

Unified Rules for 17th Century Re-enacting



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updated September 1, 2005

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Mr. Hayes:

My apologies for not sending this to you prior to this. Unfortunately, the 17th Century re-enacting community is somewhat fragmented and there is no universal or even vaguely common set of standards. This is due to the fact that we encompass 2 continents, 6 wars, and 100 years. While the majority of those involved date from approximately 1630-1660, even here there is the diversity of European vs. Colonial and military vs. civilian.

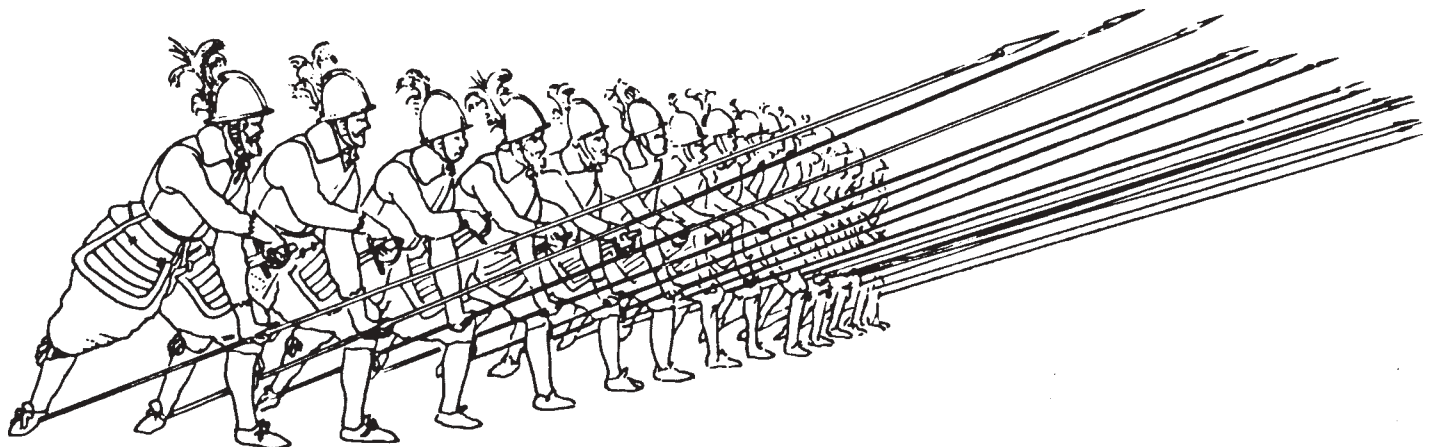
What I have enclosed is the proposal currently being considered by the larger unit commanders and event sponsors. Whether it will ultimately be accepted in its current form or substantially changed, I have no idea. Blackwell's Regiment currently abides by these rules, with the addition of some specific unit regulations, so I suppose you can assume them to be the rules most likely to be observed at NEP.

Having said all this, I would reassure you that the situation is not at all as bleak as it may sound. The great majority of organizations involved have a very high standard of authenticity and the differences are due to differences in research rather than any laxness in standards. The greatest differences come in the approach to battle re-enactment. Some of us would like to see a more authentic approach with unscripted scenarios, while some prefer a very well laid out approach. Differences also occur between those of us who would prefer an approach that lets a unit actually decide its own fate on the battle field by force of arms, while others prefer a "war gaming" style.

The rules that I have sent you are, as noted, a compilation from many sources in an attempt to find a middle ground. I hope that they serve the purpose the LHA. Again, due to general differences I am serving as Safety and Authenticity officer for my own regiment, so I suppose that by extension, I will be the designate for any 17th Century musters at LHA.

If you have any questions, or if I can be of any further assistance, please don't hesitate to call me.

Steve Barratt
Officer Commanding, 3 Company



Unified Rules for 17th Century Re-Enacting

These rules are designed to give a common set of standards for all 17th Century re-enactment groups, both military and civilian. The idea is that a set of rules can be established to cover the areas where groups must interact, but leave as much autonomy as possible in the hands of the individual groups. The primary areas of overlap will be safety and battlefield related items. The shorter we keep the rules, the more likely people will be to agree. This set of proposed rules has been put together from multiple sources and several different groups. There is no one source or one organization responsible for these rules.

Part two of this manual is based on the fact that no cumbersome “Umbrella Organization” would be needed. The involved groups would have their representatives sign on behalf of each group to accept the rules. The unit leaders would not have any specific meeting schedule and should only meet if a problem occurred which involved a modification of the rules. As long as everything is done in accordance to the agreed upon rules, we should not have to keep reviewing and refining everything.

The whole manual hinges on each group being willing to give and take. I am sure that there does not exist a set of rules that will be totally acceptable to all. If we can all set our individual prejudices aside in favor of the greater good of the hobby, however, we can have a set of rules that will remain constant from muster to muster; no more interminable officer’s meetings where we find out which rules we are playing by this week. Each group would also have to be willing to keep things relatively simple. We all know basically what will happen at a muster. As long as there is no major attempt to nullify the rules as they are written by “special circumstances”, we should be fine. This does not stop groups from holding musters with specific goals or tightly defined time periods. It merely means that we all have to be willing to comply not only with the written rules, but also with the spirit of these rules.

This manual was created so we have something specific with which we can approach site directors. We will all know where we stand and what to expect.

Resources Consulted for Constructing this Manual

Guild of Gentleman Adventurers, John Symborski
Living History Association Master Manual of Safety for Flintlock Era Units 1700-850
National Rifle Association
Safety Regulations – Council of Minutemen
Safety Regulations Manual – North-South Skirmish Association
Soldiers Manual – The Brigade of the American Revolution

Line drawings from:

Round Shot and Rammers, by Harold L. Peterson, Bonanza Books, NY, NY. A division of Crown Publishers, Inc. Library of Congress Catalog Card Number 69-16153

Weapons – An International Encyclopedia from 5000BC to 2000AD, The Diagram Group, St. Martins Press, NY, NY. ISBN 0-312-03950-6

Participating Organizations

A participating organization shall be defined as a 17th Century re-enactment organization, with at least 5 active members and a recognized leader. In the case of a site that wishes to participate in this process, the membership number shall be waived. The group leader or the re-enactment coordinator of a site shall be the representative to the council.

The Charter

A copy of the agreed upon rules will be maintained in an up-to-date manner.

Areas of Coverage

The rules shall cover Authenticity, Fencing and Skirmishing, Tactical Battles, Artillery, and General Safety.

Authenticity

- 1) All participants will comply with a minimum standard of authenticity
- 2) Clothing shall be made of natural fibers, in a period manner and be of such a pattern that is appropriate to the station of the wearer.
- 3) Modern eyeglasses and footwear, being the most commonly ignored items, must be eliminated. All possible effort must be made to be correct in these very visible areas.
- 4) Beyond this, each member organization shall determine its own standard of authenticity without interference from other members.

I

Gunpowder

A Basic Regulation

- 1 The only type of incendiary material allowable for use in any muzzle-loading weapon (musket, rifle, pistol, or artillery ordnance) covering the time period up to and including the Civil War, shall be **black powder**.
- 2 Absolutely no smokeless powder will be used. Any person found to be employing same, shall be ejected immediately from the event and severely disciplined.

B Storage of Gunpowder

- 1 During re-enactments or tacticals
 - a. No loose powder will be employed; all powder must be in proper paper cartridge form (see appendix for instruction on construction); these cartridges will be stored in a cartridge box of either tin or leather construction while the individual is on the field.
 - b. No powder horns or priming horns are to be filled with powder or used to load or prime a musket during a re-enactment.
 - c. Apostles, wood cartridges are not to be filled with powder for reenactments. During firing demonstrations one or two Apostles may be used with powder but all others must remain empty.
- 2 In camp
 - a. All prepared cartridges and any other contained black powder shall be stored in spark-proof, nonflammable containers.
 - b. These containers shall be secured so that only authorized persons have access to the contents. (This will eliminate the possibility of unauthorized access by either children or spectators.)
 - c. These containers shall be stored at least a minimum of 75 feet from the area of fires, sparks, or heat.
 - d. Cartridges should be made before coming to an event. Under certain circumstances, permission to fabricate cartridges may be obtained from the camp Provost Marshal or safety officer, who will set aside a safe and secured area for this purpose and will have strict control of the situation.

II

Edged Weapons

All edged weapons such as swords, tomahawks, knives, bayonets, pikes, etc., shall remain sheathed at all times, in camp or in tacticals, with the following exceptions:

A Swords

- 1 Officers commanding in the field and using the weapon as a tool of command. Care will be taken not to brandish weapon at or near an individual nor will it be pointed at anyone.
- 2 Officers on parade. Care must be taken to hold the sword in a secure manner, especially when using it to salute.

B Spontoons and Halberds

- 1 Same as A. 1 and 2.

C Tomahawks

- 1 Will not be used in tacticals or re-enactments.
- 2 Will be properly secured and sheathed on belt or carriage, with care being taken if person intends to become a feigned casualty in a battle.

D Knives and similar edged weapons

- 1 None will be used in any tactical or battle.
- 2 Same rule as C.2. (must be properly sheathed and secured)
- 3 Sharp edged kitchen utensils shall be kept in a safe area when not in use, and precautions taken to minimize accidents when they are used.

E Bayonets

- 1 Shall remain sheathed unless the order is given to fix bayonet under the following circumstances:
 - a. Picket duty
 - b. Guard duty
 - c. On parade
 - d. A strictly controlled tactical demonstration of a bayonet charge, with no less than 20 feet separating opposing forces or spectators and with ground free of obstructions.
 - e. Will not be leveled at any person or animal.

- 2 Will be fixed only on command of a responsible officer.
 - a. It will be the duty and responsibility of the respective line officers to maintain strict control and order in the use of the bayonet in items 1-a through 1-d.
- 3 No firearm will be discharged while having a fixed bayonet.
- 4 There will be no feigned casualty by anyone carrying a weapon with fixed bayonet under any circumstances.
- 5 There will be no running with fixed bayonet in a staged bayonet charge, or tactical.

F Pike and Pike Push (see details in rules for tactical battle)

III Firing of Muzzle Loading Pieces

A Introduction

- 1 Since the bulk of LHA sponsored events employ long firearms weapons that issue will be addressed at this time. As the need arises for revising the rules, all others firearms will be dealt with at that time.

B Safety Duties of Unit Commanders and NCO's

- 1 The backbone of any safety regulations is not only the safety officer, but also must include the unit commanders and NCO's. They shall have the responsibility of seeing that each man of their unit is well aware of the safety regulations of the LHA, and of observing the weapons handling of their men at LHA events, and correcting any unsafe practices they notice. They also have the responsibility of inspecting the blank cartridges of each man before every LHA event, to make certain that there are no "live ball" rounds in their cartridge box. Also all Apostle, wood cartridges must be empty and free of all black powder.

C Firearm Safety Requirements

1 Lock Function

- a. The half-cock position of the cock must withstand a moderate pressure on the trigger without releasing.
- b. The lock must mate tightly to the barrel in the pan-vent area.

2 Trigger Pull

- a. Muskets & Rifled Muskets – at least three (3) pounds
- b. Pistols – at least three (3) pounds, no set triggers
- c. Rifles – no limit, but must not discharge when struck smartly on the butt on full cock.

3 Vent Sizes

- a. Musket – New vent, 5/64" to 3/32" is recommended. Vent size must be less than #37 drill (0.1040).
- b. Rifle – New vent #50 drill size. Vent size must be less than #46 drill (0.0810).
- c. Pistol – Smooth bore, same as musket. Rifled, same as rifle.

D Proof Testing

- 1 The firearm shall have been proof tested before it can be used in a LHA event.

E Safety Inspections

- 1 Before all LHA units enter events the following items will be checked; any that are found unacceptable will cause that firearm to be rejected as unsafe and will not be allowed on the field until the condition has been corrected and passed.
 - a. Vent
 - b. Lock function
 - c. Fit of lock in pan-vent area
 - d. Trigger pull
 - e. Fit of barrel breech to stock (no gaps between metal and wood)
 - f. General inspection for obvious cracks and weakening of stock
 - g. Fit of bayonet to barrel on a military weapon
- 2 In addition to checking of firearms, blank cartridges may be randomly checked for wrapping and contents.

F Cleaning

- 1 The firearm should be cleaned after every day of firing, oiled, and inspected for overall damage or malfunction.

G Ammunition Specifications

- 1 Powder – Only black powder will be used. Smokeless powder is strictly prohibited.
- 2 Cartridges – Blank cartridges will be of paper construction in the 17th & 18th century manner. The paper will be heavy enough to withstand accidental ignition by a spark. See appendix for details.
- 3 Blank charge loads – Use the lowest load that produces a satisfactory report. Use a reliable powder measure.

Musket Blank Loads

The following are recommended blank loads. Do not use FFFFg powder for blanks. Flintlocks:

Bore Size

.75 to .70
.69 to .65
.64 to .60

Charge (Includes priming)

5 drams (135 grains) FFg or FFFg
4½ drams (123 grains) FFg or FFFg
4 drams (109 grains) FFg or FFFg

Rifle Blank Loads

Same rules apply as for muskets.

Bore Size

.45
.50
.54
.58

Charge (Includes priming)

50-70 grains FFg or FFFg
60-90 grains FFg or FFFg
60-90 grains FFg
60-100 grains FFg

Weaponry must fit the time period you are portraying.

Pistol Blank Loads

Use approximately ½ of the rifle load of the same bore size, not to exceed 50 grains.

1 Dram Equals 27.3 Grains

H Firearms Handling Regulations

- 1 Always keep the muzzle elevated when firing, sufficient to avoid causing injury to the person to the front of you.
- 2 When pouring powder down the barrel, keep muzzle away from your face or body, and away from anyone in your vicinity. Keep the hand and fingers clear of the muzzle. Powder has been known to ignite, on rare occasions, when poured down the barrel.
- 3 Absolutely NO wadding of muskets or any other firearm is allowed.
- 4 No ramrod is to be removed from its pipes and inserted in the bore during a battle or firing ceremony.
- 5 Open powder containers are prohibited at all times.
- 6 During blank firing a muzzleloading weapon, if you suspect there is more than one load in the gun, do not fire, bring firearm to the “shoulder” position, and wait for the opportunity to safely drop the load. Failure to do so, and the discharge of the gun could cause it to blow the breech plug, causing severe injury.
- 7 Vent picks should be used at frequent intervals to clear out the vent to insure good ignition.
- 8 Be sure that the flint in flintlock weapons or match in matchlock weapons is securely held in the jaws of the cock. Failure to do so could result in it flying out and causing some deep, nasty cuts or burns that are slow to heal.
- 9 Unit commanders and NCO's are advised to place new recruits next to experienced troops in the ranks so that the more experienced man can observe him and help him if a problem should occur.

Rules for Skirmishing and Dueling - General Safety

When you are killed, and the action continues around you, curl your body into a fetal position with your weapons near to hand. This will protect you and prevent your weapons from being stepped on and injuring someone else.

Sword blades should be inspected for excessive wear, rust, sharp bends and deep nicks. Any blade showing evidence of these should be replaced.

During the combat, keep an eye on your blade and on your opponent's. If a blade is broken or kinked, the combat must be stopped immediately.

The word “HOLD” shall be used to stop the combat in any unsafe situation.

The appointed marshals and the director of the fencing shall be responsible for seeing that all the rules are followed. They shall have the right to stop the combat and remove repeat offenders if those marshals deem it necessary for the safety of the combat.



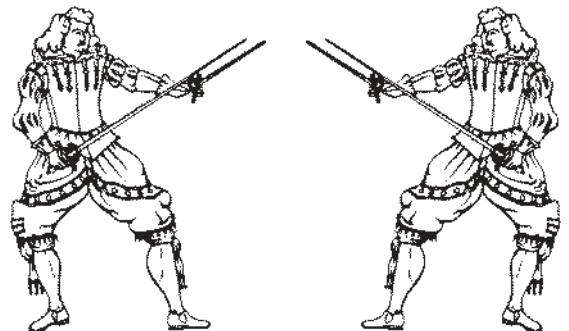
Rules for Skirmishing and Dueling

These rules cover engagements with sword only, either as a fencing skirmish or as a dueling competition. They are not to be used as part of a battle or re-enactment scenario.

- 1) All combatants must wear a buffcoat over a doublet or a fencing jacket under their doublet.
- 2) Buffcoats must be made of at least 6oz. Leather. They must have a 2-3 inch standup collar, flat along the top and overlapping for the front closure. They should have all seams solidly sewn and should be without slashes.
- 3) Doublets or coats should be well lined with 10-12 oz. Canvas duck. Additional lining layers at the throat and underarms are required. Reinforcing lining on the sleeves is recommended, especially if the buffcoat is of the sleeveless variety. The collar on the coat must also be of the standup variety, so as to add protection to the throat.
- 4) If a fencing jacket is worn in place of a buffcoat, it must be worn under the doublet and breeches. In the interest of authenticity, the fencing jacket must not be visible. Fencing jackets must be of the type with two arms and must be of 3-weapon type, made of canvas duck. Nylon fencing jackets are not acceptable.
- 5) Fencing masks must be of the saber or 3-weapon type. A fencing mask of this type attached to a period helmet is acceptable. Masks must be worn at all times when in the area of a skirmish or when involved in a duel.
- 6) Gauntlets are required to be worn on both hands. They must be made of leather and have cuffs of sufficient length to overlap and cover the sleeve opening.
- 7) Additionally, it is advisable for men to wear athletic cups, women to wear some additional breast protection and groin protection, and for also consider the use of kneepads under their breeches.
- 8) Metal body armor is acceptable, as long as it is in keeping with the station of the combatant. All areas covered by metal armor are considered proof against sword cuts and thrusts.
- 9) Swords and rapiers must be fitted with wide stage epee blades. All daggers must have cut off epee blades ending in a closed loop or a thin, non-edged blade with a wide rounded tip. Maximum blade length is 16 inches.
- 10) Sword blows may be delivered to any part of the body except the groin. All blows must be delivered in a controlled manner, with no wild flailing. All hits, whether point or edge, must be solid but not hard. Glancing or sliding blows will not count. All hits are by the acknowledgement of the recipient. If an opponent does not feel your blows are hard enough, call an officer or a marshal. DO NOT just increase the power. Remember, SAFETY is the most important consideration.
- 11) Attacks with the dagger must be of the "broken wrist" variety. No direct point thrusts are allowed. Additionally, participants must be able to demonstrate their competence in the "broken wrist" trust before being allowed to use it. The marshals or the director of the fencing shall make the determination. Otherwise the dagger may be used for parrying only.
- 12) Weapon use should roughly equate to the historical situation of the fencer. Thus, soldiers should use a sword with a parrying object in the off hand. Bucklers should be used only by Scotsmen. Officers and NCO's should be able to use swords and daggers, and only officers are allowed to use 2 swords. These rules apply to skirmishing only. In fencing tournaments, anyone may use any weapons form in the interest of fairness. For skirmishing, civilians will follow the same rules as officers.
- 13) Killing from behind or from the blind side of an opponent is permitted if done in a safe manner. The attacker must stop, plant his feet, deliver the blow, and call to his opponent to ensure acknowledgement. The blow must be delivered lightly to a well protected portion of the anatomy, preferably the back. The neck and head are absolutely not to be used as targets in this situation. Running from one opponent to another down a line of troops is prohibited.
- 14) Kills are considered blows to the body or head. Blows to the limbs will cause the loss of that limb. Wounded limb may not be used for blocking or balancing. If you are wounded in the leg, you must kneel upon that leg. You may not hop around and continue to fence.

Rapier and dagger play

A common way of fencing in the 16th and early 17th centuries was with a rapier in the right hand and a main gauche dagger in the left for parrying an opponent's thrusts. Such daggers were often made in a matching set with the rapier.



Rules for Tactical Battles

- 1) All Officers and NCOs are responsible for their troops at all times while on the field. It is also the responsibility of all Commanders to fully acquaint their men with the rules.
- 2) All battle participants should be armed with weapons appropriate to the period, and be familiar with the working of those weapons. Safety training is required for all troops.
- 3) In order to present a historically correct appearance, Officers and NCOs should be familiar with at least one of the common drill manuals of the period. Movement of troops on the field should conform to period style, and commands given should be of the correct style.
- 4) Push of Pike will be done with the pikes in the "Charge" position. Each unit will advance slowly until there is approximately 2 feet of overlap on the pike points. This should provide a gap of about 6 feet from the point to the opposing front rank. At the command "Fall On", pikemen will push their pikes downward or to the side, NEVER in a forward motion. This "fencing" with the pike points will be the ONLY contact of pike units in this style of push.
- 5) Under certain circumstances, with the agreement of all involved, the "English" pike push may be used. In this style, the blocks will approach each other with their pikes in the "Port" position. When they are within arm's reach of each other, the command "Fall On" will be given. At this time, the units will push against each other until one falls apart or gives way, in the manner of a rugby scrum. Great care should be exercised to avoid the trampling of fallen troops.
- 6) No matter which style of pike push is used, the Officer in charge of the block should be at the front of the block, off to one side. From this position, he will be able to see the distance from the opposing block, the position of the pike points, and the rate of closure. The Officer in charge will not be considered a target or tagged as a casualty when in charge of his block on the field. This is purely for safety reasons.
- 7) Musketeers will fight as blocks or as small detachments in "Forlorn Hopes". A few musketeers may be detached for use as sharpshooters or marksmen.
- 8) The Officer in charge of the musket block will be responsible for making sure that the targets are at a safe range. Whenever possible within the context of the battle, he will call the loading drill by detailed command. He must see that ramrods are not used when loading by mode of battle, and must be aware of misfires and other loading problems. Should a large number of muskets misfire in a volley, the Officer must withdraw the unit and clear the loaded weapons before resuming the battle.
- 9) It is the responsibility of the battle sponsors to provide an adequate number of marshals for each battle. These marshals shall be dressed in such a manner that they will not be distinguishable from the rest of the battle participants. They shall also be provided with information on the battle and the rules so that they can judge the action and keep it safe, stopping the battle if needed.
- 10) All participating units must take their casualties as determined in the table. NCOs should be able to tag members of their own units to be casualties as needed. Units seen to be not taking casualties as required should be pointed out to the marshals, and damage inflicted by these units should be ignored.
- 11) These tactical rules are based on re-enactment style combat and not on actual physical contact. Safety is the primary objective and the battles should be won by the tactical knowledge of the Officers and NCOs. The troops will win by following the orders of their commanders and the units that follow well and quickly will gain the victory.
- 12) Victory conditions will vary greatly depending on the type of battle, the objective, the terrain, and whether it is an open ended tactical or a scripted battle. The sponsor of each battle must make the victory conditions and objectives readily available to all units well in advance of the battle.

Open Field Engagement – A Suggested Formula

Pike vs. Pike — equal numbers — standoff — both withdraw

Pike vs. Pike — unequal numbers — smaller unit withdraw — 10% casualties

Pike vs. Pike with Shot or Artillery support — pike withdraws — 25% casualties

Pike vs. Pike with Shot and Artillery support — pike withdraws — 50% casualties

Pike vs. Shot — equal numbers — both withdraw — pike takes 10% casualties

Pike vs. Shot — more pike — shot withdraws

Pike vs. Shot — Shot outnumbered 2-1 — shot withdraws — 10% casualties

Shot vs. Shot — equal numbers — both withdraw — both take 10% casualties

Shot vs. Shot — unequal numbers — smaller unit withdraw — 25% casualties

Shot vs. Shot with Artillery support — unsupported shot routs — 50% casualties

Artillery vs. Pike or Shot — 30 yards range — 30% casualties to infantry

— 50 yards range — 20% casualties to infantry

— 70 yards range — 10% casualties to infantry

Artillery vs. Shot — artillery outnumbered 2-1 — artillery takes 10% casualties

Artillery will not be attacked by unsupported pike unless odds of at least 4-1

Artillery vs. Artillery — the fifth shot from a gun in a continuous counter battery engagement will disable the opposing gun

Safety

All muskets will be lightly loaded with no wad. Ramrods will not be drawn in a battle. The complete drill can be done when it is called for by the NCO for demonstrations only. Otherwise load shall be tamped by striking the butt smartly on the ground.

Minimum ranges: Musket — 30 feet; Pistols — 25 feet; Artillery — 100 feet

Aim all weapons above the heads of your opponents **NO MATTER WHAT THE RANGE.**

When troops are within the safety range of an artillery piece, the gun crew will call the entire loading drill without actually loading and priming. At the “FIRE” command, the gunner will then call “BOOM” in a loud voice. The gun will be assumed to do 20% casualties to those within the 60-degree fire cone.

Pikes will be used only when the pike are in a body. Unattached pikemen must run or surrender.

Colors

Recognizing that the honor of a unit resides in its colors, no one will sow disrespect to another unit's colors. They may be used as a defense in close combat, and it is assumed that all possible efforts will be made to protect one's own colors. If there is no possible way to get the colors to safety, they may be assumed to be captured. No one shall pull or tear at the colors so as to intentionally damage them. It should also be noted, however, that colors taken into a battle are always at risk of some damage.





Position of Order

Only 1 of 2 apostles should be filled with powder for demonstration. In battles all cartridges must be made of paper and carried in a leather pouch. All apostles must be empty.



Shouldered Musket - Marching Order. Lit match is not normally carried and is hung from the collar of charges. For live firing practice and hunting or battle, a length of lit match was held between two fingers of the left hand.



Removing the musket from the shoulder. This is not a position as such, but a mid-motion view to see how the musket rest is transferred to the left hand at the butt, so that the right hand becomes free to grasp the musket near the lock.



Poise your musket. From this position the musket may be shouldered or joined to the rest or it may be placed on the rest directly.



Join your Musket to your Rest. From this position, the musket may be ordered or loaded. The priming flask is seen better in this photo.



Prime your Pan. This occurs after the commands to open the pan and to handle the primer, and before the commands to close the pan, cast-off loose corns and to blow-off loose corns.



Handle your Charge. This occurs after the command to cast-about the musket. Note that the charges (or "apostles") are hung in pairs, So that when one is pulled the cords are lengthened and the next charge is pulled up to the collar (or bandolier). This not only makes it easier to load the musket, but makes the next charge easier to select and less likely to be mixed-up with an emptied charge. As the charges are used-up, grasping an empty charge becomes more likely and will interrupt the drill.



Charge your Musket. The pouring is begun just shy of the muzzle to assure that the charge has powder, then the nipple can be tapped against the muzzle to assure a full release of the charge.



Draw Forth your Scouring Stick. (After handling and loading shot)



Shorten your Scouring Stick. The end of the stick is placed on the collar so the end does not needlessly soil the coat, and the hand is slid down near the end of the stick so it becomes easy to insert the end of the stick into the muzzle.



Ram Home your Charge. This is followed by: Withdraw your Scouring Stick; Shorten your Scouring Stick; Return your Scouring Stick; Recover your Musket; and Draw Forth your Match.



(LEFT) Set your Match. The jaws of the cock (or serpent) are adjusted to securely grip the match, so that the lit end protrudes 1-2 inches to the rear. This is followed by Try your Match, noting that the pan is still closed and the travel of the match is checked to assure that the lit end will ultimately land in the middle of the pan. Here the musket is rested, but often these preparations are often done with the musket joined to the rest in the recovered position to permit troop movements as needed.



(RIGHT) Blow your Coal. This is needed to remove the ash that forms over the glowing portion of the match. This ash has an insulating effect that can actually prevent the match from igniting the priming charge. This occurs after Rest your Musket and Open your Pan.



Present. This is followed by Give Fire, Recover your Musket and Close your Pan. The sequence begins again, or the musket may be shouldered or ordered.

These 29 commands are a shortened version. Different versions existed. Field commands are Prime & Load, Present and Give Fire.

**Submitted by John Symborski
Guild of Gentlemen Adventurers**



(Above center) Side view of a soldier resting on his weapon at ease.



(Above to right) Close up. I had put on my glasses for some reason but they are not worn for reenactments being of modern design. Small-lensed near-period glasses are often seen among the 17th century reenactors. The shoes are hand made using 17th century techniques. Soldiers who were married often had a wedding band. The musket had been fired earlier in the day, so the powder marks make the lock show up better in the pictures. The musket is an early 17th century style (1600-1620), and they were common in the wars, as all equipment available was used. The trigger-pull variety became prevalent in the 1640^s as that type was then manufactured. Matchlocks were not totally eliminated (as well as snaphaunces) from English armories until the reign of Anne (1702-1714), although the true flintlock was prevalent after 1677.

Minimum Safety Rules for Artillery

Required Equipment – Self closing ammunition chest, vent brush, vent pick, thumbstall, heavy leather gauntlets, leather pass bag, hammer, wet sponge, worm, water bucket, individual containers for priming powder, linstock and slowmatch.

Crew – There is a minimum requirement of 5 people to fire a piece. Two to work the muzzle, one to stop the vent, one to handle the powder and one to fire.

Safety Distances – All spectators must be 50 feet behind the piece. Opposing forces must be a minimum of 100 feet from the muzzle and clear of an arc of 45 degrees on either side of the muzzle. Guns should also be aimed to fire over the heads of opposing forces, never aimed point blank at troops. Again, larger guns than the normal 3 pounder should use appropriately longer ranges.

Cartridges – All cartridges must be made of at least 3 layers of heavy-duty aluminum foil, formed around a mandrell. The powder should be put in a plastic bag and then wrapped in aluminum foil, with the end of the foil twisted closed. Excess foil should be removed so that the twisted end is no more than ½ inch long.

Inspection – The Artillery Commander will inspect all guns and crews before they take the field. He will make the final decision in conjunction with the muster Master concerning and questionable situations.

Gun Tubes – All guns must be of safe construction by a competent, professional gunsmith. Original tubes must be able to demonstrate that they are still in reliable condition consistent with safe, modern artillery practice. Original iron tubes should be lined with a seamless liner.

Loads – Each cannon will have a different load, according to caliber and use. Remember that the primary responsibility of all gunners is safety, and use the lightest load possible. Usually 4oz. of FFg powder or less per inch of bore size.

This is by no means intended to be a complete set of safety rules for the use of artillery. It is merely a reminder of some of the most important rules. It is expected that all gunners have done appropriate research and training before taking the field. For more complete safety rules, check the LHA Manual for Flintlock Era Weapons or contact:

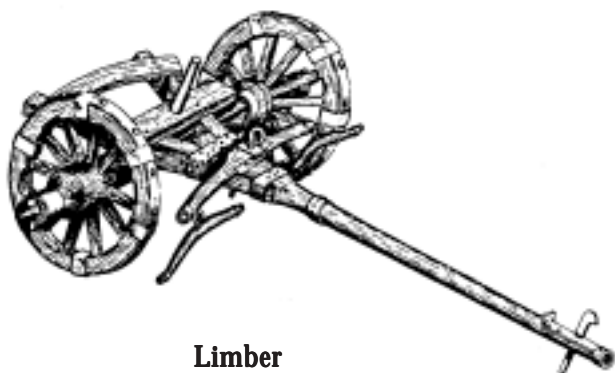
The Muzzleloading Artilleryman
234 Monarch Hill Rd
Tunbridge, VT 05077

For further reading:

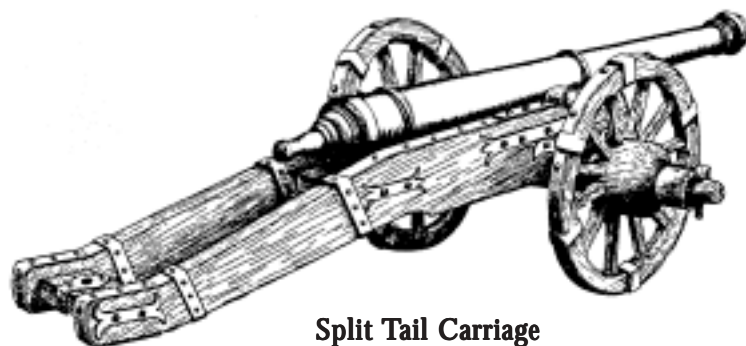
The More Complete Cannoneer by M.C. Switlik
Museum and Collector Specialties
38 E Elm St
Monroe, MI 48161

Standard NCWAA Artillery Drill Manual
National Civil War Artillery Association
C/o The Living History Association
PO Box 1389
Wilmington, VT 05363

The references mentioned above are concerned primarily with American Civil War artillery. However, they contain a wealth of information about safety, gun tubes, and standards.

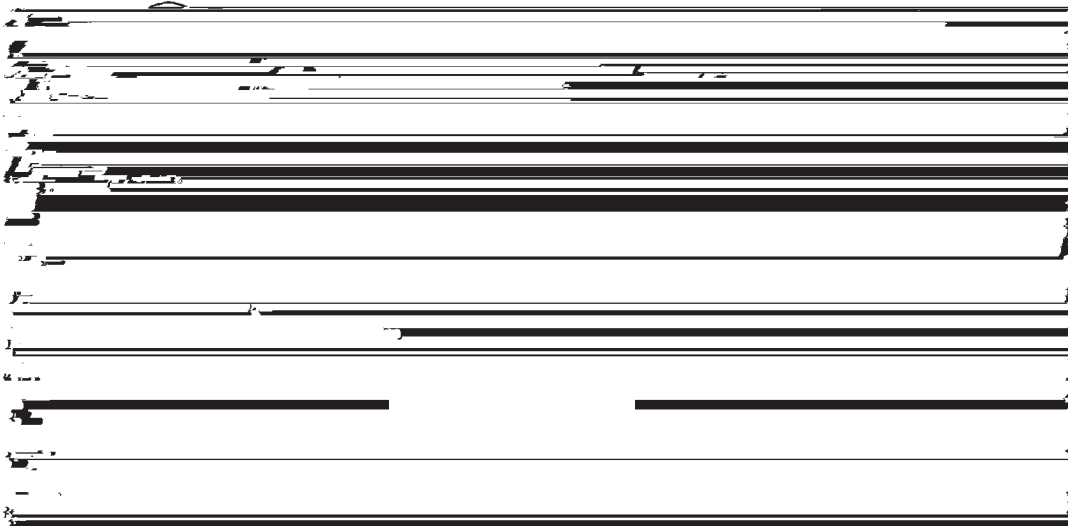


Limber



Split Tail Carriage

THE EXERCISE OF THE GUN



BEING A MANUAL OF INSTRUCTION FOR A SMALL FIELD PIECE

PREPARED FOR SIR THOMAS BLACKWELL'S REGIMENT

BY

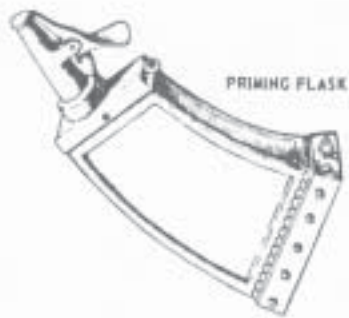
STEPHEN BARRATT, AN ENSIGN OF THAT REGIMENT

Equipment Required

Self closing Powder Box
Leather Pass Bag
Vent Brush
Mandrel for forming cartridges
2 Vent Picks of a length that will not contact the bottom of the barrel
Double Ended Sponge for wet & dry sponge
Spare Sponge Worm and rammer combination with tapered rammer head
Water Bucket
Belt Priming Pouch with individual Priming Charge Holders
Powder Horn for re-filling Priming Charge Holders
Muzzle Tompion and apron for the Touch-hole
Linstock and Slowmatch

Additional Supplies for Maintenance

Axle Grease
Wax for Trails and Powder Box
Gun & Bore Oil
Oiling Swab
Wooden Mallet
Flat Faced Hammer
Brass Headed Hammer
Pliers
Screwdriver
Monkey Wrench
Spare Square Head Bolts



PRIMING FLASK

Flask is only for show. You should use only single cartridges for priming.



SEARCHER



SPONGE



WORM



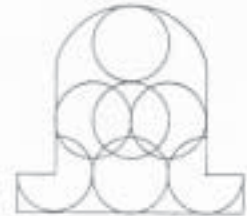
RAMMER



LINSTOCK



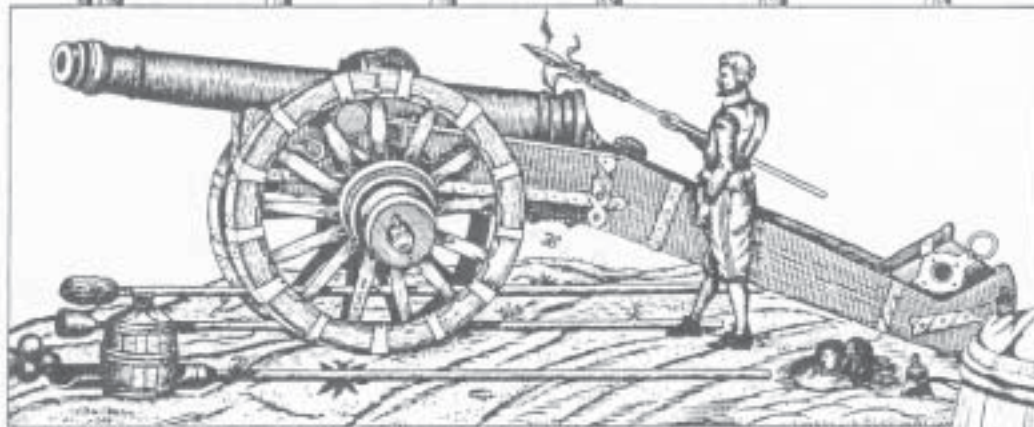
LADLE



PATTERN FOR LADLE



LINSTOCK



FROM A CONTEMPORARY PRINT



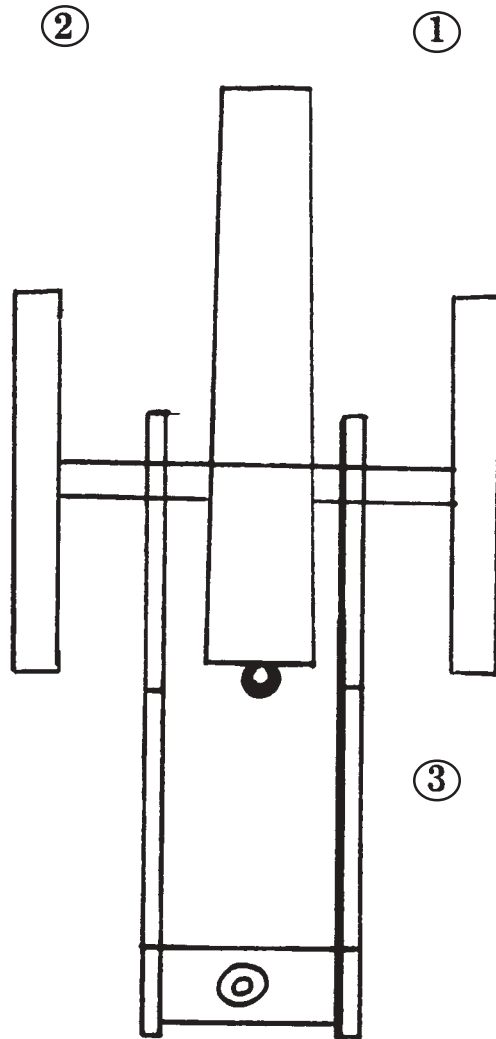
POWDER BAG



BALL



SLEDGE BARREL



The Words of Command

- I. Order your piece to load
- II. Search your piece
- III. Sponge your piece
- IV. Search your piece
- V. Sponge your piece
- VI. Advance your piece
- VII. Put in your powder
- VIII. Put home your powder
- IX. Thrust home your wad with three strokes
- X. Gauge your piece
- XI. Prime your piece
- XII. Give fire
- XIII. Put back your piece
- XIV. Search your piece

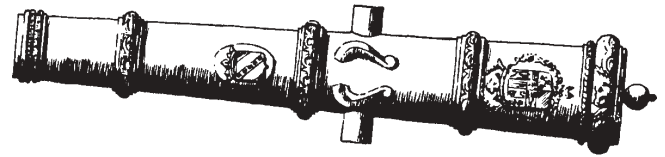
④

- 1. Number 1 Matrosse
- 2. Number 2 Matrosse
- 3. Number 3 Matrosse
- 4. Gun Sergeant
- 5. Powder Boy

⑤



Spanish Demi-Culverin, 1572



Spanish Cannon, 1600-1650

The Exercise of the Gun

- I.
 - 1 & 2. Unstrap the tools from the trails, remove the tompion and visually inspect the bore.
 3. Removes the apron and inspects the touch-hole.
 4. Oversees the operation and makes sure that downrange is clear of dangers.
 5. Maintains a position 20' behind the gun with the powder.
- II.
 3. Inserts a brass priming wire into the touch-hole and move it around to clear any debris, removes the wire, then securely covers the touch-hole and maintains position until the piece is clean.
 2. Inserts the worm to the breach, turns the screw to engage any debris and removes. If there is evidence of debris, repeat.
- III.
 1. Inserts a wet (not dripping) sponge to the breach, turns three times, and removes.
- IV.
 2. Inserts worm to the breach, turns to engage debris, and removes. He then makes a visual inspection of the tube to make sure it is clear.
- V.
 1. Inserts wet sponge to the breach, turns 3 times, and removes. He then reverses the sponge and inserts the dry end to remove excess water, turns 3 times and removes.
 3. Removes thumb from touch-hole.
- VI.
 5. Removes cartridge from powder box, puts it into leather pouch and brings it down the right side of the gun and gives it to 1.
- VII.
 1. Inserts the cartridge into the tube with two fingers, the tail of the cartridge out.
- VIII.
 2. Rams the cartridge home firmly, using an underhanded grip with the thumb clear. The hand should not at any time completely encircle the rammer shaft.
- IX.
 1. Puts a small twisted wad of green grass into the tube
 2. Rams it home with three good strokes, using the underhanded grip.
- X.
 3. Makes sure of the elevation of the gun, aims the gun, and checks again that the downrange is clear.
- XI.
 3. Puts a brass priming wire down the touch-hole and pierces the powder charge. He then removes a priming charge from his belt pouch and puts it in the touch-hole.
- XII.
 4. Does a final check downrange and applies the linstock to the priming charge.
- XIII.
 - 1 & 2 Return the gun to the firing line and check the ground in front of the gun for burning debris.
- XIV. Proceed with searching procedure and the drill as before. A minimum 3 minutes between the dry swab and the advance of the powder will be maintained.

Quick List for the Drill for Loading and Firing

- 1) Search your piece Clean the vent with a brush or the vent pick. Vent is tightly covered with a gloved thumb. The vent remains covered until the charge is loaded and the rammer withdrawn. Insert the worm and rotate to make sure the barrel is clear of debris and any unburned charge.
- 2) Sponge your piece Wet sponge is inserted to the breech and rotate twice and withdrawn. If any evidence of unburned powder is found, repeat.
- 3) Search your piece As above.
- 4) Sponge your piece A dry sponge is inserted into the bore and put all the way to the breech. Rotate twice to remove any excess water and withdraw.
- 5) Advance your charge The powder is brought from the magazine box to the gun in a leather pouch. Place the charge in the hands of the matrosse. Be sure to take the charge to the gun in such a way as to be, well clear of the linstock.
- 6) Put in your charge The charge is inserted into the muzzle with the forefinger and thumb. Make sure the twisted end of the aluminum foil is pointing out of the muzzle.
- 7) Ram home your charge With an underhand grip, carefully ram the charge into the breech and tap it solidly home. Be sure that the charge is all the way in by inspecting the marks on the rammer. At no time should the thumb close over the top of the rammer shaft.
- 8) Prime your piece Thumb is removed from vent. A brass or bronze vent prick is inserted into the vent and thrust down hard to break the cartridge. Move the vent prick around to make sure the cartridge is burst. Prime the vent with a small powder container, just enough to hold one priming charge. Never prime from a horn.
- 9) Have a care Matrosses retire to the firing position. Give another look downrange to make sure no one has wandered into the safety zone. Raise the linstock over your head to indicate that the gun is primed and ready to fire.
- 10) Give fire Fire the gun.

At this time, the gun should be cleared as in steps 1-4. After 3 minutes has passed, the next round may be fired, starting again with step 1. This actually means that the gun is searched and sponged 4 times between rounds. The additional safety is worth the repetition!

General Safety Rules

- Cartridges** Double thickness aluminum foil formed around mandrel. Twisted to close and excess foil cut off. Cartridge will contain no other materials -paper, plastic, etc.
- Wadding** Should be clean green grass free of weeds or other debris. Grass should not be wet enough to clump up when fired. Wadding shall not be used in Tactical Battles against other units.
- Spectators** Should be 75' distance behind the gun.
- Downrange** A minimum of 75' to the opposing forces and an angle 45° to either side of the barrel. For friendly forces, a minimum 30' to infantry and 20' between guns in battery. Do not fire into the rear of friendly forces if they are advancing and less than 75' from the gun.
- Timing** There will be a minimum 3 minutes between rounds, this will be measured from firing of the first round to the loading of the next round.
- Powder** Main charge will "F" Black Powder.
- Requirements** Priming will be done with "4F". Pyrodex will not be used.

No one shall cross in front of the gun once the drill has commenced.

No one shall smoke on the line or near the powder box. A guard shall be always in attendance on the powder box. Alcohol and gunpowder do not mix. Anyone showing effects of alcohol will immediately be replaced on the gun crew. Anyone repeating this offense will be permanently replaced.

V

Camp Safety

Definition of Provost Marshall: person in charge of setting up reenactor camps

A. Introduction

The use of common sense while setting up, starting and maintaining cook fires, participating in the encampment, and dismantling the camp, will reduce the number of hazards and accidents. The overall Commander of the camp shall be the Provost Marshall. This person will be in charge of castrementation, the fire pit areas, and the general administration of the encampment. The Provost Marshall will advise all participants of specific rules and regulations regarding the camp, since various locations, city and state ordinances and conditions would necessitate accommodation to the situation. The rules and safety regulations that follow are a general guideline only, and will be augmented by specifics as required by local ordinances or space restrictions.

B. Campfires

1. All fires will be enclosed in proper fire pits, steel plate, or fireboxes not to exceed an area of four (4) feet in diameter in all directions cleared of flammable materials such as limbs, leaves, etc.
2. Fires shall not be left unattended in camp areas at any time and must be attended by an adult.
3. No fuels other than wood shall be used for fires, in consideration of safety and authenticity.
4. The area surrounding the fire pits shall be tended by an adult reenactor to prohibit direct contact of the fire with any member of the general public.
5. Fires must be extinguished before turning in for the evening.
6. The hours of burning, size and placement of fires shall be in accordance with local and state regulations and shall be regulated by the Provost Marshall or host or both.
7. No bonfires are permitted.
8. Fires must be no closer than five (5) feet to a cook fly, and twenty (20) feet away from tents.
9. A bucket of water must be at each fire pit.
10. Children must not be allowed to tend fires without adult supervision; no playing around fire pits.
11. At the end of its use, fire pits must be drenched in water, stirred, drenched again, replacing the sod and re-leveling the ground to its former appearance.
12. No garbage may be burned in a fire pit.
13. Axes and hatchets must not be left around camp fires, wood piles, or in walk areas, but rather they must be sheathed and put in a secured tent or camp chest.

C. Evening Lighting

1. Candles enclosed in a properly secured lantern are strongly recommended as the lighting in and around camp, to preserve authenticity.
2. Lanterns shall be kept a safe distance from flammable articles such as tents.

D. Smoking

1. Prohibited in tents.
2. Shall not be allowed within fifty (50) feet of black powder storage areas or cartridge fabrication designated by the Provost Marshall, event safety officer or host unit.

E. Public Safety: Camps

1. Camps must be neat and well organized with clear walkways through and around camps.
2. Camp fires must be attended by an alert adult that will keep spectators a safe distance from fires.
3. Cook fires must always be a bed of coals or of practical size. Bonfires are not allowed.

F. Battlefield and Demonstration Areas

1. No firing or handling of weapons is allowed by spectators.
2. No firing of weapons in camp areas is allowed.
3. All battlefield and demonstration areas must be designated as such and must have a rope or other barrier to separate spectators from participants.
4. All weapons firing must take place at a distance of twenty-five (25) feet or more from the public, and weapons shall be fired away from the public, but never in the direction of the public.
5. Battles, where an opposing force advances toward the public may not fire in the public's direction, except when the opposing line is between the attackers and the spectator line. At that time, the defending force (those with their backs to the public) must be at least fifty (50) feet from the spectators. Those firing in the direction of the spectators must be at least one hundred and fifty (150) feet from spectators and be aiming fifteen (15) feet in front of the opposing troop line, at an oblique.
6. Cannon fire must always be at a distance of at least one hundred (100) feet from the spectator line when firing in the general direction where spectators may be located. Artillery must be obliqued with the spectator line, or firing away from the spectator line.

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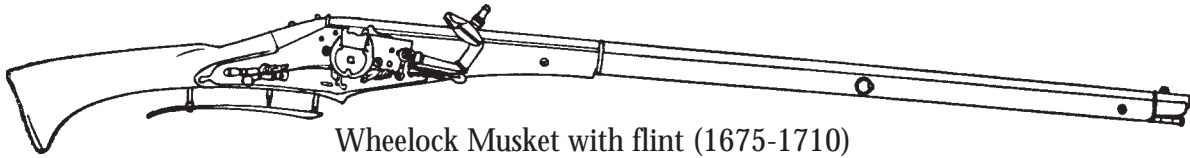
South Bend Replicas Inc., South Bend 1984

Safety Rules and Procedures for Shooting Muzzleloading Artillery

Cannon Ltd., Baltimore 1988

Appendix #1

Commonly Used Infantry Firearms



Wheellock Musket with flint (1675-1710)



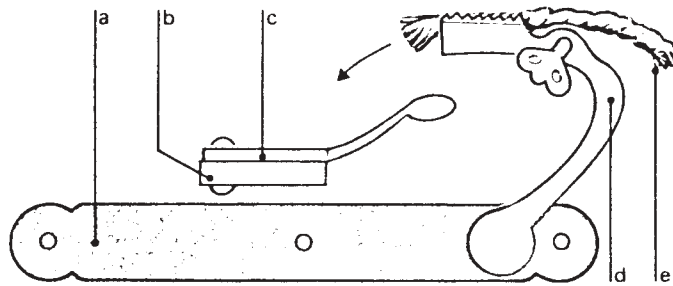
Matchlock Musket (1500's to 1700)

Appendix #2

Common Firearm Locks

Matchlock

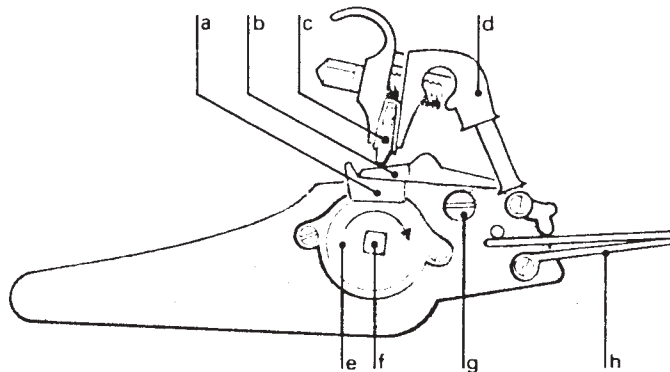
Used in Europe until about 1700, it was used in India and Japan until the mid-19th century. On the trigger being pressed, the glowing tip of the match is plunged into the priming powder in the pan. Many varieties exist. In most, the pan and its cover are part of the barrel not of the lock, and must be opened by hand.



- a Lockplate
- b Pan
- c Pan-cover
- d Serpentine
- e Match

Wheellock

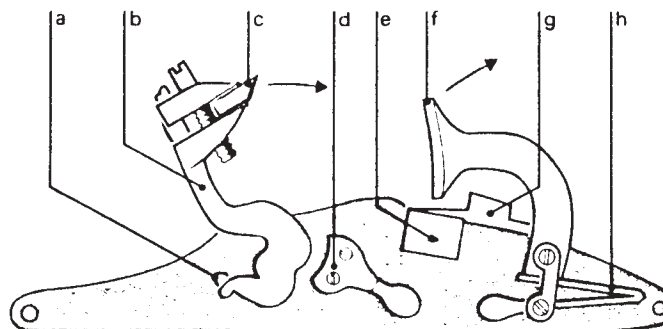
Efficient, but internally complex and thus expensive, this type never wholly replaced the matchlock for military use. On pressing the trigger, the pan-cover slides forward and the pyrites is pressed against the wheel as it turns. The resulting sparks ignite the priming in the pan.



- a Pan
- b Pan-cover
- c Iron pyrites
- d Cock or dog-head
- e Wheel
- f Wheel-arbor or spindle
- g Pan-cover release
- h Cock-spring

Snaphance

An important innovation, using flint and steel for the first time. On pulling the trigger, the pan-cover is opened mechanically. At the same time, the cock swings forward to scrape the flint down the face of the steel, so pushing it away. The resulting sparks fall into the powder in the pan below.



- a Sear
- b Cock
- c Flint
- d Buffer
- e Pan
- f Steel
- g Pan-cover
- h Steel-spring

Appendix #3

Bore / Charge Relationship Guide

Number of gage	Bore Diameter	Max. Charges FG Powder	Max. Charges FFG Powder	Max. Charges FFFG Powder
1	1.669	Considered as Wall Gun size and will vary charges with weight	Not recommended too fine and can produce high pressures	Not recommended too fine and can produce high pressures
2	1.325			
3	1.157			
4	1.052			
5	.976			
6	.919			
7	.873			
8	.835	6 drams 163.8 grains	5 drams 136.5 grains	
9	.803			
10	.775			
11	.751	5 drams 136.5 grains	4½ drams 122.85 grains	3½ drams 95.5 grains
12	.729			
13	.710	4½ drams 122.85 grains	4 drams 109.2 grains	
14	.693			
15	.677	Not recommended too coarse to give good burning with light ball	3½ drams 95.55 grains	3 drams 81.9 grains
16	.662			
17	.649		3 drams 81.9 grains	2½ drams 68.25 grains
18	.637			
19	.626			
20	.615		2½ drams 68.25 grains	2 drams 54.6 grains
21	.605			
22	.596			

Appendix #4

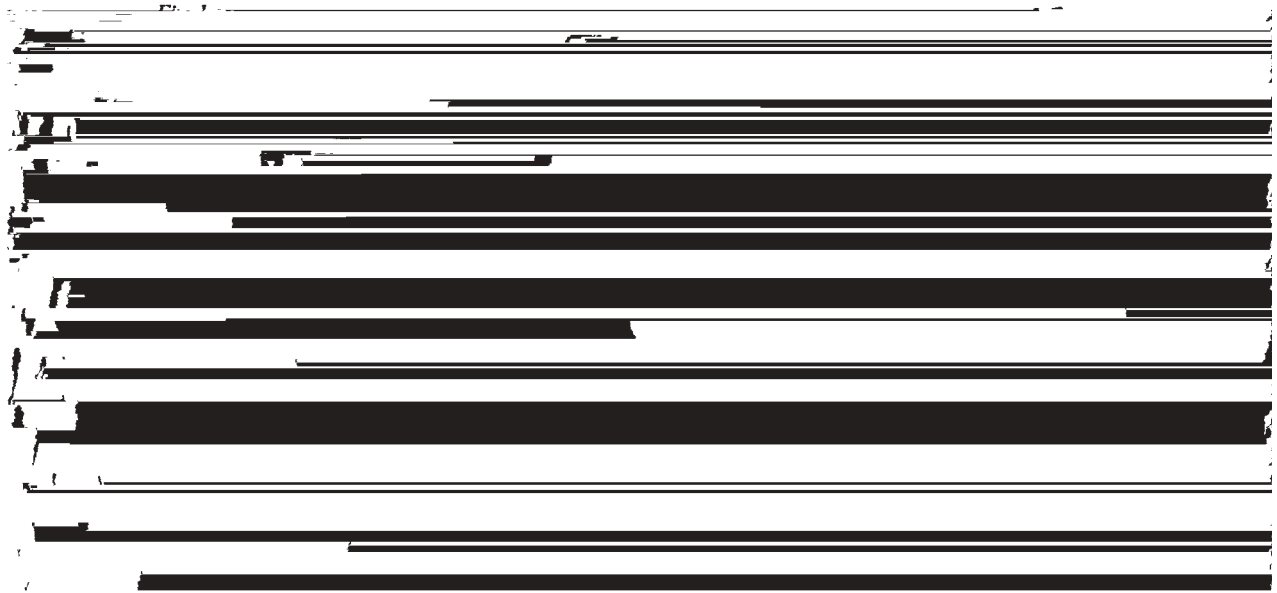
Recommendations as pertains to muzzleloading artillery

- A. Cartridge: Fixed, pre-loaded cartridges are the safest known. Use only unquilted broiler weight aluminum foil. Let "D" equal the exact diameter of the bore of the specific piece to be used. Make a sturdy cartridge pattern cut exactly to the dimensions you calculate from.
- B. Former: Make a former to the specifications in Fig. 1. It can be a wood turning, paper tubing or other material built up to size with gummed paper tape. In the case of tubing, close one end with a heavy, glued cardboard disk to prevent punching in the foil when folding the overlap. If the tube is porous, seal it with a thin coat of varnish. After it fully sets, sinterize it. If possible, provide an air hole to prevent suction when withdrawing the former.

Prepare a former (a tube 0.2 inches smaller than the bore) using aluminum foil 3 times the length of the circumference, roll it upon the former and fold one end closed and hit that end on a hard surface to lock the foil. Remove the former ~ fill with powder and fold closed.

NOTE: Make former with air passage in center or on circumference to facilitate its removal.

- C. Cartridge Forming: Place the cartridge on a flat smooth surface. Position the former as shown in Fig. 1. Roll up the cartridge into a cylinder leaving $\frac{3}{4}$ "D" overlap as shown. Fold overlap over end of former and press out creases and puckers. Withdraw former. Make desired number of cartridges at one time.
- D. Charge: The only acceptable charge is FG black powder. In the 18th and 19th century, copper, brass or wood was favored. The object of both is to eliminate the chance of a static electricity spark. Measure each load carefully. Charge only one cartridge at a time, and put it aside to avoid mistakes. Seal the cartridge as shown in Fig. 2. "A" shows the cartridge with the powder level indicated at the bottom. Fold and crease the upper end as in "B."



Appendix #5

Musket Cartridge Guide

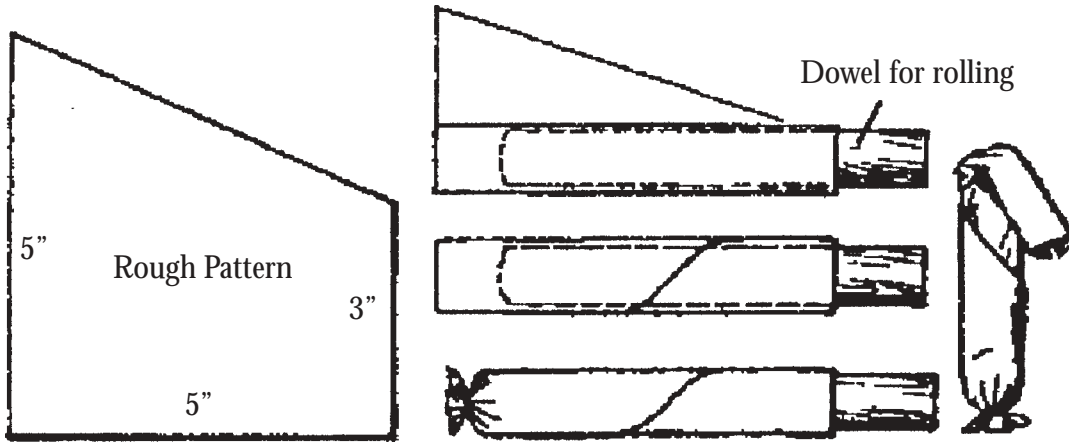


Figure III — Cartridge Rolling Guide

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