

THE AMERICAN CIVIL WAR SOCIETY LTD

CODE OF CONDUCT FOR ARTILLERY

Introduction

A smooth bore muzzle loading cannon having a barrel with an internal bore of not less than 24 inches in length and not greater than 2 inches in diameter is classed as being a shotgun under the provisions of the Firearms Act 1968.

In order to fire a cannon for re-enactment purposes a Gun Commander must possess the following licences:-

- a) A Shotgun Certificate.
- b) A Gunpowder Licence.(aka Explosives Licence)

Where the barrel is less than 24 inches in length, greater than 2 inches in diameter, or is rifled, then a Firearms Certificate is required in order to fire the gun.

Anyone handling black powder / gunpowder must have a Gunpowder Licence, too.

Proof

Before firing a cannon in a public display it is essential that the barrel has first been tested & proofed at either the Birmingham or London Proof House. In practice the Proof Master tests the barrel with a charge of double that which the gun will be expected to fire. Thus giving a safety factor of 100%. Dependant upon the size of the bore and quality of the barrel most cannon on the re-enactment scene in Britain are proofed to fire either a 2 oz, 4 oz, or 8 oz charge of black powder in blank form. Details of the proof are then stamped on the barrel for reference purposes. IT IS AN OFFENCE to forge "Proof-Marks' or to sell an un-proofed barrel. (See: The Gun Barrel Proof Acts 1868,1950,and 1978.)

Duties Of A Gun Commander

Before taking part in a display a Gun Commander must ensure:-

1. That licences are up to date and available for inspection by the Police should this be required.
2. That all the necessary tools & equipment to hand in order to fire the gun safely are available.
3. That gunners are adequately trained & fully conversant with how, to load and fire a cannon in addition to knowing what to do in case of a misfire.
4. That all the ammunition for the gun is kept in a secure container; is supervised at all times; that no cartridge exceeds the proof of the gun. (Double loading is absolutely prohibited)
5. That all members of his gun crew are in a sober condition bearing in mind that it is a Criminal Offence to be drunk or under the influence of drugs when in charge of a firearm.
6. That the barrel has been thoroughly searched/wormed out and is clear of any obstruction prior to entering the display arena.

Equipment

Cannon accoutrements for the safe operation of cannon:-

1. Two sponges of size to fit the bore snugly – one for 'wet' use and one for 'dry'
2. Worm, again to fit the bore, with tines able to 'catch' any cartridge or other matter left in the bore.
3. Bucket with water to wet sponge the bore.
4. Priming wire – a metal spike used to pierce the cartridge prior to priming.
5. Gunners bag – leather bag to carry cartridges from 'limber' to gun.
6. Priming/Firing materials – in our case 'Hammer' Mechanism and .22 BP Blank Cartridges.
7. Wooden 'Limber' box to contain cartridges.

Personal accoutrements

1. Heavy leather Gauntlets for those using Sponge/Rammer
2. Heavy leather Gauntlets for those using Worm
3. Heavy leather Gauntlets for those handling cartridges.
4. Thumb-stall, Glove with reinforced thumb or Gauntlet for those 'serving' the vent.
5. Woollen uniform jackets will be worn for protection against flash/sparks.
6. Ear protection is required. Small, discreet ear defenders are strongly advised: large head-phone ear muffs are obviously not appropriate for re-enacting.

Matters Of Safety

(In relation to Cannon)

1. Under no circumstances must any projectile ever be fired from a cannon during the course of a battle re-enactment or display.
2. Ensure cannon are suitably positioned with a clear field of fire. Blank shots will not be discharged at or towards any re-enactor, animal or any other cannon or member of the public when they are less than 25 yards from the muzzle.
3. The limber box will be positioned to the rear of the Cannon, with the lid opening towards the front.
4. Cannon will not be captured or over-run except by prior arrangement between the Gun Commander & opposing Infantry / Cavalry Commander. It is essential that all ammunition & explosives are safely stowed away before the attack is launched. NO GUNPOWDER or AMMUNITION must ever be captured or taken away from the person to whom it was issued.
5. Gun Commanders must ensure that cannon are unloaded and cleared before the guns leave the battlefield.
6. Guns must be regularly inspected for wear & tear and barrels re-proofed if necessary.
7. Never use a powder flask or pour loose gunpowder into a cannon: always use pre-packed "rounds" of known, safe amounts of gunpowder (see duties of gun commander, point 4)

Blast

Recent tests in America have established that the blast of a 4 oz (quarter pound) blank charge of fine grain black powder fired from a 2 inch diameter smooth bore cannon has a muzzle velocity of over 1500 feet per second. More powerful than a magnum hand-gun and more than sufficient to propel a 2 lb cannon ball a distance of one-mile in fractionally under four seconds. So be warned:

Remember, when firing a cannon, the blast from the muzzle spreads in a large “cone” centred along the axis of the bore – the safety zone WILL be an 180 degree arc.

IN THE FINAL ANALYSIS: Safety is largely a matter of PERSONAL RESPONSIBILITY and COMMON SENSE. Be a responsible re-enactor.

Loading Procedure

The following loading procedure is based on the collective experience of 'Modern Day' Cannoneers both in Britain and America and represents a mixture of authenticity commensurate with SAFETY.

In the practical firing sequence that follows all the various aspects of firing a cannon have been broken down into separate stages:-

(These commands may be given by a Battery/Section Commander – or by individual Gun Commanders when the Battery Commander simply orders 'LOAD')

FIRING SEQUENCE - "BY DETAIL"

COMMAND given by Gun/Battery Commander	RESPONSE: By members of gun crew detailed to carry out specific duties.
1. VENT	A gunner wearing a leather glove or thumb-stall places his thumb over the touch hole and keeps it there until the command 'PRIME' is given.(Command No 7.). This is a time proved safety procedure to avoid oxygen being sucked into the barrel via the touch hole thus fuelling the flames of any bits of cartridge that may have been left in the barrel from the previous shot.
2. WORM or SEARCH	Barrel wormed to remove out bits of old cartridge
3. WET SPONGE	Sponge out the bore with a damp sponge to cool the bore and extinguish any remaining sparks
4. DRY SPONGE	Sponge again but with a dry mop to ensure that the bore is clean and dry before inserting a cartridge
5. ADVANCE ROUND	Bring charge from limber cox and insert into the bore
6. RAM	Ram it down the barrel until the charge is firmly seated in the breach
7. PRIME	Pierce cartridge via the vent with priming wire and insert primer in vent

8. READY	The gunners stand clear of the piece and to the rear of the axle line and slack is taken from the lanyard
9. FIRE	First checking that the field of fire is clear, the lanyard is pulled, igniting the primer and thence the Main Charge.

When pulling the lanyard, the gunners turn away from the vent and the front men watch the muzzle to confirm that the main charge has been fired.

The above firing sequence is continued until such time as the command to "Cease Firing" is given. Firing cannon requires maximum concentration and it is far better to forgo speed for safety.

IN THE CASE OF A CANNON MISFIRING adopt the following procedure:-

- a) Keep clear of the muzzle and do nothing for at least a full minute just in case the charge is still smouldering in the barrel and due to go off at any moment. Under no circumstances must anyone look up the barrel or insert a worm or ramrod into the bore.
- b) If the gun has not gone off after the time lapse use the priming wire to ensure that the touch hole is clear of any obstruction and that the cartridge has been pierced properly.
- c) Re-Prime the gun
- d) Ensure that you have a clear field of fire and attempt to fire.

In 99 cases out of a hundred the gun will fire first time after clearing the vent and re-priming.

SHOULD THE GUN STILL FAIL TO GO OFF AFTER ADOPTING THE ABOVE PROCEDURE

1. Stand the gun down and allow it to stand down for three minutes.
2. Commence to dampen the main charge/cartridge by pouring water down the touch-hole.
3. Allow a further period of time (not less than 3 minutes) before using the worm to remove the offending cartridge.
4. The gun is now ready to be sponged out and re-loaded.

Signals By Artillery

1. When a cannon has a charge in the bore (loaded), the tools (rammer/worm) will be held vertical on the wheel hub (or rim for emphasis) = 'HOT' KEEP CLEAR
2. On a misfire during the waiting period, the tools will be placed inside the wheels, across the barrel, forming an 'X' = 'UNSAFE' KEEP CLEAR
3. The sponge rammer protruding from the muzzle of the gun, with the front of the gun unoccupied indicates the gun is clear and safe for assault, over run, advance through, redeploy back to, occupy by infantry / cavalry, etc.