



Lincoln Lore

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“... one of the little breech-loading cannons I got of Hon. Eli Thayer.”

Editor's Note: Important credits for this issue go to Dr. Jack P. Covell, researcher, restorer, and owner of the piece under discussion; to Gary L. Delscamp, researcher and photographer; to Russell E. Thornton, who discovered the patent mark; and to Donald E. Thornton, who helped his father.

M. E. N., Jr.

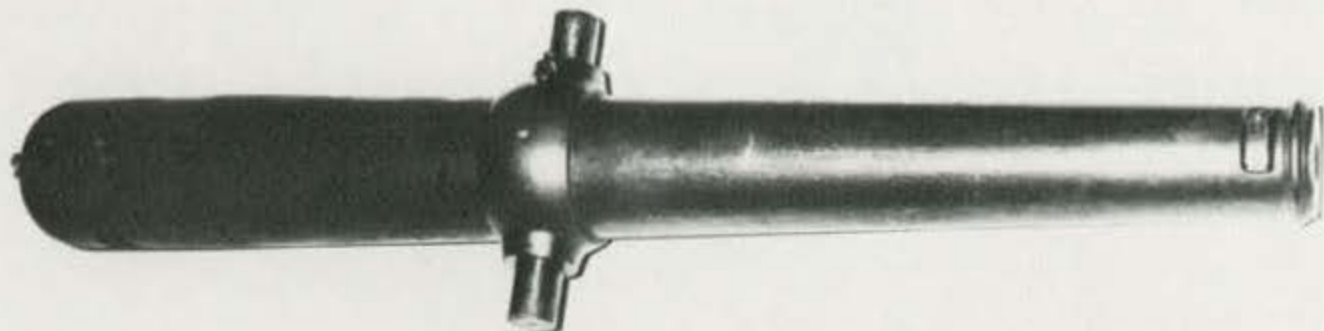
About a year before he won election to the Presidency, Abraham Lincoln asserted that the three discoveries and inventions of greatest value to the human race were “the arts of writing and of printing — the discovery of America, and the introduction of Patent-laws.” These were of crucial importance, he said, because they served to facilitate all other discoveries and inventions since. Probably only a few patent lawyers would still rate the introduction of patent laws on a par with the discovery of America and the development of writing and printing, but this serves well to reveal a peculiar trait in Abraham Lincoln's character: he was fascinated by technological innovations.

Lincoln's weakness for inventions would have large effects when he became President of the United States. The Army was of the mind that no invention could be developed fast enough to have any profound effect on the war at hand; therefore, it turned a deaf ear to the horde of inventors who descended on Washington with their various, curious, and sometimes efficiently lethal wares. These innovative Yankees quickly learned that their chances for a real hearing by the War Department were much enhanced if they could only get to Lincoln, persuade him of the merit of their schemes, and then be sent to the War Department with a request from the Presi-

dent that they be given a fair hearing. So much of this activity went on, in fact, that Robert V. Bruce managed to write one of the more ingenious (and lively) books in the whole field of Lincolniana, *Lincoln and the Tools of War*, in which he related the stories of dozens of inventions and their encounters with President Lincoln and the War Department.

Among those inventions the acceptance of which spoke well for Lincoln's ability to forecast the technological future, was a curiously elusive piece of artillery called, for no very good reason, “The Ellsworth Gun.” Muzzle-loaders and smooth-bores were very quickly a thing of the past after the American Civil War, and this little cannon was, therefore, a milestone in the history of American artillery: it was the only American breech-loading rifled cannon purchased by the War Department during the Civil War.

Unfortunately, the Ellsworth Gun was not as epoch-making in American military history as it was in the history of American technology. Fewer than fifty of the cannons were produced, and despite their association with some of the war's more colorful commanders, Elmer Ellsworth, Benjamin F. Butler, and John C. Frémont, they proved to be rather ill-starred in combat. A number were captured by the Confederates in the Shenandoah Valley campaign of 1862 against General Frémont, and others found their way to out-of-the-way and inglorious theaters of combat. As Professor Bruce puts it, “By 1863 all the Ellsworth guns had vanished into limbo or Dixie.” Until recently, none has been seen, but a candidate for being one of the long-lost little cannons has come to the attention of *Lincoln Lore*, and we are happy to have the exclusive right of reporting this find.



Courtesy G. L. Delscamp

FIGURE 1. This is a photograph of the recently discovered barrel of a small cannon. Taken just two months ago, it shows a small square hole near the breech in the lower left-hand corner of the picture. Two metal wedges and a tray to hold them have been removed to expose the holes. FIGURES 2 and 3 on page 2 show the breech before the wedges and other attachments were removed. Note the number “5” which appears on the trunnion, the metal sleeve around the middle of the barrel from which the cylindrical rods which rested on the carriage protrude.



FIGURE 2. This photograph shows the right side of the breech. The two metal wedges rest one atop the other in the tray. The lower wedge had a handle which protruded parallel to the axis of the barrel. By pushing it away from the barrel, it caused the wedges to work against each other, loosen the interior breech mechanism, and finally slide out into the tray. The rings probably had chains on them which kept the wedges from being lost from the barrel.

Courtesy G. L. Delscamp

All modern accounts of the Ellsworth gun, for which no patent models, drawings, or plans have ever been found, are based on Bruce's pioneering study, and here is the substance of that account:

Having bought manufacturing rights to B. F. Joslyn's new breech-loading rifle, the imaginative Yankee [Eli Thayer] applied the same design to a little breech-loading fieldpiece and sent a dozen specimens out to chastise the Kansas "border ruffians." In April 1861, when the conflict flared up again on a continental scale, Thayer sold two of his little cannons to the Union Defense Committee of New York, for the use of Elmer Ellsworth's Zouave regiment. Thereafter he called his cannon the "Ellsworth Gun."

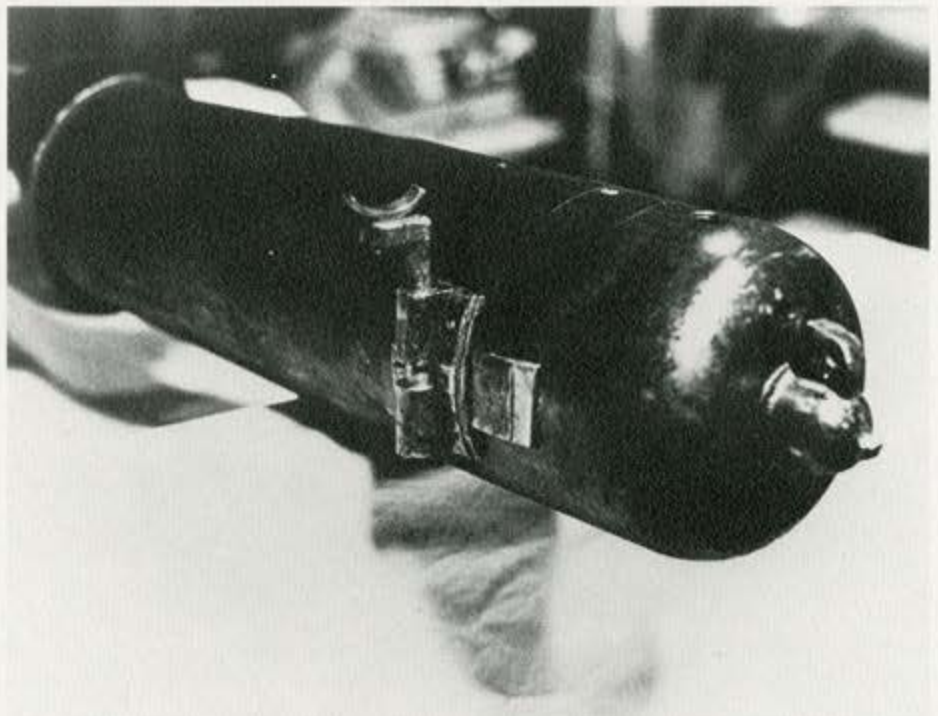
This curious hybrid, somewhere between a Brobdingnagian rifle and a Lilliputian cannon, fell under Lincoln's interested scrutiny in September 1861. The gun Lincoln saw

was four feet long, had a 1 1/2-inch bore and weighed about three hundred pounds without its carriage. Like the Joslyn rifle, its breech mechanism consisted of a cone and expanding rings, held in place by a tapered steel key which passed through the shank of the breech and was operated by a compound lever. A handle opened the breech piece. The conical chilled-iron ball, wound with tallow-soaked cord, fitted into a cup at the end of a brass cartridge; and the 3-ounce charge was ignited through perforations near the other end. Instead of a limber, the carriage had a drag rope attached for hauling by manpower.

Thayer made much of the gun's maneuverability, cheapness and rapidity of fire; and Lincoln at last consented to order twenty guns at \$350 each, subject to the inspection of McClellan's chief ordnance officer . . .

From 1863, when the cannons disappear from the official re-

FIGURE 3. This is the left side of the breech. The two wedges protrude slightly above the surface of the barrel, just behind the device which must have cradled a sight of some sort. The bore of the rifled cannon was so small that it fired a very small projectile which could not have been very destructive and had, therefore, to be accurately placed. The hole above the breech is a mystery, but it may have held a level. Since the rifle had a range of three miles, it doubtless had to have a telescopic sight on it.



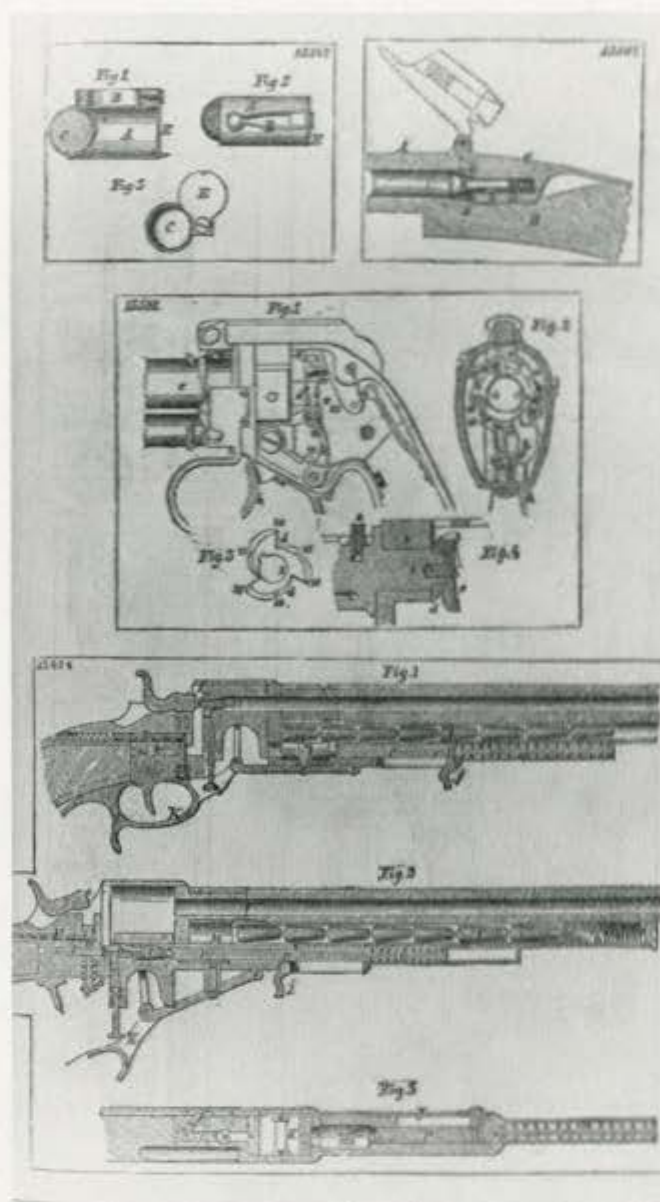
Courtesy G. L. Delscamp

ords, until June, 1974, when a cannon barrel was purchased by two gun collectors from a man who had acquired it to decorate his rock garden, there has been no evidence of the Ellsworth cannon. The barrel in question did not provoke much interest at first. The two gun collectors made a five-minute examination, decided that the little piece must have been the sort used to throw lines of rope from distressed ships to shore or *vice versa*, and within half an hour sold the barrel to a local firearms dealer as a curiosity or advertising piece for his store. The dealer had the barrel for six days. He removed some of the coat of thick black paint which covered the barrel and found a patent mark. Having been in the gun business for thirty years, the dealer had acquired some standard references on the history of weapons. Checking *The Breech-Loader in the Service*, he found the patent date listed there and realized that he had probably acquired a breech-loading Civil War piece rather than a line-throwing cannon. He had no reason to believe that these were not produced by the thousands and happily sold the gun for about 700% profit to two men who frequented his shop.

These two men, Dr. Jack Covell and G. L. Delscamp, were better equipped to evaluate the significance of the little field-piece. Dr. Covell is a gun collector with a solid technical knowledge of the practical workings of firearms, though twentieth-century weapons are his specialty. Mr. Delscamp is a recent college graduate with a degree in history and an ability to find his way around a library. Between them, they decided that the cannon barrel was no ordinary piece from the standard arsenal of Civil War weapons but the rare Ellsworth cannon, and they went to work to clean up the gun and prove their point. This work has taken two years of incredible efforts in garages and machine shops. Along the way, Mr. Delscamp lost interest and sold his share to Dr. Covell, who has continued the machine-shop work and the thankless process of writing and telephoning experts in the history of weaponry. Of course, there can be no real expert on a gun no one has ever seen so much as a picture of, and these efforts have not been altogether successful. Moreover, the desire to keep the barrel in good shape for posterity and the limited means available to an ordinary citizen who does not own a foundry have prevented exerting the kinds of force and violence on the piece that might open it up and prove the way its mechanism works. Nevertheless, the evidence for Dr. Covell's little cannon is substantial.

The dimensions seem to fit the existing word descriptions of the Ellsworth Gun. The barrel weighs around 290 pounds, is four feet long, and has a 1 1/2-inch bore. It is no line-throwing gun because the barrel is rifled, and the spin imparted by rifling would only serve to snarl a rope flying through the air. Although the breech plug is apparently firmly shut with rust and corrosion and the breech has not yet been opened, the cannon must be a breech-loader. Otherwise, there is no reason for the presence of the curious-looking compound wedges which protrude from the side of the piece and penetrate through the other side. These wedges operated by a handle which, though broken off and stuffed in the muzzle (along with a lot of rocks, debris, and what looked like red Georgia clay), extended parallel to the axis of the barrel from the circular protrusion on the breech-side of the upper wedge. Strenuous efforts have caused these wedges to move and, in fact, be removed from the cannon. But they did not do what doubtless they were meant to do before the breech plug rusted, force the breech plug out so that the barrel could be loaded from the rear.

All of these pieces of evidence might add up only to the fact that the barrel is that of a small old rifled cannon with a curious system of wedges near the breech. The important piece of evidence, however, is that patent date which first made the gun dealer realize he had something more than a seacoast curiosity. Stamped on the breech near the protruding plug is:



From the Lincoln National Life Foundation

FIGURE 4. This page from the plates of the *Report of the Commissioner of Patents for the Year 1855* contains the diagram of the B. F. Joslyn patent in the upper right-hand corner.

PATENTED
AUG. 28TH, 1855

A check of the *Report of the Commissioner of Patents for the Year 1855* reveals that only one patent was issued on that date for a firearms device. It was patent number 13,507, issued to B. F. Joslyn for an "Improvement in Breech-loading Firearms." It was the Joslyn patent which Eli Thayer purchased and adapted for use in a small rifled cannon.

In a letter to President Lincoln written on September 21, 1861, Thayer advised the organization of companies of soldiers armed with twenty of these weapons, which, he claimed, combined the advantages of artillery and infantry rifles. So light in weight (he claimed they weighed in at something like 200 or 225 pounds — quite an underestimate) that they could be pulled into place by men rather than horses and so small that they could be placed anywhere a rifleman could, the Ellsworth Guns nevertheless fired a seventeen-ounce ball a distance of three miles (at three degrees elevation), that is, artillery and not infantry range. Moreover, only a small number of men was required to operate the guns (he did not say precisely how small a number), and they could easily get off twenty rounds per minute. Thayer gave as his address Wil-



Courtesy G. L. Delscamp

FIGURE 5. This close-up photograph of the muzzle shows the rifling (visible at the edge of the shadows at the lower right of the bore).

lard's Hotel in Washington, and he had doubtless come down from Massachusetts to lobby for the purchase of the Ellsworth cannon — at what he claimed was a very low price, especially when compared to ordinary field artillery.

Thayer, an ex-Congressman and a maverick Republican who had voted for Lincoln's nomination at the Wigwam, had some influence. Three days later Lincoln drew up a memorandum for purchase of "twenty guns, . . . made equal, or superior to the Ellsworth gun" at \$350 each. Lincoln noted that the gun had recently been exhibited to him. The twenty cannons were

manufactured in Thayer's home town, Worcester, Massachusetts, by L. W. Pond at the factory of Goddard, Rice & Company. Some improvements were made on the model Lincoln had seen, because Charles Kingsbury, who examined the guns in November for the Army, reported that the "cannon rifles" were superior to what he had seen before with Lincoln. The improvements were wide-ranging enough for L. W. Pond to claim that the cannon was his own invention, or so, at least, *The Scientific American* reported in December.

The barrel under discussion here has no other identifying marks than those already mentioned — except the numeral "5" which appears in five different places on the barrel. This numeral, if a serial number, is consistent with the small number of cannons known to have been produced. While in itself it provides no conclusive evidence, it at least does not have to be explained away, as a higher number, in the hundreds, say, would have to be. The device on the side of the breech opposite the wedges is not mentioned in any of the literature on the Ellsworth Gun, but it might be a part of a sighting device, perhaps added as an improvement by L. W. Pond.

The positive proof of the identity of the barrel still lies immobile in the breech. Only the system of rings, pin, and cone will provide sure identification for the Ellsworth Gun, for it is distinguished by its B. F. Joslyn-patented breech device. From all other outward appearances, however, this could well be the long-lost Ellsworth cannon. If it is, it is a significant artifact for Lincoln students (as well as military historians and students of the history of American technology). Abraham Lincoln seems to have been very keen on the little cannon's possibilities, and when a Mr. Hegan visited him later, the President instructed Colonel George D. Ramsay to "show him one of the little breech-loading cannons I got of Hon. Eli Thayer." It was quite an innovative piece of weaponry, and President Lincoln had personally seen to its acceptance by the Army, even to the point of drawing up the terms of the contract and, on December 3, 1861, signing the manufacturer's bill for \$8811.87, "I advise that the above account be paid. A. Lincoln."



FIGURE 6. The all-important patent mark appears, alas, in an awkward place. It is just above the breech plug. Early owners of the barrel apparently damaged the mark in trying to remove the plug. The "T" is partly obliterated, as is most of the "8"; however, the beginnings of both of the loops in the "8" are visible on the side near the "2".

Courtesy G. L. Delscamp