

NZAR ID A79 Armstrong QF 12pdr Guns in New Zealand

By Dr John Osborne, AA, MG, DTT, PhD, FSG July 2005 reviewed Feb 2016

In 1900 the New Zealand Government ordered 4 pillar mounted Quick Fire 12 pdr 12cwt MK1, 3¹/₄" (7.62cm) calibre guns which arrived in 1901 refer **Fig 1**. for details. Two were installed in Fort Gautley, Devonport, Auckland and two at Fort Ballance, Wellington, During 1914-18 these two guns were mounted on New Zealand mercantile vessels and after the war were installed at Fort Dorset, Seatoun, Wellington. These QF 12 pdrs remained in NZ Army Coastal Defence service until the disbanding of the New Zealand Coast Artillery in 1959. One of these guns is now on display at the QE II Army Memorial Museum, Waiouru, refer **Fig 5**.

The Armstrong designed quick firing "QF" 12 pounder 12cwt Mark 1 gun was introduced in 1880 during the blackpowder propellant era, however the guns full potential was not realised until after 1887 when Alfred Nobel introduced smokeless powder propellant which became known as cordite, significantly more powerful and cleaner burning than blackpowder propellant. The QF 12pdr MK1 guns were manufactured to Armstrong's fabricated built up barrel design technology and adopted by the British Royal Navy in 1881, and the British Army in 1894.

The Barrels had polygroove Elswick Section progressive twist rifling which started at 1 in 120 increasing to 1 in 28 at the muzzle. The 120" (3.048m barrel bore length) when elevated to 40 degrees had a range using cordite ammunition of 11,750 yards (10,744m). Gun barrel recoiled approximately 10" (25cm). Barrel life was about 2700 rounds

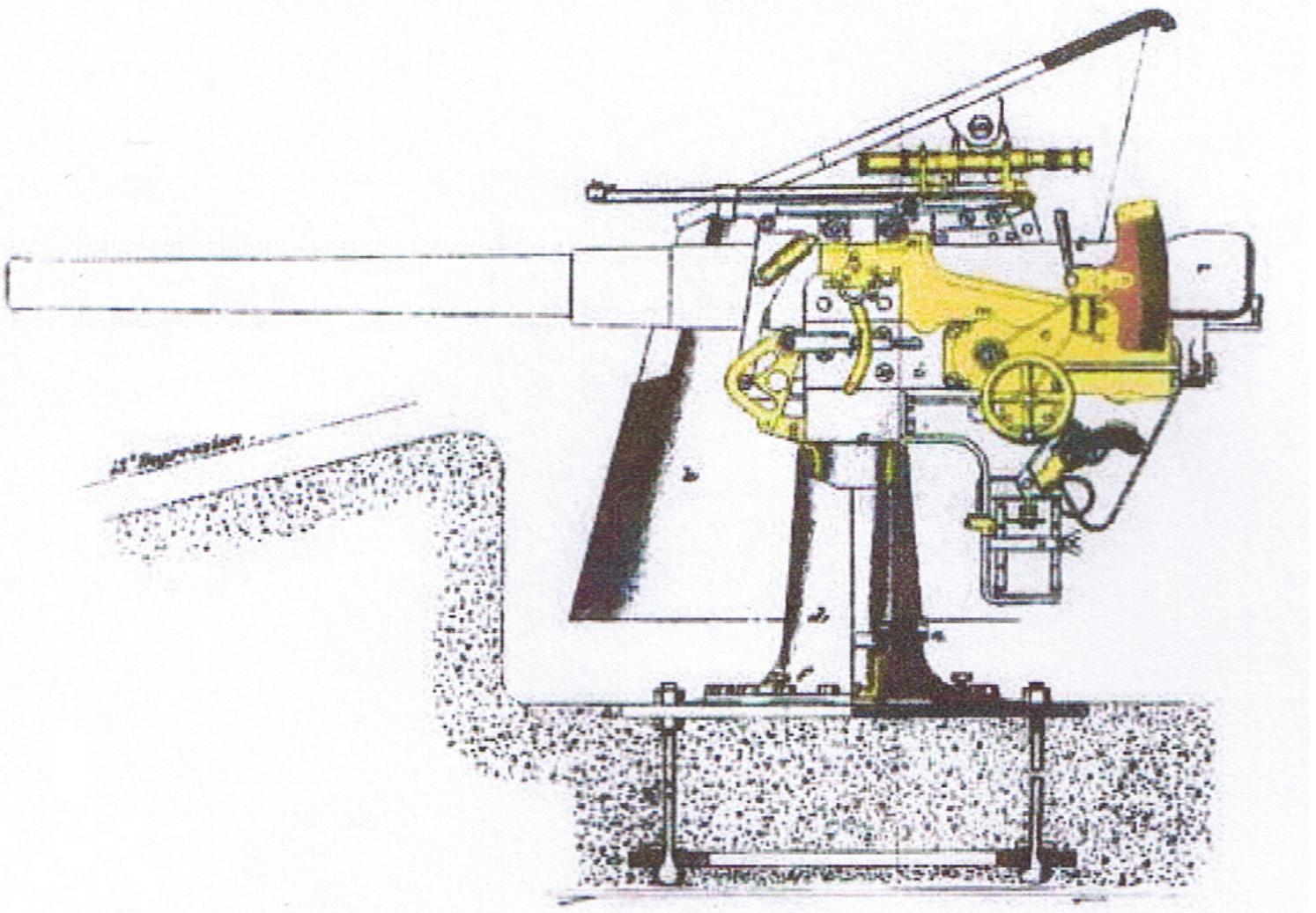


Fig 1. Drawing of a pillar mounted coastal defence QF 12 pdr, 12 cwt MK1, and method of emplacement. In use the Gunlayer grasped the pistol grip handle with his right hand, the elevating hand wheel with his left hand, and trained the gun by using his body weight / shoulder against the training bar. The spent cartridge case was extracted manually by a gun crew member using a hooked tool. Other crew members opened the breech, chambered a live round and closed the breech. With practice the gun crew could achieve a rate of fire of 15 aimed rounds per minute.

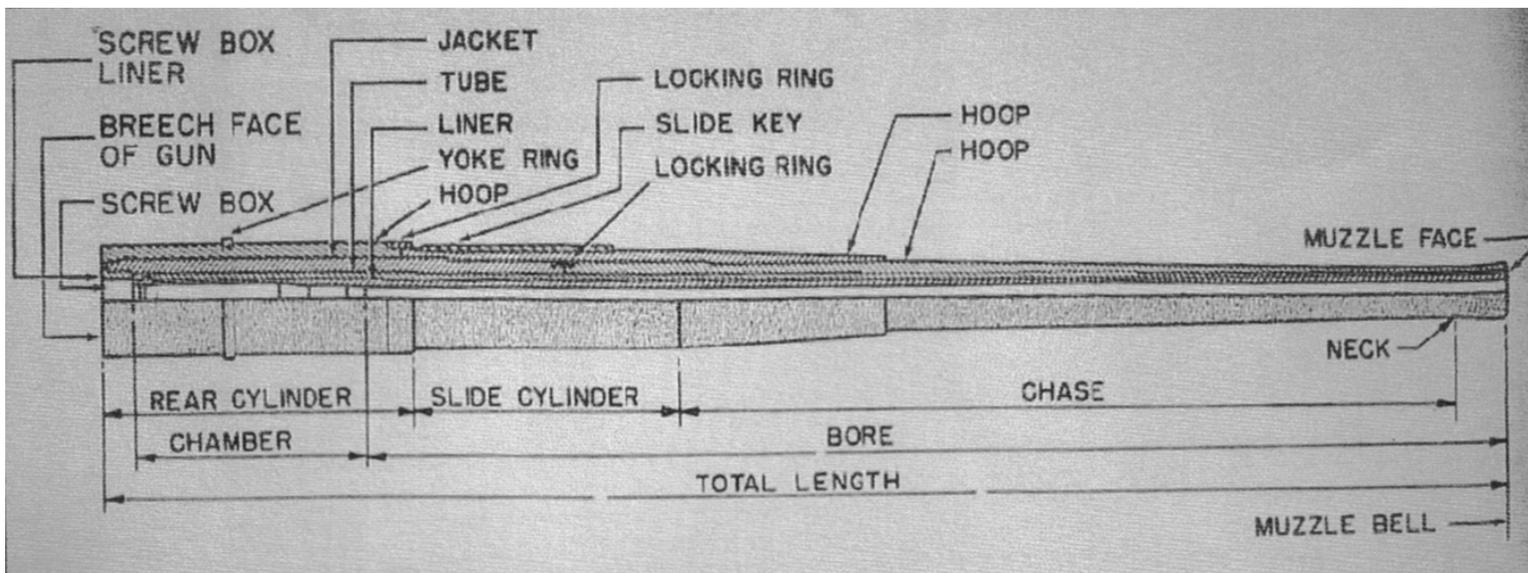


Fig 2 Drawing of an Armstrong designed built up barrel construction made of multiple hoops shrunk on over each other to strengthen where needed. This type of construction was used for almost all British guns until the 1920's when "Monobloc" solid steel barrel technology was introduced for guns smaller than 6 inches (15.2cm) calibre.

The QF 12 pdrs were used on the British Royal Navy "27 Knot" Destroyers of the 1890's, on most Japanese Warships between 1890 and 1920, on Italian minor warships and auxiliaries from 1916 to WWII, known in Italy as the QF 12pdr Armstrong Gun. Also in many coastal defence batteries around the world. 4737 QF 12pdrs 12 cwt were made to Armstrong's barrel design and many thousands more were manufactured using the Monobloc solid steel barrel. Canada, Italy and Japan all made this gun under license. Many small British and allies warships, including submarines and defensively armed merchant ships carried these guns during WW1 and WWII including some New Zealand ships.

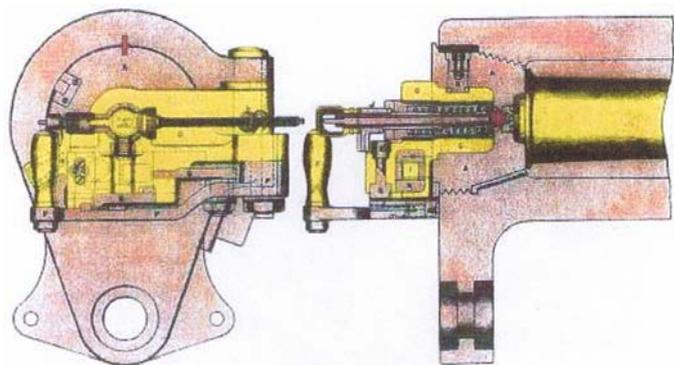


Fig 3. Detail of single-motion screw breech mechanism.



Fig 4.

Fig 4. Solid projectile 2.98" (75.8mm) diam, length 8.5" (215.9mm) marked on nose cone "12PDR MK1" and yellow painted .75" (19mm) band. Body stamped with broad arrow. Fitted with copper driving / sealing band 3.085" (78.4mm) diam. Base stamped 12P ROF 1/N and LOT numbers. Weight 12.95lbs (5.715kg). 303" British cartridge alongside for comparison. Ammunition types, Solid Armour Piecing, High Explosive (HE), Shrapnel and Star Shell. Projectile weight HE, 12.9lbs (5.67kg). Velocity 2235fps (681mps). Propellant charge originally 2 lbs (0.909kg) cordite MD, later 2.09lbs (0.95kg) SC061 or 2.75lbs (1.25kg) NF059.

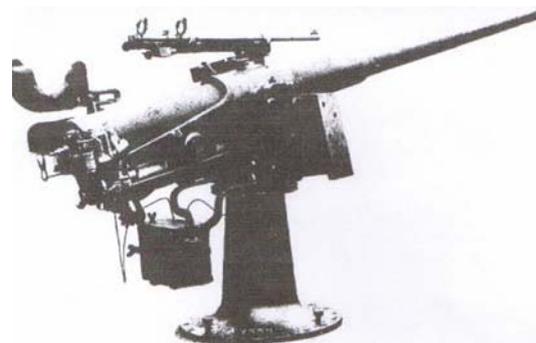


Fig 5.

Fig 5. Photo of a New Zealand QF 12pdr MK I. displayed at the QEII Army Museum. Shield and sight not attached.

Four more QF 12 pdr. guns went to Dunedin and Wespport, and two more came to NZ in 1920 to train seamen gunners for armed merchant cruiser. In WWII NZ got two more from the RAN to help defend Wellington. The breech on one of the Fort Balance Guns exploded in 1904 killing one gunner John Palmer and injuring 5 other. The Navy museum also has one of these guns.

Special Thanks and Acknowledgements Phil Cregeen FSG, Noel Taylor FSG and for more information visit Queen Elizabeth II Army Memorial Museum, Waiouru. www.armymuseum.co.nz
 Naval Weapons of the World. www.navweapons.com Great Guns by Peter Cooke & Ian Maxwell .
 Royal New Zealand Artillery Old Comrades Assn. www.riv.co.nz
 Osborne Arms Museum. armsmuseum@xtra.co.nz