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Muzzle Loading

Rifled Guns

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## Muzzle Loading Rifled Guns

As the reader may be aware, we have a Rifled 12.5 inch shell mounted on a railway wagon on our 2'-6" gauge railway. What you may not appreciate is that this shell weights approximately 800 lbs & required a charge of 43 lbs of gunpowder to fire it to a maximum range of 6000 yards.

Note the driving studs which engaged the riffling to impart spin to the shell.

By the 1870s these studs were found to be un-necessary and a copper or lead driving band took their place, to engage the rifling.

All though William Armstrong designed & built breach loading rifled guns from the 1850,s, the breach mechanisms proved unreliable and until the 1880,s (when a more reliable breach mechanism was invented) muzzle loading rifled guns were the norm for both land and sea.

The two photos show the type of gun for which this shell was intended.

It is a rifled muzzle loading gun and weighed 38 tons.

A crew of twelve men were required to fire this monster and this type of gun was sited at forts on the coast such as Hurst Castle in Hampshire (where these photos were taken), to guard the western entrance to the Solent.

9", 10" & even 13" guns were built and used both on land and at sea in the new Iron warships which were replacing the traditional wooden ship of Nelsons time. The Hurst Castle site had ten 12.5 inch and five 10 inch, 18 ton rifled muzzle loading guns.

The Hurst Castle guns were installed in the 1860s and (all though, by the 1880s were obsolete) were kept in service (as a reserve) until the end of the 1914/18 war, when they were finally scrapped. The gun in the photos was salvaged from the Isle of Wight and mounted on a simplified replica carriage.

I have been asked on a number of occasions, "how were these guns loaded?".

Well there were a number of methods, the most sophisticated of which was to turn the gun from it's firing position, through 180 degrees so that it faced a shell hoist and mechanical rammer.

The bag of powder (don't forget, this is before the days of cordite) was hoisted from the magazine bellow, level with the muzzle and the rammer operated to drive it home. While this was happening a shell was loaded onto the hoist which had returned to the magazine and once the rammer was withdrawn, raised level with the muzzle and the shell rammed. The gun was then swung back to its firing position.

At Hurst Castle the loading method was much more physical, with the gunpowder charge being loaded and rammed by the gun crew. The shell was then lifted level with the muzzle by crane and again rammed by the gun crew.

It must have been a hell of a job ramming 800 lbs of shell down the barrel of a rifled gun.

In the photos of the gun at Hurst Castle, you can see the ram and other implements needed to load the gun, in a rack directly above the gun position.

Photos & Text by J. Wilson

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