

25-Pounder Gun/Howitzer



Charles Fraser Comfort. 25-Pounder Firing. 1944, watercolour.

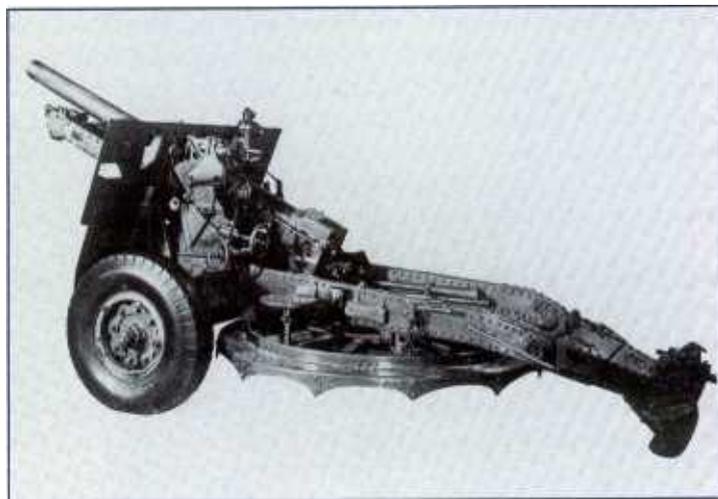
The 25-pounder gun/howitzer was widely acclaimed as the best divisional artillery weapon to see action with any of the combatants during the Second World War. This gun had a close connection with Canada. While it was of British design, it provided the armament of most field regiments of the Royal Canadian Artillery during much of the war and Canadian industry produced many of the 25-pounder guns and much of the ammunition used by the other armies of the Commonwealth.

The 25-pounder was the outcome of the experience of nearly 40 years of war and peace. The lessons of the South African War, at the turn of the century, led the British authorities to develop the 18-pounder field gun and the 4.5-inch howitzer, both of which gave splendid service with the Canadian and British armies in the First World War. During the inter-war years it was decided that a new gun should be designed which would be capable of providing both the high angle fire of a howitzer and the flat trajectory fire of a field gun. Theoretical

studies indicated that such a gun should have a calibre in the order of four inches and fire a shell weighing about 30 pounds. The financial restrictions resulting from the economic depression of the 1930's made it imperative that use should be made of the existing stock of 18-pounder guns. By relining these guns, using modern technology, it was possible to increase their calibre to permit them to fire a heaviershell. The original 25-pounders were thus, in reality, converted 18-pounders mounted on 18-pounder carriages.

In order to provide the ballistic characteristics required for both the howitzer and field gun roles, the 25-pounder was originally provided with three different propellant charges. To permit the adjustment of the charge as required to engage a specific target, the shell and the cartridge case were loaded separately, in contrast to the fixed ammunition of the 18-pounder gun. Experience showed that the flexibility of the 25-pounder could be further improved if an even greater choice of charges was provided. This need was met by the introduction of two small propellant increments which could be used to produce muzzle velocities between those of the three main charges.

There was also an operational need to increase the maximum range beyond the 11,500 yards obtainable with Charge 3. To meet this requirement a super charge was developed to give a range of 13,400 yards. This charge naturally produced extra stresses on the carriage and muzzle brakes were introduced to relieve this problem.



Q.F. 25-Pounder gun/howitzer



Ford CMP Field Artillery Tractor with Ammunition Limber and 25-pdr gun of the 5th Field Regiment, Royal Canadian Artillery at the 2nd Canadian Corps Artillery Jamboree, England, May 27, 1944.

While the standard projectile of the 25-pounder was a high explosive shell, numerous types of carrier shells were developed in response to operational needs. These included smoke, flare and star shells and even a shell to discharge leaflets over enemy positions.

In addition to its functions as both a howitzer and a traditional field gun, the 25-pounder had a very potent anti-tank capability. To facilitate this function, advantage was taken of an invention which dated back to the end of the First World War. A circular platform was carried under the trail which could be dropped on the ground, allowing rapid all round traverse for anti-tank firing. Lieutenant-General A.G.L. McNaughton was so impressed by the anti-armour performance of the 25-pounder that he saw the possibility of this gun being used in a primary anti-tank role. To this end research was carried out in Canada to develop a projectile with even greater penetrating capabilities than the existing 20-pound solid A.P. shot. The coming into service of the very powerful 17-pounder anti-tank gun rendered this possible role unnecessary.

During the course of its service life the 25-pounder gun was mounted on numerous designs of carriage. Many of the converted 18-pounders were lost at Dunkirk in 1940 and were replaced with carriages designed for the 25-pounder. The two which became best known were the Mark 4 and the Mark 5. The former had two box-shaped side brackets connected at front and rear, while the latter had a split trail which permitted extended traverse. Mention must also be made of the Canadian-designed Sexton self-propelled mounting which was based on the chassis of the Rain tank. This S.P. version of the 25-pounder was well received by its users.

Technical Details

Q.F. (Quick Firing) 25-pounder gun Marks 2 and 3

Standard projectile

HE Shell Mk. ID S/L

Fuze No. 117 or 119

Weight - 25 lbs.

Range Table Muzzle Velocities

Charge 1: 650 ft. per sec.

Charge 2: 975 ft. per sec.

Charge 3: 1,450 ft. per sec.

Ordnance - Steel

Weight with breech mechanism 8 cwt 3 qtrs (444 kgs)

Length - 96.72 inches

Calibre - 3.45 inches

Chamber capacity - 151 cu. inches

Polygroove rifling - 1 turn in 20 calibres (69 ins)

FURTHER READING

L.W.C.S. Barnes, [Canada's Guns.](#)

National Museums of Canada, Ottawa, 1979.

John Batchelor and Ian Hogg, [Artillery.](#)

Macdonald and Co., London, 1972.