

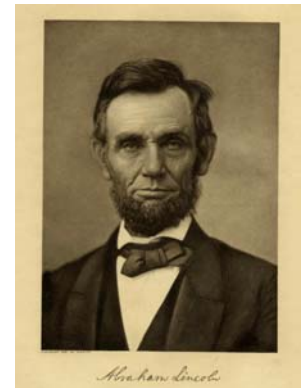
The Booth Deringer—Genuine Artifact or Replica?

Sally A. Schehl

Associate Editor, *Forensic Science Communications*
Forensic Science Research Unit
Federal Bureau of Investigation
Washington, DC

Carlo J. Rosati

Firearms Examiner
Firearms-Toolmarks Unit
Federal Bureau of Investigation
Washington, DC



Introduction

Five days after Confederate General Robert E. Lee surrendered to Union General Ulysses S. Grant at McLean's Courthouse in Appomattox, Virginia, an actor named John Wilkes Booth achieved historical immortality by firing the shot that claimed the life of Abraham Lincoln. The events surrounding this first assassination of an American President are extensively chronicled with regard to cast of characters, social and political repercussions, and ultimate resolution, particularly as Lincoln's death occurred in the direct aftermath of the nation's greatest schism and would be a far-reaching factor in the future course of history. In the midst of these volumes of materials treating the Lincoln assassination, this article focuses not on the motives of John Wilkes Booth nor on the response of the American people to the death of Abraham Lincoln on April 15, 1865, in Washington, DC, but rather on the weapon that created the fatal ripple—Booth's Deringer pistol.

One hundred and thirty-two years after the death of Lincoln, this pistol was again an item of interest in Washington, DC. In June 1997, the U. S. Park Police and the National Park Service contacted the Federal Bureau of Investigation with a request for assistance in examining the Deringer pistol used by John Wilkes Booth in the assassination of Abraham Lincoln. The authenticity of the pistol, which is displayed at the Ford's Theatre National Historic Site in Washington, DC, was drawn into question during the adjudication of a New England estate belonging to a member of a burglary ring that operated throughout the northeastern United States between the late 1960s and the early 1980s. Members of this ring had allegedly replaced the original Booth pistol with a replica pistol in the late 1960s, at which time the security system at Ford's Theatre was much less sophisticated than that in place today. Curatorial records of the Booth pistol were unable to resolve the issue of authenticity, and the FBI Laboratory was subsequently assigned to determine beyond a reasonable doubt whether the Deringer pistol displayed at Ford's Theatre is the same pistol pictured in historical photographs pre-dating the 1960s.

Background

The Lincoln Assassination

On April 14, 1865, President Abraham Lincoln and Mary Todd Lincoln, in the company of Major Henry Reed Rathbone and his fiancée, Clara Harris, attended a performance of *Our American Cousin*, a play showing at Ford's Theatre in Washington, DC. At approximately 10:15 p.m., an actor named John Wilkes Booth made his way to the state box occupied by the President and his companions, entered the sitting area unchallenged, and, pointing the muzzle of his Deringer pistol at the back of Abraham Lincoln's head, fired a single shot. During the ensuing chaos, Booth dropped the pistol, stabbed Major Rathbone in the arm with a knife, vaulted over the railing of the state box to the stage, and escaped through the back of the theater to his horse. Though having broken the fibula of his left leg during his leap to the stage, Booth was otherwise uninjured and rode unpursued from the scene of the crime.

Abraham Lincoln, unconscious, was carried from Ford's Theatre to Petersen's House, a collection of boarding rooms located across the street from the theater. Surrounded by his family and political colleagues, Lincoln died on the morning of April 15, 1865, approximately nine hours after receiving the fatal gunshot wound.

Twelve days after shooting Lincoln, John Wilkes Booth was trapped in a burning barn near Port Royal, Virginia, by 2,000 pursuing Union soldiers. When the fire and smoke failed to force Booth from the barn, Sergeant Boston Corbett, acting against Secretary of War Edwin Stanton's official orders to return Booth to Washington alive, shot and killed the actor-turned-assassin.

The Deringer Pocket Pistol: History and Attributes

The pistol recovered from the state box after the Lincoln shooting was a silver-inlaid model of the pocket type produced by Deringer, an armsmaker based in Pennsylvania.

In 1806 Henry Deringer established a firearms factory in Philadelphia and began manufacturing flintlock pistols, muskets, and, somewhat later, percussion rifles for the U.S. Army. Though initially recognized as a supplier of long arms, Deringer gained renown with the production of percussion dueling pistols, which first appeared in 1825 and were primarily sought by military officers and political officials. The manufacture of a smaller version of the dueling pistol in the late 1840s and the pocket pistol in the early 1850s solidified Deringer's position as a manufacturer of quality firearms.

The Deringer pocket pistol achieved its greatest popularity during the mid-1850s and was a favorite of civilians seeking a compact, easily concealed firearm for use in personal defense. Although the Deringer pistol was somewhat limited by its single-shot capacity, its light weight and small size gave it a distinct advantage over bulkier, unconcealable alternatives, and the limitations of its firing capacity could be circumvented by carrying two pistols, which were sold as pairs for approximately \$22 to \$25 during that time period. The Deringer pistol's ubiquity, success, and infamy as a deadly weapon is apparent in its association with a number of prominent California murders that took place during the 1850s, as well as its later use in the assassination of President Lincoln. The latter homicide ensured the permanent notoriety of the Deringer pistol while simultaneously finalizing the incorporation of the word "derringer" into the American lexicon as a common noun denoting a concealable, short-barreled nonautomatic pistol. Notably, the use of the noun Deringer refers to a pistol manufactured by Henry Deringer, whereas the use of the noun derringer (sometimes spelled Derringer) refers to a pocket pistol of any make.

With the advent of breechloading firearms, self-contained cartridges, and the Civil War, the demand for Deringer pistols and other percussion weapons declined sharply. In addition to its pending obsolescence as a percussion device, the Deringer pistol's non-martial status was underscored by the lack of a standardized caliber among pistols of its make. Because each paired set of Deringer pistols included a bullet mold specific to the caliber of the two matching pistols, loss of this mold virtually precluded the proper fit of ammunition for the paired set. The prewar focus on definitively military weapons obviated the inadequacy of the Deringer pistol on the battlefield, and sales of the firearm during the war were low. Following the death of Henry Deringer in 1868, the market for pocket pistols opened to competitors eager to apply the breechloading system to a concealable weapon.

A Deringer pocket pistol is typified by its small size and short-barreled, single-action percussion design. The barrel of this firearm can range in length from less than 1 to 4 or more inches and is made from wrought iron browned with a chemical solution that imparts copper-colored streaks to the barrel. Partially round and partially octagonal, the Deringer barrel is flattened and slotted on top to accept a blade-style front sight and is rifled with seven grooves, right twist. The grooves are beveled at the mouth of the barrel, and caliber varies from .33 to .51 inches.

General attributes of a typical Deringer pistol include a black walnut stock with a checkered grip, a checkered hammer thumb piece, and an S-shaped triggerguard. The mountings of the pistol are engraved German silver; some specimens bear gold or gold-plated mountings. All mountings are attached to the stock with pins, with the exception of the sideplates and buttplate, which are fixed with bolts or screws. The lockplate and barrel are stamped with the trademark DERINGER PHILADELA (on separate lines) and may bear an additional stamping on the top of the barrel that indicates an agent's name and address. No serial numbers are present, but letters or digits may be stamped or punched on various parts of the pistol—for example, barrel, lockplate, breechplug, wedge, and trigger—for use during assembly. Overall length of the pocket pistol ranges from 3¾ to 9 inches.

The widespread popularity of the Deringer percussion pocket pistol led to equally widespread imitation. Some copies of the Deringer pistols can be distinguished from the original firearms by their solid steel, rather than wrought iron, barrels. Other copies, specifically those produced by Slotter & Co. (a group composed of several of Deringer's former workmen) and distributed by A. J. Plate, are identical in design and trademark stamp to the genuine Deringer pistols. Still other facsimiles were stamped with variations of the Deringer name to avoid prosecution for trademark infringement. Ultimately,

however, all derringers manufactured after 1870, at which time Deringer production ceased, must be considered replicas that follow or expand on Deringer's original design.

Materials and Methods

On July 28, 1997, the National Park Service curator and a U.S. Park Police captain removed the Booth Deringer pistol from its case in Ford's Theatre and hand-carried the firearm to the Federal Bureau of Investigation for examination. Once in the possession of the FBI Laboratory, the Booth Deringer became the object of a series of examinations designed to determine the authenticity of the pistol beyond a reasonable doubt.

To assist in clarifying the issue of the pistol's authenticity, the FBI Laboratory was provided a series of photographic and documentary evidence that included historical photographs of the pistol dating from the 1930s, 1950s, and 1960s, as well as technically descriptive materials from this timespan. Through a series of physical analyses, the Firearms-Toolmarks Unit characterized the pistol with regard to all derringer-style pistols of similar size and caliber and recorded all relevant features of the firearm for comparison with the photographic images. Building on the morphological information obtained through the Firearms-Toolmarks Unit's examination of the Booth Deringer, the FBI Laboratory's Special Photographic Unit performed photographic superimpositions using the Deringer and the historical images of the pistol.

Results

The Booth Deringer (Specimen K1) was described as a single-shot, muzzle-loading, percussion cap-fired Deringer pistol manufactured by/for the Henry Deringer Company of Philadelphia, Pennsylvania. Its notable features and markings included, but were not limited to, a black walnut stock with checkering; a barrel with an octagonal upper portion and a round lower portion; an S-shaped triggerguard; a hammer; and scrollwork on the sideplates, buttplate, stock tip, wedgeplates, front sight, escutcheon, and flashplate. Figures 3 through 7 show the pistol as viewed from a number of angles.

The trademark DERINGER PHILADELA was found stamped in two locations-on the lockplate and on top of the breech plug. A letter "P" inside a sunburst was also stamped as a proofmark on the left flat of the breech plug between two bands of gold. No serial numbers were noted. Standard forensic measurements of the pistol were recorded and are presented in [Table 1](#).

Because the age and historical value of the Deringer pistol precluded test firing to obtain rifled bullet



Figure 1. Newspaper photograph from the 1930s showing the Booth Deringer pistol. [Click for enlarged image.](#)



Figure 2. The Booth Deringer display at Ford's Theatre. [Click for enlarged image.](#)



Figure 3. The Deringer pistol used by John Wilkes Booth to assassinate Abraham Lincoln. [Click for enlarged image.](#)

samples, the interior of the barrel, breech plug, and flash port of the firearm were cast with Mikrosil, a dental material used to reproduce three-dimensional impressions. From the resulting cast, FBI examiners determined that the barrel of the pistol was rifled with seven grooves in a counterclockwise direction (left twist). Land and groove impression measurements of .100 and .085 inches, respectively, were recorded. The barrel cast was returned to the U.S. Park Service following completion of the examination.

Notable in the examination of the pistol's barrel was the observation that the Booth Deringer, unlike most Deringer pocket pistols, has rifling that turns in a counterclockwise direction (left twist) rather than the typical clockwise (right twist). How frequently this rifling pattern occurred during the production of the original Deringer pocket pistols is unknown.

Physical examination of the Deringer pistol revealed a number of imperfections unique to the firearm. Foremost of these was a significant fracture or crack in the forestock of the firearm, which bore evidence of previous repair. Impression toolmarks in the barrel above the fractured portion of the stock and an S-shaped defect in the metal of the pistol's barrel were additional discrete features found on the Deringer. Variations in the shading and grain of the pistol's black walnut stock were also noted for comparison purposes.

The Firearms-Toolmarks Unit also requested permission to examine the lead bullet that fatally wounded Abraham Lincoln. This bullet was extracted from Lincoln's brain during the autopsy performed by local physicians in 1865 and is currently maintained by the Armed Forces Institute of Pathology in Washington, DC (Figure 8). Though determined to be consistent in size and weight to the caliber .41 lead balls that were used in caliber .44 pocket pistols of the type owned by Booth, however, the bullet had suffered corrosion with the passage of time and was in too advanced a stage of oxidation to allow accurate comparison to specimen K1.

Photographic superimpositions using the Deringer pistol and images of the firearm dating from the 1930s demonstrated a close correspondence between the specimen pistol and the pistol depicted in the historical photographs. Unique identifying characteristics including swirl patterns in the grain of the stock, pit marks on the barrel, and other damage to the wood of the pistol were visible on the K1 Deringer pistol examined by the FBI Laboratory and in the photographs submitted by the National Park Service for comparison.



Figure 4. Muzzle view of the Deringer pistol showing the 7-groove rifling pattern. [Click for enlarged image.](#)



Figure 5. The Booth Deringer pistol, top view. [Click for enlarged image.](#)



Figure 6. The Booth Deringer pistol, left side. [Click for enlarged image.](#)



Figure 7. The Booth Deringer pistol, right side. [Click for enlarged image.](#)



Figure 8. The Booth Deringer pistol with the bullet and skull fragments removed from Lincoln during his 1865 autopsy. [Click for enlarged image.](#)

Additional photographs of the K1 Deringer pistol from numerous angles were taken by the Special Photographic and Firearms-Toolmarks Units during examination and scaled to the archived images for additional 1:1 comparisons.

The Booth Deringer and all submitted photographic and documentary items were returned to National Park Service curator on August 8, 1997.

Table 1
The Booth Deringer—Morphological Characteristics

<u>Feature</u>	<u>Measurement in Inches</u>
Overall length	5.87
Overall height	2.79
Breech plug length	0.53
Barrel length	1.62
Rifling length	1.55
Muzzle to end of breech plug	2.16
Lockplate center	1.90
Lockplate	2.62
Front outside of barrel	1.01
Middle outside of barrel	0.95
Outside of hammer	1.06
Inside trigger guard	1.04
Butt width	1.37

Discussion

The firearm shown in the 1930s historical photographs of the Booth Deringer pistol was determined to be consistent with firearm specimen K1. On the basis of corresponding forensic measurements and external physical features, most notably the fractured stock, patterned wood grain, and barrel defects of the pistol, the FBI Laboratory concluded beyond a reasonable doubt that the Deringer pistol currently displayed at Ford's Theatre is the same pistol that was photographed during the 1930s. This finding precludes the possibility that the pistol had been stolen from the theater and replaced with a replica during the 1960s.

Conclusion

Although the FBI Laboratory's examinations clarified the authenticity of the Deringer displayed in Ford's Theatre, two questions concerning this pistol remain. The first of these concerns the distinguishing crack present in the forestock of the pistol, which is thought to have occurred when Booth dropped the firearm in the state box after shooting Lincoln. An alternate theory asserts that the crack predated the assassination and may actually have occurred while Booth, an avid

horseman, was riding through Washington. The fall of the pistol to a cobbled or brick-paved street from the pocket of a man on horseback could have damaged the firearm in such a fashion.

A second question centers on the distribution of the Deringer pocket pistols in matched pairs, which sold for approximately \$25 during the 1860s. These matched pairs were custom-made, high quality firearms that often bore gold and silver inlays. Booth, an attractive, wealthy, and prominent actor of his era, was a man able to afford a set of pistols of the quality associated with the Deringer name. Was the Deringer used by Booth to kill Lincoln one of such a pair? If so, what became of its mate?

These questions seem trivial, however, when one considers how events in post-Civil War America might have unfolded if Booth's single-shot Deringer had misfired on April 14, 1865, or if Lincoln had survived the bullet wound. What could have been the course of our nation's history?

Note: *The Booth Deringer and other artifacts associated with the assassination of Abraham Lincoln are displayed at the Ford's Theatre National Historic Site in Washington, DC. The bullet and a skull fragment removed from Lincoln during the probing of the wound by attending physicians are currently maintained by the Armed Forces Institute of Pathology in Washington, DC.*

Retrieved 2/2/09 from: <http://www.fbi.gov/hq/lab/fsc/backissu/jan2001/schehl.htm#Table%201>

References

Kunhardt, D. M. and Kunhardt, P. B. *Twenty Days: A Narrative in Text and Pictures of the Assassination of Lincoln*. Harper and Row, New York, 1965.

Parsons, J. E. *Henry Deringer's Pocket Pistol*. William Morrow, New York, 1952.

National Park Service, U.S. Department of the Interior. *Ford's Theatre and the House Where Lincoln Died: Official Park Guide*. Government Printing Office, Washington, DC, 1999.







Retrieved 2/2/09 from: <http://www.fbi.gov/hq/lab/fsc/backissu/jan2001/schehl.htm#Table%201>