

## HOW SHOULD MUZZLE-LOADING ARTILLERY CHARGES BE ROLLED TO PREVENT PREMATURE FIRING?

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Premature firing is one of the most dangerous occurrences an artillery reenactor will ever experience, and there have been a number of serious injuries over the years caused by powder charges breaking open during ramming. The Loyal Train of Artillery Chapter of the United States Field Artillery Association (LTAC-USFAA) uses the following procedures when preparing powder charges.

The charges should be carefully prepared in cylindrical packages using plastic “baggies” (the sandwich kind with the fold-over top, not the “zip lock” kind since the zipper can produce a projectile when the powder charge is fired) and heavy aluminum foil. Make sure that the foil does not have any holes or tears that would allow powder to come into contact with a lingering spark. The following outlines the assembly of foil wrapped charges.

1. Use a highly polished wood or metal mandrel or a water glass.
2. Wrap several layers of heavy duty aluminium foil around it. Leave enough at one end so the foil can be folded to form the bottom. The mandrel should have a very slight taper so the foil bag can be easily taken off of it.
3. Form the bottom by folding the foil over the mandrel and pressing it against the end. You can pick up the foil and mandrel and, turning it upside down, tap it on a hard, flat surface.
4. Pour measured powder into the “baggie.”
5. Roll the powder in the “baggie,” being sure to get all air out and not to tear the “baggie.” Fold and secure the flap on the “baggie.”

6. Remove the foil bag from the mandrel and place the powder bag into it.
7. Roll the excess foil around the powder and flatten it. ***Do not*** twist the foil on the top into a “pig-tale” to close the charge. The charge should be flat on both ends. The pig-tail can create a projectile that has been known to hit soldiers in the field.

**Storage Of Charges:** The completed charges should be placed in a heavy cardboard cylinder with a bottom and lid. This will protect the charges when being handled. If a bag does develop a leak, you will not have loose powder scattered about the limber chest. Another suggestion is to use a metal ammo box either with or instead of the cardboard cylinders.

**Storage Of Primers:** At no time allow primers to be stored in the same container, or in the same compartment, with the powder charges. They should be placed in a metal box and stored separately from the chest.

**Limber Chest:** The limber chest should be divided into at least 2 compartments. Only accoutrements and equipment essential to servicing the piece, and charges should be allowed in the chest. Primers should be kept separate from the charges if possible. Keep it free of loose powder at all times. It should be equipped with a hasp and lock.

By taking the time prepare and store powder charges in the way described in this article, the risks of premature firing are greatly reduced. Safety should be the number one concern of every artillery reenactor – the consequences of poor safety procedures can be fatal, even when only firing blank powder charges.

Ready to learn more about muzzle-loading artillery safety taught by the LTAC-USFAA? Artillery Safety is taught to all students who attend the Artillery Schools, and the manuals can be purchased online at <http://artillerypublications.com/>.