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Colt's Manufacturing Co., Hartford
and to
'The Art of American Arms'
and
'Silk and Steel Women at Arms'
Museum Loan Exhibitions
'Son of a Gun' - BBC-TV
'Colt Firearms Legends' - SONY
'The Guns That Tamed the West' - A & E
'The Story of the Gun' - A & E
'The Gun Industry in America' - BBC-TV/Open University
'Annie Oakley' - Riva Productions for PBS American
Experience
Chairman, Antique Arms Committee
U.S. Society of Arms and Armour/America Remembers
Fine Colts The Dr. Joseph A. Murphy Collection
The Arms of Tiffany (with Janet Zapata) (2006)
The Art of the Gun, Mini-Series, 5 Vols. (with RM Lee)
The Art of the Gun, Maxi-Series, 5 Vols. (with RM Lee)

Samuel Colt Presents
The Arms Collection of Colonel Colt
L.D. Nimschke Firearms Engraver
The Evolution of the Colt
The Rampant Colt
Colt Commemorative Firearms
Theodore Roosevelt Outdoorsman
The Book of Colt Firearms
The Book of Winchester Engraving
Antique Arms Annual
Colt Pistols (with R.E. Hable)
Paterson Colt Pistol Variations (with P.R. Phillips)
The Colt Heritage
The "Russian" Colts
Colt Engraving
Rare and Historic Firearms (Christie's)
Winchester 1 of 1000
Colt's Dates of Manufacture
The Deringer in America, 2 Volumes (with L.D. Eberhart)
Colt An American Legend
Rare Firearms - A Benefit Auction (Christie's)
Winchester An American Legend
The Peacemakers
Steel Canvas
Ruger & His Guns
The Colt Engraving Book (two volumes)
The Official Price Guide to Gun Collecting
The World of Beretta
The Paterson Colt Book
The Guns of Manhattan (2011)
Blue Book of Colt's Dates of Manufacture
Theodore Roosevelt Hunter-Conservationist,
Boone & Crockett Club Publications
American Arms Collectors The Al Cali Collection

**The Rare, Historic and Important
Presentation from Colonel Samuel Colt
To His Most Significant Colleague,
Friend and Employee
Elisha King Root (1808-65)
The Colt-Root Model 1855 Sidehammer Pistol
Cased Set
"Finished in the Best Style"
The Custom Designed Rosewood Case
With Special Inside Glass Lid**

In a Rosewood Frame

**The Case Outer Lid Inlaid
with Presentation Inscribed Silver Plaque**

Presented to

E.K. Root

By Col. Samuel Colt

Prest. Colt's Pt. F. A. Mfg. Co.

May 16th 1857

**The Colonel Colt to E.K. Root Garniture
Engraved by Gustave Young
and One of the Most Inspired Masterpieces
From All the Models Then in Manufacture by
Colt's Patent Fire Arms Mfg. Co., Inc.**

As documented thoroughly in the writer's *Steel Canvas, The Colt Engraving Book-Volume I*, and in *A Life's Tapestry of a Collector The George F. Gamble Collection*, the most desirable inscribed presentation set of Colt revolvers, from the Colonel himself, is that which was presented to his key aid and factory Superintendent, Elisha King Root, May 16th 1857.

The present letter documents the known sets which are key to the presentation garniture. Most important in the statement from the Board of

Directors of Colt's Patent Fire Arms Mfg. Co., dated May 16th 1857, is the fact that these arms were to be

a full and complete set of all the different Kinds of arms manufactured by the Company made and finished in the best style [and that they] be presented to him, and that he be requested to accept the same as a special mark of regard from the members of the Board.

To date only four sets of these arms have been discovered, which means there remains a few other guns, most likely in the hands of Root descendants.

Those firearms which are already known are not only detailed in the present letter – but one set, which was only recently discovered - is featured. That set is the presently empty silver-mounted rosewood and glass case for the Model 1855 Sidehammer revolver – commonly known among collectors as the “Root” Colt. It is this case, and its original contents, which receives most of the description and commentary in the present document.

Presently the Root case remains empty, but in order to emphasize the importance of identifying the presentations generously bestowed on E.K. Root by Colt and his company, this letter will attempt to locate its original contents.

General Description and Markings of the 1855 Root Colt Presentation Case, Inscribed to E.K. Root, from Colonel Samuel Colt, and Dated May 16th 1857

Serial No. 0000

.265 caliber, six-shot cylinder.

3 ½-inch barrel, with post front sight

Profusely engraved, with hand-engraved cylinder scene.

Blued finish, with case-hardening on the loading lever, hammer and frame. Special piano grade varnish finish on the select walnut grips.

Extremely rare casing of rosewood, with silver and silver-

plated mountings. Glass plate interior lid, framed in

rosewood

Accessories of mold, flask, cap tin and key.

Deluxe engraved silver-plated key escutcheon.

Deluxe engraved silver or silver-plated plaque inlaid on

case lid. The inscription reading:

*Presented to
E.K. Root
By Col. Samuel Colt
Pres. Colt's Pt. F. A. Mfg. Co.
May 16th 1857*

**The Life and Times of Elisha King Root
(1808-1865)
Mechanical and Engineering Genius**

The history represented by the E.K. Root-Colonel Colt Revolver Garniture is unparalleled in the annals of firearms design and manufacture in America.

It is impossible to comprehend the historic achievements of Colonel Samuel Colt without an understanding and knowledge of the genius of Colt's most productive and innovative associate: Elisha King Root. Their collaboration is of such importance the fascination that someday a major book will be written about these two giants, whose collaboration was unequaled by any other business, industrial and entrepreneurial saga of their lifetimes.

Colonel Colt was America's first industrial tycoon. The Superintendent of his factory – the source of Colt's immense wealth – was the towering manufacturing wizard who made that wealth a reality. For much of the last fifteen years of his life, Colt was

engaged in developing the markets for his invention, traveling extensively, primarily in Europe, and in the Eastern United States – particularly to New York City.

Professor Joseph Wickham Roe of New York University best summed up the collaboration of Colt and Root in his landmark book *English and American Tool Builders*. First published in 1916, this work devoted an entire chapter to “The Colt Armory.” Roe summed up the collaboration of Colt and E.K. Root with the simply yet powerful, all-inclusive statement (p. 169):

**The credit for the revolver belongs to Colt;
for the way they were made, mainly to Root.**

Roe’s observations about Colt and Elisha King Root occupy much of “The Colt Armory” chapter. The most prescient of these statements are the following [note writer’s placement of particularly significant passages in **boldface**]:

After the failure of his first venture at Paterson, Colt had seen the advantages of interchangeable manufacture at the Whitney shop [Whitneyville CT], and determined to carry it even further in his new plant [Hartford]. So thoroughly was this done that the methods crystallized there, and many of the tools installed have undergone little change to this day. . . .

Colonel Colt was a remarkable man, masterful, daring and brilliant. He started the larger industrial development of his city, and affected manufacturing methods more than any other man of his generation.

One of the elements of his success was his ability to gather and hold about him men of the highest order. Among these was Elisha King Root, one of the ablest mechanics New England has ever produced. Root was a Massachusetts farmer's boy, a few years older than Colt. He served an apprenticeship worked at Ware and at Chicopee Falls [MA], and came to the Collins Company, axe makers, at Collinsville, Conn., in 1832. He began work there as a lathe hand in the repair shop, but very soon became foreman and virtual superintendent. His inventions and methods converted a primitive shop into a modern factory and gave the Collins Company control, for a long time, of the American market, and opened up a large export trade. In 1845 he was made superintendent, and that same year was offered three important positions elsewhere, one of them that of master armorer at Springfield.

In 1849 Colt offered him the position of superintendent at a large salary. It was characteristic of Colt that, although he was just

starting and still in small rented quarters, he outbid three others to get the best superintendent in New England. Root moved to Hartford, designed and built the new armory and installed its machinery. Many of the machines devised by him at that time are still running, holding their own in accuracy and economy of production with those of today. Almost every process used in the plant felt his influence. He invented the best form of drop hammer then in use, machines for boring, rifling, making cartridges, stock turning, splining, etc., and worked out the whole system of jigs, fixtures, tools and gauges. **The credit for the revolver belongs to Colt; for the way they were made mainly to Root.** Fig. 33, a chucking lathe, and Fig. 34, a splining machine, are two of Mr. Root's machines which are still at work. When Colonel Colt died, Mr. Root became president of the company and continued until his death in 1865, receiving, it is said, the highest salary paid in the state of Connecticut. **He was a mechanic and inventor of high order, a wise executive, and the success of the two companies he served was in a large measure due to him.** He was quiet, thoughtful and modest. His influence went into flesh and blood as well as iron and steel, for under him have worked F.A. Pratt and Amos Whitney, Charles E. Billings and C.M. Spencer, George A. Fairfield, of the Hartford Machine Screw Company, William Mason and a host of

others whom we cannot mention here. **Like a parent, a superintendent may be judged, in some measure, by the children he rears, and few superintendents can show such a family.**

**Proclamation by Colt's Pt. F.A. Mfg. Co.
Regarding Presentation to E.K. Root,
The Delegation Including Gustave Young**

Colonel Colt was known as a man of considerable generosity. He recognized and rewarded ability and production in his executives and workmen. Over the years a few of the Colonel's very best associates and employees were given presentation arms or other recognition to honor their contributions to the company's success. To Root alone was awarded the *piece de resistance* – by far the most spectacular presentation ever made to a Colt employee, and unique in its concept: a complete set of the firearms line, finished in the most exquisite style.

Two documents reveal the nature and importance of this remarkable gesture. First of these is quoted from Minute Book A, Colt's Patent Fire Arms Mfg. Co., page 218 *et seq.*:

RESOLUTION BESTOWING A GIFT
TO E.K. ROOT

May 16th, 1857

At a Meeting of the Directors held at the Office of the Company.

Mr. Root having tendered his resignation as Superintendent of the Armory, the same was accepted, and it was

Noted, That the thanks of the Board be tendered to E.K. Root late Superintendent of the Corporation for his valuable and faithful services in that Office and that in testimonial thereof a full and complete set of all the different Kinds of arms manufactured by the Company made and finished in the best style be presented to him, and that he be requested to accept the same as a special mark of regard from the members of the Board.

Voted, that E.K. Root be invited to assume the Office of Consulting Engineer of the Corporation upon such terms and conditions and with such powers as may be agreed upon between him and the President [Colonel Colt] of the Company.

The Board then adjourned

Attest R. Vallant, Secy pro tem.

Further documentation of importance is a newspaper article published in *The Courant* (Hartford), of May 15th 1857. The Colt factory workmen were honoring Root:

MR. ELISHA K. ROOT, Superintendent of Colt's Armory, having resigned his situation, the workmen under his supervision, last evening presented him with a silver tobacco box lined with gold and a silver pitcher and stand, worth \$250. On the pitcher was this presentation:

*Presented
To
Elisha K. Root
by the
Workmen of Colt's Armory
Hartford, Conn.,
May 14th, 1857.*

We regret that so estimable a citizen as Mr. Root should be compelled by the state of his health to resign a situation he has filled with so much ability. He removes to Minnesota and carries with him the good wishes of this whole community for his health and prosperity.

Other Presentations in the Historic May 16th 1857 Garniture

In addition to the Model 1855 Pocket Model, the other presently known presentation pieces from Colt's garniture to Root are as follows:

Cased set of a Third Model Dragoon revolver, serial no. 16461/’, with 7 ½-inch barrel, profuse engraving, and special inscriptions on the cased lid plaque. The casing identical in general styling to that used on the Model 1855 Colt Root pistol (noted at beginning of the present letter), with glass panel above the case contents, and elaborate engraved presentation plaque inlaid on the lid.

Cased set of a New Model Sporting Rifle, popularly known as the Model 1855, Serial no 140. Inscribed on the tang of the rifle: “To E.K. Root/From Col Colt/May 16th 1857.”

Accompanying the Rifle no. 140 is a Navy Model, known as the Model 1851, or Belt revolver, serial no. 80108, fitted with an attachable Carbine Breech, bearing the same number. The revolver bears no inscription, but the glass-topped case lid is gold leafed and the yoke of the carbine breech is inscribed:

*Presented to
E.K. Root
By Col. Samuel Colt
Prest. Colt's Pt. F.A. Mfg. Co.
May 16th 1857*

The elaborate glass-topped and relief carved rosewood and velvet-lined casing for this set of arms has no equal in the known annals of

presentation arms from Colonel Colt. The complete set was featured in the author's *Samuel Colt Presents*, item 147, pages 249-253, and also appears in color on pages 142-143 of *The Colt Heritage* and its subsequent title, *Colt An American Legend* – both issued as the official history of Colt firearms. The caption to this double page spread notes: “The most lavish of all Colt casings reflects the substantial debt the Colonel owed to his right hand, E.K. Root, who on Colt's death would become company president”

The elaborate cased Navy and New Model Rifle ensemble is presently in the Colt Collection of Firearms, Raymond Baldwin Museum of Connecticut History, Connecticut State Library, Hartford. It is the writer's assumption that the set had been left on loan to the Colt Collection, when still at the factory. Thus, the possibility exists that a family member will have a receipt indicating that loan. Which means that theoretically the Root family could reclaim this set as their rightful property.

Cased set of a Navy or Belt Model, the 1851, in a rosewood box similar to that of the Dragoon no. 16461, with glass panel interior lid. Serial no. 55447. This matching revolver is described below, and was pictured on the front cover of *The*

Gun Collector magazine, no. 34, November 1950. The revolver also appears in the writer's *The Colt Engraving Book-Volume I* (pages 70-71).

Speculation as to other firearms in the garniture is as follows:

Cased Old Model Pocket revolver, known today as the Model 1849 Pocket.

The likelihood is that a Dragoon revolver with attachable Carbine Breech was also part of the garniture. This, too, would have been cased, and inscribed.

A Model 1855 Rifle or Rifled Musket may also have been prepared, since the "complete" set was to be represented . . . in fact there may be some additional longarms, such as a revolving carbine or sporting shotgun.

Samuel Colt's Agreement with E.K. Root

Of all Colt's employees, only Root enjoyed what could truly be termed "privileged status." The inventor-entrepreneur-showman knew full well that in E.K. Root he had the very best talent that money could buy. Their unusual business agreement was drawn up by Root and Colt's principal attorney Edward N.

Dickerson. Its content was reported by Dickerson in a letter of July 11, 1853, addressed to Samuel Colt, then in London:

Enclosed I send you the substance of a proposition made by me to Mr. Root during your absence, reduced to the form of an agreement, which if you & Mr. Root agree, you must have copied and exchanged with him.

The substance of the whole matter is that you employ Mr. Root at \$5,000 a year for the exercise of his skill and knowledge in the mechanical part of your business and that whatever is produced by that exercise so far as it relates to the manufacture of firearms is yours, and so far as Mr. Root can use it for other purposes, it is his. That is the most obvious justice to both parties and ought not to be objected to by either. The invention would not be produced but for your business & machinery, and whatever thing or machine be produced is yours. And there is no reason why all the resulting benefit of that machine should not be yours also, so far as your business is concerned. Thus if it is useful for any other purpose it can be applied by Root & all he gets from that is clear profit coming out of the fact that you have afforded him the means of making the contrivance.

I hope that this will meet the views of both; but if it does not, the law gives you the right to use all these things, although the right is not exclusive -

Root and His Contributions to Colt's Patent Fire Arms Mfg. Co.

E.K Root's role in the Colt success story centered in two main categories: (1) research and development, and (2) manufacturing. Root held over a dozen patents in the design of firearms, cartridges and their packagings, and machinery. A complete series of Colt firearms – the Root Sidehammer revolvers, rifles, shotguns, muskets and carbines – was named after him (by modern day collectors and students), and he has been credited as their designer. To Root is also credited the creeping loading lever used on the Model 1855, 1860, 1861, 1862 and 1865 Colt revolvers and on the Sidehammer series of longarms.

Root's patent no. 13999 of December 25, 1855, covered two intriguing designs for a double action mechanism, a type never to enter into production, but which was thoroughly explored from an experimental standpoint. He created a radically new revolver featuring a hinged frame, with variations in the attachment of the barrel, frame and cylinder, but likely due to the factory fire of February 4, 1864, plans for this unusual item were dropped.

The Model 1861 Colt Special Musket was largely his creation, and its successful production was to his credit. Alterations of the percussion musket to a metallic cartridge breech-loader was yet another area in which Root left his mark. He was even posthumously granted a patent for a breech-loading metallic cartridge single shot musket having an outside hammer and an inside firing pin (no. 65509, June 4, 1867).

Among Root's firearms designs to which patents were not granted were a threaded rammer operated by a knurled knob set in the barrel lug, an arc-type rear sight (used on the First Model Sidehammer Sporting Rifle), and a ball extractor for ramrods.

Undoubtedly Root was the chief architect in making practical many of the basic design ideas of Samuel Colt. Interestingly only two persons in the company during Samuel Colt's lifetime were allowed to take out patents – Colt himself and E.K. Root. On some of Colt's patents Root acted as a witness, and *vice versa*. In the Colt Collection of the Raymond Baldwin Museum of Connecticut History are several specimens of weaponry, in varied stages of completion, which reflect on Root's genius in armsmaking.

In machinery for gun manufacture, Root was without peer. To quote from Roe's *European and*

American Tool Builders: “Almost every process used in the plant felt his influence. He invented the best form of drop hammer then in use, machines for boring, rifling, making cartridges, stock turning, splining, etc., and worked out the whole system of jigs, fixtures, tools and gauges.”

Felicia Johnson Deyrup’s *Armsmakers of the Connecticut Valley* corroborates Roe (boldface added by author):

A factor which contributed heavily to the growth of the machine tool industry in this period [c. 1835-75] was the development of what might be called a school of inventors and gifted master mechanics. In the Connecticut Valley the most famous of these were Cyrus Buckland and Thomas Warner of the Springfield Armory, **E.K. Root of the Collins Company, later Superintendent of the Colt Company**, Frederick W. Howe, H.D. Stone and R.S. Lawrence of Robbins & Lawrence, Albert Eames and William Ball of Chicopee, and James H. Burton of the Harper’s Ferry Armory and the Ames Manufacturing Co. Many of these men were separated from one another geographically; yet they were stimulated by one another’s work and achieved a sort of cooperation similar to that which had so greatly aided invention among the gun manufacturers of the first thirty years of the

century. For the most part they were closely connected with gun making, either as highly paid employees in armories or as independent workers in arms centers. Many of the future leaders of the machine tool industry received their training in armories under these men. This is perhaps the best evidence of the great debt the machine tool industry owes to small arms manufacture.

Other Tributes to E.K. Root

Several studies have been published on E.K. Root, always placing emphasis on his seventeen years with the Colt company (1848-1865), since that period was the most significant and productive in his long career. The first biography appeared in the first Colt book, *Armsmear*, a tribute primarily to the husband of publisher Mrs. Samuel Colt. Released in 1866, a six-page eulogistic essay devoted to Root began with the laudatory statement (page 257):

Next to the death of the great inventor of the Colt revolver, the Patent Fire-Arms Company, as well as this whole community in the field of mechanical invention, could sustain no greater loss than in the death of Elisha K. Root, on the 5th of July, 1865.

The extent of Root's improvements in manufacturing are further revealed in *Armsmear* (page 260):

Besides introducing, from year to year, improvements in the details of almost every process in the construction and arrangement of the parts for which he took out no patents, he devised in 1853, in the drop-hammer, a new mode of forging the parts of firearms, which was patented, and which has been widely introduced into all forging shops in this country and in Europe. In 1854 he procured a patent for an improved machine for boring the chambers in the cylinders of revolvers, which completely revolutionized the manufacture of the article, by the accuracy and rapidity with which the work was done. In the same year he patented a compound rifling machine, by which the work on four barrels could be done at one time, and thus the results be quadrupled. His improvement in the slide lathe, patented in 1855, is now almost universally adopted wherever this machine is used. Among his patents assigned to the Colt['s] Patent Fire-Arms Manufacturing Company, are three for making and one for packing cartridges; and among his unpatented machines, is one for shaping the barrel, and another for shaping the stock of the pistol. In the construction of the buildings of the Armory, his inventive genius

devised methods which effected great saving of timber and labor. For the pumping apparatus used in supplying water to the reservoir of Armsmear, as well as in that used by the city of Hartford, Mr. Root made several important improvements, which were introduced into the steam-engines manufactured by Col. Colt for the Russian government.

Armsmear also quoted Root's former employer at the Collins works, the founder himself (page 259):

He was with me seventeen years, and I knew him intimately While at Collinsville he invented and patented several machines which greatly facilitated and perfected the manufacture of the axe, by which the Collins axe got and kept possession of the American market. One of his patents covered an entirely new process for punching out the eyes of axes, instead of forming them by welding; and another, by bringing the axe to an edge by chipping instead of the slower process of grinding, at once economized its construction, and obviated a deleterious result to the lungs of the operatives.

And quoting yet another tribute to Root, from *Armsmear*, this one comprehensive in different ways (page 261):

Wherever and by whomsoever employed, Mr. Root was not content to do the work in hand as well as any other person under the same circumstances, but his thoughtful and ingenious mind was busy in devising a safer, shorter, more economical, and more efficient way of accomplishing the same or a better result. Possessing not only the gift of invention, as rare in mechanics as in poetry, which defies analysis, he had that other quality, equally rare, of consummate prudence or wisdom which discerned the line, invisible even to many brilliant minds, that divides the possible from the visionary. Hence every one of his patents had an immediate practical value, and his many suggestions on any subject in the field of his study and experience, even those which were not patented, were always prized. The two great companies whose operations have proved so profitable to their proprietors and stockholders – the whole community, that is benefited and enriched by the possession of better and cheaper implements in consequence of his witty devices – owe him not only high estimation and pecuniary reward while living, but, in memory, a large debt of gratitude, as one of the world's benefactors To be appreciated as he was by the founders of these companies - to rise in their employ from the anvil and the lathe to the largest salary paid in the State, and to accumulate a handsome fortune for

his family – was equally creditable to him and to them.

E.K. Root and Colonel Colt – Their Relationship as Friends and Co- Workers

The wealth of documentary evidence on Colt and Root provides intimated insight into their business and professional relationship. Additionally, fragmentary evidence exists revealing of their friendship and personal relations. Factory ledgers of c. 1856-65 reveal Root's salary at \$5,000 while Superintendent, and \$6,000 as President, per year. His was reputed to have been the highest salary paid in the entire state of Connecticut, and was four times that of the best of Colt's other lieutenants. He was one of the select few persons allowed to hold company stock, and similar special benefits were part of his income as Samuel Colt's second in command and later as the Colonel's successor as president. As a matter of interest, the company officers in 1857 were: Colonel Samuel Colt, president, E.K. Root, superintendent, Luther P. Sargeant, treasurer and secretary, and Horace Lord, master workman of the armory.

From the London factory, on June 20, 1856, Colt wrote his private secretary Milton Joslin that "Mr. Root must push on the five or fore other samples or

Moddles like the Modle I brought making one of them with the Manard Primer attached” It was Root who oversaw the research, development, and production of all weapons. The bizarre spelling usually is an indication that the communication was a draft by Colt himself (for transcription by a secretary, who would correct the spelling and grammatical excesses), but was sometimes simply a handwritten letter, dispatched in the Colonel’s customary haste.

To Root also was the responsibility for full production. Quoting from an historic letter addressed to the factory by Colonel Colt, February 18, 1860: “Say to Mr. Root and Mr Lord that they must du there best to turn [out] our arms. Run the Armoury Night & Day with double sets of hands until we get five or ten thousand ahead of each kind we cannot have to many on hand to meet the exegences of the times make hay while the sun shines.” The times, of course, were those events leading up to the Civil War.

Again writing to the factory, Colt on March 23, 1861 exhorted “Mr. Lord & Root about pushing on the wirk. I will . . . repeat here that I want the wirk at the Armoury pressed with the greatest possible energy until we have a large supply of arms on hand particularly those required for millitary purposes”

Colt’s frequent travels throughout the period of c. 1849 through 1861 were made with the assurance that

the factory was left in the capable hands of E.K. Root. It was not unusual for the Colonel to be away from the factory for several months at a time. In Root he had complete trust and confidence, a conviction reinforced by innumerable experiences in which Root had proven himself time and again.

In late April of 1861, the Civil War having commenced, Colt was enroute to Washington, D.C. to offer the full services of his factory to the Union government. He was forced to stop in New York City due to sickness. From the St. Nicholas Hotel he wrote to Gideon Welles, Secretary of the Navy (April 21): “ We can produce if required 100,000 military arms this year, which amount may be afterward increased to an indefinite number. Please bring this subject before the President and Secretary of War, and telegraph me to what extent the Government may wish to employ our armory. Until then I shall suspend individual orders for military arms. Shall I send Mr. Root to see you?” Unable to make the trip himself, Colt was prepared to send the very best talent in his place. Interestingly, it was the Colt factory which was awarded the first contract of the Civil War for rifled muskets (25,000; July 5, 1861).

Having worked together closely from 1849 through 1862, Colt and Root must be considered to have cemented a firm bond of mutual respect and admiration. It is difficult to assess if this could be

termed a deep friendship but in studying personalities, Colt's was that of the ebullient, light-hearted, good-natured super salesman, while Root was the rather serious and taciturn inventor-scientist-mechanic-administrator. They both shared a passion for work and an obsession with getting things done. To quote Edwards' *Civil War Guns* (page 327):"

When Sam Colt died, the local poet laureate and belle of Hartford society, Mrs. Lydia Huntley Sigourney, penned a wistful epitaph, ending "The like of him we lose today, we may not see again." She was to see Colt's like again, in the driving energy, the determination, of Elisha Root. That he was a more taciturn, self-effacing fellow, made him unlike Colt in some personal characteristics. In drive to get the job done and determination to stick to it, they were as brothers.

As a final bond, E.K. Root was one of the eight men selected as pallbearers at Colonel Colt's funeral. And it was to Root that he Colonel had turned when hand picking his successor as company president, This was a vital transition period in the firm's history. The Civil War was in full swing, and the demand for weapons was acute. For the critical years of 1862, 1863, 1864 and 1865, the reigns were held by E.K. Root. Nearly as many firearms were made by the company in those Civil War years, as had been made previously under Colt's own leadership.,

Yet another contemporary source which is revealing of the Colt-Root connection is “A Day at the Armory of Colt’s Patent Fire Arms Mfg. Co.” (*United States Magazine*, March 1857), based on knowledge gained personally by that lengthy piece’s author:

Mr. Root, to whom we are indebted for a few hours of valuable instruction, is one of the most accomplished, practical and scientific mechanics of the day; although only in the prime of life, he has established a most enviable position, and his opinions on mooted questions of mechanism are eagerly sought after, even by the principals of some of our most extensive city establishments. Colonel Colt informed us that since their first connection all his views had been most ably seconded and put in practical operation by Mr. Root. In fact, the whole manufacture of every description is under his immediate direction.

Two final points of interest and relevance have to do with Mrs. E.K. Root’s relationship with Colonel and Mrs. Samuel Colt. Matilda Colt Root was a cousin of Colonel Colt. Her father was Elisha Colt (1778-1827), a brother to Samuel Colt’s father Christopher. Her paternal grandfather was Samuel Colt’s paternal grandfather, Benjamin Colt (1738-1781). A practice of the Colonel was to have relatives in the employ of his armory. Colt felt more

comfortable with relatives, or with persons who were married to relatives, considering this to be an extra bond of trust.

The other revelation of interest is that in September of 1992, the writer located a presentation copy of the *Armsmear* book, with the inscription:

**Mrs. E.K. Root
with the love of her friend,
Mrs. Samuel Colt
Armsmear –
Christmas 1866.**

Enclosed with that copy of *Armsmear* was a calling card of Mrs. Colt, on which was the hand written note:

**With Mrs. Samuel Colt's love.
Armsmear.**

A Set of Colt Revolvers Presented by E.K. Root

Although the rather conservative Root was not prone to use the presentation revolver as a marketing tool to the extent of his predecessor, nevertheless, when the occasion called for something special, he was capable of following through. One of the most elegant of presentations from the percussion period is

a richly gold inlaid and engraved pair of New Model Navy or Belt revolvers, known to collectors as the Model 1861 Navy.

The set, in appreciation for settlement of Colt's insurance claims from the February 1864 factory fire, was finely inscribed on each backstrap in script. The New Model Navy or Belt revolvers (the Model 1861 Navy), serial nos. 17239 and 17240, were gifts from Root to Lewis Lippold, a faithful and productive Colt company employee. The revolvers, cased in a rosewood box, are pictured in various titles, including on pages 108-109 of *The Colt Heritage* and *Colt An American Legend*. Each backstrap is engraved in script:

**From
E.K. Root Prest Colts Pt. F.A. Mfg. Co
To
Lewis Lippold.**

Other Studies of E.K. Root

Among other revealing profiles of Root are the Colt books of James E. Serven, Charles Haven and Frank Belden, William B. Edwards, Ellsworth Grant, and the present writer. Valuable material also appears in Felecia Johnson Deyrup's *Arms Makers of the Connecticut Valley*, Jack Rohan's *Yankee Armsmaker*, and in William B. Edwards' *Civil War Guns*.

For many years Chief Historian of the National Park Service, Harold L. Peterson wrote a thumbnail biography, “A Man to Remember,” which was published in the *American Rifleman* magazine and in *The NRA Guide to Gun Collecting*. In this tribute, Peterson referred to Root as “directly responsible for much of the success of 2 great American manufacturing companies, Collins & Company, and Colt. . . .”

Yet other more recent sources are *Yankee Dreamers and Doers*, by Ellsworth S. Grant, and Professor David A. Hounsell’s *From The American System to Mass Production 1802-1932*. Grant stated (pp. 190-191) that Root was a “mechanical genius” and revealed the date when Colt first met Root was in Ware, Massachusetts, years before Colt had invented the revolver: “In a few years [Root] would design and construct the incomparable Colt Armory and install its equipment. Under Root’s quiet but firm leadership, one that despised sham and sought perfection, Colt’s became a training center for a succession of gifted mechanics, who went on to apply its manufacturing techniques or to head companies of their own – men like Francis A. Pratt, Amos Whitney, Charles E. Billings, and Christopher M. Spencer. . . .”

E.K. Root is second only to Colt himself in the amount of published material available on his career

and contributions, relevant to Colt firearms and their history.

A Detailed Description of the Colt-Root Dragoon's Elaborate Embellishments

Revealed in considerable detail in the photographs, scroll and border coverage on the Colt-Root Dragoon are of far more detail and in noticeably greater amounts than on standard style embellished Colt Dragoon revolvers. This includes the frame, hammer, cylinder, barrel, loading lever, wedge, gripstraps and screws. Much more detail is devoted to the round portion of the barrel, as well as to the bottom of the loading lever.

The cylinder has profuse coverage on the breech, as well as detailed waved line borders on either side of the cylinder stop slots, and a detailed waved line border at the muzzle. Note the border engraved around the serial number cartouche, which is cut over the roll design. The cylinder scene itself has been accentuated with engraving over the roll scene.

This extensive scroll engraved coverage features not only minute detail, but also an occasional intertwining of scrolls. Two stylized dog head motifs are on left flat panel of the barrel lug. A relatively

large stylized dog head motif is on the right flat panel of the barrel lug.

Three stylized dog head motifs are on top of the round section of the barrel at the breech, wherein are intersections with the octagon barrel section. There is an unusual design with the heads pointing in three directions, and with the center motif streaming out as if on an extended neck.

A stylized dog head motif is on the left side of the frame, to left of the hammer screw. A stylized dog head motif is on the right side of the frame. A stylized wolf head motif is on each side of the hammer.

The finely checkered hammer spur has seven neatly cut tiny o stamps in the V-shaped space between the spur and the scale and scroll motif on the top of the hammer. This device is also repeated on the Colt-Root Model 1851 Navy revolver.

Note also the vertical mark with the serial number, which normally indicates engraved, with ivory grips, instead of select walnut.

The Casing of the Colt Root Dragoon

Measuring 7 1/2- x 15 3/4- x 3 7/8-inches deep.

The case was specially built of rosewood, with silver-plated brass bound corners, the lid with scalloped silver-plated brass inlaid plaque, measuring 2 1/4- x 3 1/8-inches. The scalloped and engraved key escutcheon measuring 1 1/8- x 1 7/16-inches.

The hinges are of silver-plated brass, secured by blued screws. The lock mechanism is of German silver, with blued screws. The section of the lock inset on the case base has a British view stamping on the left of a crown over VR, at the right, PATENT.

Inset in the case lid is a mirror, to allow for enhanced viewing of the contents. An interior lid is framed in rosewood, and has a glass panel, giving a coffin effect to the ensemble. Two sliding silver-plated brass latches secure this glass and rosewood panel into the lowered position. An ivory pull allows for lifting the glass and rosewood panel, which is on two silver-plated brass hinges with blued screws.

The cream-colored velvet lining, partitioned in the American style interior, has blind scroll tooling around the upper section. Accessories are of a silver-plated stand of flags flask, a brass bullet mold with bright steel sprue cutter marked COLTS/PATENT, and the polished handles silver-dipped, packet of Colt's Cartridge Works combustible envelope cartridges, L-shaped blued screwdriver/nipple wrench, tin of Eley

Bros. caps in their original paper wrapper, and miscellaneous spare parts.

The small brass collection tag number, 257, attached to a spare cylinder stop, is from the Richard Prosser Mellon Collection.

The bottom of the case is covered with green felt.

**A Detailed Description of the
Elaborate Embellishments
of the
Colt to Root Model 1851 Navy No. 54477/'
General Description and Markings**

Serial No. 55447/'

.36 caliber

7 ½-inch barrel, with blade front sight on dovetailed base, the marking on top flat as illustrated.

Blued finish, with case-hardened hammer, frame and loading lever. Silver-plated brass gripstraps, and richly varnished select walnut grips.

Profusely engraved, with hand-engraved Naval Engagement cylinder scene, silver-plated brass gripstraps. Varnished select walnut grips.

**The Colt-Root Model 1851 Cased Navy
Presentation,**

a Mate to the Colt-Root Third Model Dragoon Cased Set, and to Other Arms

The scope and grandeur of the Colt-Root garniture of presentation revolving firearms can be determined to some extent by examining the guns from the set which have survived and are known, as well as by studying examples and records of the garnitures given by Samuel Colt, or the Workmen of His Armory, to others.

The conclusion of the author is that the Colt to E.K. Root garniture is the grandest of them all. Likely more examples of that May 16, 1857 gift will be located. Fortunately, the elements discovered to the present are all in an excellent state of preservation.

The Casing of the E.K. Root Navy No. 55447/

Of brass bound rose, the brass silver-plated, the elaborate and custom manufactured case measures 7- x 14 $\frac{3}{4}$ - x 3 $\frac{1}{4}$ -inches deep. An unusual triple-edge beveled hardwood base is $\frac{1}{4}$ -inch thick, and extends entirely around the case bottom. The base extends from the case bottom to a thickness of $\frac{1}{4}$ -inches.

Like the deluxe and custom made case of the E.K. Root Dragoon revolver, the Navy case is specially constructed of rosewood, with silver-plated brass bound corners, the lid with a scalloped silver-

plated brass inlaid plaque, measuring 2 1/4- x 3 1/8-inches. The scalloped and engraved key escutcheon measures 1 1/8- x 1 7/16-inches – and is the same size as the same fixture on the Dragoon casing.

As on the E.K. Root Dragoon case, the hinges are of silver-plated brass, secured by blued screws. The lock mechanism is of German silver, with blued screws. The section of the lock inset on the case base has a British view stamping on the left of a crown over VR, at the center, PATENT.

Inset in the case lid is a mirror, to allow for enhanced viewing of the contents. An interior lid is framed in rosewood, and has a glass panel, giving a coffin effect to the ensemble. Two sliding silver-plated brass latches secure this glass and rosewood panel into the lowered position. The ivory pull allowing for lifting the glass and rosewood panel is missing. The panel is on two silver-plated brass hinges with blued screws.

The cream-colored velvet lining, partitioned in the American style interior, has blind scroll tooling around the upper section, matching that on the E.K. Root Dragoon set. Accessories are of a silver-plated brass plunger flask, inscribed *Navy Pistol*, a brass double cavity bullet mold with bright steel sprue cutter marked COLTS/PATENT, and the polished handles silver-dipped, two packets of Colt's Cartridge Works

combustible envelope cartridges, a blued L-shaped screwdriver/nipple wrench, and a tin of Eley Bros. caps in their original paper wrapper.

The bottom of the case is covered with a tan paper of some substance, well worn.

Description of the Engraving of the Colt-Root Navy No. 55447/'

A stylized dog head motif is on the left barrel lug flat.

A wolf head motif is engraved on each side of the hammer, as on the Root Dragoon revolver.

A stylized eagle head motif is on the left side of the frame, beneath the hammer screw. Floral motif engraved at the center of the recoil shield, including the buttercup, which is considered a Gustave Young signature motif, or rebus.

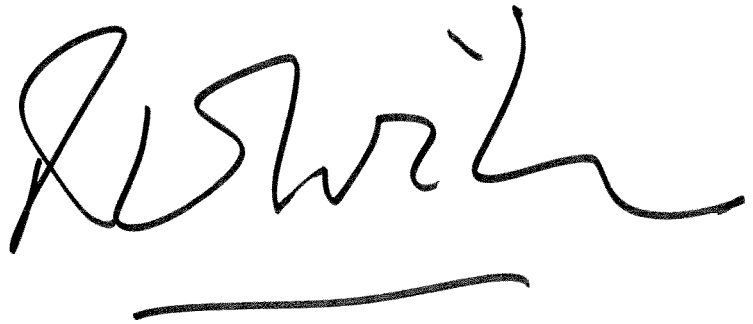
Finely checkered hammer spur, with seven neatly cut tiny o stamps in the V-shaped space between the hammer spur and the scale and scroll motif on the top of the hammer, as on the E.K. Root Dragoon revolver.

The cylinder has extensive scrollwork at the breech, with finely cut waved line borders at the breech, and at the cylinder's muzzle. The naval engagement cylinder scene was hand engraved over

the roll, and includes a special border around the COLTS PATENT No. serial marking panel.

Extensive and minutely detailed scrollwork is on all parts, as with the E.K. Root Dragoon revolver.

Note the vertical mark with the serial number, a factory marking which normally indicated the revolver was engraved, with ivory grips, instead of select walnut.



Literature:

Felicia Johnson Deyrup. *Arms Makers of the Connecticut Valley A Regional Study of the Economic Development of the Small Arms Industry, 1798-1870*. Northampton MA: Smith College Studies in History, Volume XXXIII, 1948.

Ellsworth Strong Grant. *The Colt Legacy The Colt Armory in Hartford 1855-1980*. Lincoln RI: The Mowbray Co., 1982.

-----, *Yankee Dreamers and Doers*,
Chester CT: Pequot Press, 1973.

David A. Hounsell. *From the American System to Mass Production, 1802-1932*. Johns Hopkins University Press, TK.

Joseph Wickham Roe. *English and American Tool Builders*, New York: McGraw-Hill Book Co., 1926.

Illus., pages 64 and 79, R.L. Wilson, *The Colt Engraving Book*, volume I.

Illus., page 124, R.L. Wilson, *Steel Canvas The Art of American Arms*.

Handwritten list of Root Patents, entitled: “List of Patents of Elisha K. Root – to be assigned to Colts Patent Fire Arms Manufacturing Company – Hartford, Conn.” From papers at the Colt Collection of Firearms, Connecticut State Library, Hartford CT.

“Improved Machine for boring the Chambers in the Cylinders of fire Arms” issued 28 November 1854 No. 12,002.

“Improved Compound Rifling Machine” issued 23 January 1855. No. 12,285.

“Improved Slide Lathe” issued 15 May 1855. No. 12,874

“Improvement in Revolving Fire Arms” issued 25 Dec’ 1855, & re-issued on an amended Specification 1 Nov 1859 No. of Re-issue 846.

“Improved Drop for forging Metals” issued 9 Novemb 1858 No. 22,034.

“Improvement in Primed Metallic Cartridges” issued 11 Octr 1864 No. 44,660.

“Improvement in Shot Metallic Cartridges” issued 5 May 1863. No. 38,414.

"Improvement in Priming Metallic Cartridges" issued 15 Nov 1864 No. 45,079

"Improvement in Drop Hammers" issued 16 Augt 1853 No. 9,941

"Improved Method of Packing Cartridges" issued 18 Jany 1859 No. 22,675.

Note: Displayed at the Museum of Connecticut History, Hartford, is a bronze relief plaque portrait of E.K. Root, the description of which is as follows:

Bronze relief plaque cast in memory of Elisha K. Root, from the Colt Collection of Firearms, Raymond Baldwin Museum of Connecticut History.