

To Make an Authentic Cartridge

by David Stieghan

This article is an attempt to aid the modern living historian in making proper blanks to simulate original cartridges. The instructions in this particular article are to aid in making of blanks for our simulations, adhering mainly to the original appearance of the round.

Before starting, one must be careful to obtain the proper materials. This first consideration is the "former", or dowel rod. This simple original rule for size still holds; the "former" should be the size of the ball for smoothbores (spherical ball) or the size of the bore for rifles, rifled muskets, or rifle muskets (elongated balls[1]). Until someone markets dowel rods of the proper sizes, 1/2" and 5/8", dowels may be swelled to the proper size by wrapping with paper or tape, or reduced from 5/8" or 7/8" by sanding. One end of the "former" should be roughly shaped to imitate the ball (round or cone shaped) just like the originals. The other end should be concave, but this is only necessary when making live smoothbore ammunition.

Common brown wrapping paper was, and is, the proper material for the tubes. A few guidelines should be used, however, the paper should be strong, thin, with a slightly glossy appearance. Mailing paper, which comes in 30" tubes, is the closest that may be found today. DENNISON KRAFT PAPER for example. Grocery sack paper will not do, as it is too thick, too weak, will not fold well, and gets "fuzzy" on the outside very quickly [2].

Almost all musket ammunition used during the war, were tied with flax thread [3]. Through close examination of numerous originals, flax thread seems to predominate, though cotton thread may have seen limited use. Check local shoe or leather repair shops for flax thread. PENN'S HAND SHOE THREAD is one example of many. You would be surprised how common flax thread still is. If flax thread is unavailable, unbleached or natural cotton thread could be used (Cotton Quilting Thread is probably the closest).

The ball can best be simulated with cotton balls. They can be bought cheaply in large quantities -- get the small or regular sizes rather than the enormous facial sizes. Two to four balls, depending on the projectile, will do well. Toilet paper, 3 to 5 sheets, may also be used, but it doesn't work as well and doesn't make the cartridge look authentic.

Optional items include: a pair of scissors, a needle and a choking string. These items will be discussed when appropriate.

The following description of fabrication is written for a right hander, lefties may of course, reverse the instructions. First place the "former" (dowel rod) in the right hand and with the outer wrapper trapezoid in the left hand (or place flat on the table) 1/2" or 5/8" from the end of the longest side (see Fig. 1 [4]). Turn the paper around the dowel once, and check to make sure the paper is going on tightly. Finish rolling on the paper, and hold the tube and dowel firmly in

the left hand with the thumb extended and holding down the end of the "point" (see "X" on Fig. 1).

The tube can be choked two ways; the original way, with a choking string and toggle, or by twisting. The choking string may be "...made by twisting 4 or 5 cartridge threads; fastened to the edge of the table, at the right hand of the workman." [5] The choking string is given one turn around the projecting end of the cylinder between the top of the "former" and the fingertip. Before removing the fingertip, use it to fold down the projecting paper inside-out, flat upon the top of the "former" (see Figs. 1 and 2). Remove choking string. Next place about an inch of the cartridge thread under the extended tail. Carefully fold this "tail" over the end of the cylinder and fold down along the other side of the tube. It is best to again press this bottom part firmly on a flat surface to sharpen the creases. Also, pinch back the "tail" as it begins to lay along the tube so that it will remain flush on the cartridge. Good paper will allow very flat and secure folds, as per the originals. The finished tube should be strong, rigid, and must not flex at all. The cartridge is now ready to bundle.

FOOTNOTES:

[1] Beginning in 1845, and through the end of the Civil War, all musket balls and most buckshot were produced by pressure (compression) rather/instead of casting, and the .69 caliber musket ball diameter was then increased from .640 to .650. Though the 1861 Ordnance Manual states that .58 caliber cartridges were to use a .5775 diameter ball, battlefield experience showed that this was insufficient windage, and by 1864, the Federal arsenals were producing .58 ammunition with .571 ball to interchange with Enfields. Lewis pp. 112-115, 117-118, 124, 130-131, 157-158, 189, 219-221, 224-225.

[2] See 1861 Ordnance Manual pp. 262-263.

[3] "Thread for infantry cartridges, of unbleached flax, two strands, strong and even." 1861 Ordnance Manual p. 264.

[4] For the sake of simplicity, the inner cylinder should be omitted when making blanks. Also, the original instructions say to place the dowel 1/3" -1/2" from the end but that will take some practice for the beginner. 1861 Ordnance Manual p. 267; Lewis, p. 186.

[5] Lewis, p. 177; the 1861 Ordnance Manual further states that this choking string should be 9" long. p. 267.

[6] Lewis: Plate 24, 1,b,c,e,f,g; Plate 25, a,b,c,d,e,f,g,h,j; Plate 26, b; Plate 27, d,h,j; Plate 31, 1,c,f,i,j; Plate 33, b,c, d,e,f.

ILLUSTRATIONS:

Fig. 1 Lewis, p. 178 (1840 Ordnance Manual)

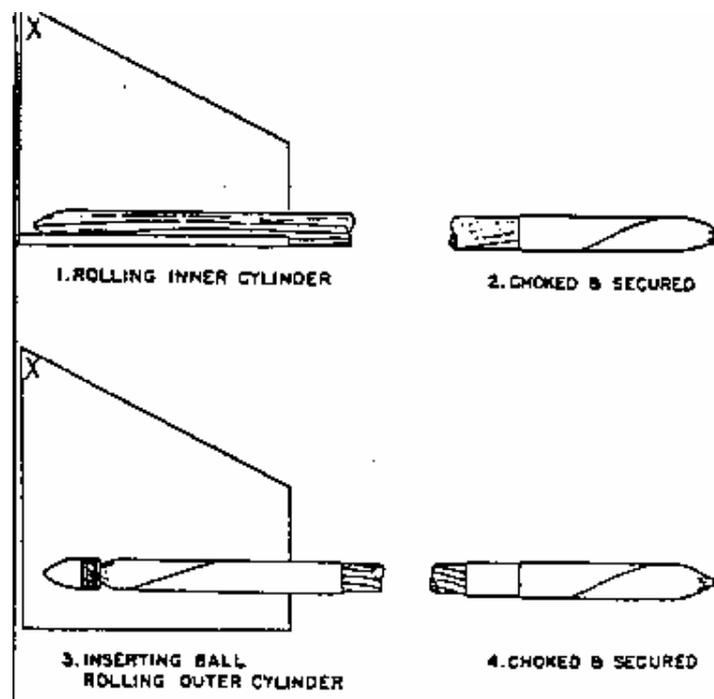
Fig. 2 Lewis, p. 187 (1861 Ordnance Manual)

Fig. 3 p. 270 (1861 Ordnance Manual)

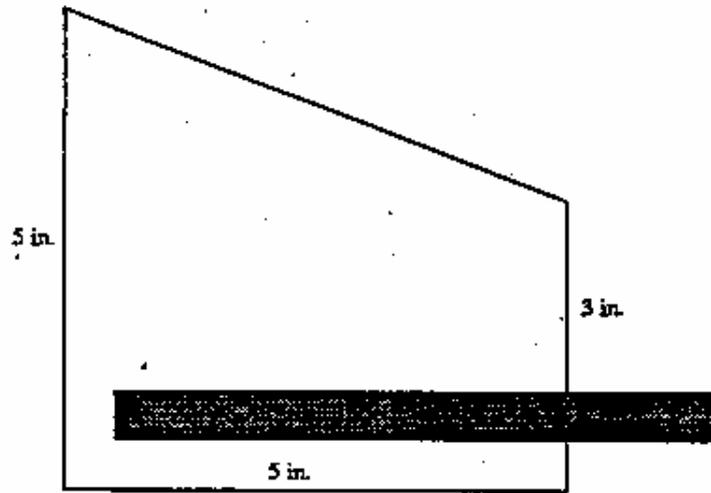
SOURCES

Coggins, Jack. Arms and Equipment of the Civil War. Garden City, NY; Doubleday & Co. 1962, pp. 26-39.

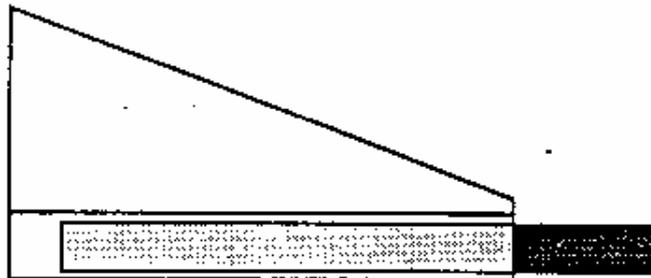
Peterson, Harold L. Pageant of the Gun. Garden City, NY; Doubleday & Co. 1967 pg. 294-300.



ROLLING CARTRIDGES



Cut paper to pattern above; place a cardboard coat hanger tube or a wooden dowel 1/2 inch from left end of paper, letting tube protrude from right end.



Roll paper around tube from bottom to top.

Twist end of protruding paper and mash into indentation at end of tube. Remove tube.



Add 60 gr. black powder to tube (slightly less than a teaspoon).



Flatten end of tube above powder (about the last two inches).



Fold over end of tube, forming a triangular point.



Fold back the flattened end of tube, and tuck under flap.