

LIGHTING

For a century after the Revolution, candles afforded the only authorized source of artificial light in barracks. They were not actually provided for buildings, but to men with their rations in pitifully small quantities fixed by law. Candles had to light not only the men's quarters but guardrooms and noncommissioned officer's quarters as well. With only a pound and a half of soft candles accompanying each 100 pounds of rations, it is likely that administrative requirements for candles meant that barrack rooms--especially during the decades when most barracks were divided into many small chambers--went mostly unlighted except for illumination from open fireplaces. Few barracks had adequate lighting even during daylight, because few had sufficient windows, often none at all. When darkness fell, the men went to sleep--or, like moths to a flame, to well-lighted sutlers' shops, groggeries, or brothels. Perhaps because Americans generally had primitive lighting in the early decades of the 19th century, the dimness of army quarters elicited little contemporary comment until the last years of the candle's dominance. There were, after all, worse aspects of barracks life than the fact that the squalid conditions were hidden in darkness.

It is reasonable to suppose that, especially as stoves began to replace open fires during the three decades before the Civil War, soldiers at many posts found ways to increase the light available to them. Extra candles, for instance, could be purchased with personal or company funds from sutlers or other merchants. With a little ingenuity, it also would be possible to fashion a variety of simple lamps from materials readily at hand in the barracks. Perhaps the simplest is the "slush lamp," made of grease or oil in a basin of some sort, with a string or rag for a wick--actually the oldest form of lamp, with many examples surviving from ancient times. Soldiers could easily make basins from clay, wood, or unserviceable kitchen or eating utensils; when canned foods came into general distribution, lamp basins were ready-made.

Fuel for such lamps would not be in short supply; the Army's greasy diet afforded plenty. In fact, kitchen grease was a popular source of lamp fuel before the Civil War. Describing the return of his ship to Boston in 1836, Richard Henry Dana, Jr., listed matter-of-factly the various personages who greeted her at the dock, including "dealers in grease, besieging the galley, to make a bargain with the cook for his slush. . . ." ¹

Of candle holders and other such luxuries before the Civil War, there is no record. It is doubtful that soldiers would often have found them worth the price, except as they might fashion their own from wood. A hole in a block would have held any candle well enough. Because neatness (including clean tables) was required by regulation, it can be surmised that even candles set into their own drippings would have adorned blocks or wood plates rather than the tables or benches directly. In later years, bottles would have made convenient candle holders.

Other sources of lighting may be judged possible but unlikely. Wooden firebrands--like those that adorn castles in vampire movies--are easily made from pine knots or by soaking knots, cones, or hardwood stick ends in pitch or grease. But they would have been very dangerous in barracks and probably forbidden for that reason. Commercial lamps and fuels would have required significant expenditures of company funds, but it is known that they became common enough in barracks after the Civil War that they were outlawed for safety reasons in 1869.

The candle ration was modified to allow three types of candles at the start of the Civil War, but it was not increased. In describing life in winter huts during the war, one veteran recalled, "For lighting these huts the government furnished candles in limited quantities: at first long ones, which had to be cut for distribution; but later they provided short ones." The supplies, he said, were undependable. Sometimes they were plentiful, other times scarce. And only infantrymen enjoyed "official candlesticks"--bayonets, the sockets of which fitted candles very nicely. "Quite often," he said, "the candle was set upon a box in its own drippings." ² But there were alternatives:

Whenever candles failed, slush lamps were brought into use. These I have seen made by filling a sardine box with cook-house grease, and inserting a piece of rag in one corner for a wick. The whole was then suspended from the ridgepole of the hut by a wire. This wire came to camp around bales of hay brought to the horses and mules.³

The major change concerning barracks lighting after the Civil War was the growing volume of complaints from officers and men. No longer did they silently accept conditions markedly worse than those in the civilian world. Soldiers now were better educated and paid than before, and more of them hailed from well-lighted urban homes. The contrast between army barracks and civilian houses was too much to bear, especially when the soldiers' attempts to provide their own lighting were thwarted by regulation.

Conditions of lighting did not change until the distribution of authorized, general issue lamps in 1882. Before that date, one officer could fairly describe the men's quarters as "our dungeon barracks with the men huddled around the flickering flame of one or two candles . . . such a hole."⁴ Any better lighting was unauthorized and therefore uncommon.

If there was any evolution in barracks lighting between 1800 and 1880, it is likely that most candles were probably of tallow in the earlier years, sperm in the middle decades, and adamantine (white paraffin) in the later period.

Notes

1. Richard Henry Dana, Jr., Two Years Before the Mast (orig. 1840; exp. ed. 1869; Classics Club ed., Roslyn, N.Y.: Walter J. Black, n.d.), 377. Profits from the sale of galley slush may sometimes have been among the perquisites of the cook's position. But more commonly, especially in the navy where everything was public property, the proceeds were deposited into a "slush fund," which could be spent for the benefit of the crew at the discretion of the captain, much like company funds in the Army. I have found no record of the sale of army slush during the 19th century, although that may have occurred where there was a civilian market for it. If it did occur, proceeds probably went into the regular post or company funds rather than a separate "slush fund."

2. Billings, Hardtack and Coffee, 72-73.

3. *Ibid.*, 73.

4. Quoted in Foner, United States Soldier Between Wars, 18.

HEATING

For 50 years after the Revolution, the only source of heat authorized for the Army's quarters was open fireplaces, which were fueled with wood cut by the men. An 1820 drawing of Cantonment Missouri, Nebraska, shows fireplaces apparently lined with clay and fronted in brick, with flat-arched openings. The chimneys were of sticks and mud.¹ The huts at simpler army posts usually had nothing more than log-and-mud fireplaces with chimneys, usually exterior, of the same materials.

Such arrangements did not work well. Short, improperly constructed chimneys would not draw, filled rooms with smoke, and required continual reconstruction. They were also hazardous, consumed prodigious quantities of wood (limited by regulations), and were inefficient for cooking or heating. Cooking, in fact, was often the principal purpose of the fireplaces, as at times the wood was rationed according to the number of kitchen fires. The fireplaces in the early decades were therefore routinely fitted out with culinary accessories. A list of materials required for the construction of barracks and buildings at Cantonment Oglethorpe, Georgia, in 1826 included "Fire hook and chain . . . \$10.00."²

So the men choked and shivered, and warmed themselves with rum or whiskey, but said little more about barracks heating than about lighting. The first modern heating appliances for Army quarters, in 1831, were six anthracite grates for the hospital and six more for officers' quarters at Fort Monroe, Virginia. Thereafter, stoves of various types began to replace open fires where the conservation of wood was important. At Fort Atkinson, Iowa, in the fall of 1843, Croghan had something to say about the heating of the buildings:

A requisition of 19 stoves for the hospital and officers' and men's quarters has been forwarded to the quartermaster at St.

Louis, which I trust may be immediately met, so that they may be here before the commencement of the winter. Many of the chimneys smoke so badly that no comfort can be expected without stoves, and more than this, a great saving of fuel will be made, for to supply the fireplaces the daily labor of 25 axe men and five teamsters is requisite during the winter, whereas 10 axe men and 2 teamsters can supply the stoves.³

Stoves continued to multiply in the Army. During the winter of 1854-55, at Carlisle Barracks, Pennsylvania, one soldier recalled, "The rooms were heated by stoves in which we burned wood. They were comfortably warm during the winter, which I found less severe in Southern Pennsylvania than in New York."⁴ At Fort McHenry, Maryland, that same season, there were 17 stoves, including one each in the guardroom and prison room, and six split between the two company quarters. But one stove in each barrack had been condemned, along with three others around the fort. In requesting replacements, the responsible officer had to justify the use of stoves by citing the fort's "special climatic circumstances."⁵

Things were not hospitable during a terrible winter at Fort Pierre, Dakota, the next year. The men there lived in thin-walled portable wooden houses, officers and soldiers suffering alike. "Each house," a survivor of that season reported, "was furnished with two sheet iron stoves for burning wood, and had stove pipes passing through the roof."⁶ The buildings all, despite the stoves, were frigid during the winter.

The unregulated and accordingly sporadic appearance of stoves here and there prompted the quartermaster general in 1857 to urge both the general adoption of stoves throughout the Army and a policy on their supply, but he was not heeded. The result was that there was no general pattern of stoves installed in barracks; many of them were of low quality. At the end of 1858 Fort McHenry's quartermaster reported that the barracks stoves purchased the year before had worn out and been sold. He suggested that he would either have to get new stoves or repair the chimneys and buy fenders and andirons. Because stoves were safer and more economical, he recommended the former course of action.⁷

As with nearly every other convenience, the soldiers were left to their own devices to heat their winter quarters during the Civil War. "The fireplaces," said a veteran, "were built of brick, of stone, or of wood." The stick chimneys were laid up on the outside of the huts and usually had so little draft that the huts filled with smoke.⁸

The absence of standards and policy continued after the Civil War. At Fort Cummings, New Mexico, all the quarters in 1867 were heated with large open fireplaces because there were no stoves.⁹ But at Fort Laramie, Wyoming, in 1870--a year when the Army spent almost \$23,000 on stoves of unknown types¹⁰--the men complained bitterly about the cold, although all their barracks were heated by stoves of some sort.¹¹ Four years later, at Fort Robinson, Nebraska, which was then under construction, the surgeon attributed a delay in shipment of heating stoves to "criminal neglect."¹²

Standard designs for stoves and ranges were finally adopted in 1875, and thereafter some uniformity began to appear in the way the Army heated its barracks. But not even that measure could eliminate all the variations between different posts. At Fort Stevenson, Dakota, in 1879, an inspection report revealed that each dormitory was heated by three coal stoves, but in an incredibly amateurish and dangerous way: The stove pipes all entered the brick chimneys above the "tie beams" (there were no ceilings) very near the roofs.¹³

Notes

1. See appendix B.
2. Report of the Quartermaster General upon the Subject of Barracks, Storehouses, Hospitals, &c., H. Doc. 61, 19 Cong. 2 Sess. (1827), 7.
3. Prucha, Army Life, 49.
4. Meyers, Ten Years in the Ranks, 36.
5. E.B. Babbitt to Jesup, Jan. 18, 1855, QMConFile--McHenry, Fort, RG92.
6. Meyers, Ten Years in the Ranks, 72.
7. Lieut. J. M. Robinson to Maj. M.M. Black, Nov. 6, 1858, QMConFile--McHenry, Fort, RG92.
8. Billings, Hardtack and Coffee, 46-47.
9. William Thornton Parker, Annals of Old Fort Cummings, New Mexico, 1867-68, an excerpt from Parker's 1919 memoirs (Fl. Davis, Tex.: Frontier Book Company, 1968), 23.
10. ARQMG 1870, 184.
11. Billings, Report on Barracks and Hospitals, 347.
12. Roger T. Grange, Jr., "Fort Robinson: Outpost on the Plains," Nebraska History, 39 (Sept. 1958):203.
13. Mattison, "Old Fort Stevenson," 33-34.

MESS FACILITIES

According to the regulations, soldiers were to be provided camp kettles among their camp and garrison equipage; later, iron pots could be substituted for the kettles when troops were in garrison or winter quarters, where they ate in larger groups than in the field. For anything else, it would appear, the men were on their own. But that flies in the face of common sense and is contradicted by the fragmentary evidence. Even the regulations, by 1821, assumed that there would be meat hooks and bread shelves in the barracks; and some other utensils had to be used to cook and serve food.

Mess pans appear to have accompanied the supply of kettles from the outset, albeit on no stronger authority than custom. In 1813 a supplier named William Romy offered to provide "a quantity of Camp Kittles at 25 Cts per Lbs & a quantity of Mess pans at 70 Cents per piece . . .," along with axes and chains.¹ Mess pans, which were described in later years and distributed in fixed numbers, were not for eating but rather for serving; food removed from pots or kettles was placed on tables in mess pans.

The provision of separate kitchens and mess rooms seems for many years to have depended upon how elaborate and large a given post was. At a substantial place like Cantonment Missouri in 1820, mess rooms about twice the size of barrack rooms, adjoining separate, tiny kitchens, were provided for two regiments.² But more often than not, the primitive posts in the early decades probably lacked separate facilities; the men cooked and ate, probably on homemade tables, in the rooms where they slept. But even at Cantonment Missouri, as late as February 1820 an officer complained that there were not enough tables or shelving to contain "table furniture and fragments of provisions."³ "Table furniture," of course, meant eating utensils--plates, forks, spoons, and so on.

The preferred material for cooking utensils was iron throughout the 19th century. But other materials apparently could be used as well, and beginning in 1821 and continuing thereafter, for very sound but unmentioned reasons, the regulations required that "those [cooking utensils] made of brass or copper will not be used unless they be lined with tin."⁴

There are few good descriptions of the Army's eating arrangements in the early 19th century; frequently only the state of kitchen or table cleanliness was reported by inspectors or surgeons. An unusually informative account of a mess room, one probably dolled up for an inspection, came from the Post at Alexandria, Virginia, in 1820:

In the company mess room, I found a range of tables, neatly garnished with clean table clothes and the requisite furniture for dinner. I found a non-com presiding at the end of each table, with an ample tureen of excellent turtle soup before him, from which he was helping his mess mates.⁵

The men at Alexandria lived in "permanent" quarters, which were generally larger and somewhat more elaborate than the "temporary" quarters of the frontier. But it is likely that the trend toward separate cooking and eating rooms was well established everywhere by the 1830s, to the extent that circumstances would permit.

There is little reason to believe that the basic furniture of kettles, mess pans, and mess cans--as well as other essential utensils--changed in character in any important way for many decades. A specification for those items in an 1831 contract might well describe those used for many years before and after:

[The camp kettle is to be] made of the best American sheet iron and in the best manner as to workmanship. Seams neatly and tightly closed, the camp kettle having a well sized smooth and perfectly round base. Camp kettle in heighth 11-1/2" in dia. 12", 17 lbs. 12 oz.

There are to be two smaller sized kettles, made to fit into each other neatly as a nest of three. These are furnished by the pound.

Mess pan--dia. at top 11-1/2" and trifle more than 8-1/2" dia. at bottom. These are furnished by the piece. Height of mess can 5-1/4" both are neatly turned at the top over a stout wire.⁶

The use of round-bottom kettles (round bottoms are presumably seamless and more durable, and spread the heat of an open fire more evenly, than flat bottoms) would suggest the need for either hangers or trivets during cooking. Outdoors, pole frames and ropes could suspend kettles well enough, but indoors metal cranes, chains, frames, or trivets would be required. It is not surprising, therefore, that in 1826 a "Fire hook and chain . . . \$10.00" was a routine element of a barrack constructed at Cantonment Oglethorpe, Georgia.⁷ The larger pots, however, had legs.

Croghan reported separate kitchens and mess rooms at Fort Pike, Louisiana, in 1844, where "the kitchen and its utensils, the mess room, and mess furniture are in good condition. . . ."⁸ At New Orleans Barracks the same year, he said, "The mess rooms and kitchens are as clean and neat as any one could desire."⁹ Even at Fort Washita, Oklahoma, a rather more primitive place, he stated, "The kitchens and mess rooms are in good order, but having dirt floors, they can not be made to look very neatly. One of the ten companies, G, spreads its table under a shed, which I take for granted will be boarded up before the cold weather sets in."¹⁰ It would appear that separate cooking and eating rooms had become standard practice at least by the 1840s.

The transition from cooking over open fires to cooking on ranges probably paralleled the transition to heating stoves, if it did not come slightly ahead. The event probably occurred first at "permanent" posts and others given more substantial construction than the usual. At Fort McHenry, Maryland, where the heating stoves routinely fell apart, the kitchens fared somewhat better in 1857:

No. 1 Cook room . . . has had cook range repaired, new lock on door, plastered and repainted, wants floor [illegible] cook range repaired. No. 2. Cook room . . . cook range repaired, new locks on door, plastered and repainted.¹¹

Kitchen ranges commonly were built-in brick structures with iron fittings. The plans for those presented in the barracks regulations of 1860 probably were representative of those actually built before and after the Civil War.¹² It should be noted, however, that those same plans still supposed that the buildings themselves should be heated with open fireplaces, not stoves.

As late as 1875 Dr. Billings and his colleagues protested the fact that companies were not issued "mess furniture," but must provide their own. It might be supposed that the men did not receive eating utensils from the Army, but there is reason to believe otherwise. It is highly possible that, even if inconsistently through the 19th century, such necessities were part of the personal field equipment issued to recruits along with their uniforms, blankets, and the like. Augustus Meyers recalled the outfitting of recruits as they were about to be shipped to their regiments from Governors Island, New York, in 1860:

One morning a few days later we formed on the parade ground, fully equipped with knapsack, haversack, tin cup, tin plate, knife, fork and spoon, a canteen and three days' rations of boiled salt pork and hard bread stowed in our haversack, but without arms.¹³

Kitchens and mess rooms at Civil War training camps were in buildings separate from the barracks. The mess buildings were generally occupied by long, single-unit bench-and-table structures somewhat resembling modern picnic tables, nailed together in the plainest fashion. A photograph of one ready for use shows the tables covered with white cloths and a complete tin setting at every place--cup, canlike bowl with handle, plate, knife, fork, and spoon. The picture was probably taken

during a holiday, as there were floral centerpieces distributed down the tables. The room was lit by hanging lamps (presumably) with picture-painted shades.¹⁴

Movable iron ranges probably became more common after the Civil War. The enlisted men's mess facilities at Fort Laramie, Wyoming, in 1870 "all are provided with cooking-stoves, tables, and benches. Most of the companies are in possession of good mess furniture, consisting of delf plates, bowls, and knives and forks," according to the post surgeon.¹⁵

At Fort Davis, Texas, in January 1870 the company kitchens were inconsistently maintained, but at least the sloppiness of the cooks led the post surgeon to identify some of the kitchen furniture:

B. Co. . . . Kitchen in all respects, in very good condition.

C. Co. . . . Kitchen, neat and clean except tables.

K. Co. . . . Kitchen--Range not clean, table dirty, shelves in cupboard dirty, Provision boxes and packs for the same dirty.

Two days later he discovered:

C. Co. . . . Kitchen clean. Provision boxes also.

K. Co. . . . Kitchen, Range dirty. Cupboard in which dishes are kept dirty.¹⁶

For two years the surgeon kept after the men at Fort Davis, regarding their untidiness, but as he prepared to depart the place in May 1872, he complained, "The mess rooms and kitchens are not plastered--have earth floors--and are equally as dirty and untidy as the barracks."¹⁷

The adoption of the new stoves and ranges in 1875 eventually led to the standardization of such equipment in army kitchens. Besides the ranges themselves, the stove regulations provided for the first time an enumeration of their "trimmings":

The following is a list of the trimmings for these ranges:

Tin trimmings:

- 1 wash-boiler.
- 1 coffeeboiler.
- 1 steamer.
- 1 teakettle, (iron or tin.)
- 3 bake-pans.
- 1 potcover.

1/16 inch cast iron:

- 2 pots.
- 2 skillets.
- 2 griddles.
- 1 iron-heater.

Sheet iron No. 26:

- 3 joints pipe.
- 1 elbow.¹⁸

That list of stove utensils, which was supposed to be sufficient for one company of soldiers and which was further refined in 1876, had probably been in use in barracks for some years. But except for the issue of kettles in camp and garrison equipage (which stilled prevailed after 1875, separately from the furniture of barracks ranges), stove utensils had not been specifically sanctioned by regulations.

During its compilation of supply specifications in 1875, the Quartermaster Department recorded those for pots and camp kettles, once again in a fashion suggesting that they had prevailed in the Philadelphia purchasing office for some time:

Pots: Iron. To be of cast iron, diameter outside at rim 15-3/8 inches, depth inside 11-1/2 inches, with three legs on bottom, 3-1/2 inches long; ear on opposite sides of the top for the bail.

The latter to be of round iron 7/16 of an inch diameter. Capacity 6 gallons. Weight 35 to 37 pounds.

Furnished from Phila Depot by Col Easton March 2nd 1875.

Kettles, Camp. To be of three sizes made of good American sheet iron, and so as to fit into each other in nests of three, viz: No. 1, the largest size should be 12 inches diameter and 11-3/4 inches deep: to contain 4-1/2 gallons.

No. 2. 10-1/4 inches diameter, 11-1/2 inches deep. to contain 3-1/2 gallons. No. 3. 8-1/2 inches diameter, 11-1/4 inches deep and to contain 2-1/2 gallons.

To have iron wire bails 5/16 of an inch in diameter, the ends to be drawn to a point.

Rim to be formed over a heavy iron wire.

Weight of nest of three kettles 17 to 17-1/2 pounds.

Furnished from Phila. Deport by Col. Easton, March 2nd 1875.¹⁹

Notes

1. QMConFile--Kitchen Equipment 1813, RG92.
2. See appendix B.
3. Johnson, "Cantonment Missouri," 125.
4. 1821 Regulations, 12; for another example, see 1835 Regulations, 46. Continued cooking in utensils containing copper, a very active chemical element, can taint the taste of food and lead to heavy-metal poisoning. Tin is chemically less reactive than copper, brass, iron, or steel.
5. Inspection report of Col. William McRae, June 1830, quoted in Kummerow and Brown, Enlisted Barracks at Fort Snelling, 20.
6. Irvine to Robert Dingee, Feb. 5, 1831, quoted *ibid.*, 24.
7. Report of the Quartermaster General upon the Subject of Barracks, Storehouses, Hospitals &c. (1827), 7.
8. Prucha, Army Life, 67.
9. *Ibid.*, 68.
10. *Ibid.*
11. J.L. Donaldson to Lieut. Col. H. Brooks, July 3, 1857.
12. See appendix B.
13. Meyers, Ten Years in the Ranks, 160. Meyers had first joined the Army as a musician boy in 1854, then reenlisted as a soldier in 1860.

14. Soldiers' Dining Room, Civil War Training or Convalescent Camp, National Archives neg. B-4064.

15. Billings, Report on Barracks and Hospitals, 347.

16. Medical History of Fort Davis, Jan. 5 and 7, 1870.

17. Ibid., May 1872.

18. See appendix C for the stove regulations. An "iron-heater" was used to warm clothes irons, and was usually a small trivet.

19. ROQMG, Miscellaneous Specifications, RG92.

OTHER CONTENTS OF BARRACKS

The minimum furnishings of a barrack--where there was any furniture at all during the 19th century--were the bunks of the men. As late as the 1870s some places had nothing else. Sometimes other contents of barracks received specific mention in contemporary reports. For instance, during the construction of barracks and other quarters at Cantonment Oglethorpe, Georgia, in 1826, the quartermaster spent \$25.00 on fire buckets.¹

There were other objects in most barracks, however. Craftsmen among the troops were permitted by regulations to construct benches and tables, as well as bunks, with tools and materials provided by the quartermasters. But very often the exact nature of barracks contents in a specific case can be inferred only indirectly. One of the buildings at Hancock Barracks, Maine, burned down in February 1833. Afterwards, officers, noncommissioned officers, and enlisted men together petitioned the Congress for compensation for

a considerable loss of furniture and personal apparel; that this loss was greatly increased by their personal exertions having been principally directed to the preservation of the other buildings, and for which purpose the carpets and blankets belonging to both officers and men were used, and partially or wholly destroyed. . . .²

In 1838 Croghan complained loudly about the worn-out articles carried on the inventory at almost every post, because "they serve but to lumber up the store rooms." Objects of his attention included such things as kettles and hoes that were no longer serviceable.³ At Fort Washita, Oklahoma, in 1844, each company stored its supply of cartridges in its own storeroom because no magazine had yet been built at the post.⁴

At Fort Leavenworth, Kansas, in 1853, there was an interesting addition to the barracks of one company. The company commander organized a subscription among the officers, noncommissioned officers, and enlisted men to raise funds for a company library, which was delivered in February. It included a set of "Harper's Classical and Family Libraries," according to one person who was there.

A pair of book cases, with hinges closing the edges on one side, and two locks the edges on the other side, held the library of uniform size and binding. When open the title of each book could be read, and when closed no book could move or get out of place; the books were all the same length and breadth, and an excellent collection.⁵

Where the bookcase was located was not recorded.

The next year, according to Augustus Meyers--who had surely one of the best memories for details among enlisted men of the 19th century--the musicians' training barracks at Governors Island, New York, was well appointed indeed:

A wide shelf around the room above the beds provided space for knapsacks, extra shoes, drums, fifes, and other objects, and on hooks under the shelf were hung the overcoats. There was a coal fire burning in the grate. A few wooden benches and a chair for the corporal in charge; this, with a water pail and a tin cup on a shelf behind the door, completed the furniture of the room.⁶

At Fort McHenry, Maryland, it was reported without elaboration in 1857 that both barracks "have had new locks on doors."⁷

Only a few enlisted men in the 19th century left detailed descriptions of their personal effects. Among them was Eugene Bandel, a German immigrant who was a corporal in the 6th Infantry during the late 1850s. Because he was both a noncommissioned officer and the company armorer,

he was unusually well endowed and, among other things, was allowed to retain and transport a chest of tools (most of which he had made himself), which afforded extra space for other things:

So far as books are concerned [he wrote to his mother from Fort Leavenworth in 1857], the lack of which I feel, as you may well believe, you are mistaken. Here a soldier is not, as in Germany, limited to his knapsack. For instance, I have a large chest full of tools, a trunk full of underwear and clothing, and a small chest of miscellaneous matter, such as books, tobacco, and the like. Then, too, I have two knapsacks (quite different from the German knapsacks which, however, no soldier here carries at all) full of soldier clothes and bedding, consisting of two woolen blankets and a buffalo fur. Consequently you will see that, although not all of the soldiers, nor even most of them, have as many chests, boxes, and packages as I have, it requires many wagons to transport a regiment across the prairies. . . .⁸

Even in the rude huts of winter quarters during the Civil War, the soldiers were able to add personal touches, according to one veteran:

Many of these huts were deemed incomplete until a sign appeared over the door. Here and there some one would make an attempt at having a door-plate of wood suitably inscribed; but the more common sight was a sign over the entrance bearing such inscriptions, rudely cut or marked with charcoal, as: "Park House," "Hole in the Wall," "Mose Pearson's," "Aster House," "Williard's Hotel," "Five Points," and other titles equally absurd, expressing in this ridiculous way the vagaries of the inmates.⁹

Such individualities were tolerated, of course, only in the large citizen armies of wartime and would never have been allowed in the quarters of the Regular Army before or after the war. Inside the huts, according to the same source, the men placed their knapsacks or bundles of personal

effects at the heads of their bunks. Haversacks, canteens, and equipment usually hung on pegs inserted into log walls, but there was no regular place for muskets. Hardtack boxes served as "dish closets," with their covers mounted as doors on leather hinges. Boxes mounted on legs served as tables, around which were to be found homemade three-legged and four-legged stools. Some huts would have shelves over the fireplaces for "bric-a-brac." "But such a hut as I have been describing was rather high-toned," recalled the soldier. "There were many huts without any of these conveniences."¹⁰

Another veteran of service just after the Civil War left record of a rare glimpse inside the tent of a first sergeant, David Grew of the 1st Cavalry, at the new post on the Upper San Pedro, Arizona, in 1866. John Spring visited Grew one night to engage in some serious drinking. Grew's possessions, which later he would probably move into his quarters (then under construction), appeared to Spring "in the half-darkness of the tent, illumined by a solitary tallow candle [; they were] a tumbler, a sugar bowl, and some lemons standing on a cracker box near his bed. . . . I placed my bottle and cigars on Grew's homemade table; he carried a corkscrew of course."¹¹

The summaries of miscellaneous barracks contents in Billings' 1870 Report on Barracks and Hospitals were inconsistently descriptive but revealed a wide range of variation from post to post. The following are some examples:¹²

[Camp Bowie, Arizona] [There is] no other furniture than the rough bunks. . . .

[Camp Crittenden, Arizona] [Besides bunks, the] only fixtures are wooden arm-racks and benches.

[Fort Foote, Maryland] [O]ver each [bunk] is a shelf for the knapsack of the soldier.

[Fort Independence, Massachusetts] The furniture of these squad rooms is little beside the stove, bunks, and bedding, the clothing, arms and accoutrements of the men.

[Madison Barracks, New York] Each squad-room is thoroughly fitted up with gun racks, lockers for the clothing and effects of the men, tables, chairs, shelves, and clothes-hooks . . . [each] locker and shelf are painted with [the soldier's] name and company number.

[Fort Monroe, Virginia] The men sleep in the main room of the company quarters . . . in which, too, are kept their boxes, extra clothing, apparatus for cleaning arms, accoutrements &c.

[Camp Verde, Arizona] [The] only fixtures or furniture is a double line of bunks. . . .

[Fort Washington, Maryland] [Besides bunks, the barracks are] also fitted with . . . lockers, and gun racks.

The Army's fear of fire influenced the contents of its buildings after the Civil War. At Fort Laramie, Wyoming, in 1870 an "ample supply" of water barrels were kept filled in all buildings, including 400 gallons in the hospital alone. There were fire buckets hanging in every room at the post, and many buildings had fire ladders as well.¹³ The distribution of commercial fire extinguishers began in 1869 or 1870, and within a few years virtually every post had a supply of the Babcock soda-lime chemical extinguishers. After 1874 the Johnson Forcible Hand-Pump was the preferred model, and in due course it became ubiquitous.¹⁴

Both boxes and benches received occasional mention, but few descriptions, as barracks contents, especially after the Civil War. The benches of course, were specifically permitted by regulation, although their actual construction in any instance depended upon the tastes of the craftsman and the materials and tools available to him. Graphic depictions of any before 1880 are few. John Cox, a veteran of service on the frontier in the 1870s, sprinkled his memoirs with a number of detailed

cartoons illustrating his stories. One shows a group seated around a Composite bunk playing cards. One member of the party is viewed from behind on a one-man bench that appears to be made of only four boards--the top resting on board legs with one diagonal board brace, making it look like the letter N with a cap. Although Cox's drawings were generally very accurate, necessity would demand an opposing brace not shown in his drawing, unless there were a foot board connecting the legs or a horizontal brace joining the legs and brace around midpoint (neither shown in the drawing).¹⁵

Boxes or footlockers are more curious. They were first authorized in 1875, but only for permanent barracks, and in fact the specified model received very little distribution. It measured 24 inches long, 12 inches broad, and 10 inches high--and was therefore smaller than those appearing in photographs of the late 1880s and early 1890s, which were bigger, contained compartmentalized trays, and had standard fittings. It might justly be surmised that the 1875 dimensions accorded with the unofficial "boxes" or "lockers" mentioned in earlier sources as far back as the 1850s.

In compiling supply specifications in 1875, the Quartermaster Department recorded those for the record books that adorned every orderly room in the Army:

Books, Company Order. To have 44 ruled leaves and 4 unruled leaves. 24 lbs. demy; size of paper when folded in book, 10-1/4 inches broad, 15-1/2 inches long.

Books, Company Descriptive. Same in all respects as the company order books, with the addition of printed heading according to pattern.

Furnished from Phila. Depot by Col. Easton, March 2nd 1875.

Books: Company Morning Report. To have 96 ruled and printed leaves, according to pattern, and four unruled blank fly leaves 24

lbs. per ream; size of paper when folded in books, 11 inches broad by 14-1/2 inches long.

Furnished from Phila. Depot, by Col. Easton, March 2nd 1875.

Books, Company Clothing Account. To have 140 ruled and printed leaves, according to pattern, and 4 unruled blank fly leaves, 24 lbs. demy; size of paper when folded in book: 10-1/4 inches broad, 15-1/2 inches long.

Furnished from Phila. Depot by Col. Easton March 2nd 1875.¹⁶

It cannot be assumed that anything not specifically identified in a contemporary account as being present in a barrack was perforce absent. However, one category of objects--tubs and other bathing facilities--was pointedly described as missing from virtually every military post as late as 1875 and probably for some years after.¹⁷

During 1876 the War Department adopted specifications for general issue stencil plates and sets, scrubbing brushes, and brooms.¹⁸ Each class of items had probably long been present at military posts--stencils because the Army had long since made a tradition of labeling everything, brooms and brushes because things were supposed to be kept clean (although "holystones" probably had a longer history). But it is doubtful that there was a great deal of uniformity in such miscellany from one post to the next, whereas after the late 1870s uniformity in even the mundane was guaranteed by the very promulgation of the specifications and the addition of the items to the inventory of general issue supplies.

However each post fitted itself out, one last standard item appeared in most barracks in the late 1870s. That was the first barrack chair, a plain wooden model distributed to virtually every post, according to the supply table established for it (one to every noncommissioned officer above the rank of corporal, six for every 12 enlisted men of other ranks) before 1880.¹⁹ At about the same time, the distribution of books and current periodicals to military posts, temporary as well as permanent, was

just getting underway. It appears, however, that separate reading rooms were usually established by one means or another, so the publications probably remained in them. Unless a post library had a lending policy, any reading matter present in barracks would have been personal property--and kept stored out of sight in all properly tidy barrack rooms (the clear implication of the regulation barracks neatness was that, at least in the daytime, the rooms were not to appear lived-in). Few of them had enough light to read by anyway before the 1880s.

Notes

1. Report of the Quartermaster General upon the Subject of Barracks, Storehouses, Hospitals, &c. (1827), 7.
2. U.S. Congress, House, Committee on Military Affairs, Report on Claim of Officers, Non-Commissioned Officers, and Privates of the Army for Losses Sustained by the Burning of Hancock Barracks, Maine, Mil. Aff. Doc. 557, 23 Cong. 1 Sess., ASP 20. The committee recommended that the requested relief not be granted.
3. Prucha, Army Life, 83 and 85 as examples.
4. *Ibid.*, 93.
5. Lowe, Five Years a Dragoon, 98-99.
6. Meyers, Ten Years in the Ranks, 2-3.
7. J.L. Donaldson to Lieut. Col. H. Brooks, July 3, 1857, QMConFile--McHenry, Fort, RG 92.
8. Bandel, Frontier Life in the Army, 114.
9. Billings, Hardtack and Coffee, 47.
10. *Ibid.*, 70-71.
11. John A Spring, John Spring's Arizona, ed. A.M. Gustafson (Tucson: University of Arizona Press, 1966), 62.
12. Billings, Report on Barracks and Hospitals, passim. This is presented with page citations in appendix A.

13. Ibid., 349.

14. See chapter 11 and appendix L.

15. Cox, Five Years in the U.S. Army, 49.

16. ROQMG, Miscellaneous Specifications, RG 92. Although it is not stated, the first specification probably arrived from Philadelphia with the others. All were probably in force long before 1875. A "demy" is a size of paper, commonly 16 x 21, 15-1/2 x 20, or 17-1/2 x 22-1/2 inches. The two books with demy sheets apparently had the second size, almost half of each sheet folded into the book as what is today called a foldout. The formats of all record book pages, including those specified here, were frequently revised and published with each issue of the general regulations.

17. Report on Hygiene, x-xi. Anderson, "Army Posts, Barracks, and Quarters," 433-34, said in 1881, "yet we have no bath-rooms." Tubs cut from barrels were reported at Fort Leavenworth in 1852-53, however. Lowe, Five Years a Dragon, 76-77.

18. See appendix L.

19. See appendix L. The new model was replaced by a leather-bottom one in new specifications adopted in 1883. ROQMG, Miscellaneous Specifications, RG 92. The new model, however, would appear only where the earlier ones had not been supplied or had broken down in use.

GUARDBOUSES

While providing instructions on the construction of buildings at Fort Detroit, Michigan, in 1805, the secretary of war added, almost as an afterthought, "A guard house also will be requisite, of one story, and about 15 feet square. The walls of the guard house should be built of square timber of nine inches thickness."¹ He had nothing more to say on that subject, and neither did many other observers of military posts during the 19th century. The subject was so mundane, or distasteful, that not even George Croghan offered it much attention. Nevertheless, some generalizations are possible.

A guardhouse--whether a separate building, a pair of buildings, or part of some other structure--served two purposes, to house prisoners and to house the guard of the day. The prison section of a typical guardhouse was divided into two parts--a common prison room, and a few isolation cells for incorrigibles. For the most part, prison facilities received no fixtures other than slop buckets and, often, iron rings in floors or walls to which shackles were secured. Prisoners commonly slept on floors, although usually--depending upon the sentiments of the local commander or the circumstances of an individual sentence--they took their blankets into jail with them. Finally, at least in the last half of the century, post surgeons endeavored to have prison facilities washed, disinfected, and coated with whitewash. But for the most part, guardhouse prison sections were dim and dungeon like.

Quarters for the guard usually adjoined the prison section, because one of the duties of the guard force was to provide prison security. The chief furnishings in the guard section during the 19th century would have been those accorded offices, since the officer of the guard (usually the officer of the day) and the corporal (sometimes sergeant) of the guard had paperwork to do. That was often segregated in a separate

room for the officer. In the guardroom, benches, shelves ("banquettes"), or bunks probably were common for the men resting between assignments. Arm racks probably were common also, along with tables and benches. Fireplaces or stoves would have provided heat, and generally the guard claimed extra candles because of their need for nighttime lighting. Since the guard was the first line of attack against fire, firefighting equipment, buckets, and (when they were issued) fire extinguishers would have been readily at hand.

The unchanging ritual of the daily guard, persisting to the present, helped to determine the furniture requirement. Men were detailed for guard duty for periods of 24 hours. When men of the guard were not absent at sentry posts or on other assignment, they were to remain in the guardroom, fully clothed (including shoes), their weapons close at hand, ready to respond to any call. Sentry assignments were rotated through the 24-hour period and supervised by the corporal. Men might also be detailed as messengers or for special assignments. All took their meals in the guardroom, something that would argue in favor of tables and benches.

At Fort Randall, Dakota, in 1857 Augustus Meyers was sentenced to 30 days' confinement, the first and last 10 days at hard labor, the middle period in solitary confinement. Afterwards, he left one of the few memoirs of army imprisonment during the 19th century:

When my ten days of solitary confinement expired, I commenced the last term of ten days at hard labor the same as before. During those terms I had to sleep on the floor in the large prison room with the other prisoners. I would have preferred to sleep in the cell alone.²

The unhealthy conditions of confinement irritated the post surgeons, who did what they could to ameliorate them. The surgeon at Fort Davis in 1869, for instance, inspected the prison rooms routinely, "and under his directions disinfectants have been freely and constantly used."³ The

understandable concern of the physicians was reflected in Billings' 1870 Report on Barracks and Hospitals. At Fort McHenry, Maryland, the surgeon opined that the guardhouse was too small for the garrison and had an average confinement of 18 prisoners. There were two prison rooms and three small cells for solitary confinement, adjoining a guardroom. "The guard room," he said, "is warmed by stoves, ventilation is rather imperfect, and the building is believed to be decidedly unhealthy."⁴

The prison at Fort Pulaski, Georgia, comprised three casemates, warmed by "large stoves and open fireplaces" and housing an average of 42 prisoners.⁵ At Fort Laramie, Wyoming, the two-story guardhouse was somewhat better. The upper floor held one room for the guard and another for the officer, plastered and ceiled, with six windows between the two. "The larger room," reported the surgeon, "contains a rough board bed, where all the members of the guard who are off duty may lie down, a couple of chairs, and a desk." Downstairs, however,

the basement room is [about 25 feet square] of rough stones, whitewashed, has one door and a window towards the river [heavily barred with wagon tires] and on the opposite side at the top two small windows for ventilation. A couple of cells are partitioned off [with heavy planks and solid doors] in the south side for refractory prisoners.

The prisoners are all kept in the basement room which contains no furniture. There are ten prisoners at present [21 in November 1868]. The basement room is neither warmed nor lighted.⁶

The same year at Fort Davis the surgeon complained that an average of 30 men at a time were confined in a room measuring 15 by 15 by 10-1/2 feet high, giving each only 79 cubic feet of air space when, in his opinion, they required 200 to 300 cubic feet. The only ventilation was afforded by four holes measuring 1-1/2 by 12 inches, which were in the walls about eight feet above the floor, and an opening in the ceiling

about 2-1/2 feet square--the latter ineffective, because the air remained entrapped by the roof. He recommended that the building be enlarged and given better ventilation.⁷ Two years later, he reported:

In accordance with the communications of the Post Surgeon . . . the Guard House was enlarged by adding on a new room 12 x 16. This building is never well policed, always in a very filthy and disgusting condition, although disinfectants are freely issued from the Hospital. They are either wasted or improperly used by reason of it not being the obligation of any one to superintend this matter.⁸

Three years later, another surgeon at Fort Davis reported that the guardhouse prison room was floored with flagstones. He recommended replacing that with board flooring.⁹ Also in 1875, the guardhouse at Fort Dodge, Kansas, was described as a temporary wooden shed measuring 18 by 24 feet, in bad condition and unsuitable for use, although it had an average population of 12 prisoners. There apparently were no contents other than the buckets used for defecations. To the post surgeon, the conditions were "deplorable."¹⁰

Finally, one other veteran mentioned in passing some additional guardroom furnishings, probably at Fort Randall, Dakota, 1873-75. They were "the guard house clock," and "the guard house broom."¹¹

Notes

1. Quoted in Prucha, Sword of the Republic, 174.
2. Meyers, Ten Years in the Ranks, 132.
3. Medical History of Fort Davis, Nov. 1869. This is typical of an oft-repeated refrain.
4. Billings, Report on Barracks and Hospitals, 65.
5. *Ibid.*, 149.
6. *Ibid.*, 348; see also Rickey, Forty Miles a Day, 177.
7. Medical History of Fort Davis, Oct. 1870.
8. *Ibid.*, May 1872. The issue of hospital disinfectants for other buildings was forbidden by the supply tables, but happened anyway.
9. *Ibid.*, Jan. 1875.
10. Leo E. Oliva, Soldiers on the Santa Fe Trail (Norman: University of Oklahoma Press, 1967), 173.
11. Cox, Five Years in the United States Army, 70-73.

PART V

RECONCILIATION



SINGLE MEN IN BARRICKS DON'T GROW INTO PLASTER SAINTS*

The preceding parts of this report have approached the furniture of army barracks through examination of administrative history, the development of regulations, and contemporary comments. The following discussion attempts to reconcile the information from those different perspectives into a summary of what, from decade to decade, might have been found in an "average" (if there ever was such) barrack and guardhouse.

Permanent barracks, where they existed, tended to be larger and more substantially built, often better finished, than temporary quarters. From the outset, a whole or at least a half or quarter company occupied a single room, although there were probably exceptions here and there. Because the installations were often near cities, they were closer to commercial sawmills than most temporary posts and as a result usually had more and finer furniture, space permitting.

Temporary barracks varied greatly one from another and underwent some general evolution through the decades. A few generalizations are possible. Most of them throughout the period were of wood, although here and there, especially in later years, they were built of stone, brick, or adobe. The rudest practice, dominant in the earliest years, was to build them of logs or puncheons embedded in trenches, unified only by the roof structure. That general form of construction fell out of favor increasingly after the War of 1812 but remained common until the Civil War and occasionally thereafter. It was supplanted first by construction with hewn horizontal timbers, which did not persist long, then timber-frame construction. The posts built between 1817 and 1820, although basically horizontal-timber structures, showed an increasing use of sawn wood, a product of the great availability of tools after the War of

*Rudyard Kipling

1812. Portable sawmills were available by the 1820s, if not earlier, and became more common thereafter, especially in the 1850s. The resulting greater abundance of lumber (and nails) promoted balloon-frame construction and more and better furniture.

Probably from the very earliest days the Army used whitewashes--often called "calcimine" or "kalsomine"--extensively for interior finish. The typical barrack room was whitewashed once or twice a year, both for sanitary reasons and to lighten the dark rooms. Where paint (which was always in limited supply) was used, it was only for building trim and sometimes for furniture.

Wooden floors, often of low quality, were standard for buildings erected after 1817. But for no decade can they be described as usually present. Very often they were later improvements to barracks originally built without them; that pattern prevailed even in the decades after the Civil War.

Temporary barracks were generally suitable enough when new, but all of them--because of the nature of their construction and the Army's low level of maintenance--deteriorated rapidly. The same can be said of the furniture within them.

With experience and improving technology, the size of temporary barrack rooms tended to grow over the years, from the small huts common before 1812 to company-size rooms for as many as 100 men. Also, especially in the earlier decades, the size of a barrack room significantly determined the number and dimensions of furnishings placed in it.

During most of the 19th century, the craftsmanship evidenced in furniture built by troops probably often surpassed that reflected in the buildings built by the same men. There were several reasons for that, a principal one being scale--a bench built of boards is simply easier to fabricate than a building of logs. For one-man tasks, the best craftsmen in a unit were assigned. The furniture itself was plain and simple (given basic skills and tools) to make. Further, woodworking skills were

widespread among America's populations in the 19th century, especially before the Civil War when many soldiers came from rural homes or small towns where woodcraft was an important part of daily life. The general level of craftsmanship declined after the war, however, with the gap filled increasingly by prepared lumber and the growing use of nails (technology's gift to the inept joiner) and by the distribution of general issue objects.

It should also be recalled that throughout the 19th century a substantial part of the enlisted ranks were foreigners with more than ordinary skills, who often joined the Army to learn English, without which they could not find work in civilian life. Other skilled men joined the Army, especially after 1849, in order to be shipped to the West, where (if they did not desert upon arrival) they hoped to find profitable employment after discharge. Others joined during the recurrent economic slumps, when jobs in the civilian world were scarce.

Finally, at the risk of belaboring the point, throughout the century there was a great deal of variation in buildings and their contents from post to post; about the only thing uniform throughout the Army was its uniform. However, considerable uniformity of buildings and furniture could be expected within any one post--in fact, it was required by regulations.

There will be few citations in the discussions that follow; the reader is referred to the earlier parts of the report and to the appendixes. The figures on authorized company size are derived from the tables in appendix N.

A comment on the Army's strength is in order. Because the returns surviving are incomplete, no one knows exactly how many men were in the Army during the years before 1816. The authorized strength and organization were matters of law, although it is known that the Army probably was never at full strength during those early years. But the organization was complete even if the companies were under strength, so in comparison with the fuel regulations and related data, the authorized strength may be taken as a guide on how companies would have been divided among rooms.

Barracks:

In the fall of 1782 the Continental Army moved to the neighborhood of New Windsor, New York, to establish its final cantonment. Working in groups of 16, within two months the soldiers erected over 700 substantial corner-notched timber huts for every purpose, along with a large assembly building. The typical soldier hut measured about 39 by 18 feet overall, with a fireplace and chimney at each end; it was divided into two rooms, each to house an average of eight men. It is known that the men built bunks for themselves, in which they slept in pairs, and it is believed that they were built into the hut walls. Given the rather generous space available to each group of eight, the likeliest form of the bunk would have been that shown as the problematic "first" army bunk in appendix D--a floor-level side rail confining straw over brush or puncheons, one in each corner of the room. Two-level bunks had been used by the British in the 18th century, and the erection of such structures--in two corners of the room at the opposite end from the fireplace--would have freed floor space and removed the straw from the open fire. However, the one-story version, because of the limited range of tools available, is more likely. Regarding other furniture there is little information, although puncheon benches, tables, and stools, along with camp paraphernalia, seem reasonable.

New Windsor Cantonment was not only the Continental Army's last and largest, it was its finest. It reflected years of experience, increasing sophistication, and a substantial inventory of tools (mainly those for chopping, hewing, and shaping; except for crosscut types for bucking logs, saws apparently were not abundant). Washington required that all buildings be built to a high standard and ordered some that did not meet his approval to be demolished and started anew.

For the Continental Army, New Windsor reflected the attainment of professionalism and of perfection in military construction. To the United States Army 20 years later, it was a precedent, an ideal, a standard to

be met. The Army's leaders in the years after 1800, including the secretary of war, were mostly veterans of the Continental Army. Its standards were not only handy precedents for the new Army, but they were matters of personal experience upon which to base decisions for the future.

Revolutionary War precedent clearly applied in the first regulations adopted for the Army in 1801, setting the issue of fuel according to each room occupied as barracks by eight enlisted men. That was modified in 1806, but the eight-man standard remained. It might be assumed from that standard that the Army generally housed its men in groups of eight. But that was probably not the universal case, as the Army did nothing in consistent fashion in its early years. To begin with, the miniscule force was scattered before 1805 in at least 43 locations, from 375 men in tents and rented space at New Orleans to three soldiers at Fredericktown, Maryland. The military posts proper included a number of frontier stockades inherited from the British and others erected as conditions demanded. No two, probably, were alike, although they were chiefly rude constructions of log or puncheon palisades with interior buildings attached to the outer walls. But the small number of posts built by the Army before 1812 may well have, to the extent possible, reflected the example of New Windsor, including rooms for eight.

By 1812 the Army officially grouped its men in dozens for housing and distributed fuel accordingly. The change, which was certainly an economical one, may have developed in practice ahead of the regulations, with the 12-man room more generally the norm by the time the rules were altered. There were several possible reasons for that. The winter quarters of the Continental Army, reaching final form at New Windsor, were collections of detached buildings in open communities. Frontier posts, however, were confined within walls. Adherence to eight-man rooms would not have been as practical in such circumstances as lining the stockades with series of oblong, 12-man rooms.

Just as revolutionary precedent could be applied only awkwardly to the conditions at frontier posts, it did not fit well the actual organization of

the new American Army, which itself underwent deliberate reformation when the peacetime establishment was fixed anew in 1802. Companies were less conveniently divisible into groups of eight than into dozens. Taking an infantry company as a standard, the following table presents the average authorized size of a company, as changed before 1812, with the results if divided by eight or twelve:

1800: 62 men required 7.8 rooms (by 8) or 5.2 rooms (by 12)

1800: 76 men required 9.5 rooms (by 8) or 6.3 rooms (by 12)

1808: 76 men required 9.5 rooms (by 8) or 6.3 rooms (by 12)

In dividing companies to determine how many rooms they would have required, two considerations should be borne in mind. First, some small allowance must have been made for regimental noncommissioned officers. Second, greater allowance must have been made for the fact that few or no companies were at authorized strength. The result is that the product of each division, to match the realities of actual strength, was likely rounded down to the next lower whole number rather than up--that is, overcrowd rather than overbuild. The War Department might have intended to issue wood to men in groups of eight, as had been done at New Windsor, but the men themselves would have had less work to do if they built rooms for 12. The latter probably became progressively more common, especially after 1802.

Another force favoring the 12-man room was the fact that the men were issued equipment and cartage in units of six--in which they also lived in tents. And finally, it should be reiterated that there apparently was no uniformity at all; men probably lived here and there in groups ranging from two to 20 or more, depending upon circumstance. The War Department, in seizing upon the eight-man quarters of New Windsor, may have simply borrowed the handiest precedent as it established control over the fuel ration. It did not resolve the disparities until 1812, when the expanded size of companies joined the other influences to make groupings in dozens the most practical pattern.

Finally there is considerable reason to believe that the most common bunk before 1812 was the floor-level type sketched as the "first" army bunk in appendix E. For one thing, the best available evidence on a "permanent" barrack during the period, Fort Detroit, suggests that there the men were to sleep in lofts not exceeding 3½ feet high--a clear implication that they slept on the floors of the lofts. For another, it is believed that the typical tool inventory at a new post under construction probably fell short even of that at New Windsor in 1782. Elevated, even multistoried bunks could have been built with such limited tools, but they would have required great skill and some time. Furthermore, it is known that elevated bunks were apparently new in the Army as late as 1820 (although the two-story free-standing bunkbed that soon became the norm probably had roots as far back as the 1750s).

Guardhouses:

There is almost no information on the earliest guardhouses. Because corporal punishment was the chief means of discipline, it is very possible that malefactors were seldom confined. Some accommodations for a garrison guard would have been necessary, however. Guardrooms during this period probably had nothing more than a bench or shelf for the men, an arm rack or pegs for the weapons, a larger supply of candles than present in barrack rooms, and slop and water buckets. Heat came from open fireplaces. Otherwise, the guardroom at a post probably matched the barrack rooms in dimensions and form of construction. Where prison rooms were present, their entire furnishings would have been shackles, and rings, and slop buckets for wastes.

The guardhouse at Detroit was supposed to be of 9-inch timbers, 15 feet on a side. Whether it was to be subdivided is not apparent from the instructions.

1812-1820

Barracks:

There were no permanent barracks occupied during this period, except the few built before 1812 that survived. Otherwise, the few artillerists manning coastal fortifications mostly lived in circumstances not greatly different from those on the frontier. It was not until 1820 that the War Department directed the Corps of Engineers to erect quarters at permanent fortifications, something it did only occasionally for the next six decades.

At the start of the War of 1812, the average authorized size of an infantry company was expanded to 102 men; it grew to 103 men in 1813, and fell to 101 the next year. In 1815, after the war, it reverted to 78 enlisted men per company on the average, although companies were seldom at full strength.

Winter quarters erected during the war were mostly open hut cantonments, much like those of the Revolution, in the northern theater, and rough log-palisaded forts, often reinforced with earthen embankments, in the Northwest. But the most general pattern, especially during the first two years, was one of chaos and deprivation. At many places the men lacked bunks, straw, blankets, sometimes even buildings--and the tools to build them with. Construction practices varied, but mostly followed older patterns. Barracks furniture, as such, was probably very rare in most temporary quarters during the war. The chief change from earlier conditions was that, given the expanded companies and the various exigencies, huts and barrack rooms were often grossly overcrowded. After 1812 the War Department allowed a room to each 12 men, but where quarters were insufficient crowding was unavoidable.

Immediately after the war, as the Army shrank swiftly in size, there was relatively little new construction; most troops occupied posts already existing. Between 1817 and 1820, however, there was a significant

construction program (its budget cut in half just after it started). Actually, there were two. One developed fortifications (mostly without quarters) on the seacoasts, the other on the frontier. Earlier construction and room arrangement reflected a range of hybridization between the previous patterns and those followed after 1817.

Among the noticeable trends was the growing use of sawn lumber. Tools, including saws, were more available in both the civilian and military worlds after 1815 than they had been before the war, and industry was introducing a steadily expanding range of saws, planes, and other woodworking implements. Also, buildings and forts commonly were built of corner-notched horizontal timbers, a pattern that largely gave way to post-on-sill construction after 1825.

Another development was the shrinking size of barrack rooms built after 1817. More men typically occupied less space, and as a result a significant evolution in bunks occurred. They now commonly appeared in two or three stories, and they were narrow, typically less than 3 feet wide. Even so, they crowded the rooms, and that together with emerging hygienic awareness made separate kitchens and mess rooms generally the norm by 1820. But bunks were not always present, and those that were seem to have been variously built-in or free-standing. The lower level of the former typically remained on the floor, that of the latter often was elevated. The advantages of movable bedsteads were obvious, and in general terms built-in floor-level bunks became uncommon after 1820.

Cantonment Missouri, Nebraska, built 1819-20, was in its day the largest military post in the United States. It was also the best documented of its generation. That, together with its possible status as a sort of standard for other posts, allows it to serve as an instructive example of the general type. The scaled drawings of the post made in 1820 (appendix B) show a hollow square about 240 feet on a side, with a covered gateway projecting from the center of each side. All construction was of hewn horizontal timbers, corner-notched, with board floors and roofs. Brick fireplaces with stone hearths and mud-and-stick chimneys projecting through the roofs heated the rooms.

The continuous outer wall, without openings of any sort, formed the back wall of all rooms in the square. It was about 10 feet high at the roof line. The continuous roof sloped toward the center of the fort, resting on the front walls of the rooms, about 6 feet high. The rooms themselves--the fort was more or less four strings of cubicles joined at the corners--were pretty much alike, about 10 feet square on the outside, slightly more than 9 feet square on the interiors; some of them were subdivided. Each room had one window--12 inches wide by 18 inches high--facing the center courtyard, next to a board door about 3 feet tall and 1½ feet wide, opening onto a small stoop. The front and back walls were connected by stringers; the stringers or joists may have supported lofts in some of the rooms.

Two buildings occupied the center of the court; they were built of timbers like the outer square. One, measuring roughly 28 feet by 50 feet, housed three general storerooms each about 14 feet square; a mess room for two regiments measuring about 10 feet by 20, with a kitchen room at its end about 8 feet by 10; a schoolroom measuring about 5 by 10 feet; a storeroom for Indian trade goods measuring about 5 by 5; and four rooms for guards and prisoners, three of them about 5 by 5, one about 5 by 10. The other building, measuring about 28 feet by 40, was divided into six equal rooms, five for storage and one a double-walled magazine.

Three of the rooms in the outer square were for hospital use. The rest housed officers and enlisted men of two regiments, Indian agents, and storage or special uses. For the 6th Infantry, 460 enlisted men occupied 36 rooms, or slightly more than 12 to a room on the average. The 608 enlisted men of the Rifle Regiment occupied 40 rooms, or about 15 to a room on the average. (Both figures include regimental noncommissioned officers.) In addition, there was a substantial number of washerwomen, wives, and children in the barracks, although the actual figure is not known. Washerwomen were authorized at the rate of one to every 17 men, or 27 for the 6th Infantry and 35 or 36 for the Rifle Regiment.

The barrack rooms were dim, low hovels, scarcely more than small wooden caves. An officer of the 6th Infantry complained that the men made a bad situation worse. Those in his regiment cleaned fish and piled wood in their rooms, and the riflemen were only somewhat better. Both regiments habitually spilled water on the floors "which renders them damp and unhealthy." Both also threw their wash water out the doors, and garbage everywhere, especially behind the buildings. "The construction of the bunks in the Rifle Regiment," he averred, "does not appear to be calculated for the enforcing of a rigid police on account of the vacancy next the floor." (Both quotations, Johnson, "Cantonment Missouri," 126.) It would appear from that that the bunks of the infantrymen were on the floors.

The question is how anywhere from 12 to 18 people could find a way to sleep in about 80 square feet of space. Obviously, the bunks had to be narrow and multistoried. A typical room at Cantonment Missouri could have accommodated three two-story bunkbeds for 12 men in all, provided they were less than three feet wide. The door and fireplace would have to have been at the same end of the room, opposite the bunks. The lofts could have accommodated extras, such as women or noncommissioned officers, but not everyone.

Alternatively, the bunks could have been in three stories. But if the headspace was less than 6 feet (if a loft was present), the lower bunk must have been on the floor or the separation between stories very small.

At Cantonment Missouri the Army created problems in the design of quarters and furniture that it did not sort out until the 1820s. One officer complained that the men's meals were "irregular," which is not surprising if one small mess facility served two regiments. On the other hand, during the first winter there were complaints that some of the infantry rooms did not have tables or shelving to hold "table furniture and fragments of provisions." Although it is difficult to see how the rooms could have accommodated more than bunks and equipment, that suggests that there may have been some cooking, eating, and storage in some of the rooms.

It was probably at places like Cantonment Missouri around 1820 that the free-standing, multistoried wooden bunkbed, with attached shelving and arm rack became established as the norm. Hardly anything else would have worked in such circumstances. Certainly this bunk had existed before, although not universally. Now it was inescapable. And in the Army's way of doing things, it would persist even after its general necessity had passed.

Guardhouses:

There is little information about guardhouses during this period. At Cantonment Missouri, guards and prisoners had four rooms in a building given several other uses. One room, presumably for the guard, measured 5 feet by 10, the others, presumably for prisoners, measured 5 feet square. That reflects the fact that the Army had turned increasingly to confinement and away from more brutal punishments, but it says little about the arrangement of the interiors. Probably the only furniture in prison rooms would have been slop buckets and shackles. In the guardroom, a bench or shelf for the men to rest on, perhaps a musket rack, seem likely, probably along with a slop bucket, water bucket and dipper or cup, sandbox or water bucket for fires, and candles.

1821-1848

Barracks:

In 1821 the authorized strength of the Army was cut in half, to just over 6,000 officers and men. From 1833 to 1836, three acts of Congress raised that figure by only about a thousand. In 1838 the demands of the Seminole War raised the limit to over 12,000, and in 1846 and 1847 the Mexican War drove it to over 17,812 and 30,865 respectively. When the war ended, Congress cut the authorized force to just over 10,000 officers and men. But as the last table in appendix N shows, the actual strength

of the Army never approached the authorized. That fact did much to ease the overcrowding prevalent in barracks by 1820.

The expanded Army during the two wars really did not affect the demand for housing, since the major part of the force was in the field. Even at the many strong points of the Seminole War most of the troops lived in tents--the fresh air giving them a lesser rate of disease than was prevalent at military posts elsewhere. In peacetime, the average authorized strength of an infantry company was 51 enlisted men after 1821, if one allows for the fact that most companies were understrength, that is a figure easily divisible by 12, with a company typically occupying four rooms at a temporary post. Even the authorized expanded companies of the 1840s seldom exceeded that figure by much, requiring at most only another room for a dozen. In 1848, at the end of the War with Mexico, the average infantry company reverted to an authorized average of 52, where it remained until the Civil War.

Except for wartime, artillery companies remained at a stable authorized average of 55 men, reduced to 54 in 1848. Dragoon companies were somewhat larger, 71 on the average when first authorized in 1833, reduced to 61 in 1848. The Regiment of Mounted Riflemen had an authorized average company of 76 enlisted men throughout its life after establishment in 1846, except for the height of the Mexican War. It did not require barracks until after 1848.

Even with smaller companies, the Army could not for long coop its men up in tiny dens such as it built at Cantonment Missouri. Questions of humanity aside, the men simply would not endure such conditions, and deserted in great numbers--their own way of reducing the overcrowding. The fact that there was a stable Quartermaster Department after 1821, together with an increasingly professional officer corps and a body of enlisted men working with more and better tools, combined to promise improved construction procedures. But that was not to be for some time. In 1820 Congress halted all construction and repair on the frontier, and in 1823 the construction of permanent works (mainly without quarters anyway) came to a halt. The result was that all posts suffered more or

less deterioration for half a decade. Floors rotted away, roofs sagged, bunks fell apart.

Construction resumed in 1825. The Army seems by the mid-1820s to have settled upon a general pattern for temporary barracks and furniture, which persisted for nearly three decades with relatively little evolution either in the regulations or in practice. The commonest method of construction was post-on-sill timber frame with timber in-fills, although examples of log and puncheon palisade-in-trench construction and other materials and techniques could be encountered. The board floors that had rotted away so fast in the early 1820s probably did not seem worth the trouble, so wood floors were installed only occasionally. Puncheon floors probably were common, since they were cheap and easily replaced, but very often barrack floors were of earth.

Timber-frame construction, especially with more and better tools, allowed greater size and flexibility than palisades or horizontal timbers with corner joining--although the chief reason why Cantonment Missouri's structures were so small may have been either hastiness to beat the approach of winter or simple ineptitude on the part of the officers in charge. So barrack rooms became larger after 1825. Those reported at Fort Washita, Oklahoma, may have followed a general pattern. Each company was divided among four rooms, each measuring 17 feet by 19 feet and with separate mess facilities. In that case the four rooms were in two buildings; in other instances the rooms were all under one roof.

Stockades surrounding frontier posts became less common, although by no means nonexistent--even as late as the 1870s some officers believed a fort should look like a fort. But there was no real military reason for their presence, and they interfered with both traffic and ventilation. So while here and there some commanders built new posts with enclosing walls, at others the walls were torn down.

Bunks, benches, and tables in barracks and mess rooms were acknowledged by the regulations after 1821 but not specifically permitted to be built at public expense until 1835.

An important aspect of barracks life during the period was the fact that the buildings universally began to deteriorate even before they were completed. After a period of years they became thoroughly disagreeable. They were dim, smoky, and damp enough to begin with, but sooner or later they became obnoxiously smelly and visibly shabby, sometimes jury-rigged together in one way or another. Those improperly sited on wet ground or in flooded areas were the worst.

At permanent forts the story was inconsistent. Men at permanent forts built before the early 1820s occupied quarters if the Corps of Engineers had gotten around to building them--something that was not common. Construction resumed in the late 1820s and accelerated in the 1840s, but with the same indifference toward quarters. Where the forts were garrisoned, the men usually lived in casemates or tents. Even that was not common, however. The Army was so heavily invested in the West that it could not spare men for the seacoast works. Much of the time artillery units existed only on paper. The most significant occupation of permanent quarters was along the Canadian border and at recruiting depots. For most of the period forts around New York, on the Virginia coast, and in Louisiana tended to receive what military units were available; the others were in caretaker status, unmanned.

This is the first period when the regulations provide some useful information about the contents and appearance of barracks. Winfield Scott was finally able to impose his standards of sanitation, orderliness, and uniformity upon the Army. The evidence is that the officer corps, by now dominated by West Point graduates, implemented the regulations to the extent that conditions allowed. In practice there was a great deal of variation from post to post, but a high degree of uniformity (the Army's cardinal virtue) within a post, from room to room.

The reduction of the straw allowance in 1821 probably combined with the space limitations to keep the wooden bunks narrow before the 1850s. But the regulations suggest other features of the bunks as well. Although the bunks were arranged in two, sometimes three, layers, the regulations treated each bunk and its shelf as a separate unit. The bed bottoms

were regarded as the first, or lower, shelf, upon which were displayed the rolled bedding, knapsack, and greatcoat. The shelf proper received the dress cap in its case and presumably the dress uniform if not on the soldier or in the knapsack. Weapons and knapsacks, kept at the ready, went to the foot of the bunk, things not at the ready (bedding, dress cap, shoes) to the head.

It is also apparent that arm racks were supposed to be appended to the bunks. But it seems that that became less common as time passed. It was probably simpler to construct separate structures for muskets, placing them at the foot of the bunks. Where, in rare cases, the rooms were large enough, arm racks may have been against or attached to walls. They could not have been elevated too far from the floor in any case, because the muskets averaged around 5 feet long throughout the period. Storage of muskets was always vertical, because of the lack of wall space.

The racking of arms and accoutrements was carefully prescribed in the regulations, albeit leaving wide room for different interpretations (as Croghan complained). In 1821 the regulations required the following:

Fire arms will be habitually placed, (the cock let down, and the bayonet in its scabbard) in the arm-racks; the accoutrements suspended over the firelocks; swords hung by the belts, on pegs.

From 1835 on, the same subject is prescribed as follows:

The arms will be placed in the arm-racks, the stoppers in the muzzles, the cocks let down, and the bayonets in their scabbards; the accoutrements suspended over the arms, and the swords hung by the belts on pegs.

The most significant change was the addition of the stopper, or tompion, which probably had been present earlier. What may seem like another change--from suspending the accoutrements over the "firelocks" to over

the "arms"--was not one at all. It merely reflected the evolution of the language. "Firelock" was the common American military term for a flintlock musket before the 1820s, when it passed out of use. It did not mean the lock or firing mechanism of the weapon. The likeliest interpretation is that the accoutrements were hung over the muzzles of the weapons when racked. Where the pegs for the swords were is open to speculation. The likeliest case is that they were not far from the muskets and were probably (but not always) affixed to the racks rather than nearby walls or furniture.

It is clear that the muskets were not to be racked with bayonets fixed. Not only were the rooms often too low, but plug bayonets had long since vanished, and the practice of permanently soldering bayonets to muskets--15,000 were so treated from 1796 to 1800--was formally outlawed by the secretary of war in 1806.

Finally, it should be reiterated that no item of barracks furniture varied as widely from place to place and from year to year as the arm rack. There may not have been a general standard until the 1880s.

Guardhouses:

Guardhouses were still a rather unmentionable subject during this period. The same considerations for furnishings applied as for the earlier period.

The 1850s

Barracks:

The Army entered the 1850s somewhat reduced in strength from before the Mexican War but retaining the same company sizes--52 enlisted men authorized to an average infantry company. For a change, however, actual strength very nearly matched the authorized figure through the early part of the decade. In 1855 the Army was reorganized, and its

authorized strength increased by about one-fifth. The average size of infantry companies remained the same, however, except for the optional authority given the president to add 32 privates to companies in remote areas in the West. The president exercised his option freely in the years before the Civil War, and at many places the average strength of infantry companies was around 85 or more.

Portable sawmills, chiefly circular animal-powered types, became relatively common in new post construction in the West. As a result, barracks housing whole companies in one room became increasingly common, although by no means universal. On the contrary, the range of variations across the Army was greater than it had ever been before. Company barracks at Benicia Arsenal, California, built with balloon-frame construction in 1850, measured 80 feet by 30 feet; those built in 1856 at Fort Davis, Texas, of stone with thatched roofs and flagstone floors, measured 60 feet by 20. At Fort Duncan, Texas, the men lived in groups of six in small grass-and-willow huts. Here and there the Army tested wood or iron portable buildings, with generally poor results. Large stone or brick barracks were built at several urban centers, New York in particular, but men at many other new and old seacoast works still inhabited casemates or tents.

Nor did older forms of construction vanish altogether. Posts built in Oklahoma during the decade were fashioned of logs and puncheons in a throwback to the most primitive methods. Timber-frame, post-on-sill construction, however, no longer was prevalent--probably because the traditional skills required for such work were growing scarce. In the civilian world, abundant lumber and nails had made balloon-frame wood construction very common. By the time the Army released its new barracks regulations in 1860, it too seemed determined to adopt the balloon-frame wood building as its standard.

Except in some of the permanent quarters in the Northeast, the furniture in barracks remained the old wooden bunks, benches, and tables, although the quartermasters on the Pacific Coast did, apparently with some success, make serious efforts to equip some barracks with iron

bedsteads. Where wooden furniture built on site remained the rule, it is likely that sawn, dressed, lumber was commonly available and that nails began to supplant traditional joinery (although posts under construction often ran out of nails). There was also a noticeable trend toward wider bunks, probably mainly in permanent barracks and recruiting depots where space was available, but possibly at some of the new temporary posts as well.

Some interesting changes in furnishings were promised, and a few of them delivered during the decade. In 1854 the War Department adopted the single iron bedstead as the army standard, but without saying what it should be. The straw allowance thereafter was for men as individuals rather than in pairs--12 pounds per man per month. But in practice, most of the Army continued to sleep double on wooden, two-story bunkbeds. Somewhat over 5,000 copies of the Johns bunk were supplied to recruiting depots around New York at the end of the decade, and an unknown number of a similar type made their way to California and to a few other posts around the country. It is also known that iron bedsteads of more than one type came into use around New York. One was simply an iron version of the two-story, four-man wooden bunkbed, possibly Whiting's design. Another was a one-story, two-man bedstead that could be folded up during the daytime. The latter may have followed the pattern of folding one-man bedsteads in use in British barracks.

Stoves became more common in the 1850s, especially at the eastern posts where fuel was especially scarce. They remained relatively uncommon in temporary barracks but did appear here and there, especially on the West Coast. Plumbing was installed for laundry rooms and water-closet latrines in many permanent quarters, along with iron cooking ranges (often with water backs to supply hot water). Some temporary quarters even got built-in brick ranges, although open fires remained the principal way of cooking food. Where ranges were present, the number and variety of skillets, pots, griddles, and other "stove furniture" expanded, most of it iron or tin. Some post bakeries were established, but as in later years when they became general, they were wholly separate from barracks and mess rooms.

The private soldier's leisure life is somewhat better known for the 1850s than for earlier periods. Occasional company libraries were reported. In at least one instance halved barrels were placed in a mess room to serve as bathing tubs in winter. The liquor ration had long since ended, but the men of the 1850s had more money to spend than had their predecessors; liquor was consumed mostly off post or at sutler's shops. Some money may have been used to increase the supply of candles in barracks, and it is almost certain that company funds began to be used for such purposes. Barracks remained mostly dim, however, as there were better uses for the money than sputtering candles.

Drunkenness and sexual adventures have been important forms of soldier recreation as long as there have been armies. Another illicit and equally ancient pleasure is gambling. Various dice and chance games and similar ways of parting fools from their money have been around for thousands of years. By the 1850s card games were one of the most popular types of recreation in the United States; by then they had probably begun to surpass dice as the preferred form of gambling in the Army.

Tobacco chewing remained widespread in the 1850s, indeed for many decades yet to come. But the smoking of cigars and, especially, pipes was increasingly common. Briar pipes (often homemade) were probably the most popular, but they never completely supplanted clay pipes, breakable though the latter were; clay pipes enjoyed a resurgence during the Civil War, but by the 1870s they were regarded as quaint or low-class. (Sherlock Holmes' devotion to the workingman's black clay pipe in the 1880s and 1890s was regarded by Dr. Watson as among his "slovenly" habits out of keeping with his station; he never smoked a calabash, by the way. Although often identified with cigars, Ulysses Grant was more commonly seen with a briar in his mouth--a habit he apparently acquired in the Army during the 1850s. Incidentally, the reason archeologists find only clay pipes while digging at old military posts is that clay, unlike briar, does not rot in the ground.) Corncob pipes were reported in the late 1850s. Roll-your-own cigarettes appeared mainly after the Civil War; tailor-mades became progressively more common after the 1880s.

The better paid and better educated soldiers of the 1850s had more personal possessions than their forebears. Chests, boxes, and footlockers for soldiers--not formally authorized, although long traditional for seamen--were often reported during the decade, although mostly in permanent quarters. They remained uncommon, of inconsistent pattern, and of no uniform availability; most of them were probably the property of sergeants and corporals. The Army still expected its soldiers to live out of knapsacks.

It was probably during the 1850s or just before that the Army blanket changed color from white to gray with black stripes and letters. That happened in barracks, but not, it seems, in hospitals; in the 1860s and 1870s gray blankets were used by the Medical Department only in the field; post hospitals were supposed to be furnished white blankets. It is likely, since hospital blankets came from the medical supply system, that that dual pattern was also followed in the 1850s.

Finally, it was the Medical Department that produced the most important change in army furniture during the 1850s. Iron bedsteads appeared on the hospital supply table in 1856, and within less than two years virtually every post hospital, permanent and temporary alike, had received them. No record of its design has been located, but it was probably that appearing in photographs of Civil War hospitals.

Guardhouses:

As before, little is known about guardhouses in the 1850s, except that in one form or another they seem to have been almost universal. At permanent posts the guardroom commonly was associated with the main gate, with prison sections adjoining. Benches for the men, a common table or desk, one or two common chairs, and cleaning and fire-fighting implements probably were common. Built-in shelves or banquettes may have been common, although not universal, resting places for the men. Arm racks would have been similar to whatever was in the barracks at the post, placed near the door. Guardrooms received extra issues of

candles and fuel. Metal-and-glass lanterns (for candles) for the corporal of the guard probably were common by the 1850s.

Civil War

The furniture of Civil War buildings may be quickly summarized. Barracks for volunteers at the training camps were not furnished; rather, the bunks were built in, at first as pigeon holes along the walls. In the early part of the war, the barracks for a company of 100 men were of two types--50 feet long with bunks in three tiers, or 100 feet long with bunks in two. The bunks measured about 4 feet by 6, were separated head from foot by wood partitions, and slept two men each. The only furniture was bedding and blankets; nothing else occupied the buildings. By 1864, standard plans called for two-story barracks, with the dormitories holding bunks in three levels (with two shelves) projecting at right angles from the long walls, the room having windows and better heat and ventilation than the earlier barracks. Both types are reflected in plans in appendix B. Virtually all Civil War buildings were balloon-frame, the lumber often dressed.

Winter quarters harked back to those of the Continental Army, except that they were usually smaller (two and four men were common) and roofed with tenting. The men furnished them with rude built-in bunks of various sorts and such other handiworks as they were capable of assembling. Extensive use was made of wood from ration boxes and bailing wire. The supply of candles was undependable, and slush lamps made from sardine cans appeared in some huts. The cleanliness of the quarters depended upon the habits of the occupants, and camp sanitation was unevenly enforced in volunteer regiments throughout the war. Like soldiers on campaign since time immemorial, the armies of the Civil War were infested with insects.

All buildings erected during the war were officially temporary and disposed of as soon as possible after its conclusion. Any influence they might have had on later construction vanished with them.

Late 1860s

The Army emerged from the Civil War with the largest authorized peacetime strength in its history, established in 1866 at 80,258 officers and men. The larger force was necessary to occupy the South, intimidate the French in Mexico, and put down the Indian resistance to white settlement in the West. But Congress believed that such strength was required only on paper--it actually held the force down to a "minimum organization" of 54,641 officers and men. Only companies of cavalry were allowed full strength; they averaged 100 enlisted men. Unmounted artillery companies averaged 76, mounted artillery companies 140, and infantry companies 69.

In 1869 Congress reduced the authorized strength of the minimum organization to 37,313 officers and men. Cavalry companies now averaged 80 enlisted men, unmounted artillery 76, the five mounted artillery companies 140, and infantry 69.

The companies were considerably larger than they had been before the war, a fact that helps to explain the instances of almost unbelievable overcrowding, especially in cavalry barracks, reported at every hand in the late 1860s. Other factors were also at work. The temporary quarters reoccupied or built by the Army in the years after the war can generally be described as much like those of the 1850s, only worse--as a whole, the worst housing in the Army's history. Here and there men lived in grass shacks, tiny log hovels, soddies, shabby adobe houses, even dugouts. When the Army scattered over the West and the South in 1866, there was no budget for anything more than the most primitive construction. Even when, during the next few years, major construction projects were begun, the Army too often proved to be its own worst enemy. Posts started in Texas in 1867, for instance, were rather nicely designed in comparison with earlier examples. Typically, each company was to receive a building, with two dormitories measuring over 20 by 80 feet, together with other rooms and mess facilities. Even at 50 men to a room, such spacious quarters would have seemed luxurious to a veteran of the 1850s or before. Unfortunately, the posts were built under inept

supervision because the Quartermaster Department was not allowed to send officers to direct the work; some of them were sited on inhospitable ground, and some buildings began to come apart even before they were finished. Worse, the money ran out before the projects were completed, and the buildings planned were not all even started, let alone completed. At Fort Davis, only two of six projected barracks were reasonably finished by the spring of 1868, and the unprotected adobe walls of a third were left to weather away for several years.

Similar mishaps occurred elsewhere, aggravated by inconsistent but generally inadequate appropriations for construction and repairs. The result was that there were too few barracks for too many men. With the blessing of the regulations, minimum-space requirements for enlisted men had as much real-world application as those for angels on pinheads. If it were possible to offer a general description based on an average of all temporary barracks in place in the late 1860s, and leaving aside places where men huddled in small groups in grass shacks or dugouts, the recipe would read something like this: Take the room as given, then cram into it as many two- or three-story wooden bunkbeds as it can take, leaving only enough space to allow exits and entries. If that is not enough, sleep more than two men to a bed and put others on the floor. Any surplus can erect tents on the parade ground.

There were only two general considerations that guided the foregoing procedure in the late 1860s. One was that the width of the bunks commonly had grown to 4 or 4½ feet. The other was that the Army usually tried to house an entire company in the same circumstances, no matter how crowded, and it refrained from putting men from more than one company in the same room. But even those considerations were excepted on occasion. And certainly the men were not so grossly overcrowded everywhere, even in the West; just almost everywhere.

At permanent barracks, nothing changed in the late 1860s from conditions before the war; even the same furniture was usually in place, except for the Johns bunks, which were all junked by 1865 or so. A few hundred Jack bunks were placed at David's Island in late 1867.

Conditions began to improve during the 1870s, although often inadvertently. But there were some footnotes for the late 1860s. The germ theory of disease had become more widely appreciated, and with the medical supply table of 1867 the Medical Department instituted a regular disinfectant procedure in post hospitals. That called for the use of "chlorinium," a mixture of concentrated sulfuric acid, table salt, and manganese dioxide. Placed under beds, the concoction released small quantities of chlorine gas. For understandable reasons, the procedure was eliminated from later supply tables, in which carbolic acid was the preferred disinfectant.

And in 1869 the War Department expressly outlawed the use of lamps burning volatile fuels at military posts--an indication that some had begun to appear here and there. There is evidence that lard-oil lamps had by that time become common in guardrooms, and the medical supply tables suggest that hospitals may have been using alcohol ("spirit") lamps on occasion.

Finally, there is considerable evidence of the widespread use of disinfectants in guardhouse prison rooms. The commonest, and most traditional, was lime. But surgeons also complained that their disinfectant supplies were too much drawn on for such purposes. In 1871, the medical supply table offered a clue on practices in the 1860s by including the following statement: "Disinfectants are furnished by the Medical Department, for use in Post Hospitals, and with the sick, only. Quicklime [unslaked lime], chlorinated lime, and disinfectants for the use of posts, must be obtained from the Quartermaster's Department."

The 1870s

Barracks:

The postwar Army had a maximum actual strength of 56,815 officers and men in 1867. It shrank steadily thereafter. By the time Congress reduced the authorized force to 37,313 in 1869, the actual strength had fallen below that by about 600.

Congress adjusted the authorized strength to 35,353 in 1870, cutting average company sizes substantially. As authorized, cavalry companies in the minimum organization averaged 77 enlisted men, unmounted artillery companies 72 men, the five mounted artillery companies 132, and infantry companies 65. But in the following years actual strengths continued to decline. In 1874 Congress limited the total number of enlisted men to 25,000 and over the next two years readjusted the force but kept its authorized strength below 27,472 officers and men. As authorized, cavalry companies averaged 70 enlisted men (54 privates), artillery companies 43 (29 privates), and infantry companies 48 (34 privates). The actual strength of the Army fluctuated between 28,000 and 30,000 between 1871 and 1874, and between 25,000 and well below 27,000 thereafter, dropping below 25,000 once (in 1877).

The result of those developments was that most companies were under strength most of the time. When it is recalled that the actual strength figures included recruits not yet arrived at their units, men in transit and in hospital, prisoners in guardhouses or the United States Military Prison (established 1874), and unreturned deserters, it is apparent that the numbers of men housed in barracks fell dramatically after the late 1860s.

The effect was that, just as the housing conditions of the Army had generally reached their nadir, they suddenly began to improve, at least as regards overcrowding. Overcrowding remained a problem at many places, where there were too few barracks or the ones present were small. And certainly, throughout the 1870s some soldiers continued to inhabit brush hovels and other substandard housing. But as the decade progressed, overcrowding became less prevalent.

Other things helped as well. Through the 1870s the rate of establishment of new military posts declined, and several older posts (which had drained the repair budget) were abandoned. Although appropriations for construction and repair were erratic during the decade, and always insufficient, there was relatively more opportunity for improvement and expansion at posts that were apparently beginning to assume some

(informal) permanence. Most such improvements came on the frontier. At permanent posts the construction effort went chiefly to applying the lessons and repairing the damages of the Civil War, and at the end of the decade a substantial share of the garrison still occupied casemates.

Perhaps the most interesting series of development during the 1870s was the gradual replacement of wooden furniture built on site by an increasing number of articles in general issue. That reflected not only changing official attitudes in the Army but possibly an accelerating decline of craftsmanship in the general population after the Civil War. If the Army wanted its men to have decent furniture, it must provide it, because they were becoming progressively less able to do it for themselves.

The following are the more important adjustments to the furniture inventory during the decade:

1870: Distribution of fire extinguishers began, the Babcock only at first, then the Johnson, which became most common. All posts were well supplied by 1875.

1871: During fiscal 1871 the Army distributed 5,358 Barrack bunks to locations identified in chapter 9, including 4,000 to posts in Texas. During the same period, 3,113 Composite bunks (some possibly two-story) were authorized and delivered to locations listed in the same chapter. The latter were the company's first model (appendix G), with cast-iron gas pipe uprights. During the same period, 1,600 Miller bunks were installed in barracks around New York Harbor.

1872: New standard plans for buildings at temporary posts were distributed. Following the contracts let in November 1871, during fiscal 1872 the Quartermaster Department distributed 8,666 single iron bedsteads, probably about half each the Barrack and Composite models. The Barrack bunks appear to have been shipped mostly to the South and West, the Composite to posts in the Northeast and

along the coast. Toward the end of the fiscal year a bolt was substituted for the screw-bolt on the Barrack bunks already shipped. No more Barrack bunks were purchased after this fiscal year. Almost all bunks of both patterns were shipped without wooden slats, which were to be manufactured at the posts. Finally, it should be recalled that all Composite bunks shipped from fiscal 1872 to the end of the decade were of the company's No. 9 model, with Y-shaped feet and the shield at head and foot.

1873-74: By the end of fiscal 1874 the Army was nearly completely supplied with single iron bedsteads for barracks. In 1875 only 11 posts reported their men sleeping in the old wooden bunks. One, Fort Stockton, Texas, did so because the iron bedsteads had arrived without slats, and materials to make them were not available locally. In response to complaints, after 1873 the Quartermaster Department purchased slats for such circumstances.

1873: The Army adopted the new Mission Mills blanket, gray with black stripes and letters as before, but a better blanket. Purchases after the spring of 1873 were for the new blanket.

1874: Coyle bunks, 200 in all (appendix H), were distributed for testing to locations identified in chapter 9.

1875: The Quartermaster Department started to consolidate and standardize its specifications, that year for iron pots; camp kettles; and company order, descriptive, morning report, and clothing account books. Footlockers were authorized for permanent barracks, and standards adopted; limited distributions began, although many similar types were already in place unofficially. Specifications for rubber blankets were adopted. Billings proposed shower baths. The board on stoves met and prepared specifications for stoves and ranges, which were adopted; purchases of the new standard models began. Pillow sacks of tenting canvas were distributed.

1876: New specifications were adopted for blankets, changing the stripes and letters from black to indigo. Specifications for brooms, scrubbing brushes, and stencil plates were adopted. Specifications for "furniture" for cooking ranges were adopted, and the inventory of cooking implements standardized. Specifications for iron bunks (composite) were adopted, inadvertently omitting the top bracing rod but otherwise matching the company's No. 9 model. The Coyle bunk was adopted, with the addition of a foot board matching the headboard, and admitted to future competitions.

1877: The secretary of war ordered establishment of separate reading rooms, libraries, and schools at temporary posts; distribution of literature began.

1878: Specifications for the Coyle bunk were adopted. Specifications for barrack chairs were adopted; distribution began and was completed the following year. Study of improved lighting began, but without results in barracks until 1882. Manufacture of double bedsacks ceased.

1879: Specifications were adopted for bedsacks, pillow sacks, and mosquito bars. The last double bedsacks were issued, totaling 106. The Quartermaster Department apparently resumed shopping for single iron bedsteads as replacements for aging units.

1880: Procurement of replacement bunks apparently resumed; all acquired thereafter, despite the specifications, were of the Composite Iron Works Company's No. 10, with shortened frames and no shield, which the company had tried unsuccessfully to offer in 1873.

Conditions in temporary barracks varied so widely and changed so rapidly during the 1870s that an average for any one year would be exceedingly arbitrary. By 1879 or 1880, however, the furniture inventory had stabilized, with most general issue objects available at most places. In addition, construction was generally standardized on the frontier after 1872 (although each post's plans were individual variations of the general

design), and the maintenance backlogs widespread in 1870 seem by 1880 to have been made up. That is, most (not all) barracks had had floors and ceilings installed, and there were fewer reports of falling plaster or collapsing roofs. The occasional disorderliness of the men at the start of the decade had evidently been generally curbed by its end.

The standard plans issued in 1872 (appendix B) guided the construction of a number of barracks during the decade, with adjustments to local conditions, to be sure. Nor was it remarkably different from many of the barracks started in the late 1860s, so adjustments to older structures are rather obvious. Another advantage of following the 1872 plan is that it represents the maximum division of space that any barracks would have--dormitory, two rooms for noncommissioned officers, dayroom, armory, library, washroom, mess room, kitchen, cook's room, and pantry or storage. Not all of those purposes were served under one roof at all posts, nor were all purposes even served at all everywhere. For a company lacking a library or dayroom, for instance, the uses would have been transferred to other space or not served at all. Libraries seem chiefly to have been in separate buildings serving entire posts rather than one company.

It should be noted that the 1872 plan shows the placement of 58 bunks in the dormitory. More could be accommodated if necessary, while fewer would relieve crowding. They could also be stacked in daytime. Privates and corporals occupied the dormitory, while sergeants were accommodated in the other rooms. The average authorized complement of companies in the 1870 organization was as follows:

Cavalry:	1 first sergeant, 1 quartermaster sergeant, 5 sergeants, 70 other ranks
Artillery:	1 first sergeant, 1 quartermaster sergeant, 4 sergeants, 68 other ranks (not mounted)
Artillery:	1 first sergeant, 1 quartermaster sergeant, 4 sergeants, 126 other ranks (mounted)
Infantry:	1 first sergeant, 1 quartermaster sergeant, 4 sergeants, 59 other ranks

Clearly, the 1872 plan was prepared with the authorized infantry company in mind, at least regarding bedspace. There was some reason for that, because the infantry was the major branch of the Army. But the 1870 organization did not last long. After 1874 the average authorized companies were as follows:

Cavalry:	1 first sergeant, 5 sergeants, 65 other ranks
Artillery:	1 first sergeant, 4 (in 50 companies) or 5 (in 10) sergeants, 38 other ranks
Infantry:	1 first sergeant, 4 sergeants, 43 other ranks

The "other ranks" in the lists above were mainly privates and corporals, but depending upon the arm included trumpeters, farriers, blacksmiths, artificers, saddlers, and wagoners. Some of those specialists may have been housed near their work, but the commonest practice was to maintain companies together.

The orderly room (the name was borrowed from the British Army, where first sergeants were "orderly sergeants") served as the private apartment of the first sergeant and as the company office--often the only one available to the officers outside their homes. But since the first sergeant really ran the company, it was his domain, the place where he did the paperwork, handed out instructions, and dressed down miscreants.

The status of the orderly room had probably not stabilized by 1880. The position of first sergeant, as such, had only appeared in the table of organization in 1861, and the custom of allowing its occupant segregation from the rest of the barracks seems to have developed indifferently. There is some question, therefore, about the extent to which, even by 1880, the Army would have regarded the orderly room as a private apartment for the first sergeant, or as his office, in which he also slept. That it was an office seems most likely, because the barracks plans issued in 1860 (appendix B) and others issued during the Civil War set aside one room as an office without offering separate accommodations for sergeants, first or otherwise. The office function probably moved with the first sergeant in the 1872 plan, although that was flexible enough to

allow other rooms to serve the purpose. When companies had quartermaster sergeants, they probably shared rooms with first sergeants. After 1874 the first sergeant had his room to himself and was more likely than before to maintain his office there.

The dayroom, when there was one, was the general purpose room for the company, used during off hours. This was where a company would have placed the major share of its few candles, and where it would most likely have had other candles or permitted lamps purchased with company funds. If there was a company library and no other space for it, it would have been here. All other general company property, such as baseball equipment, would have been found here if not in a storeroom. But it should be noted that mess rooms had long served also as dayrooms, and that the latter were not anywhere near universal by 1880.

Although an armory is called for in the 1872 plan, even in much later times such facilities were by no means universal. Arms were routinely locked up wherever stored. Ammunition was ordinarily in the post magazine, but where there was no magazine, reports of ammunition storage in barracks were common. If an armory was present, it was kept locked.

The 1872 plan also shows a room for a library, but company libraries appear to have been less common at the end of the 1870s than separate post libraries. It is more likely that the space was used as a storeroom.

The washroom was not for the men, but for their laundry. It was a clear descendant of that shown in the Barracks Regulations of 1860, for which things like tubs and washboards were specified. It was located conveniently to the rear door of the building, giving laundresses access to the laundry kettles, to the lines where they hung clothes to dry, and to wherever they dumped used water if there was not a chute or drain pipe. When plumbing was installed in barracks (rare before the 1880s), the laundry room and kitchen typically received it. Here the company's two or three laundresses worked, doing the men's underclothes and blankets in water, and sponging and pressing uniforms at times.

The mess room underwent little evolution before 1880, which is understandable. Unless also serving as a dayroom, it needed to be nothing more than a simple place to eat, where the cooks and waiters were privates rotated for the duty.

The kitchen, of course, was dominated by the cooking range. Those issued after 1875 had water backs; any remaining from an earlier purchase were probably much like the later standard ranges, which according to the Army's stove board were based on ranges produced by Miller of Cincinnati. The kitchen was spotlessly clean and orderly for inspection, but it was nearly always in use, the range seldom growing cold. One of the duties of inspectors was to observe the quality of cooking and of the food prepared for the troops, so cooking would not cease merely because an inspector was coming through.

The pantry or rations storeroom just off the kitchen received rations as distributed to the company, often weekly or even monthly depending upon local practice and space at the post commissary. Some things, such as extracts and major condiments, were distributed in annual or semiannual increments for storage in company kitchens.

The last room set aside in the 1872 barracks plan was the cook's room. There is no reason to believe that this space was ever occupied as quarters, and considerable evidence against it. Officially, at least, the Army did not yet have full-time cooks; men were detailed from the company to serve as cooks, helpers, and waiters. Quarters next to the kitchen were likely uncomfortable, especially in summer, and the surgeons objected vehemently to anyone sleeping where "effluvia" from a kitchen could reach him. Further, every cook needs to get out of the hot kitchen occasionally, and everyone needs a place to sit down and rest. Finally, the "bull" or boss cook had paperwork to do. He kept track of his inventory and accounted for all rations received and served, including the daily bread charged against the company account. His accounts were reviewed regularly and passed on to his successor in the rotation.

The distribution of general issue objects, especially bedsteads, and other considerations had blurred the distinctions between permanent and temporary quarters by the late 1870s, except for the quality of the buildings. Recruiting depots tended to be more crowded in general, and to have fewer objects besides bedsteads, than other quarters. And at many of the coastal fortifications, the men remained in casemates or tents, along with their hospitals.

Guardhouses:

Guardhouses continued to be managed indifferently during the 1870s, despite some attempts at penal reform during the decade. It would appear that no two were alike, and that may have continued to be the case even after the issue of a standard plan for guardhouses at temporary posts in 1872 (appendix B). Actually, that plan may be more informative for guard and prison facilities at permanent posts than for temporary locations. Those facilities were commonly associated with gates at the big posts, and the 1872 plan is quite clearly modeled on the gate-flanking pattern. But whether permanent or temporary, the 1872 plan reflects the common general pattern: Guardhouses had a room for the guard, another for the officer, a common prison room, and cells. The 1872 plan envisioned no furniture (other than that authorized for an office), resting both the guards and the prisoners on a "banquette" or shelf. But it is known that many guardhouses did have some furniture for the guards, although usually not for prisoners. The variations probably equalled the number of guardhouses.

Prison rooms and cells were almost always dark, poorly ventilated, malodorous, disgusting places, routinely condemned by the surgeons. The facilities for the guard were often little better. Standards of maintenance and sanitation were nowhere high and often nonexistent. No one, it appears, wanted to give the subject much attention. Except for the surgeons, officers seem to have all but ignored it. The enlisted men all had the experience of serving in the 24-hour guard rotation, and many of them that of confinement. Neither was enjoyable or offered any incentive to take care of the facilities.