A Canteen is a Canteen, or is it?

by Kevin O'Beirne

Small things can mean a lot. When a living historian appears in public clad in "light marching order," certain items stand out. One such important item—and one that is too often overlooked by many reenactors—is the lowly canteen. Not all canteens are made alike and, as with all items for sale on Merchant's Row, it is "buyer beware" when it comes to authenticity. The goal of this article is to provide basic facts on period Federal canteens so that reenactors can tailor their equipment to their specific portrayal.

The Federal Depot System.

Federal soldiers were issued equipment through "arsenals" or "depots" in various cities. While several "sub-depots" existed, the major centers that supplied the smaller depots were located in Philadelphia (the "Schuylkill" depot), New York City, Cincinnati and St. Louis. Prior to the war, the Schuylkill depot was the sole supplier for the US Army.

All depots attempted to make their equipment comply as closely as possible with Army Quartermaster Department requirements although, with the exigencies of war and the need for huge volumes of equipment, compromises were made. Furthermore, quartermaster regulations changed during the course of the war.

To ensure an accurate portrayal, historical interpreters should identify the depot from which their original unit drew equipment during the war. Because of changing Quartermaster Department regulations and contract variations, it is also important to establish a time period during the war for the unit's impression.

For most of the war, the Army of the Potomac drew its supplies from the large depot near Washington, D.C. This depot in turn drew its goods from both Philadelphia and New York, and perhaps, to a much lesser extent, Cincinnati and St. Louis. These four "regional" depots served as centers for stockpiling of finished goods, as well manufacturing and contract administration centers. The Schuylkill, Cincinnati and St. Louis depots had in-house manufacturing centers and also let and administered outside contracts to private firms. Private contractors made all of the goods issued by the New York Depot. Government employees inspected each piece of military equipment manufactured by contractors for the army. Canteens were inspected for leakage before the covers and straps were added and, if found to be acceptable, were stamped by the inspector. From August 1862 onward, contractors were required to place their names on the canteen strap or spout and after May 1864 were also required to include the date of the contract on each item.

Canteens had the following principal components: body and spout, cover, cork and attachment, and strap. Details on each component are provided below.

Body and Spout.

In late 1857, the United States Army developed the oblate spheroid canteen that would be issued to millions of Federal troops during the Civil War. The body of all Federal canteens included two soldered, oblate spheroid halves, the spout, and three tin "keepers" for the strap. What came to be known as the Model 1858 canteen held three pints of water and was a wholly American invention. The canteen body was tin-plated sheet iron, and was smooth and entirely devoid of any markings. The old, pre-1857 canteens had a large "U. S." stamped in the tin; Civil War canteens did not have this stamp.

Throughout the war, the St. Louis, Cincinnati and New York depots issued what is today termed "smoothside" canteens. The Schuylkill Depot introduced a major variation in July 1862 by fabricating many, but not all, canteen halves with ribs or corrugations, hence this canteen's unofficial names of "bull's-eye" and Model 1862, even though the bull's-eye canteens were never officially adopted by the Federal army during the Civil War. The number of corrugations on bull's-eye canteens was not specified, although most had five to seven corrugations per half. It is interesting to note that, despite the widespread use and popularity of the bull's-eye canteen by many reenactors, this particular variation on the Quartermaster Department regulations was provided only through the Schuylkill Depot and only after mid-1862.

Obviously, genuine tin-plated sheet iron canteens are the most accurate alternative for reenactors. Because the iron is prone to rust when the tin is worn off, modern makers offer versions made of stainless steel—obviously not available in the 1860s.

Many reproduction canteens differ in size from originals, as shown in FIG 1. In general, they should be $7^{5}/_{8}$ inches in diameter, about $2^{3}/_{3}$ inches thick, and hold three pints of water.

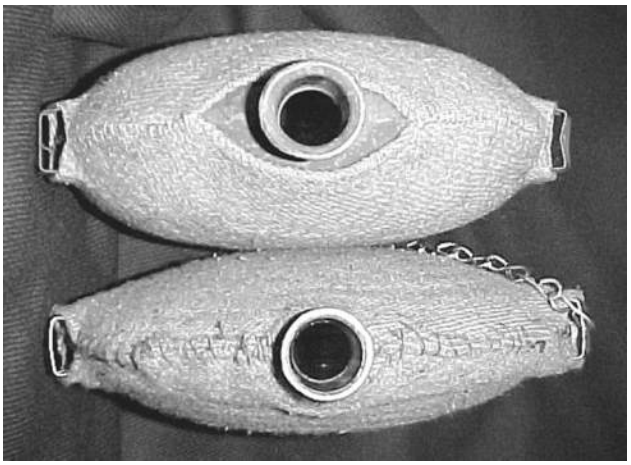

FIG 1. A comparison of an original canteen (top) and a typical reproduction canteen (bottom).

The best alternative for freedom from rust is to purchase an authentic tin canteen and coat it with beeswax (paraffin will crack, so use genuine beeswax). To coat your canteen's

interior and prevent rust, remove the cover as described below. Next, obtain a beeswax candle and melt it into a small, disposable container that can be utilized to pour the liquid beeswax into the canteen spout. The wax will dry fairly quickly and, as such, must be kept in a liquid state to coat the interior of the canteen. To accomplish this, light a second candle or turn on the burner of a gas stove on the low-flame setting. Slowly pour some of the beeswax into the canteen spout, while holding the canteen over the heat source; be very careful not to melt the solder that holds the canteen together. While keeping the canteen close to the heat, slowly roll it around so that the beeswax coats the entire inside surface. Add more beeswax as necessary. Care and patience is required, as the coating process will take at least a half-hour.

The most authentic alternative is to simply obtain a tin canteen and deal with the rust when and if it appears, which is how hundreds of thousands of Federal soldiers did it. Rusting can be delayed or avoided through a few simple practices, including:

1. At events, keep your canteen as full as possible, especially at night. Rust occurs when ferrous metals, water, and oxygen combine. Keeping your canteen full eliminates oxygen from the equation so that the reaction that produces rust does not occur.
2. When you return home from an event, empty your canteen out right away, and shake the canteen to remove all standing water droplets. Store the canteen for a day upside down with a paper towel stuffed through the spout to the bottom of the canteen. The paper towel will wick away residual water.
3. Store your canteen uncorked for final air-drying.

Spouts for Civil War canteens, with minor exceptions noted only at the Cincinnati Depot, were made of soft metal that resembles pewter. For a time, the Cincinnati Depot contracted for and issued canteens with tin spouts. Minor differences in spout sizes can be seen on canteens from various depots, although of greater importance were the variations *over time* at individual depots. Generally, the cast canteen spouts with narrow mouths are of early-war manufacture, while many surviving later-war examples have larger spouts made of spun pewter tubing. While inspector and contractor stamps were sometimes placed on the strap, some contractors placed such stamps on the canteen spout. Many bull's-eye canteens issued after 1862 appear to have been marked on the spout. Spout-markings on smoothside canteens appear to be mostly from the late 1864 and early 1865. Quartermaster Department specifications required marking canteens on the spout starting in late 1864.

The three strap keepers on each canteen were essentially unchanged at all depots throughout the war. Most modern-day reproductions are acceptable in this respect. Because the New York Depot used a chain to attach the cork to the canteen, only New York Depot canteens featured a neatly punched hole in one of the two upper strap keepers.

Cover.

The cover is the most visible aspect of a Civil War canteen and, unfortunately, many Federal reenactors' canteen covers are completely out-of-synch with period documentation. A typical Yankee reenactor has a canteen covered with light blue kersey material—often of the same type of fabric as his uniform trousers. Although this kind of fabric was used, it was uncommon, as will be discussed.

Some early canteen covers were satinette, a cheap cotton warp/woolen weft fabric that appeared to be "finished" only on one side. Once the Civil War began in earnest, the grade of material used for canteen covers actually declined. It is interesting to note that covers were not subject to Federal army inspectors, as was the canteen body and spout. The 1865 Quartermaster Department regulations, which codified what the army had been purchasing throughout the war, specified only that cover material should be, "a coarse cheap woolen, or woolen and cotton fabric." In contrast, the kersey wool material used on some reenactors' canteens is a "premium" fabric.

Material purchase records as well as relics from the period show that the vast majority—probably over three-quarters—of Federal canteens were covered with jean cloth, which was a very coarse, cheap cotton warp/woolen weft, twill woven material. Reproduction jean cloth-covered canteens can be ordered from various suppliers, and canteen cover kits are also available from many cloth vendors and makers of high-quality reproduction clothing.

On occasion, any cheap cloth that was available on the open market was employed by private firms and by government purchasing agents to meet deadlines on canteen delivery contracts. For example, a large number of canteens issued from the Schuylkill Depot between autumn 1862 and summer 1863 were covered with striped furniture upholstery fabric which, not surprisingly, proved to be very durable.

The predominant color of canteen covers issued by the Federal army, especially jean cloth covers, is an interesting subject. Today, many relics have brown, reddish-brown, or tan-colored covers. These most likely were gray at the time of their manufacture and, over 140-plus years, the logwood dye used to color the fabric oxidized to a brownish hue.

Unauthentic repro canteen covers are one of the easier deficiencies to remedy. Substandard covers can be replaced with a logwood-dyed jean cloth cover; it is also acceptable for early-war canteens to be covered in satinette. Use of field-improvised covers should be minimal because most surviving canteens appear to retain their original cover, and some "field repairs" on surviving original canteens may have been made by post-war owners.

New York Depot canteen covers were almost universally machine-sewn on the lower half and then hand-finished on the upper half, after the cover was slipped onto the canteen. Most Schuylkill Depot covers appear to be entirely hand-sewn. Machine-sewn canteen covers were present only on factory-made examples and, obviously, covers that were repaired in the field should not have machine sewing.

Finally, based on period photographs, it appears that coverless canteens were rather common during the war, and were probably more prevalent than is seen today in the ranks of reenactment units. The biggest disadvantage with this is that if exposed to the sun, the contents of the canteen will tend to heat dramatically. The original covers were intended insulate the contents, and evaporation will actually *cool* the contents if the cover is soaked with water.

To re-cover a canteen, first remove the strap. If you

plan to replace the strap with a new one, simply cut it in two. If you are going to put the same strap back on the canteen, carefully take the strap-joint apart with a stitch-ripper. Note how it goes together so that it can be re-sewn in the same fashion. Next, cut the old cover off the canteen. Leave the old cover's stitching intact so you can refer to it when putting on the new one.

If you are making your own cover, take the cover material and cut out two circles, equal in size to your old cover, plus about a 0.25 inch seam allowance. Pin the two circles "right sides together" (i.e., with the sides that will be outside facing in) and stitch them together about halfway around the lower circumference of the cloth, about 0.25 inch inside the edge of the material. This seam should run between the two top strap keepers, leaving a gap through which the bottom strap keeper will protrude. After this phase of the sewing, turn the cover inside out, so that the "right sides" are facing outside, and slip the canteen into the new cover. Use an overcast stitch from the top of the strap keeper on each side to the spout. The seam allowance will have to be turned inside for this part of the sewing, but once it starts, it is surprisingly easy. Use the old cover as a model.

With the new cover in place, dampen it thoroughly and let it dry before putting on the strap. This will shrink the cover, depending on the strength of the material, and help it conform to the shape of the canteen. Once the sewing is complete and the cover shrunk onto the canteen, put the strap (old or new) through the loops and, if you have a cloth strap, sew the joint. Your canteen-covering operation is complete.

FIG 2. This canteen has a knotted sling, which has been stencilled by its owner.

Some soldiers marked their equipment with information such as their name, regiment, company and number. A fair number of surviving canteens have the soldier's name (FIG 2), and others have numbers (FIG 3). When provided, such markings were usually made in black or white paint on the canteen cover. It bears repeating, however, that most original specimens observed by this writer had either no identification on them or, as commonly seen, simply the soldier's initials. This writer has also seen some original canteens with the soldier's name or initials and other information marked on the strap in lieu of it being painted on the cover (FIG 2). Finally, some soldiers decorated their canteen covers with corps badges or other designs, either of colored cloth sewn to the cover, or with a painted design. However, such ornate designs appear to have been uncommon. The elaborate painted scenes normally done on bare canteens are almost invariably post-war.

FIG 3. A canteen with its owner's initials indicating a Celtic surname, "J. Mc. G." The "9" may be the soldier's number, but is more likely a unit designation.

Cork and Attachment.

The cork and ring of most reproduction canteens are fairly accurate. The 1865 Quartermaster Department regulations state,

> Velvet cork, $1\frac{1}{4}$ inches long, to fit the mouth-piece [of the canteen], to be capped on top with tin, through the center of which extends a galvanized iron wire, $\frac{1}{8}$ of an inch in diameter, with a loop at top, $\frac{7}{8}$ of an inch diameter (inside), secured at bottom of cork with a galvanized iron or white metal washer and screw-nut.

The only place where most reenactors' canteen corks fall short is on the method of attaching the cork to the canteen. Just about every reproduction canteen available from the mass-market vendors includes a stainless or tin-plated chain. It is interesting to note that, of the millions of canteens issued during the Civil War, only the New York Depot furnished canteens with chains. Furthermore, the chains on the originals are *galvanized* iron wire (FIG 4 and FIG 5). Canteens from depots other than New York used twine as the specified method of cork attachment.

New York Depot canteens had chains just long enough to secure the cork to one of the two upper canteen strap keepers. *Only* strap keepers from New York had a hole punched in them where the end link of the chain was attached (FIG 5). The chain passed through the loop on the cork. The end-link was opened and attached to another link in the chain, similar to the method used on most modern-day reproductions.

Canteens from Schuylkill, Cincinnati and St. Louis all used, per the Quartermaster Department regulations, a "strong piece of cotton or linen twine, 20 inches long, and doubled together," although most surviving artifacts have twine, which measures twelve inches at the outside. Thus, if your unit was issued equipment through a depot other than New York, it is best to throw away the tin chain on your canteen and replace it with a cotton twine. Take the twine, run it through the cork loop (twice), run it through one of the two upper strap keepers, and tie it in a loop with a square knot. Schuylkill, Cincinnati and St. Louis depot canteens did not have a hole punched in the strap keeper for the twine. Many quality reproduction canteens use jute string for the cork attachment.

FIG 4. An illustration showing how New York Depot chains were typically attached to the cork. The picture also shows a fairly common method of marking the owner's initials in the soft metal of the spout. This particular canteen also has the same initials stenciled in black, one-inch letters on the cover. Perhaps the spout initials were added after the cover became soiled.

The casual observer of military antiques will note the existence of bull's-eye canteens with chains attached to their stoppers. These are *not* Civil War canteens. Closer inspection will reveal that, instead of being affixed to one of the sling loops, the chain is held onto the *spout* with a large ring. This is an identifying characteristic of the Model 1872 canteens, which were retrofitted Civil War leftovers.

Strap.

At the beginning of the war, US Army Quartermaster Department regulations stipulated canteen straps to be a $^{5}/_{8}$ inch wide leather strap that was seventy-three inches long. Surviving specimens suggest that leather canteen straps were originally russet (brown) in color; black leather canteen straps are generally thought incorrect for a Civil War-era living historian. The strap was fastened with a roller-buckle, and a triangular piece of leather called a safe was sewn behind the roller buckle to reduce wear on the uniform. Evidence suggests that leather straps were issued during the early years of the Civil War only by the Schuylkill and New York depots. Due to their relatively high cost and tendency to wear swiftly in the field, use of leather canteen straps seems to have been largely discontinued starting in the autumn of 1862.

At least one early-war canteen exists that was probably issued from New York and has a cotton sling. This canteen can be seen on page 40 of Don Troiani's *Regiments and Uniforms of the Civil War.* It is not currently known, however, if this is an isolated or rare example.

Thus, living history impressions through at least late 1862 and, in some cases well into 1863 for units that were supplied from New York or Schuylkill should probably carry canteens with russet-colored leather straps.

FIG 5. A New York Depot canteen.

It appears that cloth straps were issued by the Cincinnati and St. Louis depots throughout the war, with Schuylkill and New York following suit beginning in the autumn of 1862. Straps were seventy-two inches long and made of white, woven cotton duck (FIG 5) or twill-woven cotton webbing (FIG 6). The weave of the material used for cloth straps differed from one depot to another, and with material availability. Much of the material used at Schuylkill was one inch or one-and-a-half inch wide webbing. Surviving examples include both diagonal and chevron-style weaves; the thick woven strap sold by many modern-day vendors does not seem to have been prevalent during the Civil War. The cotton drilling or duck used for straps was usually folded and machine-sewn on both sides—this was unnecessary for the webbing straps.

Some original canteens from Schuylkill and, reportedly, from New York were made of cotton with a buckle. The use of such "transitional" canteen straps may have been limited and, therefore, their use by is not recommended unless specific documentation exists to support their use.

In the field, the leather straps were adjustable due to their roller-buckle feature. Cloth straps were both cut and re-sewn to the proper length or, more commonly, simply tied in a knot; the knot was usually tied in a position so that it did not interfere with the wearer's other traps or cause discomfort. An examination of period photographs of Federal soldiers reveals that most wore their canteens, haversack, and cartridge box higher than many reenactors. Optimally, the strap length should be such that the canteen hangs between the waist and the elbow.

FIG 6. Multi-panel webbing strap on a Schuylkill Depot "bull's-eye" canteen.

Field Modification: The Spout Vent.

Like other pieces of issue gear, canteens were subject to a certain amount of modifications by the soldiers who used them. The modification most frequently encountered on originals is a vent hole bored into the soft metal spout of the canteen. These holes are often quite crude: the one shown in FIG 7 was probably made by rotating the point of a knife into the soft metal of the spout.

The most likely reason for venting the canteen spout would have been to allow the soldier to draw on the spout as we would suck a straw, without the necessity of "pouring" the contents into the mouth. Bearing in mind that the original soldiers were often marching in an exhausted state over extremely rough roads and that water was often precious, this explanation seems plausible. On the other hand, it does raise some other questions: would not the water dribble out of the hole and down one's chin? Would not the spout leak even with the cork in place?

Some experimentation involving drilling spout holes into reproduction canteens provided the answers to these questions. The spout will not leak when the cork is inserted because the "bore" of most original canteen spouts was slightly tapered: the matching taper of the cork therefore seals against the entire surface of the spout, including the areas above and below the spout vent.

It was surprising how much easier it was to drink from the vented canteen. No water was lost while drinking unless the canteen was raised with the vent hole on the *bottom*, so a habit was developed when using the canteen that involved feeling the spout before uncorking to insure that the vent hole was on the top.

FIG 7. A canteen spout vent.

Wrap-up.

To sum up, a living historian's canteen is an important part of the authenticity picture, and can be easily improved. First, determine the depot from which your unit's equipment was issued and then, if applicable, consider replacing the strap, cover, and/or cork attachment to suit your impression.

Adding a suitable contractor's name and contract date, if applicable for the year of your impression, along with inspector's marks on either the strap or spout further adds to your authenticity. Also, wearing the canteen at the correct height is a way to improve your appearance. Best of all, none of these items costs much, and all will make a big difference in your authenticity.

This article has presented a few basic tenets on Civil War canteens for living historians. Looking like a Civil War soldier is a very important aspect of establishing a proper impression that does honor to the brave men of 1861–65, and few components of a soldier's gear were as visible as the trusty canteen. Next time you think about improving your reenacting "kit," do not neglect the all-important canteen.

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Original canteens that were examined are from John E. Tobey, the North Collins (New York) Historical Society, the Niagara County (New York) Historical Society, the Gettysburg National Battlefield Park and the Pamplin Historical Park collections.