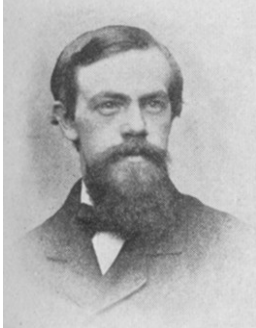


Infantry Clothing and Equipment: Observations from the *United States Army and Navy Journal*

By Mark D. Jaeger



Opinions about the quality of clothing and equipment issued to Federal troops were, to use a bowdlerized version of the old aphorism, "like brains: everybody had them." This was particularly true in the case of the *United States Army and Navy Journal*, the quasi-official voice of the armed forces from 1863 onward, whose owner and editor, Captain William Conant Church (shown at left), minced no words when discussing *les affaires militaires*.¹

Readers will therefore find the following salient (and sometimes acidly humorous) observations of considerable interest. The piece about army "duds" was originally published in the 14 November 1863 edition while the observations about infantry equipment appeared two weeks hence in the 28 November edition. The actual author of the articles remains unidentified due to Church's understandable, but often maddening, editorial habit of, at most, permitting only the attachment of *noms de plume* to submissions, ostensibly to promote candor and "objectivity." However, given the general tenor of the comments below, we should not be surprised if they flowed from the pen of Captain Church himself—a man who never lacked for something to say.

Readers should note that the below *Journal* items have been previously submitted by James S. Hutchins to *Military Collector and Historian*.² However, for the benefit of those not familiar with Hutchins' article, a "new and improved" transcription is herewith provided along with additional explanatory notes and figures not provided by Hutchins in his original piece.

INFANTRY CLOTHING.

The great questions "wherewithal shall we be clothed," excites as much interest in the army as anywhere else, and is quite as important to the soldier's well-being as to that of the Broadway dandy, even though it engross[es] the latter's attention.

As the subject has become of fresh interest to the new levy, we offer them some of the fruits of experience in this matter. One reason why enlisting is no brisker, is found in the extravagant notions of the discomforts of military life, apart from its dangers, many persons taking pains to represent Government as the great delinquent in this respect. And with so much cause for complaint against some Departments, it is well to remove odium in others, where it is undeserved.

Nothing, for example, has been more maligned than army *bootees*, as Quartermaster parlance styles them. Their equals in real service can seldom be found for double their price. Yet the recruit is usually admonished by domestic war-council to furnish, above all things, his own shoes. A stylish pair of "Balmorals," with quadruple soles and a complicated network of lacings, is about the ideal.³ The first long-roll will likely to find a man struggling with a yard of shoe-string, to thread it through a dozen holes in a hurry. And such occasions, by the way, afford no time for elaborate toilets. You must have garments fit to 'jump into' when divested at all. Besides the daily trouble of lacing, the long gaiter-strings will break, when they can't be replaced. In this respect, a buckled shoe is better, though the buckle may rust, or the tongue snap,

and leave a worthless fastening, not easy to mend or supply. The Balmorals, also, while very neat and snug, are apt to be a little narrow. If so by a hair's breadth, there is torture ahead. The superfluity, too, of that extra half-inch of soles will be manifest, after a day's march of eight or ten hours. Expensive shoes, in short, are often thrown away unused, for the despised Government 'mudscows'. These 'mudscows' or 'gunboats' as they are facetiously termed, are low-cut, stitched, very light, and very cheap. A higher shoe would better protect the ankles, but at an increased cost, and without allowing the feet air or the ankles freedom of play. The sole is very broad, and the heels broad and low, in advantageous contrast with the high and narrow pattern of ordinary shoes. The sole is sometimes thought too thin. So it is on city pavement, and might be for campaign in New Hampshire; but not for the Southern roads, where one hardly strikes a pebble in a mile. Indeed, the perpetual muddy, clayey, Southern soil often seems, as in the camps around Washington, to actually rot the stitches, so as to bring off the soles in less than a month.⁴ The canvas leggings, at one time issued, would keep out water, but more especially the *dust*, which on a heavy tramp will clog up the trowsers and make the underclothing excessively dirty. But it took time to adjust them.

The underclothing is generally very good--not, indeed, of the home style and quality, but simple and healthy. The Government socks, however, were evidently modelled for a race of gorillas, and have give rise to an ingenious tailoring device of cutting off the tops, and sewing up the balance so as to fit ordinary feet. Long, close-woven, snug, home-knit stockings are a great luxury, though even these may now and then be charged (unless they be meant for the colored troops) with having too much *heel*. The shirts are good, though, like those sent out by benevolent societies, usually too short. We have seen a bundle of the latter unrolled by the Sergeant in charge, amidst a general laugh--the brief garments seemingly designed for cherubs or other beings needing no protection below the arms.

The blue trowsers are substantial and comfortable, and with no mean pretensions even to style--a little roomy in the seat and wide around the waist for youngsters, but they grow out to them in time. The uniform frock is good, especially as compared with the coats some regiments carried to Washington [in 1861], before they donned the blue. A Massachusetts regiment, since famous, we remember in ridiculous bob-tailed garments, resembling the dress-parade coat of a street-organist's monkey.⁵ The coat is sometimes considered too thick for summer and too thin for winter. But this difficulty is almost unavoidable. Our soldiers are liable to make the transit of half the Temperate Zone in a single campaign, and a dress thick for one might be chilly for his more Northern comrade. But the house or fatigue coat is the easiest and most comfortable of all the garments.

The cap is useful and even natty, in most eyes, though we were never greatly impressed with its beauty. But no other cap is so comfortable. There is room for a wet sponge, green leaves, a handkerchief, or other protection against the sun, in the top. The slanting vizor fits easily to the forehead, without marking it, though the straight-vizored forage cap may look a little jauntier.



English military observers
wearing their "diminutive,
vizzorless fezzes."
Library of Congress

It seems an improvement over the diminutive vizzorless fez, worn on fatigue by some English regiments. The dress-hat is usually considered a nuisance--heavy, hot, stiff, and ill-looking. Many regiments refuse to draw them; others get rid of them as soon as possible after drawing them. Some readers may remember the hats floating round off [Cape] Hatteras [North Carolina] in BURNSIDE's Expedition to Newbern.⁶

The shape of the hat shields from sun and storms, but it might be made smaller, lighter, more flexible, and stripped of the feather, and of those brass gewgaws which serve little use but as a mark for the enemy to shoot at.

In overcoats, there is a great difference between the lots distributed and even between different coats in the same lot. Whenever the recruit can pick his clothing, he will notice the

diversity in texture, color, general style and value, and a little care at such times is well taken. The overcoat is warm, is handy considering its bulk, and folds or rolls into a compact bundle. The overcoats issued to the three months' men were the best we have happened to see--thick and substantial, dyed in the wool, and all woven so as to be air-tight and water-tight. But besides the much greater expense, they were both too hot and too heavy for Southern campaigning. Perhaps it might be well to have the cape woven and water-tight, and the coat light as at present. The cape might be made separate from the coat, to button upon it if required. A very great advantage would be to furnish, as in officer's coats, three garments, varying in weight, where there is now but one. The cape would often be sufficient, where coat and cape together are too hot and cumbersome. But there would be, amongst other objections, the liability of losing or misplacing the capes.

In blankets, there is everything from excellent to execrable. Civilians find some of them good enough to purchase for private use. Others are not fit for horse-cloths. You can thrust your finger through many a blanket stamped U. S., like paper. Competent regimental Boards of Survey are often compelled to reject two out of three, or sometimes sweep off the whole. We have often seen men come out of them after a night's bivouac, looking like animals, covered with fine wool. No terms, indeed, are too strong to describe the poverty of thousands of army blankets and overcoats. Sometimes, in unboxing fresh overcoats, you can find instances where the needle has run for half a yard, perhaps, without thread, merely interlacing the fibres of the wool, before the operator had re-threaded the machine. In many cases it is necessary to re-make the coat almost entirely. The cloth also is often wretched. We have been struck with the excellence of the cavalry and artillery overcoats, and the shabbiness of the infantry. Officers are often satisfied to draw and wear a private's cavalry overcoat, merely substituting the "I" button.

The black overcoats issued to the nine months men⁷ were the masterpiece of efforts in that direction--the flimsy fabric almost like tissue, the dyeing of the wretchedest [sort]. We have known trousers and dress-coats to be completely spoiled by the inky liquid which exuded from the overcoats in a rain-storm. So easily did the coloring infusion leave on a suggestion of moisture, that it was a camp jest that the coats were made for steeping. And a certain

nondescript liquid called indifferently tea or coffee as the cook might fancy, was commonly known as overcoat tea--one boiled coat producing a barrel of tea. Besides, the very looks of these garments shamed the men. The more comfortably you clothe soldiers, the more neat and becoming their uniform, the better they will do their duty. Make their dress a laughingstock, if you would have them lose self-respect, like a parti-colored convict. But as it is now, the uniform is a source of pardonable pride; furloughed men and discharged men even, being glad to wear it in the streets.

There is a great difference in the clothing of different departments, East or West, of different corps and divisions, and even of regiments from the same State, brigaded together. There is often as wide a diversity between parts of the same outfit--the overcoat being good and the blanket poor, perhaps, or *vice versa*! Each regiment has a different experience, and that of many readers may differ from ours. We do not claim, as is evident, that the Government clothing cannot be bettered, but only that it is very good. Its style is about half way between the looseness of the French, and the stiffness of the old English pattern. An American has a disbelieving shrug for those tall fellows whom he sees in stiff leathern stocks, tight coats, trowsers strapped under their shoes, with caps stuck on one side of the head and rattan in hand, parading the streets of Quebec.



The French uniform, on the other hand, has hardly succeeded, except, after many trials, in pleasing our people. Zouave battalions had made it popular, and a few thousand uniforms of *chasseurs á pied* have been disbursed for alleged meritorious services.⁸ But our troops have generally gone back to the old regulation model.

As to the present quality of the clothing, there is still cheating enough by contractors, but perhaps an improvement from the time when furnished shop-room cloths, cob-web blankets, and shoes filled with pine shingles, was the rule. The dailies [were] now filled with outcries from the soldier, and complaints from his friends at home, against knavish contractors of shoddy or pasteboard leather. The weeklies joined the pursuit by many satirical cuts. Whether it is that all the old cloths in the country have now been made up for the Army, or whatever the cause, the chase has been abandoned. Occasionally still a discovered swindler starts a hue and cry in the papers, but in the main the shoddy excitement is over.

Chasseurs á pied uniform of
the 18th Massachusetts
*Image courtesy of Don
Troiani*

Government has served its apprenticeship at tailoring, and knows now its customers' needs. It has learned to deal with contractors, its system of protection is better, its Inspectors more experienced, bad goods less easily smuggled through, and outrageous swindles less

frequent. The veteran, too, has learned how to use his clothing. Much that he thought fraudulent was genuine stuff, only something new to the wearer--coarse and rough in style, but sound in substance. And in short, however it may have been formerly, the recruit no longer needs to supply himself at a hardly-spared expense with the equivalents of regulation clothing. And especially he should know that such an equivalent can only be had at a much great price. Two dollars, for example, will buy the soldier an extra pair of serviceable shoes. French bootees or top boots may have some advantages over these, but the government could not undertake to equip a million of men on that scale.

Government clothing supplies then, have certain good qualities. They are just adapted to the soldier's needs, being the fruit of simple experience. They are furnished at a very low cost, as an inspection of the price list will show. They are made in a sufficiently neat and becoming style. Being transported with the army, the soldier can have them at the same rates in localities where otherwise he could not get them for months, or only from sutlers at extortionate prices. The yearly allowance is amply sufficient for ordinary service. The value of the undrawn surplus goes to his credit. Finally, if from any cause he wishes to overdraw his account, the extra amount may be charged against his wages, and payment is now called for in cash.

INFANTRY EQUIPMENTS.

Having in a previous article said what we had to say of "Infantry Clothing," we now add a few words upon Equipments. The *knapsack* in ordinary use, as is well known, is a wooden frame, covered with leather, painted canvas, or similar material, substantially like the French and English patterns. Its chief objection is that the top boards press directly against the shoulder-blades and chafe them severely, if the knapsack is carried for a long time fully loaded. When McCLELLAN advanced on Yorktown, in the Chickahominy campaign,⁹ a reporter sent North the remarkable dispatch, that some of our brave troops, eager to get forward, actually threw away their knapsacks, regardless of the loss. The truth was, that the knapsacks thrown away on the Peninsular march were dropped, less from patriotic fervor than from pain in the back. Some soldiers, indeed, remove the boxes entirely, the old Mexican campaigners often setting the example. The soft knapsacks, or those without frames, are less chafing; but on heavy marches in warm weather they lie solid and hot between the shoulders, like a sack of meal, and there is no chance for ventilation. The frame might perhaps be fitted to the back, and otherwise improved.



In SHORT's patent [knapsack], the wooden strips are curved, thin and light, and not fastened together, but easily adjusted.¹⁰ His arrangement of the straps also materially eases the burden, and the whole structure is light and convenient, while capable, apparently, of bearing rough usage.

Short Patent Knapsack (front and rear views) of Private Andrew Cram
7th Maine Light Artillery Battery
Images courtesy of The Horse Soldier

The SHORT knapsack has been supplied to some regiments in place of the other, by private enterprise--Government being induced to allow commutation value, and the surplus being paid by those undertaking the equipment in this respect. Rubber-covered knapsacks protect their contents from moisture, but are still more uncomfortable than leather, under a hot sun. Those covered with hide, with the hair outside, are usually thought too clumsy to supersede others to any great extent. Many complaints against the Army knapsack are traceable to an improper method of wearing and strapping it; and to excessive packing. Attention to these matters is made the personal duty of company officers in the European service. And with us, Art. xxxvi (§687), of the "Revised Regulations" on "Troops in Campaign," says "When necessary, the orders specify the rations the men are to carry in their haversacks. The field officers and captains make inspections frequently during the march; at halts they examine the knapsacks, valises and haversacks, and throw away all articles not authorized." At division or brigade inspections, or perhaps even at Sunday inspections, officers are particular to have the knapsacks neat. But on the march, when care is needed most, there is apt to be only a general warning against overloading, partly because officers dislike to intermeddle in this respect. Sometimes an inspection of the knapsack reveals a small stationer's shop set up in its interior, with hordes of old letters, newspapers, canned meats, rebel bullets, geological curiosities, and the like, stuffed into the corners. But experience corrects the evil, and there is a difference between the packs of a brigade on its first and twentieth march.

The British foot-soldier, according to a London magazine, has furnished to him *five* brushes, and the cavalryman *eight*, besides "an infinity of other articles, such as blacking, sponge, button-sticks, &c., which he has to account for at any moment; which is rather hard, seeing that when a man is campaigning--with the enemy perhaps upon him in a night attack--he can't always pack his knapsack as leisurely as a traveller leaving an inn." We incline to think that if a brush or two is missing after half a dozen bivouacs, no great penalty will be incurred.

But whatever the French and English soldiers may carry in campaigning, in garrison service, at least we see them with knapsack square and nearly flat, the coat tightly rolled on top, and everything trig¹¹ and neatly strapped. Our volunteer regiments often march with enormous packs, bulging out to the utmost distension of the flap, the straps strained, and the whole an amorphous mass, hardly recognizable as a knapsack.

The Government *haversack* will outlast a dozen of the fancy sort sold in the stores. These are invariably used up and thrown away after trifling service, and the regulation style substituted. The latter is a simple, inelegant satchel, costing a quarter as much as the other, is stronger, lighter and more capacious. It has fewer pockets, it is true, and the contents are apt to get thoroughly mixed by several days' carriage. It has an inside lining, which, however, usually gets torn up, in time, for gun-wads. Coffee and sugar rations are sometimes dealt out for a march in small cotton bags, one to each man, and are so kept clear of the meat and hardtack. Another praiseworthy device is the small tin-box strapped to the knapsack for the same purpose.

The bulging double-convex shape of the *canteen* prevents it from being worn in the regulation style, "on the left side, outside the haversack," especially when the latter is crammed with rations. The cloth partially protects the tin from the sun, and wetting it keeps the contents cool. If the canteen be filled with water only, or coffee without milk, it will continue sweet. But some carry whatever liquid they can get--beer, whisky, apple-jack, or milk. Milk soon sours the canteen, and whisky makes it black and foul.

The leather equipments, belts, boxes, bayonet-sheath and frog, seem unnecessarily heavy at first. But they are all substantial, *and quite as good as the British [Enfield] ones captured on blockade and distributed to our troops* [emphasis added]. It is quickly seen that the belts are not too wide, and that narrower ones would "cut in" too much. Recruits seldom "handle cartridge" neatly, the partitions in the box causing considerable manipulation to get the cartridge out--though less when the box is brought to the front, as it should be, when loading. Some regiments in the field, and many commands in garrison, where fewer rounds are carried in the cartridge-box, transfer the latter to the waist-belt, dispensing with the cross-belt. The change looks neat, and is favored somewhat by the experience of regulars; but it is pronounced injurious to the loins. At all events, in active campaigning the use of the cross-belt as a support to the full cartridge-box is unquestionable.

It is puzzling to explain the necessity of the breast-plate, except it be to furnish a conspicuous target for the enemy. It requires time to scour the plate and keep it shining. And we have heard men complain sometimes, that the canteen and haversack straps crossing the plate press its spurs into the chest, and create annoyance in that way. The waist-belt plate is obviously a clasp as well; but what use does the other plate serve? In general, however, the infantry uniform and equipments are good, and everything useless is dropped. For instance, we have but one uniform button for all troops, an initial in the shield denoting, for officers, to what arm of the service they belong. But, according to the English writer above quoted, "every regiment in British pay has its own distinctive button with its own special device. ***Silvered ones for the militia; big-sized page-buttons for the hussars; rich gilt for the guards; and second best for the line. The button should seem to be [a] distinctive enough regimental emblem, but there is as broad variety in the facings and trimmings of the uniform. There are no less than sixteen shades of green alone used in facings of the British army, besides an infinity of buffs, browns, yellows and blues, and all the other colors of the rainbow."¹²

Perhaps Government might do well to establish National manufactories of Army clothing and equipments. It may seem strange, at first, to suggest the propriety of Government turning

harness-maker and tailor. Yet why not make its own uniforms, as well as its own guns? Experiments in importing Enfields have only established the superiority of our own rifles for ordinary service. Why not a National clothing workshop secure the same beneficial results in uniformity, excellence in quality, perfect adaptation to the needs of the service, facility in supply, economy of production, and whatever other good effects flow from our Springfield armories and similar government enterprises? At least, we should then have something which could with more accuracy of language be called a *uniform*. The various shades of color, the diversities in texture now prevalent, and the different beau-ideals of martial proportions now entertained by cutters and stitchers, would be assimilated.

We think, too, more positive and equable rules could be made for the care and preservation of clothing and equipments. At present it is sometimes hard to tell whether an unsoldierly appearance in this or that particular is due to the positive fault of the wearer, or to original sin in the garment. Above all, the vexation and mischief worked by dishonest contractors should be checked and diminished. Every ell¹³ of cloth going to the manufactory should be weighed and measured. Every shoe or coat put together should be examined by comparison with a deposited regulation pattern. All this, however, and even the question to what extent, if to any, such plans would be beneficial, is rather a consideration for the future, for times of peace. At present more urgent matters concern us, and we must continue to trust for rapid supplies of clothing to private sources.

¹ The *circa* 1865 image of William Conant Church is drawn from Miller, Francis T., ed.-in-chief. *The Photographic History of the Civil War*, Vol. X. New York: Review of Reviews Co., 1911, p. 25.

² Hutchins, James S. "Comment on Union Infantry and Cavalry Equipage in the Army and Navy Journal, 1863-1864." *Military Collector and Historian*. 48, 2 (Summer 1996), p. 77.

³ "Balmoral" laced shoes, or half boots with closed throats, were made fashionable by Albert Saxe-Coburg-Gotha (1819-1861), Prince Consort of Queen Victoria (reigned 1837-1901). Nicknamed after "Balmoral Castle," the royal residence at Edinburgh, Scotland, this style of footwear consisted of a closed front laced ankle boot characterized by the vamp wings being extended along either side to form a galosh. "Quadruple soles" apparently refers to a Nineteenth Century version of "stacked" soles and heels.

<http://podiatry.curtin.edu.au/shoeglos/content.html>
<http://podiatry.curtin.edu.au/boot.html#fantasy>

⁴ The section of this article addressing army footwear is also available for viewing at "The Chambersburg Cobbler": <http://www.chambersburgcobbler.com/mens>

⁵ The precise identity of this Bay State regiment is unclear. However, *Dyer's Compendium* indicates that several "Ninety Days" Massachusetts militia regiments passed through, or were encamped around, the environs of Washington DC during the spring and summer of 1861. Among these was the Sixth Massachusetts, of "Baltimore Riots" notoriety.

⁶ A reference to General A. E. Burnside's successful, January-February 1862 combined-service amphibious expedition that established effective Federal control over much of the eastern North Carolina coast. An excellent account of Burnside's enterprise can be found in Richard A. Sauers' *The Burnside Expedition in North Carolina: A Succession of Honorable Victories*. Dayton OH: Morningside Press, 1996. The incident described is obscure but the circumstances suggest that some of Burnside's ship-borne troops detested their "army hats" so much they simply pitched them over the side in favor of more practical "lids."

⁷ "Nine months men" were those who served in regiments raised under authority of Abraham Lincoln's 4 August 1862 call for an additional 300,000 volunteers for nine months' service. Most of the units eventually raised were provided by the New England states, New York, or Pennsylvania. Ironically, many nine months' units did not see significant action until their terms of service had nearly expired. One such regiment, the One Hundred Fifty-first Pennsylvania Volunteer Infantry, alone suffered seventy-two per cent casualties at Gettysburg.
<http://www.geocities.com/Heartland/Hills/7117/151PAInf.html> and
<http://www.mcfarlandpub.com/book-2.php?isbn=0-7864-0804-9>

⁸ The author is referring to the ten thousand French light infantry (*chasseurs á pied*) uniforms ordered by the War Department and subsequently delivered, along with a large quantity of French-issue equipment, in December 1861. The Sixty-second Pennsylvania, Eighty-third Pennsylvania, and Eighteenth Massachusetts regiments all reportedly received them; however, they were worn only briefly, or not at all, during the ensuing Peninsula Campaign and never again thereafter. Excellent accounts about the *chasseur* uniforms can be found in Coates, Earl J., Kochan, James, L., and Troiani, Don. *Don Troiani's Soldiers in America*. Mechanicsburg PA: Stackpole Books, 1998, p. 150-152 as well as in Coates, Earl J., McAfee, Michael J. and Troiani, Don. *Don Troiani's Regiments & Uniforms of the Civil War*. Mechanicsburg PA: Stackpole Books, 2002, p. 27.

⁹ The writer seems to have confused his events. The "advance on Yorktown," during the opening stages of George B. McClellan's Peninsula Campaign, occurred 4-5 April 1862. As for the incident mentioned by the writer, the 9 April 1862 *New York Times* carried the following in a dispatch sent from "Fortress Monroe" describing the actions of McClellan's troops as they drew up in front of the enemy's works at Yorktown:

About 10 o'clock on the morning of the 5th [of April], the booming of the first gun was heard. It electrified the whole line. Overcoats, blankets, haversacks, &c., were thrown away by the anxious soldiers, each regiment vieing [sic] with the other to be the first in [to the fight].

McClellan's forces did not actually reach the Chickahominy River until nearly the end of May due to inclement conditions, Confederate delaying actions, and McClellan's consistent overestimation of Southern troop strength. The actual "Chickahominy Campaign" culminated in the "Seven Days" battles at the end of June 1862.
<http://www.peninsulacampaign.org/campaign.shtml>

¹⁰ Joseph Short, of Boston, Massachusetts, was granted patent number 34,272, on 28 January 1862, for his knapsack, which featured a unique strap arrangement permitting ventilation of a

wearer's back and shoulders. Short was thereafter issued a patent (37,203, 16 December 1862) for an improved strap arrangement, which reduced an annoying habit of his knapsack to sway sideways when its wearer marched quickly or ran. Additional illustrations of "Short's Patent Knapsack" can be found in Francis Lord's *Civil War Collector's Encyclopedia*, Vols. I & II, Edison NJ: Blue and Grey Press, 1995, p. 150-151. An idealized lithograph showing Short's knapsack is also shown in James S. Hutchins' *Military Collector and Historian* article.

Photographs of a Short knapsack, identified to John Fuller, Company I, 53rd Massachusetts Volunteer Infantry, can be viewed at:

<http://www.authentic-campaigner.com/forum/showthread.php?t=7468>. Yet another Short knapsack, identified to Andrew Cram, 7th Battery, Maine Light Artillery, can be viewed on the "Horse Soldier" website: <http://www.horsesoldier.com/catalog/c0015.html>

As of November 2004 Joseph Hofmann, of "Jersey Skillet Licker," <http://www.skilletlicker.com>, has begun offering a limited run of reproduction Short's Patent knapsacks.

¹¹ Noah Webster's *Dictionary* (New York: S. Converse, 1828) states that "trig" is an archaic synonym for "trim" or "neat."

http://65.66.134.201/cgi-bin/webster/webster.exe?search_for_texts_web1828=trig

¹² Two superb online resources for researching British Army uniforms of the Victorian era are "British Infantry Regiments, 1660-1914,"

<http://geocities.com/Pentagon/Barracks/3050/buframe.html>, and "Military Heritage," <http://www.militaryheritage.com/>

¹³ Noah Webster's *Dictionary* (New York: S. Converse, 1828) describes the *ell* as follows:

ELL, n. [L. ulna.] A measure of different lengths in different countries, used chiefly for measuring cloth. The ells chiefly used in Great Britain are the English and Flemish. The English ell is three feet and nine inches, or a yard and a quarter. The Flemish ell is 27 inches, or three quarters of a yard. The English is to the Flemish as five to three. In Scotland, an ell is $37 \frac{2}{10}$ English inches.

http://65.66.134.201/cgi-bin/webster/webster.exe?search_for_texts_web1828=ell

The specific length to which the writer refers in his article was undoubtedly the English *ell*, which was fixed at approximately forty-five inches by sundry acts of Parliament in late medieval times.