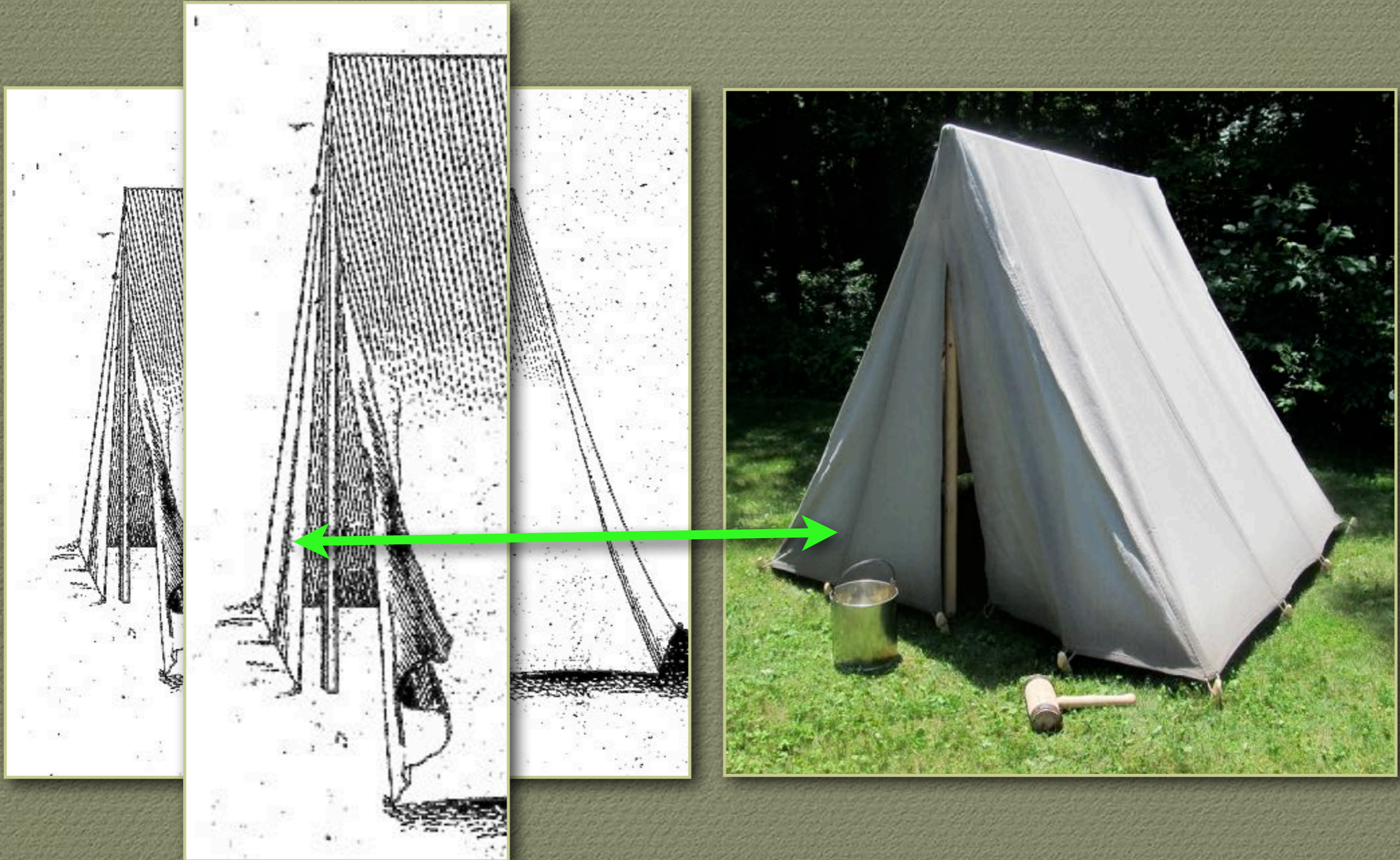
All of the tents were constructed using hand sewn “Double” or “Flat” Seams as described in this article.

Tent Reconstruction Details

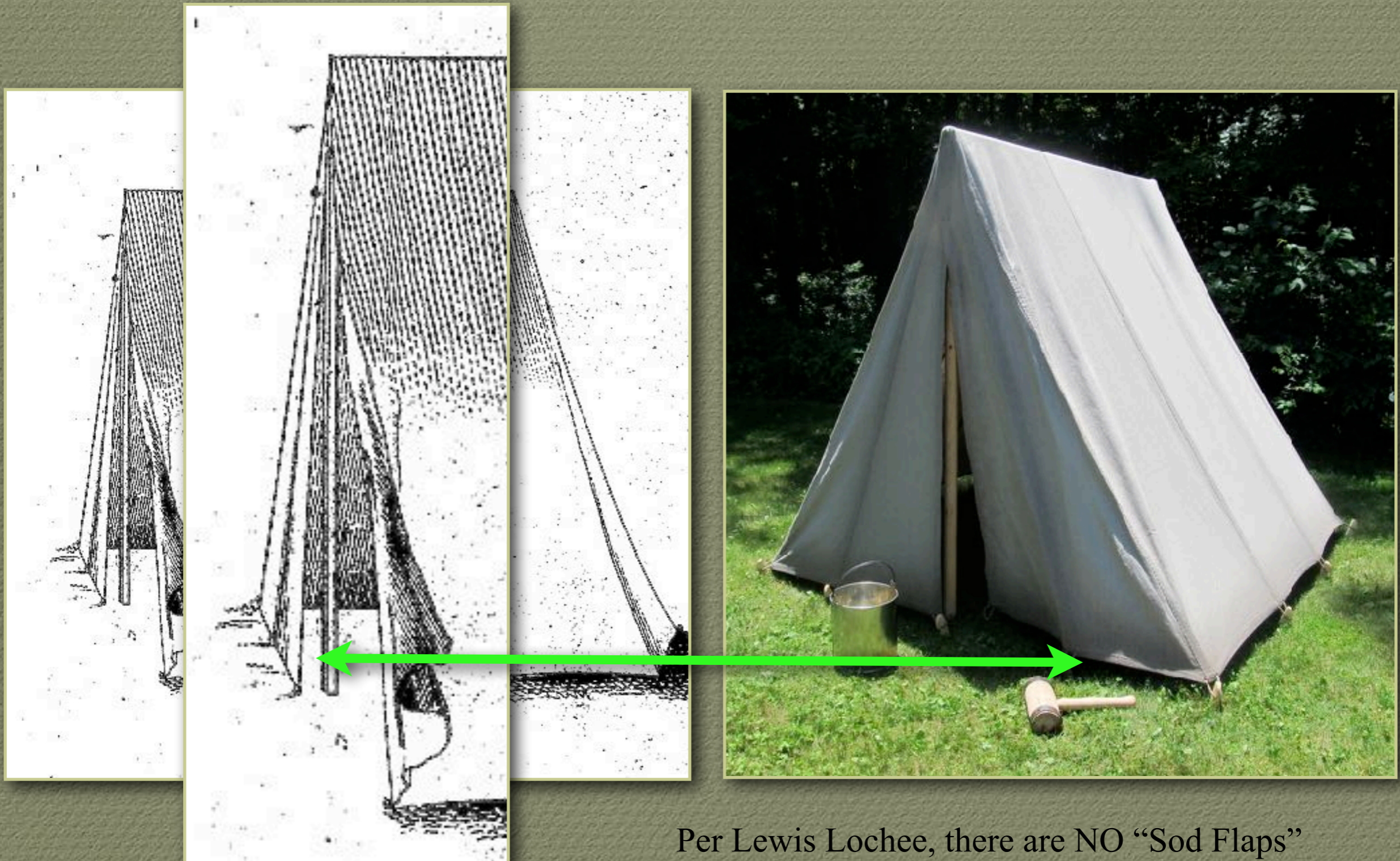


Lochee Two Panel Front Flaps with Loops at Each Seam. Front Flaps share a Common Peg.

Tent Reconstruction Details



Tent Reconstruction Details



Per Lewis Lochee, there are NO "Sod Flaps"

Tent Reconstruction Details



Front Flap Loop Closures

Tent Reconstruction Details

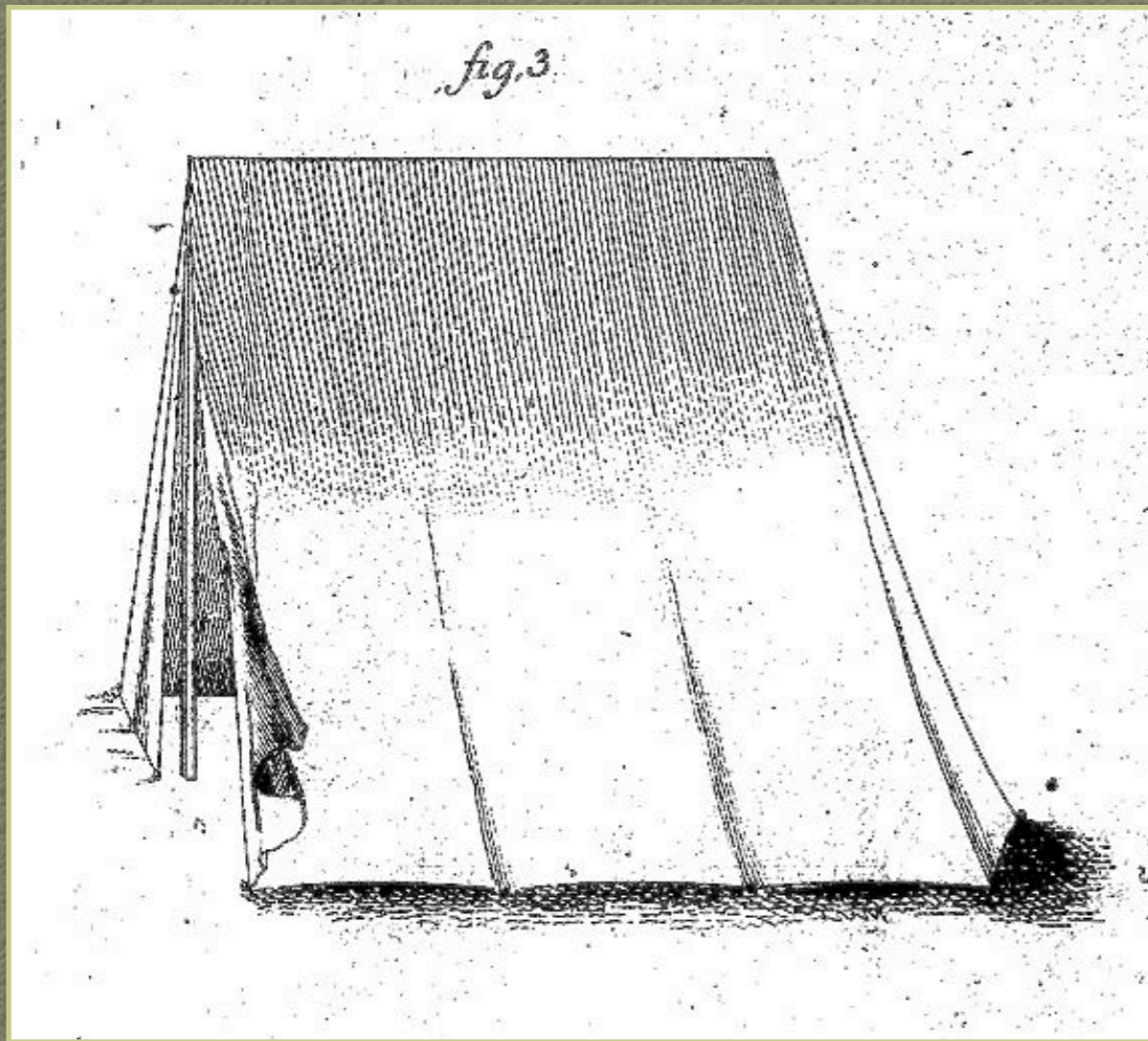


Tafel 13: Detail des Zelttes A; Burg Forchtenstein/Burgenland



Lochee Closure of Front Flaps

Tent Reconstruction Details



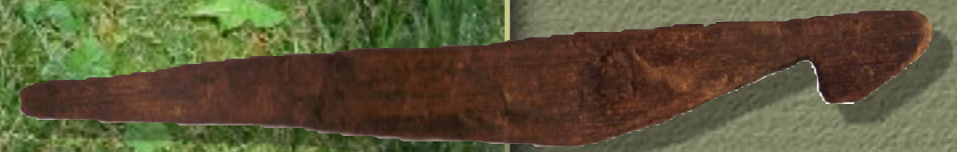
Lochee Three Panel Side Wall Construction with Three Sided Rear Bell and Loops at Each Seam

Tent Reconstruction Details



Lochee Rear Bell with Linen Loop Placement

Tent Reconstruction Details



Double Grommet Linen Cord Loops & Tent Pegs by H.W. Morgan and Sons

Tent Reconstruction Details



Double Grommet Linen Cord Loop Knots

Tent Reconstruction Details



Lochee Interior

Tent Reconstruction Details



Tent Poles with Pins - Constructed by Eric Swanson

Miscellaneous

"The Disbanded Subaltern, A Poem. By William Carter,
Late a Lieutenant (sic) of the 40th. Regiment of Foot."
Printed for the Author (Undated Imprint, c. 1780-83)

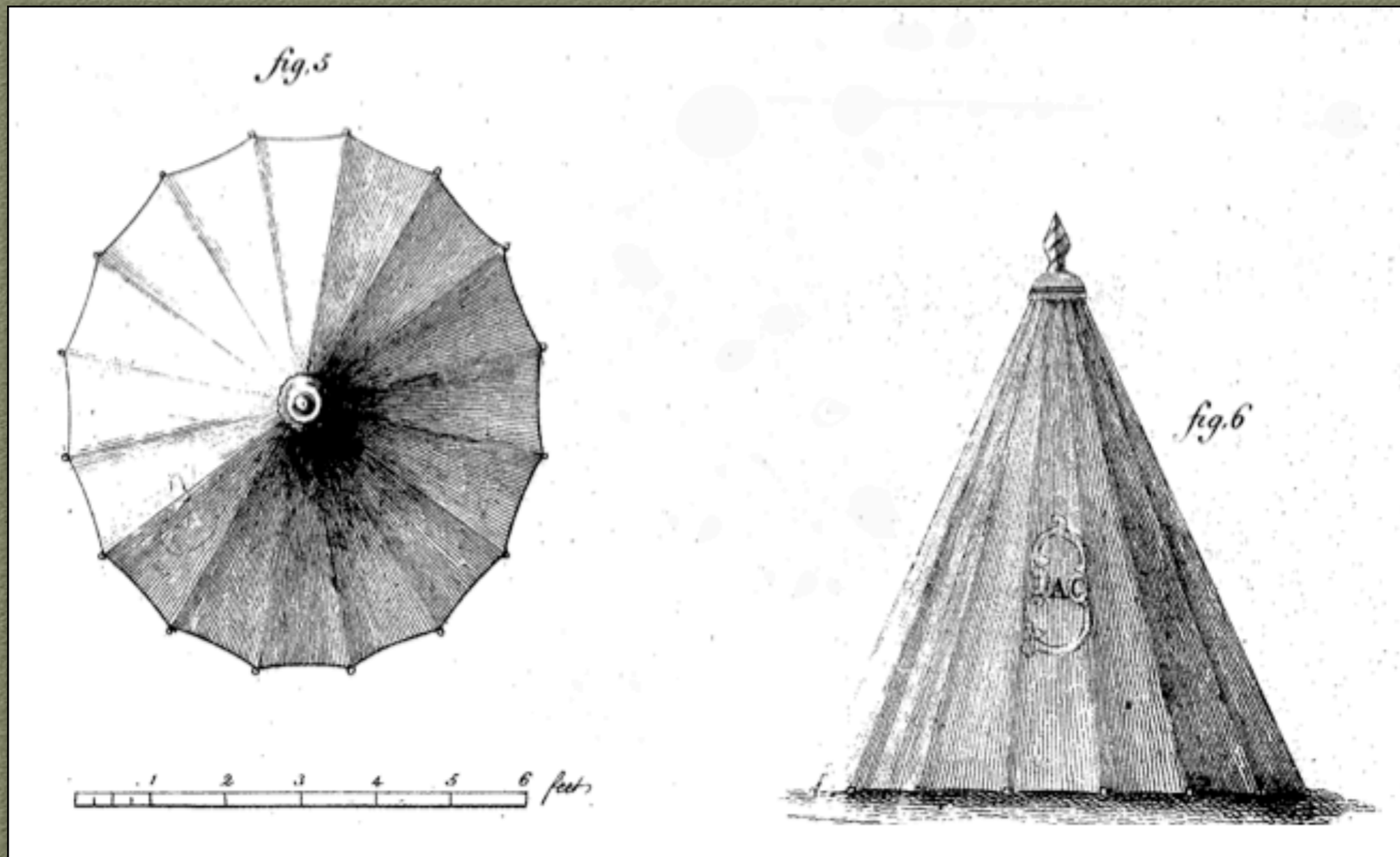
High o'er the drowsy Camp with sultry gleam
The mid-day Sun now sheds his potent beam;
Beneath the shade his canvas roof supplies,
Stretch'd on clean straw, the listless Soldier lies;
The weary files who form'd the last night's guard,
The sweet embrace of sleep no more debarr'd,
Challenge in dreams the wary midnight rounds
Or catch the watch-word's visionary sounds.
Now some adjust their burnish'd arms with care,
Clean the tough belt, the well-worn coat repair,
And some beguile the sultry length of day
With many a barren joke, fortuneless lay.
In quaint derision of the Heady glance
Now moves the steamy soil with mimic dance;
Now languid Stiness holds her fallen reign
O'er the white camp, and far-extended plain;
Save where some lad whom Fate hath doom'd to share

"The Disbanded Subaltern, A Poem. By William Carter,
Late a Lieutenant (sic) of the 40th. Regiment of Foot."
Printed for the Author (Undated Imprint, c. 1780-83)

The savoury kitchin's hospitable care,
While the kind toil his reeking brows confess,
Bears to his comrades tent the Welcome mess;
Save that, in yonder pool, which feeds the Mill
Close at the bottom of this tent-clad hill,
Their brawny limbs the sun-burnt Soldiers lave,
And woo the bracing freshness of the Wave.
Some stripling fifer with discordant sound
Now breaks the drowsy spell which lurks around;
Now gliding swift the mazy tents among,
Moves the relief in measur'd steps along,
And now, while yet the fervour of the ray
Forbids the lounge's restless step to stray,
My Walls unhung, beneath my old Marquee,
I give the vacant hour [my Friend] to thee.
Too soon, alas! shall Peace, with listless smile;
Spread her white pinions o're this hapless isle,
While gaping crowds, who mark her hov'ring high,
Shall with applauding tumults rend the sky.

Bell Tents

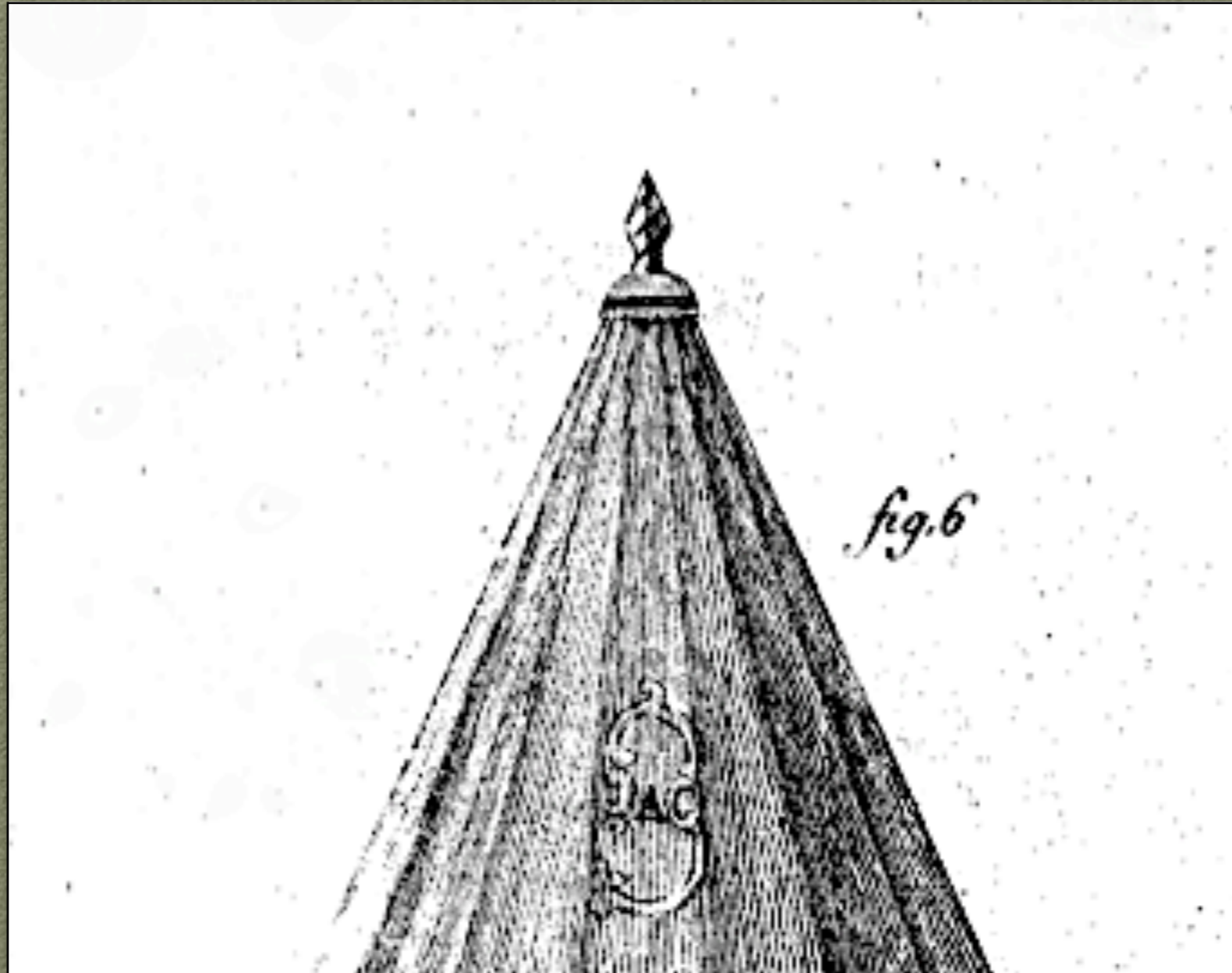
Bell of Arms



Detail from Lewis Lochee “An Essay On Castrametation” 1778

Sixteen Panel Bell of Arms Tent for storing firelocks. Six Feet in Width by Six and a Half Feet Tall, Not including the Decorative Finial

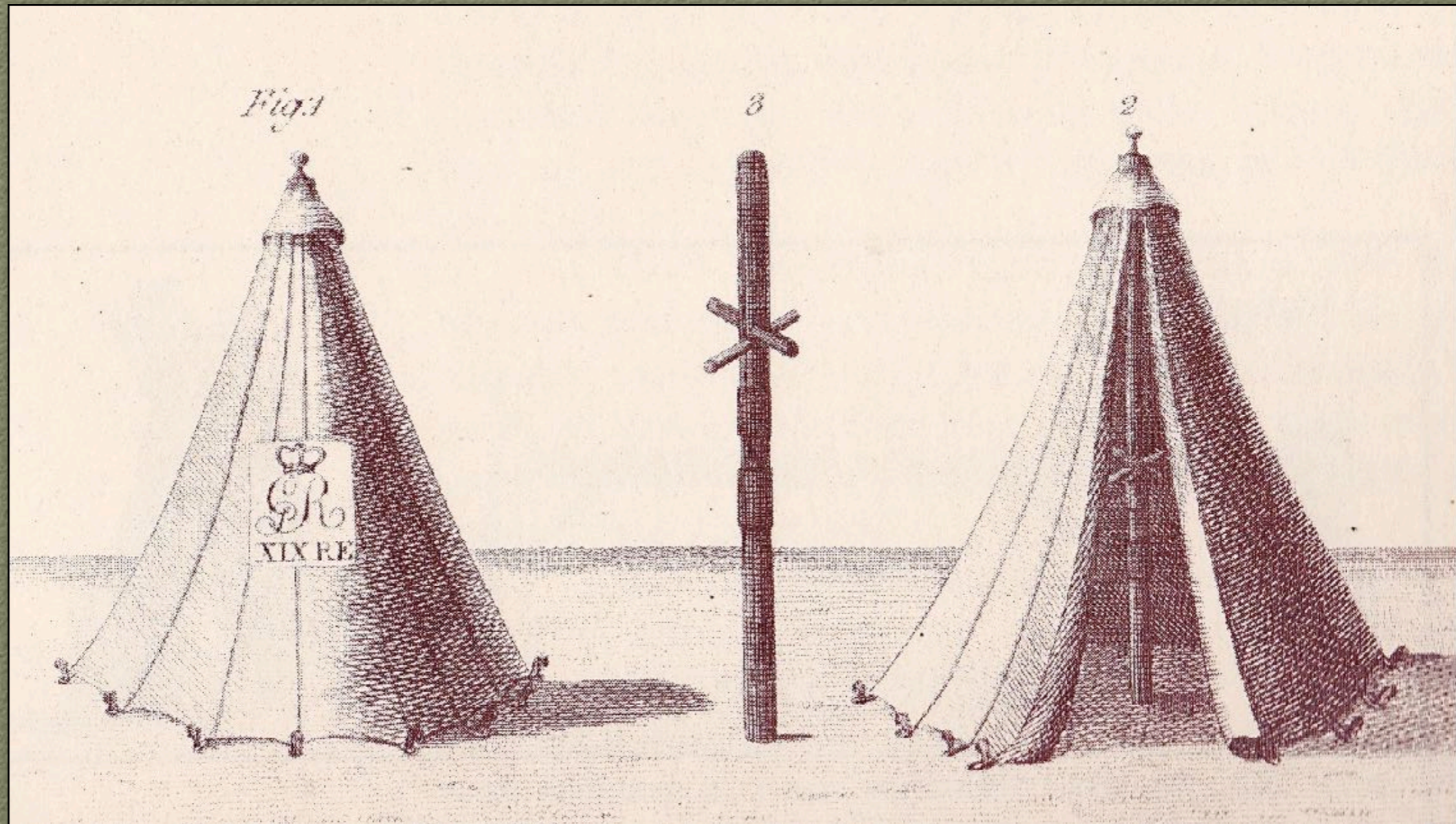
Bell of Arms



Detail from Lewis Lochee “An Essay On Castrametation” 1778

Sixteen Panel Bell of Arms Tent for storing firelocks. Six Feet in Width by Six and a Half Feet Tall, Not including the Decorative Finial

Bell of Arms



“Military Antiquities Respecting a History of the English Army from the Conquest to the Present Time”
by Francis Grose 1788

Acknowledgements & Gratitude

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

Joel Bohy, Alexander Bosch, Mathew Brenckle, Chris Fox & The Museum at Fort Ticonderoga, Henry Cooke, Don Hagist, Greg Hurley, Neal Thomas Hurst, Mark Hutter, Mathew Keagle, Philip Mead, Roy P. Najecki, Thomas Nesbitt, Steve Otlowski, Shaun Pekar, Joseph Privott, John U. Rees, Mara Riley, Mark Rogers, Gregory Sandor, Eric Schnitzer, Scott Stephenson & The Museum of the American Revolution in Philadelphia, Tim Terrell, Professor Gregory Urwin at Temple University, Rob Welch and Bob Winowitch.

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

Acknowledgements & Gratitude



Acknowledgements & Gratitude



Acknowledgements & Gratitude



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”

Bibliography

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.

Bibliography

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

Bibliography

C-5

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

Curtenius, Peter T. Letters

American Archives, 5th Series, Volumes 6-9, Unpublished MS in the Library of Congress. Courtesy Bob Winowitch

Bibliography

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

Bibliography

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.

Bibliography

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.]

Bibliography

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.

H-5

The Orderly Book of General William Howe

Bibliography

K-1

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

K-2

Kemble, Stephen, "Journals of Lieutenant-Colonel Stephen Kemble - Order Books of Lieutenant - Colonel Stephen Kemble, Adjutant General and Deputy Adjutant General to the British Forces in America, 1775 - 1778." Collections of the New York Historical Society for 1883. New York. The New York Historical Society, 1884. Reprint, Gregg Press, Boston, 1972.

Bibliography

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

Bibliography

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

Mungeoam, 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

Bibliography

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

Bibliography

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.

Bibliography

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

P - 6

Peebles, John, “4th Battalion of Grenadiers Orderly Book, 30 June - 15 November 1776.” Courtesy
of Don Hagist. Peebles Diary, Notebook 2. (Peebles Diary, GD 21/492, 2,

Bibliography

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.

Bibliography

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

Bibliography

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 it's March through the Wilderness to Quebec: with Notes and Appendix." Knowles, Anthony & Co. 1867.

Bibliography

S-4

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

S-5

Smith, Captain George; “An Universal Military Dictionary”, London, 1779

S-6

Serle, Ambrose; “The American Journal of Ambrose Serle, Secretary to Lord Howe, 1776-1778.”
Edward H. Tatum Jr., ed. Huntington Library, San Marino, Ca., 1940. Reprint, Arno Press, 1969.

Bibliography

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

Bibliography

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

Bibliography

W-4

The Orderly Book of Anthony Wayne

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