1954

The Uniform, Arms, And Equipment of the Union Soldier, 1861-1865

John Joseph FitzGerald
Loyola University Chicago

Recommended Citation

This Thesis is brought to you for free and open access by the Theses and Dissertations at Loyola eCommons. It has been accepted for inclusion in Master’s Theses by an authorized administrator of Loyola eCommons. For more information, please contact ecommons@luc.edu.

This work is licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 License.
Copyright © 1954 John Joseph FitzGerald
THE UNIFORM, ARMS, AND EQUIPMENT
OF THE UNION SOLDIER,
1861-1865

by

John Joseph FitzGerald

A Thesis Submitted to the Faculty of the Graduate School
of Loyola University in Partial Fulfillment of
the Requirements for the Degree of
Master of Arts
June
1954
LIFE

John Joseph Fitzgerald was born at Berwyn, Chester County, Pennsylvania, December 9, 1915.

He attended St. Monica School and St. Katharine High School in Pennsylvania, and Augustinian Academy in New York. He entered the Novitiate of the Order of Saint Augustine in September, 1933. He was graduated from Villanova College in Pennsylvania in 1938, with the degree of Bachelor of Arts.

After completing theological studies at Augustinian College, Washington, D.C., he was ordained to the Sacred Priesthood at the Shrine of the Immaculate Conception at Catholic University, June 10, 1941. He was graduated from Columbia Technical Institute, Washington, D.C., in 1942.

During World War II he served as pilot and chaplain with the Illinois Civil Air Patrol. At present he is engaged in teaching Science at St. Rita High School in Chicago Illinois. He began his graduate studies at Loyola University in February, 1952.
<table>
<thead>
<tr>
<th>Chapter</th>
<th>TABLE OF CONTENTS</th>
<th>page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. UNIFORMS AND EQUIPMENT</td>
<td>State governments in stable condition...</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Popularity of militia...Methods of raising regiments...Appointment of officers...</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grant, Logan so appointed...Unusual regiments...Variety of uniforms...Some regiments in gray uniforms...Gaudy colors of Zouave uniforms...Blue uniform made standard...Insignia of grade and rank...</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Branch of service indicated by colors and insignia...Hats and caps...Shoes...Shirts and underclothing...Special uniforms for artillery and cavalry...Ill fitting clothing...Poor quality of contract clothing...Complaints of soldiers...Gadgets purchased by soldiers...Wastefulness of soldiers...Light marching order...Felt equipment of the soldier.</td>
<td></td>
</tr>
<tr>
<td>II. CIVIL WAR WEAPONS</td>
<td>Establishment of Federal armories...</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Methods of marking weapons...The Springfield rifle...Inferiority of foreign weapons...Springfield praised by soldiers...The Minie bullet...The loading procedure...</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rate of fire...The Remington rifle...The Sharps rifle...The Spencer repeating rifle...The Henry repeating rifle...Burnside carbine...Gallager carbine...Joslyn carbine...Maynard carbine...Merrill carbine...Sharps carbine...Coffee mill fitted to Sharps carbine...Smith carbine...Starr carbine...Spencer repeating carbine...Superiority of Spencer carbine...Foreign revolvers used...&quot;Cap and ball&quot; revolvers...Allen and Wheelock revolver...Peals revolver...Joslyn revolver...Remington revolver...Starr single and double action revolver...Colt patents...Colts used in Mexican War...Colt model 1860 revolver...Swords and sabers.</td>
<td></td>
</tr>
</tbody>
</table>
Superiority of Confederate cavalry....Organization of Union cavalry....Inferior horsemanship of northerners....Training difficulties....The McClellan saddle....McClellan saddle liked by Union troopers....McClellan saddle also preferred by Confederate cavalry....Saddle cloths....Bridle and halter....Weight of equipment....Overloaded horses....The Cavalry Bureau....Care and supply of horses....Breeds and colors and horses....Number of horses in service....Affection of the soldier for his horse.

IV. FOOD AND RATIONS

Daily ration issued to soldiers....This ration larger than European ration....Opinions of soldiers....Food shortages....Nutritional values often low....Incompetence in Quartermaster department....Hooker reorganizes commissary....Company cooks....Desiccated vegetables....hardtack....Preserved foods....Salt beef....Salt beef held in low esteem....Fresh meat rations....Slaughtering cattle....Popularity of coffee....Dried potatoes and apples....Baked beans considered a treat....Packages from home....Raiding orchards....Berries gathered by soldiers....Foraging....Excuses made for plundering....Table manners.

APPENDICES
CHAPTER I

UNIFORMS AND EQUIPMENT

With the declaration of a state of war in April, 1861, the task of raising and equipping troops devolved upon the states. The Federal government was in a relatively weak condition as compared with the governments of the northern states, which had not felt the effects of secession as deeply as had the central government. The state governments were in a stable condition and were financially sound. In the years following the Mexican War, it had become the fashion for young men to join the local military group; although these militia regiments were usually more decorative than useful, being better suited for the Fourth of July parade than for the active campaign.

These gaudy companies provided the core of the state regiments that made up the Union army. Persons familiar with army organization during World War II will recall that there were no state regiments. All soldiers, volunteers and draftees alike, were assigned indiscriminately; a man from the Middle West might find himself in the same regiment with men from all parts of the United States.

The Union army was organized differently. The governor
of a state would offer a colonelcy to a prominent citizen as a reward for raising a regiment. Captaincies would be promised to those who assisted in recruiting the necessary number of men. Other groups would organize themselves and elect their colonel and company captains. Ulysses S. Grant, who had resigned from the army after service in the Mexican War and outpost duty in California, was appointed to the colonelcy of a regiment formed at Galena, Illinois.\(^1\) John A. Logan, founder of the G.A.R., had been a political figure in Illinois, became a colonel of volunteers, and later a major general.\(^2\) William J. Palmer, who later became president of the Denver and Rio Grande Western Railroad, while secretary to John Edgar Thomson, president of the Pennsylvania Railroad, organized a cavalry troop and became its captain. Palmer later rose to the rank of general.\(^3\)

Young men, answering a recruiting advertisement, joined organizations of their own choice. Thus a man would usually serve in a regiment made up of his neighbors and others from near his home.\(^4\)

---


2 Ibid., XI, 362.

3 Frank H. Taylor, Philadelphia in the Civil War, Philadelphia, 1913, 175.

Regiments were often formed along national or occupational lines; there were German regiments from Wisconsin, Irish from New York. Fire companies were fond of forming Zouave organizations. The Fifteenth Pennsylvania Cavalry, commanded by the Colonel Palmer mentioned above, was composed of employees of the Pennsylvania Railroad. The Corn Exchange regiment was financed by a Philadelphia bank; a group of blacksmiths from Phoenixville, Pennsylvania formed a company. A New York bank clerk named Smith proposed to enlist a regiment of Smiths—none, but persons named Smith need apply.

Diverse groups such as these presented themselves to the governors of the states and were sworn into Federal service. All had patriotic motives in common, but little else. The greatest divergence was in uniform. Three regiments from the same state had as many as five colors in their uniforms; blue, gray, black and white striped, blue with green trim, and light blue. The uniform of one of these regiments was described as consisting of "a light blouse with green collar and patent

5 Taylor, 237.
6 Ibid., 175.
7 Ibid., 130.
8 Fred A. Shannon, Organization and Administration of the Union Army, Cleveland, 1928, II, 43.
9 Ibid., 43.
10 Ibid., 90.
leather belt, dark gray pants, without stripes except in the case of officers, a black felt hat turned up at one side and fastened by a tin bull's eye, the size of a sauce plate, which displays the red, white, and blue."

Gray seems to have been a favorite color among early volunteer units. At first Manassas the gray clad Second Wisconsin was fired upon by other Union troops who mistook them for the enemy. Ohio troops fired on soldiers of the Thirteenth Indiana at Cheat Mountain because the latter were still wearing their gray militia uniforms. Early in 1862 at Wilson's Creek, near Springfield, Missouri, Louisiana and Arkansas troops maneuvered into range of General Franz Sigel's command, who were also dressed in gray. As late as Shiloh (April 6 and 7, 1862), General Grant reported some of the men were "still in the gray uniform," owing to their reluctance to change their good quality gray clothing for the inferior grade of blue uniform issued by the quartermasters.12

The most bizarre of all these militia uniforms was that of Zouave regiments. The French Zouaves fighting in Algeria had made many favorable impressions, both because of

11 Ibid., 90.

their valor and their picturesque uniform. Dozens of companies, both Union and Confederate, adopted the Zouave uniform as their own. There were many varieties, but all consisted in some sort of loose, baggy Turkish type of trousers, white gaiters, a fez, and an abundance of color, usually red and yellow. These odd, albeit colorful, uniforms were worn by many outfits until worn out and replaced by the regulation uniform. It was some time before the term "boys in blue" was true of the entire army.

The service uniform of the United States army had been blue in color since the days of the Revolution. This color was used by United States' troops through all campaigns up to 1898, when operations in tropical regions necessitated a change to a more comfortable khaki.

Detailed specifications for the uniform of officers and enlisted men were published in General Orders, Number Six, of March 13, 1861. Illustrations of the official uniforms are available in the Atlas that accompanies the Official Records.

13 Shannon, 43.

14 H. A. Ogden, The Army of the United States, Washington, 1889, plates II and III.

15 Appendix I.

16 The War of the Rebellion, Official Records of the Union and Confederate Armies, Washington, 1890, Atlas, plate CLXXVII.
The uniform consisted basically of a dark blue coat and light blue trousers. The coat was either a frock coat reaching nearly to the knees, or a shorter sack coat which reached to the level of the trouser pockets. Officers usually wore the longer coat, but the enlisted men used the more practical sack coat. One veteran wrote, "Many regiments never drew a dress frock coat after leaving the state."  

A light blue overcoat with an elbow-length cape was issued in cold weather; mounted troops used a similar overcoat except that the cape reached to the wrists.

The rank of commissioned officers was designated by insignia on the shoulder straps. The shoulder straps were usually made of velvet, about six inches long and one and one-half inches wide, edged with a rolled seam of silver thread. The color of the shoulder strap corresponded to the arm of the service to which the officer was attached; blue for the infantry, red for the artillery, and yellow for the cavalry. The insignia for a general officer was a star; one for a brigadier, two for a major general, three for a lieutenant general, and four stars for a general. Colonels wore an eagle in the center of the shoulder strap. Lieutenant colonels wore a silver leaf,

17 Billings, 316.
18 O. R. Atlas, plate CLXXVII.
majors a gold leaf, at each end of the shoulder strap. Captains wore two gold bars and first lieutenants one gold bar at the ends of the shoulder strap. Second lieutenants wore no bars, only the shoulder strap.\textsuperscript{19} Rank was also indicated by the number of brass buttons on the coat. Field grade officers (major, and upwards) wore two rows of nine buttons; company officers and enlisted men wore only one row.\textsuperscript{20} The rank of non-commissioned officers was indicated by chevrons worn on the upper sleeves. Corporals wore two stripes, sergeants three stripes. The chevrons pointed downwards.\textsuperscript{21}

The branch of the service was indicated by a strip of braid sewed to the seam of the trousers. As was mentioned above, blue signified infantry, red was for the artillery, and yellow for the cavalry. Brass insignia was also worn pinned to the hat or cap. A bugle was for infantry, crossed cannon for artillery, crossed sabers for cavalry.\textsuperscript{22} Later in the war, badges were devised for the various army corps. These were of different colors and different shapes- a red disc for the First Division of the First Corps, a white clover leaf for the

\textsuperscript{19} Ibid., plate CLXXV.
\textsuperscript{20} Ibid., plate CLXXII.
\textsuperscript{21} Ibid., Plate CLXXII.
\textsuperscript{22} Appendix III, plate I.
Second Division of the Second Corps, a black Maltese cross for the Third Division of the Fifth Corps, and so on. These insignia were made of cloth or metal and pinned to the cap.23

The authorized headgear was a black felt hat, rather high in the crown and wide in the brim. The left side of the brim was caught up and held by a clasp. A black feather was often pinned to the brim.24 The soldiers did not seem to approve of such hats. One called them "rediculous" [sic] 25 another wrote home "My new hat looks as near like the pictures that you see of the pilgrim fathers landing on plymouth, tall, stiff, and turned up on one side with a feather on it.... I don't wear it any more than I am obliged to.26

However, as the war went on some soldiers continued to wear the black hat, although it was usually a softer, more civilian style. Officers favored this sort of hat, giving it a military touch by adding a hatcord woven of gold threads, and by pinning crossed sabers, or a bugle, or other insignia of their regiment to the front of the hat. A picture taken June 2,

23 O. R. Atlas, plate CLXXV.
24 General Orders, Number Six, article 45.
25 In order to retain the color of the soldiers' speech, all words will be copied verbatim.
26 Wiley, 59.
1864, of General Grant and his staff holding a conference, shows a dozen or so officers wearing the felt hat, pinched into a variety of shapes. 27

The Iron Brigade, composed of the Nineteenth Indiana, and the Second, Sixth, and Seventh Wisconsin was known as the "Black Hat Brigade" because of the black slouch hats they always wore. 28 At Gettysburg, the Confederates expecting (on the first day of the battle) to meet only militia, encountered instead the Iron Brigade, and shouted to each other, "here are those damned black-hat fellers again....That ain't militia--that's the Army of the Potomac. 29

The favorite hat of most of the soldiers, and many officers, was the blue kepi also known as a forage cap. This was a French style cap, with a conical crown, which sloped forward, and a short leather visor. Not everyone was satisfied with the kepi either. One recruit complained, "...the forage cap was an ungainly bag with a pasteboard top and a leather visor." 30 Another recalled that a "large number of the soldiers of '62 did not wear the forage cap furnished by the government. They bought

27 David Donald, Divided We Rought, New York, 1952, 315.
28 Bruce Catton, Glory Road, New York, 1954, 22.
29 Ibid., 294.
the 'McClellan cap', so called, at the hatters instead, which in most cases faded out in a month. This the government caps did not do, with all their awkward appearance. They may have been coarse and unfashionable to the eye, but the colors would stand. 31

Long, hard marches are the usual lot of the infantryman. It was important that he have a comfortable and serviceable pair of shoes. The shoes issued were ankle-high, made of rough black leather, with heavy soles. The soldiers called them gunboats. 32 One exhibit in the Chicago Historical Society shows a soldier's shoe, with the notation that the army shoe of that time was not made in rights and lefts; all shoes were made the same. Evidently it was assumed that the shoes would acquire the proper shape after being worn for a time. However, in the General Orders, Number Six of 1861, mention is made that the shoes should be issued in rights and lefts. 33 Quite probably some contractors did deliver shoes that were neither rights nor lefts; such shoes would require only one last and consequently would be cheaper, although it seems unwise to economize at the expense of the soldier's feet. It is difficult to ascertain from

31 Billings, 277.
32 Wiley, 59.
33 General Orders, Number Six, article 55.
photographs how well made the shoes were; one picture of a group of non-commissioned officers at mess shows a man in the foreground wearing well made, double soled brogans, while another man in the picture is wearing what seem to be soft and shapeless shoes. Possibly the shoes were sent from home; possibly both were government issue. 34

A blue woolen shirt, stockings, and a set of flannel underdrawers completed the soldier's clothing issue. 35 The quality of the underclothing apparently was not the finest. "These flannels,...if they were what he drew from the government stores, were often as rough to the skin as coarse sandpaper, which they somewhat resembled in color." 36 Underwear seems to have been a novelty to some of the soldiers; one veteran recalled, "Most of the boys had never worn drawers and some did not know what they were for and some of the old soldiers who are here told them that they were for an extra uniform to be worn on parade and they half believed it." 37

Cavalrymen and artillerymen spent a great deal of time in the saddle and were issued special trousers with a reinforcing double-thickness patch which covered the seat and the inner side

34 Donald, 203.
35 General Orders, Number Six, article 124.
36 Billings, 333.
37 Wiley, 59.
of the upper trouser leg. In place of the short coat worn by the infantry, the mounted troops were issued a short close-fitting jacket. Heavy knee-high riding boots were also used by the artillery and cavalry.38

Many soldiers experienced difficulty in obtaining clothing that fit them; "My first uniform was a bad fit; my trousers were too long by three or four inches; the flannel shirt was coarse and unpleasant, too large at the neck and too short elsewhere....the blouse was the only part which seemed decent; while the overcoat made me feel like a little nib of corn amid a preponderance of husk."39 Another soldier, apparently a little man, complained, "I ... could never find ... a blouse or a pair of trousers small enough, nor an overcoat cast along my lines. The regulation blue trousers I used to cut off at the bottoms and the regulation overcoat sleeves were always rolled up...." Another mentioned that he was usually able to get "a fair fit but, some of the very tall men or short men were not so fortunate."40

It might be mentioned that there were probably very many small soldiers in the army as it was estimated that there were 846,000 boys under sixteen years of age serving in the Union forces.41

38 Billings, 37.
39 Goss, 4.
40 Wiley, 60
41 Taylor, 298.
Not only was the soldier often issued ill-fitting clothing, but many times especially in the earlier days of the war, the uniforms were of most inferior grade. Contractors whose greed surpassed their patriotism were to blame for shoes that fell apart in the first rain, and for clothing that was made of loosely woven cloth poorly sewed together. Inspectors were bribed to allow such shoddy clothing to pass. Public attitudes toward such contractors and inspectors were reflected in a cartoon which appeared in Harper's Weekly. In the cartoon three inspectors and three contractors, all with red "whiskey noses," are gathered in a storeroom, apparently inspecting the contractor's wares. There are several bottles in evidence, and a box of cigars is in the foreground. The conversation between them was as follows:

**First Contractor:** There sir! examine that blanket sir! What could be better than it to protect our volunteers. - It is 2 feet 4 inches square. - I'll allow 20 per ct. if they are passed. Oh! about the shoes? I admit we have used a leetle wood in the soles!

**First Inspector:** "Ahem!! I'll pass 'em."

**Second Contractor:** "I assure you sir! the texture of this stuff a pair of trousers that he is holding is fine, - very fine in fact! Just the thing for our Volunteers. The sewing you observe is open- for the purpose of ventilation!!!"

**Second Inspector:** "Beautiful- how cool it will be for our brave fellows."
Third Inspector: "50 per cent did you say? let 'em rip." 42

On the same page was another cartoon showing a ragged soldier shod in toeless socks, wearing tattered trousers that reached only to his knees, and a torn and sleeveless shirt. In the background a corpulent Inspector General, resplendent in a lace trimmed uniform, trots by on a fine horse, without so much as a glance at the nearly naked soldier. 43

A soldier might be able to put up with a sleazy uniform, especially in the warmer months, but poorly made shoes were a source of real distress. An old campaigner wrote, "If you find a foot soldier lying beat out by the roadside, five to one his heels are too high, or his soles too narrow, or too thin, or his shoe is not made straight on the inside, so that the great toe can spread into its place as he treads.... Moreover, a captain of a company who will let his men march with such shoes as I have seen on the feet of some poor fellows in this war, ought to be garroted with shoestrings." 44 The shoes were so bad that some of the soldiers preferred to go without them, and marched barefoot, with their shoes tied to the barrels of their muskets. 45

42 Shannon, 66.
43 Ibid., 67.
44 Shannon, 98.
45 Ibid., 98.
As the war went on the Quartermaster department was able to keep a better check on contractors and the quality of clothing improved. The writer has an artillery jacket of the period which is in an excellent state of preservation. A tailor has described the garment as being made of blue wool broadcloth, trimmed with red cotton braid. The lining is a good grade of cotton outing flannel, the sleeves are lined with unbleached muslin. The workmanship is very good, all seams are strong and straight, the brass buttons are firmly attached.

The soldier usually had plenty of clothing, although shortages were sometimes reported after a hard campaign or when the troops were separated from sources of supply for a long period. After Gettysburg, when the Army of the Potomac had marched all the way from Chancellorsville, Virginia, one man wrote, "the boys are almost wore out and a grate many shiewless," and another wrote home, "I am awful ragged Imagine a modest, timid, and retiring young man like your son walking through the thickly populated land of Virginia...with a pair of pants on with a hole in the seat which like a broken window needs two old pots to stick through... to keep the cold out and the bottoms waving in rags between the knees and the feet." An Ohioan, writing back home from Alabama, made these quaint remarks, "Our reg is purty naked they look moor like a reg of secesh than northern troops soon barfooted, soon without coats soon with
a citizen's soot on.... I have been barfooted evry sens we got back from brig porte." 46

Often a lack of enough clothing was the result of the soldier's own wastefulness. While in a permanent camp, a soldier was more inclined to take care of his belongings, but when orders came to break camp, and pack for the march, he had to decide what to take with him, and what to abandon. During the course of a long encampment a soldier would accumulate a number of odds and ends. He would have pictures from home, and gadgets he had picked up from the sutler and peddlers, in addition to his military equipments. Soldiers in camp, with few places to spend their money, were easy marks for any vendor allowed to come into the camp. Combination knife-fork-and spoons sold in great numbers; so did water-filters, a tube and charcoal arrangement to be used when drinking from muddy springs. Armored vests, made of steel, and covered with blue cloth, and weighing about ten pounds, could be purchased in officer's or enlisted men's styles for $9.00 and $7.00 respectively. Mothers, wives, and sweethearts sent other unnecessary things which they thought the soldier boys might need.

Obviously the marching soldier could not carry all these things with him. He would leave his dress coat, and take

46 Wiley, 58, 60, passim.
his blanket and overcoat, and stuff as much as possible into the knapsack, pack whatever rations were issued—perhaps enough for several days into the haversack, load his cartridge box and pockets with as many as eighty rounds of ammunition, shoulder his musket, and fall in.

After an hour or so on the march, the men began to lighten their loads. "Look at that ground where the brigade has been after its brief halt for rest," recalled one soldier, "it is strewn with blankets, overcoats, dress coats, pantaloons, shirts—indeed a little of everything from the outfit of the common soldier .... If you were to follow the column, .... you would find various articles scattered... by the roadside, where a soldier had quietly stepped out of the ranks, and sat down, unslung his blanket-roll or knapsack, took out what he had decided to throw away... and thus relieved, hastened to overtake the regiment. It did not take an army long to get into light marching order after it was once fairly on the road."47 Another soldier remarked, "The camps we left were blue with rejected overcoats and strewn with garments left behind."48

A perusal of photographs made during the Civil War

47 Billings, 333, 334, passim.
48 Goss, 74.
will show that the soldiers wore a hodge-podge of uniforms, and, understandably, they were most often dirty and disheveled. 49 Only in permanent garrisons would one find the soldier dressed as per regulations in a pressed dress coat and trousers, with his shoes blackened. The battle hardened veteran in marching order was a lean, sun tanned, bearded warrior in faded clothes, and stripped down to the essentials of fighting man. 50

Every soldier was issued a knapsack in which to carry his extra clothes and blanket. 51 The knapsack was secured to the wearer by straps which proved so uncomfortable that "the knapsack was thrown aside in the first battle, and a simple roll composed of the woolen and rubber blankets substituted for it." 52 A haversack "of painted canvas, with an inside sack unpainted" was used for carrying rations. 53 A canteen, with a


50 Appendix II, plate I.

51 General Orders, Number Six, article 130.

52 Billings, 278.

53 General Orders, article 131.
capacity of five pints, was carried by a linen strap hung around
the neck. 54 On his belt the soldier carried a seven by eight
inch cartridge box, which had a capacity of forty rounds. 55
percussion caps for firing the musket were carried in a small
leather box, also worn on the belt. The bayonet scabbard was
also worn on the belt, hanging from the left side. 56

The Union soldier was well equipped to carry out his
duties. The quality and the quantity of Federal ordnance were
largely instrumental in the defeat of the determined and va­
liant soldiers of the Confederacy.

54 Ibid., article 132.
55 Ibid., article 128.
56 Appendix III, plate 2.
CHAPTER II

CIVIL WAR WEAPONS

An act of Congress, approved April 12, 1794, provided for the erection of two national armories. A northern armory was to be located at Springfield, Massachusetts, and a southern armory at Harper's Ferry, Virginia. Production of the French musket used in the Revolution by the Continental army, the model 1763, known as the "Charleville," was begun. Arms were delivered from Springfield in 1794, but Harper's Ferry muskets did not appear until 1801.

The Harper's Ferry location, situated at the confluence of the Potomac and Shenandoah rivers, was selected because of the abundance of water power there. Construction of shops was begun in 1796, and arms production was begun in 1801.1

In order to trace makers of guns manufactured outside the armories by civilian contractors, all arms were to be stamped with the name of the contractor, the date of manufacture, and with the "eagle" which had been used in the Great Seal of 1782,

---

1 Arcadi Gluckman, United States Muskets, Rifles, and Carbines, Buffalo, New York, 1948, 55.
and on the medal of the Order of the Cincinnatus, and on gold coins of 1795.2

This method of identifying arms made at government armories and at contract factories was continued through the Civil War, and enables one to determine the origin and date of any piece.

The armories at Springfield and Harper's Ferry continued to make arms known as "U. S. Models" until Harper's Ferry, John Brown's objective in 1859, fell to the Virginia militia in April, 1861. The factory at Springfield is still in operation; an employee of the armory there John Garand, designed the famous semi-automatic M-1 of World War II.3

RIFLES

The typical infantry weapon of the Civil War was the rifled musket, hundreds of thousands of which were made at the government armories, and by civilian contractors.

The most used of these rifles was the Springfield. This was a .58 caliber weapon, fifty six inches in length. The percussion lock was marked with the letters "US" and "SPRING-FILLED" in two lines; an eagle was stamped forward of the hammer, and the date of manufacture marked behind the hammer. The entire lock plate was bright finished. The barrel was forty inches

long, finished bright, and rifled with three grooves, making one turn in six feet. The rear sight was folding two-leaf sight; the front sight was set on a lug which served as a bayonet stud. All furniture (fittings) of the gun was iron, and polished bright. Three flat bands secured the barrel to the stock. The upper sling swivel was riveted to the middle band; the lower swivel to the trigger guard bow. The bright, swelled end, cup-tipped ramrod had a catch near the end of the forecap to retain the ramrod in the stock. The bright finished, triangular bayonet was eighteen inches long with a one and one-half inch shank, and a three inch socket fitted with a locking ring. The stock was made of oil-finished walnut wood, and was fifty two inches long. The butt curved in to fit the shoulder. In the period between January 1, 1861 and December 1, 1863, a total of 265,129 model 1861 rifle muskets were produced at the Springfield armory. With the loss of the Harper's Ferry armory in April, 1861, the Springfield armory was unable to supply sufficient arms. Contracts were therefore let to private contractors.

4 The inside of a rifle barrel is cut with spiral grooves to impart a spinning motion to the bullet and thus improve its accuracy and range. 'one turn in six feet' means that the bullet will have made one complete turn around its axis when it has traveled a distance of one foot through the barrel.

5 Gluckman, 230.

6 Appendix II.
In the early days of the war, foreign rifles, especially Austrian and Belgian makes, had been tried by militia companies, but were found to be unsatisfactory. The Adjutant General, Lorenzo Thomas, reported, "...out of 3,000 but 500 could be issued, and they were indifferent." Northern contractors quickly got into production, however, and a steady supply of rifles reached the troops. By 1864, the Quartermaster's department was able to report that in addition to the weapons in use, there was a surplus of 1,195,572 rifles. The Springfield was rated highly. An ordnance officer Lieutenant Colonel Joseph W. Ripley, reported "...U. S. muskets as now made have no superior arms in the world." The soldiers liked these rifles even though they were muzzle loaders and clumsy to load. One soldier wrote to his parents, "we have not got the enfields rifles but the springfield they are just as good and a good deal lighter. We went out to try them. We fired 600 yards and put 360 balls into a mark the size of old Jeff, they can range 1500 yards with considerable certainty." 

---


8 Ibid., series III, V, 145.

9 Ibid., series III, I, 264.

The bullet used in the Springfield was a conical slug, with three grooves cut around the base. This bullet was similar to that designed by Captain Minnie of the French army, and, although not spherical in shape, was called a "minnie ball." The bullet, weighing 450 grains, and 60 grains of black powder, were wrapped together in a paper cartridge. Forty of these cartridges were carried in a leather case fastened to the belt. About twenty more cartridges were carried in the pockets. A small leather container for percussion caps was also carried on the belt. The loading procedure was as follows; the soldier pulled his cartridge box around to the front where it was more handy, withdrew a cartridge, bit the paper end off, sprinkled the powder down the barrel, put a cloth or paper wad in the barrel, and then rammed powder and wad down the barrel with the ramrod. The bullet was next inserted and rammed down. The ramrod would then be jammed into the ground, or wherever would be convenient. Then the soldier would press a small percussion cap onto the cone, or nipple. The hammer was then thumbed back, aim taken, and the trigger squeezed. The hammer would fall on the cap and explode it, which would in turn exploded the main charge and send the bullet on its way.

10 Bannerman, 61.

11 This information was gathered at the museums at Manassas, Virginia, and at Gettysburg, Pennsylvania.
About two shots per minute were all the soldier could hope to load and fire. After the first round was fired the soldier would drop to the ground and reload. Some would roll on their backs to ram in the charge, and then rise to fire. Some preferred to fire from a kneeling position; most seemed to prefer a prone position. The cover afforded by a stone fence, a fallen tree trunk, or a trench was always welcome. As the men bit open cartridge after cartridge, black powder would spill out on their sweaty faces, ringing their mouths with a black smear, which gave them a most weird appearance.12

While most of the rifles used in the Civil War were the Springfields described above, a few other domestic makes were used. One of these was the U. S. Model 1862, made by the Remington Arms Company at Ilion, New York. This was also a .58 caliber rifle, forty nine inches long, blued finish, rifled with seven narrow grooves, making one turn in five feet. The front sight was a fixed blade, and the rear was a folding two-leaf sight. Both sights were blued. The oil finished walnut stock was forty four inches long, and had a brass patch box in the butt. The ramrod was bright finished steel. Remington delivered 10,000 of these rifles at $17.00 each. This price included a twenty inch

12 Wiley, 71.
brass-handled saber bayonet.13

Another infantry weapon was the Sharps breech loading percussion rifle. This gun was of a different caliber than the others; it used a .53 caliber cartridge. This rifle was fifty three inches long, with a thirty six inch barrel, rifled with six grooves. The Sharps was a fast, sturdy, and reliable weapon, but leaked fire at the breech. Sharps delivered 9,141 of these rifles at $36.15 each, from their Philadelphia factory.14

The majority of the rifles used in the Civil War were single shot, as has been mentioned above. There were some repeating rifles in use however; these were the Spencer and the Henry.

The Spencer repeating rifle was quite similar to the better known Spencer carbine. The rifle had a longer barrel, thirty inches. Its total length was forty seven inches, and it weighed ten pounds. The government purchased 12,471 of these weapons; some militia units were equipped by private funds with Spencer rifles. Massachusetts purchased 1,500.15

The Henry repeating rifle fired a .44 caliber rim fire cartridge also manufactured by Henry. This weapon weighed nine

13 Gluckman, 245.
14 Ibid., 267.
15 Bannerman, 265.
and one-quarter pounds and was forty three and one-half inches long. It had a thirty four inch barrel, rifled with six grooves, with a gain twist, 16 making one turn in sixteen feet at the breech, and one turn in thirty three inches at the muzzle. It was fitted with a blade front sight, and a leaf rear sight. The walnut stock was oil finished, and curved to fit the shoulder. There was no forestock; the magazine ran under the barrel for its full length. The breech frame, lock, and butt plate were made of bronze.

This rifle had a long tubular magazine under the barrel, holding sixteen rim fire cartridges loaded from the front. This was a lever action rifle; it was operated by lowering the trigger guard lever, which mechanically slid the carrier block backwards, cocked the hammer, extracted and ejected the empty shell, and on the return stroke seated the next round into the chamber.

This weapon was the invention of B. T. Henry, expert machinist of Robbins and Lawrence, of Windsor, Vermont. In 1857 the insolvent Volcanic Repeating Arms Company was reorganized as

16 Gain twist is a method of rifling in which the twist, slight at the breech, increases gradually toward the muzzle to give maximum rotation at that point, and by relatively gradual acceleration of the bullet prevents it from jumping the rifling at the point of discharge.
the New Haven Arms Company, with B. T. Henry as superintendent, and Oliver F. Winchester, New Haven shirt manufacturer, as principal stockholder.

This firm also made the Henry cartridge, marked on the base with "H" for Henry; which letter is still being stamped by the Winchester company on their rim fire shells in Henry's honor. This cartridge held twenty five grains of powder and a 216 grain (about one-half ounce) conical lead bullet.

The Henry was the first magazine rifle which the Union Army used in any quantity. In the period from July 23, 1863 to November 7, 1865, the government purchased 1,731 Henry rifles and 4,610,400 cartridges. Two regiments of Sherman's army in the march to the sea were armed with the Henry. These arms were also purchased for militia companies. About 10,000 are believed to have been made.17

Soldiers who had a Henry repeating rifle considered themselves very fortunate. One of Sherman's men wrote in his diary on May 11, 1864; "I got me a Henry rifle—a 16 shooter—yesterday.... I gave 35 dollars—all the money I had for it. I am glad I could get it. They are good shooters and I like to think I have so many shots in reserve." The months later he wrote; "I think the Johnnies are getting rattled; they are afraid

17 Gluckman, 318.
of our repeating rifles. They say we are not fair, that we have
guns that we load up on Sunday and shoot all the rest of the
week. This I know, I feel a good deal more confidence in myself
with a 16 shooter in my hands than I used to with a single shot
rifle."^{18}

**CARBINES**

For fighting dismounted, the cavalry trooper was issued
a short barreled carbine. Such a weapon would provide greater
range and greater accuracy than would a revolver, and would be
more easily carried on horseback than a longer barreled rifle.

Many types of carbines were in use; Burnside, Galager,
Joslyn, Maynard, Merrill, Sharps, Smith, Starr, and Spencer. All
but the Spencer were single-shot breech loaders. The Spencer
loaded through the butt, and was a repeater.

The Burnside carbine, inventor in 1856 by Ambrose E.
Burnside, later a general in the Army of the Potomac, was a .54
caliber breech loader, with a twenty one inch barrel, rifled
with five grooves, thirty nine inches long, and weighing seven
pounds. It had a blade front sight; the rear sight could be
used as a peep or open sight, and was graduated to 100, 300, and
500 yards.

---

The pivoted trigger guard could be lowered, swinging and dropping the breech-block, and exposing the breech for loading with a conical brass cartridge. Returning the trigger guard to its closed position moved the breech-block forward, seating the cartridge in the chamber. A conventional percussion hammer was on the right side.

The War Department purchased 55,567 Burnside carbines at $35.00 apiece, and almost twenty million cartridges during the Civil War.¹⁹

The Gallager carbine was a .54 caliber breech loader, with a twenty two and one-quarter inch barrel, rifled with three grooves, thirty nine and three-sixteenth inches overall, and weighing seven and one-half pounds. It had a blade front sight, and a three-leaf rear sight graduated to 500 yards. When the trigger guard was unlatched and depressed, the barrel swung downwards (as with a shotgun,) elevating and exposing the chamber for loading with a linen covered cartridge. The War Department purchased 17,728 Gallager carbines from the manufacturers, Richardson and Overman, of Philadelphia.²⁰

The Joslyn was a .54 caliber breech loading carbine, with a twenty two and one-half inch barrel, rifled with three grooves. Total length of the carbine was thirty eight and one-

¹⁹ Gluckman, 374-375.
²⁰ Ibid., 378.
quarter inches, and the weight was seven and one-quarter pounds.

Pulling upon an oval ring on the top of the stock unlocked the breech, and permitted it to be raised vertically for loading with paper-wrapped cartridges. A conventional percussion was on the right side. Records show a purchase of 200 carbines from a Joslyn subsidiary, W. C. Freeman, on June 7, 1861; and a purchase of 600 from the Joslyn Arms Company, Stonington, Connecticut, between June 11 and July 22, 1862. Further records are incomplete, but it has been estimated that thousands of these carbines were in use during the Civil War.21

The Maynard carbine was a .50 caliber breech loader. It had a twenty inch barrel, rifled with three grooves. The overall length of the carbine was thirty six and seven-eighths inches, and the weight was six pounds. The front sight was a blade sight, and the rear was an open leaf sight graduated to 800 yards. Moving the trigger guard downward and forward tips the breech upward for loading. A broad rimmed cartridge permitted hand extraction. These arms were manufactured by the Massachusetts Arms Company, Chicopee Falls, Massachusetts. The Government purchased 20,202 of these weapons.22

21 Ibid., 387.
22 Ibid., 389.
The Merrill was a .54 caliber, breech loading carbine with a twenty two inch barrel, rifled with three wide grooves. The total length of the carbine was thirty seven and three-eighths inches, and it weighed six and one-half pounds. It had a high steel blade front sight, and an open leaf rear sight, graduated to 500 yards. This arm had a complicated loading mechanism. To load the piece the percussion hammer was cocked; then back pressure was applied to two side releases, which unlatched a lever, permitting it to be raised, thus withdrawing the sliding breech bolt and opening the breech for loading with a nitrate treated paper cartridge. The War Department was said to have purchased 14,695 Merrill carbines between January 1, 1861 and June 30, 1866.23

A well known name among American gunmakers of this period was that of Christian Sharps. His firearms had been popular before the Civil War, especially in the Western states. Sharps furnished the Union army with both a rifle,24 and a carbine. The Sharps carbine was a .52 caliber breech loader, with a twenty one and one-half inch barrel, rifled with six grooves, measuring thirty seven and one-half inches in length, and weighing eight pounds. The front sight was a brass blade, the rear

23 Ibid., 395.

24 cf. above 26.
was an elevated leaf sight without graduations.

Both the Sharps rifle and carbine used the Lawrence pellet primer. This primer system was named after its inventor, R. S. Lawrence, master armorer at the Sharps factory. A brass tube of pellets of powder was inserted into the frame under the lock plate. Each time the hammer was cocked, one of the pellets was forced by the feed spring out of the magazine in position at the nipple ready for exploding by the descending blow of the hammer, and firing the charge.25 During the war a workman, employed at the St. Louis Arsenal, devised a plan to incorporate a coffee mill on the butt stock of a gun. The Sarps carbine was selected. The butt was hollowed out for a few inches and a small grinding mill was inserted. Coffee beans, one at a time, were fed into an opening in the right side, the mill turned by a detachable crank, and ground coffee came out a slot on the left side. These interesting novelties were to be issued at the rate of one per company (two hundred men,) but not many seem to have been distributed.26 During the Civil War 80,512 Sharps carbines were purchased at $30.00 apiece.27

25 Bannerman, 16.
26 Ibid., 16.
27 Gluckman 395.
The Smith carbine had an action similar to the previously mentioned Gallager. The Smith was .50 caliber, breech loading, had a twenty one and five-eighths inch barrel, measured thirty nine inches overall, and weighed seven and one-half pounds. It had a blade front sight; and an open leaf sight with no graduations. The government purchased 30,062 of these carbines; and 13,861,500 special cartridges. 28

The Starr carbine was also a breech loading, single shot carbine. It fired a .54 caliber cartridge; the barrel was twenty one inches long, the overall length of the carbine was thirty seven and five-eighths inches. It weighed seven pounds and six ounces. During the Civil War 21,523 Starr carbines were purchased. 29

The most efficient carbine issued to the cavalry was the Spencer repeating carbine. This was a .54 caliber, magazine loading, seven shot, lever action, repeater. It had a twenty two inch barrel, measured thirty nine inches in length, and weighed eight pounds and four ounces. The government purchased 77,181 Spencer carbines, and 60,000,000 cartridges during the Civil War. 30

The outstanding feature of the Spencer was the ease

28 Gluckman, 399.
29 Ibid., 400
30 Ibid., 438.
and rapidity with which it could be loaded. The loading procedure was as follows; the plunger was removed from the butt, seven cartridges were inserted into the magazine and the plunger replaced. A spring in the plunger moved the shells through the magazine. When the trigger guard was pulled down, the fired shell was ejected, and the return stroke of the trigger guard seated another shell in the firing chamber. The hammer was thumbed back, and the piece was ready for firing. The entire operation took less time than the telling. To make re-loading even more rapid, a quick loading cartridge box was devised. This was an oblong box, made of light wood, covered with leather, with ten holes drilled lengthwise through the block. Into these holes were inserted tin tubes, each holding seven cartridges. The soldier, by removing the plunger from the butt, and inserting the mouth of a tube into the opening, could, in one quick operation, fully load the carbine. 31 The Spencer was a good weapon and both sides know it. The Union troopers had every confidence in their Spencers; they "even acquired a sort of habit of looking upon every approaching fight as a sure thing. And there was a corresponding disheartenment on the part of the rebel cavalry." 32

31 Bannerman, 223.

The Confederate soldiers gave the Spencer indirect approval when they complained, "It's no use for us to fight you 'uns with that kind of a gun." The Spencer repeater was an obvious improvement over the earlier single shot carbines. One trooper wrote in his diary, "Burnside carbines issued to the regiment today June 21, 1863. This is a poor arm, but much superior to the Merrill, which we now discard." No trooper was heard to complain about his Spencer. The Confederates would have been happy to have such a weapon. General E. P. Alexander, C.S.A. writing in his memoirs, said, "In 1864 we captured some Spencer breech loaders, but we could never use them for the lack of proper cartridges."  

REVOLVERS

Revolvers were much used in the Civil War. Every officer carried one as did the non-commissioned officers in the artillery, and they were standard issue for all cavalrymen. At the beginning of the war a shortage of domestic weapons necessitated the importation of foreign pistols. Such

---


arms as Adams, Lefaucheaux, Le Mat, Perrin, and Raphael were used until production of American revolvers could meet the demands of the army and the navy. 36

A variety of American made revolvers saw service. Some of the most popular were the Allen and Wheelock, Beals, Colt, Joslyn, Remington, Starr, and Whitney.

These revolvers are known as "cap and ball," from the fact that they were originally loaded with loose powder and an elongated ball, and fired by means of percussion caps. This was a slow and clumsy method, not suited for combat conditions. 37

A more convenient combustible cartridge was developed. This cartridge consisted of a charge of powder wrapped in paper which was glued around the base of a conical bullet. This paper wrapping was treated with a nitrate compound, and so was consumed in the explosion with practically no residue. Some manufacturers packed these cartridges in small wooden boxes, usually six shells to a case. 38

The Allen and Wheelock was a .44 caliber, six shot,

36 Arcadi Gluckman, United States Martial Pistols and Revolvers, Buffalo, New York, 1939, 159.

37 Appendix III

38 Philip Jay Medicus, Ammunition Reference Digest, New York, 1953, 78.
single action revolver, with a seven and one-half inch barrel, measuring thirteen and one-quarter inches overall. It weighed two pounds, and fourteen ounces. It had a low blade front sight; the rear sight was a V-shaped notch cut in the lip of the hammer. The entire revolver was blue. The grips were of varnished walnut. About five hundred of these revolvers were purchased by the War Department.39

The Beals was a .36 caliber, six shot, single action revolver, with a seven and one-half inch barrel, measuring thirteen and three-eighths inches in length. It weighed two pounds and ten ounces. A low blade, brass front sight was dovetailed into the barrel; the rear sight was in the frame. The entire revolver was blue. The grips were made of varnished Walnut.

The Beals was manufactured by Remington at Ilion, New York. It was the basis of later Remington revolvers. During the war, 12,251 of these weapons were purchased.40

The Joslyn was a .44 caliber, five shot, single action revolver, with an eight inch octagonal barrel, measuring fourteen and three-eighths inches overall. It weighed three pounds. A

39 Gluckman, 163.

40 Ibid., 167.
low, steel, knife-blade, front sight was dovetailed in to the barrel; the rear sight was on the frame. The walnut stocks were coarsely cross checked between the upper and lower grip screws.

The conventional type of loading lever operated the rammer. All metal parts were blued. The revolver fired a self-consuming combustible cartridge, or it could be loaded with loose powder and ball. An order of 1,100 Joslyn revolvers was purchased for use by the army and navy. Of these 875 were for the army.41

The Remington was a .44 caliber, six shot, single action revolver, with an eight inch octagonal barrel, measuring thirteen and three-quarters inches in length. It weighed two pounds and fourteen ounces. The front sight was a German silver cone fixed to the barrel; the rear sight was on the frame. The grips were of oil finished walnut. The finish was blued. The revolver fired the combustible cartridge, or could be loaded with loose powder and ball.

The Remington was a rugged and dependable military arm, and next to the Colt, was the best known of the Civil War handguns. The government purchase 125,314 of these revolvers from 1861 to 1865.42

41 Ibid., 189.
42 Ibid., 196.
The Starr revolver was unusual in that it was a double action weapon; that is, it could be operated by merely pulling the trigger. This would cock the hammer, and let the hammer fall in one operation. Single action revolvers must have the hammer thumbed back into full-cock position before the trigger will pull. Present day revolvers are usually double action.

The double action Starr was a .44 caliber, six shot revolver with a six inch round barrel, measuring eleven and five-eighths inches in length. It weighed two pounds and fifteen ounces. A steel blade front sight was dovetailed into the barrel; the rear sight was a V-shaped notch cut into the hammer lip. A loading lever operated the rammer. The finish was blued. Either combustible cartridges or loose powder and ball could be used.43

Starr also made a single action army revolver. This weapon had an eight inch barrel, measured thirteen and three-quarters inches, and weighed three pounds and one ounce.

For more than one hundred years, since 1839, to be precise, United states soldiers have been equipped with Colt pistols. In all branches of the service today the standard side-arm issue is a Colt automatic pistol.

In 1836, Samuel Colt, a young man of Hartford, Connecticut, obtained a patent for a repeating handgun. Colt's gun fired successive charges from a single barrel, by means of

43 Ibid., 201.
revolutions of a cylinder containing the loads.

Others had tried the same scheme for a repeating pistol, but had not been able to control the firing. The flintlock system was used often and caused a simultaneous discharge of all the loads.

To Samuel Colt must go the credit for perfecting the first practical firearm with a rotating cylinder. He also perfected other refinements in revolver design the using of percussion caps on cones at the back of the loading chambers; the shielding of the cones by metal walls to prevent ignition of charges other than the one intended to be fired; and a method of locking the cylinder at the instant of firing. Colt's patents covered so many principles of revolver construction that it was impossible, up to the time of the expiration of Colt's patents in 1856, to manufacture a revolver without infringing the Colt's patent.

Colt had his first factory at Paterson, New Jersey, and the first Paterson, or Texas Colt, as they are now called by collectors, came out in 1839. These revolvers became very popular in the Lone Star Republic.

In that year, 1839, representatives of the Texas government met with Colt in New York to obtain arms for the new republic. The results of these discussions were improvements such as the now conventional trigger and trigger guard, special powder
and ball flasks, and the hinged rammer that was to become a distinguishing feature of subsequent Colt's and other later revolvers.

One of the representatives of Texas in the transactions mentioned above was a Captain Walker, of the Texas Rangers. The revolver known as the "Walker Colt" is said to have been named in his honor.

Although it is now obvious that the Colt was much superior to the single shot pistols of the time, the Colt did not find a quick market. Colt had hoped to have his revolver accepted by the army, but it was refused. The reasons given were several; the cost, the weight, the possibility that the arm was too delicate to survive the rigors of field service, and the fact that a repeater might tempt the soldier to waste ammunition. 44

In passing it might be mentioned that military commanders of those times did not subscribe to the theory of rapid fire. They felt that a single shot weapon would induce the soldier to conserve his ammunition, and make each shot count. This is in direct opposition to modern tactics of saturation fire. It is interesting to note that the weapons being considered for use by the armies of the North Atlantic Treaty

44 Ibid., 175, 180, passim.
organization, the American T-44, and the Belgian Fabrique Nationale, can fire twenty-round clips at the rate of 700 rounds per minute. Both are fully automatic, that is they will fire continuously so long as the trigger is held down. 45

It was not until the Mexican War that any number of Colts were purchased by the army. Colt’s old friend, Captain Walker, now in the United States army, handled the transactions. The success of Colt guns in this war, and the trek to the California gold fields created a need for such a weapon, and Colt was able to expand. Other models appeared; the 1847 Whitneyville, the slightly shorter model 1847 Dragoon, the model 1851 Navy Colt, and the Civil War revolver, the 1860 New Model Army. 46

The Colt model 1860 was a .44 caliber, six shot, single action revolver with an eight inch round barrel, measuring fourteen inches in length, and weighing two pounds and eleven ounces. A low blade white brass front sight was set into the barrel; the rear sight was a V-shaped notch cut into the lip of the hammer. The barrel, cylinder, and trigger were blued, the loading lever, frame, and hammer case-hardened in mottled colors. The 1860


model is the first of the "streamline" Colts, the loading lever angles having been rounded off into a more graceful curve. The loading lever operated the rammer by a ratchet. This weapon was the principal revolver of the Civil War; 386,417 were purchased by the War Department. 47 The cost of these revolvers averaged $16.00 apiece. 48 This revolver could be fitted with an extension stock measuring seventeen inches and weighing two pounds and five ounces. This stock would convert the pistol into a twenty six inch carbine. These stocks were quite scarce, however, and were seldom used. 49 The colt .44 was a powerful weapon. It was loaded with from 34 to 41 grains of blackpowder, and fired a 207 grain elongated bullet, or a 143 grain spherical bullet. 50 This would be equivalent to 33 elongated bullets per pound, or 48 round bullets per pound. 51 The Colt .44 was able to penetrate seven inches of hard pine board. 52

---

47 Gluckman, 183.
48 Haven, 382.
49 Gluckman, 183.
51 Havens, 385.
52 Ibid., 387.
SWORDS

It was the fashion for all officers to wear swords. The type of sword worn seems to have been a matter of personal preference. Exhibits of officer's swords in museums show great variety in length and shape of the blade. Many of the swords were presented to officers as tokens of respect or appreciation for service, and consequently are often richly engraved.

A specialized kind of sword, the saber, adapted for both thrusting and slashing, was standard issue for the cavalryman, and was also worn by some artillery non-commissioned officers.

The writer has a cavalry saber marked "AMES, MFG. CHICOPEE, MASS" on one side of the blade, and "U. S. 1864" on the obverse side. The curved blade has a projected length of thirty four inches; the curve is an arc of large radius, dropping one inch at a point midway between the hilt and the point of the blade. The entire outer edge is sharpened for the full length of the blade, and the tip is sharply pointed. The handle is five inches long, is covered with leather, and wrapped with brass wire. The hand guard is of three brass webs cast in one piece. The saber weighs four pounds. The scabbard has a nickel finish, and is marked "DEGGE & MUSICK, PLATER."

The saber often had a saber knot attached to it. The saber knot was leather strap, looped around the handle, which the soldier could fix around his wrist so that he would not lose
the weapon in the event it were knocked from his grasp in the course of a fight.
CHAPTER III

CAVALRY EQUIPMENT

Because his specialized duties so often carried him away from camp the cavalryman had to carry most of his equipment on his own person or upon his horse. This presented a special problem.

To begin with, the northern soldier was not the horseman that his southern cousin was. The poor roads of the south made travel by carriage difficult; hence the menfolk, and many of the ladies as well, of the southern regions were quite accustomed to getting about by horseback. This stood the Confederacy in good stead, as they were able to mount a very effective cavalry force early in the war. The daring troopers of Forrest, Stuart, and Morgan commanded the greatest respect among the Federal lines.

It was not until the spring of 1863, after the successful battles at Kelly's Ford and Brandy Station, Virginia, that the Union cavalry had acquired sufficient proficiency to engage the Confederates on equal terms. Prior to that time most of the northern effort had gone into changing office clerks and plow boys into the fearless riders that cavalrymen must be.
Like most of the soldiers in other branches of the army, the cavalry soldier was a volunteer. The outbreak of the war found the United States with only five mounted regiments. These were the First and Second Regiments of Dragoons, one regiment of Mounted Rifles, and the First and Second Regiments of Cavalry. Early in 1861, the Third Cavalry was added, and shortly after, all six regiments were designated as cavalry and numbered from one to six. 1

Six regiments were obviously not an adequate mounted arm, so volunteer regiments from the states were enlisted. By the end of 1861 the states had provided 221 regiments of volunteer cavalry. New York and Pennsylvania provided the most men, twenty-three and twenty-two regiments respectively. The border states were also represented; Kentucky with seventeen regiments, Maryland with three regiments and a battalion. The Missouri State Militia Cavalry numbered fourteen regiments, and a battalion. The Missouri State Militia Cavalry numbered fourteen regiments, and there was one battalion from Delaware. There were some from the seceded states also; thirteen regiments from Tennessee, twelve from Mississippi, two from Arkansas. Alabama and Texas sent one each. There were also a few independent

1 Albert G. Brackett, History of the United States Cavalry, New York, 1865, 327.
partisan groups such as the Loudon County (Virginia) Rangers.\footnote{Ibid., 328.}

In addition to all the infantry volunteer had to learn—obedience to commands, drills, how to handle weapons, how to live in the open,—the cavalry recruit had to learn to ride and care for his horse.

So many of the Federal soldiers had come from cities and towns, where their only experiences had been with buggy and carriage teams. Even most of the farm boys had driven only plow horses. An alarmingly large number of the new troopers had never so much as sat upon a saddle horse. It was evident that much time and training would be necessary to change such an awkward group into an efficient fighting force.

Telling of the difficulties encountered in the training camps, Captain Glazier, of the Second New York, wrote, "We find the trouble is not so much with the horses, but frequently the men, many of whom have never bridled a horse, or touched a saddle."\footnote{Willard Glazier, Three Years in the Federal Cavalry, New York, 1873, 35.}

Captain Vanderbilt, Tenth New York, describes his first experience in escort duty, December 10, 1862,

...in the issue we drew everything on the list: watering bridles, lariat ropes, and pins,—in fact there was nothing on the list which we did not get.
Many men had extra blankets, sabers and belts, carbines and slings, pockets full of cartridges, ponchos, button tents, overcoats, frying pans, cups, coffee pots, etc. My company had hardly time to get into shape when the "general" sounded, "boots and saddles" blown.

Such a rattling, jingling, cursing, I never heard before. Green horses, some of them had never been ridden, turned 'round and 'round, backing against each other. Some of the boys had never ridden anything since they galloped on a hobby horse, and they clasped their legs close together, thus unconsciously sticking their spurs into the horse's side.

Well, this is the crowd I commanded to mount on the morning I was ordered by General Smith to follow him. Talk about the Flying Dutchman! Blankets slipped from under saddles, and hung from one corner; saddles slipped back until there were on the rumps of the horses; others turned and were on the underside of the animals; horses running and kicking; tin-pans and mess kettles... flying through the air; all I could do was give a hasty glance to the rear and sing out at the top of my voice C-L-O-S-E U-P! But they couldn't close. Poor boys!

Such a comic-opera troop seemed typical of Union cavalry as late as December, 1862, despite a regulation to the effect that "no person shall be mustered into the Cavalry service who does not exhibit good horsemanship and practical knowledge of the ordinary care and treatment of horses." But as months went by these hapless recruits became fairly efficient, at home in the saddle, able to handle pistol and saber, and ride boot-


5 General Orders, Number 105, August 14, 1862.
to-boot in battle charges.

Although they might have been wanting in military horsemanship, the northern troopers were well supplied with horse equipments.

As was stated above, the cavalryman, because of his roving duties, had to carry all his gear on his horse. This called for a saddle which would be light in weight, easy on the horse and rider, and fitted for packing and carrying the many items of equipment the soldier would need. The renowned McClellan saddle, designed by General McClellan, answered these requirements. Colonel Jean Roemer, of the Netherlands cavalry, in his book describing the cavalry forces of the United States and European countries gives the details of the construction of this saddle:

...the celebrated McClellan saddle, now generally introduced into the United States service, is spoken of in the highest terms by all who have used it. The pommel,... and cantle are made of two pieces framed and glued together, and are made of beech wood. Both are glued to the side bars which are of poplar, to which they are additionally secured by two rivets and four nails, the tree is covered with rawhide, put on wet, and sewed with thongs of the same, and held in place by stitches through the wood, where the pommel and cantle are joined to the side bars where they cannot chafe the horse or rider.... This saddle has skirts or flaps of thick harness leather, fastened by screws to the side bars. The stirrups are made of a bent piece of hickory or oak, whose ends are separated by a transom, and fastened with two rivets. These stirrups have hoods of stout leather riveted to the wood, leaving six inches for the foot. In great cold or heat they are superior to any other. Two girth straps pass over the
pommel and cantle arcs, to which they are fastened by four copper rivets, and to the side bars by four brass screws; their ends being sewed into D [dee] rings, the straight side of which receives the girth billets.... This saddle has no pistol holsters as the soldier carries his revolver on his person.... It has two leather saddle bags sewed to a seat with a hole in the center to fit the saddle bag behind the cantle.6

The serviceability of this saddle is attested to by the fact that the McClellan design, with only a few minor changes was used by the United States Cavalry from 1860 until cavalry was discontinued in 1945. It was popular with the troopers also;

The saddle used in the cavalry now 1863 is known as the McClellan saddle,... The soldiers like it, as it is easy to ride on, and does not give the horse a sore back unless carelessly used. Men who ride saddles are generally the best judges of them, although heads of departments sometimes think differently.7

Writing in 1868 on cavalry operations, an English writer, George Denison, wrote to several ex-Confederate cavalry officers for their opinions on equipment. One, identified only as "A Confederate General Officer," had this to say;

... of the saddles used by the Confederate cavalry with the army in Virginia, the McClellan saddle was considered by far the best. This saddle was obtained by the Confederates by capture from the enemy.... The English Hussar saddle was imported into the Confederacy by some officers from mere fancy, although never by any cavalry officers. The objection to this saddle was its great weight and it was found to injure

6

7 Brackett, 161.
the horses back much more than the McClellan, the superiority of the latter being generally conceded.8

General Thomas L. Rosser, C.S.A., a noted cavalry officer in the Army of Northern Virginia, replied;

The McClellan saddle is by far the best I ever saw for cavalry. It is strong, light, and comfortable for man and horse.9

A nephew of Robert E. Lee, General Fitzhugh Lee, C.S.A. also had a favorable comment;

For a saddle I prefer above all others what is known in this country as the 'McClellan' pattern,... It is lighter, more durable, stands exposure better, and is more comfortable to horse and rider.10

Another member of that famous family, General Stephen D. Lee, C.S.A., said;

The Confederate States trooper considered himself fortunate in getting a McClellan tree. 11

The writer has in his possession two McClellan saddles, one of the 1942 pattern, known as the M-1 Modified; the other of a lighter construction, without side skirts, known as the 1904 model. Both have a tree identical with the model of 1860;

---

8 George T. Denison, Modern Cavalry, London, 1868, 369.
9 Ibid., 357.
10 Ibid., 364.
11 Ibid., 366.
the 1942 model with the side panels resembles very much the Civil War saddle. The writer has used these saddles for a number of years and has ridden a great many miles on them, and concurs with those who say that the McClellan was one of the best saddles ever built.

Army regulations provided for a blue felt saddle pad with orange edging to be used under the saddle, but from extant photographs one would get the impression that such pads were seldom used. Occasionally one finds pictures showing an officer's mount with a fitted pad; the troopers seemed to favor a folded blanket. General officers used a saddle cloth of velvet, edged with two rows of gold cloth, and carrying the insignia of their rank. This cloth covered the entire saddle, as well as the forehands and hindquarters of the horse. It was probably intended to protect the officer's uniform from the animal's perspiration.

The rest of the horse's harness consisted of a halter and bridle. These were made of black leather, as were the saddle

12 General Orders, Number six 1861, article 137.
13 David Donald, Divided We Fought, New York, 1952, 152.
14 Ibid., 363.
15 F. T. Miller, Photographic History of the Civil War, New York, 1911, IV, 289, and 300.
16 Ibid., IV, 53.
and other tack. A brass disc, with the letters "USA" stamped into it, covered the joint between the browband and the crown-piece of the bridle. The halter was usually left on the horse, and the bridle put on over it. This enabled the soldier to tether his horse quickly; the bridle could be slipped off, and the animal tied to a tree or picket line by the lead strap which was buckled to the halter, with the other and looped back to the saddle.17

A single rein set and a curb bit was usually used. The bit was made of steel and had six inch cheeks which were gracefully curved, and joined with a crossbar at the bottom. A round brass escutcheon, engraved with the letters "U. S.," was riveted to each side of the moughpiece.18 Recently, the writer was able to obtain such a bit from Bannerman's of New York, dealers in old military goods. This bit was tried on an easy-mouthed horse, and found to be rather harsh. It is understandable how green riders using such bits on fractious horses might have the troubles mentioned above.

Blankets, ponchos, tents, and other belongings were rolled up together and strapped to the pommel and cantle. A canteen, a picket pin, and sometimes a frying pan were tied on

17 Donald, 363.
18 General Orders, Number Six, article 150.
the saddle. Rations were carried in the saddle bags; spare horseshoes and nails were carried there also.

The trooper usually wore a belt with a sling for the saber attached to it. The belt had a small hook to which the saber could be hitched up, to keep it from dragging on the ground. Also on the belt were a cartridge box, and a left-hand holster which was worn on the right hip, so that the revolver was pulled out with a cross-hand draw. Around the left shoulder, and diagonally across the chest, the trooper wore a broad belt with a roller-snap at the bottom. While the soldier was afoot, the carbine ring was attached to this roller-snap, and the weapon dangled from the right hip. When the soldier was mounted, the barrel of the carbine was thrust into a carbine boot, which was buckled to the off (right) D ring of the saddle.

Since the carbine weighed about seven pounds, the revolver about two and three-quarter pounds, the saber and its scabbard five pounds, a weight of nearly fifteen pounds was hung upon the trooper. Piston and carbine cartridges made the burden even heavier. The saber hanging from his left side, and the carbine from his right, impeded the trooper’s movements while

19 Appendix V, Plate Two.

20 General Orders, Number Six, article 169.
dismounted so he left his weapons on the saddle whenever possible. 21

In the earlier days of the war, the cavalryman would try to load every last item of equipment upon his horse, which meant that the horse had to carry about seventy pounds of gear, in addition to the weight of the rider. Both horse and man suffered from such a burden; it was not long before the load began to diminish as experience taught the soldier what items were essential and what were not.

It became a fine art how to lessen the burden of the horse; and the best soldiers were those whose horses were packed so lightly that the carbine was the biggest part of the load. If it was a wonder in the first campaign how a cavalryman could get onto or move his horse when equipped for the field, the wonder afterward came to be, how a man could live with so meagre an equipment. 22

Overloaded and overworked horses soon become rundown, which made for a serious problem in the cavalry service. Indeed, the supply and condition of horses was a serious problem for all the branches of the service, for it might be safely estimated that there were as many horses in the army as there were men. Horses were naturally more expendable than men, and losses among the animals were very high. During the first two years of the


22 Ibid., 29.
war, 234,000 horses were furnished to the cavalry when the maximum number of cavalrymen in the field did not exceed 60,000 men. 23

Many reasons were given for the large numbers of horses that were rendered unserviceable;

... least of all were death in battle, ignorance of inspecting and purchasing officers, poor horsemanship by untrained men, control of tactical operations of cavalry by officers ignorant of its limits of endurance, hardships inseparable from the great raids of the war, and last, but not least, the often gross inefficiency and ignorance on the part of responsible officers as to the care of horses in sickness and in health-all cooperated toward immense financial loss and temporary military inefficiency. 24

In 1863 the Cavalry Bureau was established, with General George Stoneman as its first chief. This bureau reached its greatest efficiency under General James H. Wilson, a young officer who rose to great heights on Grant's staff. 25

This bureau was charged with the responsibility of organizing and equipping the cavalry forces, and with providing mounts and remounts. Six principal cavalry depots were established. These were located at; Giesboro, District of Columbia, Saint Louis, Missouri, Greenville, Louisiana, Nashville,


24 Ibid., 322.

25 Ibid., 326.
Tennessee, Harrisburg, Pennsylvania, and Wilmington, Delaware. Lots of newly purchased horses were delivered here; the average price paid for a cavalry horse was $160.00, which seems a rather high price considering the price scales of the time, and the prices asked for other war materials. Contact rigles, for example, were purchased for $25.00 apiece.

No records of the breeds or sizes of the horses are available, but from photographs one could estimate that the majority were saddle-bred and no more than fifteen hands in height. At the beginning of the war some effort was made to form troops and companies mounted on the same color horses, but as remounts became scarcer, any color horse; be it bay, chestnut, white, or grey, that was healthy was put into service.

Horses that broke down in the field were returned to one of the depots mentioned above. There they were given extra feed and sufficient rest until they were considered ready to be returned to service. About fifty percent of the animals were returned to the field, about twenty five percent recuperated sufficiently to be sold as condemned animals, and the remainder died or were destroyed.

27 Ibid., 336.
28 Appendix IV.
29 Rhodes, 323.
died or were destroyed.

Some estimate of the vast number of horses in service may be made from these statistics. In the fiscal year ending June 30, 1864, the Federal government purchase 188,718 horses, in addition to 20,308 captured from the Confederates. During the first eight months of 1864, the cavalry of the Army of the Potomac alone was supplied with two complete remounts, or nearly 40,000 horses. 30

The following experience of the Seventh Pennsylvania Cavalry will afford some idea of the rigors endured by both the cavalryman and his horse. In April, 1864, the regiment started on a march from Nashville, Tennessee to Blake's Mills, Georgia.

It had nineteen hundred and nineteen horses fresh from the Nashville remount depot, and among the troopers were three hundred recruits, some of whom had never been on a horse before.

In a little over four months, the regiment marched 902 miles, not including fatiguing picket duty and troop scouting. During this period, the horses were without regular supplies of forage for twenty six days, on scanty forage for twenty seven days, and for seven consecutive days without food of any kind. In one period of seventy two hours, the horses remained saddled for sixty hours. During the expedition, 230 horses were abandoned or died, 175 were killed or captured, making a total loss of 405,

30 Ibid., 336.
or nearly fifty percent of those starting on the march. 31

As might be expected, the cavalryman often became quite fond of his horse. Captain Glazier, Second New York, wrote how happy he was "to be the recipient of a beautiful black mare, only five years old, full of life and fiery mettle, fourteen hands high, and weighing not less than ten hundred pounds. She was a gem for the cavalry service, or anything else, and a friendship was destined to grow up between us...." 32 Later Glazier was issued a remount, but he lamented the little mare, "...my little black mare....has at last succumbed, and, with a grief skin to that which is felt at the loss of a dear human friend, I have performed the last honor to the dead. The Indian may love his faithful dog, but his attachments cannot surpass the cavalryman's for his horse."

31 Ibid., 340.
32 Glazier, 30.
33 Ibid., 131.
CHAPTER IV

FOOD AND RATIONS

Few will contest the adage "An army travels on its stomach." Arms and ammunition may be furnished slowly and recruits might be required to wear their civilian clothing until uniforms are found for them, but soldiers must be fed well and often if they are to stay healthy and happy. Nothing is more destructive of morals than poor or insufficient food. The mustering of the Union army was attended with the tremendous problem of properly feeding the new soldiers. As was the case with uniforms and weapons, many unscrupulous contractors made huge profits by defrauding the government in food contracts. "For sugar it the government often got sand; for coffee, rye;..."1

As per official orders, the daily ration for each soldier was:

twelve ounces of pork or bacon, or one pound and four ounces of salt or fresh beef; one pound and six ounces of soft bread or flour, or one pound of hard bread, or one pound and four ounces of corn meal; and to every one hundred rations, fifteen pounds of beans or peas, and ten pounds of rice or hominy ten pounds of

1 Shannon, I, 55.
green coffee, or, eight pounds of roasted (or roasted
and ground) coffee, or one pound and eight ounces of
tea; fifteen pounds of sugar; four quarts of vinegar;
... three pounds and twelve ounces of salt; four
ounces of pepper; thirty pounds potatoes, when
practicable, and one quart of molasses. 2

This ration was larger than that issued to the Con-
federate soldier. The southerners had tried to follow the old
ration allowance, but had to cut it repeatedly. The ration
quoted above was about one-fifth more than that issued by the
British army, almost twice that of the French, and much more
than that of the Prussians, Austrians, and Russians. 3

A Massachusetts veteran wrote, "I have been asked a
great many times whether I always get enough to eat in the army,
and have surprised inquirers by answering in the affirmative.
Now, some old soldier who sees my reply may say, 'Well, you were
lucky. I didn't.' But I should at once ask him to tell me for
how long a time his regiment was ever without food of some kind.
And I should be very much surprised if he would say more than
twenty-four or thirty hours, at the outside. I would grant that
he himself might, perhaps, ... be deprived of food a longer time
when... separated temporarily from his company; but his case
would be the exception and not the rule.... But on the point
of scarcity of rations I believe my statement will be generally

2 Army Regulations, 1863, article 43, paragraph 1190.
3 Wiley, 224.
agreed to by old soldiers.  

The same veteran writes that the quantity of rations was nearly always sufficient, but that the quality often left much to be desired. But he conceded that the blame for this should not rest upon the government, but rather upon the "rascally contractors who supplied them,... or, perhaps,... the inspectors, who were in league with the contractors, and who therefore did not always do their duty." This old soldier mentioned the daily rations listed above, and adds that this was the camp ration. The marching ration was smaller, consisting of one pound of hard bread; three-quarters of a pound of salt pork, or one and one-quarter pounds of fresh meat; sugar, coffee, and salt.

The letters and diaries of other soldiers', however, do not all agree with the above soldier. "Some days we live first rate, and the next we don't have half enough," is the way one man looked at the food allotment. Another, after some long marches through Kentucky, wrote "The last few days we only get about 1/2 enough to eat... for the last 10 days... we have been

5 Ibid., 110.
6 Ibid., 112.
7 Wiley, 225.
living on Slap jacks... one the size of my two hands every meal with Coffee & a chunk of meat... We realy are about half starved.\(^8\) The situation must have been the same throughout Kentucky, as another man wrote home from Perryville in October, 1862, "The boys say that our 'grub' is enough to make a mule desert, and hog wish he had never been born... Hard bread, bacon, and coffee is all we draw."\(^9\)

Food shortages were relatively rare but the nutritional values of the food issued was very poor. No efforts seem to have been made to provide a balanced diet. The quartermasters had no interest in dietetics other than to supply fresh or desiccated vegetables to check scurvy.\(^10\) The diarrhea, dysentery, constipation, and malnutrition which made the soldiers easy prey to other diseases were due largely to the steady diet of fried meat, hardtack and coffee. Charles Francis Adams, who had served as a captain in a Massachusetts cavalry regiment, wrote, "My intestines were actually corroded with concentrated nourishment. I needed to live on bread, vegetables, and tea; I did live on pork, coffee, spirits, and tainted water."\(^11\) Sick

---

\(^8\) Ibid., 226.

\(^9\) Ibid., 226.

\(^10\) Billings, 112.

\(^11\) Catton, \textit{Glory Road}, 123.
men in the hospitals at Falmouth, Virginia, where Burnside had his headquarters during the winter of 1862, received the same food that was issued to the healthy men in the camps; salt pork, hardtack, and coffee. This was not because the army could not obtain the right kind of food for sick men—the storehouses at Aquia Creek were filled with such foods. It was because the officials of the army, from Burnside, a self-confessed incompetent, on down through the chain of command were so inexperienced and so inefficient that the good food was not moved from the warehouses to the hospitals. One of the very first items that General Joseph Hooker gave his attention, after he assumed command of the Army of the Potomac in January, 1863, was the improving of the food situation. Bakeries were erected so that the men might have soft bread; tangled supply lines were straightened out and proper food reached the soldiers. The results of Hooker’s reforms are revealed in a soldier’s diary:

Feb. 9, 1863. Dried apples and onions was issued today.
Feb. 15, 1863. Fresh bread was issued to the first and second regiments from the ovens.
April 21, 1863. Supply train went to the landing and brought pork, bacon, sugar, hard bread and one day’s issue of potatoes.

12 Ibid., 123.
13 Ibid., 123.
April 25, 1863. The supply train went to the landing and brought up sugar, coffee, candles, soap, carrots, and turnips.

April 28, 1863. Supply trains went to the landing and brought hams and pork.

May 1, 1863. This morning went over the river with eight wagons and issued two days rations of pork, sugar, coffee, and one days of soft bread. 14

Hooker may have had his shortcomings at Chancellorsville, but he did win the men's affection by insisting that regimental commanders see to it that company cooks were appointed, that fresh soft bread be issued four times a week, and fresh vegetables be issued twice weekly. These, of course, were camp rations, but much better than the men had received hitherto. 15

Looking back upon these improvements a veteran wrote:

From the commissary came less whiskey for the officers and better rations, including vegetables, for the men. Hospitals were renovated, new ones built, drunken surgeons discharged, sanitary supplies furnished, and the sick no longer left to suffer and die without proper care and attention. Officers and men who from incompetence or disability could be of no further use to the service were allowed to resign or were discharged.... 16

Before Hooker instituted his reforms in the commissary department it was the custom for the regimental authorities to simply issue the men their rations of pork, beans, coffee, and

14 Wiley, 226.
15 Catton, 159.
16 Ibid., 160.
so on; then make kettles and skillets available, and suggest that the men form messes of from six to ten members and then get busy with their cooking. The men usually took turns at the cooking. Eventually the practice of appointing a company cook was established. "...men were selected..., who had a taste or a ambition for the business."17 recalls one veteran. Another soldier did not agree as he complained, "The company cook is a peculiar being: he generally knows less about cooking than any man in the company. Not being able to learn the drill, and too dirty to appear on inspection, he is sent to the cook house to get him out of the ranks."18

These men, knowing little or nothing of the art of cooking, served up some wretched concoctions. A common item on the menu seems to be a sort of stew made of hardtack, meat, and desiccated vegetables, and bearing the unpalatable name of "lobscouse."19 Always ready for a joke, the soldiers quite aptly called the dried vegetables "desecrated" vegetables.20 The name seems well chosen. These precessed vegetables were described as three inch cubes, weighing about one ounce, and firmly

17 Billings, 125.
18 Bruce Catton, Mr. Lincoln's Army, New York, 1951, 184.
19 Billings, 132.
20 Ibid., 139.
compressed. They swelled up when soaked in water and became pulpy;

In this pulpy state a favorable opportunity was afforded to analyze its composition. It seemed to show,... layers of cabbage leaves and turnip tops, stratified with layers of sliced carrots, turnips, parsnips, a bare suggestion of onions,—they were too valuable to waste in this compound,—and some others among known vegetable quantities,... which defied the powers of the analyst to give it a name. In brief, this coarse vegetable compound could with much more propriety have been put before Southern swine than Northern soldiers. 21

A common staple of the soldier diet was hardtack. This biscuit attained as much notoriety in the Civil War as did Spam in World War II. A specimen of hardtack may be seen at the museum of the Chicago Historical Society. It resembles a large saltine or soda cracker, about three inches square, and about one-half inch thick. Hardtack was just that—"they were so hard they could not be bitten; it required a very strong blow of the fist to break them."22 Some soldiers insisted that they had to beat the crackers with the ends of their muskets to make them edible. An Ohio soldier wrote to a friend back home, "With out joking any thing about it I have eat crackers here that I could not take in my hands and break without getting a pry on something." A favorite term for the biscuits was "teeth

21 Ibid., 139.
22 Ibid., 114.
A camp joke went like this:

Sergeant: Boys, I was eating a piece of hardtack this morning and I bit on something soft: what do you think it was?

Private: A worm?

Sergeant: No, by golly, it was a ten penny nail.23

Several different ways were used to soften these "flour tiles" as one called them.24 The usual way was to crumble them in coffee, giving the well-known "hardtack and coffee." Some mixed hardtack crumbs in soup. Some mixed crumbs in water, and then fried the mixture in pork fat. This dish was called "skilly-gallee" and was guaranteed to be indigestible. Others made up a milk toast of hardtack and condensed milk, but since canned milk cost seventy five cents a can, this delicacy was only rarely enjoyed.25

The reference to worms in hardtack in the joke quoted above was only too true. The soldiers were inclined, however, to adopt a philosophical attitude toward wormy crackers, as one assured his readers, "But hardtack was not so bad an article of food, even when traversed by insects, as may be supposed. Eaten in the dark, no one could tell the difference between it and

23 Wiley, 237.
24 Billings, 116.
25 Ibid., 117, 118.
hardtack that was untenanted. 26 Using the tune of "John Brown's Body" they sang:

Worms eat hearty in the commissary stores
While we go starving on. 27

People can become accustomed to most anything, so it is not surprising that some soldiers got to like hardtack. One regimental historian states: "In the Eighth Iowa the first issue of hardtack nearly created insurrection. Later the men came to thank their stars they had hard tack to eat." A Pennsylvanian wrote: "I have got to like the army crackers very much. I eat them in place of bread altogether now although there is plenty of the latter." 28

Methods of canning food were not well known in the 1860's. Gail Borden had devised a method of keeping condensed and evaporated milk in cans just before the war began. For some time housewives had been putting up preserves in air-tight jars. One soldier mentions eating some canned lobsters, 29 but even though a means of preserving such easily tainted items as lobster had been found, no mention of canned meats is made. The soldier's meat ration was issued as fresh meat when possible, but usually

26 Ibid., 115.
27 Wiley, 238.
28 Ibid., 239.
the meat was salted. Both pork and beef were preserved in this way. The meat was soaked in a brine strong enough to render it impervious to decay in any climate for two years. Salt pork was usually called "sow-belly." It was served boiled in the camps; on the march the soldiers fried it, or ate it raw between pieces of hardtack.30 Evidently, trichinosis had never been heard of, or perhaps it was thought that no parasite could survive such a concentration of salt. Worse, in the opinion of the men, was the salt beef, or "salt horse, of fragrant memory" as one recalled it. This must have been an especially revolting item; "Without doubt, it was the vilest ration distributed to the soldiers. It was thoroughly penetrated with saltpetre, was often yellow-green with rust from having laid out of the brine, and when boiled, was four times out of five if not nine times out of ten a stench in the nostrils, which no delicate palate cared to encounter...."31 This ration was so salty that it was almost impossible to freshen it to the point of making it edible. When camped by a running brook, the soldiers would tie a chunk of salted meat to a cord and throw it into the stream in hopes that soaking overnight in running water would remove the briny taste.32

30 Billings, 135.
31 Ibid., 134.
32 Ibid., 135.
But soaking also removed the natural juices along with the salt, and left the meat dry and tasteless. Such tasteless and tough meat was referred to as "old bull."\(^{33}\) Waggish soldiers insisted that the beef ration was not beef at all but mule. A Connecticut soldier claimed, "the commissary... has given the boys so much mule meat that the ears of the whole regiment have grown three and one-half inches."\(^{34}\) Especially old meat was given the military funeral deemed fitting for such long army service. The offending beef, dressed in scraps of harness to indicate its branch of service, was carried in a coffin made of hardtack boxes, at the head of a mournful procession. Solemn music accompanied the cortège to the camp dump where the "remains" were laid to rest after a few solemn words were spoken and a volley fired.\(^{35}\)

In order to supply fresh meat to marching troops, herds of cattle were driven along the line of march. Men were taken from the ranks to serve as drovers and butchers. Since the troops and wagon trains must use the roads, the herds kept to the fields, but near enough to the line of march that meat rations could be distributed immediately after the animals were slaughtered. The

---

\(^{33}\) Stillwell, 124.

\(^{34}\) Wiley, 240.

\(^{35}\) Billings, 135.
animals were usually killed with a rifle, then quickly cut up and passed among the men. 36 When in a permanent camp company cooks prepared the meat, although the men preferred to do it themselves, broiling the meat by impaling it on a stick and holding it over the camp fire. As was the case with the salted meat, there were plenty of complaints about the fresh meat. One remarked that the meat was "not particularly juicy." An officer remembered, with a shudder of disgust, "odious beef served quivering from an animal heated by the long day's march and killed as soon as the day's march was over." 37 If this man complained because the meat was served too soon after slaughtering, there were others who held opposite views, "Yesterday was the first time we had to carry our meat for the maggots always carried it till then. We had to have an extra guard to keep them from packing it clear off." 38 Another claimed he could "throw a piece up against a tree and it will just stick there and quiver and twitch for all the world like one of those blue-bellied lizards at home will do when you knock him off a fence with a stick." 39

36 Ibid., 323.
37 Catton, 187.
38 Wiley, 240.
39 Stillwell, 125.
The infantryman loved his cup of coffee; "When tired and footsore, he would drop out of the marching column, build his little campfire, cook his mess of coffee, take a nap behind the nearest shelter, and when he woke, hurry on to overtake his company." When night fell "each man would seize a rail from the nearest fence" and soon "little camp-fires,... would shoot up.... Soon they would be surrounded by the soldiers who made it an almost invariable rule to cook their coffee first.... If a march was ordered at midnight,... it must be preceded by a pot of coffee.... It was coffee at meals and between meals;...." Cavalrymen and artillerymen riding by the infantry soldiers squatting before their fires, tending their coffee pots, derisively called the foot soldiers "coffee-boilers." Some of the men had quite a capacity for coffee," I can drink two and three quarts of coffee a day easily and want more," wrote one Pennsylvanian. They liked it strong too; "strong enough to float an iron wedge" was how one of Sherman's men wanted his coffee.

40 Billings, 130.
41 Catton, 187.
43 Ibid., 241.
A sort of "instant coffee" preparation was compounded of an extract of coffee mixed with sugar and milk. This product was known as "essence of coffee," and was packed in half-gallon cans. An officer remarked that it looked like axle grease, and that it had a "villainous" taste which the men did not like, and so the issue of this ration was discontinued.

Besides the desiccated vegetables mentioned above, the commissary department experimented with another processed food. Desiccated potatoes had been used by the British in the Crimean War, and were issued to the Union troops as an antiscorbutic. The soldiers did not like them at first, but later learned to bake them into patties. An Illinois veteran, writing in 1920, recalled that the dried potatoes "resembled the modern preparation called 'grape nuts.' Dried apples were also issued, "to swell the ranks of the army," as one man suggested. Baked beans were a taste treat; one soldier claimed they were "the most enjoyable dish that fell to the lot of the common soldier." But as this man was an artilleryman from Boston, his enthusiasm is understandable.

44 O. R., series 1, XI, part 1, 175.
46 Stillwell, 226.
47 Billings, 138.
48 Ibid., 137.
Soldiers were able to supplement their government issued rations with delicacies they received in packages from home. All sorts of things were sent, clothing, boots, writing paper, "pudding, turkey, pickles, onions, pepper,... potatoes, chocolate, condensed milk, sugar, broma, butter, sauce,..." Boxes were often opened and inspected lest they contain contraband liquor. "It was a little annoying to have every box opened... especially if one was not addicted to their spirits use." Boxes were neatly packed by the loving hands of mothers and sisters, but not so neatly re-packed by the inspectors, and this irked the men. Nevertheless packages from home were always welcomed, and the soldiers wrote home expressing their gratitude, "thank Mrs. Mason for those pies... and those fridge cakes and ginger snaps,... and apple sauce that was first rate."51

Game was rather scarce in the combat areas, probably because the noise of battle and frightened away the animals. Nonetheless one Yank wrote home about a meal of "fried jabird and a read headed wood pecker" that he had enjoyed.52 Orchards were raided; and apiaries provided honey. Occasionally the men

49 Ibid., 218, 219.
50 Ibid., 218.
51 Wiley, 232.
52 Ibid., 244.
would find a berry patch and would make a pie with the berries that they did not eat on the spot.

The soldiers, after the first few months of the war, had few scruples about foraging. A Pennsylvania recruit noticed that the men were convinced that "it was their bounden duty to forage upon all inhabitants of the enemy's country." Officers were supposed to prevent foraging, but that was a hopeless task. One man said, "When we first started the colonel tried to prevent our foraging, but he quickly found out that was nonsense & before we got back we were as expert at it as any of the old hands." Soldiers made a game of foraging, calling the domestic animals that they caught "wild game." From reading the Soldiers' diaries and letters one would form the opinion that the poultry and livestock in the Confederate states were much more disloyal than their owners. Rebel cows were milked; chickens and pigs that "refused to take the oath" paid with their lives. An Irishman came into camp one day with a goose and a hen dangling from the barrel of his musket. When asked by his captain for an explanation, he answered, "Sir, this goose came out as I was walking along peaceably and hissed at the American flag, so, bejabbers, I shot him on the spot... and I found this hen laying eggs for Ribil Army, and I hit her a whack and stopped that act of

53 Catton, Glory Road, 29.

54 Ibid., 29.
By comparison with scientifically compounded rations issued to the armed forces during World War II, the food provided for the Union soldier of 1861 seems woefully inadequate. It should be remembered, however, that this war was the first great war in which the country had been involved, and the problem of supplying food and equipment to so many soldiers was one with which the government had little previous experience. Little was known in those times of scientific methods of food preparation and preservation, and the balanced diet was many years in the future. In all, it might be said that the Union soldier was well fed, especially when his ration allowance is compared with those issued the European soldier. The complaints made by the soldiers would have been mostly the grumbling which seems so essential to soldier morale. Considering the lower standards of living prevailing at the time it is probable that many soldiers ate better in the army than they has as civilians.

One fact is certain. Away from home and feminine influence the men lost many of their social graces. One company, whose table manners were evidently something less than dainty, offended the sensibilities of a soldier from Pennsylvania, who wrote these lines to his wife, "It goes perty greasey

55 Wiley, 236.
Sometimes but wee will have to be Satisfied... When wee go to draw our Rashions it puts mee in mind as iff thare ware about Thirty hungray horgs In one pen and the Trough onely Big anough for about three to get in... that is the way it goes with us."

56 Wiley, 236.
APPENDIX I

General Orders, Number Six, 1861.
General Orders,

No. 6.

WAR DEPT., ADJUTANT GENERAL'S OFFICE,

Washington, March 15, 1861.

The uniform, dress, and horse equipments of the Army having been changed in many respects since the "General Regulations" of 1837, the following description of them is published for the information of all concerned:

COAT.

1.—For Commissioned Officers. All officers shall wear a frock coat of dark blue cloth, the skirt to extend from two-thirds to three-fourths of the distance from the top of the hip to the bend of the knee; single-breasted for Captains and Lieutenants; double-breasted for all other grades.

2.—For a Major General—two rows of buttons on the breast, nine in each row, placed by threes; the distance between each row, five and one-half inches at top, and three and one-half inches at bottom; stand-up collar, to rise no higher than to permit the chin to turn freely over it, to hook in front at the bottom, and slope thence up and backward at an angle of thirty degrees on each side; cuffs two and one-half inches deep to go around the sleeves parallel with the lower edge, and to button with three small buttons at the under seam; pockets in the folds of the skirts, with one button at the hip, and one at the end of each pocket, making four buttons on the back and skirt of the coat, the hip button to range with the lowest buttons on the breast; collar and cuffs to be of dark blue velvet; lining of the coat black.

3.—For a Brigadier General—the same as for a Major General, except that there will be only eight buttons in each row on the breast, placed in pairs.
4.—For a Colonel—the same as for a Major General, except that there will be only seven buttons in each row on the breast, placed at equal distances; collar and cuffs of the same color and material as the coat.

5.—For a Lieutenant Colonel—the same as for a Colonel.

6.—For a Major—the same as for a Colonel.

7.—For a Captain—the same as for a Colonel, except that there will be only one row of nine buttons on the breast, placed at equal distances.

8.—For a First Lieutenant—the same as for a Captain.

9.—For a Second Lieutenant—the same as for a Captain.

10.—For a Brevet Second Lieutenant—the same as for a Captain.

11.—A round jacket, according to pattern, of dark blue cloth, trimmed with scarlet, with the Russian shoulder-knot, the prescribed insignia of rank to be worked in silver in the centre of the knot, may be worn on parade duty by officers of Light Artillery.

12.—For Enlisted Men. The uniform coat for all enlisted foot men shall be a single-breasted frock of dark blue cloth, made without plait, with a skirt extending one-half the distance from the top of the hip to the bend of the knee; one row of nine buttons on the breast, placed at equal distances; stand-up collar to rise no higher than to permit the chin to turn freely over it, to hook in front at the bottom and then to slope up and backward at an angle of thirty degrees on each side; cuffs pointed according to pattern, and to button with two small buttons at the under seam; collar and cuffs edged with a cord or welt of cloth as follows, to wit: Scarlet for Artillery; sky blue for Infantry; yellow for Engineers; crimson for Ordnance and Hospital stewards. On each shoulder a metallic scale according to pattern; narrow lining for skirt of the coat of the same color and material as the coat; pockets in the folds of the skirts, with one button at each hip, to range with the lowest buttons on the breast; no buttons at the ends of the pockets.

13.—All Enlisted Men of the Dragoons, Cavalry, Mounted Riflemen, and Light Artillery, shall wear a uniform jacket of dark blue cloth, with one row of twelve small buttons on the breast placed at equal distances; stand-up collar to rise no higher than to permit the chin to turn freely over it, to hook in front at the bottom, and to slope the same as the coat collar; on the collar, on each side, two blind button holes of lace, three-eighths of an inch wide, one small button at the button hole, lower button hole extending back four inches, upper button hole three and a half inches; top button and front ends of collar bound with lace three-eighths of an inch wide, and a strip of the same extending down the front and around the whole lower edge of the jacket; the back seam laced with the same, and on the cuff a point of the same shape as that on the coat, but formed of the lace; jacket to extend to the waist, and to be lined with white flannel; two small buttons at the under seam of the cuff, as on the coat cuff; one hook and eye at the bottom of the collar; color of lace (worsted), orange for Dragoons, yellow for Cavalry, green for Riflemen, and scarlet for Light Artillery.

14.—For all Mounted—The same as for other enlisted men of their respective corps, with the addition of a facing of lace three-eighths of an inch wide on the front of the coat or jacket, made in the following manner: bars of three-eighths of an inch worsted lace placed on a line with each button six and one-half inches wide at the bottom, and thence gradually expanding upwards to the last button, counting from the waist up, and contracting from thence to the bottom of the collar, where it will be six and one-half inches wide, with a strip of the same lace following the bars at their outer extremity—the whole presenting something of what is called the herring-bone form; the color of the lace facing to correspond with the color of the trimming of the corps.

15.—For Dragoon Prizes—a sack coat of dark blue flannel extending half way down the thigh, and made loose, without sleeve or body lining, falling collar, inside pocket on the left side; four coat buttons down the front.
16. — For Recruits—the sack coat will be made with sleeve and body lining, the latter of flannel.

17. — On all occasions of duty, except fatigue, and when out of quarters, the coat or jacket shall be buttoned and hooked at the collar.

BTNONS.

18. — For General Officers and Officers of the General Staff—gilt, convex, with spread eagle and stars, and plain border; large size, seven-eighths of an inch in exterior diameter; small size one-half inch.

19. — For Officers of the Corps of Engineers—gilt, nine-tenths of an inch in exterior diameter, slightly convex; a raised bright rim, one-thirtieth of an inch wide; device, an eagle holding in his beak a scroll, with the word “Engineers,” a bastion with embrasures in the distance surrounded by water, with a rising sun—the figures to be of dead gold upon a bright field. Small buttons of the same form and device, and fifty-five hundredths of an inch in exterior diameter.

20. — For Officers of the Corps of Topographical Engineers—gilt, seven-eighths of an inch exterior diameter, convex and solid; device, the shield of the United States, occupying one-half the diameter, and the letters T. E. in old English characters the other half; small buttons, one-half inch diameter, device and form the same.

21. — For Officers of the Ordnance Department—gilt, convex, plain border, cross cannon and bombshell, with a circular scroll over and across the cannon, containing the words “Ordnance Corps”; large size, seven-eighths of an inch in exterior diameter; small size, one-half inch.

22. — For Officers of Artillery, Infantry, Riflemen, Cavalry and Dragoons—gilt, convex; device, a spread eagle with the letter A, for Artillery—I, for Infantry—B, for Riflemen—C, for Cavalry—D, for Dragoons, on the shield; large size, seven-eighths of an inch in exterior diameter; small size, one-half inch.

23. — Adjutant-General may wear the button of the General Staff, or of their regiment or corps, at their option.

24. — For all Enlisted Men—yellow, the same as is used by the Artillery, &c., omitting the letter in the shield.

TROUSERS.

25. — For General Officers and Officers of the Ordnance Department—of dark blue cloth, plain, without stripe, welt, or cord down the outer seam.

26. — For Officers of the General Staff and Staff Corps, except the Ordnance—dark blue cloth, with a gold cord, one-eighth of an inch diameter, along the outer seam.

27. — For all Regimental Officers—dark blue cloth, with a welt let into the outer seam, one-eighth of an inch in diameter, of colors corresponding to the facings of the respective regiments, viz: Dragoons, orange; Cavalry, yellow; Riflemen, emerald green; Artillery, scarlet; Infantry, sky-blue.

28. — For Enlisted Men, except companies of Light Artillery—dark blue cloth; sepoys with a stripe one and one-half inch wide; corporals with a stripe one-half inch wide, of worsted lace, down and over the outer seam, of the color of the facings of the respective corps.

29. — Ordnance Sergeants and Hospital Stewards—stripe of crimson lace one and one-half inch wide.

30. — Privates—plain, without stripe or welt.

31. — For Companies of Artillery equipped as Light Artillery—sky-blue cloth. All trousers to be made loose, without plaits, and to spread well over the boot; to be re-enforced for all enlisted mounted men.

HAT.

32. — For Officers: Of best black felt. The dimensions of medium size to be as follows:
GENERAL ORDERS, 1861.

Width of brim, three and one-fourth inches.
Height of crown, six and one-fourth inches.
Oval of tip, one-half inch.
Taper of crown, three-fourths of an inch.
Curve of head, three-eighths of an inch.

The binding to be one-half inch deep, of best black ribbed silk.

33.—For Enlisted Men: Of black felt, same shape and size as for officers, with double row of stitching, instead of binding, around the edge. To agree in quality with the pattern deposited in the clothing arsenal.

TRIMMINGS.

84.—For General Officers: Gold cord, with acorn-shaped ends. The brim of the hat looped up on the right side, and fastened with an eagle attached to the side of the hat; three black ostrich feathers on the left side; a gold embroidered wreath in front, on black velvet ground, encircling the letters U. S. in silver, old English characters.

85.—For Officers of the Adjutant General’s, Inspector General’s Quartermaster, Subsistence, Medical and Pay Departments, and the Judge Advocate, above the rank of Captain: The same as for General Officers, except the cord, which will be of black silk and gold.

86.—For the same Departments, below the rank of Field Officers: The same as for Field Officers, except that there will be but two feathers.

87.—For Officers of the Corps of Engineers: The same as for the General Staff, except the ornament in front, which will be a gold embroidered wreath of laurel and palm, encircling a silver turreted castle on black velvet ground.

88.—For Officers of the Topographical Engineers: The same as for the General Staff, except the ornament in front, which will be a gold embroidered wreath of oak leaves, encircling a gold embroidered shield, on black velvet ground.

89.—For Officers of the Ordnance Department: The same as for the General Staff, except the ornament in front, which will be a gold embroidered shell and flame, on black velvet ground.

90.—For Officers of Dragoons: The same as for the General Staff, except the ornament in front, which will be two gold embroidered sabres crossed, edges upward, on black velvet ground, with the number of the regiment in silver in the upper angle.

91.—For Officers of Cavalry: The same as for the Dragoons, except that the number of the regiment will be in the lower angle.

92.—For Officers of Mounted Riflemen: The same as for the General Staff, except the ornament in front, which will be a gold embroidered trumpet, perpendicular, on black velvet ground.

93.—For Officers of Artillery: The same as for the General Staff, except the ornament in front, which will be gold embroidered cross-cannon, on black velvet ground, with the number of the regiment in silver at the intersection of the cross-cannon.

94.—For Officers of Infantry: The same as for Artillery, except the ornament in front, which will be a gold embroidered bugle, on black velvet ground, with the number of the regiment in silver within the bend.

95.—For Enlisted Men, except companies of Light Artillery: The same as for Officers of the respective corps, except that there will be but one feather, the cord will be of worsted, of the same color as that of the facing of the corps, three-sixteenths of an inch in diameter, running three times through a slide of the same material, and terminating with two tassels, not less than two inches long, on the side of the hat opposite the feather. For Hospital Stewards, the cord will be of buff and green mixed. The insignia of corps, in brass, in front of the hat, corresponding with those prescribed for Officers, with the number of regiment, five-eighths of an inch long, in brass, and letter of company, one inch, in brass, arranged over insignia. Brim to be looped up to side of hat with a
brass eagle, having a hook attached to the bottom to secure the brim—on the right side for mounted men and left side for foot men. The feather to be worn on the side opposite the loop.

46.—All the trimmings of the hat are to be made so that they can be detached; but the eagle, badge of corps, and letter of company, are to be always worn.

47.—For companies of Artillery equipped as Light Artillery, the old pattern uniform cap, with red horse-hair plume, cord and tassel.

48.—Officers of the General Staff, and Staff Corps, may wear, at their option, a light French chapeau, either stiff crown or flat, according to the pattern deposited in the Adjutant General’s Office. Officers below the rank of Field Officers to wear but two feathers.

FORAGE CAPS.

49.—For fatigue purposes, forage caps, of pattern in the Quartermaster General’s Office: Dark blue cloth, with a welt of the same around the crown, and yellow metal letters in front to designate companies.

50.—Commissioned Officers may wear forage caps of the same pattern, with the distinctive ornament of the corps and regiment in front.

CRAVAT OR STOCK.

51.—For all Officers—black; when a cravat is worn, the tie not to be visible at the opening of the collar.

52.—For all Enlisted Men—black leather, according to pattern.

BOOTS.

53.—For all Officers—ankle or Jefferson.

54.—For Enlisted Men of Riflemen, Dragoons, Cavalry, and Light Artillery—Jefferson, rights and lefts, according to pattern.

55.—For Enlisted Men of Artillery, Infantry, Engineers and Ordnance—Jefferson, rights and lefts, according to pattern.

SPURS.

56.—For all Mounted Officers—yellow metal, or gilt.

57.—For all Enlisted Mounted Men—yellow metal, according to pattern.

(See No. 174.)

GLOVES.

58.—For General Officers and Officers of the General Staff and Staff Corps—buff or white.

59.—For Officers of Artillery, Infantry, Cavalry, Dragoons and Riflemen—white.

SASH.

60.—For General Officers—buff, silk net, with silk bullion fringe ends; sash to go twice around the waist, and to tie behind the left hip, pendent part not to extend more than eighteen inches below the tie.

61.—For Officers of the Adjutant General’s, Inspector General’s, Quartermaster’s and Subsistence Departments, Corps of Engineers, Topographical Engineers, Ordnance, Artillery, Infantry, Cavalry, Riflemen, and Dragoons, and the Judge Advocate of the Army—crimson silk net; for Officers of the Medical Department—medium or emerald green silk net, with silk bullion fringe ends; to go around the waist and tie as for General Officers.

62.—For all Sergeant Majors, Quartermaster Sergeants, Ordnance Sergeants, First Sergeants, Principal or Chief Musicians and Chief Buglers—red worsted sash, with worsted bullion fringe ends; to go twice around the waist, and to tie behind the left hip, pendent part not to extend more than eighteen inches below the tie.
GENERAL ORDERS, 1861.

63. — The sash will be worn (over the coat) on all occasions of duty of every description, except stable and fatigue.
64. — The sash will be worn by "Officers of the Day" across the body, scot fashion, from the right shoulder to the left side, instead of around the waist, tying behind the left hip as prescribed.

SWORD BELT.

65. — For all Officers — a waist belt not less than one and one-half inch, nor more than two inches wide; to be worn over the sash; the sword to be suspended from it by slings of the same material as the belt, with a hook attached to the belt upon which the sword may be hung.
66. — For General Officers — Russian leather, with three stripes of gold embroidery; the slings embroidered on both sides.
67. — For all other Officers — black leather, plain.
68. — For all Non-commissioned Officers — black leather, plain.

SWORD-BELT PLATE.

69. — For all Officers and Enlisted Men — gilt, rectangular, two inches wide, with a raised bright rim; a silver wreath of laurel encircling the "Arms of the United States;" eagle, shield, scroll, edge of cloud and rays bright. The motto, "E Pluribus Unum," in silver letters, upon the scroll; stars also of silver, according to pattern.

SWORD AND SCABBARD.

70. — For General Officers — straight sword, gilt hilt, silver grip, brass or steel scabbard.
71. — For Officers of the Adjutant General's, Inspector General's, Quartermaster's and Subsistence Departments, Corps of Engineers, Topographical Engineers, Ordnance, the Judge Advocate of the Army, Aides-de-Camp, Field Officers of Artillery, Infantry, and Foot Riflemen, and for the Light Artillery — the sword of the pattern adopted by the War Department, April 9, 1850; or the one described in G. O. No. 21, of August 28, 1860, for officers therein designated.
72. — For the Medical and Pay Departments — small sword and scabbard, according to pattern in the Surgeon General's office.
73. — For Officers of Dragoons, Cavalry, and Mounted Riflemen — sabre and scabbard now in use, according to pattern in the Ordnance Department.
74. — For the Artillery, Infantry, and Foot Riflemen, except the field officers — the sword of the pattern adopted by the War Department, April 9, 1850.
75. — The sword and sword belt will be worn upon all occasions of duty, without exception.
76. — When on foot, the sabre will be suspended from the hook attached to the belt.
77. — When not on military duty, officers may wear swords of honor, or the prescribed sword, with a scabbard, gilt, or of leather with gilt mountings.

SWORD-KNOT.

78. — For General Officers — gold cord with acorn end.
79. — For all other Officers — gold lace strap with gold bullion tassel.

BADGES TO DISTINGUISH RANK.

Epaulette.

80. — For the Major General Commanding the Army — gold, with solid crescent; device, three silver-embroidered stars, one, one and a half inches in diameter, one, one and one-fourth inches in diameter, and one, one and one-eighth inches in diameter, placed on the strap in a row, longitudinally, and
equidistant, the largest star in the centre of the crescent, the smallest at the

top; dead and bright gold bullion, one-half inch in diameter and three and

one-half inches long.

81. — For all other Major Generals — the same as for the Major General Com-
manding the Army, except that there will be two stars on the strap instead of
three, omitting the smallest.

82. — For a Brigadier General — the same as for a Major General, except that,
instead of two, there shall be one star (omitting the smallest) placed upon
the strap, and not within the crescent.

83. — For a Colonel — the same as for a Brigadier General, substituting a sil-
ver-embroidered spread eagle for the star upon the strap; and within the cre-
scnt for the Medical Department — a laurel wreath embroidered in gold, and
the letters M. S., in old English characters, in silver, within the wreath; Pay
Department — same as the Medical Department, with the letters P. D., in old
English characters; Corps of Engineers — a turreted castle of silver; Corps of
Topographical Engineers — a shield embroidered in gold, and below it the let-
ters T. E., in old English characters, in silver; Ordnance Department — shell
and flame in silver embroidery; Regimental Officers — the number of the regi-
ment embroidered in gold, within a circlet of embroidered silver, one and
three-fourths inches in diameter, upon cloth of the following colors: for Arti-
illery — scarlet; Infantry — light or sky blue; Riflemen — medium or emerald
green; Dragoons — orange; Cavalry — yellow.

84. — For a Lieutenant Colonel — the same as for a Colonel, according to corps,
but substituting for the eagle a silver-embroidered leaf.

85. — For a Major — the same as for a Colonel, according to corps, omitting the
eagle.

86. — For a Captain — the same as for a Colonel, according to corps, except
that the bullion will be only one-fourth of an inch in diameter, and two and
one-half inches long, and substituting for the eagle two silver-embroidered
bars.

87. — For a First Lieutenant — the same as for a Colonel, according to corps,
except that the bullion will be only one-eighth of an inch in diameter, and
two and one-half inches long, and substituting for the eagle one silver-embroidered
bar.

88. — For a Second Lieutenant — the same as for a First Lieutenant omitting
the bar.

89. — For a Brevet Second Lieutenant — the same as for a Second Lieutenant.

90. — All officers having military rank will wear an epaulette on each shoul-
der.

91. — The epaulette may be dispensed with when not on duty, and on certain
duties off parade, to wit: at drills, at inspections of barracks and hospitals, on
Courts of Inquiry and Boards, at inspections of articles and necessaries, on
working parties and fatigue duties, and upon the march, except when, in war,
there is immediate expectation of meeting the enemy, and also when the over-
coat is worn.

Shoulder Straps.

92. — For the Major General Commanding the Army — dark blue cloth, one
and three-eighths inches wide by four inches long; bordered with an embroi-
dery of gold one-fourth of an inch wide; three silver-embroidered stars of five
rays, one star on the centre of the strap, and one on each side equidistant be-
tween the centre and the outer edge of the strap; the centre star to be the
largest.

93. — For all other Major Generals — the same as for the Major General Com-
manding the Army, except that there will be two stars instead of
three; the centre of each star to be one inch from the outer edge of the gold
embroidery on the ends of the strap; both stars of the same size.
04.—For a Brigadier General—the same as for a Major General, except that there will be one star instead of two; the centre of the star to be equidistant from the outer edge of the embroidery on the ends of the strap.

05.—For a Colonel—the same size as for a Major General, and bordered in like manner with an embroidery of gold; a silver-embroidered spread eagle on the centre of the strap, two inches between the tips of the wings, having in the right talon an olive branch, and in the left a bundle of arrows; an escutcheon on the breast as represented in the arms of the United States; cloth of the strap as follows: for the General Staff and Staff Corps—dark blue; Artillery—scarlet; Infantry—light or sky blue; Riflemen—medium or emerald green; Dragoons—orange; Cavalry—yellow.

06.—For a Lieutenant Colonel—the same as for a Colonel, according to corps, omitting the eagle and introducing a gold-embroidered leaf at each end, each leaf extending seven-eighths of an inch from the end border of the strap.

07.—For a Major—the same as for a Colonel, according to corps, omitting the eagle and introducing a gold-embroidered leaf at each end, each leaf extending seven-eighths of an inch from the end border of the strap.

08.—For a Captain—the same as for a Colonel, according to corps, omitting the eagle, and introducing at each end two gold-embroidered bars of the same width as the border, placed parallel to the ends of the strap; the distance between them and from the border equal to the width of the border.

09.—For a First Lieutenant—the same as for a Colonel according to corps, omitting the eagle, and introducing at each end one gold-embroidered bar of the same width as the border, placed parallel to the ends of the strap, at a distance from the border equal to its width.

10.—For a Second Lieutenant—the same as for a Colonel according to corps, omitting the eagle.

11.—For a Private Second Lieutenant—the same as for a Second Lieutenant.

12.—The shoulder strap will be worn whenever the epaulette is not.

Chevrons.

103.—The rank of non-commissioned officers will be marked by chevrons upon both sleeves of the uniform coat and overcoat, above the elbow, of silk or worsted binding, one half an inch wide, same color as the edging on the coat, points down, as follows:

104.—For a Sergeant Major—three bars and an arc in silk.

105.—For a Quartermaster Sergeant—three bars and a tie, in silk.

106.—For an Ordinance Sergeant—three bars and a star, in silk.

107.—For a Hospital Steward—a caduceus, two inches long, embroidered with yellow silk, on each arm above the elbow, in the place indicated for a chevron, the head toward the outer seam of the sleeve.

108.—For a First Sergeant—three bars and a lozenge, in worsted.

109.—For a Sergeant—three bars in worsted.

110.—For a Corporal—two bars in worsted.

111.—For a Pioneer—two crossed hatchets of cloth, same color and material as the edging of the collar, to be sewed on each arm above the elbow, in the place indicated for a chevron (those of a corporal to be just above and resting on the chevron), the head of the hatchet upward, its edge outward, of the following dimensions, viz: Hatchet—four and one-half inches long, one-fourth to one-third of an inch wide. Hatchet—two inches long, one inch wide at the edge.

112.—To indicate service—all non-commissioned officers, musicians and privates, who have served faithfully for the term of five years, will wear, as a mark of distinction, upon both sleeves of the uniform coat, below the elbow, a diagonal half chevron, one half an inch wide, extending from seam to seam, the front end nearest the cuff, and one-half an inch above the point of the cuff, to be of the same color as the edging on the coat. In like manner, an addi-
tional half chevron, above and parallel to the first, for every subsequent five years of faithful service; distance between each chevron one-fourth of an inch. Service in war will be indicated by a light or sky-blue stripe on each side of the chevron for Artillery, and a red stripe for all other corps, the stripe to be one-eighth of an inch wide.

OVERCOAT.

For Commissioned Officers.

113.—A "cloak coat" of dark blue cloth, closing by means of four frog buttons of black silk and loops of black silk cord down the breast, and at the throat by a long loop a cheville, without tassel or plate, on the left side, and a black silk frog button on the right; cord for the loops fifteen hundredths of an inch in diameter; back, a single piece, slit up from the bottom, from fifteen to seventeen inches, according to the height of the wearer, and closing at will by buttons, and button-holes cut in a concealed flap; collar of the same color and material as the coat, rounded at the edges, and to stand or fall; when standing, to be about five inches high; sleeves loose, of a single piece, and round at the bottom, without cuff or slit; lining, woolen; around the front and lower border, the edges of the pockets, the edges of the sleeves, collar, and slit in the back, a flat braid of black silk one-half an inch wide; and around each frog button on the breast, a knot two and one-quarter inches in diameter, of black silk cord, seven-hundredths of an inch in diameter, arranged according to drawing; cape of the same color and material as the coat, removable at the pleasure of the wearer, and reaching to the cuff of the coat-sleeve when the arm is extended; coat to extend down the leg from six to eight inches below the knee according to height. To indicate rank, there will be on both sleeves, near the lower edge, a knot of flat, black silk braid, not exceeding one-eighth of an inch in width, arranged according to drawing, and composed as follows:

114.—For a General—of five braids, double knot.
115.—For a Colonel—of five braids, single knot.
116.—For a Lieutenant Colonel—of four braids, single knot.
117.—For a Major—of three braids, single knot.
118.—For a Captain—of two braids, single knot.
119.—For a First Lieutenant—of one braid, single knot.
120.—For a Second Lieutenant and Brevet Second Lieutenant—a plain sleeve, without knot or ornament.

For Enlisted Men.

121.—Of all Mounted Corps—of sky-blue cloth; stand and fall collar; double breasted; cape to reach down to the cuff of the coat when the arm is extended, and to button all the way up; buttons (24.)
122.—All other Enlisted Men—of sky-blue cloth; stand up collar; single-breasted; cape to reach down to the elbows when the arm is extended, and to button all the way up; buttons (24.)
123.—For Dragoons, Cavalry, and Mounted Riflemen—a gutta percha talma or cloak, extending to the knee, with long sleeves.

OTHER ARTICLES OF CLOTHING AND EQUIPMENT.

124.—Flannel shirt, drawers, stockings and stable frock—the same as now furnished.
125.—Blanket—woolen, gray, with letters U. S. in black, four inches long, in the centre; to be seven feet long, and five and a half feet wide, and to weigh five pounds.
126.—Cotton overalls for Engineer Soldiers—of white cotton; one garment to cover the whole of the body below the waist, the breast, the shoulders, and the arms; sleeves loose, to allow a free play of the arms with narrow wrist-
GENERAL ORDERS, 1861.

band, buttoning with one button; overalls to fasten at the neck behind with two buttons, and at the waist behind with buckle and tongue.
127. —Belt of all enlisted men—black leather.
128. —Cartridge box—according to pattern in the Ordnance Department.
129. —Drum slings—white webbing; to be provided with a brass drum-stick carriage, according to pattern.
130. —Kapsack—of painted canvas, according to pattern now issued by the Quartermaster's Department; the great coat, when carried, to be neatly folded, not rolled, and covered by the outer flap of the knapsack.
131. —Haversack—of painted canvas, with an inside sack unpainted, according to the pattern now issued by the Quartermaster's Department.
132. —Canteen—of tin, covered with woolen cloth, of the pattern now issued by the Quartermaster's Department.

TENTS.
133. —For all commissioned officers—wall tent, with a fly, pattern now issued by the Quartermaster's Department.
134. —For Hospital purposes—pattern described in "General Orders" No. 1, of January 19, 1860.
135. —For all enlisted men—Sibley's patent, according to the pattern now issued by the Quartermaster's Department, at the rate of one tent to 17 mounted or 20 foot men. Sheet iron stoves will be issued with the tents in cold climates, or when specially ordered.
136. —For officers' servants and laundresses—small common tent, old pattern.

HORSE FURNITURE.

For General Officers and the General Staff.
137. —Housing for General Officers—to be worn over the saddle; of dark blue cloth, trimmed with two rows of gold lace, the outer row one inch and five-eighths wide, the inner row two inches and one-fourth; to be made full, so as to cover the horse's haunches and forehands, and to bear on each flank corner the following ornaments, distinctive of rank, to wit: for the Major General Commanding the Army—a gold-embroidered spread eagle and three stars; for other Major Generals—a gold-embroidered spread eagle and two stars; for a Brigadier General—a gold-embroidered spread eagle and one star.
138. —Saddle cloth for General Staff Officers—dark blue cloth, of sufficient length to cover the saddle and holsters, and one foot ten inches in depth, with an edging of gold lace one inch wide.
139. —Surcingle—blue web.
140. —Bridle—black leather; bent branch bit, with gilt bosses; the front and roses yellow.
141. —Collar—yellow.
142. —Holsters—black leather, with gilt mountings.
143. —Stirrups—gilt or yellow metal.

For Officers of the Corps of Engineers and Topographical Engineers.
144. —The same as for General Staff Officers.
145. —In time of actual field service, General Officers and Officers of the General Staff and Staff Corps are permitted to use the horse equipments described for mounted service.

HORSE EQUIPMENTS FOR THE MOUNTED SERVICE.
146.—A complete set of horse equipments for mounted troops consists of 1 bridle, 1 watering bridle, 1 halter, 1 saddle, 1 pair saddle bags, 1 saddle blanket, 1 surcingle, 1 pair spurs, 1 currycomb, 1 horse brush, 1 picket pin, and 1 lariat; 1 link and 1 nose bag when specially required.
147.—All the leather is black bridle leather, and the buckles are malleable iron, flat, bar buckles, blued.

148.—Bridle—It is composed of 1 headstall, 1 bit, 1 pair of reins.

149.—Headstall—1 crown piece, the ends split, forming 1 cheek strap and 1 throat lash billet on one side, and on the other, 1 cheek strap and 1 throat lash, with 1 buckle, .625 inch, 2 shapes and 2 buckles, .75 inch, sewed to the ends of cheek pieces to attach the bit; 1 brow band, the ends doubled and sewed form 2 loops on each end through which the check straps and throat lash and throat lash billet pass.

150.—Bit—(shear steel, blued)—2 branches, S shaped, pierced at top with an eye for the check strap billet, and with a small hole near the eye for the curb chain, terminated at the bottom by 2 buttons, into which are welded 2 rings, 1 inch, for the reins; 1 mouth piece, curved in the middle, its ends pass through the branches and are riveted to them; 1 cross bar, riveted to the branches near the lower ends; 2 bosses (east brass), bearing the number and letter of the regiment and the letter of the company, riveted to the branches with four rivets; 1 curb-chain hook, steel wire, No. 10, fastened to the near branch; 1 curb chain, steel wire, No. 11, curb-chain links 0.7 inch wide, with 1 loose ring in the middle, fastened to the off branch by an S hook, coldslut; 1 curb strap (leather), fastened to the curb chain by 2 standing loops.

151.—1 curb ring for bit No. 1 replaces the curb chain and curb strap. They are of two sizes: No. 1 has an interior diameter of 4 inches; No. 2, of 3.53 inches. The number is marked on the outside of the swell. No. 1 is the larger size.

152.—There are four bits, differing from each other in the arch of the mouth piece, and in the distance from the mouth piece to the eye for the check strap. The branches are alike below the mouth piece. No. 1 is a Spanish bit, No. 2 is the next severest, and No. 4 is the mildest. Height of arch is two and one-quarter inches in No. 1, two inches in No. 2, one and one-half inch in No. 3, and one and one-half inch in No. 4. The distance between the branches is 4.5 inches in all the bits.

153.—Reins—2 reins sewed together at one end, the other ends sewed to the rings of the bit.

WATERING BRIDLE.

154.—The watering bridle is composed of one bit and one pair of reins.

155.—Bit (wrought iron, blued), 2 mouth piece sides united in the middle by a loop hinge; their ends are pierced with 2 holes to receive 2 rings 1.7 inches diameter for the reins. 2 chains and toggles, 8 links, each 1 inch by 0.56 inch, welded into the rein rings.

156.—Reins—2 reins sewed together at one end, the other end sewed to rings of the bit.

HALTER.

157.—2 check pieces, sewed at one end to 2 square loops 1.6 inches diameter, and the other to 2 check rings, 1.6 inches diameter; 3 standing loops for the toggles of the watering bridle sewed to the cheek piece near to the square loops; 1 crown piece sewed to the off check ring, 1 buckle 1.12 inches, and shape sewed to the near check ring; 1 nose band, the ends sewed to the square loops; 1 chin strap, the ends sewed to the square loops and passing loose through the hitching-strap ring.

1 throat strap, folded on itself making two thicknesses and forming at top a loop for the throat band to pass through, and embracing in the fold at the other end 1 bolt which holds 1 hitching-strap ring; 1 throat band passes loose through the loop in the throat strap, and is sewed to the cheek rings; 1 hitching strap six and one half feet long, 1 buckle 1.25 inches, and 1 standing loop, 1 billet sewed to the buckle end by the same seam which holds the buckle.
SADDLE.

158.—All the leather is black bridle or harness leather, and the buckles are blued malleable iron.

159.—The saddle is composed of one tree, 2 saddle skirts, 2 stirrups, 1 girth and girth strap, 1 surcingle, 1 crupper.

SADDLE TREE.

160.—Wood (beech)—1 pommel made of two pieces framed together at top and glued; 1 cantle formed of 2 pieces like the pommel; 2 side bars (poplar) each made of 3 pieces glued together; they are glued to the pommel and cantle, and fastened by 2 rivets, 2 burrs and 4 nails, the burrs let in on the underside; 1 strap mortice in the pommel, 3 strap mortices in the cantle.

161.—There are three sizes of trees, varying in the length of the seat. The number is marked on the pommel ornament.

No. 1. 11 inches length of seat. 15 per cent.
No. 2. 11½ "      "  50 "   "
No. 3. 12 "      "  85 "   "

162.—Iron.—1 pommel are 0.1 inch thick, with three small holes on top, fastened to the side bars by 4 rivets; 1 pommel plate 0.1 inch thick, semi-circular, fastened to the front of the pommel by 4 rivets; 1 cantle are 0.1 inch thick, with three small holes on top, fastened to the side bars by 4 rivets; 1 cantle plate 0.1 inch thick fastened to the rear of the cantle by 4 rivets; 2 stirrup loops hinged in 2 holdfasts which are fastened to the side bars by 6 rivets.

163.—The tree is painted with one coat of white lead. It is covered with best quality kip skin raw hide, put on wet, sewed with thongs of the same and held in place by stitches through the wood along the junction of the pommel and cantle with the side bars. The seams are made on the edges of the side bars, where they will not chafe the horse or rider.

164.—2 crupper rings, held by staples driven into the front ends of side bars; 2 foot staples for coat straps fastened to the front of the pommel by four brass screws, ⅜ inch; 2 crupper rings ( japanned black), fastened by staples driven into the rear ends of side bars; 2 foot staples, fastened to the rear of cantle by 4 brass screws, ⅜ inch; 1 guard plate, 1 pommel ornament, shield-shaped (sheet iron), fastened to the pommel, each by 3 brass screw pins; 6 guard plates, fastened to the cantle by 12 screw pins; 2 foot staples, fastened on the back strap by 4 brass screws, ½ inch; 1 saddle-bags stud, fastened on the back strap to the cantle are by 2 copper rivets.

165.—Two saddle skirts (thick harness leather), fastened to the side bars by 38 brass screws, ⅜ inch; 2 stay loops for the saddle-bag straps sewed to the rear edge of the skirts.

166.—Two stirrups (hickory or oak), made of one piece bent, the ends separated by 1 transom and fastened by 2 iron rivets, each, 4 burrs; 2 leather hoods, fastened to the stirrups by 12 copper rivets and burrs—distance of hood from rear of stirrup 6 inches; 2 stirrup straps, 2 brass buckles, 1.575 inches. 2 sliding loops, pass through the stirrup loops and through a hole cut in the skirts; 2 sweat leathers, each has 2 standing loops.

167.—Girth—2 girth straps pass over the pommel and cantle arcs, to which they are fastened by 4 copper rivets and 4 burrs; they are fastened to the side bars by 4 brass screws, ⅜ inch; the ends are sewed into 2 D rings, 1.85 inches; 2 girth billets, sewed to the straight side of the D rings; 1 girth, 4.5 inches, blue woolen webbing; 1 chap, 1 buckle, 2 inches, 1 standing loop, and one safe on the off end; and 1 chap, 1 buckle, 1.5 inches, 1 D ring, 1.85 inches, 1 standing loop, 1 safe on the near side; 1 standing loop on the middle.

168.—Six coat straps, 6 buckles, 0.625 inch, and stops. They pass through the mortices in the pommel and cantle and the foot staples.
GE GENERAL ORDERS, 1861.

169.—One carbine socket, 1 strap, 1 buckle, 0.75 inch, sewed to the socket. The socket is buckled to the D ring on the off side of the saddle.

170.—One surcingle, 3.25 inches, blue woolen webbing; 1 chape, 1 buckle, 1.5 inches, 1 standing loop on one end, and 1 billet on the other; 1 billet lining sewed over the end of webbing to the billet; 2 standing loops near the buckle end.

171.—Crupper.—1 dock, made of a single piece and stuffed with hair, the ends sewed to the body of the crupper; 1 body, split at one end, has sewed to it 1 chape, 1 ring, 1.5 inches, 2 back straps—each has one buckle, 0.75 inch, and 2 sliding loops—they pass through the rings of the side bars and the ring on the body of the crupper.

172.—Saddle bags, (bag leather.)—They are composed of 2 pouches, and 1 seat; the ends of the seat are sewed to the pouches. Each pouch has 1 back, sewed to the gusset and upper part of inner front with a welt; 1 gusset sewed to the back and to 1 outer and 1 inner front with a welt; 1 flap sewed to the top of the back and to the seat by 2 seams; 1 flap billet, sewed to the point of the flap; 1 chape and 1 buckle, 0.625 inch, sewed to the outer front; 1 billet, 1 buckle, 0.25 inch, sewed to the chape. The seat is sewed to the pouch by the same seams which join the flap to the back of the pouch. It has 2 holes for the foot staples and 1 hole for the saddle-bag stud; 2 key straps, sewed to the seat near its ends: 4 lacing thongs for the pouches.

173.—Saddle blanket.—To be of pure wool, close woven, of stout yarns of an indigo-blue color, with an orange border 3 inches wide, 3 inches from the edge. The letters U. S., 6 inches high, of orange color, in the centre of the blanket. Dimensions: 75 inches long, 67 inches wide; weight, 3.1875 pounds; variation allowed in weight, 0.1875 pounds.

174.—Spurs (brass)—2 spurs, 2 rows, 2 rivets, 2 spur straps, 19 inches long, 2 roller buckles, 0.625 inch, 2 standing loops.

175.—One horse brush.—1 body (maple), Russia bristles; 1 cover, glued and fastened to the body by 8 brass screws; 1 hand strap, fair leather, fastened to the sides of the body by 6 screws; 2 leather washers under the heads of screws. Dimensions: Body 3.25 inches long, 4 inches wide, 0.5 inch thick; cover, 0.1 inch thick, bristles project 0.9 inch; hand strap 2 inches wide.

176.—One curry comb.—iron, japanned black. The pattern of “Carpenter’s No. 533.” 1 body, (sheet iron, 0.4,) the top and bottom edges turned at right angles, forming two rows of teeth; 3 double rows of teeth, rivetted to the body by six rivets; 1 cross bar, rivetted across the top by 3 rivets; 1 handle, (wood) turned and painted, passes over the shank and is held by the rivetted end of the shank; 1 ferrule, sheet iron. Dimensions: Length, 4 inches; width, 4.75 inches; thickness 0.75 inch; length of handle, 4 inches; weight, 0.84 pound.

177.—One picket pin (iron, painted black.)—The parts are: the body, the neck, the head, the swell, the point; 1 lariat ring around the neck, 8-shaped, the larger opening for the lariat. Dimensions: Length, 14 inches; diameter at swell, 4 inches; from point, 0.75 inch; at neck, 0.5 inch; at head, 1 inch; lariat ring, 0.2 inch wire, welded, interior diameter 1 inch; weight of pin, 1.89 pounds.

178.—One lariat.—Best hemp one and a quarter inch rope, 50 feet long, of 4 strands; an eye spliced in one end, the other end whipped with small twine; weight, 2.38 pounds.

179.—One link.—1 strap, embracing in the fold at one end 1 spring hook, and at the other 1 buckle, 0.75 inch, and 1 billet.

180.—One nose bag—same as for Light Artillery.
MILITARY STOREKEEPERS.

181.—A citizen's frock coat of blue cloth, with buttons of the department to which they are attached; round black hat; pantaloons and vest, plain, white or dark blue; cravat or stock, black.

MISCELLANEOUS.

182.—General Officers, and Colonels having the brevet rank of General Officers, may, on occasions of ceremony, and when not serving with troops, wear the “dress” and “undress” prescribed by existing regulations.

183.—Officers below the grade of Colonel having brevet rank, will wear the epaulettes and shoulder straps distinctive of their army rank. In all other respects, their uniform and dress will be that of their respective regiments, corps, or departments, and according to their commissions in the same. Officers above the grade of Lieutenant Colonel by ordinary commission, having brevet rank, may wear the uniform of their respective regiments or corps, or that of General Officers, according to their brevet rank.

184.—Officers are permitted to wear a plain dark blue body coat, with the button designating their respective corps, regiments, or departments, without any other mark or ornament upon it. Such a coat, however, is not to be considered as a dress for any military purpose.

185.—In like manner, officers are permitted to wear a buff, white, or blue vest, with the small button of their corps, regiment, or department.

186.—Officers serving with mounted troops are allowed to wear, for stable duty, a plain dark blue cloth jacket, with one or two rows of buttons down the front, according to rank; stand-up collar, sloped in front as that of the uniform coat; shoulder straps according to rank, but no other ornament.

187.—The hair to be short; the beard to be worn at the pleasure of the individual; but when worn, to be kept short and neatly trimmed.

188.—A Band will wear the uniform of the regiment or corps to which it belongs. The commanding officer may, at the expense of the corps, sanctioned by the Council of Administration, make such additions in ornaments as he may judge proper.

By ORDER OF THE SECRETARY OF WAR:

L. THOMAS, Adjutant General.
APPENDIX III

plate 1. Insignia, (artillery, cavalry, and infantry.)

plate 2. Belt Equipment, (bayonet, canteen, bayonet scabbard, cartridge box, and cap box.)
APPENDIX IV

Contract Manufacturers of Model 1861 Rifle Muskets.¹

Amoskeag Manufacturing Company, Manchester, New Hampshire.

27,000 delivered: 1,000 at $20.00, remainder at $19.00.
marked AMOSKEAG MFG CO MANCHESTER NH with eagle and date.

A. M. Burt, New York, N.Y.

11,495 delivered at $20.00.
marked US TRENTON WITH eagle and date.

Colt's Arms Manufacturing Company, Hartford, Conn.

113,980 delivered at $20.00.
marked COLTS Pt F A MFG Co with eagle and date.

Eagle Manufacturing Company, Mansfield, Conn.

20,000 delivered at $20.00.
marked US EAGLEVILLE with eagle and date.

C. B. Hoard, Watertown, New York.

15,000 delivered at $20.00.
11,300 delivered at $19.00.
marked US WATERTOWN with eagle and date.

¹ Gluckman, 233-243.
A. Jenks and Son, Bridesburg, Pennsylvania.

25,000 delivered at $20.00 (July, 1861.)
19,000 delivered at $25.00
48,000 delivered at $20.00 (December, 1863.)
6,000 delivered at $19.00.

marked US BRIDESBURG with eagle and date.

Lamson, Goodnow and Yale, Windsor, Vermont.

50,000 delivered at $20.00.
US
marked LG&Y with eagle and date.
WINDSOR

William Mason, Taunton, Massachusetts.

30,000 delivered at $20.00.

marked US Wm MASON with eagle and date.

J. D. Mowry, Norwich, Connecticut.

30,000 delivered at $20.00
10,000 delivered at $18.00


30,000 delivered

marked US Wm MUIR with eagle and date.
WINDSOR LOCKS CT

Norwich Arms Company, Norwich, Connecticut.

18,000 delivered at $18.00
15,000 delivered at $19.00

marked US NORWICH with eagle and date.
Casper D. Schubarth, Providence, Rhode Island.

9,500 delivered at $20.00.
marked C D SCHUBARTH with eagle and date.
PROV RI

W. W. Welch, Norfolk, Connecticut.

16,000 delivered at $20.00
1,000 delivered at $18.00
marked US NORFOLK with eagle and date.

E. Whitney, Whitneyville, Connecticut.

15,001 delivered at $19.00
marked US WHITNEYVILLE or E WHITNEY with eagle and date.
Parker Snow and Company, Meriden, Connecticut.

15,000 delivered at $19.00
marked US PARKER SNOW & CO with eagle and date.
MERIDEN CONN

Providence Tool Company, Providence, Rhode Island.

25,000 delivered at $20.00
13,000 delivered at $19.00
32,000 delivered at $18.00
marked US PROVIDENCE TOOL CO with eagle and date.
PROV RI


40,000 delivered at $18.00
marked US REMINGTON'S with eagle and date.
ILION NY

Edward Robinson, New York City, New York.

12,000 delivered at $20.00
18,000 delivered at $18.00
marked US E ROBINSON with eagle and date.
NEW YORK

Sarson and Roberts,

5,140 delivered at $20.00

R. Savage,

15,520 delivered at $18.00
APPENDIX V

plate 1. Springfield Rifle

plate 2. Spencer Carbine
1 Front sight
2 Front band
3 Center band
4 Rear band
5 Rear sight
6 Nipple
7 Hammer

8 Ramrod
9 Bayonet
10 Bayonet clamp
11 Upper sling
12 Lock plate
13 Lower sling
14 Trigger
15 Butt
APPENDIX VI.

DIRECTIONS FOR LOADING COLT'S PISTOLS.

(These directions copied from label inside case of revolver.)

First explode a cap on each nipple to clear them from oil or dust, then draw back the hammer to the half-cock, which allows the cylinder to be rotated; a charge of powder is then placed in one of the chambers, keeping the barrel up, and a ball with the pointed end upwards, without wadding or patch, is put into the mouth of the chamber, turned under the rammer, and forced down with the lever below the surface of the cylinder so that it cannot hinder its rotation (care should be used in ramming down the ball so as not to shake out the powder from the chamber, thereby reducing the charge.) This is repeated until all the chambers are loaded. Percussion caps are then placed on the nipples on the right of the lock-frame, when, by drawing back the hammer to the full cock, the arm is in condition for a discharge by pulling the trigger; a repetition of the same motion produces the like results, viz. six shots without reloading.

N. B. It will be safe to use all the powder the chambers will hold, when loading with the flask, leaving room for the ball, whether the powder is strong or weak. Fine grain powder is the best. Soft lead must be used for the balls. The cylinder is not to be taken off when loaded. The hammer, when at full cock, forms the sight by which aim is taken.

To carry the arm safely when loaded, let the hammer down on the pins between each nipple, on the end of the cylinder.

The arm should be thoroughly cleaned and oiled after firing, particularly the base-pin on which the cylinder turns.

1 Bannerman, 71.
APPENDIX VII

Labeled drawing of a cap-and-ball pistol.
SECTION DRAWING OF A REGULAR DRAGOON Colt

This drawing is applicable to any Colt made after 1851 except the Model 1851, which is the only difference in the other models was in the size of outline. As far as the parts were the same:

1. Hammer
2. Hand
3. DD - Cylinder-locking belt.

Note that the barrel is rifled with gain twist rifling. After 1851, all other Factory barrelled revolvers carried this feature, which was also used in the largest form pieces of the period. As only soft lead was used for the bullets, the twist lead to be required to avoid stripping and leading the barrel.
APPENDIX VIII

Cavalry saber, (left)

Officer's sword, (right)
APPENDIX IX

McClellan saddle

1. Saddle tree
2. Pommel (coat straps rolled)
3. Cantle (coat straps rolled)
4. Rigging strap
5. Side panel
6. Saddle bag
7. Hooded stirrup
8. Sweat leather
9. Crupper
APPENDIX X.

GLOSSARY.

Bands- Metal strips fastening the barrel to the stock by encircling both these parts.

Bayonet- A stabbing blade attached to a shoulder arm.

Blade- An upright, elongated front sight.

Bluing- A process of artificial rusting used to color metallic parts of arms in shades of blue or black.

Bolt- The breech closure of a firearm used to open and close the bore.

Breech- The rear of the barrel and the pertinent mechanism.

Breech Lock- The portion of the firearm mechanism which closes the rear of the bore against the force of the charge.

Breech Loader- A firearm which receives its load at the breech.

Butt- The rearward portion of the stock of a firearm.

Butt Plate- A reinforcing plate used to cover and protect the butt of a shoulder arm.

Caliber- The diameter of the firearm bore usually expressed in hundreds of an inch.

Cap- A small metal or paper device containing a percussion ignited compound designed to ignite the main charge of a firearm.

Carbine- A shortened form of rifle or musket originally designed for the use of mounted troops.

Cartridge- A metal or paper container for a charge of explosive (usually containing the ball also) designed for holding the charge in the chamber of the arm. In its early form the cartridge was generally of paper, was broken to load and the contents were emptied into the chamber via the muzzle of muzzle loading arms.
Chamber- The part of the bore, or of the firearm mechanism, which contains the charge.

Cock- To place the hammer or the firing pin of a firearm in position for firing the piece.

Cone or Nipple- A small tube of a percussion firearm on which is placed the cap containing the fulminate or other priming compound.

Cone Sight- A front sight of conical shape.

Cylinder- The part of a multi-firing firearm holding a number of cartridges and presenting the loads successively for firing by revolution about an axis.

Front Sight- A device on the muzzle end of the barrel, used to facilitate aiming the piece.

Fulminate- An explosive compound which will ignite if heated, struck, or vibrated.

Gain Twist- A method of rifling in which the twist, slight at the breech, increases gradually towards the muzzle to give maximum rotary motion at that point, and by relatively gradual acceleration of the bullet prevents it from jumping the rifling at the shock of discharge.

Grooves- The twisting, parallel, lengthwise hollows cut in the bore to impart a rotary motion to the projectile during its passage through the barrel.

Hammer- The external movable part of the firearm mechanism used to ignite the priming charge.

Loading Lever- A jointed ramrod, suspended under the barrel, used to pack powder and bullet into the cylinder of the revolver.

Lock- The mechanism of the firearm mechanism used to ignite the explosive.

Lock Plate- The external iron plate on which the mechanism usual to flintlock and percussion systems is mounted.

Marking- The indication of the maker of the arm or of certain component parts.
Minie Bullet- An elongated bullet with cup-shaped hollow in the base, which being expanded by the action of the gasses, causes the bullet to take the rifling. Named after C. E. Minie, Captain of Infantry, French Army, to whom the invention of the system is credited.

Nipple- See Cone.

Muzzle- The end of the barrel from which the bullet leaves the arm.

Ramrod- A wooden or metal rod used for ramming down the charge of muzzle-loading arms.

Rear Sight- The device between the front sight and the eye used to facilitate the alingment of the barrel bore and the target.

Rifle Musket- A term used by the Ordnance Department in mid-19th Century to designate the new rifled arms of musket size and long slim barrels of rifle caliber.

Rim Fire- Ignition system having the percussion priming in the rim of a self-exploding metallic cartridge.

Trigger- The portion of the mechanism of a firearm which actuates the firing mechanism and causes the discharge.

Wad- The paper, felt, or other material used to retain the charge in the barrel of an arm or in the cartridge.
BIBLIOGRAPHY


Billings, John D., Hardtack and Coffee, Boston, 1887.


Catton, Bruce, Mr. Lincoln's Army, Garden City New York, 1951.

Catton, Bruce, Glory Road, Garden City, New York, 1952.

Catton, Bruce, A Stillness at Appomattox, Garden City, New York, 1954.


Denison, George T., Modern Cavalry, London, 1868.


Donald, David, editor, Divided We Fought, New York, 1952.


Miller, Francis T., Photographic History of the Civil War, New York, 1911.

National Rifle Association of America, The American Rifleman.


Ogden, H. A. The Army of the United States, New York, 1885.

Oakley, Daniel, History of the Second Massachusetts Infantry Regiment, Boston, 1884.


Roemer, Jean, Cavalry: Its History and Management, New York, 1863.


Shannon, Fred A., The Organization and Administration of the Union Army, 1861-1865, Cleveland, 1928.


War Department, *General Orders, Number Six*, 1861, Washington, 1861.


CRITICAL BIBLIOGRAPHY

PRIMARY SOURCES


Colonel Brackett was an officer in the Sixth United States Cavalry. This is a history of American cavalry from 1789 to 1865, and is helpful in that it traces the development of cavalry tactics and improvements made in cavalry equipment.


This is a treatise on cavalry organizations of European countries. A chapter on American cavalry methods is included. Statements from Confederate officers regarding the quality of Federal cavalry equipments are included in the Appendix.


This is a collection of photographs made on the battlefield by Matthew Brady and other photographers of the time. This was a very helpful series as it enables one to visualize clearly the life of the soldiers.


This study of European and American cavalry was written by a Netherlands' cavalry officer. It mentions and praises United States equipment.

War Department, *General Orders, Number Six*, 1861.

These are the official specifications for the uniform and clothing of officers and men. Specifications for horse equipments are also listed in these orders.

This massive set contains much of the official correspondence of both armies and their governments. A very helpful source, but difficult to use because it is not well indexed.

REGIMENTAL HISTORIES


This is a record of the enlisting of regimental companies, battles, and other items found in all regimental histories. It contains a number of pictures which are helpful in studying the variety of uniforms worn.


This book traces progress of a regiment from a group of green recruits into a crack cavalry outfit.

Oakey, Daniel, History of the Second Massachusetts Infantry Regiment, Boston, 1884.

This is a typical history recounting the experiences of a regiment in the Army of the Potomac.


Better than the usual regimental history, this contains a day by day record of the camp life and campaigns of a very active unit.


This is the story of the 4th Iowa Cavalry, written very objectively, at times critical of officers, and the equipment issued to the regiment.
SOLDIERS' REMINISCENCES


General Alexander was Lee's chief of artillery and thus was in a good position to evaluate Union ordnance.

Billings, John D., Hardtack and Coffee, Boston 1887.

This is a delightfully written recollection of soldier days. The author evidently was a man of considerable education, and told his story in a humorous way. This was the most helpful of all sources consulted. In addition to the fine text, the book is profusely illustrated with over 200 pen and ink sketches by Charles W. Reed.


Father Corby was one of several of his order to serve in the Union army as a chaplain. He was cited for his bravery at Gettysburg, and a statue in his honor stands there at the junction of Hancock and United States Avenues. The statue depicts him with his arm raised in absolution over the men of the Irish Brigade just before they helped to occupy Little Round Top, on the afternoon of July 2, 1863. On his return from the war he became President of the University of Notre Dame, later Provincial, and then General of the Congregation of the Holy Cross. His book is well written; a good military history as well as a good appraisal of the soldiers. This book is not cited in this thesis, but was helpful as background material.


This is a well written account by a veteran who later became a minister.


Captain Glazier enlisted in the Second New York Cavalry as a private and rose to captain's rank. He was a prisoner of war for a time, and wrote of his experiences as a trooper and a prisoner.

Goss served with the 2nd Massachusetts Artillery. His book is interesting and informative, but in places he seems more interested in writing a good story than in the facts. Nevertheless this book is helpful to one interested in the daily life of the soldier.


This is a book length letter written by Frank Haskell to his brother in the two weeks following the battle. This is a remarkable account of the fighting, but in addition contains many character sketches of the generals in command there. As the letter was not intended for publication the sketches are quite critical. This account is the only military history included in the Harvard Classics. Colonel Haskell was killed at Cold Harbor. This book was not quoted in this thesis, but was most helpful in obtaining the proper background.


Jones kept a daily journal during his service with the Sixth Wisconsin Battery. Although dull in places it provides a good insight into the soldier’s life in camp and in the field. It was not quoted in this thesis, but was used for background.


This story was written for the author’s son, that he might know the part taken by the father and neighbors in the war. It is a simple and straightforward account that was very helpful in the preparation of this thesis.


A compilation of letters and diaries of an Indiana boy that makes interesting reading, this book was very helpful.
TECHNICAL REFERENCES


Colonel Boniface was cavalry officer in the Philippines in 1898-1899. This book has not been cited, but was useful in obtaining the necessary background in cavalry operations and equipment.


The writer of this book rose to the rank of general in the Sixth United States Cavalry. As he fought in the Indian Wars following the Civil War under officers who served in the Union army, his references to cavalry tactics in the Civil War may be relied upon as authentic. He is especially helpful because of his comments on the equipment issued to the cavalry trooper.

Fuller, Claude, Springfield Muzzle Loading Shoulder Arms, New York, 1944.

This is a review of all rifles and muskets made at the National Armory at Springfield, Massachusetts, from 1795 to 1865. This is a standard reference on early American firearms.


Colonel Gluckman is one of the foremost authorities on firearms in the United States. Both of the above works are invaluable to the collector and the historian. Each was consulted many times in the preparation of this thesis.


This is a complete history of all Colt pistols from the first model patented in 1836. This work was consulted a
great deal as it contains many diagrams, patent drawings, charts, and photographs. This book is probably the most complete treatment on the subject, and was used extensively.

National Rifle Association of America, The American Rifleman.

This monthly magazine is the official organ of the National Rifle Association, and is dedicated to gun lovers, shooters, collectors, and those interested in antique guns. Several issues were consulted in composing this thesis.


This book is recommended to the reader who wishes to learn either the fundamentals or the most advanced techniques of horsemanship.

CATALOGUES


This is an annual publication, devoted in part to lists and prices of guns and ammunition, and in part to articles of interest to shooters and collectors alike.


Shortly after the Civil War, Frank Bannerman began to buy up surplus war materials, opening a warehouse and military goods store on lower Broadway in New York. He was able to supply many regiments of volunteers in the Spanish-American War, and purchased so much surplus equipment after that war that he was able to offer war material to both sides in the Russo-Japanese War. His family still operates a store and museum at 501 Broadway, and it attracts collectors from all parts of the United States. Bannerman's catalogue is highly regarded by historians interested in old weapons. It was consulted frequently in the preparation of this thesis.

This catalogue, published for collectors, has full size drawings and photographs of many cartridges, including all those used in the Civil War. This catalogue was of considerable assistance.


Primarily a price catalogue on modern guns, this catalogue also has information on old weapons.

**GENERAL WORKS**

Catton, Bruce, *Mr. Lincoln's Army*, New York, 1951.

*Glory Road, The Bloody Route from Fredericksburg to Gettysburg*, New York, 1953.


These books, a trilogy dedicated to the Army of the Potomac, are exceptionally readable. The last listed above, *A Stillness at Appomattox*, won a National Book Award for non-fiction in 1954. These books are recommended to all readers. All three were consulted often in preparing this thesis.

Donald, David, *Divided We Fought, A Pictorial History of the War, 1861-1865*, New York, 1952.

This is an excellent compilation of on the spot photographs and sketches. This work was used considerably in conjunction with *The Photographic History of the Civil War*.


This is a volume of water-color plates illustrating army uniforms from 1775 to 1885, it proved a disappointment and was not used as much as had been expected.
Shannon, Fred A., The Organization and Administration of the Union Army, 1861-1865, Two volumes, Cleveland, 1925.

This is a doctoral dissertation and affords a penetrating appraisal of high-level policy in organizing and supplying the army. It was consulted often.

Taylor, Frank H., Philadelphia in the Civil War, Philadelphia, 1913.

Published by the city of Philadelphia, this book gives the details of the raising of Pennsylvania regiments.

Upham, Cyril B., Iowa Journal of History and Politics, volume XVI, 1918, "Arms and Equipment for Iowa Troops in the Civil War."

This is an informative article telling of the problems encountered in supplying militia and volunteer regiments in the first days of the war.


This is a most complete picture of the daily life of the soldier. It was extremely helpful in the preparation of this thesis as it quoted letters and diaries which are kept in private collections and would be otherwise inaccessible.
The thesis submitted by John Joseph FitzGerald has been read and approved by three members of the Department of History.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the Degree of Master of Arts.

May 21, 1931

[Signature of Adviser]