

RARE AMERICAN CARBINES: THE BULLARD LEVER-ACTION

by Jeff Goodson



Figure 1. Bullard Lever-Action Civilian Carbine profiles. 21” fully round barrel. Serial Number 394. Author’s collection. Photos by Amy Cartee-Cox.

The Rare American Carbines series examines some of the rarest of the 19th century American carbines. It reviews the history and development of the guns, assesses data on their estimated production levels, identifies major variants, quantifies where possible their known survival rates or KSRs, and discusses the most important factors affecting their rarity and survival. This entry covers the Bullard Lever-Action carbines (Figure 1). Although Bullard manufactured some of the smoothest, strongest, and most rapidly firing lever action long arms ever made in the 19th century,¹ their carbines are among the rarest of all American carbines.

For no other American brand of is resolving the issue of “What constitutes a carbine?” as challenging as it is for the Bullard (Table 1). A total of 499 rifles, muskets and carbines, or about 18% of the circa 2,800 guns total that were made by Bullard, are survivors of known configuration.² Of those, military carbines identified by Bullard in its catalogues and brochures are all chambered in .45-70, and all have a saddle ring, a fully round barrel, and a military style buttstock.³ There are just three known survivors, all of them test, trial or experimental guns. Saddle rings are unique to them, however: no other Bullard guns with saddle rings are known. The

Table 1 Vital Statistics: Bullard Lever-Action Carbines

Maker:	Bullard Repeating Arms Company, Springfield, Massachusetts
Flayderman ID:	13-004 (repeaters) and 14-006 (single shots)
Years Made:	~1883-1888; repeaters ~1886-1888 (Jamieson²)
Loading Port:	Bottom-loading magazine on most repeaters; side magazine on some experimental guns
Breech Action:	Lever action
Ignition System:	Cartridge
Ammunition:	Internally primed metallic cartridge
Caliber:	.40; .45; .50 on large frame repeaters; .32 and .38 on small frame repeaters; .22; .32; and .38 on single shot rifles.
Shot Capacity:	Variable depending on magazine length
Bore:	Rifled; 5 lands and grooves, right twist known (SN 394)
Barrel Length:	Military Carbines: 22-1/2” – 26-1/8”; Civilian Carbines: 21”-22” (Jamieson²)
Barrel Form:	Fully round
Front and Rear Sights:	Highly variable; as many as 75%-80% of sights not original (Weight⁴)
Attachments:	Saddle ring and short bar known on three surviving military carbines only; sling swivels known on at least six other surviving rifles, but no carbines

only non-military carbine identified by Bullard has a 22" fully round barrel with no saddle ring or sling swivels. Just four civilian carbines with circa 22" round barrels are known to survive.



Figure 2. James Herbert Bullard, 1842-1914.

The Inventor

James Herbert Bullard was born in Poultney, Vermont on 14 May 1842 (Figure 2). His family moved to Barre, Massachusetts in 1852, where he was schooled until the age of fifteen. Bullard tried and failed several times to join the Union Army during the Civil War, but was kept out by a childhood foot injury. After the war, in 1866, he worked as a clerk in the Barre Post Office. He moved to Chicopee Falls in 1868 to work as a master mechanic for knitting and sewing machine companies, continuing that work until 1875 when he was hired to work at Smith & Wesson as a master mechanic. He was close friends with Daniel Wesson, and had three patents for Smith & Wesson handguns that he assigned to Wesson. Bullard remained there until around 1880.⁴

Bullard was a prolific inventor, with over a hundred patents from 1872 to 1916—the last issued two years after his death in March 1914. Described as “a far more talented inventor than a businessman,”⁵ they included everything from raisin seeders and tennis court markers to liquid fuel burners and a steam-driven car that evolved into the Overman Victor Steam Automobile.⁶ Of greatest relevance to the evolution of 19th century American firearms was Bullard’s patent (#245,700) for a lever action mechanism of exceptional design.

Bullard Arms

Bullard set up J.H. Bullard & Co. in early 1882, quickly renaming it the Bullard Repeating Arms Association. The first production repeater was assembled and tested in January 1883.⁷ In October of that year the company was reorganized as the Bullard Repeating Arms Company, the name it used until it was liquidated in 1891.⁸ From 1883-1888 the company made an estimated 2,800 rifles, muskets and carbines. They included large-frame repeaters,

small frame repeaters, single shot long arms of several types, and a few military and experimental guns.⁹

Major Patents

Bullard’s seminal “Magazine Fire Arm” Patent (#245,700) was granted on 16 August 1881 (Figure 3). It covered the repeating action for Bullard’s large- and small-frame repeaters, with a magazine that could be loaded from the bottom.¹⁰ The patented action was a rack-and pinion style that Weicht describes as “*extremely strong and the smoothest lever action ever made...The cartridge carrier works similar to the model 1873 Winchester. The bolt is locked up internally similar to the Remington Rolling Block Rifle...The action is so strong that cartridges can be resized in the chamber*”.¹¹

Patent #345,058 for the solid-frame single shot rifle, filed by Bullard employees S.K. Hindley and E.S. Field, was issued five years later on 6 July 1886 (Figure 4). “*The lever opens and closes a rotating breech block and is clocked up internally similar to the Remington Rolling Block action. This action was very strong and a very simple modification of the repeater action*”.¹² Another patent (#391,953), issued on 30 October 1888, made slight modifications to the solid frame single shot guns so that the barrel was detachable and interchangeable.

A patent (#383,641) was also issued on 29 May 1888 for the Hindley Magazine Gun.¹³ The basic Bullard rifle action didn’t change, but it was fitted with one of two styles of magazine. Just two experimental Hindley military repeating rifles were made; a large frame repeating saddle ring carbine with a round 22-1/2” barrel and a full magazine was also made (SN 2521), chambered in .45-70.

Superior Quality

The Bullard has been recognized as “*one of the finest lever action repeaters ever made*,”¹⁴ with a “*glassy smooth, gear-driven action that has never been equaled in ease of operation*.”¹⁵ Pegler describes Bullard’s compound levers and rack-and-pinion assembly as both complicated and comparatively expensive, but also “*smooth operating in the extreme*.”¹⁶ Weicht describes the Bullard rifle as “*a custom, handmade, and fitted masterpiece... (they) were second to none in design, durability, and craftsmanship, and without a doubt they had the smoothest lever action ever made*.”¹⁷ When closed the gun had the strength of a solidly locked rolling block-type action, making it the strongest of any of the lever actions then on the market. The large frame version was even capable of chambering the giant .50-115 cartridge for Theodore Roosevelt’s special order six-shot express model.¹⁸

Customization

The 1880s were an era of great customization for American gun makers. Winchester, Marlin and others began offering buyers a wide range of special or custom features for their guns, and Bullard was no different. Buyers could specify caliber, barrel length and shape, casehardening, swivels and sling straps, stock and forearm material, checkering, grip shape, engraving, and plating.¹⁹ As Weicht wrote, “*every Bullard rifle was a custom, handmade and fitted masterpiece...It is difficult to find two rifles that are exactly the same*.”²⁰

J. H. BULLARD.
MAGAZINE FIRE ARM.

No. 245,700.

Patented Aug. 16, 1881.

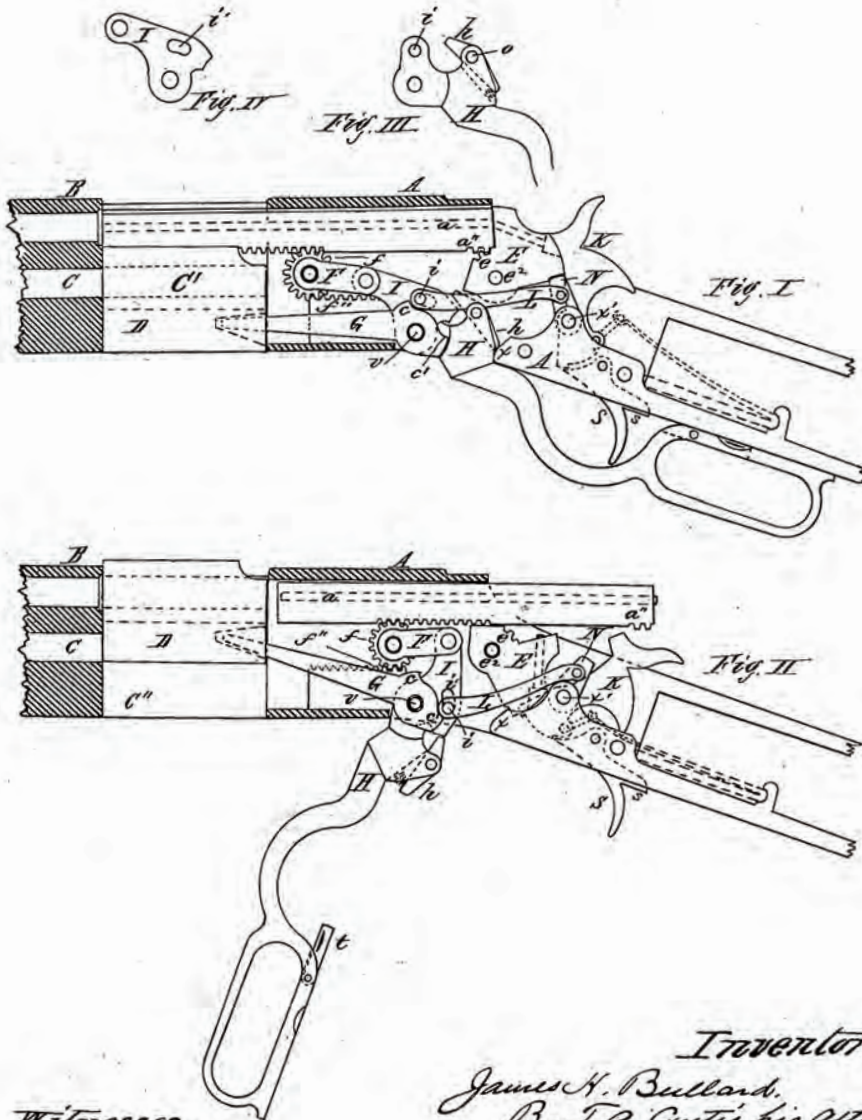


Figure 3. Bullard's seminal "Magazine Fire Arm" patent (#245,700) for large and small frame repeaters. Issued 16 August 1881.

Inventor:
James H. Bullard.
By J. A. Curtis, his atty.

Witnesses-
Fred C. Curtis.
R. B. Wakefield

Bullard's extreme customization, however, proved to be a fatal flaw in his business model. Decades after the American system of interchangeable parts had come to U.S. gun manufacturing, 'interchanging parts from one Bullard rifle to another without lots of hand fitting was next to impossible.'²¹

Failure of the Company

In spite of the very high quality of Bullard firearms, extreme customization contributed directly to Bullard's inability to compete against the mass-produced Winchester, Marlin and Remington lever action guns, and even Colt's pump action Lightning mod-

el. Bullard guns never did achieve true standardization or mass production, and along with high cost and complexity they were relegated to the margins of the larger market.²² Ultimately, it was a failure of management by both Bullard and his successors. Kau writes that Bullard's

*"biggest shortcoming was that he had little interest in overseeing the operation of the companies he formed, leaving those details to others, including the Bullard Repeating Arms Company; he was only active in the company from mid-1883 through 1885 at which time he resigned as general manager but remained a stockholder..."*²³

S. K. HINDLEY & E. S. FIELD.
BREECH LOADING FIRE ARM.

No. 345,058.

Patented July 6, 1886.

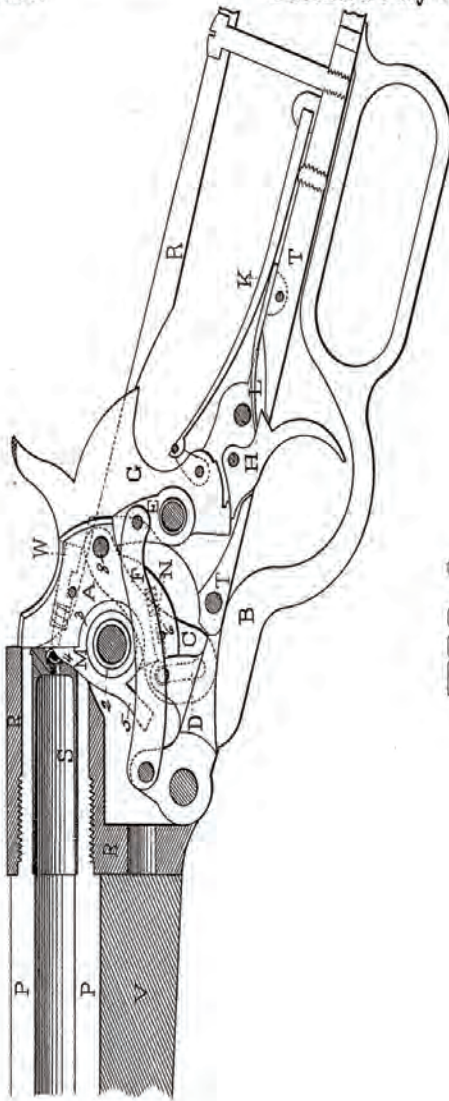


FIG. 1.

WITNESSES:
G. M. Chamberlain.
W. C. Holt

INVENTORS
Solomon K. Hindley
Edwin S. Field
 BY
Chapman & Co.
 ATTORNEY

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S. K. HINDLEY & E. S. FIELD.
BREECH LOADING FIRE ARM.

No. 345,058.

Patented July 6, 1886.

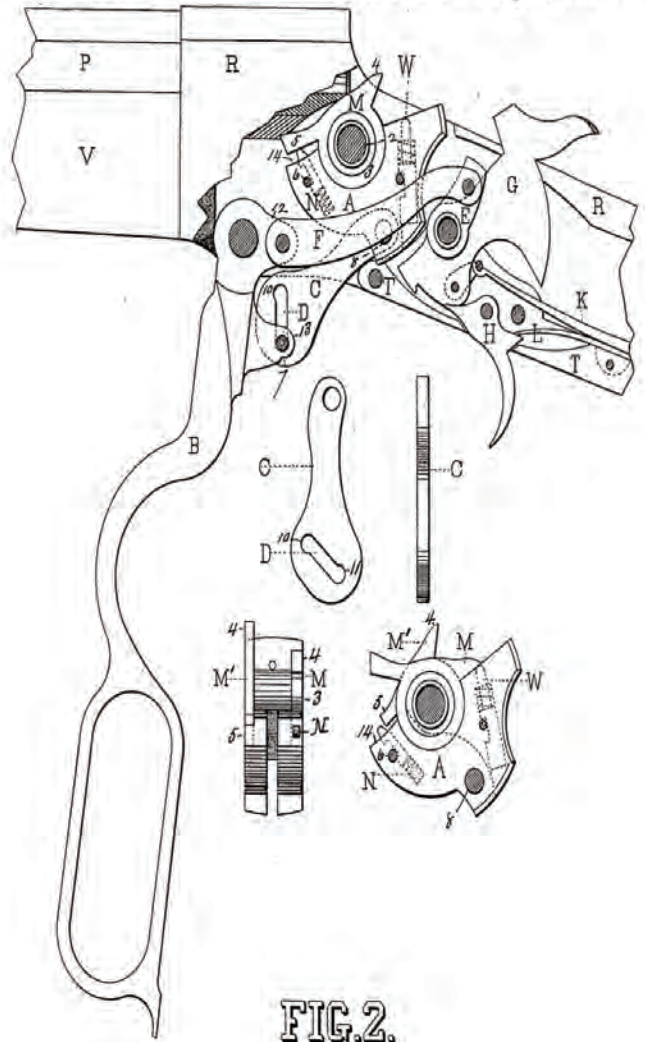


FIG. 2.

WITNESSES:
G. M. Chamberlain
W. C. Holt

INVENTORS
Solomon K. Hindley
Edwin S. Field
 BY
Chapman & Co.
 ATTORNEY

© PETERS, Photo-Lithographer, Washington, D. C.

Figure 4. The Hindley and Field “Breech Loading Fire Arm” patent (#345,058) for Bullard’s solid frame single shot rifles. Issued 6 July 1886.

Weicht concludes that:

“The reasons to cease production of the Bullard Rifle were many. President Bigelow’s failure to provide direction and planning for the future was the major downfall of the company. The loss of Bullard on a day-to-day basis must also have been a big factor. Without military contracts or plans for wider dealer distribution, the necessary improvements in design and production were never upgraded to what they

could or should have been. Cost must also have played a great part in the problem of low production as a basic Model 1886 Winchester rifle cost \$19.50 and the same Bullard Rifle cost \$33.00. The Bullard rifle was second to none in design and quality, but remained basically a custom order rifle from the company to the end.”²⁴

Production ended in 1888 after a total of only about 2,800 long arms were made. The factory building was sold to the city of

Springfield and converted to an industrial and technical school in early 1891.²⁵

Total Bullard Long Arm Production: ~2,800

Flayderman's 9th and last edition lists total Bullard long arm production at 10,000-12,000.²⁶ It's unclear where this number came from, but it has been erroneously repeated in some subsequent articles and videos on the Bullard. The best estimate of total long arm production is that of Jamieson, based on his circa 36 years of research at the time of his last known communication on the subject in 2011.²⁷ In his 2002 book *Bullard Firearms*, he listed and analyzed all 460 surviving Bullard arms known as of that time.²⁵ These consisted of muskets, rifles and carbines, plus one salesman's sample; the company made no shotguns, and no handguns. Based on analysis of these 460 surviving rifles, Jamieson concluded that Bullard made no more than 2,800 guns. These 2,800 long arms include all known large-frame repeaters, small-frame repeaters, and single shot arms that were produced by Bullard. The guns were numbered sequentially, in blocks by configuration.²⁸ Jamieson's analysis of the 460 known guns as of 2002 indicated that serialization of the Bullard broke out neatly into three categories:

Large Frame Repeaters:	SNs 1-1500 and 2500-2700. Total Production: ~1,700
Small Frame Repeaters:	SNs 1501-2000. Total Production: ~500
Single Shot Arms (all kinds):	SNs 3501-4100. Total Production: ~600

On the question of total production, Jamieson concluded:²⁹

"It is possible that a military order could show up that could add to the figures, but that is now highly doubtful. It is fair to say that the Bullard rifle in all its forms is one of the rarest of American (factory production) breechloading cartridge long arms".

Weicht attributes the difference between the total production estimate (2,800) and highest likely serial number **SN 4100** (the highest recorded serial number is **SN 4076**) to the fact that 1,300 or more serial numbers were simply never used.³⁰

Known Bullard Survival Rate

The 460 known survivors in Jamieson's analysis generate a known survival rate or KSR of 16.4% for all Bullard rifles collectively as of 2002. Nine years later, in 2011, Jamieson posted to the Marlin Firearms Collectors Association website that he had "logged just over 600 of the estimated 2,800 Bullard arms of all types produced from 1883-1890."³¹ An updated calculation using 600 known survivors generates a KSR as of 2011 of 21.4%.

Recently, a book on the excellent Bullard collection of Chris Kau has been published.³² A total of 94 long arms are in that collection, of which 38 are not listed in Jamieson (2002). Since it is unknown how many of those 38 are not accounted for in the circa 600 reported by Jamieson in 2011, calculation of a further revised KSR as of 2024 is not possible. In addition to the 460 described by Jamieson (2002), and the 38 unknown to Jamieson at that time that are in the Kau Collection, one military carbine has also recently come to light, a single shot saddle ring carbine (**SN 3745**).³³ This makes a total of 499 surviving Bullard long arms of known (i.e., published) configuration as of this writing.

Major Variants

Bullard made long arms in just three basic configurations. All are lever action. They are large frame repeaters, small frame repeaters, and single shot arms.

Large Frame Repeaters

The very first guns produced by Bullard, in January 1883, the large frame repeaters were the most popular of all Bullard arms.³⁴ They were self-locking with a solid breech block behind the bolt instead of using springs,³⁵ a design to which their extremely smooth action is sometimes attributed. The large frame repeaters have serial numbers from 1-1500 and 2500-2700, and are chambered in .40, .45 or .50 caliber. Numerous options were available, including barrel shape (round, part round or octagon), barrel length, grip shape, checkering, case hardening, butt plate style, sling swivels, stock wood, and sights. The guns were primarily marketed through dealers with a focus on hunters and shooting clubs.³⁶

Small Frame Repeaters

Bullard small frame repeaters also came out in 1883, and were covered under the same patent as the large frame guns. All known small frame repeaters are chambered in either .32-40 Bullard or .38-45 Bullard (Figure 5).³⁷ They were serial numbered from 1501-2000.



Figure 5. Bullard .32-40 Solid Head cartridges and UMC .32 caliber cartridges for both "Ballard & Bullard Rifles".

Single Shot Arms

Single shot rifles first appeared as a small solid frame model in Bullard's 1886 Catalogue.³⁸ Serial numbers fall in the 3500-4100 range, but mostly between 3500-3650. They were offered in .32, .38, .45 and .50 caliber. Very well made and extremely accurate, they offered a wide selection of options and were custom made for the client. They were therefore expensive, and not a commercial success.³⁹ Bullard subsequently introduced a single shot rifle with detachable and interchangeable barrels, which was far more successful. Serial numbers fall in the 3650-4100 range. It came in two frame sizes, .38 caliber and below and .40 caliber and above. Both rimfire and centerfire cartridges worked in either frame.⁴⁰ A single shot sub-variant was the Scheutzen rifle, introduced in Catalogue #5 in 1887. Designed for target competition, these popular guns were produced in deluxe style with detachable triggers as well as detachable barrels.⁴¹

(No Model.)

S. K. HINDLEY.

MAGAZINE GUN.

No. 383,641.

Patented May 29, 1888.

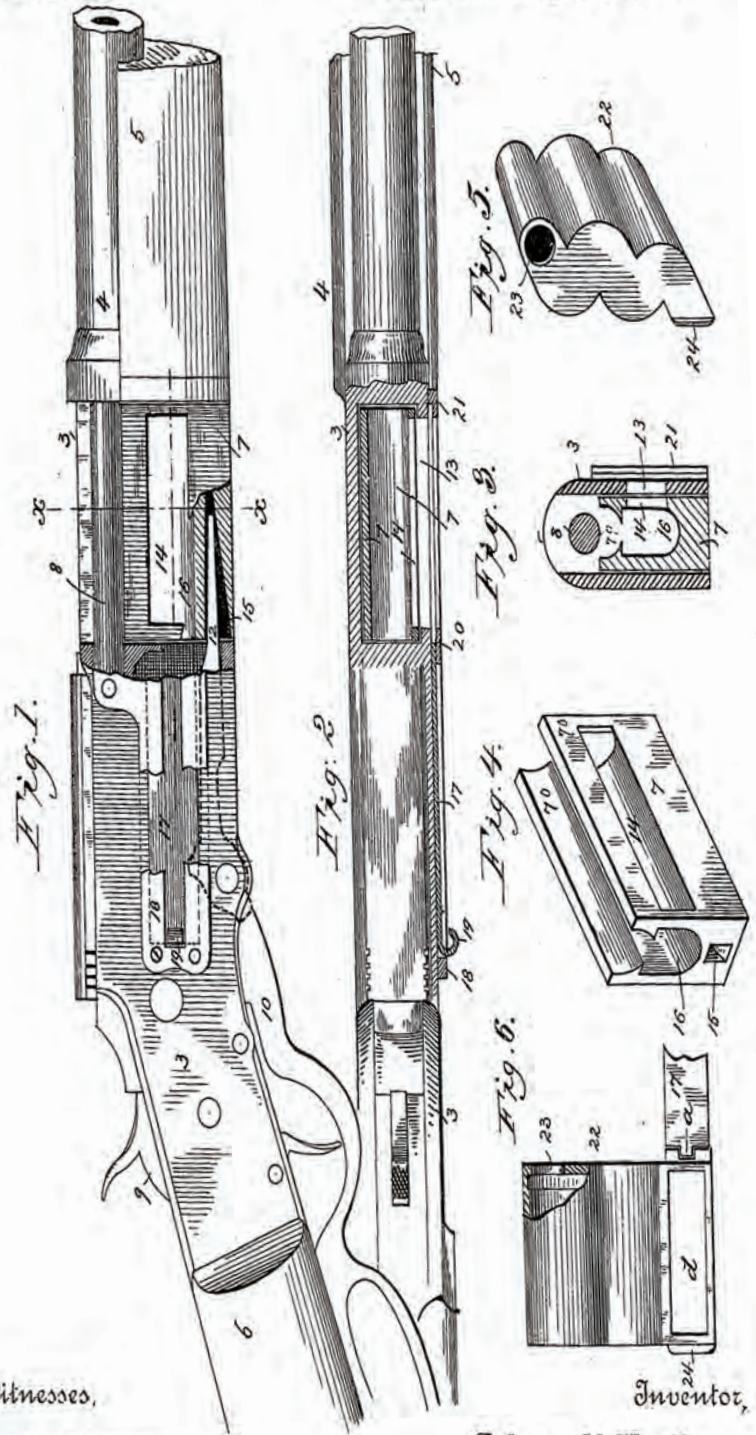


Figure 6. The Hindley "Magazine Gun" patent (#383,641). Issued 29 May 1888. Weicht believed that the magazine on this gun represented "the birth of the clip".⁴

Witnesses,

M. J. Bellom.
E. W. Chamberlain.

Inventor,

Solomon K. Hindley,
 By *his* Attorneys, *Chapin & Co.*

N. PETERS, Photo-Lithographer, Washington, D. C.

Experimental Hindley Rifles

Soloman K. Hindley, originally a competitive shooter for Bullard, went on to become Corporate Secretary and finally General Manager of the company.⁴² As manager, Hindley patented a Hind-

ley Magazine Gun on 29 May 1888 (Pat. #383,641; Figure 6) that uses a detachable, gravity-feed side magazine. Two styles were made, one loading from the top and one that fed from the face of the magazine. Of interest, Weicht writes that "the one important

feature that was overlooked was that when the magazine was empty, a new one could be easily replaced. The clip was born".⁴³ Just three Hindley experimental long arms are known today. SN 2524 and SN 2529 were both muskets with a single shot magazine cut-off, chambered in .45-70.⁴⁴ A third, known as the Hindley-Field Model (SN 2521), is a large-frame carbine with a saddle ring and short bar. All three are in the Kau Collection.⁴⁵

Ammunition

Brochures from the mid-1880s claim that

*"The Bullard is the only lever repeater that will successfully use the regular United States copper cartridge (.45 cal. 70 grs. powder) owing to its absolute certainty to extract the shell, which being made of copper and a folded head, does not contract after firing (as in the case of brass shells) but often sticks in the chamber..."*⁴⁶

Bullard also had a line of proprietary cartridges to go along with his guns (Figure 7). The giant .50-115 cartridge for Roosevelt is one example, but

*"they also chambered their guns for just about any caliber a customer demanded, even going so far as to drop forge a small number of large-frame receivers to fit the shorter .50-90 Win round and others of their ilk..."*⁴⁷



Figure 7. Cartridges developed by Bullard. From Weicht, p. 32.⁴

Serial Numbering and Inspection Marks

Serial numbers for all Bullard firearms are stamped horizontally directly behind the hammer.⁴⁸ There are no known U.S. military inspection marks; Bullard only made a limited number of experimental firearms for U.S. military testing, but it was never successful in getting a U.S. government contract.

Six Bullard Catalogues

Examination of Bullard catalogues and brochures is critical to the identification of Bullard carbines. Six have come to light from the company's nine years of operation (1882-1891). All six publications are reproduced in their entirety in Jamieson.⁴⁹ They are believed to date from 1883 (#1); 1884 (#2); late 1884-early 1885 (#3); 1886 (#4); February-late May 1887 (#5); and a brochure that likely dates to mid-late 1887 (#6). Catalogue #5 (1887) is the only dated catalogue (Figure 8). All except for #2 and #6 advertise carbines, as well as muskets and rifles, on their respective title sheets as follows:

Bullard
Repeating Fire Arms
Rifled Muskets,
Carbines, Hunting and Target Rifles
for Military and Sporting Use

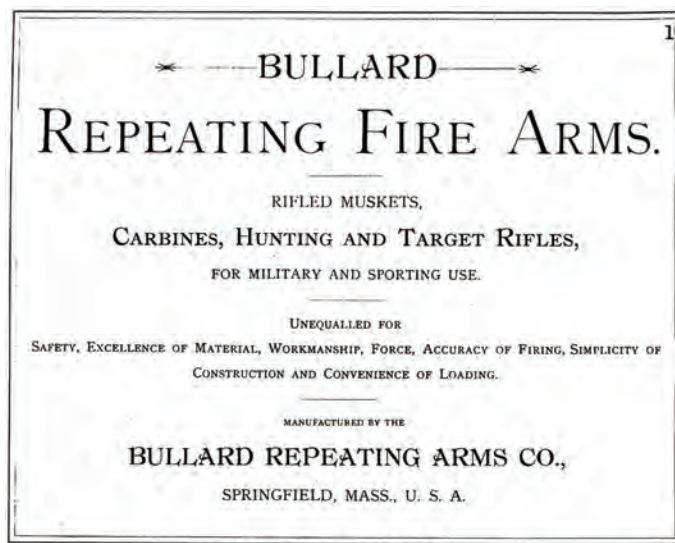


Figure 8. The fifth Bullard catalogue, the only catalogue or brochure that is dated.

Carbines are not mentioned in the text of the catalogues until Catalogue #4 in 1886, which pictures a "Military Rifle Musket" chambered in .45-70 and lists a carbine version (no picture) with a 26" barrel weighing eight pounds. The only known surviving carbine that fits this description is SN 3528.

The first catalogue to actually picture a carbine of any kind is the 1887 catalogue (#5) on Page 10. A large frame "Military Carbine" with saddle ring and short bar is pictured, described as having a 22" round barrel with a full magazine. Chambered for the U.S. government .45-70-405 cartridge, and weighing 9-1/2 pounds, it has a cutoff that changes the arm "from a magazine to a single loader". The only known survivor of this variant is SN 2521, now in the Kau Collection.

Two “extra pages” were found inserted in an 1887 catalogue (#5), unpaginated and of smaller size than the rest of the catalogue. The second page⁵⁰ pictures a lever action “Military Single Shot Carbine” with a 24” round barrel weighing 7-1/2 pounds. The only known survivor of this variant is SN 3745, also now in the Kau Collection.

Brochure #6 (mid-late 1887) is an undated four page publication which “lists the complete Bullard line of firearms and cartridges then available.” This is “the last documentable piece of factory literature uncovered, with the exception of magazine advertisements.”⁵¹ The brochure pictures two carbines. On page two is a “Military Single-Shot Carbine.” This gun is a large frame full stock arm with a 26” round barrel, chambered for either the U.S. .45-70-405 or .45-70-500 cartridge and weighing 8 pounds. The picture appears to be of the same large frame military single shot carbine shown in the two page insert found in Catalogue #5.

The second carbine, on Page 3, is different—and appears to be the first and only known picture of a civilian Bullard carbine. It’s identified simply as “Carbine,” without the “military” qualifier used on all other earlier carbines. The gun is a large frame full stock arm with a 22” round barrel, chambered for the U.S. .45-70-405 cartridge and weighing 9-1/2 pounds. The surviving Bullard carbine closest to these specifications is SN 484.

Bullard Military Carbines

Bullard military carbines are differentiated from civilian carbines here by the combination of (1) the presence of a saddle ring and bar; (2) a fully round barrel; (3) chambering in .45-70 Government; and (4) the presence of a military style buttstock (vs. the other three forms of butt produced by Bullard—the crescent, shotgun, and Scheutzen style butt).

Military Marketing

The very limited production of military carbines by Bullard wasn’t for lack of trying. Like most other late 19th century American gun manufacturers, Bullard made a concerted effort to market its guns to militaries both at home and abroad. Jamieson writes that Bullard was ready to sell to any government

“...single shot military muskets and carbines; repeating rifles in both carbine and musket style, with tubular magazines and cutoffs; and...a military variation of the Bullard repeating action which involved the removal of the tubular magazine and the substitution of a receiver-mounted box-type magazine, a.k.a. the ‘Hindley’ rifle.”⁵²

None of Bullard’s military marketing efforts, however, proved successful.

Letters to museums around the world have failed to turn up evidence of a military sale, but if they did secure one it must have been an insignificant one, thus making Bullard military examples the rarest Bullards of all, with the possible exception of engraved models.”⁵³

U.S. Marketing and Trials

The first documentation of Bullard’s effort to secure a contract from the U.S. Army for military arms was a letter from Bullard manager S.K. Hindley to the Ordnance Department dated 16 May 1885, asking for angular bayonets and buttplates for two military rifles that Bullard was finishing.⁵⁴ Military trials of Bullard long

arms are known to have taken place around that time, probably in late 1885 since they were referenced in a January 1886 edition of *Forest and Stream*.

Catalogue #4 (1886) references “the merits of our repeaters in these trials.”⁵⁵ It also references tests made in Boston in August 1885, and tests made at Creedmoor in September and October 1885, although neither of those appear to be military trials. The two Hindley design muskets were submitted to Ordnance for testing in March/April 1888, shortly before the Hindley patents were received. These were, however, unsuccessful.⁵⁶

International Marketing and Trials

There appear to have been three major attempts to market Bullard arms in Europe. The first was in May 1885. Bullard submitted a repeating carbine to the Committee of Royal Small-Arms Factory in Scotland in an effort to license them for manufacture in Britain.⁵⁷ This was apparently unsuccessful. Second, a year later in a 14 May 1886 letter, S.K. Hindley addressed

“the setbacks for their magazine rifle during the government trials. He further stated that the English had recently adopted a .40 caliber rifle and that the Swiss were interested in a .32 caliber. He felt they needed to protect their rifles with additional European patents, if they pursued the European market.”⁵⁸

Shortly thereafter, Bullard identified a major pricing problem that led it to redouble marketing of its arms in Europe. In a 9 June 1886 letter to H.H. Bigelow, then president of the company, after a sales trip to New York City gun dealers, Hindley reported that

“...the dealers were buying Winchester’s, Marlin’s, and Remington’s rifles at \$9.11 net. They felt that the net cost to them would make Bullard’s over-priced for their market. Hindley again suggested that the European market should be pursued...”⁵⁹

Kau writes that immediately thereafter, in July 1886,

“...Hindley left for an extended European sales tour. Two other Bullard associates departed around the same time to cover different parts of Europe. Other than some possible individual sales, it is not known that any significant orders had been obtained for their line of sporting or military rifles.”⁶⁰

In a third and apparently final effort, Hindley submitted an experimental bolt action repeating carbine with an under barrel magazine to the UK War Office trials in January 1887. The War Office reported on 7 February 1887, however, that the carbine was not tried because “the nature of the magazine (tube) was objected to.” The carbine was rejected,⁶¹ and further marketing of Bullard arms in Europe apparently ceased.

Surviving Military Carbines

Of the 499 surviving Bullard arms of known configuration as of 2024, only three clearly fit the four military carbine criteria; one is a large-frame repeater, and two are single shot carbines. As no military contracts have ever come to light, domestic or foreign, these guns are all considered test, trial or experimental arms. Note that experimental Bullard rifles are also known, including both large-frame and single shot configurations, with and without bayonets. The three known surviving military carbines (Figure 9) are:

SN 2521. This is a large frame repeating saddle ring carbine with a round 22-1/2" barrel and a full magazine, chambered in .45-70. Described by Kau as the "Hindley-Field Large Frame Carbine,"⁶² it has a military butt and a military style hammer selector switch for single shot only. The gun has two barrel bands, a pinned front sight and a Winchester military wind gauge rear sight. It's described in Weicht as an "*experimental tubular feed saddle ring repeater carbine with a single shot magazine cutoff and saddle ring.*"⁶³ The carbine has a martial style hammer spur. It is unknown whether this carbine was the one submitted to the Ordnance Department for the March/April 1888 Ordnance trials.

SN 3528. This is a large frame, single shot, military saddle ring carbine with a round 26-1/8" barrel, chambered in .45-70. It has a military style butt, a full length forearm, one barrel band, a Winchester front sight and a Winchester 1876 carbine rear sight.⁶⁴ It is one of two known single shot military carbines.

SN 3745. This gun, the other known single shot military saddle ring carbine, sold at Poulin Auctions in 2021.⁶⁵ It has a round 24" barrel, and is also chambered in .45-70. It has a military style butt, a full length forearm, one barrel band, a Winchester one piece fixed blade front sight, and a Winchester 1873-style adjustable wind gauge rear sight.⁶⁶

Bullard Civilian Carbines

So how many of the circa 2,800 Bullard rifles were civilian carbines? Unfortunately, there's no simple answer to this question. In fact, for no other American brand of 19th century carbine is resolving the issue of "*What constitutes a carbine?*" as challenging as it is for the Bullard. The company specified the sale of carbines on the cover of its brochures, and Bullard made a point of advertising his carbines in the text. From publication of his first catalogue in 1883, he stated that his guns are "*much easier to load on horseback than any other gun, as there is more choice of position than when the opening is on the side.*"

But Bullard didn't mark its carbines as such, and to determine what actually constitutes a Bullard carbine it's necessary to examine the most diagnostic features that are shared by 19th century American carbines. The type of sights and the shape of the butt stock can be useful indicators for some models of carbine. But Weicht estimates that "*half of all Bullard rifles have had some sight changes or additions since they left the factory,*"⁶⁷ and all four types of Bullard butt stocks (crescent, shotgun, military and Scheutzen) are found on Bullard's short-barreled arms. That leaves the three most definitive identifiers of 19th century carbines: (1) the presence of a saddle ring or sling swivels; (2) barrel shape; and (3) barrel length.

At the end of the day, a Bullard civilian carbine is what Bullard considered it to be. The only hard identifiers of Bullard carbines are those pictured and described as such in the Bullard catalogues and brochures. Military carbines weren't described and pictured until 1886 (Catalogue #4), however, and the only civilian or non-military carbine known from the catalogues is the "carbine" it advertised in its very last brochure in 1887.⁶⁸ That sole civilian carbine has a fully round, 22" barrel—but neither a saddle ring nor sling swivels. The two remaining criteria—a short 22" barrel that is fully round—are consistent with the vast majority of 19th century American carbines, and are considered here as the only true identifiers of the Bullard civilian carbine.

Saddle Rings and Sling Swivels

The presence of a saddle ring or sling swivels is one of the most immediately identifiable characteristics of the 19th century American carbine. Of roughly 150 major models of those guns, only about a dozen had neither a saddle ring nor sling swivels.⁶⁹ These exceptions include the Cochran carbine; Colt Model 1839 Revolving carbine; Morse-Muzzy civilian carbine (the few military guns had saddle rings); Perry Navy carbine (but present on the Army model); Porter Revolving Turret carbine (although exceptions are known); Schenkl carbine; Springfield Model 1807 Indian Carbine;



Figure 9. Bullard Military Carbine SN 2521 (top) and SN3528 (middle), (photos from Weicht.⁸) and SN3745 (Lot 4085 from 11/8/2021 Poulin Auction²), all in .45-70 caliber with saddle ring.

Springfield Model 1899 Krag carbine; the three Volcanic carbines; and the Warner Revolving carbine.

To this list we can now add the Bullard, which only had saddle rings on its military carbines. Even as it touted the superiority of its guns for use on horseback, Bullard didn't even offer saddle rings as an option. It did offer sling swivels as an option on its repeaters, but not on its single shot rifles. Clearly, the feature wasn't popular. There were just five documented surviving Bullard rifles with factory sling swivels known as of 2002, all of them large frame repeaters: **SN 338**, **SN 346**, **SN 555**, **SN 808** and **SN 2622**. Statistically this indicates that slightly more than thirty large frame repeaters altogether may have been fitted with sling swivels. All five of the known survivors had rifle-length barrels—two are 24", two are 26", and one is 28".

Notably, and bookending the century, all carbines manufactured by the U.S. government at its Springfield Armory in the 19th century had a saddle ring or sling rings as standard equipment except for the very first (the Model 1807 Indian carbine) and the very last (the Model 1899 Krag).⁷⁰ By the later 1800s, however, when Bullard was in production, some other model variants were being made without saddle rings. Some Winchester Model 1886 carbines were produced without a saddle ring, for example,⁷¹ and trapper or short-barreled Winchester Model 1892 carbines with 14"-18" barrels may or may not have them.⁷²

Barrel Shape

While 19th century American rifles come with barrels that are round, part-round, or octagonal in shape, virtually all of the roughly 150 major 19th century carbine models had lighter, fully round barrels. From the very first true American production carbines, the Model 1833 Hall-North and Model 1836 Hall, carbine design for the mounted soldier emphasized light weight. This emphasis continued through to the end of the century, and applies to both military and civilian carbines. Madis notes that in the 1880s, for example, heavier civilian carbines "*did not successfully compete with the lighter weight carbines.*"⁷³ Exceptions to the rule include the Wesson 2-Trigger military carbine and Warner Open Frame Revolving carbine, both of which had full octagon barrels; and the Shenkl, Cosmopolitan and Maynard carbines with part-octagon barrels.⁷⁴

Barrel Length

Also a design emphasis from the start was a barrel length that was significantly shorter than the typical rifle barrel. While this feature reduced accuracy, it also reduced weight, improved maneuverability on horseback, and reduced fouling in horse tack and on vegetation. About 80% of the 150 or so major models of 19th century American carbines have barrels that are 22" long or shorter. There are, however, about thirty models that had barrels 24" or longer, either as a feature of the model or as a major variant.⁷⁵

Carbine models with barrels 24" or longer include the Allen & Wheelock; Cochran; Colt Model 1839 and some Model 1855 revolving carbines; the Model 1833 Hall-North carbines (but not later models); the Navy Jenks; some Model 1889 Marlin carbines; some Morse-Muzzy carbines; and the Porter Revolving Turret carbine. Remington's Model 1867 Navy, Model 1855 Remington-Lee, Remington-Keen USID Model, and some No. 1 Remington military carbines also had longer barrels. Others include the Schenkl; Schroeder; several models of Sharps sporting carbines;

the Sharps Borschardt; the Sharps & Hankins guns except the cavalry or short-barrel model; the Springfield Model 1807 Indian Carbine; Wesson 2-Trigger carbine; Whitney Cochran, Excelsior and civilian Phoenix carbines; some Volcanic/New Haven Arms carbines; and the Hotchkiss carbines.⁷⁶

Surviving Civilian Carbines

Of the 499 surviving Bullard rifles for which we have hard data or photographic evidence, just four fit the criteria of having a fully round barrel that is circa 22" long or shorter: **SN 394**, **SN 484**, **SN 1145** and **SN 1190**. All four are large-frame repeaters, and none have either a saddle ring or sling swivels.

SN 394 has a crescent butt, a 21" round barrel, and is chambered in .40 caliber. This is the fourth shortest recorded Bullard barrel. It has a 6-shot half magazine and is rifled with five lands and grooves (right twist). This gun is in the Goodson Collection (Figure 1).

SN 484 has a crescent butt, a 22" round barrel, a full-length magazine, and is chambered in .45 caliber.

SN 1145 has a shotgun stock, a 22" round barrel, a three-quarters length magazine, and is chambered in .40 caliber.

SN 1190 has a crescent butt, a 22" round barrel, a full-length magazine, and is also chambered in .40 caliber.

Short Barreled Rifles or Long Barreled Carbines

Some American rifles had standard 24" barrels, and short rifles and custom-order rifles with barrel lengths of less than 24" were widely available from different manufacturers in the 1880s. From the start of production, Bullard advertised rifles with barrels of 24" and the flexibility to make any barrel length on demand. In its early catalogues, for example, Bullard advertised .38 Special rifles with 24" barrels and Express Made to Order rifles with 27" barrels "or shorter".

Of the 499 known surviving rifles listed by Jamieson (2002) and shown by Kau, 66 have barrels that are 24" or shorter. These include guns with all four different butt shapes used by Bullard (military, shotgun, crescent, and Swiss or Scheutzen), and guns with all three different barrel shapes (fully round, partly round, and octagonal). Out of these, sixteen non-military guns are known with fully round barrels that are 22"-24" long. Eleven are large frame repeaters: **SN 346**, **SN387**, **SN845**, **SN971**, **SN1462**, **SN2331**, **SN 2575**, **SN 2622**, **SN 2629**, **SN 2670** and **SN 2673**; five are small frame repeaters: **SN 1572**, **SN 1606**, **SN 1801**, **SN 1824** and **SN 1829**.

Three Bullard rifles out of the 499 have barrels that are just 20" long—the shortest barrels of all of the known survivors. One (**SN 602**) has an octagon barrel, one has a part-octagon barrel (**SN 3999**), and the third (**SN 1414**) is apparently a short-barreled target gun with a Scheutzen butt stock with an unknown barrel shape.

Single Shot "Carbines"

In addition to repeating civilian carbines, Jamieson (2002) writes that

*"It is now known that some single shot muskets and carbines were made, but the numbers were limited and some may have been sporterized by the factory to sell them off when anticipated military sales failed to materialize, and others may have been sporterized in the field."*⁷⁷

Bullard offered neither sling swivels nor saddle rings as extras on any of its single shot arms. Any single shot guns that were converted to carbines were therefore either modified at the factory without these attachments, or not modified there at all and only converted by private gunsmiths in the field. None of these shortened guns are identified in either Jamieson (2002) or Kau.

Upshot: Total Estimated Bullard Carbine Production

A sample size of 499 arms of known configuration out of a total of 2,800 long arms manufactured is 17.8% of the total and a very strong sample size. It allows statistical extrapolation of estimates for total production of both military and civilian Bullard carbines, using (1) the number of known survivors of each; (2) the configurations of arms that make up those survivors; and (3) the total estimated production (TEP) of each configuration.

Military Carbines (3 Known; ~16 total)

Flayderman lists the Bullard carbine as “rare,” but this likely reflects only the two known military carbines with saddle rings that are known to have survived at the time of Flayderman’s last edition in 2007.¹⁰ Today, three confirmed military carbines are known to survive. One is a large frame repeater (1,700 made), and two are single-shot arms (600 made). Out of these 2,300 made, a total of 421 are known to survive—272 large frame repeaters and 149 single shots. Three military carbines out of 421 known renders, by extrapolation, an estimate of 16 military carbines of large frame or single shot configuration that may have been made to support marketing of Bullard carbines to the U.S. military and abroad. These are all test, trial or experimental guns, not production carbines.

Civilian Carbines (4 Known; ~25 total)

Just four civilian (i.e., non-military) arms fit the criteria of having a fully round barrel that is circa 22” long or shorter, as specified in the only known pictured and described Bullard civilian carbine advertisement. All four are large frame repeaters (1,700 made). Out of 1,700 made, a total of 272 are known to survive. Four civilian carbines out of 272 renders, by extrapolation, an estimate of 25 civilian carbines that may have been made in large frame configuration. In contrast to the military carbines, these would have been production carbines. Any rifle could be carried on horseback, of course, and many Bullard rifles with barrels longer than 22” undoubtedly were.

These estimates do not include either single shot rifles or muskets that were later sporterized in the factory or in the field. Note also that both the military and civilian carbine estimates will im-

End Notes

The best sources of documentation on Bullard long arms are two books by G. Scott Jamieson, *Bullard Arms* (1988)⁴⁸ and *Bullard Firearms* (2002).² The latter provides a detailed rackup of every known surviving Bullard long arm as of that date. That database, supplemented by a recent book² documenting the best-known modern collection of Bullard arms by Chris Kau, has been essential in identifying and estimating the total production of Bullard military and civilian carbines. Other authoritative sources include a 2013 article on Bullard firearms in the ASAC Journal by former ASAC member G. Weicht⁴; Garavaglia and Worman (1985)¹; and a recent on-line article by George Layman (2023)⁵.

¹ Garavaglia, Louis A. and Charles G. Worman. *Firearms of the American West, 1866-1894* (Vol. 2). University of New Mexico Press. 1985., pp. 211-212.

² The 499 Bullard arms of known configuration come from three sources: Jamieson, G. Scott. *Bullard Firearms*. Schiffer, Atglen, PA. 2002, Chapter 11: *Production Tables by Serial Number*. This is a comprehensive database of the characteristics of all 460 known surviving Bullard arms as of the date of that publication. Kau, Chris. *Bullard Rifles in Color*. No publisher information, 2024; which adds 38 additional Bullard arms not in Jamieson (2002). And the Poulin auction on November 8, 2021 where an additional

prove in accuracy as the configurations of additional Bullard arms beyond the 499 known as of this writing are documented.

Survival And Rarity

Almost all rare carbines are rare because of extremely low production. This is almost always due to lack of demand, but other reasons like catastrophic fire or early contract termination can also come into play. Indeed, the reasons behind very low production are the most illuminating from the historical perspective. In the case of Bullard rifles generally, the high cost and complexity of the guns; debilitating competition from the lever action carbines of Winchester, Marlin and Remington; poor management; and failure to obtain a military contract either here or abroad, doomed the success of the Bullard Repeating Arms Company and greatly limited total carbine production.

Bullard arms were especially fine weapons, and quite expensive for the day. So while they had reached the Texas and California markets by 1884, and were used by well-known big game hunters like Doc Allen in Wyoming,⁷⁸ they weren’t carried by the average rancher in the American west. Although a rackup of known original owners lists at least four who used the guns for hunting, including two in the west, most original owners appear to have been target and competition shooters. The wealthy, who could afford the best, also favored the guns. Theodore Roosevelt had a six-shot Bullard in .50-115,⁷⁹ and other prominent owners included William F. Cody, George Ellsworth, Freeman Bull, and Daniel Wesson. At least three of the known original owners were given their Bullard rifles as presentation guns.⁸⁰

In terms of survivability, it’s worth noting that of the 22 Bullard arms with fully round barrels 24” or shorter that have survived, eight (~36%) have British proof marks on them; historical use of these guns overseas is variously noted in South Africa, India, Turkey and Australia.⁸¹ While less than successful in the United States, Bullard carbines—like the contemporary Winchester Model 1885 carbines⁸²—were apparently more successful in the British colonies and elsewhere overseas than they were in America. Which accounts for the fact that today they are more easily found at overseas auctions in places like Australia than at auctions here in the United States.

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Bullard saddle ring carbine came up for sale (SN 3745; Lot 4085); https://bid.poulinauctions.com/VERY-RARE-BULLARD-SOLID-FRAME-MILITARY-STYLE_i43265370.

- 3 The specific characteristics of Bullard arms are detailed in Chapter 11 of Jamieson (2002), and taken from the photographs in Kau (2024) and the photographs of SN 3745 in the November 8, 2021 Poulin auction.
- 4 Jamieson, 2002 Op cit.; Weicht, Gene. "The Bullard Rifle; James Herbert Bullard "Inventor"". *Bulletin of the American Society of Arms Collectors* 108: 20-33. 2013.
- 5 Layman, George. *Bullard Rifles Were Popular; But Were Too Expensive and Took Too Long to Make*. HistoryNet Retrieved from <https://www.historynet.com/bullard-rifles/>. 15 May 2023.
- 6 Jamieson, 2002 Op cit.; Weicht 2013, Op cit.
- 7 Jamieson, 2002, Op. cit.
- 8 Weicht, G. Op. cit.
- 9 Jamieson, 2002, Op cit.; Weicht Op cit.
- 10 Weicht Op. cit.; Flayderman, Norman. *Flayderman's Guide to Antique American Firearms*. 9th edition. Krause Publications. 2007
- 11 Weicht, Op cit. p. 23.
- 12 Ibid p. 26.
- 13 Ibid p. 31.
- 14 Behn, Jack. *.45-70 Rifles*. The Stackpole Company, Harrisburg. 1956. p. 57.
- 15 Layman, Op. cit..
- 16 Pegler, Martin. *Firearms in the American West 1700-1900*. Crowood Press, Great Britain. 2002. p. 81.
- 17 Weicht, Op cit. p. 33
- 18 Layman Op. cit.
- 19 Jamieson (2002).
- 20 Weicht, Op. cit., p. 33.
- 21 Jamieson (2002).
- 22 Flayderman, 2007, Op. cit.; Jamieson, G. Scott. *On-line Comments*. Marlin Firearms Collectors Association website. December 21, 2011. <https://marlin-collectors.com/forum/viewtopic.php?p=40024&hilit=Jamieson#p40024>; Garavaglia and Worman, Op. cit..
- 23 Kau, Op. cit., p. VII.
- 24 Weicht, Op cit. p. 22.
- 25 Jamieson, 2002. Op cit.
- 26 Flayderman, 2007, Op. cit.
- 27 Jamieson 2011, Op. cit.
- 28 Jamieson 2002, Op. cit., p. 288.
- 29 Jamieson, 2002, Op cit., p. 288.
- 30 Weicht, p. 22.
- 31 Jamieson, 2011, Op cit.
- 32 Kau. Op. cit.
- 33 Poulin Auctions, 11/8/2021, Lot 4085.
- 34 Kau, Op. cit., p. 1.
- 35 Ibid, p. 2.
- 36 Ibid, p. 2.
- 37 Jamieson, 2002, Op. cit., pp. 284-285; Kau, Op. cit., p. 73.
- 38 All of the known Bullard catalogues and brochures as of 2002 were reproduced in their entirety in Jamieson (2002), Chapter 10, pp. 241-279.
- 39 Kau, Op. cit., p. 90.
- 40 Ibid, p. 123.
- 41 Ibid, p. 123.
- 42 Kau, Op. cit., p. 73.
- 43 Weicht, p. 31.

- ⁴⁴ Weicht, Op. cit., pp. 31-32.
- ⁴⁵ Kau, pp. 186-191.
- ⁴⁶ Behn, Op. cit., p. 61.
- ⁴⁷ Jamieson 2011, Op. cit.
- ⁴⁸ Jamieson, G. Scott. *Bullard Arms*. The Boston Mills Press. 1988, p. 35.
- ⁴⁹ All of the known Bullard catalogues and brochures as of 2002 were reproduced in their entirety in Jamieson (2002), Chapter 10, pp. 241-279.
- ⁵⁰ Jamieson 2002, Op. cit., p. 272.
- ⁵¹ Jamison 1988 Op. cit. p. 214.
- ⁵² Jamison 2002, Op. cit. p. 187.
- ⁵³ Ibid, pp. 192-194.
- ⁵⁴ Ibid, p. 187.
- ⁵⁵ Ibid, p. 256.
- ⁵⁶ Kau, Op. cit., pp. 183-184.
- ⁵⁷ Ibid, p. 183.
- ⁵⁸ Ibid.
- ⁵⁹ Ibid.
- ⁶⁰ Ibid.
- ⁶¹ Jamieson, Op. cit., p. 204.
- ⁶² Kau, Op. cit., pp. 186-187.
- ⁶³ Weicht, Op. cit., p. 32.
- ⁶⁴ Kau, Op. cit., pp. 194-195.
- ⁶⁵ Poulin Auctions.
- ⁶⁶ Kau, Op. cit., pp. 198-199.
- ⁶⁷ Weicht, Op. cit., p. 29.
- ⁶⁸ Jamieson, 2002, Op. cit., p. 273.
- ⁶⁹ Goodson, Jeff. *American Production Carbines, 1807-1899*. Unpublished Working Draft. (Proprietary Excel database).
- ⁷⁰ Ibid.
- ⁷¹ Madis, George. *The Winchester Book*. Art and Reference House. 1961. p. 294.
- ⁷² Ibid, p. 359.
- ⁷³ Ibid, p. 288.
- ⁷⁴ Goodson, unpublished working draft, Op cit.
- ⁷⁵ Ibid.
- ⁷⁶ Ibid.
- ⁷⁷ Jamieson, 2002, Op. cit., pp. 192-194.
- ⁷⁸ Garavaglia and Worman, op. cit., pp. 211-212.
- ⁷⁹ Ibid, p. 213.
- ⁸⁰ Jamieson, 2002, Op. cit. Appendix F, pp. 299-301.
- ⁸¹ Jamieson 2011. Op. cit.
- ⁸² Goodson, Jeff. "Rare American Carbines: The Winchester Single Shot". *Bulletin of the American Society of Arms Collectors* 129: 21-28. Spring 2024.

