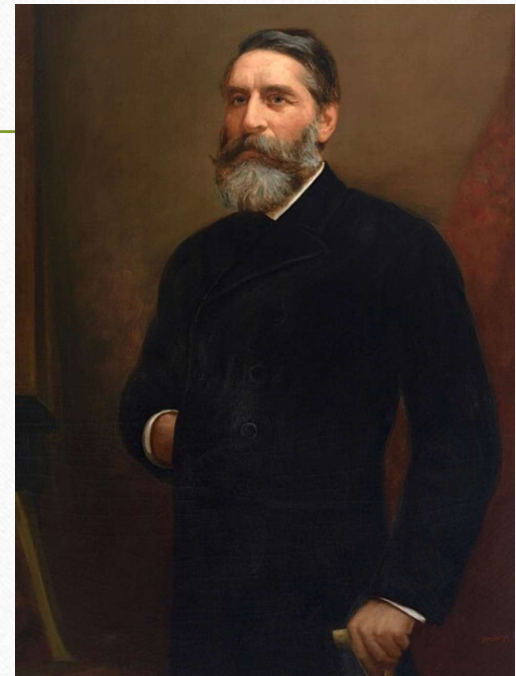


United States Navy Rifle Model 1895



James P. Lee

- British – Canadian Inventor & Arms Designer
- Born 1831 – Died 1904
- Invented the Lee Model 1879 made by Sharps
 - 1st Bolt Action Box Magazine fed rifle
 - Used double stack Design for cartridges in the magazine
 - Led to designs of the Lee Metford & Lee Enfield



Lineage of the Winchester Lee Navy

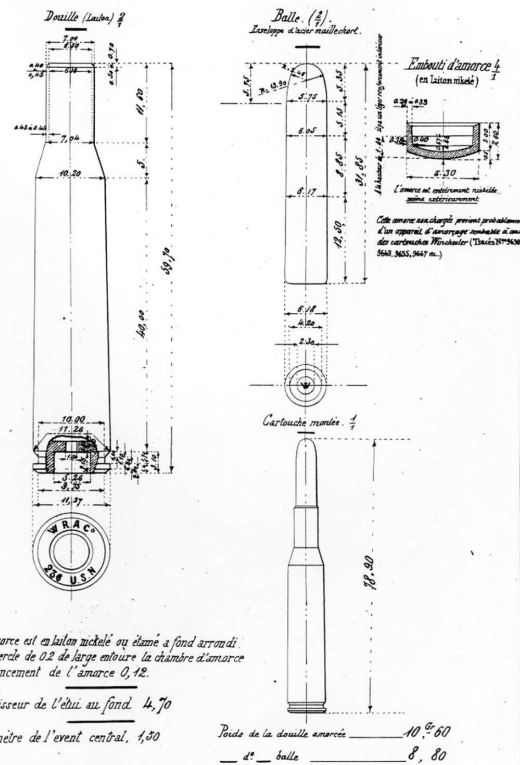
- Remington 1885 Lee Navy designed by Paris Lee
- Detachable Box Magazine
- 45-70 caliber
- Same Ladder Sight Design & Caliber as the Trapdoor



US Navy's New Small Arm

- Naval Ordnance Bureau Adoption May 1895
- Manufactured by Winchester Repeating Arms
- Navy Bureau Initially ordered 10,000 Rifles
- George Lee & James L. Lockwood traveled to France to get adoption.
- Rifle considered to Best ever made

Cartouche Cal 256 des Etats-Unis du Nord.
pour fusil LEE cal. 6^{me} fabrication W.R.A.C. échantillon reçu le 26 Nov^r 1898.



Les Moulinsaux le 21 Nov 1898.

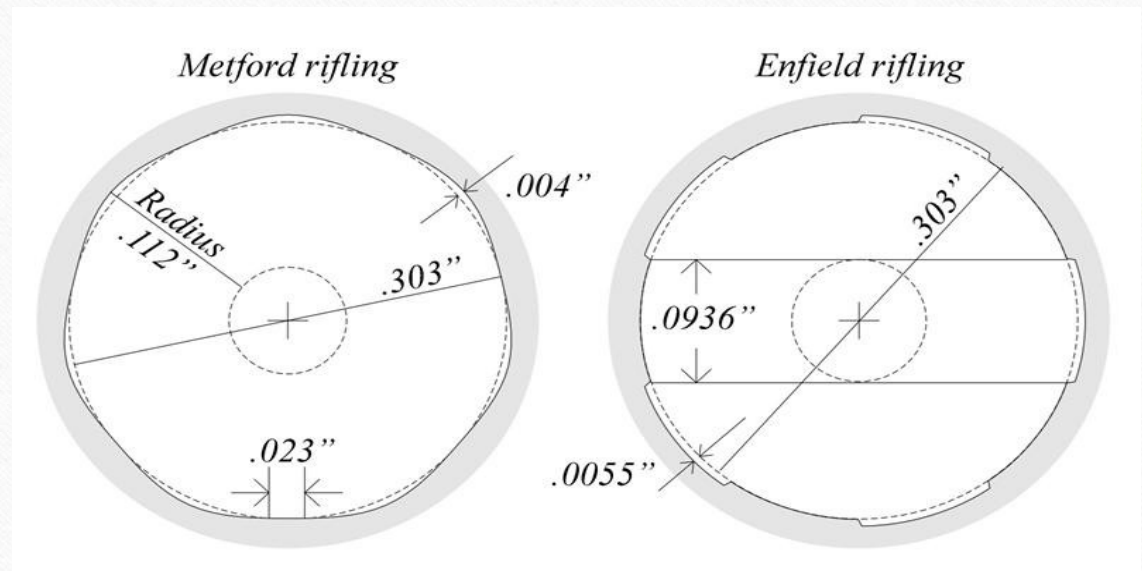
US Navy's New Small Arm continued

- Navy Standards
 - Barrels made of forged or rolled steel
 - Barrels to be oil tempered then annealed
 - Uniform Quality – Free of Slag, seams, hard spots
 - Contain about 4 ½ % Nickel
- Bolts & Receivers
 - Best Quality
 - Select samples withstanding 40,000 psi



US Navy's New Small Arm continued

- Barrels
 - 6 grooves
 - 7 ½ twist
 - Groove Depth .004
 - Metford rifling



Rifle Details

- Common Names Model 1895 Lee “Straight Pull” Rifle or Winchester Lee Navy
- 6mm Caliber or .236 (.243)
- Replacement for the Springfield M1873 Trapdoor Rifle



Implementation of the Rifle

- Development Setbacks
- USMC received a year late
- USMC Commandant Demands
 - No piecemeal rollout
 - Needed 3000 rifles plus ammunition for Marines to be proficient
 - Demand was met – USMC received 3000 of the first 10,000



Implementation continued

- 1st Contract
 - 10,000 rifles at \$17.60 each
 - January 1896
 - Serial Numbers 1-9999
 - Completed in 1897 due to manufacturing delays & changes to the Ammo
- 2nd Contract
 - 5000 rifles
 - \$18.75 per rifle
 - Completed in February 1898

Field Observations

- Considered reliable
 - Concerns for the floating extractor
- Flat trajectory
 - 600-yard range
 - Good choice for “Battle Sight Zero”
 - Aim for Enemy Belly Button only adjust if Unit leader says so

Combat Use in Cuba

- Lt Col. Robert Huntington commanded the First Marine Battalion
 - Tasked with Operations in Cuba after sinking of the USS Maine
 - Issued Lee Navy's just before Departure for Cuba
 - Engaged targets at 1000 yards
 - Cuban Forces shocked by accuracy



Combat Use in China

- Boxer Rebellion
 - USMC Contingent of 25 defended the American Embassy
 - Assistance provided by the United Kingdom, Russia France, Japan, Germany, Italy and Austria-Hungary
 - USMC Capt. Myers lead assault through Chinese Barricades
 - Lee Navy Rifle Accuracy & rapid fire made a difference

Combat Use in China continued

- 1st Marine Regiment & the Marine Detachment at Cavite formed a Battalion
 - Private Dan Daly exploits earns him a Medal of Honor
 - Lone Marine on the Embassy's Tartar Wall
 - Inflicted 200+ casualties on the Boxers with his Lee Navy Rifle



USS Maine Sidenote

- US Navy issued Lee Navy Rifles to Shipboard Armories & Marine Corps Units
- USS Maine received an allotment of Lee Navy's
- Battleship sank February 15, 1898 in Havana Harbor
- Several Dozen Rifles recovered in 50 feet of Water
- Francis Bannerman's Company sold them on the commercial market

Improved Lee Straight Pull Rifle

- Edward Parkhurst designed some Improvements
- 1st Issue - **Firing Pin Lock Redesigned**
 - Multiple Positions for Lever
 - First Position
 - Easy to “flip” the lever
 - Held the Firing Pin but did not Free it from the Sear
 - **Rifle would fire when the lock was released!**



Improvements continued

- Difficult to move to the 2nd position
 - Freed the Firing Pin from the Sear
 - Operated as a conventional Safety
 - Firing Pin Lock Protruded from top of Receiver 1/8”
 - Easily pushed into the First Position when Using the Rifle
- Navy Bureau of Ordnance Removed the Lock

Improved Lee Straight Pull Rifle

- 2nd Issue – **Bolts Falling out of the Rifle**
 - Bolt Stop Lever Protruded above the Receiver
 - Easily Pushed Down when Handling
- USS Massachusetts Drill in September 1897
 - 256 Bluejackets & Marines
 - 8 Bolts were Lost
 - 22 Extractors Lost
 - 28 Extractor Springs Lost



Bolt Stop Lever Sidenote

- US Navy Model 1895 – Description & Nomenclature Manual Statement
Page 14

“**Before firing**, always make sure that the bolt has been pushed home, and that the **bolt stop is up**.”

.

Reloading Information & Challenges

- Ammunition not made Commercially since 1930s
- Powder Loading Data readily Available
- Difficult to find Lee Navy Brass especially in any quantity
- Difficult to Locate Reloading Dies

Reloading Process

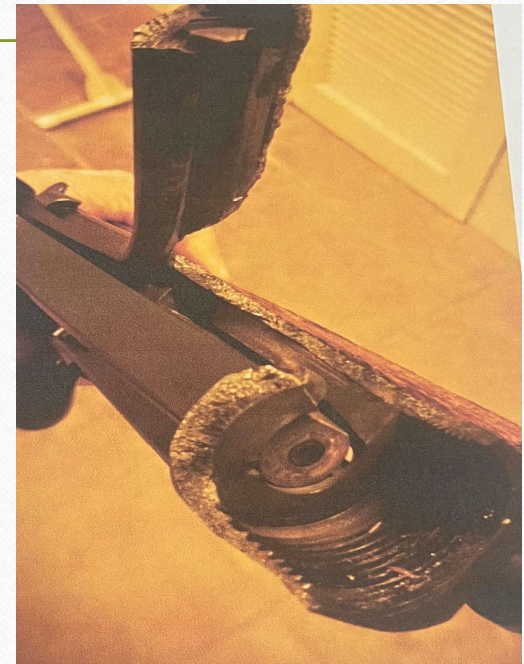
- Start with 220 Swift Brass
- Two Step Sizing
- Fire Form the Brass
- Check appearance of Brass
- Load up
- End up with about 2680 fps

Catastrophic Failure of Rifle



Catastrophic Failure of Rifle continued

- SARCO Employee in 2002 & Experienced Handloader in 2014
 - Rifle failed in nearly Identical Manner
 - Not likely Overpressure from Powder Charge
 - Used well published 30gr IMR 4895 powder
 - Both used .30-40 Brass sized down to 6mm
- Possible Explanation
 - Used .30-40 Brass for ammo which has mild maximum pressure
 - Brass may have been reloaded multiple times (Weaking it)
 - Less material around the case head
 - Unsupported Extractor nor Safely Venting Gas Unlike the Mauser



Shooting the Lee Navy

- Sharp Recoil but comfortable
- Noticed ease of mistakenly lowering the Bolt Stop Lever thus losing the bolt & extractor

Winchester Lee Navy Legacy

- Considered ahead of its time
- Spawned
 - 220 Swift
 - Worlds Fastest Rifle Round – 48gr bullet at 4,100 fps
 - 22-250
 - Popular Rifle Caliber for Varmints

Primary Sources

- NRA Rifleman 12/20
- Man at Arms Periodical 12/22
- Forgotten Weapons by Ian McCollum
- Cartridges of the World, 17th Edition
- USN Rifle Model 1895 Description & Nomenclature Manual
- Winchester Collectors Club
- USMC Weaponry online