

NZAR ID A13 Whitworth Short Rifle Compiled by Phil Cregeen © 2012

Pattern: 1862 Whitworth Short Rifle, Maker: The Whitworth Company.

Calibre: .451 in, Bore: Hexagonal 6 groove 1 turn in 20 in. Barrel length: 33 in. OA Length: 49 in.

Type of Action: ML Percussion, Weight: 9 lb., Sights: Blade foresight, Ladder rear sight graduated to 1000 yds



Muzzle showing foresight, bayonet bar and ram rod.

Enfield style lock marked WHITWORTH with Wheat sheaf Crown and W.

In the year 1854 Lord Hardinge Commander in Chief requested Joseph Whitworth, a well respected Mechanical Engineer, to assist in investigating the mechanical principles applicable in the construction of an efficient service rifle. He willingly agreed to do so, subject to the condition that he should be provided with a suitable gallery, protected from changes in the wind and from fluctuations in the atmosphere, where he could carry on the experiments which were necessary to arrive at any sound conclusion. A 500 yard gallery range was built at his home in Manchester where using screens of tissue paper he evaluated the trajectories of many combinations of rifle barrel and projectile. In these experiments he was constrained by the requirement to use the same charge, 70 grains and weight of bullet 530 grains, as the current service cartridge for the Pat 53 Enfield Rifled Musket of .577 Calibre.

The result of these experiments was a calibre of .451, which used a longer projectile and Polygonal (hexagonal) rifling with a twist of 1 turn in 20 inches. The advantage of the hexagonal rifling was that the bullet did not have to be forced into the grooves of the rifling and therefore could be of a harder material and friction was reduced. Bullets could be hexagonal or cylindrical in shape.

In 1857 comparative trials were carried out between the Whitworth and Enfield Pat 53 in which it was shown that the Whitworth was three time more accurate, had a longer range and treble the penetration of the Enfield Rifle. In 1862 1,000 (3 band 39 in barrel) Whitworth rifles were ordered from Enfield, for troop

trials, and this was followed by 8,000 more. The locks of these rifles are marked VR, ENFIELD 1863 and the barrel WHITWORTH PATENT .

In the end the Board of Ordnance did not adopt the Whitworth Rifle, claiming that the bore was too small and fouled to quickly and the rifle was too expensive. However Whitworth went on to manufacture his rifle for France and the Confederate States of America where it was used by sharp shooters to good effect in the Civil war. The Whitworth was also popular as a target rifle used by both civilians and military personnel.

The Whitworth military rifle was manufactured in three barrel lengths, Short 33 in., Medium 36 in., and Long 39 in. It was also manufactured as a target rifle and sporting rifle in various forms.

Use in New Zealand: To date no evidence has been found that the Whitworth rifle was ever introduced into New Zealand military service. However a search of "Papers Past" turned up a number of references to Whitworth rifles being used in Volunteer Corps Annual Prize Shoots although it is likely that these were match target rifles rather than military models. Anecdotal evidence indicates that early in the 20th century a Wellington Theatre Company imported a number of these rifles (20-30) as props for a pageant, some of these had a hole drilled in the muzzle to retain a socket bayonet, subsequently they were confiscated by the Police and handed over to the Army. In 1960 about 10 rifles were still held by the Army at Trentham although they were in poor condition. In 1960 the NZ Army donated a 2 band short Whitworth rifle Serial No C302 to the Petone Rifle Club. In 1979 the National Army Museum loaned a 2 band Whitworth rifle to members of the New Zealand Team to compete in International Muzzle Loading Championships in 1980-82.

To date 32 x Whitworth Military Short Rifles have been noted in New Zealand with serial numbers ranging from C302 -708 (1861/62) and D 348 – 403 (1862/63).

If you know of any evidence that supports the issue of this rifle to the New Zealand military the author would be pleased to hear from you.

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Reference: Guns and Steel by Sir Joseph Whitworth, courtesy Research Press

<http://milpas.cc/rifles/ZFiles/Articles/Shooting/Muzzleloaders/Guns%20and%20Steel.html>

Guns Review January 1994: Sir Joseph Whitworth by G Boothroyd

<http://paperspast.natlib.govt.nz>