

## Period Method for Rolling Cartridges

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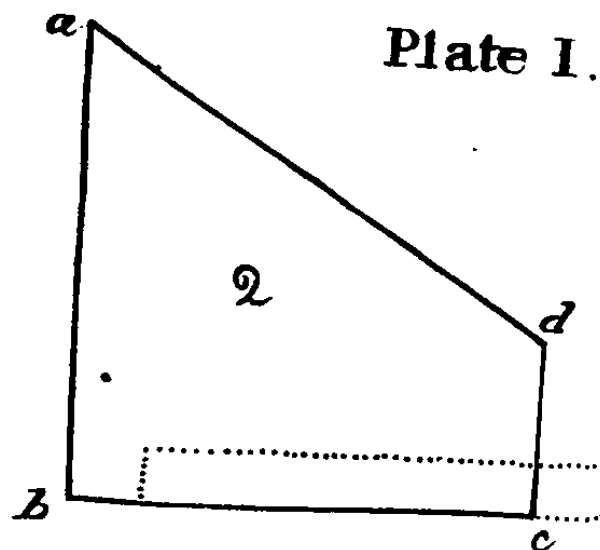
### Period instructions to create a military-style cartridge

Below are period instructions on how to roll a cartridge, taken from a Massachusetts militia manual used by Patriot forces in the AWI prior to the adoption of Stuben's manual. As the military musket in use at the time was the Short Land Pattern, I suspect that cartridges remained the same for the India Pattern musket used in our period. The same procedure can be used to make reproduction blank cartridges for re-enacting.

VII. The best method of making cartridges seems to be that used in the army. It is this.—Take the soft brown paper called whitish brown, or wrapping paper, and cut it into pieces of the form represented in plate 1, figure 2, which is of these dimensions; the side *a b* measures about six inches, *b c* about five inches and a half, and *c d* about two inches. A piece of wood about six inches long is to be made round so as to fit exactly the size of the ball; this is called a *former*: make one end of it hollow to receive a part of the ball: lay the former upon the straight edge *b c* (as represented by the dotted lines) with its hollow end about an inch from the side *a b*: roll the paper partly round the former: then with the ball press in the corner of the paper so as to cover the hollow end of the former; and keeping fast the ball, roll on till the paper is all wrapped round the former: having before taken a piece of twine and fastened its two ends to something that will not easily be moved, and so far apart as to leave it slack, you are now to take with the twine a single turn round the paper, below the ball; then running in the end of of your fore finger till it touches the ball, pull upon the string that it may girt the paper, and by turning round the former with one hand you will presently form a neck below the ball; which being afterwards tied with a piece of coarse thread, will secure the ball from slipping out: then withdrawing the former, the cartridge is ready to be charged with powder; in doing which

you muſt put in the more becauſe part of it is to be taken for priming : having properly filled the cartridge, twiſt the top, and the work is done. The ſize of the paper above deſcribed will ſerve for an ounce ball : if your ball be leſs, the paper may be ſomewhat ſmaller.

One thing ſhould be remembered, that if the cartridge exactly fits your firelock when the barrel is perfectly clean, it will be too large, and difficult to be rammed down, when it becomes foul by firing ; and 'tis dangerous firing when the ball is not rammed well home : for this therefore you are to make allowance.\*



Timothy Pickering, *An Easy Plan for Discipline of a Militia* (Salem, Massachusetts: Samuel and Ebenezer Hall, 1775), Part I, pp. 2-3.



Original musket cartridges

The following adapts Pickering instructions to provide a guide to making blank cartridges for living history events. The first part looks at preparation; the second part provides step-by step instructions on rolling and filling cartridges.

## Part I: Preparation

### A. Recommendations

Things to keep in mind when making reproduction blank cartridges:

- **Former:** Use a 5/8" dowel for the cartridge tube former. This makes a cartridge slightly smaller than the muzzle diameter, as Pickering recommends. Carve a recess in the bottom of the former.
- **Paper:** do not use photocopy/printer paper to roll cartridges—it is too heavy & resists tearing. Look for something closer in weight to newsprint. I use unbleached paper from a large easel flip pad.
- **Load:** an optimal load for a blank cartridge is around 90 grains of FFF black powder, but can effectively range between 60 to 110 grains with little effect on performance. . Some may wish to use a powder measure, but I fill the tubes to approximately 1" to 1.5". The way I look at it, when you fire you are just pushing air out the barrel, so excess powder just gets you more crud to clean out later.
- **Crimp the bottom:** Skip the part about tying the ball end with string. (No ball in the load, so no need to tie the end shut.) Twist the bottom of the tube to close it, then use the hollowed-out end of the former to crimp the twist to hold it in place.
- **Fold the top:** Pickering does not say what to do with the top end of the tube once the powder is added. Original cartridges show the paper flattened, with the sides then folded in to make a "tail", which is then folded down over the cartridge.



Reproduction blank cartridges

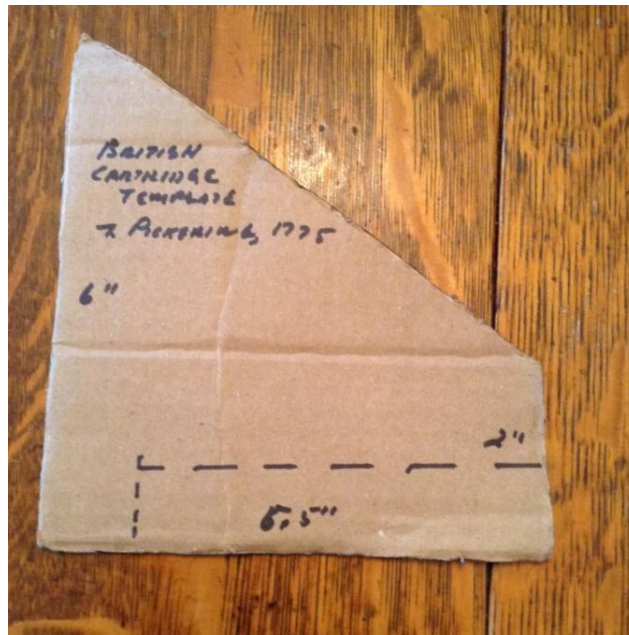
## B. Useful Tools:



Cartridge rolling tools



- **Template for the cartridge sheets.** Use a stiff cardboard cut to the dimensions provided by Pickering.



Template for cutting cartridge papers

- **Cartridge former:** Use a 5/8" wooden dowel as a former to roll cartridge tubes.



Cartridge tube former



Concave recess at bottom end

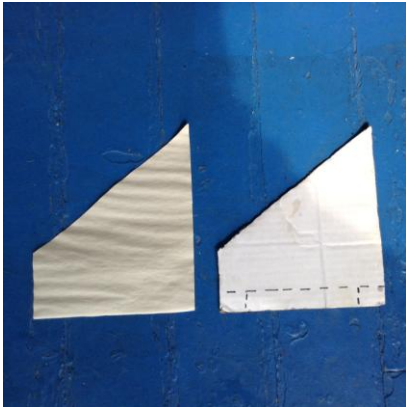
- **Powder dispenser:** A flask or powder dispenser is the safe way to fill blank cartridge tubes. Should be made of brass to prevent sparking. Below is a version of the model I favour, as the flat bottom allows the flask to stand upright,



Brass powder dispenser with flat bottom.

## Part II: Instructions for Rolling Blank Cartridges

### A: Roll the cartridge tubes

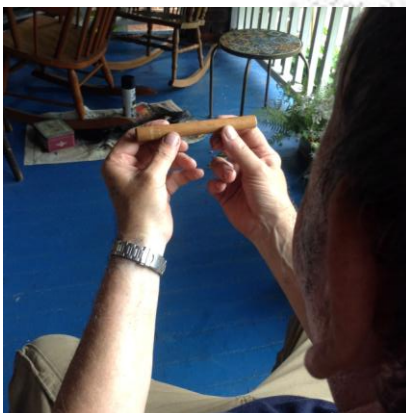


Use the measurements provided by Pickering to make a cardboard template for your cartridge papers.



Then use the template to cut out your papers. Make lots of them. (I rule them out on a stack of several flip-chart papers, which gets me a 2-inch pile of cartridge papers.)

Position the papers as shown to prepare for rolling. This will create a tube with the top end on the left, bottom end on the right. (Flip this if you are left-handed.)



Hold the former as shown to start rolling. Recessed end of the former is to the right (cartridge bottom).





Here is a view of the recessed end of the former.



Position the former on the paper so that the paper extends approximately  $\frac{1}{2}$ " beyond the recessed end of the former.



Roll the paper firmly but not tightly around the former.



Tightly twist the portion of the tube which extends beyond the right end of the former.





Firmly push the twisted end of the tube into the recess in the former to crimp it.



View of twisted and crimped end of cartridge tube.



Pull the finished tube off the former. Make lots of tubes!

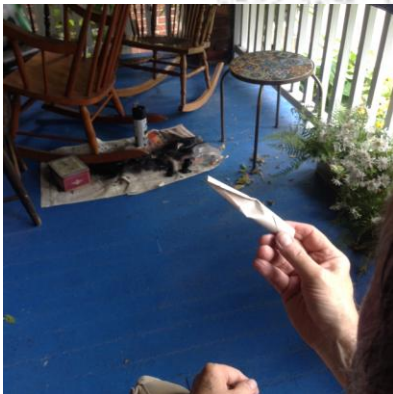
## B: Fill the cartridge tube



Use an appropriate device to pour the powder into the tube.



I fill each tube to approximately 1.5" as shown. Use a powder measure if you wish to be more precise.



Make a "tail": press the empty portion of the tube flat, then fold each side in.



Original cartridges just have the “tail” folded over alongside the filled portion of the cartridge. To reduce the chance of powder spillage, I tuck the tail into the diagonal edge of the tube to secure it.



Store your rolled and filled cartridges in a safe and non-static container.

**Extra credit:** If you want to get super accurate, wrap the filled cartridges up in bundles of 10 cartridges (2 rows of 5) using a heavy paper (I use shopping bag paper), and wrap with string. These bundles go into the 6 spaces contained in your cartridge box tins (2 in the bottom tray, 4 in the top tray). In the period these bundles were frequently checked during inspections to assess the ammunition's integrity.

Toronto

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