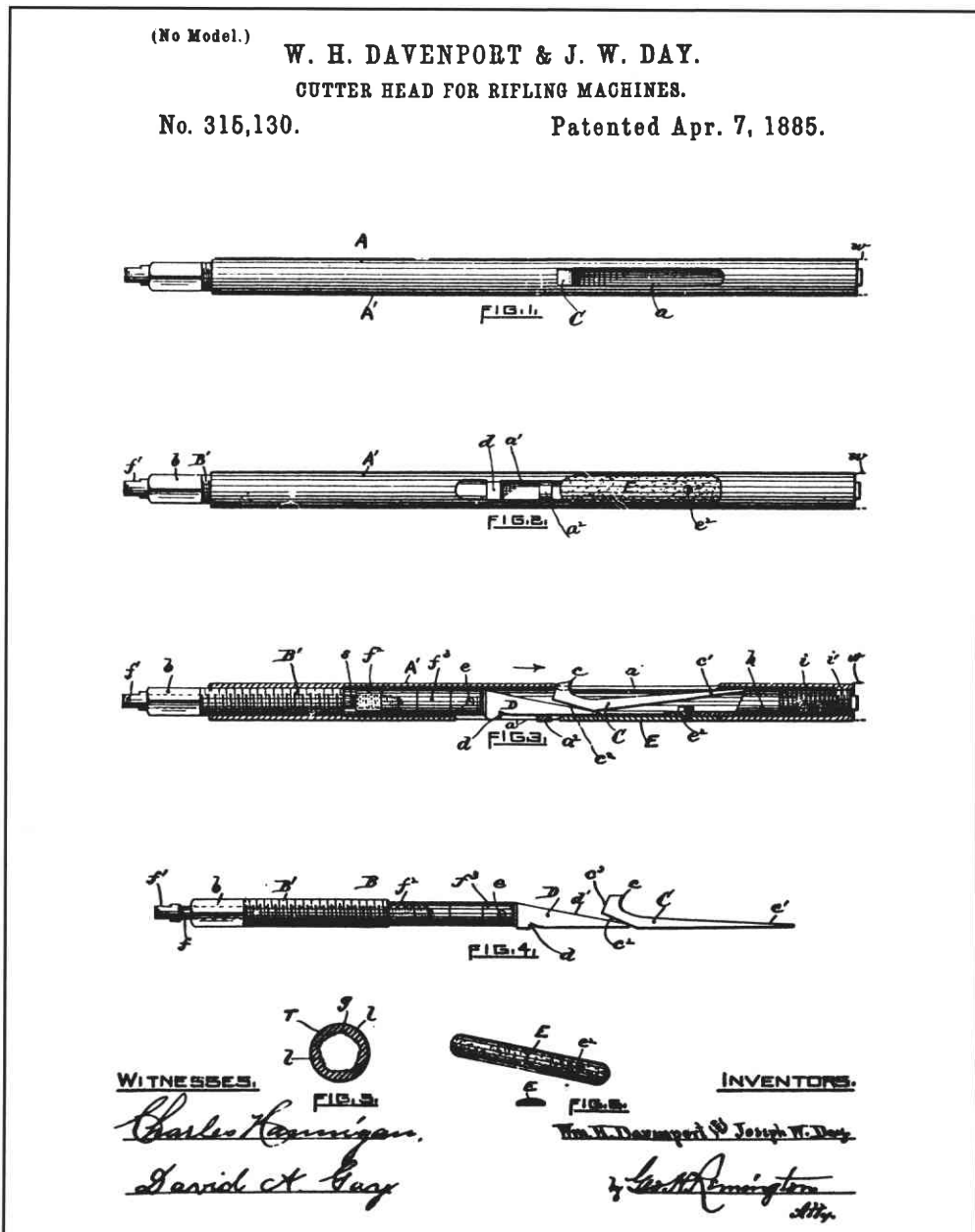




THE BAY STATE ARMS MATCH RIFLE



The drawing from Davenport & Day's cutting head patent no. 315,130 of April 7, 1885.

# The Bay State Arms Co. Match Rifle: an Update

John D. Hamilton

Among collectors of antique single-shot rifles, there seems to be a general agreement that the "match grade" rifle produced by the Bay State Arms Company of Uxbridge, Massachusetts, is among the least-common American target rifles. Various authors on the subject, such as Ned Roberts, have gone so far as to call it "one of the rarest of match rifles." The manufacturing life of Bay State Arms lasted less than three years, so that the empirical evidence of its rarely encountered products, together with too few hard facts, form most of what is known of this company's murky history.

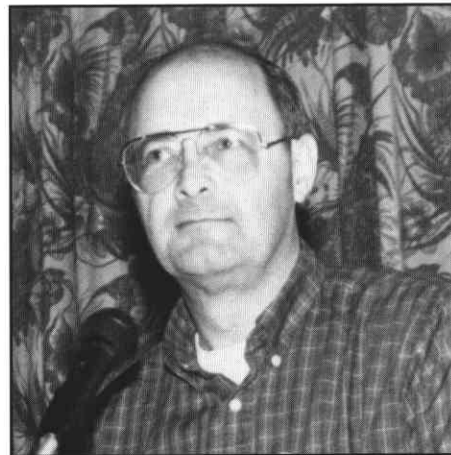
The guru of single-shot rifles, James J. Grant, opened a Pandora's box on this subject in his book, *Boy's Single Shot Rifles*. Grant's capsule history of the company and his saga of its founder, William Hastings Davenport (1828-1905), extends farthest in telling the rise and fall of Davenport's fortunes. The skeletal remains of the Bay State Arms Co., as assembled by Grant, demand further fleshing out.

Most of the available biographic information pertaining to William Davenport is found in his obituary, which was published in *Cooley's Weekly* (Norwich, Connecticut, Dec. 15, 1905), and which has been neatly digested by author William O. Achtermier (*Rhode Island Arms Makers and Gunsmiths 1643-1883*). What concerns us here is not a litany of Davenport's numerous failures and successes, but his specific connection with Bay State Arms. Let us commence by asking, "why was Bay State Arms started in Uxbridge?"

An answer to that question may lie in the fact that it was the place of Davenport's birth. Actually, such an elementary shot-in-the-dark does not land entirely in the 10-ring: William Hastings Davenport was actually born on April 20, 1828, in Mendon, Massachusetts, a town lying immediately east of Uxbridge. William was the fifth of nine children born there to George Longley Davenport and his wife, the former Harriet Barber of Boston. In Mendon, the Davenport and Hastings families were prominent, prolific, and related by many ties of marriage.

After the failure in 1883 of an earlier Providence firearms venture, the Davenport Arms Co., William Davenport was apparently not ready to quit developing guns. It is entirely logical that he would have turned homeward seeking support for his next project, the Bay State Arms Company, if indeed it was the result of a premeditated campaign to reenter the arms field. Bucolic Mendon, however, possessed neither a ready shop facility with adequate water power needed for arms manufacturing, nor the wealth to finance such an operation, but Uxbridge did. The scenario of when and how the company got started there will probably remain fragmented, although correlation of scattered pieces of the story will bring the overall picture into sharper focus.

We should first note that Davenport appeared in Uxbridge on August 22, 1884, to file a joint patent, with Joseph



W. Day, for an improved rifling machine cutter head (US Patent No. 315,130, issued Apr. 7, 1885). The patent was based on using a non-metallic shoe or gib, made from rawhide or similar substance, secured to the shell of the cutter head directly opposite the cutter. The surface of the leather shoe was mounted so that it was brought to bear against the land surface of the bore during the grooving process. Davenport had determined that the metallic shells of cutter heads then in use were too rigid and inelastic, causing the cutter to jump or chatter along the groove on the cutting draw-stroke. Furthermore, if a cutter chip or swarf were caught between the shell and a land, a scratch resulted that would affect accuracy. Such damage could be diminished by lapping or polishing, but that tended to wear down the crisp edges of the lands, and added a costly step to the manufacturing process.

The patent would certainly prove itself of technological importance to the company, but it has further significance: while nothing points to Joseph Day as a mechanical genius, his joint proprietorship of the patent would be a means to ensure his commitment to the enterprise. The Day family owned and operated a large woolen mill in Uxbridge and were among the town's leading taxpayers. Since it is doubtful that Davenport was financially able to begin a new self-funded manufacturing venture, he would need additional backing, and for this reason Joseph W. Day deserves greater notice for playing a pivotal role within the company. An interesting coincidence forms an additional bond between Day and Davenport. In 1816, Joseph Day married Abigail Taft; in 1848, Davenport married Julia Taft. The Taft connection strains at the "kissing cousin" level, but offers us yet another point in common between the two men, no matter how tenuous.

Thus armed with a virtual monopoly on a faster and less expensive method to rifle accurate barrels, Davenport's next move was to get into production. However, although we



**RIFLE SHOP OF THE BAY STATE ARMS CO.** The original two-story section was built as a grist mill in 1777; a 30 foot mansard roof addition was completed in 1885. Steam heated and gas lighted, the shop was adjacent to the Mumford River, which provided power for the machinery. Of an estimated shop force of 8-10 workmen, eight families followed the machinery to relocate in Norwich, Connecticut, in February 1887.

have exact birth and death dates for William Davenport, none are available for the Bay State Arms Company: neither its incorporation nor its demise were filed with the State of Massachusetts. A search of corporation division records at the Massachusetts State Archives covering the decade of the 1880s failed to disclose that any action had been taken to incorporate the company. Even the famous R.G. Dun Reports (forerunner of the Dun & Bradstreet financial credit rating) are silent about the Bay State Arms Company. An in-depth search of the Dun papers failed to disclose any reference to the company. From this informational void it may be inferred that the status of the company was not incorporated. Whatever the reasons for its lack of corporate image, we are forced to fall back on that often "grain-of-truth" source of revelation, gossip. In the Uxbridge of 1884, the most gospel gossip in town was in the pages of the *Uxbridge Compendium*, a small local weekly newspaper published between 1880 and 1913.

From the pages of the *Compendium* on October 3, 1884, we learn of company activity when it was reported that:

Business is so good at the Bay State Arms Co's, and the outlook for the future so encouraging while the shop room is so inadequate to this growing industry, that a 30 foot addition to the south end of the main shop is contemplated. This addition, which will be three stories high surmounted by a mansard roof, will cover the entire space to the present street line and if in future more room still is needed another story will be built with the same style of roof, to the present main building.

The "inadequate shop room" referred to in the article was a 66 x 22 foot, two-story wood frame grist mill, originally built in 1777. The original shop, with its mansard addition (and modern cinder-block addition in the rear), still stands today in the center of Uxbridge. The Mumford River flows

along the east side of its granite foundation, where its waters once supplied power to drive Bay State Arms machinery.

That notice concerning the company was further amplified on January 23rd, 1885:

\$1,000 worth of new machinery is going into Bay State Arms Co's shop as fast as it can be set up. 25 finished guns are now being turned out daily...

The shop's daily output of "25 finished guns" in all probability consisted of 12 gauge shotguns based on an earlier Davenport patent (US Patent No. 290, 751, issued Dec. 25, 1883). In September, the *Compendium* carried an illustrated advertisement for the Bay State Arms Company's "Single Breech-loading Shot Gun," with accompanying copy extolling its virtues as "the Wm. H. Davenport gun."

In early March the *Compendium* disclosed that the improved cutter head patent had been issued and the head had been used to produce finished barrels "while the patent was pending." Other Massachusetts-based arms firms were courted for barrel work. A contract was secured for barrels to be sent to Italy, but the securing of a large contract for finished rifles was announced May 8, 1885 which appeared to curtail further barrel jobbing. With such rosy prospects for the future, the contemplated mansard-roof extension to the shop was begun.

The rifle that captured the contractor's interest, and which formed the mainstay of Bay State Arms production, came with a novel take-down feature. The invention consisted of a detachable barrel, taper-fitted (.0045 inch taper) to the receiver frame, and held in place by a transverse tapered locking-pin (.010inch taper) having a partially screw-threaded stem with a short arm or lever attached.

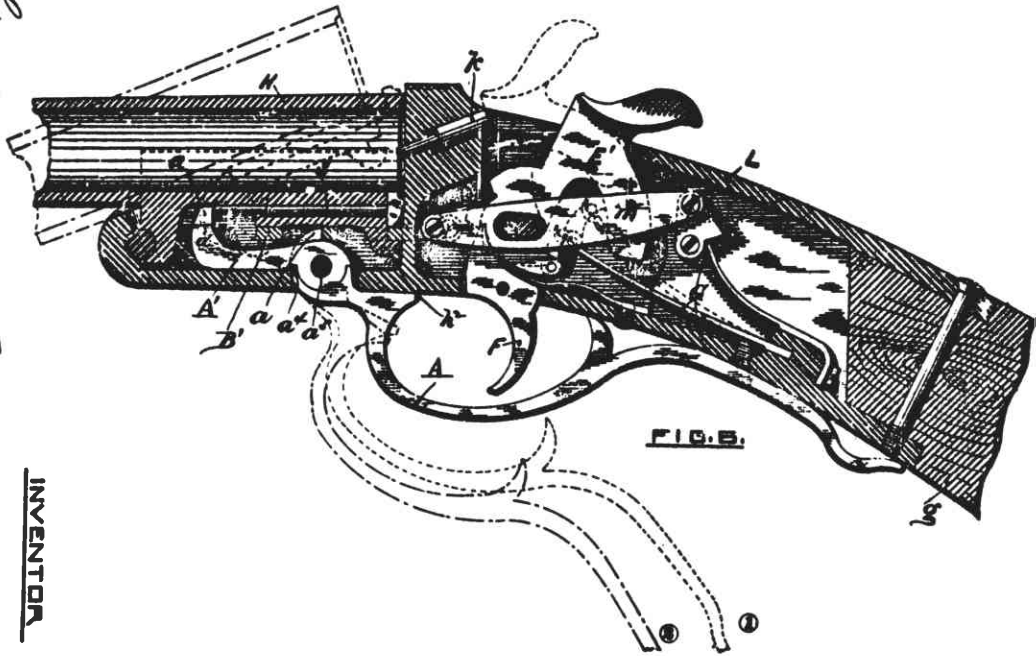
(No Model.)

W. H. DAVENPORT,  
BREECH-LOADING GUN.

2 Sheets—Sheet 2.

No. 290,751.

Patented Dec. 25, 1883.



WITNESSES,

*Charles H. Johnson*  
*Charles D. Day*

INVENTOR,

*William H. Davenport*  
*Wm. H. Davenport atty*

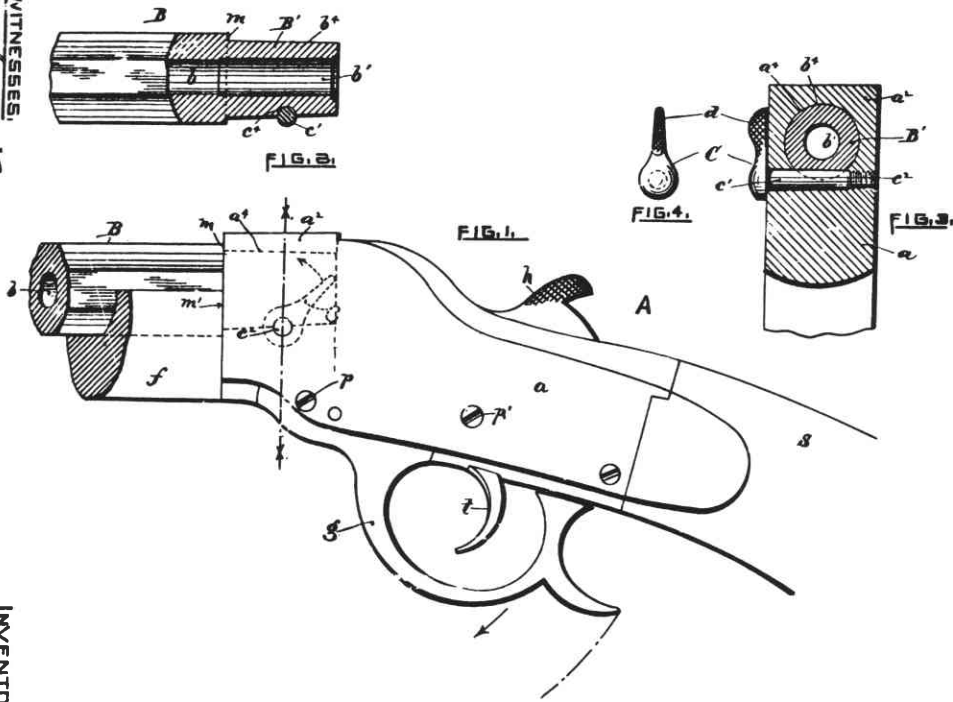
Davenport's 5th breech-loading gun patent no. 290,751 of December 25, 1883, the one under which the shotguns were made.

(No Model.)

W. H. DAVENPORT,  
FIRE ARM.

No. 320,637

Patented June 23, 1885.



WITNESSES,

*John F. Johnson*  
*Walter Day*

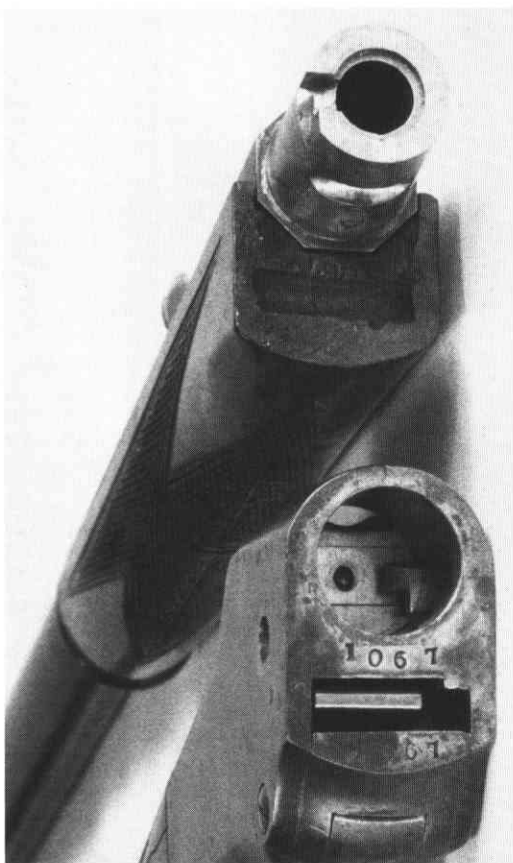
INVENTOR,

*William H. Davenport*

Davenport's 8th patent: he received a total of 25 patents relating to firearms! This is his take-down system.



**BAY STATE ARMS Co. "MATCH" rifle c. 1885-86** A single shot lever-action drop-breech target rifle manufactured by Willilam H. Davenport at Uxbridge, Massachusetts. This "match grade" rifle, serial no. 1067, has a checkered walnut stock and forearm, an iron "Swiss style" buttplate, and 28 inch half-round barrel in .32-40 cal.



**THE TAKE-DOWN METHOD** The taper-fitted barrel, separated from the receiver, and transverse locking-pin notch or cut-out (below chamber). Note the serial number on all hand-fitted parts.



**BARREL LOCKING-PIN** A threaded, tapered, pin with knurled thumb lever.

The patent for this all-important take-down feature (US Patent No. 320,637, issued June 23, 1885) was filed in Uxbridge on February 26th, with J. Walter Day (Joseph W. Day) witnessing the application. Once the patent was filed and pending, it could be employed freely without fear of usurpation. A number of these pins must have been fumbled and lost during take-down: Davenport later provided a "stop plug" to prevent the pin from being entirely removed while the barrel was being separated from the receiver frame. Since this refinement (US Patent No. 406,032, issued July 2, 1889) was not filed until after Davenport had moved from Uxbridge, Bay State Arms rifles do not have this feature.

Davenport's other Uxbridge-originated contribution to the Bay State rifle was a "sliding" breech-block face, the patent application for which he filed on June 3, 1885 (US Patent No. 326,276, issued Sept. 15, 1885). This idea permitted the firing pin to be moved to strike in the center of the chamber for use with center-fire cartridges, or to the side for rim-fire cartridges. The firing pin, in a dovetailed plate, could slide horizontally across the face of the breech block, and be secured in either position by a set-screw. Davenport further protected this idea by adding to the patent the concept of being able to adjust the firing pin plate in a vertical plane "without departing from the spirit of the invention." Markings on the general line of Bay State Arms rifles indicate the presence of these features when applicable. Since the .22 calibre rifles were made for rim-fire cartridges, there was no necessity to provide them with the adaptable firing pin feature, or refer to that particular patent in their marking.

One of the earliest illustrated advertisements for Bay State rifles appeared in *The American Field* magazine on Sept. 12, 1885 placed by the John P. Moore & Son, sporting goods firm, who offered Bay State rifles in five models variously recommended for gallery use, squirrel or deer hunting, and target work. I believe, however, that these models were not intended for serious match accuracy at the popular mid-range distances of 200-400 yards.

The unveiling of the "match grade" rifle appeared in the same magazine in January, 1886. In an open letter rebutting disparaging comments that had been made regarding the take-down feature and its degradation of accuracy, an unidentified Bay State Arms Company spokesman offered the news that they "had now *in progress* a grade in which

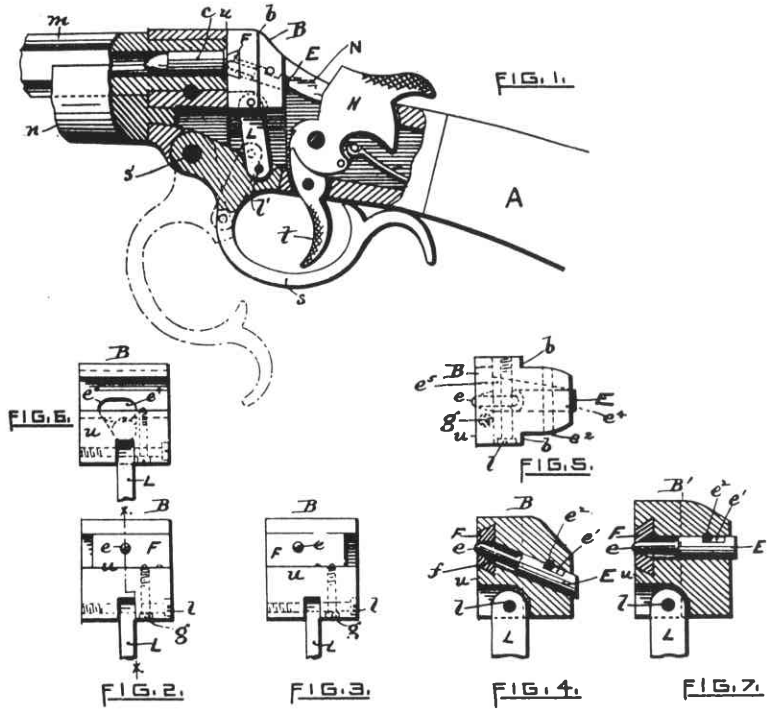
Patent no. 326,276, Sept. 15, 1885, for the sliding firing pin adaptor plate.

(No Model.)

**W. H. DAVENPORT.**  
FIRE ARM.

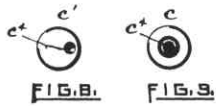
No. 326,276.

Patented Sept. 15, 1885.



WITNESSES.

*Charles Remington*  
*Frederick A. Day*



INVENTOR.

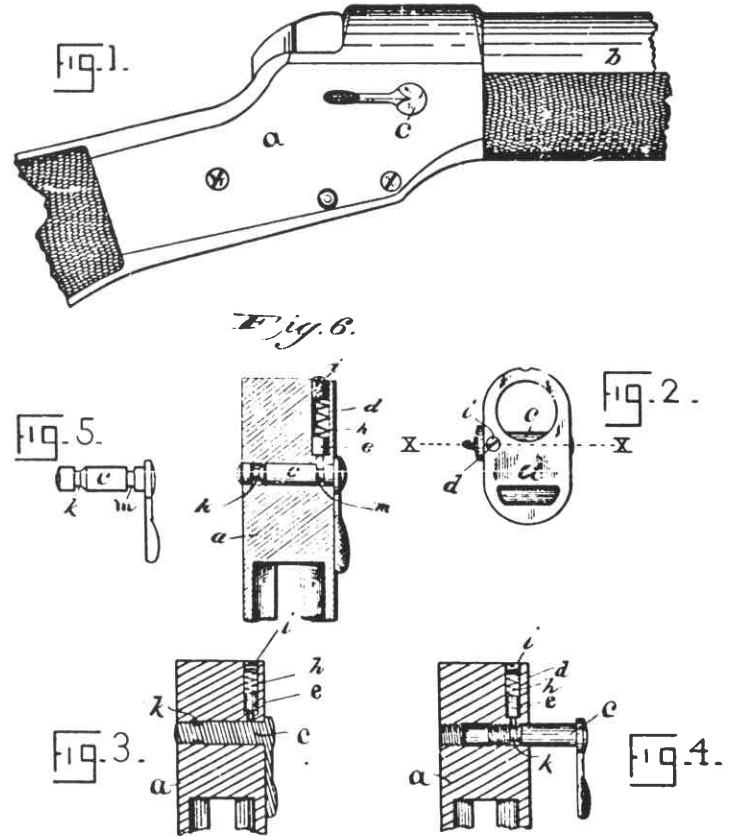
*William H. Davenport*  
by *Lucas Remington*  
Att'y

(No Model.)

**W. H. DAVENPORT.**  
MECHANISM FOR FASTENING BARRELS TO GUNSTOCKS.

No. 406,032.

Patented July 2, 1889.



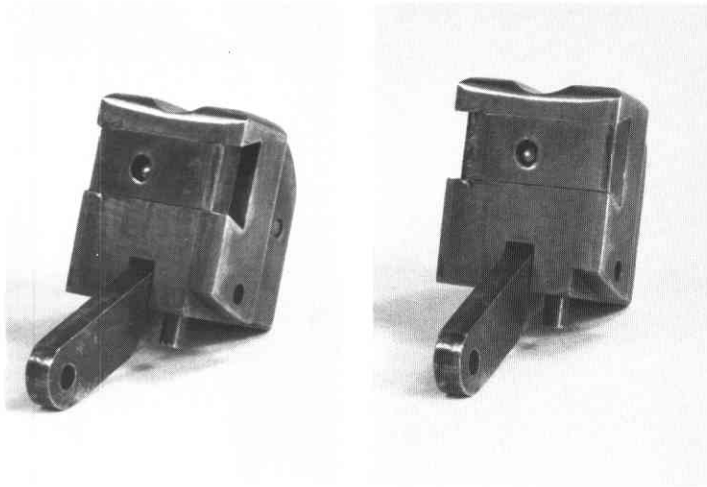
Witnesses

*Allen Tenney*  
*Alvord M. Coffin*

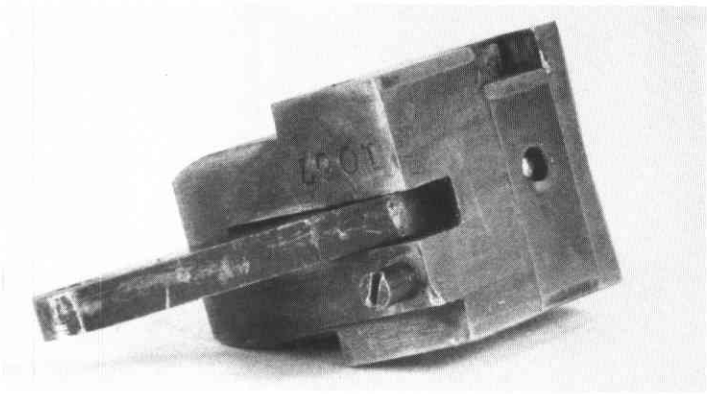
Inventor

*William H. Davenport*  
By his Attorney  
*Frank H. Allen*

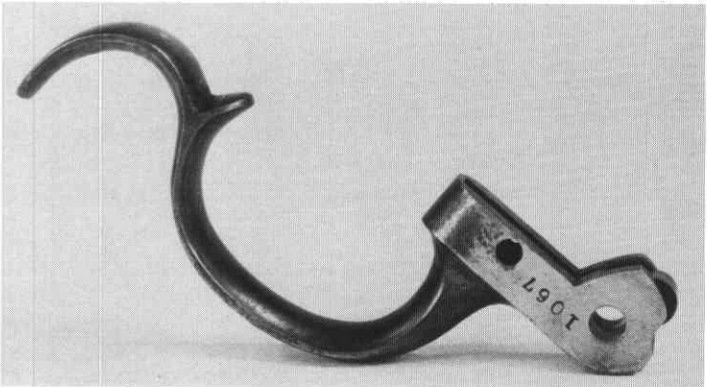
Drawings for patent no. 406,032, July 2, 1889, for the improved takedown lever.



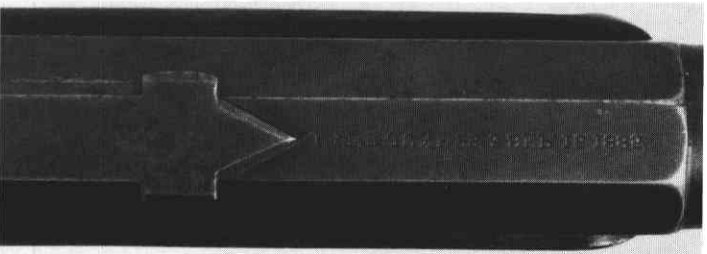
**BREECH BLOCK WITH ADAPTABLE FIRING-PIN** Davenport's Sept. 15, 1885, patent covered the dovetailed sliding plate in the face of the breech block, to adapt the firing-pin to strike either a rim-fire (left) or a center-fire cartridge (right).



**BREECH BLOCK** Note serial number and sliding firing pin assembly.



**GUARD LEVER** With serial number and a roller bearing to reduce friction at point of contact with the lever-spring.



**BARREL PATENT MARKINGS** The patents are No. 320,637 of June 23, 1885 (take down feature) and No. 326,276 of Sept. 15, 1885 (rim-fire/center-fire adaptable firing pin).

we expect to use without difficulty a .32/40 cartridge." The strength of the breech block to accommodate such a load was further touted by the information that a .38-55 calibre cartridge had been extensively tested, with satisfactory results. Such statements were calculated to remove any doubts shooters might have concerning the suitability of the Bay State "match" rifle when it made an appearance in the marketplace.

All of these "match grade" rifles were provided with checkered walnut stocks and forearms and "Swiss" style iron Schuetzen buttplates. The plates were sand-cast in a two-part mold in order to produce a hollow casting having thin edges that would offer less contact with the wood of the stock, thus make fitting the buttplate a much more economical job. One observation from the data collected is that the full octagon barrel continued to be used on the .22 calibre rifles and the half-round barrels were used with the heavier calibers.

Speculation as to the significance of the one hundred number spread of serial numbers noted here would lead one to conclude that the match grade rifles were produced in a small parcel, rather than by special order. However, unlike other arms companies that enjoyed long manufacturing lives, the short duration of Bay State Arms hardly provides a reliable gauge with which to assess its production schedules.

As the year 1887 began, rumors started to circulate in Uxbridge that the Bay State Arms Company would soon leave town and locate in Norwich, Connecticut. The *Compendium* could extract neither confirmation nor denial of this from Davenport, only that "a quantity of material for which he has no present use" had been shipped to Norwich. Those rumors had a solid basis in truth: on January 21, 1887, the *Compendium* disclosed the full story:

The Bay State Arms Company, who have been shipping their machinery, stock and tools to Norwich, CT., the last ten days, sent off the last load today. They will occupy in Norwich the large shop of the Hopkins and Allen M'fg. Company, whose charter they will run under. The shop was built expressly for the manufacture of rifles and shot guns and is well fitted up with the most improved heavy machinery which the concern here never had room for. With this and the full complement of smaller machinery and special tools the consolidated company will have every facility for competing with any arms manufactory in the country and expect at the outset a business of four times the magnitude of that done here. J. Walter Day will retain his connection with the new company and will be accompanied there by the Messrs Davenport and nearly all the present help, and expects to be running there within the next week.

On February 18th, the *Compendium* had the following postscript to the Bay State Arms Company story:

Walton C. Davenport moved his family to Norwich, Ct., Saturday, and M.W. Gross and Noah Bellville will move there shortly, besides six other families who will go sooner or later, on account of the Arms Company locating there.

From its unveiling in January, 1886, until Uxbridge operations were dismantled the following January, match rifle production was compressed within a single year. For those of us who are fortunate to own a Bay State Arms match rifle, 1886 was a very fine year.

## Bibliography

### Records

*Vital Records of Mendon Massachusetts, To the Year 1850*, Baldwin, Thomas W. (Comp.), Boston, New England Genealogical Society, 1920.

### Periodicals

*Cooley's Weekly*, Norwich, Connecticut, Dec. 15, 1905.

*Uxbridge Compendium*, Uxbridge, Massachusetts, Oct. 3, 1884; Jan. 23, Mar. 13, May 8, June 5, July 3, July 31, Sept. 25, Oct. 23, Nov. 13, 1885; July 9, 1886; Jan. 7, Jan. 21, Feb. 18, 1887.

### Articles

Lyon, Eugene L. - "Davenport Firearms Co.", *The Gun Report*, Sept. 1972, pp. 56-59.

### Secondary Books

Achtermier, William O. - *Rhode Island Arms Makers & Gunsmiths 1643-1883*, Providence, Man At Arms Press, 1980, p. 14.

Gardner, Robert E. - *Small Arms Makers, A Directory of Fabricators of Firearms, Edged Weapons, Crossbows, and Polearms*, New York, Bonanza Books, 1963.

Grant, James J. - *More Single-Shot Rifles*, New York, William Morrow & Co., 1959.

*Boy's Single Shot Rifles*, New York, Williams Morrow & Co., 1967.

Kelver, Gerald O. - *100 Years of Shooters And Gunmakers of Single Shot Rifles*, Ft. Collins, CO., Robin Press Inc., 1975.

Roberts, Ned, and Waters, Ken - *The Breech Loading Single Shot Match Rifle*, New Jersey, Van Nostrand Co. Inc., 1967.

Serial numbers, calibres, and special features of five Bay State Arms match-grade rifles:

Serial No.	Calibre	Remarks
1060	.22	Octagon barrel (Grant, <i>Boy's Single Shot Rifles</i> )
ukn.	.32-40	Half-round barrel (F. Sargent coll.)
1067	.32-40	Half-round barrel (J.D. Hamilton coll.)
1076	.38-55	Half-round barrel (J. Goergen coll.)
1160	.22	Octagon barrel (R. Peterson coll.)

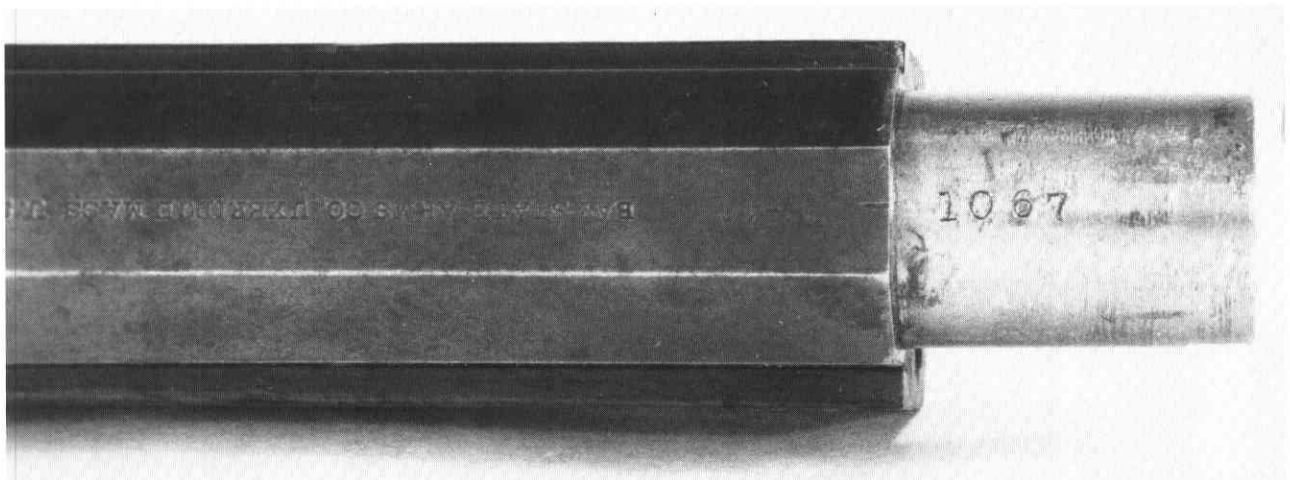
★ ★ ★ ★ ★ ★ ★ ★ ★ ★

The author is indebted to Professor Homer O. Blair, Franklin Pierce Law Center, for assisting in obtaining copies of the Uxbridge patents, and to Susan Stanovich, Chief Librarian, Uxbridge Public Library, for access to the original *Compendium*.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★



**SWISS-STYLE BUTTPLATE** The iron Swiss-style Schuetzen plate was sand cast in a two-part mold (center seam visible). The hollow casting, with its thin edges, offered less contact with the wood stock and made fitting it to the butt an easier and less costly job.



**BARREL DETAIL** The tapered barrel shank, serial number, calibre, and Bay State markings.



# Bay State Arms Co's SINGLE BREECH-LOADING SHOT GUN.




WM. H. DAVENPORT.

Steel Barrel, Blued Frame and Trimmings, Choke Bore, Pistol Grip, Rebounding Lock, Double Bolt, Combination positive and Automatic Ejector, permitting cartridge to be

## PUSHED COMPLETELY HOME

With thumb before closing gun. Unlike any other, the Wm. H. Davenport gun is closed smoothly and firmly without communicating the slightest movement whatever to the lever, consequently the stock may be securely grasped without risk of hurting the hand by the lever springing back into place. In putting gun together also, the barrel is simply hooked on the frame **without holding back any springs**, thus doing away with an operation troublesome to both dealer and customer.



 We shall offer a limited stock of these guns, our new model, giving the sporting public in this vicinity an opportunity to get a first-class, hard shooting and handsome arm, 12 ga., 30 in. barrels, for

**\$10 EACH, NET.**

**BAY STATE ARMS CO.,**

UXBRIDGE, MASS.

BAY STATE ARMS Co. SHOTGUN ADVERTISEMENT that appeared in the *Uxbridge Compendium*, (Sept. 25 1885). As far as is known, only single barrel shotguns were made by Bay State Arms. Photo courtesy Uxbridge Public Library.