

Martini-Henry Mark I 1873

The **Martini–Henry** is a breech-loading single-shot lever-actuated rifle that was used by the British Army. It first entered service in 1871, eventually replacing the Snider–Enfield, a muzzle-loader converted to the cartridge system. Martini–Henry variants were used throughout the British Empire for 47 years. It combined the dropping-block action first developed by Henry O. Peabody (in his Peabody rifle) and improved by the Swiss designer Friedrich von Martini, combined with the polygonal rifling designed by Scotsman Alexander Henry.

There were four main marks of the Martini–Henry rifle produced: Mark I (released in June 1871), Mark II, Mark III, and Mark IV. There was also an 1877 carbine version with variations that included a Garrison Artillery Carbine, an Artillery Carbine (Mark I, Mark II, and Mark III), and smaller versions designed as training rifles for military cadets. The Mark IV Martini–Henry rifle ended production in 1889, replaced by the Lee–Metford, but it remained in service throughout the British Empire until the end of the First World War.

In the original chambering, the rifles fired a round-nosed, tapered-head .452-inch, soft hollow-based lead bullet, wrapped in a paper patch giving a wider diameter of .460 to .469-inch; it weighed 485 grains. It was crimped in place with two cannelures (grooves on the outside neck of the case), ahead of two fiber card or mill board disks, a concave beeswax wad, another card disk and cotton wool filler. This sat on top of the main powder charge inside initially a rimmed brass foil cartridge, later made in drawn brass.

The cartridge case was paper lined so as to prevent the chemical reaction between the black powder and the brass. Known today as the .577/450, a bottle-neck design, it has the same base as the .577 cartridge of the Snider–Enfield. It was charged with 85 grains (5.51 g) of Curtis and Harvey's No.6 coarse black powder,^[3] notorious for its heavy recoil.^[5] The cartridge case was ejected to the rear when the lever was operated.

The rifle was 49 inches (1,245 mm) long, the steel barrel 33.22 inches (844 mm). The Henry patent rifling produced a heptagonal barrel with seven grooves with one turn in 22 inches (559 mm). The weapon weighed 8 pounds 7 ounces (3.83 kg). A sword bayonet was standard issue for non-commissioned officers; when fitted, the weapon extended to 68 inches (1,727 mm) and weight increased to 10 pounds 4 ounces (4.65 kg).

The standard bayonet was a socket-type spike, either converted from the older Pattern 1853 (overall length 20.4 inches (518 mm)) or newly produced as the Pattern 1876 (overall length 25 inches (635 mm)), referred to as the "lunger". A bayonet designed by Lord Elcho was intended for chopping and other sundry non-combat duties, and featured a double row of teeth so it could be used as a saw; it was not produced in great numbers and was not standard issue.

The Mk2 Martini–Henry rifle, as used in the Zulu Wars, was sighted to 1,800 yards (1,600 m). At 1,200 yards (1,100 m), 20 shots exhibited a mean deflection from the centre of the group of 27 inches (69 cm), the highest point on the trajectory was 8 feet (2.44 m) at 500 yards (460 m).

.577/450 Martini–Henry Cartridge

Description

The .577/450 Martini–Henry is a black powder, centre fire rifle cartridge, it was the standard British service cartridge from the early 1870s that went through two changes from the original brass foil wrapped case to the drawn brass of two parts, the case and the primer.

Bullet diameter:	.455 in (11.6 mm)
Case length:	2.34 in (59 mm)
Parent case:	.577 Snider
Used by:	British Empire
Rim diameter:	.746 in (18.9 mm)
Neck diameter:	.487 in (12.4 mm)
Shoulder diameter:	.628 in (16.0 mm)

Martini Henry Mk1 1st & 2nd Pattern Rifle

Weapon Specification

Calibre 577/450"

Date of Approval 1872:-1874 Trials only not fully approved, 5000 issued to Canada.

Length 4'1" (L) 4'0" (s)

Weight 8lb 12oz

Weapon Overview

The Martini Henry Mk1 Service rifle can be described as having three phases, as it was not officially adopted into service for a full three years after its initial sealing as it went through a continual development process, and was not officially designated a Mk1 until 20 October 1871. In tests from Jan 1871-October 1872 the Martini Henry rifle was used purely for trials, with a .450" "long" boxer cartridge the features found on the MHR Mk1 (first) pattern are now very rare indeed. These include, safety catch and no knocks form to the barrel. As a result of experiments made by Eley with a bottle shaped round the service rifle was to have the bottle shaped 577/450" round which gave greater velocity.

Official production of the rifle began under an order from the War Department of 13.4.1871, being approved 3.6.1871, by Jan 1873 32,092 were in store.

The trials proved various faults:

- 1) The striker pin was prone to breakage
- 2) The untreated block was prone to rusting
- 3) Trigger pull was considered too light

On 3.9.1872 The official second pattern variant of the MHR Mk1 (second pattern) was sealed, this pattern had a safety catch fitted on the right of the action. The stock cup, which held the lever had a improved configuration, with an internal C spring and lug. A change to the sighting ladder, with windage lines on the slider provided better adjustments for range.

In 1873 the rifles breech block assembly was modified, including a new pattern strengthened striker and the block had been re-configured to accept the a better striker. The newly manufactured and existing breech blocks were marked and carried the distinctive "S.B" on the axis to indicate the upgrade. The breech- block

was left highly polished untreated steel to assist light reflection when inspecting the bore, as this was the 1874 production year, the breech block was designated the '74 pattern and remained a constant pattern throughout the lifetime of the 577/450 model, all rifles in store were converted.

Resultant evaluation tests found that the safety catch was not required and was officially dispensed with (11.11.1873), rifles in stores with that feature were converted, the catch removed, the leaf spring snipped off and the retaining screw holes in the action body filled, with all new production having no facility for that feature.

The cleaning rod was held into place by a spring clip under the nose-cap, the rod itself had a pronounced shoulder which required a pull away from the spring, within a short period of time, complaints were received as to the sharp corners of the rod shoulder and its liability to damage the bore when cleaning. A new design was adopted with a tulip shaped swell which in twisting pushed the rod away from the clip allow it to be pulled clear.

By March 1874 120,000 Mk1 rifles had been produced, the majority by the RSAF Enfield, and two principal govt approved private manufacturers under contract, The Birmingham Small Arms and Metals Company (BSA & M Co) and London Small Arms Company (LSA). At a ratio of 6:2:1 respectively making 37,900 rifles.

In May 1874 the first issue of 2100 MHR Mk1 rifles were sold to Canada, prior to the full adoption of the rifle by the British Government, fortunately these second Pattern rifles were to be unaltered in the proceeding years and remain good examples of the MHR Mk1 (2nd) pattern.