

= English cannon =

The first usage of cannon in Great Britain was possibly in 1327 , when they were used in battle by the English against the Scots . Under the Tudors , the first forts featuring cannon batteries were built , while cannon were first used by the Tudor navy . Cannon were later used during the English Civil War for both siegework and extensively on the battlefield .

Cannon were first used abroad by the English during the Hundred Years War , when primitive artillery was used at the Battle of Crécy . With the Age of Discovery and the establishment of the Thirteen Colonies , cannon saw use in British armies in North America , first against the rival colony of New France , and later during the American Revolutionary War . From the 18th century to the present day , the Royal Regiment of Artillery has formed the artillery of the British Army . The Royal Navy developed the carronade in the 18th century , although they disappeared from use in the 1850s . As with other western cannon of the period , cannon used by the British Army and the Royal Navy became longer ranged and more destructive in the 19th and 20th centuries .

= = History = =

= = = Early development = = =

English cannon saw its first use during the Hundred Years War , being used in small numbers during the 1340s . " Ribaldis " were first mentioned in the English Privy Wardrobe accounts during preparations for the Battle of Crécy between 1345 and 1346 . These are believed to have shot large arrows and simplistic grapeshot , but they were so important they were directly controlled by the Royal Wardrobe . According to the contemporary poet Jean Froissart , the English cannon made " two or three discharges on the Genoese " , which is taken to mean individual shots by two or three guns because of the time taken to reload such primitive artillery . Similar cannon appeared at the Siege of Calais later the same year and by the 1380s , the " ribaudekin " had become mounted on wheels .

= = = Tudor navy and the rise of the fort = = =

Towards the end of the Middle Ages , the development of cannon made revolutionary changes to siege warfare throughout Europe , with many castles becoming susceptible to artillery fire . In England , significant changes were evident from the 16th century , when Henry VIII began building Device Forts between 1539 and 1540 as artillery fortresses to counter the threat of invasion from France and Spain . They were built by the state at strategic points to form the first powerful cannon batteries , but , though they had many of the same architectural facets as true castles , they served a purely military function (rather than serving as residences) . Deal Castle remains one of the most impressive such Device Forts , and was perfectly symmetrical , with a low , circular keep at its centre . Over 200 cannon and gun ports were set within the walls , and the fort formed a firing platform with a shape that allowed many lines of fire . In addition , its low curved bastions were designed to deflect cannonballs . Cannon were now an inexorable part of English warfare .

Cannon also saw use in the Tudor navy (where a cannon was a " gun " , and a cannonball a " shot ") . The French " culverin " was adapted for naval use by the English in the late 16th century , and had a significant advantage over the ballista that had previously been used in naval warfare . This cannon was of relatively long barrel and light construction , and fired solid round shot projectiles at long ranges along a flat trajectory . One of the first ships to be able to fire a full cannon broadside was the English carrack the Mary Rose , built in Portsmouth from 1510 ? 1512 , and equipped with 78 guns (91 after an upgrade in the 1530s) . It was one of the earliest purpose @-@ built warships to serve in the English Navy (thought never to have served as a merchant ship) , and her crew consisted of 200 sailors , 185 soldiers , and 30 gunners .

With the Age of Discovery , rivalry developed between European colonies and the importance of

cannon in naval warfare increased . Many merchant vessels were armed with cannon and the aggressive activities of English privateers , who engaged the galleons of the Spanish treasure fleets , helped provoke the first Anglo @-@ Spanish War , though it was not one of the main factors . A fleet review on Elizabeth I 's accession in 1559 showed the navy to consist of 39 ships and in 1588 , Philip II of Spain launched the Spanish Armada against England . In a running battle lasting over a week , the Armada was scattered and defeated by the English navy .

= = = 17th century = = =

A description of the Gunner 's art is given during the English Civil War period (mid @-@ 17th century) by John Roberts , covering the modes of calculation and the ordnance pieces themselves , in his work *The Compleat Cannoniere* , printed London 1652 by W. Wilson and sold by George Hurlock (Thames Street) . The lower tier of English ships of the line at this time were usually equipped with demi @-@ cannon ? a naval gun which fired a 32 @-@ pound solid shot . A full cannon fired a 42 @-@ pound shot (and in fact there was a so @-@ called " royal cannon " that fired a 60 @-@ pound shot) , but these were discontinued by the 18th century as they were seen as too unwieldy .

With the establishment of the Thirteen Colonies , cannon saw use in English armies in the North American mainland , first against the rival colony of New France . However , although the French were outnumbered , their fortifications and artillery were superior to English cannon . When 34 ships from the English colony of Massachusetts bombarded Quebec in 1690 , they were outmatched by the French batteries , which badly damaged the ships ' hulls and struck off the colours of the English flagship . The English brass field guns landed on the shore were entirely ineffective against the militiamen in the woods , and a spontaneous retreat left five cannon abandoned on the shore . French victory showed that to take Quebec , the cannon of " Old England would have to be brought in " .

= = = 18th century = = =

Before the 18th century , artillery " traynes " were raised by Royal Warrant for specific campaigns and disbanded again when they were over . On 26 May 1716 , however , by Royal Warrant of George I , two regular companies of field artillery , each 100 men strong , were raised at Woolwich . On 1 April 1722 these companies were grouped with independent artillery companies at Gibraltar and Minorca to form the Royal Regiment of Artillery . The regiment expanded rapidly and by 1757 had 24 companies divided into two battalions , as well as a Cadet Company formed in 1741 .

When Quebec was finally captured during the French and Indian War , the British had more cannon installed in the fortifications , and built more embrasures into the walls to maximise their effectiveness against siege batteries . When the French returned in 1760 , the defenders had to leave all but two of their field guns in the retreat into the city . However , British cannon proved effective , as a heavy cannonade on the French batteries allowed them to hold out long enough for reinforcements .

By 1771 , there were 32 companies of the Royal Artillery in four battalions , as well as two Invalid Companies comprising older and unfit men employed in garrison duties . In January 1793 , two troops of Royal Horse Artillery (RHA) were raised to provide fire support for the cavalry , joined by two more in November 1793 . All RHA personnel were mounted . The Royal Irish Artillery was absorbed in 1801 .

Additionally , the carronade was adopted by the Royal Navy in 1779 , and the lower muzzle velocity of the round shot was intended to create many more of the deadly wooden splinters when hitting the structure of an enemy vessel ; these in fact were often the main cause of casualties . It was much shorter and a third to a quarter of the weight of an equivalent long gun : for example , a 32 pounder carronade weighed less than a ton , but a 32 pounder long gun weighed over 3 tons . Carronades were manufactured in the usual naval gun calibres , but they were not counted in a ship of the line 's rated number of guns . As a result , the classification of Royal Navy vessels in this period can

mislead , since they would often be carrying more pieces of ordnance than they were described as carrying .

The carronade was initially very successful and widely adopted , although in the 1810s and 1820s , greater emphasis was placed on the accuracy of long @-@ range gunfire , and less on the weight of a broadside . The small powder charge of the carronade was only able to project a heavy cannonball over a relatively limited distance . The short barrel , low muzzle velocity and short range also increased the risk that a carronade would eject burning wadding onto nearby combustible materials , increasing the risk of fire . The carronade disappeared from the Royal Navy from the 1850s after the development of steel , jacketed cannon by William George Armstrong and Joseph Whitworth .

= = Operation = =

The 1771 Encyclopædia Britannica describes the operation of 18th @-@ century British cannon . Each cannon would be manned by two gunners , six soldiers , and four artillery officers . The right gunner was to prime the piece and load it with powder , while the left gunner would fetch the powder from the magazine and keep ready to fire the cannon at the officer 's command . Three soldiers stood on each side of the cannon , to ram and sponge the cannon , and hold the lantern and ladle . The second soldier on the left was charged with providing 50 bullets .

Prior to loading , the cannon would be well cleaned with a sponge to remove all sparks , filth , and dirt . The powder was added , followed by a wad of paper or hay , and the ball was thrown in . After ramming the cannon would be aimed with the elevation set using a quadrant and a plummet . At 45 degrees the ball had the utmost range ? about ten times the gun 's level range . Any angle above the horizontal line was called random @-@ shot . The officer of artillery had to ensure the cannon was diligently served . Water was available to dip the sponges in and cool the pieces every ten or twelve rounds .

In the late 1770s it was said that a 24 @-@ pounder could fire 90 to 100 shots a day in summer , or 60 to 75 in winter . A 16 or 12 pounder would fire a little more , because they were easier served . The Encyclopædia Britannica mentions " some occasions where 200 shots have been fired from these pieces in the space of nine hours , and 138 in the space of five . "

The introduction of carronades at this time also resulted in guns that were easier to handle and required less than half the gunpowder of long guns , allowing fewer men to crew them than long guns mounted on naval garrison carriages .

During the Napoleonic Wars , a British gun team consisted of 5 numbered gunners - fewer crew than needed in the previous century . The No.1 was the gun commander , and a sergeant , who aimed the gun . The No.2 was the " spongeman " who cleaned the bore with the sponge dampened with water between shots ; the intention being to quench any remaining embers before a fresh charge was introduced . The No.3 , the loader , inserted the bag of powder and then the projectile . The No.2 then used a rammer , or the sponge reversed , to drive it in . At the same time , the No.4 (" ventsman ") pressed his thumb on the vent hole to prevent a draught that might fan a flame . The charge loaded , the No.4 pricked the bagged charge through the vent hole and filled the vent with powder . At the No.1 's command the No.5 would fire the piece with his slowmatch .