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ILLUSTRATED CATALOGUE OF UNITED STATES CARTRIDGE COMPANY'S COLLECTION OF FIREARMS.

THE MOST COMPLETE COLLECTION IN THE UNITED STATES, EMBRACING CROSSBOW GUNS, MATCH-LOCKS, WHEEL-LOCKS, SNAPHAUNCE LOCKS, FLINT-LOCKS AND PERCUSSION-LOCKS; SPECIMENS OF THE DIFFERENT MUSKETS, RIFLES, CARBINES, REVOLVERS AND PISTOLS USED BY THE UNITED STATES GOVERNMENT AND ITS OPPONENTS DURING THE FRENCH, INDIAN, REVOLUTIONARY, CIVIL AND SPANISH-AMERICAN WARS. THE LATEST TYPES OF MILITARY ARMS OF THE DIFFERENT COUNTRIES, INCLUDING THE NEW U. S. MODEL OF 1903 MAGAZINE RIFLE, AND A FEW RARE OLD CANNON.

PUBLISHED BY
UNITED STATES CARTRIDGE COMPANY
LOWELL, MASS., U. S. A.
"This is the arsenal. From floor to ceiling,
Like a huge organ, rise the burnished arms.

* * * * * *

When the death-angel touches those swift keys!
What loud lament and dismal Miserere
Will mingle with their awful symphonies!"

Longfellow.
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UNITED STATES CARTRIDGE CO

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Introductory.

In preparing this Catalogue for publication, the United States Cartridge Company has studied to avoid omissions and mistakes in the description of the fire-arms, etc., herein illustrated; and, while probably a few mistakes are unavoidably made, and an incomplete description of certain arms given, the Catalogue is believed to be nearly correct.

All fire-arms mentioned in this Catalogue, unless otherwise described, are muzzle-loading, iron-mounted, have iron barrels and plain black walnut stocks.

The figures following the word "calibre" (which is abbreviated for convenience "cal.".) represent the diameter of the bore of the barrel in hundredths of an inch. To illustrate: the model of 1822 U. S. musket is cal. .69 = 69-100 of 1 inch; the model of 1855 is cal. .58 = 58-100 of 1 inch. (Calibre in metric system given in millimeters, abbreviated "mm.".)

The calibre of the arms of all nations has been gradually decreasing for years.

It will hardly be expected that this Catalogue, issued for the purpose of describing the arms exhibited, will give a complete history of Fire-arms. To do so would increase its size beyond convenience. Collectors are referred to works to be found in large libraries for the history in full of Fire-arms, brief mention of which is here given.

No publication has, in the six hundred consulted by the writer, given the actual date of the first hand fire-arm. Its first appearance was at the same time as the breech-loading cannon, both being of large bore, and invented at the beginning of the fourteenth century. Considering them as they differ in the mechanism of their locks, they are:

The Hand Cannon; earlier part of fourteenth century. Forged iron. Very crude at first. Fastened to a block of wood. Too large to be fired from the shoulder. The vent or touch-hole in the top of the barrel. The first improvement in this "model" was a cover or plate, to keep the powder dry, etc.
The Portable Hand Cannon; middle to the end of fourteenth century.
Differs from its father in having some shape to the wood. Not unlike a
stock, and capable of being shouldered. Beginning with this arm we find
the vent on the right side, and a pan added to hold the priming. A cover
was also added, moved by hand. This arm is known to have been made
in 1453. These arms were fired by a match held in the hand. The first
lock appears to have been a piece of yellow metal, S-shaped, pivoted at
the center, the upper point slit and holding the match, the lower part pro-
longed like the lever in a cross-bow; its weight keeping the match raised
above the pan till the "trigger" was compressed.

Next comes the true Match-lock. The first arm having in the lock a
spring. Made at first with the projecting open pan, they were improved
by a cover for it. Owing to their simplicity and cheapness match-locks
were used over two hundred years.

The Wheel-lock (Gun) was invented in Germany. Nuremberg is
by all authorities credited as its birthplace; the time, between 1509 and
1517. Seventy writers do not differ eight years, and it is probable that
the specimen claimed to be made in 1509 was made in 1569. This would
fix the date 1515-17, and leave the amateur collector free to settle in his
mind which is correct to label his first wheel-lock. Sulphurous pyrites
replaced the match.

Beautiful specimens of wheel-lock pistols may be seen in the case of
early pistols in this exhibit. Space will permit only a very brief descrip-
tion of the wheel-lock. Screwed into the jaws of the cock, which was in
front of the pan, and pointed to the rear, was the pyrites. The pan had
a sliding cover. A steel wheel having projections, which, when in con-
tact with the stone, produced sparks setting off the powder. Motion
was given by a ribbon spring, which was wound up as is a clock; relea-
sing the spring fired the gun.

The Snaphaunce Gun, deriving its name from a pecking hen, followed
the wheel-lock. The wheel was replaced by a cock, which struck a "bat-
tery," or cover (steel-faced), covering the pan. It still used pyrites to
cause the spark, and was the forerunner of the flint-lock. The earliest
known snaphaunce pistol dates 1598.

The Flint-lock Gun was invented about 1630. It appears on equally
good authority to have been first made in France and Spain.

Percussion dates back to 1807. Invented by Rev. A. John Forsyth.
First used in form of powder ignited by a punch, and hence the name
"Punch-lock." Later used in pills, and the arm known as a Pill-lock.

The copper percussion cap was invented in 1818, and is accredited to
Note.—The Air-gun, of which a good specimen is shown, was invented in 1560 in Germany.

Collectors will find the following table useful in distinguishing old English muskets from French muskets in cases where, from rust or age, no engraving or marks are visible, or where the original lock is gone:

<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of original musket,</td>
<td>42 inches</td>
<td>44.72 inches</td>
</tr>
<tr>
<td>Length of bayonet,</td>
<td>17 inches</td>
<td>15 inches</td>
</tr>
<tr>
<td>Diameter of the bore (cal.),</td>
<td>.75</td>
<td>.69, .70</td>
</tr>
<tr>
<td>Diameter of the ball fired,</td>
<td>.676</td>
<td>.65</td>
</tr>
<tr>
<td>Weight of the ball fired,</td>
<td>1.06 oz.</td>
<td>.958 oz.</td>
</tr>
<tr>
<td>Weight of the arm and bayonet,</td>
<td>12.25 lbs.</td>
<td>10.98 lbs.</td>
</tr>
<tr>
<td>Length of the barrel and bayonet,</td>
<td>59 inches</td>
<td>59.72 inches</td>
</tr>
</tbody>
</table>

The English “Enfield” Rifle, perfected in 1853, and adopted in 1854, takes its name from the place where it was first made. The original musket, the “Minie,” adopted in 1851, differs from the Model of 1858, “Enfield,” in both caliber and weight. The “Minie” weighed 10 lbs. 8 1/4 oz., and was cal. .702. The Model of 1858, “Enfield,” the gun used in the Civil War on both sides, weighs 9 lbs. and is cal. .577, and was considered the highest type of its class at the time.

Old English military arms have engraved on the lock, back of cock, “TOWER,” or “DUBLIN” (which designates the place of inspection), and near the center of the lock, between the cock and the pan, the English crown, ☥, over the initials GR (showing the arm was made during the reign of King George). There ruled in England four kings of this name: George I (1714-1727), George II (1727-1760), George III (1760-1820), George IV (1820-1830).

To the left of the crown (toward muzzle) is usually seen the “broad arrow,” ←☐, signifying government ownership.

Note.—Comparatively few of the older English army guns show any dates. The period of manufacture may be determined, however, by the style of the characters and the work. Arms made during the reign of William and Mary (1680-1702) are engraved “W & M;” Queen Anne (1702-1714), “AR;” William IV (1830-1837), “WR;” Queen Victoria (1837-1901), “VR.”
Marks on U. S. Arms.

Inspected barrels were first stamped with the "proof-mark," viz., the initials of the inspector's name, with the letter "P." under them, placed on the left side of the barrel, just above the left flat, and about one inch from the breech; in addition to the proof-mark the letters "U. S." were stamped on the top of the barrel one inch from, and the year of fabrication underneath those letters in the direction of the axis of the barrel, ending at the breech.

Note.—During the forties inspectors were ordered to stamp the barrels as follows: The proof-mark to be the letter "V." for viewed, "P." for proved, with the eagle's head under them, stamped thus: > ２， on the left square of the barrel, opposite the cone-seat, and the year of fabrication on the top of the barrel, in the direction of the axis of the barrel, ending at .25 inch from the breech.

Locks.

On the earlier arms the place and year of fabrication are stamped on the face of the lock-plate in rear of the cock; at the National Armories an ３ and the letters "U. S." are stamped on the lock-plate under the pan; at private armories the letters "U. S." and the name of the contractor.

Note.—A few exceptions to this method are noticeable. W. T. Evans of Valley Forge, Pa., frequently stamped an eagle on locks. B. Evans of Valley Forge stamped his name over and Valley Forge under an eagle, curving the letters into an oval. N. Starr of Middletown, Conn., stamped one half of a large six-pointed star under "U. S." and over his name. E. Whitney of Whitneyville (New Haven), Conn., stamped locks in the thirties both ways, with and without an inverted arrow crossing a branch of laurel, under "U. S." and over his name:

```
U.S.

E, WHITNEY
```

Some of the earlier-made government armory locks have the "U. S." on a shield in front on the eagle; others the name of armory in a curve in front of cock.
COLLECTION OF FIRE-ARMS

Mountings.

The letters "U. S." are stamped on the tang of the butt-plate of all arms made by or for the government.

Bayonets

Are stamped on the face of the blade, near the neck, with the letters "U. S." Beginning with the Model of 1840 the bayonet has a clasp.

Ramrods.

The rods of the earlier models are stamped near the head.

Stocks

Are stamped on the left side (opposite the lock) with the initials of the inspector's name.

Locks approved on inspection are stamped on the underside of the pan with the inspector's initials. (This rule applies to flint-locks.)

The Model of 1855 called for a magazine with cover in the lock-plate, and the eagle is stamped on the cover, the place and year of fabrication are stamped on the face of the lock—the year in rear of the hammer, and the name of the armory in front of the magazine, with the "U. S." over it. This was the first arm provided with the Maynard primer-lock (so called tape-lack).

Note.—These locks made during the fifties by the Remingtons had stamped across end of lock-plate, in rear of hammer: REMINGTON'S and a small knob was riveted into center of the magazine cover.

Civil War Period.

At the Springfield Armory (and at Harper's Ferry Armory up to April 18th, 1861), the date of manufacture was stamped in rear of the hammer, the between the hammer and the cone, and "SPRINGFIELD" (or HARPER'S FERRY), with the letters "U. S." over it, under the cone (nipple).
No common method appears to have been followed by the "contractors," who, as a rule, stamped locks as they saw fit. A few cases are illustrated:

The Eagle Manufacturing Company of Mansfield, Conn., stamped the date in the rear of hammer, and in front of hammer, under the cone, an "^gf, and "EAGLEVILLE" under the letters "U. S."

The Amoskeag Manufacturing Company of Manchester, N. H., stamped the "^gf between the letters "U. S." over its name and place of manufacture.

S. Norris and W. T. Clement stamped the "^gf, over the letters "U. S." in front of the hammer, and FOR under the "MASSACHUSETTS."

One with the "^gf stamped in front of the hammer, and under the cone, above "1862," and under the letters "U. S." "NEW YORK."

One made by E. Whitney, stamped "1863" in rear of hammer, the "^gf above the letters "U. S." in front of the hammer, and under the cone "WHITNEY-VILLE."

The Trenton Arms Company, Trenton, N. J., stamped the word "TRENTON" under the "U. S."

The Bridesburg Machine Works, Philadelphia, Pa. (Alfred Jenks & Son), stamped the word "BRIDESBURG" under the "U. S."

These few illustrate the variety existing, and lack of uniformity.

Note.—The interested collector will notice in the cases of Civil War arms, guns made Model of 1861 assembled with a lock Model of 1863. This is due to locks of the '63 Model, and made in '63, '64 or '65, being put on guns made in '61 or '62.
COLLECTION OF FIRE-ARMS

The Model of 1863 corresponds with the Model of 1861, except as follows: The end of the muzzle is rounded to prevent being damaged by bruises. The hammer is different in shape and has flat surface beveled. The "swell" is omitted on the ramrod. Band springs are discarded, and the bands open, fastened by screws. The lock is case-hardened in colors, and the bands, swivels and guard blued.

Beginning with the adoption of breech-loading arms made at Springfield, Mass., in 1866, barrels are stamped > Lös on the upper left side, just in front of the receiver. The breech-blocks are stamped "U. S." "Model;" also with the year of adoption of model just in rear of the hinge. The number of the gun is stamped on the upper rear portion of the receiver. Guns found satisfactory after testing are stamped "P" on the under side of the stock, in rear of the guard-plate.

Locks.

The place of fabrication is stamped on the lock-plate with the letters "U. S." over it. An ♦ is stamped just in rear of the former stamps.

Finished Arms.

The initials of the inspector's name (master armorer or principal inspector) are stamped on the stock opposite the rear end of the lock in italics.

The letters "U. S." are stamped on the tang of the butt-plate.

Bayonets are stamped "U. S." on the face of the blade near the neck.

Springfield Armory.

Springfield was the first town settled in western Massachusetts. Its situation recommended it as a depot for military stores, and a place for the repair and manufacture of munitions of war during the Revolution. The first work ever done in Springfield was repairing arms, and manufacturing cartridges and fireworks. During the Revolution it was a recruiting-post and rendezvous for soldiers. In 1778 and 1779 the government works were established on a portion of their present site on the hill.

Being centrally situated, easy of access, and at the same time so far inland as to be out of the reach of sudden invasions of the enemy, it
had been early in the war fixed upon as a suitable place for making and repairing the various war goods mentioned. The various artificers employed had their shops where they could find a convenient place and resided all over town. The laboratory for cartridges and for the different fireworks manufactured on such occasions was in the barn of Ebenezer Stebbins.

After two or three years the public works were removed to the hill where they are now. This was done gradually in the years 1778 and 1779 as accommodations could be made. A few cannon were cast here during the war, but no small arms were manufactured until 1795. At the close of the war the workmen employed were discharged, and the arsenals, magazines and shops were left in the charge of a store-keeper.

When the subject of making arms was under the consideration of the national government in 1794, the convenience of the place and the arsenals, magazines, etc., were a sufficient inducement to establish the National Armory here.

The manufacturing of arms commenced in 1795 with about forty hands.

From July 10, 1793, to September 1, 1801, $230,251.23 was spent at the Armory at Springfield, and from Oct. 1, 1793, to June 30, 1801, $75,214.98 at Harper’s Ferry.

In 1802 the superintendent of the Springfield Armory was David Ames; salary, $840; rations, 3; total, $993.30. Master Armorer, Robert Orr; salary, $600; rations, 2; total, $702.20.

There were 1020 more muskets made in 1811 than in 1854; 113,406 muskets altered to percussion in 1850-51; 50,000 muskets repaired 1809 to 1822, omitting 1811 and 1812.

The Assessors’ report for 1837 relative to the Armory states public land and buildings, value $210,000; machinery, $50,000; number of muskets on hand, 170,000, value $2,040,000; number manufactured year 1836-37, 14,000, $154,000. Hands employed, 260.

In 1847 and 1848 at Springfield were manufactured 3,600 “short-model” muskets, differing very little in appearance from the Infantry Musketoon of 1842. These light-weight guns were especially made for Frémont’s Expedition in 1858, the Mormon War affair.
Harper's Ferry

Was named after Robert Harper, an English millwright, who obtained a grant of it in 1748 from the owner, Lord Fairfax, a friend of George Washington, who first surveyed it, and personally selected it as the site for the National Armory in 1794. The population was then 1762. Robert Harper did not settle Harper's Ferry. It was selected as the site of the Southern National Armory at the time Springfield was, Congress in 1794 having authorized two National Armories to be established.

No records or guns are to be found which show any manufacturing of arms at the Ferry before 1801. Little of interest, outside of Hall's going there in 1816, is attached to the Ferry until the John Brown raid, followed by the destruction of the Arsenal in 1861. The first superintendent at the Armory was a Mr. Perkins, an English Moravian.

The capacity of the Harper's Ferry Armory was from 1,500 to 2,000 guns a month, and the rifles made there were considered the best in the world. The Harper's Ferry Yerger enjoyed, in its day, a reputation second to no weapon of the small arms kind in the world. It was known as the Mississippi rifle, Jefferson Davis' company coming from that State and being armed with the Yerger in the Mexican War.

All government records of Harper's Ferry perished in the fire which destroyed the Arsenal, April 18th, 1861. "The avowed purpose and declared obligation of the Federal government was to occupy and possess the property belonging to the United States, yet one of the first acts was to set fire to the Harper's Ferry Armory, the only establishment of the kind in the Southern States, and the only southern depository of the rifles which the government had then on hand."—Jefferson Davis.

In April, 1861, the defense at Harper's Ferry consisted of forty-two regulars under the command of Lieut. Roger Jones, this company of military having been kept there by the government for the protection of the place since the John Brown raid.

Acting under orders given by Captain Kingsbury (sent there the day before from Washington to take charge of the Armory, the superintendent, Col. Barbour, having moved away), Lieut. Jones blew up the Arsenal at 9 o'clock in the evening, April 18th, 1861, and with the forty odd "regulars" made tracks for Washington city.

About this time the Confederate force, numbering 300 odd—although supposed to be over 3,000—arrived and, aided by the citizens and employees, put out the fire and to a certain extent defeated the ends
intended. The Arsenal, between 16,000 and 17,000 finished rifles and muskets, and the carpenter shop were totally destroyed. Master Armorer Amistead M. Ball so bravely and skillfully directed these efforts that a large portion of the gunmaking machinery, material and unfinished arms were saved, and when boxed were sent by rail to Winchester (the terminus of the road), thence by wagons to Strasburg, at which place the confiscated property was turned over to the Manassas Gap Railroad, and forwarded to Richmond, Va. By the 18th of June all of this material was removed. The machinery thus secured was divided between the arsenals established by the Confederates at Richmond, Va., and Fayetteville, N. C., and when installed, supplied to a great extent the want which existed in the South, of means for the alteration and repair of old or injured arms, and finally contributed to increase the scanty supply of arms which existed in the Confederacy at the outbreak of the Civil War.

In connection with the removal of all this machinery, it may interest us to follow the skilled workmen and see what became of them. Best known was the superintendent, Mr. A. M. Barbour. He was elected to the convention in Virginia to represent the Union sentiment of Jefferson County. While in Richmond he fell a victim to secession and turned traitor to the government.

Master Armorer Ball, whose capacity, zeal and courage prior to and during the fire deserve more than a passing notice, promptly showed his colors and went to Fayetteville, N. C., with the machinery sent there, but like the ship which, after having weathered the storm, goes down in the calm, this master armorer, other than whom there was none better in this country, soon after assuming his new position was found one morning dead in bed.

The following extracts from letters written to the War Department at Washington during the war show where some of the skilled help went.

In a letter dated Oct. 8, 1861, to the Hon. Simon Cameron, at Washington, sent by the gun firm, John S. Gallaher & Co., is a memorandum which reads: “I met a party yesterday whose foreman is an old Harper's Ferry barrel-maker, and he proposed to furnish 6,000 barrels per month. I have also four responsible parties who agreed to deliver me from 6,000 to 10,000 barrels each, after sixty days. I have two responsible parties to furnish the stocks and three to furnish the locks, all old Harper's Ferry workmen, so with these men to put the guns together, 10,000 per month can be turned out.”

Enclosure with a letter sent to Washington Aug. 31, 1861:

“We have two establishments, one at Boston under the control of the Boston Arms Co., the other at Newark, N. J., where, besides the
hands that are now there, are 250 of the hands that were at the Harper's Ferry Armory, now suffering for work, who will go to work in it. This plant will be managed by the later superintendent of the Hall Rifle Works at Harper's Ferry."

In March, 1865, the machinery used in manufacturing arms at Fayetteville, which was taken from Harper's Ferry, was loaded on the flat cars of a coal company running to Egypt, Chatham County, carried there, unloaded and secreted. Egypt was the site of large coal mines, owned and operated (before the war) by Philadelphia capitalists. These mines were confiscated by the Confederate government and leased to Malette & Brown, a firm who operated them with men conscripted for the service. In May, 1865, the United States government, learning of the whereabouts of this machinery, sent ninety-six six-mule teams there, recaptured it, together with a twelve-pound "Napoleon" and one load of musket-barrels, and removed it all to Raleigh, where it was loaded on cars for Washington. Among other things recovered was the die with which the letters "U. S." and the "eagle" were stamped on the lock-plate, at Harper's Ferry. The "U. S." had been cut out and in its place "C. S. A." put in. [See note under Gun 207, page 50.]
Exhibit A.

John Cookson Breech-loading Magazine Gun: Its History and Description.

The gun, as the engraving on it indicates, was made by John Cookson in 1586. The name is evidently English. Judging, however, from the design and character of the work, and from a knowledge of the state of art in England at that date, it is surmised to have been of Spanish origin, or at least modeled after a similar Spanish design.

The advanced state of the art in Spain in the latter half of the sixteenth century, together with the facts that similar Spanish work exists, and that a trace of Moorish design is visible in the scroll-work of the engraving, all point to this theory. Strangely enough, the place of residence of the maker does not appear.

The gun found its way to Maryland, probably with the early English colonists, and was finally discovered in Baltimore. It was one of a number of guns confiscated after a search for arms by the provost marshal in 1863, and was retained in the custody of the United States until after the close of the Rebellion. It remained unclaimed until 1867, and was finally thrown in the scrap-heap, where it was picked up by a scavenger, who sold it for a nominal sum.

In the fall of 1888 the gun was brought to the shop of Richard Heinze, a gunsmith of Baltimore, by a man who asked to have it repaired and changed to a percussion-lock. Mr. Heinze examined it, saw that it was extremely rusty, and considered it of little or no value. The alteration of the lock was out of the question. He finally bought the gun for a trifling sum and put it away with a number of others. Some two months later he made a closer examination of the gun, and became greatly interested in his "find." He at once began removing the rust, and labored faithfully at its restoration for eleven days, until he had put it in its present perfect condition. The old arm has been loaded and fired several times, and a good score made.

Aside from the excellence of the workmanship, the design is worthy of study.

It is difficult to tell whether the barrel is twist or laminated. The butt-plate is both embossed and engraved. The end-sight is a Turkish
crescent. All the metal work is more or less engraved, showing flags, drums, piles of cannon-balls, cannon being fired, stacks of muskets, boarding-pikes, etc. On the top of the barrel appears, "JOHN COOKSON, FECIT" (made by John Cookson). On the lock is a scroll bearing the maker's name; it is being held up at the left by an angel, at the right by a female figure, presumably intended to represent Queen Elizabeth. The stock is made of a peculiar kind of wood unknown in this country. Iron-mounted.

The letters in the following description refer to the side sectional view. The arm is a magazine, smooth-bore, flint-lock gun, firing spherical bullets, weighing 260 grains, and a charge of about 125 grains of powder. It has a capacity of ten rounds, and a magazine is also fitted to the lock for a similar number of priming charges.

It is charged on the left side through an opening with a hinged flap, the bullets being poured into one compartment (A), and the powder in another adjacent one (B).

These compartments connect by cylindrical passages with the central chamber in the frame, in which is located a solid cylindrical block (c) with its axis from right to left.

This cylinder forms the recoil-block, and is fitted with two radial cavities large enough to hold a ball and a charge, and located so that, in revolving, the cavities will be opposite the passages from the magazine. Here the ball drops into the first cavity (D), and the powder into the second (E), and by revolving the cylinder to the front the passages are closed, and the ball and charge brought in front of the rear end of the bore (F), the loading being done with the muzzle held down. The bullet then drops in and the block remains with the charge in line with the bore. The powder cavity is fitted with a diaphragm (g) to prevent the bullet from dropping into it.
The powder cavity or chamber is connected by a vent, through the axis of the cylinder, with the pan.

The pan is a cavity in one end of the cylinder or breech-block on the right side, and revolves in the lock in front of the magazine containing the priming charge, where at each revolution it scoops up a charge and revolves it in place under the flint, and closes the opening to the magazine.

The cylindrical breech-block is revolved by a lever on the left side, which also cocks the hammer and closes the pan.

This automatic action is accomplished by a stop on the cylinder acting on a hooked lever-arm attached to and pivoted on the hammer. The stop pushes the hammer back by the lever, and the hook on the latter pulls the steel-faced cover of the pan, known as the “battery,” into place. The lock and trigger are the ordinary design; but it is worthy of note that the design as regards sear, sear spring, main-spring, etc., is the same as that used on the latest flint-lock guns.

The barrel, front-sight, and under-side of the guard are all in one piece, and the carving and other works show evidence of the highest mechanical skill.

The only omissions in the provisions for all the necessary points in the design, from a mechanical point of view, are those for inserting a wad, and preventing the escape of gas through the vent. The former is partly compensated by making the bullet slightly larger than the bore, and the latter exists in all flint-locks. From a military point of view, the design of the arm gives evidence of being far in advance of its time. With the magazine charge, the ten shots could be fired in a time which would compare very favorably with magazine guns of to-day. Very little time is required for charging, as it is only necessary to fill the compartments with bullets and powder, with no counting and measuring. The charges are automatically measured, and the loading is fully as accurate as that of metallic cartridges.

Altogether, the antiquity, design, workmanship, and beauty of the gun make it a most valuable and remarkable relic.
COLLECTION OF FIRE-ARMS

Case No. 1.

Arbalists or Crossbow Guns.

101 Fourteenth Century, German Petstol or Crossbow Pistol, which has peep-sights, is iron mounted and finely engraved.

102 Sixteenth Century, Spanish Arbalist or Crossbow Gun. It is called Goat's-foot Crossbow. This weapon was constructed either with or without stirrup. The apparatus employed to bend this crossbow is a lever. From Madrid, Spain.

103 Fourteenth Century Arbalist, with stirrup and windlass to set the bow. This crossbow was formerly used in the steen or prison of the Spanish Inquisition at Antwerp, Belgium. The windlass to draw the bow-string is provided with two cranks and two pulleys; has no fixed rests, but is always worked by a stirrup. Inlaid stock. Pistol grip. A few German archers were experts in shooting this kind of arm.

104 Windlass belonging to No. 103, and described therein.

105 Sixteenth Century Prod, a light crossbow used chiefly in field sports. The crossbow (a galet in French because the missiles used were stones) of the sixteenth century is the next in order. Instead of quarrels or crossbow bolts, this weapon shot leaden balls, and even stones. The stock, which went between the nut and the bow, was generally curved, and often made of iron. This weapon, of medium strength, is bent by means of a lever fixed to the stock, or with the hand alone.

106 German Arbalist or Crossbow Gun. It has peep-sight, plumb-bob for level, wind-gauge, hair-trigger; stock gun-shaped, and worm-eaten. It has two arrows or bolts, which date back to the fifteenth or sixteenth century. These dates mark the end of the Middle Ages and the beginning of the New Era, and also inaugurate the introduction of shooting festivals, and the transition from the use of the crossbow to fire-arms. These shooting festivals were occasions not only of social enjoyment, but of preparation for whatever might come in the shape of invasion or internal dissension, and the spirit of liberty was fostered by these gatherings.

*B Ancient Old Crossbow Gun, with sights, mahogany stock, ivory ornaments, brass-mounted; shooting quarrels or bolts. This weapon is bent by means of a lever fixed to the stock, or with the hand alone.

*Not under glass.
COLLECTION OF FIRE-ARMS

Case No. 2.

ANCIENT MATCH-LOCKS.

108 Fifteenth Century, Match-lock Gun, cal. .70 The barrel is a little bell-muzzle, and is fastened to the stock by four copper bands. The stock is badly worm-eaten.

109 Sixteenth Century, Afghan Match-lock Gun, cal. .75 Straight stock, ornamented barrel. The barrel is wound to the stock with cord. From Afghanistan.

110 Seventeenth Century, Japanese Match-lock Gun, cal. .45 Barrel is covered with sheet brass. Very curiously shaped stock, crooked like a pistol grip-stock. It is made to shoot from the hip. This gun was secured by Geo. G. Accles, of the Gatling Gun Co., October 11, 1887, while traveling on the Island of Formosa; was made by natives.

111 Sixteenth Century, Indian Match-lock Gun, cal. .65 Barrel made of wire, finely inlaid with gold and silver. All the mountings finely inlaid with gold and silver. The barrel is wound with cord to hold it to the stock. From Punjab, India.

112 Japanese Match-lock Gun, cal. .50 Octagon barrel, finely inlaid with gold; ebony stock. From the Island of Formosa.

113 Sixteenth Century, Indian Match-lock Gun, cal. .60 The barrel is four square, with fancy muzzle, and is fastened to the stock by four flat brass bands. Straight stock. From the Himalaya Mountains, India.

114 Sixteenth Century, Afghan Match-lock Gun, cal. .50 Peculiar shaped stock; barrel fastened to the stock by fourteen brass bands. From Afghanistan.

*C An old Match-lock Gun, cal. 1. The barrel is slightly bell-shaped at the muzzle. Iron-mounted. Length, 10 feet. This gun was made in India or China about the year 1413. It was sent to the United States by the princes of East India with their exhibit to the World's Fair at Chicago, Ill., and was on exhibition in the Art Department in the summer and fall of 1893. It is duly authenticated by credentials from the English house in Bombay which invoiced the collection.

*D English Flint-lock Fowling-piece, cal. .80 Brass-mounted. Length, 7 feet 4½ inches. Made in England. It was owned by Charles Brechemia of Philadelphia.

*Not under glass.
Case No. 3.

**Japanese Match-locks, Blunderbusses, etc.**

115 Oriental Flint-lock Arquebuse, cal. at the muzzle, 1 1/3 inches. Iron barrel, inlaid with silver; bell muzzle; carved gun-shaped stock; used by mounted horsemen; a very fine old arm. It was bought in Tunis, Morocco, by Captain Charles H. Saunders of Hartford, Conn., in 1889.

116 Sixteenth Century, Wheel-lock Arquebuse, cal. .75 Straight stock, with a patch-box having a sliding wooden cover. This gun was purchased of Jerome Remington of Vosburg, Pa.

117 English Wheel-lock Gun, cal. .50 Barrel and lock finely engraved; carved stock, having patch-box with sliding cover; brass-mounted. Made in England.

118 Wheel-lock Rifle, cal. .48 A gold stamp upon the barrel, which is finely engraved; engraved lock marked "I. G. D."; carved stock, having a sharp-pointed spur in the butt-plate, and a patch-box with sliding cover; brass-mounted. Made in Germany.

119 Seventeenth Century, Japanese Match-lock Gun, cal. .75 Octagon barrel, finely inlaid with gold and silver; brass lock, and mounted; mahogany stock. From Japan.

120 Seventeenth Century, Japanese Match-lock Gun, cal. .60 Octagon barrel, inlaid with gold and silver; Japanese inscription on the barrel; ebony stock; brass-mounted. From Japan.

121 Seventeenth Century, Japanese Match-lock Gun, cal. 1. Octagon barrel, finely inlaid with gold and silver; brass lock; copper and brass bands. From Japan.

122 Seventeenth Century, Japanese Match-lock Gun, cal. .65 Copper and brass bands; inlaid with gold and silver; brass lock, hammer and guard. From Japan.

123 Seventeenth Century, Japanese Match-lock Gun, cal. .75 Octagon barrel, inlaid with gold and silver; brass-mounted; live oak stock. From Japan.

124 Oriental Flint-lock Arquebuse, cal. at the muzzle, 1 1/4 inches. Bell-muzzle, iron barrel. On the stock on the opposite side from the lock is a projection known as a belt-hook. Brass-mounted; stock ornamented. From Mexico.
COLLECTION OF FIRE-ARMS

Case No. 4.

ANCIENT FLINT-LOCK GUNS.

125 Seventeenth Century, Spanish Flint-lock Gun, cal. .55 Barrel fastened to the stock by six silver bands; stock finely ornamented with ivory, some of which is colored. This gun was picked up on the battle-field of Gibraltar by a native, about the year 1765. This battle terminated the Moorish rule in Gibraltar. The gun was kept in the family until about the year 1845, when it was presented to Admiral Clary of the United States Navy, who retired a number of years ago. Obtained from the Admiral’s family.

126 Seventeenth Century, Persian Flint-lock Gun, cal. .70 Barrel engraved, and partly covered with ornamental sheet brass; stock ornamented with tacks, etc. From Kerman, Persia.

127 Oriental Flint-lock Rifle, cal. .50 Octagon barrel, inlaid with silver, and fastened to the stock by four silver bands. It has a gold stamp upon the barrel; lock inlaid with silver. From Harran, Asiatic Turkey.

128 Arabian Flint-lock Gun, cal. .60 Barrel inlaid with silver and fastened to the stock by five silver bands; stock finely inlaid with mother-o-pearl. From Mecca, Arabia.

129 Moorish Flint-lock Gun, cal. .75 Barrel inlaid with silver ornaments, and fastened to the stock by three bands ornamented with silver. From Morocco.

130 Turkish Flint-lock Gun, cal. .70 Barrel fastened to the stock by four silver bands; inlaid with mother-o-pearl. From Taurus Mountains, Turkey.

131 Oriental Flint-lock Rifle, cal. .54 Octagon barrel, finely inlaid with gold, and fastened to the stock by five silver bands. The stock is inlaid with gold and colored ivory. From Constantinople.

132 Arabian Flint-lock Gun, cal. .68 Barrel a little bell-muzzle, and finely inlaid with gold; stock covered with ornamental iron, inlaid with silver; of excellent workmanship. From Asia.

133 Oriental Flint-lock Gun, cal. .70 Barrel fastened to the stock by seven brass bands; stock inlaid with mother-o-pearl. From Constantinople.

134 Seventeenth Century, Persian Flint-lock Gun, cal. .68 Barrel fastened to the stock by six brass bands. Very peculiar-shaped stock. From Kerman, Persia.
Case No. 5.

FLINT-LOCK BLUNDERBUSES.

135 Flint-lock Blunderbuss, cal. at the muzzle, 1½ inches. Brass barrel, cannon-shaped muzzle; brass mounted. Stock worm-eaten. A very old arm. Marked, "SMART, GLOUCESTER."

136 English Flint-lock Blunderbuss, cal. at the muzzle, 1½ inches. Bell-shaped muzzle; brass-mounted. On the lock is engraved GR, under a ☉. Made about 1800.

137 English Flint-lock Blunderbuss, cal. at the muzzle, 2 inches. Engraved on the lock, "TOWER," and GR, under a ☉ and a ☘. This is a very old gun, about the first blunderbuss made.

138 Flint-lock Blunderbuss, cal. at the muzzle, 1½ inches. This blunderbuss was carried on the stage-coach for protection of passengers and the mails from highwaymen. It was owned by a gentleman in Northumberland, England, and had been in his family more than a century.

139 English Flint-lock Blunderbuss, cal. at the muzzle, 1½ inches. Brass barrel, cannon-shaped muzzle. Marked on the barrel, "LONDON."

140 Flint-lock Blunderbuss, cal. at the muzzle, 1½ inches. Is called an Irish blunderbuss. Brass barrel, bell-shaped muzzle.

141 English Flint-lock Blunderbuss, cal. at the muzzle, 1½ inches. Iron barrel, bell-shaped muzzle; iron-mounted.

142 English Flint-lock Blunderbuss, cal. at the muzzle, 1½ inches. Brass barrel, bell-shaped muzzle; brass-mounted. Marked, "BLAKE, LONDON."

143 English Flint-lock Blunderbuss, cal. at the muzzle, 1½ inches. Brass barrel, bell-shaped muzzle; brass-mounted, with spring bayonet on top of barrel. Marked, "BASS, LONDON, ENGLAND."

144 Flint-lock Blunderbuss. Bell-shaped muzzle, cal. 2 inches. Iron barrel. Marked, "R. ASHMORE, 1775." This blunderbuss was borrowed or stolen from Jefferson Davis' house at Richmond, Va., during the Civil War by a volunteer in the Eleventh Regiment, Connecticut Volunteers. There is no doubt but it was one of Jeff Davis' trophies which he brought home from the Mexican War.

145 English Flint-lock Blunderbuss, cal. at the muzzle, 1½ inches. Engraved on the lock, "TOWER, 1651," and a ☉ under a ☘.
Case No. 6.

FLINT-LOCK BLUNDERBUSES.

146 Belgian Flint-lock Blunderbuss, bell-muzzle, cal. 2 inches. Half octagon iron barrel, 22 inches long; brass-mounted. Made in Belgium. Proof-mark, ©

147 English Flint-lock Blunderbuss, bell-muzzle, cal. 1½ inches. Brass barrel, cannon-shaped muzzle; brass-mounted. Marked, "KING, LONDON, ENGLAND."

148 Flint-lock Blunderbuss, bell-shaped muzzle, cal. 3½ inches; has swivel. Used as a wall-piece; very heavy iron barrel, and iron-mounted; a hundred years old or more.

149 Oriental Flint-lock Blunderbuss, very large bell-shaped muzzle, cal. 4 inches. Iron barrel, 10½ in. long; finely inlaid with silver; lock and mountings inlaid with silver; stock gun-shaped, inlaid with brass; length barrel and stock, 20 inches; a fine arm.

150 Arabian Flint-lock Gun, cal. .62 Iron barrel, finely inlaid with gold; stock has a peculiar shape, and is covered with iron, and ornamented with brass and Oriental figures.

151 Seventeenth Century, Turkish Flint-lock Blunderbuss, cal. 2 inches. Iron barrel, inlaid with gold; stock inlaid with silver. Marked on the lock, "WILSON." Very fine old arm. From Constantinople.


153 English Flint-lock Blunderbuss, bell-shaped muzzle, cal. 1½ inches. Half octagon iron barrel, 14 inches long; brass-mounted. Marked, "COOK, LONDON, ENGLAND."

154 Flint-lock Blunderbuss, cal. at the muzzle, 1 inch x 2 inches. Oval, or egg-shaped muzzle; iron barrel; brass-mounted. On the barrel and on the lock is engraved "SEGALLAS, LONDON."


156 English Flint-lock Blunderbuss, cal. at muzzle, 1½ inches. Heavy brass barrel, bell-shaped muzzle; brass-mounted. Marked, "BARTLETT, LONDON, 1811."
Case No. 7.

Flint-lock Muskets Used in the Revolutionary War.

157 English Smooth-bore Flint-lock Musket, cal. .75 Engraved on the lock, "DUBLIN CASTLE," the $\Theta$, the letters $GR$ and the $\Theta$. On the stock in rear of the barrel is inlaid a brass plate, engraved "F.10TH;" heavy stock, with wide butt; brass-mounted. Fought with in the Revolutionary War by Capt. Geo. Dennison, Mystic, Conn.

158 English Smooth-bore Flint-lock Musket, cal. .75 Engraved on the lock, "TOWER," the $\Theta$, the letters $GR$, and the $\Theta$; heavy stock, with wide butt; brass-mounted. Carried in French, Indian and Revolutionary Wars by Robert Avery, Stonington, Conn.

159 English Smooth-bore Flint-lock Musket, cal. .75 Engraved on the lock, "TOWER," the $\Theta$, the letters $GR$, and the $\Theta$; heavy stock, with wide butt; brass-mounted. A relic of the Revolution. Carried in the war by John Bunnell, Berlin, Conn.

160 English Smooth-bore Flint-lock Musket, cal. .75 Engraved on the lock, "TOWER," the $\Theta$, the letters $GR$, and the $\Theta$; heavy stock, with broad butt. Fought with in the Revolution by John Pratt, Hartford, Conn. Has five notches cut in the stock, representing as many Indians killed with the gun, it being the custom in those days, particularly among the Indians, to keep score on the stock.

161 English Smooth-bore Flint-lock Musket, cal. .75 Engraved on the lock, "VOIG, 1776;" brass-mounted; lock is not original; has a brass pan of French manufacture; engraved on the barrel, "67th REG.;" cut in the stock, "K.M." Carried through the Revolutionary War by Daniel Munger, Saybrook, Conn.

162 French Smooth-bore Flint-lock Musket, cal. .70 Lock is neither engraved nor stamped; iron-mounted. A relic of the King Philip War, and formerly owned by Stephen Church.

Note.—The lock on this gun is not original; the pan is not original.

163 French Smooth-bore Flint-lock Musket, cal. .75 Engraved on the lock in script, Charlestown; iron-mounted; wide iron bands. Formerly owned by Elisha Crosby, Ashburnham, Mass., and carried in the Revolutionary War.
Case No. 8.

**FLINT-LOCK MUSKETS USED IN THE REVOLUTIONARY WAR.**

**164** English Smooth-bore Flint-lock Musket, cal. .75  Heavy stock, wide butt, etc.; has English proof-mark on barrel, common to all the military arms herein described; no engraving on the lock. Formerly the gun of Thos. Bickford of Rockingham, N. H., a Revolutionary soldier.

**165** English Smooth-bore Flint-lock Musket, cal. .75  Engraved on the lock, “IORDAN” (JORDAN?), “1743,” the †, the letters GR, and the ≪&. Cut in the stock, “C. H.” “W. D.;” brass-mounted. A different model arm than the “Brown Bess,” as was called the English army musket (1690-1840). Formerly owned by Cornelius Havens, Pomfret, Conn., 3d Regt., Conn. Line.

**166** English Smooth-bore Flint-lock Fowling-piece, cal. .60  Engraved on the lock, “ALLPORT, LATE WITH KETLAND, LONDON;” brass-mounted. Carried in the Revolutionary War by John Marsh, Sturbridge, Mass.

**167** English Smooth-bore Flint-lock Fowling-piece, cal. .60  Barrel slightly bell-muzzle; not the original lock. Fought with in the Revolution by Israel Brown, Lebanon, Conn.


**169** English Smooth-bore Flint-lock Musket, cal. .75  Lock is neither stamped nor engraved; brass-mounted, with very heavy bands. Fought with in the Revolution by Gudgo Sheppard, Voluntown, Conn.

**170** English Smooth-bore Flint-lock Musket, cal. .75  Engraved on the lock, “MOORE, LONDON;” brass-mounted; a very old gun. Used in French and Indian and in Revolutionary Wars by John Smith, 1st Regt., Conn.
Case No. 9.

Guns Made by the United States Government from the Flint-lock Smooth-bore Musket of 1799 to the Percussion-rifled Musket of 1860.

171 Model of 1795, United States Flint-lock Smooth-bore Musket, cal. .70 On the lock is stamped "SPRINGFIELD," and engraved in script "U.S." On the tang of the butt-plate is stamped "1799." The stock under the guard is marked VII. This musket is in excellent condition, and seldom found, only having been made this year.

Note.—In 1795 (the year following the act of Congress establishing a National Armory at Springfield, Mass.) were made the first government arms; and the Springfield, a French flint-lock, smooth-bore musket, and the highest type of hand firearms in Europe, was adopted as the model. This musket is generally known as the "Springfield Model of 1799," and, erroneously, heretofore been credited as being the first manufactured.

172 Model of 1808, United States Flint-lock Smooth-bore Musket, cal. .69 On the lock in rear of cock is stamped "1808"; between the cock and pan is stamped "SPRINGFIELD," and engraved in script the letters "U.S." On the tang of the butt-plate (indicating the year the gun was finished) is stamped "1809."

Note.—This is the second model of United States arm, and differs somewhat from the first model.

173 Model of 1808, United States Flint-lock Smooth-bore Musket, cal. .69 On the lock is stamped "PITTSFIELD," "1808," "U. S.,” and "POMEROY." Made for the United States government by Lemuel Pomeroy, Pittsfield, Mass., 1808. Eltweed Pomeroy, coming from England in 1635, made the first guns at Windsor, Conn., A.D. 1637. A.D. 1640, Eldad Pomeroy, son of Eltweed, was given a grant of 1000 acres of land in Hampshire, Mass., for his skill as a gunmaker. General Seth Pomeroy, fourth generation from Eltweed, officer in French and Indian wars, seems to have given the Pomeroy guns their highest finish at Northampton, Mass. A.D. 1800, Lemuel Pomeroy, sixth generation from Eltweed, removed to Pittsfield, Mass., bringing same anvil used by Eldad and Seth, and continued the
manufacture of guns till 1840. A.D. 1904, anvil and site of musket-shop still in possession of the Pomeroy family.

174 Model of 1808, United States Flint-lock Smooth-bore Musket, cal. .69 On the lock is stamped “HARPER’S FERRY,” “1812,” “U. S.,” and . Made at the National Armory at Harper’s Ferry, 1812. 10,200 muskets were made this year at Harper’s Ferry Armory, Va.

175 Model of 1808, United States Flint-lock Smooth-bore Musket, cal. .69 On the lock is stamped “E.STILLMAN,” “1812,” “U. S.,” and . Made for the United States government by Ethan Stillman of Brookfield, Fairfield County, Conn., in 1812.

Note.—Ethan Stillman was one of twenty-five gunmakers given contracts by the government in 1808 to manufacture arms, to be supplied to the militia of the states. His contract was issued Sept. 14th, 1808. He had delivered only 1675 finished arms at the close of the year 1812.


Note.—16,480 arms were made at Springfield Armory in 1830.

177 Model of 1822, United States Flint-lock Smooth-bore Musket, cal. .69 On the lock is stamped “HARPER’S FERRY,” “1833,” “U. S.,” and . Made at the National Armory at Harper’s Ferry, 1833. 12,040 arms made at Harper’s Ferry in 1833.

178 Rifled Musket, cal. .58 Percussion. No name or date on lock. Proof-marks > A, and “NEW HAMPSHIRE,” stamped on the barrel; brass guard and bow; large rear sight; narrow end band, with sight; brass end on ramrod.

179 Model of 1808, United States Flint-lock Smooth-bore Musket, cal. .69 Made for the United States government by E. Buell, Marlborough, Conn., 1812. (Stamped on the lock in rear of cock, across the plate, “E. BUELL,” and between cock and pan, MARLBOROUGH, in a curve, under an .)

180 Model of 1808, Flint-lock Smooth-bore Musket, cal. .69 On the lock is stamped N.HAVEN.
EXHIBIT E. BREECH-LOADING CANNON.

Cal. 2 inches, made of wrought iron. The marks on it indicate that it was made in China about the year 1373. The cannon is 5 feet 8 inches long. Was fired by a fuse. The breech-loading apparatus or breech-block of this wonderful arm is distinct from the wrought metal of the cannon, and is charged before being placed in position for firing. The bore containing the charge is exactly identical with that of the cannon, and in horizontal lines. The bores are absolutely in unison. The breech-block is held in place by a crossbar and the wrought-iron projection from the chamber that penetrates the body of the cannon, holding the two together with resistless energy. This breech-block is removable at the will of the operator or gunner. A ring is attached to it for that purpose. This cannon was sent to the United States by the Princes of East India with their exhibit to the World's Fair at Chicago, Ill., and was on exhibition in the Art Department in the summer and fall of 1893. It is duly authenticated by credentials from the English house in Bombay which invoiced the collection.
Case No. 10.

United States Rifled and Smooth-bore Muskets Used in the Civil War (War of the Rebellion), 1861-1865.

181 United States Model of 1861, Rifled Percussion Musket, cal. .58 Stamped on the lock “1861,” “U. S.,” and an $\mathcal{A}$; curly-maple stock. Made for the United States government during the first year of the Civil War, in Germany.

Note.—A very rare arm.

182 Model of 1822, United States Flint-lock Smooth-bore Musket (with bayonet), cal. .69 Altered to Percussion in 1852 at Springfield Armory.

Note.—The government did not order the Flint-locks on hand altered to Percussion until nearly ten years after its adoption. In 1851 and 1852 a great many Flint-locks were so altered.


184 Model of 1822, United States Flint-lock Smooth-bore Musket (with bayonet), cal. .69 Altered to Percussion, with Remington primer, in 1857. Used in Civil War on Northern side.

185 Model of 1842, United States Flint-lock Smooth-bore Musket (with bayonet), cal. .69 Marked, “MILL CREEK, PA.” Altered to Maynard’s primer-lock, patented 1845. A relic of the Civil War, Federal Army.

186 United States Model of 1808, Smooth-bore Flint-lock Musket, cal. .69 Altered to Percussion. About twelve inches of the barrel and stock have been cut off, and the end band replaced. Altered by removing the pan, adding a cone, and retaining the flint-cock, a piece of iron, shaped to strike the cap, replacing the flint. Stamped on the lock “E. STILLMAN, 1812.”

Note.—Ethan Stillman of Brookfield, Conn., was one of twenty-five gunmakers to obtain a contract to manufacture muskets for the government in 1808 (Sept. 14). He had delivered only 1675 Dec. 31st, 1812.

187 United States Model of 1863, Rifled Percussion Musket (with bayonet), cal. .58 Stamped on the lock “1863,” “U. S.,” under an
UNITED STATES CARTRIDGE CO.

Made by S. Norris & W. T. Clement for the State of Massachusetts.

Note.—In 1863 Massachusetts contracted with this firm for 2000 of these rifles, costing $18.50 each.


Note.—This gun is the Model of 1861, having band springs, swell on the ramrod near the head, etc. The lock is the 1863 model and differs from Model of 1861 in the shape of the hammer, and in being case-hardened in colors, as are all locks of later models.


Note.—Gun is Model of 1861, lock, Model of 1863. Edward Robinson was given a contract June 10th, 1863, for 20,000 Springfield Rifled Musquets, cal. .58 He delivered 30,000 in all.


Note.—Colonel Colt received the first contract to furnish arms during the Civil War, July 5th, 1861 (25,000 at $20), and delivered in all 75,000.

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CALIBER, LENGTH AND WEIGHT OF SMALL ARMS.

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<tr>
<th>(U. S.)</th>
<th>FLINT-LOCK</th>
<th>PERCUSSION</th>
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<tr>
<td>1822</td>
<td>1840</td>
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<td>Caliber,</td>
<td>inches</td>
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<td>Length,</td>
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Of one of the early specimens of breech-loading cannon, bearing date of 1400, made of wrought iron. The chase was formed of two bars bent longitudinally and surrounded by a number of rings welded to each other. Surrounding the whole were three large rings, also a large ring in the centre to lift it by. The length of the breech-block is 2 feet, the bore 4 inches, its weight 125 pounds. It was taken from a wreck or sunken ship which had been gradually driven on the coast of South Devon, England, in 1891. The opinion of the English authorities was that this ancient vessel belonged to the Spanish Armada.
Case No. 11.

Rifled Muskets Used in the Civil War (War of the Rebellion), 1861-1865.


Note.—13,802 arms of this model were fabricated at Springfield Armory during the year of 1861.

192 Model of 1861, United States Rifled Percussion Musket (with bayonet), cal. .58 Marked, "WILLIAM MASON, TAUNTON, MASS., 1863." Civil War relic, Union Army.

Note.—William Mason of Taunton, Mass., was given a contract by the government, No. 74, Jan. 7th, 1862, for 50,000 "Springfield" rifles (by which name the Model of 1861 was known), which contract was subsequently increased 50,000. He made and delivered in all 30,000 at $20 each.


Note.—E. S. Allin was master armorer of Springfield Armory, and a machinist of extraordinary ability. He devised this the first breech-loading system to be used; and 5000 percussion muskets were altered as above in 1865. 217,784 "Springfield" rifles were made at Springfield Armory in 1863.

194 Model of 1861, United States Rifled Percussion Musket, cal. .58 Made at the Springfield Armory in 1862. This rifle was dug up near Antietam bridge, Sept. 17, 1889, by Alex. McCalvery of Sharpsburg, Md. There is no doubt that it was dropped by some soldier at the battle of Antietam, Sept. 17, 1862. It was found about eight rods below Antietam bridge in the sand which makes land from the flow of high water in the river, and about eighteen inches below the surface. The rifle is very rusty, having been buried just twenty-seven years to a day. 102,410 made at Springfield Armory, year of 1862.

195 Model of 1861, United States Rifled Percussion Musket (with bayonet), cal. .58 Marked, "E. WHITNEY, WHITNEY-VILLE (New Haven), CONN., 1862." Civil War relic, Union Army.
Note.—Eli Whitney was given a contract to make and deliver 40,000 arms, No. 64, Dec. 24th, 1861, and a second contract for 15,000 Oct. 17th, 1863. He delivered in all during the Civil War 15,001 at $19 each.

Model of 1861, United States Rifled Percussion Musket (with bayonet), cal. .58 Marked, "WILLIAM MUIR & CO., WINDSOR LOCKS, CONN., 1862." A relic of the Civil War, Federal Army.

Note.—William Muir secured contract No. 53, Dec. 4th, 1861, for 30,000 arms of above model at $20, and delivered the same.

Model of 1861, United States Rifled Percussion Musket (with bayonet), cal. .58 Marked, "PROVIDENCE TOOL CO., PROVIDENCE, R. I." (Gun is Model of 1861, the lock is Model of 1863, made in 1864.)

Note.—The Providence Tool Co. of Providence, R. I., "by J. B. Anthony," were given contract No. 4, July 13th, 1861, for 25,000; also No. 52, Nov. 26th, for 25,000, and May 1st, 1864, a third contract for 32,000. They delivered 70,000 at $20 and $19 each.

Model of 1861, United States Navy Percussion Rifle (with saber bayonet), cal. .69 Made by Eli Whitney, Whitneyville, Conn. Stamped on the lock "WHITNEY-VILLE." Known as the Plymouth Rifle. Has a projection rear of guard-bow for the third finger. Large head on ramrod. Used in United States Navy during Civil War.


Note.—The Savage Repeating Fire-arms Co. was given a contract Sept. 9th, 1862, for 25,000 arms of above pattern, which contract was increased 12,000 Feb. 25th, 1864, at $18 each. They delivered in all 25,500.

Model of 1863, United States Rifled Percussion Musket (with bayonet), cal. .58 Made by Norwich Arms Co., Connecticut. (Gun is Model of 1861. Lock is Model of 1863, and stamped "1864," "U. S.," "NORWICH").

Note.—The Norwich Arms Co. made a contract with the government April 1st, 1864, for 10,000 arms, which was increased 15,000 Oct. 18, 1864. Price, $18 and $19 each. They delivered both lots, 25,000 in all.
EXHIBITS G AND H. PAIR OF BRASS CANNONS.

Length 28 inches, bore 1½ inches. The inscription on them is as follows: "ME FECIT CIPRIANUS CRANS IANSZ AMSTELODAMI, A. D. 1745." These cannons are beautiful specimens; are somewhat smaller than the type that were captured from the British at Bunker Hill in 1775. From the collection of A. Gerald Hull of Saratoga, N. Y., who died February, 1893.
COLLECTION OF FIRE-ARMS

Case No. 12.

"Confederate" Guns Used in the Civil War, 1861-1865.

201 Model of 1808, United States Flint-lock Smooth-bore Musket (with bayonet), cal. .69. Stamped on the lock "C. S. A." (Confederate States of America), and between the cock and pan "S.C." On the barrel and stock "P.M., S.J. III I. M. SOUTH CAROLINA." Used in the Confederate Army at beginning of the war.

202 Model of 1822, United States Flint-lock Smooth-bore Musket (with bayonet), cal. .69. Stamped on the lock "U. S.," and "C. S." "NORTH CAROLINA." Relic of the Civil War, Confederate Army.


204 Confederate Rifled Musket, cal. .58 Percussion. The lock-plate forged for a primer-lock, Model of 1855, either at Harper's Ferry before Apr. 18, 1861, or at Richmond, Va., with machinery taken from the Ferry. Lack of time, etc., prevented new dies being manufactured, which accounts for the tape-lock blanks seen on Confederate-made arms.

205 Model of 1842, United States Smooth-bore Percussion Musket (with bayonet), cal. .69. Made at Springfield Armory, Mass., in 1850. The first model of Percussion musket issued. A few were used in the Mexican War. History as given by its former owner: "This gun belonged to L. G. Perry, Dublin, Ga., who was a soldier in the Confederate Army during the Civil War. Mr. Perry belonged to a company in the Fourteenth Georgia Regiment, and was stationed at Ox Ridge, Sept. 1, 1862, when General Phil. Kearney, mistaking the Confederate lines for Federal, rode into or close to the Confederate camp; realizing his mistake, ordered to halt, and seeing the Confederate guns pointed at him, said: 'Don't fire; I am a friend.' Saying this, he wheeled his horse and put off at full speed, to escape if possible. He lay flat on his horse to escape the bullets whistling in the air near him. But one fatal shot struck and killed him, and it is said by authority of Mr.
Perry and others of his company that this gun was the one that sent the fatal bullet that killed General Phil. Kearney, Sept. 1, 1862." This gun was presented to this collection by Captain E. A. Perry of Hartford, Conn., who is a brother of L. G. Perry, deceased, of Dublin, Ga., and from whom he received the gun with its history.


Note.—The machinery used for making rifles at Harper’s Ferry was moved to Fayetteville, North Carolina, by the Confederate government in 1861. Nearly all Confederate-made arms are brass-mounted. The die used to stamp the eagle and C. S. A on arms made by Confederate government at Fayetteville, N. C., came from Harper’s Ferry. The U. S., which was originally under the eagle, was cut out and C. S. A (the S inverted) were "keyed" in.


Note.—The lock-plate on this gun was forged for a “Maynard Primer,” which device had been condemned after trial as worthless. Machinery used in manufacturing this lock had been removed to Richmond, Va., from Harper’s Ferry, and the "tape-lock" plates were made up without the magazine, lack of time, etc., preventing new dies being made. Rifled muskets were made at Richmond with machinery secured at Harper’s Ferry in 1861.

At the beginning of the Civil War the military arms to fall into the hands of the Confederates were:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Charleston, S. C.</td>
<td>9,280</td>
<td>5,720</td>
<td>2,000</td>
</tr>
<tr>
<td>Fayetteville, N. C.</td>
<td>15,480</td>
<td>9,520</td>
<td>2,000</td>
</tr>
<tr>
<td>Augusta, Ga.</td>
<td>12,380</td>
<td>7,620</td>
<td>2,000</td>
</tr>
<tr>
<td>Mt. Vernon, Ala.</td>
<td>9,280</td>
<td>5,720</td>
<td>2,000</td>
</tr>
<tr>
<td>Baton Rouge, La.</td>
<td>18,580</td>
<td>11,420</td>
<td>2,000</td>
</tr>
<tr>
<td>Total</td>
<td>65,000</td>
<td>40,000</td>
<td>10,000</td>
</tr>
</tbody>
</table>
EXHIBIT I. REVOLUTIONARY CANNON.

Revolutionary Iron Cannon, length 4 feet 7 inches, bore 2½ inches; was in the American service at Yorktown, Va., when Lord Cornwallis surrendered, October, 1781.
Case No. 13.
FOREIGN-MADE GUNS USED IN THE CIVIL WAR, 1861-1865.

209 English "Enfield" Rifled Musket (with bayonet), cal. .577 Percussion, with safety cone protector, held by chain fastened to the trigger-guard. Marked, "POTTS & HUNT, LONDON."

210 English "Enfield" Rifled Musket (with bayonet), cal. .577 Percussion. Stamped on the lock "TOWER" "1862." On the stock is carved "M. S. FERRIN."

211 English "Enfield" Rifled Musket (with bayonet), cal. .577 Percussion. Stamped on the lock "V. R." "1863." Marked on the stock, "B.O.M., ENFIELD."

212 French Rifled Musket (with saber bayonet), cal. .70 Percussion. Marked, "I. SCHOPEN, ALIGE."

213 German Rifled Musket (with bayonet), cal. .70 Percussion. Stamped on the lock ^= under German crown, and "Saurn." "1832." This gun is numbered 104,774.

214 Austrian Smooth-bore Musket (with bayonet), cal. .70 Flint-lock altered to Percussion. Marked on the barrel, "D, 29th." On the stock "1st C. 72."

215 Belgian Smooth-bore Musket, cal. .70 Percussion. Marked, "S. BLASIE."

216 English "Enfield" Rifled Musket (with bayonet), cal. .577 Percussion. Stamped on the lock ^= "TOWER" and "1862." Marked on the barrel, "COMPANY B. 59th."


218 Bavarian Smooth-bore Musket, cal. .70 Percussion. Cone is near the centre of the barrel. Brass-mounted. Marked, "CRAN-PIN, HERZBURG."
Case No. 14.

**United States Breech and Muzzle Loading Guns Used in the Civil War (1861-1865).**

219 Model of 1819, United States Flint-lock Rifle, cal. .54. Stamped on the lock “1829” “U. S.” “S. NORTH, MIDDLETOWN, CONN.” Heavy barrel, small lock, oval patch-box, iron cover; rear sling swivel is on a branch extending backwards from the guard-bow. Iron-mounted and browned, except side-plate and bands. Ramrod has brass tip.

Note.—Contracts for the manufacture of this rifle were issued to Simeon North of Middletown, Conn.; Henry Derringer of Philadelphia, Pa.; Nathan Starr, Middletown, Conn., and R. & D. Johnson, Middletown, Conn., in 1820.


Note.—This arm resembles the Hall, other than it is provided with a bayonet, which consists of a blade sliding under the barrel. Similar to Greener’s pencil-case bayonet. North’s device consists of a lever on the side of lock, holding it closed. 3520 purchased by United States government during Civil War.


Note.—Before alteration this gun was similar to the “Mississippi” rifle (also known as the “Yerger”) made at Harper’s Ferry.

Note.—This rifle (already referred to in No. 223) was first made at Harper’s Ferry Armory, and was the third model of United States rifle (1842). The first was the Model of 1814, Harper’s Ferry rifle; and the second the common rifle, Model 1819. The State of Massachusetts owned 1739 Windsor rifles Dec. 31st, 1861.

Merrill’s Breech-loading Rifle (with saber bayonet), cal. .54 Merrill’s patent, July, 1858, and May 21 and 28, 1861. Paper cartridge. Marked, “J. H. MERRILL, BALTIMORE, MD.” 14,495 purchased by the United States government during the Civil War.

Model of 1842, United States Rifle (with bayonet), cal. .54 (Harper’s Ferry Yerger.) Made at the Harper’s Ferry Armory, 1850. Altered to a Merrill breech-loading rifle in 1859.

Spencer Repeating Breech-loading Rifle, cal. .56 Patented March 6, 1860. Seven shots. Metallic cartridge. Marked, “SPENCER REPEATING ARMS CO., BOSTON, MASS.” 94,156 purchased by the United States government during the Civil War.

Joslyn Breech-loading Rifle, cal. .56 B. F. Joslyn’s patent, No. 42,000, March 22, 1864. Metallic cartridge, rim fire. Made by the government at Springfield Armory in 1864. 11,261 purchased by the United States government during the Civil War.

Number of shots per minute with Breech-loading Rifles, government test, in 1866.

<table>
<thead>
<tr>
<th>Name</th>
<th>Shots per Minute</th>
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<tbody>
<tr>
<td>Henry</td>
<td>25</td>
</tr>
<tr>
<td>Berdan</td>
<td>18</td>
</tr>
<tr>
<td>Ballard</td>
<td>18</td>
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<tr>
<td>Peabody</td>
<td>17</td>
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<td>Cochran</td>
<td>16</td>
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<td>National</td>
<td>16</td>
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<td>Poulton</td>
<td>16</td>
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<td>Remington</td>
<td>15</td>
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<td>Spencer</td>
<td>15</td>
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<tr>
<td>Allen</td>
<td>14</td>
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<tr>
<td>Smith</td>
<td>14</td>
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<tr>
<td>Sharps</td>
<td>12</td>
</tr>
<tr>
<td>Joslyn</td>
<td>8</td>
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<td>Berg</td>
<td>8</td>
</tr>
<tr>
<td>Maynard</td>
<td>7</td>
</tr>
<tr>
<td>Starr</td>
<td>6</td>
</tr>
<tr>
<td>Merrill (revolving)</td>
<td>6</td>
</tr>
</tbody>
</table>
**HALL'S RIFLE.**

In 1664 Abraham Hall, of England, was granted a patent for a "gun or pistoll which hath a hole at the upper end of the breech to receive the charge, which hole is opened or stopped by a piece of iron or steel that lies along the side of the piece and is movable."

May 21, 1811, a patent was issued to William Thornton and John H. Hall for a breech-loading rifle (flint-lock). This was the first breech-loading arm manufactured in this country. Col. John H. Hall, the inventor, was from North Yarmouth, Maine, formerly a part of Massachusetts, and at least one beautiful fowling-piece made by him is known to exist. (In the author's collection.)

During Supt. Stubblefield's administration at Harper's Ferry, about 1816, the government having concluded to adopt the gun into its service, Col. Hall was sent there to superintend its manufacture. Two buildings on "The Island" up the river were set apart for him, and he continued making the Hall rifle in those shops until 1840, when he moved to Missouri. After this period, other buildings were erected on the same island for the manufacture of the "Yerger Rifle," but the place retained the name of "Hall's Works," by which it was known in Hall's time. No fighting or attempt to hold prisoners occurred there during the John Brown raid in 1859.

Hall's is the first patent recorded, and the evidence, sustained by the records of the Ordnance Bureau, prove that John H. Hall was the inventor of the first breech-loading arm receiving attention from the government. In a letter addressed to Col. Bomford of the Bureau of Ordnance dated January 24, 1815, Hall writes:

"I invented the improvement in 1811, being at that time but a little acquainted with rifles, and being perfectly ignorant of any method whatever of loading guns at the breech."

He at a later date suggested the manufacture of 1000 of his patent rifles. Official records indicate that in 1816, 100 of these arms were made and issued to a company of riflemen, and that the reports thereon were favorable. In 1825 two companies of U. S. troops, stationed at Fortress Monroe, were armed with Hall's rifles, and were using the same in 1827, during which year 2000 more were completed.

There is evidence the rifle was used successfully in the Black Hawk and Seminole wars, also in the Mexican War, and while not generally known, it is a fact quite a number were used in the Civil War.
Case No. 15.

Carbines Used in the Civil War, 1861-1865.


230 Smith's Breech-loading Rifled Carbine, cal. .52 Rubber cartridge. Barrel connected with butt by a hinge below and held by a long spring on top of the barrel. Spring lifted by a lever in front of the trigger. G. Smith's patent, No. 15,496, Aug. 5th, 1856. Marked, "AMERICAN ARMS CO., CHICOPEE FALLS, MASS." 30,062 purchased by the government during the Civil War.

231 "Perry" Confederate Breech-loading Rifled Carbine, cal. .52 Paper cartridge, brass breech-block, similar construction as the "Burnside" heavy barrel.


233 Starr's Breech-loading Rifled Carbine, cal. .54 Paper cartridge. E. S. Starr's patent, No. 21,523, Sept. 14th, 1858. Marked, "STARR ARMS CO., YONKERS, NEW YORK." 25,603 purchased by the United States government during Civil War.


Hall's Breech-loading Carbine, cal. .52  Col. John H. Hall's patent, with North's improvement, by which the lock is held closed by a side lever instead of an under-catch. The original catch was liable to catch in the clothing, etc., and open the breech accidentally. A soldier might carelessly blow off his thumb. Marked, "S. NORTH, MIDDLETOWN, CONN., 1847."

Sharps' Model, Breech-loading Carbine, cal. .54  Paper cartridge. Brass-mounted. This carbine, known as the "Richmond Carbine" and as the "Confederate Sharps," is one of many made in 1862 and '63 by S. G. Robinson, Richmond, Va. Made for the Confederate government after the Sharps model. During the siege of Richmond buried uncased by the Confederates, and dug up and sold by the Federal government.

Note. Confederate-made arms are usually brass-mounted.


Note.—Sharps' arms were used in United States Army as early as 1846, in the Mexican War, and were the first carbines to replace the discarded "Hall."

Merrill's Breech-loading Rifled Carbine, cal. .54  Paper cartridge. Brass-mounted. J. H. Merrill's patent. No. 20,954, July 20th, 1858; Nos. 32,032, 32,033, April 9th, 1861; No. 32,451, May 28th, 1861, and No. 33,536, Oct. 22d, 1861. Breech closed by a plunger connected to a lever on top of barrel, hinged at its rear. Resembles the Jenks Navy Carbine already described. Has no cartridge extractor, cartridge being entirely consumed. Copper face on the end of plunger to act as a gas check and seat the cartridge without exploding it. Marked, "J. H. MERRILL, BALTIMORE, MD." 14,495 purchased by the United States government during Civil War.
EXHIBIT J. REVOLUTIONARY SWIVEL IRON CANNON.

Length 28 inches, bore 1\(\frac{1}{4}\) inches. Has the English crown on it. Taken off one of the war-vessels in the British fleet at Charleston, S. C., during the Revolutionary War.
COLLECTION OF FIRE-ARMS

Case No. 16.

CARBINES USED IN THE CIVIL WAR, 1861-1865.

241 Remington's Breech-loading Rifled Carbine, cal. .56 Metallic cartridge, rim fire. Joseph Rider's patents, No. 40,887, Dec. 8th, 1863 (reissued May 3d, 1864), and No. 45,123, Nov. 15, 1864. Marked, "REMNONT ARMS CO., ILION, N. Y."

242 Maynard's Breech-loading Rifled Carbine, cal. .50 Metallic cartridge, fired with a percussion cap. The cartridge has a large, wide head, with a small hole admitting the fire from the cap when fired. Dr. Edward Maynard's patents, No. 8126, May 27, 1851, and No. 26,364, Dec. 6th, 1859. Marked, "MASSACHUSETTS ARMS CO., CHICOPEE FALLS, MASS." 20,002 purchased by the United States government during Civil War.


244 Warner's Breech-loading Rifled Carbine, cal. .50 Metallic cartridge, rim fire. Brass frame. Breech-block hinged to the right side and fastened when closed by a catch on opposite side. Has extractor operating separately by a slide under the barrel, similar to the Ballard. James Warner's patents, No. 41,732, Feb. 23d, 1864, and No. 45,660, Dec. 27th, 1864. Marked, "JAMES WARNER, SPRINGFIELD, MASS." 4001 purchased by the United States government during the Civil War. Rare.

245 Triplett & Scott's Breech-loading Rifled Carbine, cal. .50 Metallic cartridge, rim fire. Is a magazine carbine. Loads from front of butt; barrel revolves on an axis parallel to the barrel, until it opens magazine, and loads. Extractor is worked by the rotation of the barrel. Louis Triplett's patent, No. 45,361, Dec. 6th, 1864. Marked, "MERIDEN MFG. CO., MERIDEN, CONN." A few were used by the United States government in Civil War.

Note.—Also called Scott & Triplett's carbine.

246 Ball's Breech-loading Rifled Carbine, cal. .56 Metallic cartridge, centre fire. A magazine gun. Breech-block is so made that when once closed, it can not be opened until hammer is down. Operated by a lever underneath. Magazine is under the barrel, loads at rear. Albert Ball's patent, No. 38,935, June 23d, 1863.
UNITED STATES CARTRIDGE CO.

(reissued); also No. 43,827, Aug. 16th, 1864. Marked, “E. G. LAMSON ARMS CO., WINDSOR, VT.” 1002 purchased by the United States government during Civil War.


Ball’s Breech-loading Rifled Carbine, cal. .56 See No. 246.


Spencer Repeating (Magazine) Rifled Carbine, cal. .56 Metallic cartridge. C. M. Spencer’s patent, No. 27,393, March 6, 1860. Has a thin, removable steel loading-chamber, which can be taken out and reloaded. Marked, “SPENCER REPEATING RIFLE CO., BOSTON, MASS.” 94,156 purchased.

Burnside’s Breech-loading Rifled Carbine, cal. .54 Metallic cartridge, fired with a percussion cap. Movable chamber pivoted in front under the barrel. In closing, the breech-block has a forward movement, pushing the cartridge, which is tapering, into the barrel. Center fire, the brass cartridge being perforated in the center of base, exploded by the fire of a percussion cap. A. F. Burnside’s patent, No. 14,491, March 25th, 1856. Made by the Burnside Rifle Co., Providence, R. I. 55,567 purchased by the U. S. government during Civil War.
EXHIBIT K. BRASS HOWITZER.

Length 30 inches, bore 3 inches. It is authentically stated that this howitzer was in service in the Mexican War and did good work at the battle of Vera Cruz, March 23 to 26, 1847. From A. Gerald Hull's collection, Saratoga, N. Y.
Case No. 17.

CARBINES USED IN THE CIVIL WAR, 1861-1865.

255 Wesson's Breech-loading Rifled Carbine, cal. .44 Metallic cartridge, rim fire. Franklin Wesson's patents, No. 25,926, Oct. 25, 1859, and No. 36,925, Nov. 11, 1862. The rear of barrel tilts up for loading, being hinged to the stock below. No extractor. Barrel held closed by a spring catch. 151 purchased by the United States government during the Civil War. By some means this carbine fell into the hands of the Indians. History as given by Buckskin Joe: "I, with Tanning Iron and Tanning Hoe, while hunting on the Middle Fork of the Flat Head River, I found a large Indian tepee, snowed up. I dug the snow off, and there were two Indian bucks and one squaw. They were frozen stiff. I think they got there, and got snowed in, and starved to death. I took the rifle from the tepee, Nov. 23, 1889. Signed, Buckskin Joe, hunter, trapper, and guide." The stock is ornamented with brass tacks.

256 Sharps & Hankins' Breech-loading Rifled Carbine, cal. .56 Metallic cartridge, rim fire. Christian Sharps' patent, No. 22,753, Jan. 25th, 1859. Operated by a lever underneath the barrel. Depressing the lever moves the barrel forward for insertion of the cartridge. Marked, "SHARPS & HANKINS, PHILADELPHIA. PA." Used in the Civil War by Union troops.

257 Ball's Breech-loading Rifled Magazine Carbine, cal. .56 Metallic cartridge, center fire. (See No. 246 for description.)

258 Sharps' Breech-loading Shot-gun, cal. .70 C. Sharps' patent. Can be loaded as breech-loader or muzzle-loader. Marked, "SHARPS RIFLE CO., HARTFORD, CONN."


260 Sharps' Breech-loading Rifled Carbine, cal. .52 Paper cartridge, with coffee-mill attachment in the butt of the stock. Christian Sharps' patent, No. 5763, Sept. 12th, 1848. Made by Sharps Rifle Co., Hartford, Conn. Used in the Confederate Army during Civil War. Coffee-mill in the butt of the stock for the soldier to grind his coffee. Very few of them were made. During the Civil War this carbine was captured with many
others by the United States. The United States government sent about 4000 Sharps rifles and carbines to Sharps’ rifle factory at Hartford, Conn., to be repaired, and this carbine was found among the lot.


262 Austrian Carbine, cal. .75 Percussion. A worthless arm, purchased in large quantities by the United States government in the beginning of the Civil War, at an average price of about $16 each. Issued to cavalry and soon discarded.

263 English Carbine, cal. .577 Percussion. Has nipple protector, held by chain fastened to guard-bow. Swivel ramrod. Iron-mounted. Marked, “BARNETT, LONDON.” This arm was used on both sides in the Civil War. Taken from a blockade runner captured off Cuba in 1861.


265 Confederate Carbine, cal. .58 Percussion. Swivel ramrod. Brass-mounted. On the lock in rear of hammer is stamped Confederate flag; in front of hammer, “COOK & BROTHER” “ATHENS GA.” and “2719” in one line; under the name, “1864.”

Note.—This arm was known as Cook’s Musketoon.

266 Confederate Carbine, cal. .58 Percussion. Stamped on the lock “CS” “RICHMOND, VA” “1864” Relic of Civil War.


268 Peabody Martini Breech-loading Rifled Carbine, cal. .45 Hammerless metallic cartridge. Marked, “PROVIDENCE TOOL CO., PROVIDENCE, R. I.” 600,000 Peabody arms made for the Turkish government, 1873.

Note.—The “Peabody” system, appropriated by the English, to which was added the device of the Swiss, Martini, was rechristened, with the addition of the “Henry” rifling, the “Martini Henry” (1875-1890).
EXHIBITS L AND M. PAIR OF SIGNAL-GUNS.

Length 23½ inches, bore 3 inches. From the old whaling ship "New England." In 1841 this noted whaler sailed from New London to the whaling grounds in the neighborhood of Greenland, and remained in service until 1860. These guns were used for salutes, on entering ports or passing friendly vessels, and for guiding back the harpoon crew in case they might be out of sight of the whaler. It was not an infrequent occurrence that the harpoon crew were swept out of sight in pursuing the monsters of the deep. But the crew were almost invariably sure of being guided back by the signal-gun, which was fired from time to time on shipboard.
18. 
Breech-loading Rifles.


270 Colt’s Revolving Breech-loading Rifle (with saber bayonet). (See No. 269.)


276 Colt’s Breech-loading Revolving Rifle, cal. .38 (Sporting rifle.) Six shots. Altered to metallic cartridge, center fire, with extractor. Marked, “COLT’S FIRE-ARMS MFG. CO., HARTFORD, CONN.”

277 Colt’s Breech-loading Revolving Rifle, cal. .36 (See No. 276.)

278 Colt’s Breech-loading Revolving Carbine, cal. .36 (See No. 276.)

279 Sharps’ Breech-loading Rifled Carbine, cal. .52 Percussion. Linen cartridge. Maynard primer-lock. Patented 1845. The cartridge was inserted whole, the block in rising shearing off its base by the sharp edge of its face. Cartridge was fired by exploding a primer. Made by Sharps Rifle Co., Hartford, Conn.

Case No. 19.

Repeating Arms.


283 Brown Breech-loading Rifled Bolt Carbine, cal. .44 Metallic cartridge. Marked, "BROWN MFG. CO., NEWBURYPORT, MASS."

284 Boyington Breech-loading Rifle, cal. .50 Percussion. Cylinder holds one cartridge and is revolved by a lever. Proving a failure, no more were made. John Boyington, South Coventry, Conn., in 1845.


286 Jennings’ Repeating Flint-lock Gun, cal. .54 Three shots. Loads at muzzle, one charge over the other. Lock slides from one vent to the others. Skeleton stock, ornamented with silver. Marked, "L. JENNINGS, NEW YORK."

287 Henry Magazine Rifle, cal. .44 Tyler Henry’s patent, improved; patent reissued. Loading at side. Marked, "NEW HAVEN ARMS CO., NEW HAVEN, CONN."


Note.—Tyler Henry was a first-class workman of many years’ experience. Employed back in the forties by Robbins & Lawrence, Windsor, Vt., he conceived the ideas embodied in this arm: the difference between the Henry and Winchester,
which came out later, consists mainly in the manner of charging the magazine. The Winchester loaded at the rear, the magazine having a hinged lid. The Henry has a movable muzzle section, similar to the Volcanic.


290 Jennings’ Improved Repeating Breech-loading Rifle, cal. .54 See below for patent and description.


292 Model of 1819, United States Flint-lock Rifle (with bayonet), cal. .54 Altered to a repeating rifle. Four shots. Marked, “S. NORTH, MIDDLETOWN, CONN., 1822.”

Note.—Erroneously called “North’s Rifle.” Has stamped on the barrel, as required by United States government, letters “U. S.” and inspector’s initials “A. H.” The steel-covered patch-box was original.

There were manufactured at the two National Armories for the year ending September, 1842, 16,295 muskets. Some progress had been made in providing models and in the fabrication of parts of percussion arms. The Armories had been placed under the immediate direction of ordnance officers—a change afterward sanctioned by law. Repairs being deemed necessary at both Armories the majority of the help were discharged, 60 to 100 men being retained at Harper’s Ferry to finish up some carbines.

74
EXHIBIT N. OLD IRON CANNON.

Length 34 inches, bore 2 inches. This cannon was taken from a blockade runner which was captured by the United States steamer "Resolute," July 25, 1861.
Case No. 20.

MAGAZINE AND REVOLVING RIFLES.

293 Roper Revolving Breech-loading Shot-gun, cal. .64 Four shots. S. H. Roper's patent, No. 53,881, April 10th, 1866. Marked, "ROPER REPEATING ARMS CO., AMHERST, MASS."


Note.—Known as the “Paterson.” (See “Paterson” revolver, No. 698.)


296 Breech-loading Rifle, cal. .44 Percussion. Paper cartridge. Has cylinder, with one chamber turning one quarter round, on an axis vertical to the barrel, to load.


299 English "Minié” Musket, cal. .702 Percussion, altered to "Snider” breech-loader. This gun, in its original form, was the forerunner of the “Enfield.”

300 English "Enfield” Musket, cal. .577 Percussion, altered to "Snider” breech-loader, firing the “Boxer” cartridge (metallic). Stamped on the lock, “TOWER” “1861.”


UNITED STATES CARTRIDGE CO

8210, July 18th, 1851. Marked, "P. W. PORTER, NEW YORK."


304 Swiss Telescope Breech-loading Magazine Rifle, cal. .38 Percussion. Holds eight steel shells, each having a cone for percussion cap. Loaded on right side. Globe-sights. On frame is stamped “KELLER A. ADRAU.” On plate is stamped “TEAN LIVIC.”

Few breech-loading arms other than the “Hall” were tried or used up to the commencement of the Civil War. Among the principal ones were the Sharps, Burnside and Spencer, of which a few were issued to troops between 1845 and 1860. The Maynard was also issued, but not to any extent. In 1857 the Burnside was approved by an Army Board convened at West Point. They were of the opinion, however, that the breech-loader was not perfected, and were unfavorably inclined to its adoption. At the outbreak of the Rebellion the Ordnance Bureau was unable to supply the demand for arms, and everything serviceable was purchased.

The appended list shows the number of breech-loading arms purchased during the war:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1,059</td>
<td>Ballard</td>
<td>3,520</td>
</tr>
<tr>
<td>1,002</td>
<td>Ball</td>
<td>11,261</td>
</tr>
<tr>
<td>55,567</td>
<td>Burnside</td>
<td>14,495</td>
</tr>
<tr>
<td>9,342</td>
<td>Cosmopolitan</td>
<td>892</td>
</tr>
<tr>
<td>22,728</td>
<td>Gallagher</td>
<td>20,002</td>
</tr>
<tr>
<td>1,052</td>
<td>Gibbs</td>
<td>1,001</td>
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<td></td>
<td>20,000</td>
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<tr>
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<td>80,512</td>
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<td>94,136</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25,603</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4,001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>151</td>
</tr>
</tbody>
</table>
PRIVATE ARMORIES.

The National Armories at Springfield, Mass., and Harper's Ferry, Virginia, having been established, Congress in 1808 enacted a standing law requiring the annual payment from the U. S. Treasury of $200,000 for the six Private Armories which were established that year. From among the most prominent gunmakers were selected: Asa Waters, of Sutton (now Millbury), Mass.; Simeon North, of Middletown, Conn.; Nathan Starr, of Middletown, Conn.; Eli Whitney, of Whitneyville (near New Haven), Conn.; Henry Derringer, of Philadelphia, Pa.; and Lemuel Pomeroy, of Pittsfield, Mass.

Contracts were issued to them for a term of years, which were renewed from time to time, until 1840.

These Private Armories were regarded as permanent, having been publicly recognized by the government as a part of the United States force for the supply of arms. In 1845, when the last contracts expired, the whole system was broken up, without notice. The contractors were paid but little above the actual cost of making similar arms at the National Armories. The armorers at Springfield and the Ferry being paid by the day, had no motive to invent labor-saving machinery; the contractors were therefore obliged to make discoveries and improvements to increase their profit. Naturally, while very few inventions of importance were ever made at Springfield or the Ferry, a great many were brought out in the Private Armories.

The six Private Armories assured, the government proceeded to issue contracts for arms to supply the militia. The first contractors were:

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Date of Contract, 1808</th>
<th>Number Delivered Dec., 1812</th>
</tr>
</thead>
<tbody>
<tr>
<td>W. &amp; I. I. Henry</td>
<td>Pennsylvania</td>
<td>June 30</td>
<td>5754</td>
</tr>
<tr>
<td>Goetz &amp; Westphal</td>
<td>Pennsylvania</td>
<td>July 13</td>
<td>1381</td>
</tr>
<tr>
<td>John Miles</td>
<td>New Jersey</td>
<td>July 20</td>
<td>6793</td>
</tr>
<tr>
<td>Winner, Nipples &amp; Co.</td>
<td>Pennsylvania</td>
<td>July 20</td>
<td>5100</td>
</tr>
<tr>
<td>Waters &amp; Whitmore</td>
<td>Massachusetts</td>
<td>Sept. 8</td>
<td>2000</td>
</tr>
<tr>
<td>Ethan Stillman</td>
<td>Connecticut</td>
<td>Sept. 14</td>
<td>1675</td>
</tr>
<tr>
<td>Daniel Gilbert</td>
<td>Massachusetts</td>
<td>Oct. 13</td>
<td>4125</td>
</tr>
<tr>
<td>French, Blake &amp; Kingsley</td>
<td>Massachusetts</td>
<td>Oct. 20</td>
<td>1825</td>
</tr>
<tr>
<td>I. &amp; C. C. Barstow</td>
<td>New Hampshire</td>
<td>Oct. 21</td>
<td>875</td>
</tr>
<tr>
<td>Wheeler &amp; Morrison</td>
<td>Virginia</td>
<td>Oct. 21</td>
<td>2375</td>
</tr>
<tr>
<td>Oliver Bidwell</td>
<td>Connecticut</td>
<td>Oct. 25</td>
<td>3250</td>
</tr>
<tr>
<td>O. &amp; E. Evans</td>
<td>Pennsylvania</td>
<td>Oct. 25</td>
<td>2040</td>
</tr>
<tr>
<td>Stephen Jenks &amp; Son</td>
<td>Rhode Island</td>
<td>Oct. 25</td>
<td>1700</td>
</tr>
<tr>
<td>R. &amp; C. Leonard</td>
<td>Massachusetts</td>
<td>Oct. 29</td>
<td>2875</td>
</tr>
<tr>
<td>A. &amp; P. Bartlett</td>
<td>Massachusetts</td>
<td>Oct. 31</td>
<td>1000</td>
</tr>
<tr>
<td>Rufus Perkins</td>
<td>Massachusetts</td>
<td>Oct. 31</td>
<td>2300</td>
</tr>
<tr>
<td>I. I. &amp; N. Brooke</td>
<td>Pennsylvania</td>
<td>Nov. 1</td>
<td>2743</td>
</tr>
<tr>
<td>W. &amp; H. Shannon</td>
<td>Pennsylvania</td>
<td>Nov. 9</td>
<td>2899</td>
</tr>
<tr>
<td>Sweet, Jenks &amp; Sons</td>
<td>Rhode Island</td>
<td>Nov. 13</td>
<td>2750</td>
</tr>
</tbody>
</table>
Case No. 21.

Telescope and Sporting Rifles.

305  "Ruggles'" Rifle, cal. 52 Percussion. Hammer is on under side of barrel. Marked, "RUGGLES, STAFFORD HOLLOW, CONN.," about 1830.


Note.—A lot of these old rifles were purchased and used by the Confederate government.

310  "Kentucky" Flint-lock Rifle, cal. 45 Long octagon barrel. Brass-mounted. Fancy patch-box. Finely engraved. Marked, "GEORGE GOULCHER." This rifle was once the property of an Indian by the name of Abram Antoine, who was chief of the Stockbridge tribe of Oneida Indians, New York State. He was a bad man, and killed many white people in his day with this rifle, in the vicinity of Morrisville, N. Y., from 1800 to 1822. The last white man he killed was a Mr. Jacobs, for which he was captured and hanged in 1823 in the village of Morrisville, N. Y. His daughter Mary was hanged five miles from Morrisville, in the village of Peterboro, for murdering a man before Antoine himself was hanged. The rifle was broken when Antoine was captured. It was repaired by putting a rib under the barrel. The rifle has been owned and used by many since Antoine was captured and hanged.

311  Indian Chief's Flint-lock Rifle, cal. 45 Heavy octagon barrel, finely engraved. Silver-mounted. Marked, "H. E. LEMAN,
LANCASTER, PA.” Picked up on the battle-field of Wounded Knee Creek, near Pine Ridge, S. D., after the fight, Dec. 29th, 1890, by a member of Troop “A,” 7th U. S. Cav., stationed at Fort Riley, Kan.

312 Telescope Rifle, cal. .52 Percussion. Heavy octagon barrel, having a false muzzle (protecting barrel and telescope), which has been removed in photograph to show its construction. Made for Berdan Sharpshooters by R. A. Moore, Courtland Street, New York. The rifle belonged to Captain Isaac P. Judson of New York, who was an expert rifleman, and belonged to the Berdan Sharpshooters. He used this rifle at Hampton Roads, Va., as well as in many other battles during the Civil War.


ARSENALS AND DEPOTS IN UNITED STATES IN 1822.


In 1841 the arsenals in the United States were nineteen in number, as follows:

Alleghany, Apalachicola, Augusta, Baton Rouge, Champlain, Detroit, Fort Monroe, Frankford, Kennebec, Mt. Vernon (Ala.), Pikesville (N. C.), Rome (N. Y.), St. Louis, Washington, Watertown, Watervliet, Harper’s Ferry and Springfield. There were five ordnance depots: Charleston, New York, Palatka, Rock Island and Tampa Bay.
COLLECTION OF FIRE-ARMS

ARMS MADE AND REPAIRED AT THE U. S. ARMORY AT SPRINGFIELD, MASS., FROM ITS ESTABLISHMENT TO THE CLOSE OF THE YEAR 1848.

<table>
<thead>
<tr>
<th>Year</th>
<th>Muskets.</th>
<th>Year</th>
<th>Muskets.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1795</td>
<td>245</td>
<td>1822</td>
<td>13,200</td>
</tr>
<tr>
<td>1796</td>
<td>835</td>
<td>1823</td>
<td>14,070</td>
</tr>
<tr>
<td>1797</td>
<td>1,028</td>
<td>1824</td>
<td>14,000</td>
</tr>
<tr>
<td>1798</td>
<td>1,434</td>
<td>1825</td>
<td>15,000</td>
</tr>
<tr>
<td>1799</td>
<td>4,595</td>
<td>1826</td>
<td>15,500</td>
</tr>
<tr>
<td>1800</td>
<td>5,304</td>
<td>1827</td>
<td>14,505</td>
</tr>
<tr>
<td>1801</td>
<td>3,205</td>
<td>1828</td>
<td>15,560</td>
</tr>
<tr>
<td>1802</td>
<td>4,358</td>
<td>1829</td>
<td>15,500</td>
</tr>
<tr>
<td>1803</td>
<td>4,775</td>
<td>1830</td>
<td>16,480</td>
</tr>
<tr>
<td>1804</td>
<td>3,306</td>
<td>1831</td>
<td>16,200</td>
</tr>
<tr>
<td>1805</td>
<td>3,535</td>
<td>1832</td>
<td>16,370</td>
</tr>
<tr>
<td>1806</td>
<td>2,018</td>
<td>1833</td>
<td>12,400</td>
</tr>
<tr>
<td>1807</td>
<td>5,602</td>
<td>1834</td>
<td>14,160</td>
</tr>
<tr>
<td>1808</td>
<td>5,870</td>
<td>1835</td>
<td>13,000</td>
</tr>
<tr>
<td>1809</td>
<td>1,876</td>
<td>1836</td>
<td>13,520</td>
</tr>
<tr>
<td>1810</td>
<td>600</td>
<td>1837</td>
<td>14,500</td>
</tr>
<tr>
<td>1811</td>
<td>602</td>
<td>1838</td>
<td>15,000</td>
</tr>
<tr>
<td>1812</td>
<td>12,020</td>
<td>1839</td>
<td>10,000</td>
</tr>
<tr>
<td>1813</td>
<td>10,140</td>
<td>1840</td>
<td>15,969</td>
</tr>
<tr>
<td>1814</td>
<td>0,926</td>
<td>1841</td>
<td>10,720</td>
</tr>
<tr>
<td>1815</td>
<td>9,585</td>
<td>1842</td>
<td>9,720</td>
</tr>
<tr>
<td>1816</td>
<td>7,279</td>
<td>1843</td>
<td>4,000</td>
</tr>
<tr>
<td>1817</td>
<td>7,199</td>
<td>1844</td>
<td>4,700</td>
</tr>
<tr>
<td>1818</td>
<td>13,015</td>
<td>1845</td>
<td>11,027</td>
</tr>
<tr>
<td>1819</td>
<td>12,000</td>
<td>1846</td>
<td>14,265</td>
</tr>
<tr>
<td>1820</td>
<td>13,200</td>
<td>1847</td>
<td>14,310</td>
</tr>
<tr>
<td>1821</td>
<td>13,000</td>
<td>1848</td>
<td>11,250</td>
</tr>
</tbody>
</table>

Cost of the workmanship of a musket complete in 1819 at Springfield:
Cost of manufacturing barrel......................$1.31
Cost of manufacturing lock..........................2.10
Cost of mountings, with rod and bayonet.........1.50
Cost of stocking and finishing...................1.66
$6.57

Expense of workmanship and materials, or musket complete:
20 lbs. iron, @ 8c..................................$1.60
3 lbs. steel, @ 16c...............................0.48
Rough stock........................................0.30
Coal.................................................1.00
Files..................................................0.20
Labor................................................6.57
Wear of tools and machinery......................1.00
$12.40

Each workman stamps his work, and each inspector of it his.

STATEMENT OF ARMS MANUFACTURED AT THE SPRINGFIELD ARMORY DURING THE CIVIL WAR.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>Cost Each.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1861</td>
<td>13,802</td>
<td>$13.11</td>
</tr>
<tr>
<td>1862</td>
<td>102,410</td>
<td>11.81</td>
</tr>
<tr>
<td>1863</td>
<td>217,784</td>
<td>10.69</td>
</tr>
<tr>
<td>1864</td>
<td>276,200</td>
<td>10.69</td>
</tr>
<tr>
<td>1865</td>
<td>195,341</td>
<td>14.12</td>
</tr>
</tbody>
</table>

805,537 $11.70—Average.
Case No. 22.

Indian Rifles. Some of these Rifles were Captured and Others Surrendered by Hostile Indians (Sioux and Cheyenne) soon after the Custer Massacre, June 26, 1876, on the Little Bighorn River, Wyoming Territory.


316 Indian Rifle, cal. .54 Percussion. Octagon barrel, maple stock; broken, repaired with rawhide; much worn. Marked, "H. E. LEMAN, LANCASTER, PA."

317 Indian Rifle, cal. .52 Percussion. Octagon barrel, maple stock, with a bullet-hole through the butt near the patch-box. Brass-mounted, and ornamented with brass tacks. Marked, "H. E. LEMAN, LANCASTER, PA."

318 Indian Rifle, cal. .50 Percussion. Set (hair) trigger, octagon barrel, black walnut stock; broken, and repaired with rawhide. Iron-mounted, ornamented with brass tacks. Marked, "J. HENRY & SON."


320 Indian Rifle, cal. .52 Percussion. Set or hair trigger, octagon barrel, walnut stock, ornamented with brass tacks and rawhide; in very good order. Marked, "J. HENRY & SON."


322 Indian Rifle, cal. .54 Percussion. Octagon barrel, maple stock; much worn; ornamented with brass tacks; butt of the stock nearly covered with rawhide. Brass-mounted. Marked, "H. E. LEMAN, LANCASTER, PA."

Case No. 23.

Indian Rifles. Some of these Rifles were Captured and Others Surrendered by Hostile Indians (Sioux and Cheyenne) soon after the Custer Massacre, June 26, 1876, on the Little Bighorn River, Wyoming Territory.


326 Indian Rifle, cal. .50 Percussion. Octagon barrel, maple stock; worn; has been broken, and repaired with rawhide. Marked, “H. E. LEMAN, LANCASTER, PA.”


Note.—This name also occurs “J. GOLCHER.”


331 Indian Rifle, cal. .52 Percussion. Octagon barrel; patch-box; maple stock, broken, and repaired with rawhide. Brass-mounted. Stock much worn, and ornamented with brass tacks. Marked, “G. GOLCHER.” Nearly all of the Indian rifles are ornamented with brass-headed tacks. Popular belief is that each tack represented a soldier, settler or white woman killed.

Case No. 24.

Breech-loading Rifles used in the Civil War. Mauser Rifles Captured by United States Troops During the War with Spain.

333 “Greene’s” Bolt Breech-loading Rifle (with bayonet), cal. .535 Paper cartridge. Hammer underneath barrel. The cartridges had the bullets in the rear, so that there were always two bullets in the gun when loaded, the rear bullet acting as a gas-check. A wind-gauge slide on the rear sight. Barrel has elliptical bore. J. D. Greene’s patent, No. 18,634, Nov. 17th, 1857. Marked, “GREENE at MILLBURY, MASS.”


335 German Breech-loading Rifle, cal. .54 Has four-edged bayonet. Metallic cartridge. Marked, “LORRIN SHUTZ.” Civil War relic, Confederate Army.


337 Berdan Breech-loading Rifle (with bayonet), cal. .50 COLT’S FIRE-ARMS MFG. CO., HARTFORD, CONN., made 30,000 for Russia in 1869.


**CARTRIDGES FOR SMALL ARMS, 1839.**

<table>
<thead>
<tr>
<th>Kind</th>
<th>Diameter, Inches</th>
<th>Number in One Pound</th>
<th>Weight, Grains</th>
<th>Ratio of Weight of Ball to Balls, Grains</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musket</td>
<td>.64</td>
<td>18</td>
<td>130</td>
<td>1-3rd</td>
<td>Powder</td>
</tr>
<tr>
<td>Musketoon</td>
<td>.64</td>
<td>18</td>
<td>85</td>
<td>2-9ths</td>
<td></td>
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<tr>
<td>Hall’s Carbine</td>
<td>Musket Calibre</td>
<td>.64</td>
<td>18</td>
<td>93</td>
<td>1-5th</td>
</tr>
<tr>
<td>Hall’s Carbine</td>
<td>Rifle Calibre</td>
<td>.525</td>
<td>32</td>
<td>93</td>
<td>1-3rd</td>
</tr>
<tr>
<td>Hall’s Rifle</td>
<td>.525</td>
<td>32</td>
<td>100</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Common Rifle</td>
<td>.525</td>
<td>32</td>
<td>100</td>
<td>90</td>
<td></td>
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<tr>
<td>Pistol</td>
<td>.525</td>
<td>32</td>
<td>50</td>
<td>45</td>
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</tbody>
</table>

**DIMENSIONS OF CARTRIDGES, 1840.**

<table>
<thead>
<tr>
<th>Kind of Cartridge</th>
<th>Length, Inches</th>
<th>Kind of Cartridge</th>
<th>Length, Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musket</td>
<td>2.37</td>
<td>Musketoon</td>
<td>2.18</td>
</tr>
<tr>
<td>Buck and Ball</td>
<td>2.55</td>
<td>Ball and Buck</td>
<td>2.43</td>
</tr>
<tr>
<td>Buckshot</td>
<td>2.75</td>
<td>Buckshot</td>
<td>1.39</td>
</tr>
<tr>
<td>Blank</td>
<td>1.83</td>
<td>Blank</td>
<td>2.5</td>
</tr>
<tr>
<td>Ball</td>
<td>1.81</td>
<td>Ball</td>
<td>1.9</td>
</tr>
<tr>
<td>Carbine</td>
<td>2.31</td>
<td>Blank</td>
<td>1.68</td>
</tr>
<tr>
<td>Musket</td>
<td>1.32</td>
<td>Ball</td>
<td>1.12</td>
</tr>
<tr>
<td>Buck and Ball</td>
<td>2.31</td>
<td>Blank</td>
<td></td>
</tr>
<tr>
<td>Buckshot</td>
<td>1.32</td>
<td>Blank</td>
<td></td>
</tr>
<tr>
<td>Blank</td>
<td>2.1</td>
<td>Blank</td>
<td></td>
</tr>
<tr>
<td>Rifle</td>
<td>1.58</td>
<td>Blank</td>
<td></td>
</tr>
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</table>
**Collection of Fire-Arms**

Arms Made and Repaired at the U. S. Armory at Harper's Ferry, Va., from Its Establishment to the Close of the Year 1848.

<table>
<thead>
<tr>
<th>Year</th>
<th>Pattern Muskets</th>
<th>Pattern Rifles</th>
<th>Pattern Pistols</th>
<th>Wall Pieces</th>
<th>Harpoon Guns</th>
<th>Cannon Locks</th>
<th>Muskets</th>
<th>Rifles</th>
<th>Pistols</th>
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<th>Year</th>
<th>Muskets</th>
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<th>Model Carbines</th>
<th>Model Percussion Pistols</th>
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*Flint-lock.
Case No. 25.

United States Musketoons, American Whaling Guns, etc.

344 United States Rifled Carbine, cal. .54 Percussion. Stamped on the lock "SPRINGFIELD" "1854," and in front of the hammer an ☼ over letters "U. S." Has one band held by a bandspring. Brass tip. Stud under end of barrel; ramrod held to this stud by a swivel. Ring on rear of bow-guard. Small leaf-sight. Iron-mounted.

345 United States Model of 1842, Rifled Cavalry Musketoon, cal. .69 Percussion. Stamped on the lock "1848" "SPRINGFIELD" "U. S." and an ☼. Has ramrod held to a stud on under side of barrel by a brass chain to prevent loss when loading on horseback. Brass-mounted. Long swivel-bar, with ring, extending from rear band to rear screw of side plate. Leaf-sight. Brass sight on front strap of end band.

Note.—A rare arm. Seen in very few collections.


349A Bomb Lance, which explodes after being shot from whaling gun. Belongs to the gun described above.

350 Model of 1842, United States Smooth-bore "Musketoon" (with bayonet), cal. .69 Percussion. Stamped on the lock "1847" "SPRINGFIELD" "U. S." and an ☼. Made at the Springfield Armory in 1847.

Note.—The manufacture of Musketoons was discontinued in 1855.

Note.—Patch-box was added to musket of this model in 1859.

352 "Richards'" Double-barrel Rifle and Shot-gun; rifle cal. .35, shot-gun cal. .70 Percussion. Laminated barrels. Marked, "RICHARDS, LONDON, ENGLAND."


354 Rowe's Breech-loading Rifled Carbine, cal. .52 Percussion. Paper cartridge. A. H. Rowe's patent, No. 42,227, April 5, 1864. This patent proved to be an infringement of Richard S. Lawrence's patent, No. 8637, Jan. 6th, 1852, and was turned over to Lawrence. Marked, "A. H. ROWE, HARTFORD, CONN., 1864." The barrel rotates to the right. Has two triggers, one for cocking and the other for firing; the hammer is out of sight.

355 Cane Gun, cal. .60 Percussion. Hammer underneath barrel. Brass barrel, leather-covered. Has an extra handle, which screws onto the barrel when used as a cane.

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STATEMENT OF ORDNANCE PURCHASED IN EUROPE.

<table>
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<tr>
<th>Year</th>
<th>By Whom</th>
<th>Article</th>
<th>From</th>
<th>Price</th>
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<td>1832</td>
<td>Lieut. Daniel Tyler, by authority of War Dept.</td>
<td>Six Muskets, different models. Six Carabines, different models. Three pairs Pistols.</td>
<td>France</td>
<td>@ $35.93 @ 28.39 @ 16.40</td>
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<td>1840</td>
<td>Ordnance Board.</td>
<td>Four Muskets, different models. One Carbine. One Pistol.</td>
<td>England</td>
<td>121.50 18.50</td>
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<td></td>
<td>F. Cotterrell, New York.</td>
<td>Two Swiss Rifles.</td>
<td>Imported from Geneva</td>
<td>55.91</td>
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As in 1795, when the French "Charleville" smooth-bore musket—the highest type of its kind—was adopted as the model for the first U. S. musket made in Springfield, so again in 1840, from all of the above arms, the French arm was selected as the best arm, and the models of 1840 and 1842 patterned after it.

94
ARMS ADOPTED BY FOREIGN COUNTRIES AND IN USE 1898.

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<th>Country</th>
<th>System</th>
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<th>Cartridges in Magazine</th>
<th>Length of Barrel</th>
<th>Wt. in lbs</th>
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<td>England</td>
<td>Lee-Speed, 1891</td>
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<tr>
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<td>Mannlicher, 1892</td>
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<td>28.8</td>
<td>8.5</td>
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<tr>
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<td>Murato, 1887</td>
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<td>29.6</td>
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95
Case No. 26.

Flint-lock Fowling-pieces; Wall-pieces.


357 German Flint-lock M. L. Rifle, cal. .75 Wall-piece, very heavy. Sights on it for 800, 1200 and 1800 yards. Has hair trigger. Butt of stock cut away to rest it on shoulder when fired. Marked, "CRAUSIN, HERZBURG, GERMANY, 1818."

358 Dutch Flint-lock M. L. Gun, cal. .80 Brass-mounted. Made in Holland in the sixteenth century and brought to this country by some of the first settlers, who settled on North River, near Albany, N. Y.


360 Dutch Flint-lock Wall-piece, cal. .96 It has a spur on the barrel near the muzzle. This is used for catching it on the outer wall or edge of the porthole to check the recoil when the gun is fired. From an old fort in Amsterdam, Holland.

361 French Charleville—Flint-lock, Smooth-bore Musket, cal. .70 Engraved on the end of the lock, in rear of cock, in large letters, "U.S." On the barrel stamped "1763." Nearly twelve inches of the barrel cut off, leaving only two bands. Left side of the butt has the so-called "cheek place," allowing face to lie close to the stock. Fought with in the Revolutionary War by John Mayer, Somerset County, N. J., who was commissioned as commissary Oct. 1st, 1778. This gun and the English "Brown Bess" were the principal arms used by the Americans in the Revolution.
Case No. 27.

**FLINT-LOCK FOWLING-PIECES.**


364 Flint-lock Fowling-piece, cal. .70 Brass-mounted. No name on the lock. Was fought with in War of 1812 at Stonington.


366 Belgian Flint-lock Smooth-bore Musket, cal. .64 Stock painted red. Made at Liège, Belgium, for the Egyptian trade.

367 English Flint-lock Fowling-piece, cal. .70 Marked, "J. T. TARRANT" "LONDON." Brass-mounted.

368 Flint-lock Fowling-piece, cal. .70 Brass-mounted. Used in the Revolutionary War. From Brooklyn, Conn.

COLLECTION OF FIRE-ARMS

Case No. 28.

FLINT-LOCK FOWLING-PIECES, SINGLE AND DOUBLE BARREL.

370 Single-barrel, Percussion Fowling-piece, cal. .70 Brass-mounted.
    One of the first models of the percussion-lock.

371 English Double-barrel, Flint-lock Fowling-piece, cal. .60 Marked, "HARRIS," London. The barrels are finely made and inlaid with gold. Stock has been broken and repaired. Originally a pair of these double-barrel guns belonged to a gentleman in Berwick, England. The mate of this one was presented to the Berwick Museum, England. Very old. From George Hart, Pilgrim Street, Newcastle-upon-Tyne, England.

372 English Double-barrel, Flint-lock Fowling-piece, cal. .60 Stock is inlaid with silver. Silver-mounted. Marked, "KETLAND, LONDON."

373 Single-barrel, Flint-lock Fowling-piece, cal. .70 Engraved on the lock, "R. E. A." Brass-mounted.

374 English Double-barrel Shot-gun, cal. .70 Marked on the barrels, "A. H." Damascus twist. Finely made gun of its day. Formerly owned by Mr. Rufus King, Hartford, Conn.


376 English Double-barrel, Flint-lock, Smooth-bore Fowling-piece, cal. .60 Brass-mounted. This gun was purchased in Georgia in 1817 by Mr. Abraham Foot, and remained in his family until purchased of his daughter, Mrs. Vining, in 1893.


ARMS SOLD TO STATES BY THE U. S. GOVERNMENT.

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<td>Aug. 5, 1812</td>
<td>Delaware</td>
<td>500</td>
</tr>
<tr>
<td>Sept. 1, 1812</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Case No. 29.

**Sitting Bull's, John Brown's and Other Rifles.**

378 German Air-gun, cal. .45 With iron globe placed below the barrel. Fired by air being compressed into the globe by an air-pump. The air is allowed to escape rapidly when fired. The barrel is inlaid with gold and silver. Carved stock. Marked, "C. G. WERNER, 1752;" a gunmaker in Leipsic, 1750 to 1780.

379 Bavarian Double-barrel, Flint-lock Gun, cal. .60 Sometimes called "Up-and-Down" gun. Iron-mounted. This gun has the barrels revolving on a common axis, parallel with the stock, each barrel having a pan and battery. One lock, having one cock and a single trigger, fires both barrels, which are turned in succession until opposite the cock and in the proper position for firing, in which position they are retained by a small spring bolt, moved by a stud fixed and working upon the fore part of the trigger-bow. The date of its manufacture can be fixed early in the eighteenth century. They were originally from Bavaria. Many of them were used in the Alps.

380 Four-barrel Revolving Shot-gun, cal. .58 Percussion. Revolves by hand. No name or marks.


383 Ancient type of Flint-lock.

384 Sitting Bull's Rifle, cal. .42 Percussion. Octagon barrel. Brass-mounted. Silver patch-box. Stock is decorated with twenty-three pieces of ornamental silver. Engraved on the lock the maker's name, "J. GOLCHER." This rifle was purchased of a trader, who traded a breech-loading rifle for it with Sitting Bull.

Note.—Golcher (sometimes engraved Goulcher) was a famous rifle-maker, and made the finest Indian and "Kentucky" rifles.
Three-barrel Gun. Two barrels rifled, cal. .38; one-barrel shot-gun, cal. .70 The two rifle barrels side by side above, with two hammers on top; shot barrel between and underneath, with hammer underneath all three. Percussion.

John Brown's Breech-loading Rifle, cal. .38 Percussion. Paper cartridge. Octagon barrel. Beautifully polished, black walnut stock, with fancy patch-box. No maker's name or number on the rifle to show who made it, or where it was made. This rifle was made expressly for John Brown, who did not care to have any maker's name on it. Brown carried it on his Kansas campaign. It was afterwards presented to Charles Blair of Collinsville, Conn. Brown called at his home on the third day of June, 1859, and presented him with this rifle. Made by Maynard Gun Co., Chicopee Falls, Mass., 1856.

Sixteenth Century German Air-gun, cal. .38 The barrel is lined with brass. In the stock at the butt is a bellows, with machinery arranged to compress the air; operated with a crank or key. One of the earliest air-guns made. The manufacture of these guns was forbidden. The first improvement in this gun was an air-pump for compressing the air, in the seventeenth century.

COMPARATIVE EXPENSE OF MANUFACTURING A MUSKET.

IN 1817.

<table>
<thead>
<tr>
<th></th>
<th>Cost at Springfield Armory</th>
<th>Cost at Harper's Ferry Armory</th>
<th>Average cost</th>
<th>Contract price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$13.56</td>
<td>$14.25</td>
<td>$13.90</td>
<td>$14.00</td>
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</tbody>
</table>

IN 1821.

<table>
<thead>
<tr>
<th></th>
<th>Cost at Springfield Armory</th>
<th>Cost at Harper's Ferry Armory</th>
<th>Average cost</th>
<th>Difference, 1817 and 1821,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$12.06</td>
<td>$12.97</td>
<td>$12.51</td>
<td>1.39</td>
</tr>
</tbody>
</table>

Average cost estimated for 1822 $12.00
Contract price to be $12.00
SYSTMS USED BY FOREIGN COUNTRIES IN 1880.

The table following shows what countries had adopted the various breech-loading systems in 1880.

It is noticeable that when a foreign country overcame national prejudice and adopted a system not their own, it was invariably one of American invention:

<table>
<thead>
<tr>
<th>System</th>
<th>Country</th>
<th>Description of Breech System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albini</td>
<td>Belgium</td>
<td>Block pivoted at rear, at right angle to axis of chamber, and opening upwards and forwards.</td>
</tr>
<tr>
<td>Beaumont</td>
<td>Holland</td>
<td>Block sliding backward in receiver, on a plane with axis of chamber.</td>
</tr>
<tr>
<td>Berdan</td>
<td>Russia</td>
<td>Transformed bolt gun.</td>
</tr>
<tr>
<td>Carcano</td>
<td>Italy</td>
<td>Block sliding backward in receiver, on a plane with axis of chamber.</td>
</tr>
<tr>
<td>Chassepot</td>
<td>France</td>
<td>Block pivoted at rear, at right angle to axis of chamber, and falling forward within receiver.</td>
</tr>
<tr>
<td>Dreyse</td>
<td>Prussia</td>
<td>Block pivoted at rear, at right angle to axis of chamber, and opening upward and forward.</td>
</tr>
<tr>
<td>Mauser</td>
<td>Prussia</td>
<td>Block pivoted upon center, at right angle to axis of chamber, and falling forward.</td>
</tr>
<tr>
<td>Peabody—Martini and Martini—Henry</td>
<td>Great Britain, Turkey, Roumania</td>
<td>Block rotating upon axis at right angles to axis of chamber and opening backward.</td>
</tr>
<tr>
<td>Remington</td>
<td>Spain, Holland, Denmark, Sweden, Norway, S. Am. Republic, China</td>
<td>Block pivoted at front, at right angle to axis of chamber, and thrown upward and forward.</td>
</tr>
<tr>
<td>Springfield</td>
<td>United States</td>
<td>Block pivoted upon center, at right angle to axis of chamber, and falling forward.</td>
</tr>
<tr>
<td>Werner</td>
<td>Bavaria</td>
<td>Block rotating upon axis parallel to axis of chamber.</td>
</tr>
<tr>
<td>Werndl</td>
<td>Austria</td>
<td></td>
</tr>
</tbody>
</table>

105
Case No. 30.

FOREIGN FLINT-LOCK GUNS, ETC.

388 Model of 1763, French Flint-lock, Smooth-bore Musket, cal. .75 Engraved in script on the lock, "Manufure De Charleville." In 1795 this musket, the highest type of its kind in Europe, was selected as the model for the first arms made by the government at the Springfield Armory. This specimen was fought with by Paul Davidson of Hebron, Conn., in the Revolution.

389 Flint-lock, Smooth-bore Musket, cal. .69 Three brass bands, and brass-mounted. Stamped on the lock is the maker's name, "E. W SPIES."

390 Austrian Flint-lock Musket, cal. .75 Has long, heavy bayonet. On the lock is a safety-catch in rear of hammer.

391 Dutch Flint-lock Musket, cal. .70 Has four brass bands, and is brass-mounted. Made by TOME, Amsterdam, Holland. Engraved on plate, "W.L.I. FUND."

392 Model of 1822, United States Smooth-bore Musket. Flint-lock, altered to Percussion. Made for the United States government by W. L. Evans, VALLEY FORGE. On the stock is cut "H. A. SHAW, 79th."

393 Lindsay's Repeating Rifle, cal. .58 Percussion. Two locks, two hammers, one trigger and one barrel. Bullet of first cartridge acts as a breech for the second cartridge. Proved a failure. Only a few made at Springfield Armory in 1860. Civil War relic used in Confederate Army.

394 Minié Musket (with bayonet), cal. .69 Made at the Springfield Armory (1842). Altered to percussion in 1854.

395 German Flint-lock Musket (with bayonet), cal. .70 Three brass bands, and brass-mounted. Heavy, square-shaped butt-plate.

In 1841-42 the number of private armories in the country employed by contract was seven.

E. Pomeroy, Pittsfield, Mass., manufacturing yearly 1200 muskets.
E. Whitney, Whitneyville, Conn., " 1500 "
N. Starr, Middletown, " 1200 rifles.
H. Derringer, Philadelphia, Penn., " 1200 "
A. Waters, Millbury, Mass., " 3000 pistols.
R. Johnson, Middletown, Conn., " 3000 "
S. North, Middletown, " 2000 Hall's carbines.

Total small arms, 13,100
MODERN UNITED STATES GUNS. MODERN MAGAZINE GUNS USED IN FOREIGN COUNTRIES.

396 Model of 1893, Mannlicher (with knife bayonet), cal. 6.5 mm. (.256 inches.) Roumania. Like the German gun, has a magazine with a sliding and turning bolt. The follower is simply a lever with no swinging leaf, and the magazine has no cut-off.

397 Model of 1895, Mannlicher Rifle (with knife bayonet), cal. 8 mm. (.315 inches.) Austria. A magazine gun. The bolt is operated by a simple forward and back motion of the hand. Magazine is under the receiver. To fill it the bolt is drawn back. Cartridges can not be inserted one at a time into the magazine.

398 Model of 1890, Mannlicher Rifle (with knife bayonet), cal. 8 mm. (.315 inches.) Germany. A magazine gun. The follower is simply a lever with no swinging leaf, and the magazine has no cut-off. The bolt differs but little from the bolt of the old Mauser system. The head of the bolt does not turn.

399 Model of 1890, Lee Magazine Rifle (with knife bayonet), cal. .45 A bolt gun, with an opening the length of a cartridge in the bottom of the receiver, just in rear of the barrel. Has detachable magazine inserted from below. Has cut-off, and can be fired as a single loader.

400 Model of 1890, Mannlicher-Schonauer Rifle (with knife bayonet), cal. 6.5 mm. (.256 inches.) Portugal. A magazine gun, similar to the arm adopted by Roumania. Has a strip-off clip, using rimless cartridges, the magazine being flush with stock.

401 Model of 1883, Winchester (with bayonet), cal. .45 A repeater having three motions (as a single-loader has four). Fired by a center lock, the firing pin passing through the bolt. The magazine is charged through a hole in the side of the stock. Depressing the lever draws back the bolt and cocks the gun.

402 Model of 1890, Mauser (with saber bayonet), cal. 7.65 mm. (.301 inches.) Turkey. A bolt-gun, having magazine fixed under receiver, filled by passing cartridges through the receiver from loading-clip. Follower is practically of the Mannlicher type.

403 United States Model of 1873, Breech-loading Rifled Musket, cal. .45 In 1872 this arm, known as “Springfield, No. 99,” was selected from among over one hundred systems, tested to obtain a new breech-loading arm. This arm is similar to Model of 1870 in appearance. The caliber is reduced from .50 to .45 Barrel is steel instead of iron, as in early models. With numerous changes this arm continued in use until 1892, when the modified “Krag” was adopted and the caliber reduced to .30
U. S. MODEL OF 1903.
COLLECTION OF FIRE-ARMS

U. S. Model of 1903.

Magazine Rifle, cal. .30  This arm, to be issued to all government troops, differs in many ways from all models heretofore fabricated. The entire barrel is encased in wood, the front sight excepted. There are 90 component parts to the gun (Model of 1795 had about 35). Compared with the old flint-lock musket, which, in the hands of a "well-disciplined" soldier, could be fired three times a minute, this new rifle has been fired 23 times a minute as a single-loader (aimed shots), and 25 times a minute (aimed shots) as a magazine arm; without aiming, 27 shots as a single-loader, and 35 using magazine fire, a minute. When used as a magazine gun, it is loaded with "clips," which hold five cartridges each. The operating parts are the Bolt Mechanism and Magazine Mechanism. The bolt moves backward and forward and rotates in the well of the receiver, carries a cartridge either from the magazine, or one placed by hand in front of it, into the chamber and supports its head when fired. Pushing the bolt forward after charging the magazine ejects the "clip," which may be noticed when in position is vertical. A "cut-off" having a thumb-piece, which when turned down shows "OFF," converts the gun into a single-shooter. When turned up, the word "ON" indicates the arm is ready to be loaded from the magazine. Has front and rear sights, and rod bayonet. Upper band has stacking swivel; is held by a screw. Lower band, having swivel held by a band spring. Butt swivel plate and swivel. The bolt in this gun may be removed in a second, and thrown away, rendering the arm unserviceable. Total length of gun 43.43 inches. Weight, 8.937 pounds.
Case No. 40.

Match-lock, Wheel-lock, Snapaunce-lock and Flint-lock Pistols.

452 Seventeenth Century, Turkish Flint-lock Pistol, cal. .60 Iron-mounted. A rare old piece. From Constantinople.
453 French Flint-lock Horse Pistol, cal. .70 Trigger-guard bow gone. Brass-mounted. Wood ramrod. Marked, "LE PAGE MOUITIER, PARIS," a celebrated gunmaker, about 1665 to 1685, during the reign of Louis XIV.
454 Seventeenth Century, Turkish Flint-lock Pistol, cal. .50 Lock inlaid with gold. Silver bands, and silver crescent on the butt of stock. From Diarbekir, Turkey.
455 Seventeenth Century, Flint-lock Bell-muzzle Pistol, cal. 1 1/2 inches. Half octagon barrel. Lock and barrel finely inlaid with gold. From Erzeroum, Turkey, on river Euphrates, about 700 miles east of Constantinople, and formerly belonged to a chief or "bey."
458 Double-barrel Flint-lock Pistol, cal. .60 Carved mahogany stock, the butt representing a head. Very old and rare.
459 English Double-barrel, Flint-lock Pistol, cal. .54 Marked, "TWIGGS, LONDON." A rare specimen.
460 Russian Flint-lock Pistol, cal. at the muzzle 1 3/4 x 1 inch; so-called "oval bore." Brass-mounted. Initial of maker's name inlaid in gold; also a crown stamped on the barrel. Very old; rare arm. Purchased in Moscow, Russia.
461 Seventeenth Century, Turkish Flint-lock Pistol, cal. .50 Barrel and stock inlaid with silver. From Constantinople.
463 Foreign Flint-lock Pistol, cal. .42 Brass-mounted. Mahogany stock. Engraved on the lock "A. ANSBACH." Inlaid with gold in the top of barrel, "I. M. HAMAN."
467 | Pair Seventeenth Century Wheel-lock Pistols, cal. .50 Iron-mounted. A rare pair, showing the first improvement in firearms after the match-lock. First used about 1540. From Athens, Greece. No. 468 shows the arm cocked.

468 | Pair Sixteenth Century Snaphaunce-lock Pistols, cal. .60 Peculiarly shaped stocks, covered with ornamental brass, and finely inlaid with silver. From Constantinople.

469 | Pair Turkish Flint-lock Pistols, cal. .70 Large size. Silver bands, otherwise iron-mounted. Very finely engraved. On the-barrels is inlaid in gold “CONVNIO.” From Constantinople.

470 | Pair Seventeenth Century, Turkish Flint-lock Pistols, cal. .60 Solid silver-mounted. From Diarbekir, Turkey.

471 | Seventeenth Century, Turkish Flint-lock Pistol, cal. .50 Brass barrel and butt-plate finely embossed. Brass lock-plate. Side-plate embossed with coat-of-arms. Stock inlaid with silver star, crescent, etc. From Harpoot, south of Erzeroum, on the river Euphrates, Turkey.

472 | English Flint-lock Pistol, cal. .50 Octagon barrel. Marked, “W. MILLS, LONDON.”

473 | Flint-lock Pistol, cal. .50 All steel. Finely engraved. To the cock has been brazed the head of a percussion hammer, which fires a cap placed on a cone, or nipple, which has been brazed into the top of the barrel. Pistol is both Flint-lock and Percussion.

Note.—This pistol, seen only in a few collections, is known as the “Highlander,” a class which is all by itself. This weapon, no doubt, evolved from the German steel “dag.” Many “Highlanders” were to be found in European armies. The earliest specimens, seen only in the largest collections in foreign countries, are all steel, as is the one here exhibited. Three patterns were made. The first made has a heart-shaped butt and “snaphaunce” lock. Later the butt was fashioned claw-shape (see illustration), having a flint-lock. The latest of these pistols has a round butt.

474 | Seventeenth Century Flint-lock Pistol, cal. .60 Silver-mounted. Very old. From Madagascar.

475 | English Flint-lock Horse Pistol, cal. .60 Has an arm called a “belt-hook” on the stock opposite the lock. Brass-mounted. Engraved on the lock, “TOWER” in rear of cock; and under the ☥, the letters GR, and the ←.

476 | Pair English Flint-lock Dragoon Pistols, cal. .70 Large, heavy arms, brass-mounted.
COLLECTION OF FIRE-ARMS

482 English Flint-lock Horse Pistol, cal. .60 Octagon barrel, safety-slide on cock. Iron-mounted. Carved stock. Engraved on the lock, "SOUTHALL;" on the barrel, "LONDON."

483 English Flint-lock Horse Pistol, cal. .64 Octagon barrel. Iron-mounted. Carved stock. Marked, "JOVER, LONDON."

484 Pair English, Heavy Flint-lock Horse Pistols, cal. .60 Heavy. 
485 Brass-mounted. From London.

486 Pair English Flint-lock Horse Pistols, cal. .60 Brass-mounted.

487 Carved mahogany stocks. Engraved on the locks, "SMITH."

A table showing the diameters, in thousandths of an inch, of gun-barrels and of the leaden balls corresponding to the several gauge numbers.

<table>
<thead>
<tr>
<th>Gauge No.</th>
<th>Diameter of the bore in thousandths of an inch or the calibre</th>
<th>Diameter of the bullet in thousandths</th>
<th>Weight of lead ball in grains</th>
<th>Gauge No.</th>
<th>Diameter of the bore in thousandths of an inch or the calibre</th>
<th>Diameter of the bullet in thousandths</th>
<th>Weight of lead ball in grains</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>.988</td>
<td>.983</td>
<td>1,400</td>
<td>21</td>
<td>.632</td>
<td>.627</td>
<td>333 1/3</td>
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<tr>
<td>6</td>
<td>.920</td>
<td>.924</td>
<td>1,165 1/3</td>
<td>22</td>
<td>.627</td>
<td>.622</td>
<td>318 1/3</td>
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<tr>
<td>7</td>
<td>.880</td>
<td>.884</td>
<td>1,000</td>
<td>23</td>
<td>.615</td>
<td>.610</td>
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<tr>
<td>8</td>
<td>.848</td>
<td>.843</td>
<td>875 1/2</td>
<td>24</td>
<td>.582</td>
<td>.577</td>
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<td>.804</td>
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<td>.566</td>
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<td>.564</td>
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<td>.762</td>
<td>636 1/3</td>
<td>27</td>
<td>.562</td>
<td>.567</td>
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<td>.752</td>
<td>.747</td>
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<td>.562</td>
<td>.577</td>
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<td>.703</td>
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<td>31</td>
<td>.537</td>
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<tr>
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<td>.529</td>
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<tr>
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<td>.654</td>
<td>411 1/2</td>
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<td>388 1/2</td>
<td>34</td>
<td>.463</td>
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<td>.635</td>
<td>.630</td>
<td>355</td>
<td>35</td>
<td>.421</td>
<td>.416</td>
<td>140</td>
</tr>
<tr>
<td>20</td>
<td>.635</td>
<td>.630</td>
<td>355</td>
<td>36</td>
<td>.421</td>
<td>.416</td>
<td>109 1/2</td>
</tr>
</tbody>
</table>
COLLECTION OF FIRE-ARMS

Case No. 41.

FLINT-LOCK PISTOLS.


489 Pair English Flint-lock Horse Pistols, cal. .56 Brass barrels. brass-mounted. The original lock of one has been replaced by one made by "Goulcher." Marked, "KETLAND & CO., LONDON." Formerly owned by Col. William H. Maxwell of the English Army in 1789.

490 English Flint-lock Horse Pistol, cal. .56 Brass barrel and mounted. Engraved on lock, "RICHARDS." Fought with in the Revolutionary War by Timothy Mather, Windsor, Conn.

491 "Sharpe" Flint-lock Horse Pistol, cal. .58 Brass barrel and mounted. Stamped on the barrel, "EXTRA SHARPE PROOF"; on the lock, "SHARPE."

492 Seventeenth Century, Flint-lock Horse Pistol, cal. .50 Brass barrel, stamped "BRISTOL." Engraved on the lock, "GABBITAS."

493 English Horse Pistol, cal. .60 Percussion. Brass barrel and mounted. Marked, "HOPKINS, LONDON, ENGLAND." From battle-field of Chester Station, Va., May 10th, 1864.


495 Pair English Flint-lock Horse Pistols, cal. .64 Round barrels. Brass-mounted. Marked, "KETLAND & CO., LONDON."

496 Pair English Flint-lock Horse Pistols, cal. .60 Half octagon barrels. Iron-mounted. Marked, "W. KETLAND & CO., LONDON."

497 English Flint-lock Horse Pistol, cal. .64 Octagon barrel. Iron-mounted. Marked, "JOSH KEELEY, LONDON."

498 English Flint-lock Horse Pistol, cal. .50 Brass-mounted. Marked, "KETLAND & CO., LONDON."

499 German Flint-lock Horse Pistol, cal. .50 Brass-mounted.


Pair Belgian Flint-lock Horse Pistols, cal. .70 Brass-mounted. Made in Liège, Belgium, ©.

Pair English Flint-lock Horse Pistols, cal. .60 Brass-mounted.

Barrels slightly bell-muzzle. Engraved on the locks, “IOYNER.”

French Double-barrel Horse Pistol, cal. .50 Percussion. One barrel over the other (superposed). Found on the battle-field of New Market Road, Va., Oct. 7th, 1864.

German Pistol, cal. .50 Percussion, with a safety-guard. Brass-mounted. From the battle-field of Chester Station, Va., May 10th, 1864.


German Pistol, cal. .50 Percussion. From battle-field near Fort Wagner, S. C., July 11th, 1863.
COLLECTION OF FIRE-ARMS

The "Allen."

This famous pistol, known as the "Pepper Box," a favorite weapon with the forty-niners, and the only gun Mark Twain had with him when treed by the buffalo, was first manufactured by Ethan Allen, a pioneer in the fire-arms industry. Born in Bellingham, Mass., in 1810, he first manufactured fire-arms in 1832 at North Grafton, Mass. (The Lambert Cane Gun invented by Dr. Lambert of Upton, Mass.) In 1834 Allen made the saw-handle target rifled pistol, and invented the self-cocking, or double-action, revolver. About this time he took in as partners his brothers-in-law, Charles T. Thurber and Thomas P. Wheelock, and the name of the firm became Allen, Thurber & Co. In the fall of 1842 they moved to Norwich, Conn. Remaining there until 1847, they again moved to Worcester, Mass. In 1857 Mr. Thurber retired and the firm name was changed to Allen & Wheelock. Mr. Wheelock died in 1863. In 1865 Messrs. H. C. Wadsworth and Sullivan Forehand, sons-in-law, were admitted into the firm, and the name changed to Ethan Allen & Co. Under this name the business continued until 1873, when, Mr. Allen having died in 1871, the name was again changed to Forehand & Wadsworth. In 1883 Mr. Wadsworth retired. The name remained unchanged, however, until November, 1890, when the firm became incorporated as the Forehand Arms Co.

In 1852 Frederick Allen, Andrew J. Brown and John Luther were manufacturers of musket and rifle barrels in Worcester. The business soon passed into the hands of Mr. Luther. Mr. Paul Allen, formerly in the employ of E. Allen, was superintendent of Luther's factory. Employed among others were Horace Smith and D. B. Wesson, expert workmen, also Alexander Stocking, who later made the single-action Pepper Box, having the hammer with a projection for cocking. Luther fitted up a private room for Smith & Wesson, and Smith invented a repeating rifle.

Ethan Allen invented and built the first set of machinery in the world for manufacturing metallic cartridges. This branch was carried on extensively by him from 1860 to 1872, when it was sold to Gen. Benj. F. Butler, of Civil War fame, President of the United States Cartridge Co. at that time.
Case No. 42.

Revolving Pistols (Pepper Boxes), Single, Double, Three and Four Barrel Pistols; "Knife Pistols;" Brass-barrel Pistols, Etc.


Six-shot Revolving Pistol (Pepper Box), cal. .38 Percussion. Double-action. From Charleston, S. C.


Six-shot Breech-loading Revolving Pistol (Pepper Box), cal. .22 Metallic cartridge, rim fire. "Knuckle" revolver; also called "Knuckle duster." J. Reed's patent, No. 51,752, Dec. 26th, 1865. Heavy brass frame, engraved "My Friend."


Four-shot Pistol (Pepper Box), as described above. Larger size.


Wheeler Double-barrel Pistol, cals. .22 and .32 Metallic cartridges, rim fire. Superposed barrels, turning half round to fire. Henry F. Wheeler's patent, No. 55,752, June 19th, 1866. Marked, "AMERICAN ARMS CO., BOSTON, MASS."

Marston Three-barrel Pistol. Barrels one over the other, called "Up-and-down" Pistol, cal. .38 Metallic cartridge, rim fire. Has an indicator showing which barrels have been fired. W. W. Marston's patent, No. 17,386, May 26th, 1857; improved 1864. Marked, "WILLIAM W. MARSTON, NEW YORK."

Lafaucheux Six-shot Revolving Pistol (Pepper Box), cal. .22 Metallic cartridge, pin fire; double action. Marked, "LAFAUCEUX ARMS CO., PARIS."

Six-shot Revolving Pistol (Pepper Box), cal. .22 Metallic cartridge, rim fire. Marked, "BACON ARMS CO., NORWICH, CONN."

Eight-shot Revolving Pistol (Pepper Box), cal. .22 Metallic cartridge, rim fire. J. Rupertus' patent, No. 43,606, July 19th, 1864. Marked, "RUPERTUS PATENT PISTOL MFG. CO., PHILADELPHIA, PA."
Percussion Pistol, cal. .36  Half octagon barrel.  Flat-top hammer.  Marked, "MANHATTAN FIRE-ARMS CO., NEW YORK."


Percussion Pistol, cal. .36  Half octagon barrel, extra long.  Marked, "ALLEN & THURBER, NORTH GRAFTON, MASS."  (1837-1842.)  From the battle-field of Winchester, Va., June, 1863.

Double-barrel Flint-lock Pistol, cal. .42  Brass barrels, one over the other (superposed).  Revolving pan, turning one-quarter round to prime second barrel.

Double-barrel Flint-lock Pistol, cal. .45  Superposed barrels.  Pans turn one-quarter round to prime second barrel.

Double-barrel Pistol, cal. .38  Percussion.  From the battle-field of Cold Harbor, Va., June, 1864.

Double-barrel Pistol, cal. .38  Percussion, in fine order.  From battle-field of Seven Pines, near Richmond, Va.

Double-barrel Pistol, cal. .38  Percussion.  Picked up on the battle-field of Petersburg, Va., 1865.


Double-barrel Pistol, cal. .38  Percussion.  It has but one trigger, shoots one or both barrels at the same time.  Found on the battle-field at Chester Station, Va., May 10, 1864.

Double-barrel Pistol, cal. .38  Percussion.  From battle-field of Gaines' Mills, Va., June, 1862.


Single-barrel Percussion Pistol, cal. .50  Engraved octagon barrel.  From the battle-field of New Market Road, Va., Sept. 29th, 1864.

"Grabb" Pistol, cal. .36  Percussion.  Marked, "J. C. GRABB."  From the battle-field of Cedar Creek, Va., Oct. 9th, 1864.

"Derringer" Pistol, cal. .41  Percussion.  Silver-mounted.  Marked, "DERRINGER, PHILADELPHIA, PA."


Pair Cooper's Pistols, cal. .42 Rifled; percussion; silver-mounted; stocks ornamented with silver; stamped, "J. COOPER."

"Derringer" Pistol, cal. .44 Percussion; silver-mounted. Marked, "DERRINGER, PHILADELPHIA, PA."

"Derringer" Pistol, cal. .52 Percussion. Marked, "DERRINGER, PHILADELPHIA, PA." From the battle-field of New Market, Va., May 15th, 1864.


Pair Dueling Pistols, cal. .50 Percussion. Laminated rifle barrels, silver-mounted; mahogany stocks; finely engraved frame.

Pair Sharpe Pocket Pistols, cal. .38 Percussion, rifled. Marked, "SHARPE, LONDON."

Pair English Flint-lock Pistols, cal. .50 Octagon barrels; carved mahogany stocks; safety-catch on hammers. Engraved on the locks, "W. EDWARDS;" on the barrels, "DEVONPORT."


Knife Pistol, cal. .22 Metallic cartridge. Shell handle; has two blades. Marked, "UNWIN & ROGERS, SHEFFIELD, ENG."

Lafaucheux Revolver, cal. .32 Six shots. Metallic cartridge, rim fire; double action; with dagger. Marked, "LAF AU Cheux ARMS CO., PARIS." From battle-field of Charles City Road, Va., Aug. 16, 1864.


Double-barrel Flint-lock Pistol, cal. .50 Superposed barrels with dagger, released by a spring. From Moscow.

COLLECTION OF FIRE-ARMS


Note.—These pistols are not "Derringers." They require different ammunition and load at the breech. Resembling the Derringer, which is a muzzle-loading pistol and similar in shape and size, has misled collectors.

582 Pair Williamson Percussion Pistols, cal. .582J silver-plated. David Williamson's patent, No. 58,525, Oct. 2d, 1866. Marked, "D. WILLIAMSON, NEW YORK."

583 Pair Flint-lock Pistols, cal. 45 Finely engraved; mahogany stocks. Marked, "D. EGG, LONDON," gunmaker to His Royal Highnesses the Prince of Wales, the Duke of York, etc.

584 Pair English Flint-lock Pistols, cal. .50 Concealed triggers; iron barrels, 2½ inches long; safety-catch rear of hammer; mahogany stocks. Engraved on the lock, "KNUBLEY, LONDON."

585 English Flint-lock Pistol, cal. .38 Half octagon barrel; engraved iron stock. Made in London.

586 English Flint-lock Pistol, cal. .45 Cannon-shaped barrel; stock inlaid with silver. Marked, "E. NORTH, LONDON, ENG."

587 Foreign Flint-lock Pistol, cal. 38 Brass, bell-muzzle barrel.

588 Pair English Flint-lock Pistols, cal. .50 Brass barrels, 2½ inches long; slide (safety) on the top rear of hammer; mahogany stocks. Marked, "P. BOND, 45 CORNHILL, LONDON, 1785."

589 Pair English Bell-muzzle Pistols, cal. 1. Percussion. Brass barrels; embossed hammers (lions' heads), carved stocks. Marked, "BOND & CO., LONDON."


593 Oriental Flint-lock Pistol, cal. .65 Brass barrel, three inches long; brass mounted; carved stock, with four medallions set in the mountings. On the barrel is engraved 1611. From Constantinople.

594 French Pistol, cal. 32 Metallic cartridge; carved stock. From Charleston, S. C.

595 French Pistol, cal. 22 Metallic cartridge, rim fire; carved stock. From Charleston, S. C.

596 Pistol, cal. .22 Metallic cartridge. All iron. From Petersburg, Va.

125
Oriental "Snaphaunce" Pistol, cal. .54. Brass mounted; heavy butt-plate; finely engraved. Very fine arm.

Note.—The "Snaphaunce" followed the Wheel-lock, preceding the Flint-lock.

English Flint-lock Pistol, cal. .60. Barrel inlaid with gold; brass mounted, carved stock.

German Pistol, cal. .28. Percussion. Finely engraved. From battle-field of Peach Tree Creek, Ga., July 20th, 1864.


Hopkins & Allen Pistol, cal. .32. Marked, "HOPKINS & ALLEN, NORWICH, CONN."

Parker Single-barrel Pistol, cal. .36. Percussion, with safety-catch; finely engraved. Marked, "PARKER, LONDON." From battle-field of New Market Road, Va., October 7th, 1864.

Pistol, cal. .44. Percussion. From battle-field of James Island, S. C., June 14th, 1862.

Kingsley Rifled Pistol, cal. .22. Made by Henry B. Kingsley in Colt’s Armory, "HARTFORD, CONN., 1865."


"Confederate" Pistol, cal. .36. Percussion. Half octagon barrel, eight inches long; hammer underneath the barrel. Marked, "S. SUTHERLAND, RICHMOND, VA." Presented by
Mr. George W. Bryant, Farmington, Conn., Feb. 29th, 1888. Mr. Bryant belonged to Co. D, 1st Conn. Cav., under General Custer, and captured this pistol from a Confederate during the Wilson raid in 1864.

616 Quinnebaug Rifled Pistol, cal. .36 Percussion. Hammer under the barrel; nine-inch barrel. Marked, "QUINNEBAUG RIFLE CO., SOUTHBRIDGE, MASS." This pistol was picked up after the battle of Antietam, Sept. 17, 1862, by J. S. Owens, Sharpsburg, Md.

617 French Breech-loading Pistol, cal. .32 Octagon barrel; carved stock; peculiar construction. From battle-field of Sailor's Creek, Va., April 6th, 1865.

618 French Breech-loading Pistol, cal. .50 Metallic cartridge. Octagon barrel; iron-mounted; carved mahogany stock. From Fort Fisher, N. C., January, 1865.

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PAPER AND METALLIC AMMUNITION.

Paper cartridges, also called "combustible envelope cartridges," were made for Colt's, Remington's, Whitney's, Bacon's, and all other revolvers using caps.

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<thead>
<tr>
<th>No.</th>
<th>Cal.</th>
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<tr>
<td>31</td>
<td>.31</td>
<td>Pocket size</td>
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<td>36</td>
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<td>52</td>
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<td>Sharps Rifle size</td>
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<td>58</td>
<td>.58</td>
<td>&quot;Springfield&quot; Rifle size</td>
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<tr>
<td>69</td>
<td>.69</td>
<td>U. S. Musket size</td>
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Note.—A paper cartridge, .38 cal., was also made for a Remington Navy revolver.

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METALLIC CARTRIDGES.

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<td>41</td>
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<td>for so-called &quot;Derringer&quot; Pistols</td>
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<td>44</td>
<td>.44</td>
<td>for Henry and other Rifles</td>
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<tr>
<td>56</td>
<td>.56</td>
<td>for Spencer and other Rifles</td>
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Lafaucheux Pin Cartridges, Nos. 7, 9 and 12

Balls made of lead were numbered by weight, i.e.: No. 32 took 32 to weigh a pound. Other numbers were 45, 65, 90, 140, 190, 225, followed in size by No. 3 Buckshot, Turkey or Duck, BB, 1, 4, 7 and 10.
COLLECTION OF FIRE-ARMS

Case No. 43.

PIN-FIRE REVOLVERS, MAGAZINE PISTOLS, ODD PIECES, PRIMER-LOCK PISTOLS, ETC.

619 Revolver, cal. .32 Double action; six shots, pin fire; metallic cartridge; finely engraved. From the battle-field of Petersburg, Va., September, 1864.

620 "Lafaucheux" Revolver, cal. .35 Six shots, metallic cartridge, pin-fire; double action. Marked, "LAFACUEUX ARMS CO., PARIS." Civil War relic.


622 Lafaucheux Army Revolver, cal. .42 Six shots, metallic cartridge, pin-fire; double action. Marked, "LAFACUEUX ARMS CO., PARIS, FRANCE." Civil War relic.

Note.—Thousands were purchased by United States government during Civil War.

623 Lafaucheux Revolver, cal. .38 Six shots, metallic cartridge, pin-fire; double action. Marked, "LAFACUEUX ARMS CO., PARIS.

624 French Pin-fire Revolver, cal. .38 Ten shots. From the Philippines. A relic of the late war.

625 "Le Mat" Revolver (French Navy pattern), cal. .42 Percussion. Nine shots. Barrel in the center fires a buckshot, cal. .66 The extremity of the hammer is made with a joint, so that it may be turned forward to fire the chambers, or turned down to fire the central barrel. Marked, "Col. Le Mat, Paris." Made for Slidell & Beauregard, Charleston, S. C., for Confederate States of America. A rare arm. Seldom found outside of collections.

626 Double-barrel Revolver, cal. .36 Eighteen shots, pin-fire. Made in Birmingham, Eng.


Note.—With Colt’s Army “44,” Kerr’s revolver was the principal pistol used by the Confederate Army in the Civil War.


129
French Hammerless Pistol, cal. .58 Metallic cartridge; operated with a lever on top, which opens the breech for the cartridge at the same time it cocks it, and is ready for use when lever is closed. Hammer inside. Marks on the barrel, "CBRE DEGRE." Marked on the lever, "PISTOLET, ROBERT BREVETE."

Revolver, cal. .42 Six shots. From the battle-field of Petersburg, Va., June, 1864.

Deville Revolver, cal. .38 Six shots, metallic cartridge. Automatic; bar on the top of barrel to slide the cylinder forward to load. Marked, "L. DEVILLE."


Note.—Smith & Wesson sold this patent to the Volcanic Arms Co.


"Percival" Magazine Pistol, cal. .32 Invented by Orville Percival, Moodus, Conn., about 1840. Patented by Percival and Smith, patent No. 7496, July 9th, 1850. Marked, "H. SMITH, NORWICH, CONN., 1850." This arm has two chambers, which are suspended vertically from the barrel when the arm is not being loaded; in that case the two chambers are made to turn through a half circle, and the powder, fulminate, and ball dropped into its place from the magazine; the revolution backwards left the barrel loaded for action. Forty .32-caliber balls could be inserted in the chamber at once. The powder necessary for the same number of charges was received in the adjoining chamber, which also contained the tube for the fulminate. The latter was in the form of pellets, and dropped from the chamber into the receptacle designed for the purpose.

Belgian Repeating, Four-shot, Automatic Pistol, cal. .38 Percussion. Hammer inside; four chambers in breech-block, which slides up and down in center of case; it raises up when cockin;
COLLECTION OF FIRE-ARMS

it from one chamber to another; is operated with a trigger. Name on it, "H. COLLEYE;" on the breech-block the Belgian proof-mark 🟦. From Montreal, Canada.


639 Flint-lock Tinder-box. Used in "ye olden times" to obtain fire; a necessity before the invention of the match. A particularly old and rare specimen.

640 Antique Flint-lock Powder Tester; also known as "Epronvette." When fired, the force of the powder exploded turns an indexed wheel, which is held by a spring at the muzzle.

641 Revolving Pistol, cal. .31 Percussion. Three shots.

642 "Lower" Revolver, cal. .38 Six shots, metallic cartridge. Marked, "J. P. LOWER." From Charleston, S. C.

643 "Pettengill" Hammerless Revolver, cal. .44 Double action, six shots. Stamped on the frame, "PETTENGILL'S PATENT, 1856." "RAYMOND & ROBITAILLE." E. S. Pettengill's patent, No. 15,388, July 22d, 1856. From the battle-field of Gettysburg, Pa., July 1st-4th, 1863.

Note.—Dec. 26th, 1861, the United States government contracted with ROGERS, SPENCER & CO., OF WILLOW VALE, ONEIDA COUNTY, NEW YORK, for 5000 "Pettengill" Revolvers. Owing to the delicate mechanism, they proved unserviceable.


646 English Army Revolver, cal. .44 Six shots, percussion, paper cartridge. Used in the Confederate Army during Civil War.

647 Navy Revolver, cal. .36 Percussion, six shots, paper cartridge. From the battle-field of Antietam, Md., Sept. 17th, 1862.


131


651  "Slocum" Revolver, cal. .32 Five shots, rim fire; metallic cartridge. Has sliding shells on the cylinder, which open to admit cartridge. F. P. Slocum's patent, "No. 38,204, April 14th, 1863 (reissued twice). Marked, "BROOKLYN ARMS CO., BROOKLYN, N. Y."

652  Manhattan Revolver, cal. .32 Six shots, metallic cartridge. Marked, "MANHATTAN ARMS MFG. CO., NEW YORK."

653  "Stevens" Revolver (frequently called Maynard's Tape-lock Revolver), cal. .31 Six shots, percussion, paper cartridge. J. Stevens' patent, No. 12,189, Jan. 2d, 1855; with Dr. Edward Maynard's Primer-lock, patented Sept. 22d, 1845. Marked, "MASSACHUSETTS ARMS CO., CHICOPEE FALLS, MASS." From the Gettysburg battle-field, July, 1863.


655  Wood's Revolver, cal. .32 Six shots. Metallic cartridge, pin-fire; has extracting lever. S. W. Wood's patent, No. 41,803, March 1st, 1864. Marked, "CONNECTICUT ARMS CO., NORFOLK, CONN."


Note.—There were three sizes of these revolvers made.

Adams Revolver, cal. .44 Percussion, five shots, paper cartridge. Made for ADAMS REVOLVING ARMS CO., NEW YORK, by MASSACHUSETTS ARMS CO., CHICOPEE FALLS, MASS. From battle-field of Baton Rouge, La., Aug. 5, 1862.

Revolver, cal. .22 Six shots; metallic cartridge.

Beals Revolver, cal. .31 Five shots, percussion, paper cartridge. F. Beals’ patent, No. 15,167, June 24th, 1856. Marked, "E. REMINGTON & SON, ILION, NEW YORK."

Walch Revolver, cal. .36 Ten shots, percussion, paper cartridge. Has two hammers and ten cones, or nipples; five chambers in cylinder, two cartridges in each. J. Walch’s patent, No. 22,905, Feb. 8th, 1859. Marked, "WALCH FIRE-ARMS CO., PARK ROW, NEW YORK."

Walch Revolver, cal. .34 Percussion, large size, twelve shots; two charges in each chamber, one charge above the other; has twelve cones and two hammers. J. Walch’s patent, No. 22,905, Feb. 8th, 1859. Marked, "WALCH FIRE-ARMS CO., PARK ROW, NEW YORK."

Pistol, cal. .38 Percussion. Large cylinder. Marked, "NORWICH FALLS, CONN."
COLLECTION OF FIRE-ARMS

Case No. 44.

AMERICAN ARMY AND NAVY REVOLVERS AND PISTOLS FROM 1813 TO 1865.

666 Model of 1855, U. S. Rifled Percussion Pistol, cal. .58 Maynard's Primer-lock; detachable stock; swivel ramrod; brass-mounted. Made at Springfield Armory, 1856.

Note.—This pistol was adopted in 1855, when the caliber of all small arms was changed from .69 to .58. The Musketoon, described elsewhere, was ordered discontinued, and this pistol, to which was attached a stock allowing it to be fired from the shoulder, was authorized for cavalry.—Jefferson Davis, Secretary of War. 1855 was also the year the Maynard Primer was adopted.

667 Colt's New Model Army Revolver, cal. .44 Six shots, percussion, paper cartridge. S. Colt's patent; detachable stock.

668 Colt's Old Model Army Revolver, cal. .44 Six shots, percussion, paper cartridge. S. Colt's patent; detachable stock.

669 Colt's New Model Army Revolver, cal. .44 Six shots, percussion, paper cartridge; with detachable extension stock, formed like the butt of a rifled musket, allowing the revolver to be fired from the shoulder. This specimen has a canteen in the stock, with an opening at the comb of the stock. Marked, "COLT'S PATENT FIRE-ARMS MFG. CO., HARTFORD, CONN."

670 Colt's New Model Navy Revolver, cal. .36 Six shots, paper cartridge, with detachable stock. Marked, "COLT'S PATENT FIRE-ARMS MFG. CO., HARTFORD, CONN."

671 Colt's New Model Navy Revolver, cal. .36 Six shots, percussion, paper cartridge; with detachable extension stock. Colt's patent. Marked, "COLT'S PATENT FIRE-ARMS MFG. CO., HARTFORD, CONN."


Note.—This little pistol was commonly known as Remington's Vest Pocket Pistol, and carried by officers. It was a dangerous weapon for the owner, owing to the difficulty in cocking.
UNITED STATES CARTRIDGE CO


675 Remington Navy Pistol, cal. .50 Metallic cartridge, rim fire. Joseph Rider's patents, No. 49,887, Dec. 8th, 1863 (reissued May 3d, 1864), and No. 45,123, Nov. 15th, 1864. Marked, "REMINGTON ARMS CO., ILION, N. Y."


677 Whitney Army Revolver, cal. .44 Six shots, percussion, paper cartridge. Has an extra trigger revolving the cylinder. E. Whitney's patent. Marked, "E. WHITNEY, NEW HAVEN, CONN."

678 Beals' Revolver, cal. .31 Seven shots, paper cartridge. F. Beals' patent, No. 15,167, June 24, 1856. Marked, "E. WHITNEY, WHITNEYVILLE, CONN." Civil War relic.

679 Whitney's Colt Pattern Navy Revolver, cal. .36 Percussion, six shots, paper cartridge. E. Whitney's patent, No. 11,447, Aug. 1st, 1854. Marked "E. WHITNEY, NEW HAVEN, CONN."

Note.—Connecticut owned and condemned some 75 of these in June, 1887.


682 Pair, Model of 1842, U. S. Army Pistols, cal. .56 Brass mounted; swivel ramrods. Marked, "H. A. CO., MIDDLETOWN, CONN.," one in 1851, 1852. Carried by the Governor's Horse Guard Conn., until condemned in 1885.

683 "Allen" Army Revolver, cal. .44 Percussion, six shots, paper cartridge. E. Allen's patent, No. 16,367, Jan. 13,

685 "Starr" Navy Revolver, cal. .36 Percussion, five shots, paper cartridge. The trigger is double. By continuing to pull on the forward trigger, which raises the hammer and revolves the cylinder, the back of the trigger hits the front of a rear trigger, causing the hammer to fall. E. T. Starr's patent, No. 14,118, Jan. 15th, 1856. Marked, "STARR ARMS CO., NEW YORK." Civil War relic.


687 "Starr" Army Revolver, cal. .44 Percussion; six shots; paper cartridge; single action. Marked, "STARR ARMS CO., NEW YORK."

688 "U. S." Flint-lock Pistol, cal. .70 Made for the U. S. government by Simeon North, Berlin, Conn., 1813.

Note.—No pistol made for the U. S. government is so rare, valuable, and sought for as is this so-called "North's Berlin." Simeon North was given the first government contract for pistols in 1813, and furnished 500. On the lock-plate, in rear of the cock (which is of the variety known among collectors as "flat"), across the end is stamped in three lines "S. NORTH," "BERLIN, CONN." Between the cock and the pan, under an eagle looking toward the muzzle with half-raised wings, is stamped "U. STATES."

689 "U. S." Flint-lock Horse Pistol, cal. .56 Large, heavy pistol; heavy iron band; iron-mounted. Made for the United States government by Simeon North, Middletown, Conn. Stamped on the lock, "S. NORTH," in a curve over, and "MIDDLETOWN" in a curve under, the letters "U. S.," separated by an eagle.

Note.—Not one of the 500 first made.

Mode of 1819 U. S. Army Pistol. Flint-lock altered to percussion; swivel ramrod; iron-mounted. Made for the U. S. government by and marked, "S. NORTH, MIDDLETOWN, CONN."

S. Model of 1836, Flint-lock Army Pistols, cal. .547 Swivel rods; iron-mounted. Length, 10 2-5 inches; weight, 2 nds, 9½ ounces. Made for the United States government and marked, "R. JOHNSON, MIDDLETOWN, CONN.,
Note.—This model differs from the Model of 1819 in that the pan has a "fence;" no "cock bolt;" holds the lock half-cocked. The band has a branch and no band spring.

693 Model of 1836 U. S. Flint-lock Pistol (altered to Percussion), cal. .547 Iron-mounted; swivel ramrod. Made for the U. S. government by and marked, "R. JOHNSON, MIDDLETOWN, CONN., 1843."


Note.—D. Leavitt's patent, No. 182, April 29th, 1837, was the third issued for revolvers, and the first to be numbered.


698 Colt's Revolver, cal. .31 Percussion, paper cartridge; octagon Damascus barrel. Trigger falls forward when not in use. Cylinder loads from the front, as did all fired by a percussion cap. No ramrod attached to the arm. Samuel Colt's first patent (no number), Feb. 26, 1836. On top of the barrel reading toward the handle is engraved, "Patent Arms Mfg. Co., Paterson, N. J.; Colt's Pat."

Note.—This is known as the "Paterson;" is the rarest type of Colt's Revolver and highly prized by collectors. Found in very few collections.

699 Colt's Patent "House Pistol." A four-shot, breech-loading revolver, cal. .41 Using a rim-fire metallic cartridge, known as the "Derringer" cartridge. Weight, 14½ ounces; length, 6 inches. Cylinder known as the "Clover Leaf," from its shape; brass frame. A powerful weapon. Stamped on top of barrel, "COLT'S PATENT HOUSE PISTOL." "COLT'S FIRE-ARMS MFG. CO., HARTFORD, CONN."

Note.—The type of pistol used in the Stokes-Fisk affair.
COLLECTION OF FIRE-ARMS

700 Colt's "New Model" Revolver, cal. .31 Five shots, percussion, paper cartridge. Colt's patent. Marked, "COLT'S PATENT FIRE-ARMS MFG. CO., HARTFORD, CONN." From battle-field of Gettysburg.

701 Colt's "New Model" Revolver, cal. .36 Six shots, percussion, paper cartridge. S. Colt's patent. Marked, "COLT'S FIRE-ARMS MFG. CO., HARTFORD, CONN."

702 Colt's Revolver, cal. .31 Five shots, percussion, paper cartridge. Unfinished, showing process of manufacture. From Colt's Armory.

703 Colt's Army Revolver, cal. .44 Six shots, percussion, paper cartridge. Samuel Colt's patent. Marked, "COLT'S FIRE-ARMS MFG. CO., HARTFORD, CONN."

Note.—This revolver was used more than all others by Federal troops, and by many Confederates in the Civil War.

704 Colt's Revolver, cal. .31 Six shots, percussion, paper cartridge. Colt's patent. Stamped on top of the barrel, "ADDRESS COL. SAMUEL COLT, NEW YORK, U. S. AMERICA." From the battle-field of Newburn, N. C.


Note.—Contracts for 5500 of these were issued by the government in 1861, costing $20 each.

706 Wesson & Leavitt's Revolver, cal. .31 Six shots, percussion, paper cartridge; small size; cylinder revolves to the left. Patented by Wesson & Leavitt. Marked, "MASSACHUSETTS ARMS CO., CHICOPEE FALLS, MASS." Civil War relic from Gettysburg.


713 Colt’s Army Revolver, cal. .44 Six shots. Altered from paper to metallic cartridge. Marked, “COLT’S PATENT FIRE-ARMS MFG. CO., HARTFORD, CONN.”

EXHIBIT O. COEHORN MORTAR.

Bore, $5\frac{3}{4}$ inches; named after its inventor, Baron Coehorn. It has two handles, and may be carried by two men for short distances. Used for throwing bombs, shells, etc. It was in the service at Yorktown, Va. April 30 to May 4, 1864, and in many other battles during the Civil War.