



# Research Press Journal

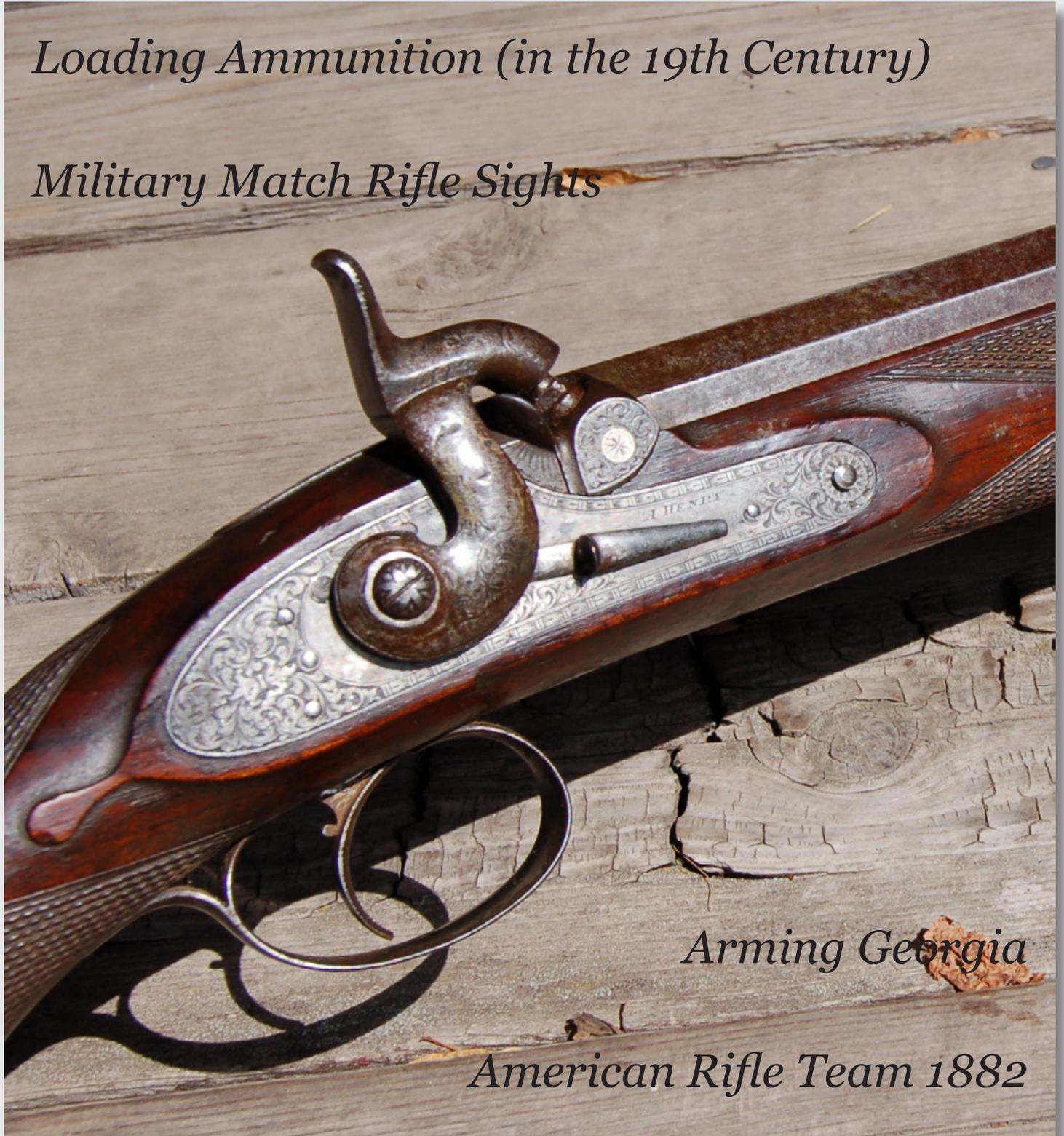


Issue 3 | Summer 2018

[www.researchpress.co.uk](http://www.researchpress.co.uk)

*Loading Ammunition (in the 19th Century)*

*Military Match Rifle Sights*



*Arming Georgia*

*American Rifle Team 1882*

# Research Press Journal

Editor: David Minshall

[journal@researchpress.co.uk](mailto:journal@researchpress.co.uk)

## Firearms

- Long range rifle fire. Long range target rifles. British military longarms. Small arms trials. Ammunition. Accessories. Gunmakers.

## Marksmanship

- Military marksmanship. The art of shooting. Long range muzzle loading. National Rifle Association. Creedmoor and the international matches.

## 19thC Riflemen

- Those who pioneered the sport of target rifle shooting from the muzzle loading and into the black powder breech loading era. Biography.

## Rifle Volunteers

- The Volunteer Force was established in 1859. From 1881 territorial regiments included regular, militia and volunteer battalions.

[www.researchpress.co.uk](http://www.researchpress.co.uk)

© 2018 Research Press



While every effort is made to trace copyright holders, we may on occasion have failed and apologise to anyone whose rights may have been infringed.

# Contents

Issue 3 | Summer 2018

- 3 Calendar of Events**  
*Black Powder Rifle Target Shooting*
- 4 Priming**  
*News, Events, People & Places*
- 6 Loading Ammunition (in the 19th Century)**  
by David Minshall
- 12 American Rifle Team, Creedmoor 1882**  
*Contemporary portraits*
- 16 Firearms**  
*Firearms - Improvements in the Rifle - Breech-Loading - Selection of the Service Weapon - The Snider and Martini-Henry*  
by Charles Hibbs
- 22 Military Match Rifles & Their Sights: Kerr and Turner**  
by David Minshall
- 26 Arming Georgia (Part II)**  
by Southron Sanders
- 36 The Literature of the Volunteers of 1859**  
*The Urge To Volunteer, 1850 to 1859*  
by W.S. Curtis

## On The Cover

Muzzle loading rifle by  
Alexander Henry, Edinburgh  
see  
*Alexander Henry - Rifling through a Life*  
page 4

# Calendar of Events

For further details and links to entry forms see:

[www.researchpress.co.uk/index.php/news/events/2018-events](http://www.researchpress.co.uk/index.php/news/events/2018-events)

## UK

- 14-15 July - Imperial Historic Arms Meeting. Bisley. Muzzle loading and breech loading. National Rifle Association.
- 4 August - National 900 & 1000 yard Championships, Bisley. Muzzle loading. Muzzle Loaders Association of Great Britain.
- 4-5 August - Metford Trophy. 1000, 1100 & 1200 yards. Bisley. Muzzle loading. Long Range Rifles.
- 19 August - HBSA Open Long Range Championship. 900 & 1000 yards. Bisley. Breech loading service and match rifles. Historical Breechloading Smallarms Association.
- 15 September - HBSA Open Mid Range Championship. 300 & 500 yards. Bisley. Breech loading service and match rifles. Historical Breechloading Smallarms Association.
- 20-21 October - Trafalgar Meeting. Bisley. Muzzle loading and breech loading. National Rifle Association.
- 27 October - Rigby Cup and Whitworth Cup, 600 yards. Bisley. Muzzle loading. Long Range Rifles.

## Canada

- 24-26 August - Canadian Black Powder Championships. Connaught Rifle Range, Ottawa, ON. Dominion of Canada Rifle Association.

## USA

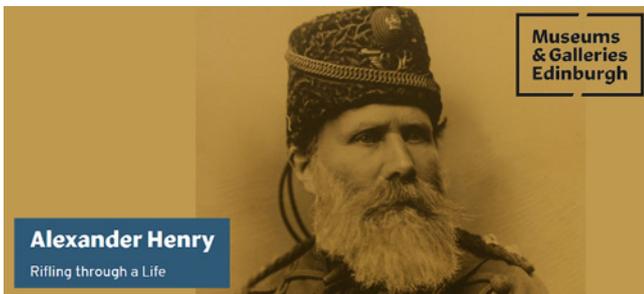
- 28-29 July - Dick Hoff Memorial Match. Miami Rifle and Pistol Club, Cincinnati, OH. 300, 500 & 600 yards. Muzzle loading and breech loading black powder rifles.
- 5-7 September - NMLRA National Championship, Black Powder Target Rifle Match, Camp Atterbury, IN. 300 & 600 yards (practice match) and 800, 900 & 1000 yards. Muzzle loading and breech loading black powder rifles.
- 1-7 October - 2018 NRA Black Powder Target Rifle Championship, NRA Whittington Center, Raton, NM.
- 6-7 October - NMLRA Hepsworth Long Range Black Powder Target Rifle Match, Camp Atterbury, IN. 1000, 1100 and 1200 yards. Muzzle loading and breech loading black powder rifles.

*Long Range Rifles Branch of the Muzzle Loaders Association of Great Britain  
Stickledown Range, Bisley, 1000 yards*



# Priming

News, Events, People & Places



## Alexander Henry - Rifling through a Life

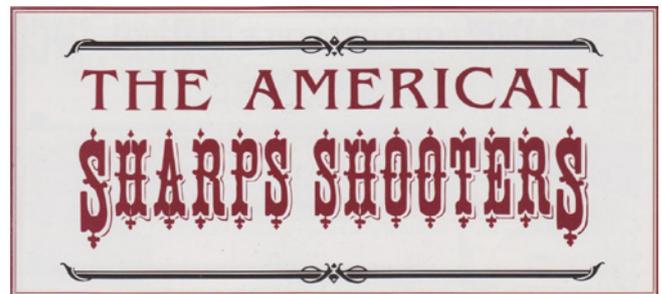
2018 is the 200th anniversary of the birth of Edinburgh-born Alexander Henry who was a world-famous rifle maker when Edinburgh was a centre for gunmaking. He is best known for the Martini-Henry rifle, the British military rifle of the Victorian era. His rifles and shotguns were made for maharajas and royalty, including one commissioned by Queen Victoria for John Brown, her personal attendant. Henry also held civic roles in Edinburgh as a town councillor and Moderator of the High Constables of Edinburgh.

This exhibition brings together a collection of items to illustrate his story of business success and failure, and family tragedy. The exhibition runs from Friday 8 June to Sunday 9 September 2018, at The People's Story Museum.

The museum gives a unique insight in to Edinburgh's working class people from the 18th century to the late 20th century. The displays include tableaux, original objects, images and personal stories to reveal their fascinating history of the city. The collection focuses on the history, culture, crafts and trades, and the people of Edinburgh but also as a place to explore more contemporary issues, events and opinions. All of the displays are based around the words of Edinburgh's people, taken from oral history reminiscences and written sources to tell real stories. The collections reflect this with objects ranging from Friendly Society regalia, banners and material relating to Edinburgh's diverse communities.

The People's Story Museum  
163 Canongate, Edinburgh EH8 8BN  
+44(0)131 529 4057

[www.edinburghmuseums.org.uk/  
whats-on/alexander-henry](http://www.edinburghmuseums.org.uk/whats-on/alexander-henry)

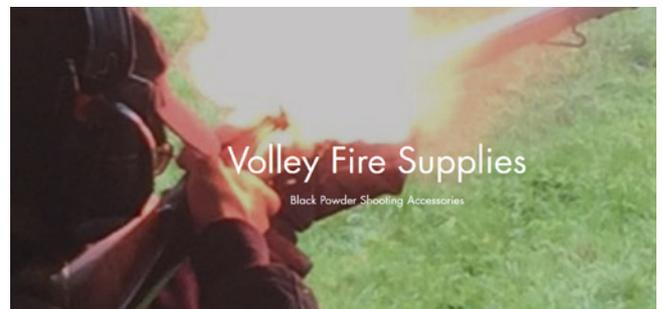


## The American Sharp Shooters

Mike Nesbitt, the Editor of "The American Sharps Shooters" magazine, published by C. Sharps Arms Co., Inc., would like anyone who wishes to get an email copy of the magazine to write to him at: [miken54@aol.com](mailto:miken54@aol.com).

This is an interesting magazine issued several times a year and includes product reviews, match reports, historical and modern hunting articles and a regular feature on Old West Centerfires.

The magazine is also posted in the *Historic Shooting* forums ([www.historicshooting.com](http://www.historicshooting.com)) under the Publications section, where back issues can be downloaded.



## Volley Fire Supplies

*Volley Fire Supplies* is a new British enterprise selling almost entirely British made products. Just launched they have a range of lubricated felt wads and card wads available, including hexagonal wads for the Whitworth enthusiast, and flints coming soon. There are plans for the shop to grow progressively over time.... from their site: "Please ask if there is something you need. We might not be able to supply it but might know who can help."

[www.volleyfiresupplies.co.uk](http://www.volleyfiresupplies.co.uk)

### Long Range Rifles

The 'shooting season' of the Long Range Rifles Branch of the Muzzle Loaders Association of Great Britain is now well underway, with four matches completed, and several club records being broken.

The *Volunteer Trophy* was held at Bisley on 8 April. This is a 15 shot match fired at 600 yards with military match rifles; full stocked rifles generally of .45 calibre and fired with open sights. Shooters on the first detail only had to contend with a gloomy sky and lingering smoke in the generally calm conditions. What wind there was wasn't enough to blow the already rain soaked wind flags around much. The second detail was much the same conditions, but with the addition of rain! Despite shooting in the miserable conditions of the second detail, John Whittaker had a tremendous shoot and convincing win. His score of 54.1 is a new Branch record for the event.

The *Barry Custance-Baker Cup* is the Branch's 900 yard Championship for match rifle. Held on 19 May at Bisley shooters were able to enjoy some fine weather. Alan Beck (65.3) won the match by just one point ahead of one of the Dutch members, Henrie van Koot (64.2). This was another fine win, again setting a new Branch record score.

The *Asquith Cup*, held at Bisley on 8 June, is the ultimate challenge for the military muzzle loading rifle enthusiast. The event comprises 15 shots fired at each distance, 600 and 800 yards, with .577 calibre rifles. Shooting is from the prone position with only the two point military sling permitted for support. The event was quite close run at 600 yards, but the longer range really starts to push the limit of 'target rifle shooting' with the military muzzle loader and fortunes can vary significantly. In the end Alan Beck had an outstanding shoot, beating his 600 yard score by 9 points and with a winning aggregate score of 91.3 set a new record score for the match, by one v-bull.



*Volunteer Trophy match, Century Range, Bisley, 600 yards*

The 30 shot *1000 yard Championship* (match rifle) is usually held on a single day, however Bisley range availability meant that it was held over two mornings (9/10 June), 15 shots each detail. Mostly sunny with a light but changeable wind, conditions were tricky. Overall Sunday morning saw a slightly higher average score; what separated the winners though was their consistency over the two days.

First held in 1992, the *Metford Trophy* is a demanding trial for the long range rifleman; this is an aggregate match of 15 shots at each distance 1000, 1100 and 1200 yards. This match will be held in August. The year will close with the *Rigby Cup* (match rifle) and *Whitworth Cup* (hexagonally bored rifles) at 600 yards in October.

[www.longrangerifles.co.uk](http://www.longrangerifles.co.uk)

<i>Volunteer Trophy</i>		<i>Asquith Cup</i>	
John Whittaker	54.1	Alan Beck	91.3
Henrie van Koot	44.1	John Whittaker	77.1
Chris Goed	43	David Craven	58
<i>Barry Custance-Baker Cup</i>		<i>1000 yard Championship</i>	
Alan Beck	65.3	Alan Beck	123.2
Henrie van Koot	64.2	John Whittaker	109.1
Paul Wolpe	56.1	Chris Goed	91.1

# Loading Ammunition (in the 19th Century)

David Minshall

Gunmakers D. & J. Fraser, of Edinburgh, introduced their falling block match rifle in 1881. The rifle was tried by several Scottish riflemen in the selection shoots for the Scottish Eight to compete for the Elcho Shield<sup>1</sup>. The rifle gained popularity and six of the Scottish Eight eventually competed using the Fraser rifle that year.

Management of the breech loading match rifle was still new to some, the muzzle loader long being favoured despite the success of the American Teams using breech loaders in long range international competition since 1874. The perils of hand loading were still being discovered as demonstrated in the following contemporary text taken from a newspaper report on the 1881 Scottish team trials:

“In connection with the breech-loader it has to be borne in mind that the filling and capping of cartridge cases is a new employment to many of our men, and it is not at all astonishing that some little amusing incidents should occur in connection with that operation. We heard one the other day which was humorously related to a number of interested listeners. It was to the effect that a member of the gallant band, intent upon having his cartridges properly filled and capped, borrowed the new Fraser refiller and cleared the room in order that he might not be distracted during the operation of recapping. His friends had not long gone when a report startled them, and rushing into the room they found their friend prostrate on the floor - the suddenness of the cap snapping having been sufficient to overthrow him and the machine together. It is needless to say that all had a hearty laugh at the little harmless misadventure, but the incident, humorous as it is, shows that our men require a little training in this department, for if there is any slip here its effect must undoubtedly be felt at the target.”

*(Glasgow Herald, 15 June 1881)*

A later note in the press referred to Daniel Fraser's ammunition used in the 1885 Scottish Eight trials:

“Mr. Fraser is using a charge of 90 grains of U.S. powder and a bullet of 540 grains. He has discovered a new system of wrapping the paper around the bullet, so as to leave the force of explosion to expand the lead more equally than can be done where the paper is twisted in a knot and pushed into the base of the bullet. The system is, we believe, in use in America, but has not as yet been used in this country, so that Mr. Fraser, who discovered it in the course of investigations during the winter, feels that he has obviated one the difficulties which riflemen have had to encounter.”

*(Glasgow Herald, 2 July 1885)*

Whilst the term ‘U.S. powder’ is suggestive of something imported to the UK, further evidence suggests it is a powder grade by Curtis & Harvey. A report of Ulster Rifle Association's Annual Prize Meeting in 1881 identifies for one competition “4th prize (presented by Messrs. Curtis & Harvey, Hounslow), 15lbs of U.S. gunpowder” (*Northern Whig, 18 August 1881*). A reference from 1883 refers to a Scottish rifleman using “88 grains of Messrs. Curtis & Harvey's U.S. powder.” (*Glasgow Herald, 13 June 1883*). The following year, another report from Scotland notes that Thomas Caldwell “had throughout been using 84 grains of Curtis and Harvey's new U.S. powder, and the shooting he has made is looked upon as a proof that it, though a slower burning powder, is capable of giving good results.” (*Volunteer Service Gazette, 19 July 1884*). In the personal shooting register of Neville Jodrell, reference to ‘U.S. powder’ has been found between 1881 and 1884. Illustrated (next page) is a record of a shoot from 1884 in which 10 shots have been fired with a Sharps rifle at 800 yards with Curtis & Harvey's No.6 and a further 10 with their U.S. powder.

American riflemen adopted the breechloader as a match rifle and used, with success, large charges of slow-burning powder. Although this left a heavy residue, cleaning-out between shots removed its detrimental effect on accuracy. In the UK, Curtis & Harvey's No. 5 or No. 6 are grades commonly cited in contemporary references to loads for muzzle and breech loading

match rifles. 'Curtis & Harvey's U.S. powder' seems to be something different; a slow burning powder marketed in the UK (also a powder grade for export perhaps?). Does any reader have further knowledge on this, or contemporary advertising literature?

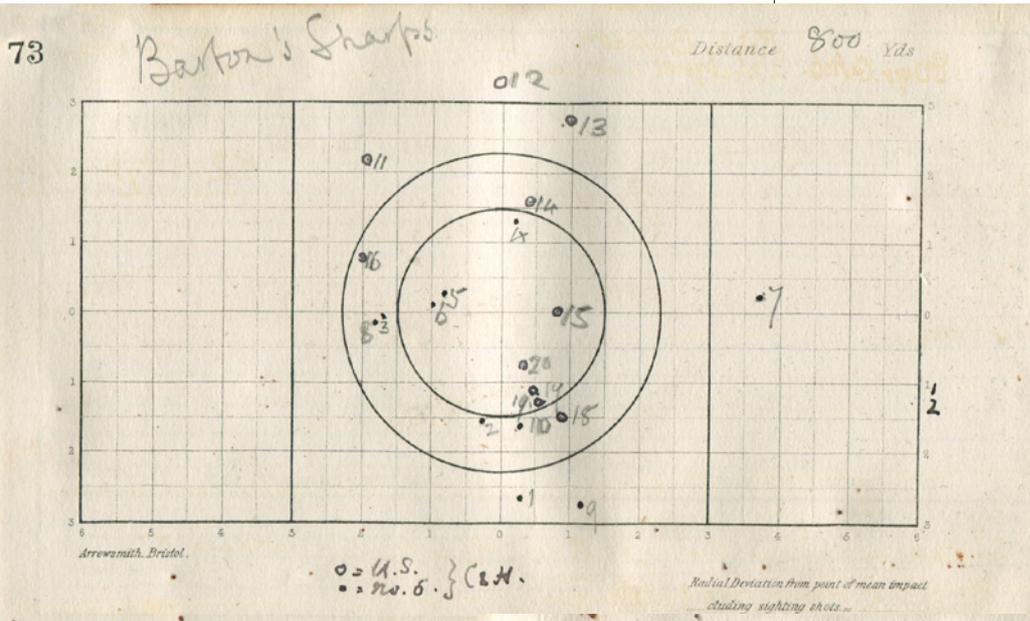
'Curtis & Harvey's U.S. powder' was possibly only available for a brief period. In 1883, the NRA(UK) banned cleaning out between shots. It may be that this ban discouraged the wider adoption of a slow burning powder in the UK. Following their undoubted success in the long range international matches of late 1870s, some British riflemen had taken to using American rifles. One effect of the cleaning ban, as noted by J.H. Walsh in his "Modern Sportsman's Gun and Rifle" (1884), was "the almost total disappearance of the American rifles from the prize lists."

As to the paper patching adopted by Fraser, the method may be similar to that used by Frank Hyde<sup>2</sup> in the USA. In this, rather than gathering in the paper wrap and pushing it into the base, the paper is gathered in and then cut out, making it easier for the bullet to strip. Is anyone else willing to speculate as to the form of wrap used by Daniel Fraser, or better still have some original Fraser ammunition to hand to check?

Today, gaining advice on loading ammunition requires just a few keywords in Google or a short question on a forum or Facebook group. In the UK in the 19th Century the primary source for such discussion was the *Volunteer Service Gazette and Military Dispatch* (VSG). First published in 1859, the newspaper provides a fascinating chronicle of the Volunteer Movement and small arms development. The second half of the

19th Century takes us from the muzzle loading era, through black powder cartridge rifle and on to smokeless powders, and within the pages of the VSG this story, both for military and match rifle, can be followed.

In December 1884 one young rifleman wrote to the VSG seeking information on loading ammunition. He had already read a well-known book published in 1877, but aware of improvements sought current advice. This letter elicited a helpful response, and both letters follow.



Pages from the personal shooting register of Neville Jodrell. 14 March 1884

ARM. <i>80gr. Cal. 6. Rigby Bullet.</i>										DATE <i>March 14. 1884</i>	
LOAD <i>2 Michford lubricators</i>										SHOT AT <i>Abercromby</i>	
N <sup>o</sup>	VALUE	DISTANCE	WIND		REMARKS.	N <sup>o</sup>	VALUE	DISTANCE	WIND		REMARKS.
			DIRECT	W. G.					DIRECT	W. G.	
1	3	955	10	7	<i>clean only barrel</i>	11	3	969	8	6	<i>82 grain powder same wads &amp; bullet bad lot off over</i>
2	4	159	10	8		12	4	167	8	7	
3	4	163	8	8		13	3	165	8	7	
4	5		8			14	4	163	8	8	
5	5					15	5	161	8	9	
6	3		7	3		16	4		10	8	
7	2		5	11		17	5		8	10	<i>lot off low &amp; left</i>
8	4		10	8		18	4		10	12	
9	3		7	8		19	5	163	12	13	<i>a little low lot off</i>
10	4		8			20	5		13	14	
TOTAL - AVERAGE PER SHOT						GRAND TOTAL - AVERAGE PER SHOT					
WEATHER OR MEM: <i>Solid B. bead - B. bead elevations throughout on left side of backsight. Fouling dry: blew plenty.</i>											

### LOADING AMMUNITION TO THE EDITOR OF THE VOLUNTEER SERVICE GAZETTE.

Sir, - Being a young shot, I shall be very glad if some of the veterans will give myself, as well as many others, some hints and advice with regard to the Ammunition of the Match and M.B.L.<sup>3</sup> rifles. I believe, if you can afford the time, it is preferable to load one's own cartridges, were it for nothing else than the confidence imparted by the doing so. I have read Major Young's book<sup>4</sup>, but so many improvements have taken place since 1878, that I should like, if one who loads for himself would give his *modus operandi* from the time he empties his shells on the rifle range; and state his manner of extracting the cap, and the instrument he employs; the cleaning, drying, and re-capping of the shell; and the style of loading, and most convenient manner of doing so. Such information will confer a great favour on, Sir, yours, &c., J. B. A.

December 16th, 1884.

(*Volunteer Service Gazette*, 20 December 1884)

### LOADING AMMUNITION TO THE EDITOR OF THE VOLUNTEER SERVICE GAZEITE.

Sir, - Referring to J. B. A.'s request for hints on this point: Some years ago, while in Mr. Farrow's<sup>5</sup> tent at Wimbledon, I watched the whole process, and picked some valuable information. Mr. Farrow put about twenty dirty shells into a tin full of water, and boiled them for few minutes over a lamp; he then put the shells on a sheet of iron over the lamp, where they hissed and steamed. When dry, they were allowed to cool; each was then rubbed outside with a cloth, and the inside with dry brush, and then tapped on the table, when some brown dust came out; they were then capped, and each was rubbed outside with an oil rag. Mr. Farrow had a loading machine, consisting of a funnel to contain the powder, then a drum, moving on a central axis, which can be set to cut off any charge. He commenced by screwing this on to his chest of drawers; he then tilted a pound canister of powder into the funnel, and left it there upside down, so that the powder always retained the same level. He took a tube about two feet six or three feet long, put a shell at the bottom, passed a

charge of powder from the loading machine down the tube into the shell, and so on until all were charged. He then put in the wads, and with those particular cartridges which I saw him load he won either the Albert or the Wimbledon Cups<sup>6</sup> (I forget which it was).

What was good enough for him with a Match rifle, I thought good enough for me with an M.B.L.; so to save the trouble of weighing each charge, I procured one of the Wilkinson loading machines from Messrs. Rigby, of St. James-street, for about fifteen shillings, and for some time used to load my own ammunition. I have often tested the charges, and never found a difference of more than a grain; but for the last three years I have used the excellent cartridges supplied by Westley Richards<sup>7</sup>, and Co. I have fired several thousand rounds, and cannot remember either a burst shell or a misfire.

*Shells.* - As in some instances the chamber of the rifle is not quite in a line with the barrel, owing to an error in the breech screw, or if the chamber is not accurately bored, a shell once fired will not go home in the chamber without being swaged, it may be necessary to re-swage every shell; but with most M.B.L. rifles it is not necessary to do so. Mr. Hyde always filed a nick in the rim of each new shell before firing it, and took care always to keep the nick to the top. It will be found that an old shell requires about two hundredths lower elevation than a new one. Both Mr. Farrow and Mr. Hyde preferred old shells to new, I have in my possession a Remington shell given me by a Dutch friend, which has been fired about 700 times with a charge of about 40 grains, for short range shoulder practice, and it appears as good as ever save that the cap holes are worn rather large.

*Cleaning.* - After firing the seven or ten rounds at any distance, it is better to take out the caps with the extractor and drop the shells then and there into a tin of water, and rub out the insides with a small bottle brush cut down to the right size, and when the day's work is done pour off the dirty water and put in some clean, shaking them round and round, this is all the washing they require; they should be put into a holland bag<sup>8</sup>; on reaching home they should be rubbed outside with a cloth and dried in the oven or otherwise, or they may be boiled and baked in

the manner described. Dirty shells should be put as soon as possible into water and left there until they can be cleaned - if left they become corroded. If this should happen, they should be put into diluted sulphuric acid, a dessert spoonful to a pint of water, until all bubbling ceases, then boiled in water with a little soda, and then rinsed in clean water and dried. The shells having been thus cleaned should be put away until the whole stock has been used.

Before capping them, it is desirable to put each shell into the chamber of the rifle; any that are too long must be shortened with the rimer, and all burst or damaged shells should be hammered flat.

*Cap extractor.* - For shells which have one central hole, perhaps a hammer and punch is the best implement; but for all others some re-capping tool is necessary, and I am not aware of anyone that is entirely satisfactory. The American pattern has two limbs, but it is apt to injure the shell. This, I think, can be obtained from Messrs. Rigby. The old Belgian pattern - of which, I believe I brought home the first six or seven years ago - has three limbs, but it is not so good as the Fusnot pattern. The two latter can be obtained from Messrs. Westley Richards & Co. and Mr. Gibbs<sup>9</sup>. The weak point about these two patterns is the needles, which are apt to break. I have all three of these machines, but much prefer the Fusnot pattern. They are in use all over the Continent. If a cap extractor comes to grief, the caps may be extracted by simple hydraulic apparatus. Fill the shell half full of water, and put in a small ruler or other wooden cylinder fitting pretty tight; rest the shell on a piece of metal with a hole in it, so as to allow the cap to come away; a tap with a light mallet will drive out the cap. *It is of the utmost importance that in re-capping care should be taken to see that the cap is home and counter-sunk*, and it should be remembered that one of our best shots injured his hand by trying to push home a proud cap while in the chamber of his rifle. If there is a doubt about any shell hammer it flat.

*Powder.* - Eighty grains of Curtis and Harvey's No. 6 is the proper charge for use with the waxed felt wads; if more is used fouling accumulates, but with a grease wad eighty-five or even ninety grains may be used with advantage. For shoulder shooting sixty grains is enough, a lump of cotton wool may be

put in over the powder to fill up. A dab of sight black on the outside of the shell will prevent mistakes. It is better to purchase the stock of powder in bulk at the beginning of the season. The contents of all the canisters should be shaken into one heap, and any surplus of last year's powder may be mixed with it, so as to have all alike instead of buying pound at a time.

*Wads.* - The Deeley Metford cartridges are prepared with waxed felt wads; I recommend three, not two. Poor Osborne<sup>10</sup> swears by grease wads, and he won the Duke of Cambridge's<sup>11</sup> prize a year or two back, and the M.B.L. aggregate this year at Wimbledon with a Webley rifle<sup>12</sup>; but when I tried them with a Metford barrel I came to grief, and so did others.

*Loading tube.* - If the powder is poured into the shell down a tube, it packs itself tight; the longer the tube the smaller the space occupied by the powder, from two feet six to three feet is sufficient. I believe Messrs. Rigby supply tubes for the purpose, but any intelligent workman can easily make one. It is better to have it telescopic, in two pieces, for convenience of carriage; the joint is easily kept tight with an inch of rubber tubing, a small funnel should be soldered at the top, and the lower end should have a slit sawn in it so as to fit tightly inside or outside the mouth of the shell. With a glass funnel, two feet of glass tubing, and a few inches of rubber tubing, a good loading tube can be made up.

*Loading wads.* - Messrs. Westley Richards supply a machine with a lever, for pushing home the wads and seating the bullets for about £2, but this is very cumbrous for taking about. I find that the ordinary collar and pusher supplied by them are quite sufficient for the purpose intended. In using these it is necessary to be very careful to push in the wads straight, and one at a time, and in loading all the operations should be conducted with uniformity.

As the time is short, I have written this letter hastily, without reference to any notes, and must apologise for any omission. - I remain, Sir, your obedient servant,

22 Dec., 1884

C. Fredk. Lowe<sup>13</sup>.

(*Volunteer Service Gazette, 27 December 1884*)

## Loading Ammunition

The following additional letter, while not a direct response to the original query, provides some further observation on powder variation in cartridges and supplements the information imparted by M. Lowe.

### **Martini-Henry Ammunition**

TO THE EDITOR OF THE  
VOLUNTEER SERVICE GAZETTE

SIR, - Below are the weights of the charges of powder taken from two packets of Martini ammunition, served out at the last Wimbledon Meeting; they were marked 1884. I took every precaution to see that every grain of powder went into the balance pan, and that the weights were correctly taken:

<i>Packet.</i>	<i>Packet.</i>
1. 83.0 grains.	1. 83.9 grains
2. 85.4	2. 84.0
3. 87.0	3. 85.1
4. 84.9	4. 85.1
5. 84.2	5. 86.0
6. 84.5	6. 83.9
7. 82.3	7. 84.9

It will be noticed that there is a difference of nearly five grains between the highest and lowest in the first packet; quite enough I suppose to render a "possible"<sup>14</sup> impossible at long range.

If much of the Government ammunition is similarly loaded, I am afraid we shall not gain much by going in for the very exact vernier<sup>15</sup> measurement. I fill most of my D.E. Metford cartridge cases, as it is economical, though troublesome. I must thank Mr. Lowe for some valuable hints gathered from his letter; I quite agree with him about the recapper not being entirely satisfactory. I have a "Fusnot," but the points of the steel pins are for ever breaking.

If I have not time to at once thoroughly clean my shells when I return home from the range, I find it a good plan to put them into a bowl with a strong hot solution of washing soda, whirl them round and round for a minute or so, then thoroughly rinse them with two or three changes of clean water, they will keep a long time after that without corroding. The soda effectually stops the formation of sulphuric

acid from the products of the combustion of the powder - which it is so corrodes the shells if left untouched for long. Messrs. Westley and Richards supply a brush on purpose for cleaning out the shells.

I find it best to swage all my shells after use; I find it the only way to get all the caps properly into position. I then try every shell in the rifle before refilling, and always have to reject a few for fitting badly.

I use the ordinary rammer and trunk for putting the waxed wads into position; but it is quite hard work, they fit so tight. When through the trunk, they go with a rush into the case, and I am afraid this must crush the powder somewhat.

I have always weighed my powder to about a quarter of a grain, as directed by Major Young in "The Three Rifles." It is a tedious job, and I am very glad to know that the charge can be got exact enough by measure. I should be glad of information concerning breathing tubes. I have used a home-made one consisting of a piece of glass tubing passed through a cork, which fits the chamber of the rifle, and a piece of rubber tubing to blow through; the piece of glass tube is put through the cork far enough for the end of it to be just beyond where the bullet sits, the moisture from the breath condenses in the glass tube, and two or three drops are always blown into the barrel, and are carried by the bullet up the barrel, moistening the fouling all the way, and leaving the fouling at the muzzle always quite moist and soft. I have been told that the drops of moisture are quite wrong; but the plan seems to answer very well in practice; there never seems to be any accumulation of fouling in my rifle, and it always keeps its elevation perfectly, no matter how hot and dry the weather.

With the Martini, I find one "blow off"<sup>16</sup> sufficient to bring it to its normal elevation; but with the Deeley Metford I am always obliged to fire two, it then keeps the same elevation. With only one blow off, my first shot at the target is sure to be a high one. - I am, Sir, yours faithfully,

W.H. Hammond.

Milton Chapel, near Canterbury, Dec, 30, 1884.

(*Volunteer Service Gazette*, 3 January 1885)

Does anyone have further contemporary examples of loading ammunition advice for 19th Century riflemen using the black powder cartridge rifle they can share?

### Notes

1. A challenge published in a Scottish newspaper in 1861 that Scotland would shoot against England was taken up. The match was limited to Volunteers (akin to the US National Guard), in teams of eight, and was fired at 800, 900 and 1000 yards. To perpetuate the match Lord Elcho presented the Elcho Shield for annual competition. The first match took place in 1862. It was not until 1865 that an Irish Eight entered the match.
2. Frank Hyde (born c.1832) was a member of the American rifle team at Creedmoor, USA, in the match against Great Britain in 1877. At this time, he was resident of Newtown, Long Island, where he was President of the local rifle club. He was also connected in business with the Sharps Rifle Company, and as their 'professional target shooter' spent the summer shooting seasons of 1878, 1879 and 1880 in Britain representing their interests.
3. Military Breech Loader (MBL) was a class of rifle for target shooting defined by the National Rifle Association (UK). Specification included weight limit, overall length (min. and max.), trigger pull, sights, stock to allow for ramrod and sling use. MBL encouraged advancement in the design of military rifles.
4. "The Three Rifles: i. The Snider, ii. The Military Smallbore, iii. The Match Rifle." by Stamford Sheridan Young, Major 39th Middlesex Rifle Volunteers. (First published 1877 by William Clowes and Sons. Reprinted by W.S. Curtis (Publishers) Limited, 1997, ISBN 0948216158). Young, a banker by occupation, was born in Penang, East Indies, in 1843, and died at East Preston, Sussex, 1901. He was a member of the British team of Rifle Volunteers that competed against the US National Guard at Wimbledon, England, in 1883.
5. W. Milton Farrow was born in Belfast, in the state of Maine, in 1848, and began shooting at long range in 1877. He was on the American team that went to Canada in 1878, travelled to England and France in 1879 where he won rifle competitions, and was a member of the American team competing against Ireland at Dollymount in 1880. His book, "How I Became A Crack Shot," was published in 1882 (and reprinted by Wolfe Publishing Co., AZ. in 1980).
6. Farrow actually won both the Albert and the Wimbledon Cup. These competitions were held during the NRA(UK) Annual Rifle Meeting, on Wimbledon Common (1860-1889). Firing with a Ballard rifle he won the Albert competition at Wimbledon in 1879 (2nd Stage fired at 1,000 yards). In 1880 he won the "Any Rifle Wimbledon Cup," again fired at 1000 yards, winning on the tie shots against Mr. Evans and Major Young.
7. British gun and rifle maker Westley Richards, of Birmingham, were one of the leading companies in the development of single shot breechloading rifles. Their capping breech loader 'monkey tail' design was adopted by the British military. Later developments included the Deeley-Edge-Metford which became a popular choice for long range riflemen; the Elcho Shield match of 1880, six of the English Eight used this rifle.
8. Holland cloth is a plainwoven or dull-finish linen.
9. George Gibbs was a Bristol, UK, gunmaker who manufactured both the Gibbs-Metford muzzle loading rifle and the Gibbs-Farquharson-Metford breech loader. Both rifles had notable success in long range competition.
10. Frank (Francis) Osborne died of cancer aged 36 at Birmingham on 22 June 1885, after a protracted illness. A popular man, during his illness a fund had been established to benefit his wife, Amelia, and their children. He was a foreman gunmaker, likely at P. Webley and Son as three of the Webley family contributed to the fund. Osborne was a private in the 1st Volunteer Battalion Royal Warwickshire Volunteers. In 1879 Osborne and Lowe (*author of the letter published by the VSG on 27 December 1884*) had arranged the first of an annual long range rifle match for military breech loaders (MBL) between the Midland Rifle Club (with Osborne as Captain) and South London Rifle Club (with Lowe as Captain). In subsequent years the Metropolis was represented by the North London Rifle Club.
11. The Duke of Cambridge's Prize was for military breech loaders, 15 shots at 1000 yards.
12. The Webley rifle is likely to be the Webley-Wyley, introduced by Messrs P. Webley & Son, Birmingham, in 1879. The Wyley action was compact and light, enabling a heavier barrel while still remaining within competition weight limits. There is no under or side lever, the block, as in the Snider, forming its own handle.
13. Charles Frederick Lowe (1838-1913) was a regular correspondent regarding rifle matters in the latter part of the 19th Century. A solicitor by occupation, he was also a member of the 13th Middlesex (Queen's Westminster) Rifle Volunteers. In 1883 he was a member of the Great Britain team of Rifle Volunteers that competed against a US National Guard Team at Wimbledon (a follow up to a similar match at Creedmoor, USA, in 1882).
14. Possible is an abbreviation for highest possible score.
15. The vernier was a calibrated device used to finely set the elevation slide on military rifle sights.
16. "Blow off" was a contemporary term for what today are often referred to as a 'fouling shots' or 'barrel warmer'.



# American Rifle Team, Creedmoor 1882



D.B. Minshall collection  
(actual size 6.5 x 4.25 inch)

A competition with military breech loading rifles between the Rifle Volunteers of Great Britain and the National Guard of America was agreed to for 1882.

On 14 and 15 September the teams of twelve met at Creedmoor, USA. The match was fired at 200, 500 and 600 yards on the first day, and at 800, 900 and 1000 yards on the second. Positions were standing at 200 yards, prone or sitting at 500 and 600 yards, and any at 800, 900 and 1000 yards. The rifles used were of military pattern, although not necessarily one authorised for service. Each man fired seven shots at each distance, and no cleaning between shots was permitted. The British team won scoring 1,975, against the American team score of 1,805 out of a possible 2,530.

In 1883 there was a return match at Wimbledon, England, on 20 and 21 July. The British Volunteer team was again victorious scoring 1,951, against the American team score of 1,906.

The cabinet photograph on the previous page is of the American Rifle Team of 1882.

Numbering the men by row, and ordered left to right, they are:

1.1	James McNevin	(Team)
1.2	Col. John Bodine	(Team Captain)
1.3	Sergt. Thomas J. Dolan	(Team)
2.1	Col. G.E.P. Howard	(Team)
2.2	M.D. Hinds	(Team)
2.3	Sergt. N.D. Ward	-
2.4	Samuel E. Irlam	-
3.1	Charles W. Hinman	(Team)
3.2	D.R. Atkinson	(Team)
3.3	John Smith	(Team)
3.4	D.H. Ogden	(Team)
4.1	<i>unidentified</i>	
4.2	Sergt. A.B. Van Heusen	-
4.3	Major E.O. Shakspeare	(Team)
4.4	Sergt. J.M. Pollard	(Team)
5.1	Sergt. J.L. Paulding	(Team)
5.2	Capt. T.W. Griffith	-

Not pictured is:

Frederick Alder (Team)

Those who were selected for the final team of 12 are identified by (Team).



The Daily Graphic: New York, Saturday, September 16, 1882

## American Rifle Team, 1882

(1.1) **James McNevin (b.1848)** was born in Brooklyn, where he resides. He is 34 years old, and entered the National Guard as a private in the Fifty-second Regiment. When the organisation was disbanded he enlisted in the Fifty-sixth Regiment, and when that command was also mustered out he was transferred to the Thirteenth Regiment, in which he is now Ordnance Sergeant. He began rifle-shooting in 1877, and was a member of the regimental team last year.

(1.2) **Col. John Bodine (b. 1825)** was born in Ulster County, near the village of Highlands, in 1825. He has been connected with the National Guard, in various capacities, for about 35 years. At one time he was Colonel of the Ninety-second Regiment, Eighth Brigade, long since disbanded, and he is now a supernumerary officer, having been rendered so by the disbandment of the Fifth Division, Major-Gen. James W. Husted commanding. Col. Bodine was a member of the American team in its contests with the Irish riflemen in 1874 and 1875, and of the American team which achieved a victory in the Centennial rifle-match for the "Palma" at Creedmoor in 1876. He was also Captain of the American team which won the international match in a contest with an Irish team at Dollymount, Ireland, in 1880.

(1.3) **Sergt. Thomas J. Dolan (b. 1852)** is 30 years old, and was born in New York. He joined Company D, Twelfth Regiment, in 1873. The company, under command of Capt. H.B. Smith, was famous as a sharpshooters' organisation. It became reduced in numbers, however, and finally Capt. Smith resigned and the company was consolidated with others. Dolan entered Company F, and was ultimately elected First Sergeant, a position he still holds. He began rifle-shooting in 1874, and has been a member of the regimental team every year since that time. He has also been a member of the State team every year except one, and has been a member of the International team both seasons. He holds the championship marksman's badges of his state for the years 1880 and 1881. In the short-range match at Creedmoor in July 1882 he made three consecutive scores of 33 out of a possible 35, a feat never before accomplished.

(2.1) **George E.P. Howard (1848-1929)** was born in New York, in 1848, and is one of the United States Assistant District Attorneys for the Southern District of New York. He joined the National Guard in 1875, as Paymaster, 1st Brigade, N.J., from which he was promoted to be Brigade Judge Advocate. He was later appointed Brigade Inspector. He commenced to shoot about 5 years ago, mainly with the military rifle, at military distances. He has been the champion military shot of New Jersey for the past two years.

(2.2) **M.D. Hinds (b. 1837)** is 45 years old, a native of Broome County, and belongs the Twentieth Separate Company of Infantry, Binghamton. He has been engaged in rifle practice in matches since 1876. His best recorded score was made last July, when he scored 92 out of a possible 105 points.

(2.3) **Sergt. N.D. Ward (b. 1836)** was born in White Plains, Westchester County. He joined Company A, Ninth Regiment, in March, 1866, and was promoted Quartermaster-Sergeant by the late Col. James Fisk, Jr. He began shooting at Creedmoor in 1875, and has steadily but slowly improved. He has been on the regimental team during the past four year, and is a member of the Amateur Rifle Club.

(2.4) **Samual E. Irlam (b. 1845)** is a member of the Thirty-first Separate Company of Infantry, better known as the Reminton Rifle Corps, of Ilion, N.Y. He is 37 years old. He has no record as a marksman previous to this year.

(3.1) **Charles W. Hinman (b. 1849)** is 33 years old and a native of Boston, where he resides. He is a member of Company B, First Regiment, Massachusetts Volunteer Militia, and has been shooting at Creedmoor during the past two annual prize meetings.

(3.2) **D.R. Atkinson (b. 1850)** is a native of Pennsylvania, and is 32 years old. He lives in Honesdale, and belongs to Company E, Thirteenth Regiment, N.G.S.P. He has been a member of the team representing his state since it was first organised. He took the second place in 1879 and last year, and led his team in 1880.

(3.3) **John Smith (b. 1847)** lives in Hoboken, where he keeps a hotel. He was born in England (*actually in the county of Denbighshire, Wales*. Editor) in 1847, and served his time as a member of the British Volunteers. While thus connected he won several prizes at Wimbledon, including 21 different pieces of plate and several cups. He also won two Queen's badges, the St. George medal. And the bronze medallion given by the British National Rifle Association. He is a member of Company C, Ninth Regiment, N.G.S.N.J.

(3.4) **D.H. Ogden (b. 1841)** is a native of Binghampton and is 41 years old. He joined the Forty-fourth Battalion N.G.S.N.Y., in 1876, and in the following year was transferred to the Twentieth Separate Company, of which he is now a member. He commenced military rifle practice at Creedmoor in 1877, and was a member of the State team during the ensuing three years. He was also been in the company team during the same period.

#### (4.1) *Unidentified*

(4.2) **Sergt. A.B. Van Heusen (b. 1840)** is a native of Greenbush, Rensselaer County, New York, and is 42 years old. He joined the Tenth Regiment, Albany, in 1861, and when the war broke out he went with the regiment, which was known as the One Hundred and Seventy-seventh Regiment, N.Y.S.V., for a term of service in the field, continuing for nine months. The regiment was engaged in the battle of Port Hudson. In 1867 Sergt. Van Heusen removed to New York. He became a member of Company B, Twelfth Regiment, in 1875, and was subsequently elected Sergeant of the company. He began rifle-shooting in 1875, and has been a member of the regimental team in all of its matches at Creedmoor since that time. He has also been a member of the inter-State team four times and a member of the American team in the match for the Hilton trophy three times. He has won several individual prizes.

(4.3) **Major E.O. Shakspeare (b.1842)** is a member of Gen. Hartranft's staff, First Division, N.G.S.P., and lives in Philadelphia. He is 40 years old, and is a Director of the Pennsylvania State Rifle Association. He has been a member of the State team during the

past two years. This is his first experience in shooting at the long ranges with a military rifle.

(4.4) **J.M. Pollard** is a member of the Washington Light Infantry.

(5.1) **Sergt. J.L. Paulding (b. 1856)** is a native of Poughkeepsie and is 26 years old. He removed to New York in 1868. He joined Company B, Twelfth Regiment, in 1878, and was promoted Sergeant in 1880. He commenced using military rifles in target practice during the year 1879. He won the first prize in the Judd match at Creedmoor last year and in 18880.

(5.2) **Capt. T.W. Griffith (b. 1852)** is a native of Brooklyn, and is 30 years old. He removed to Hoboken, and joined Company F, Ninth Regiment, New-Jersey National Guard, in 1875, and was subsequently elected Captain. He commenced target-shooting in 1875, and has been a member of the team representing that State at Creedmoor since its first organisation. He has held the championship marksman's badge of the State during the past four years.

The twelfth man in the team was:

#### **Federick Alder (b. 1847)**

was born in London. He has passed the greatest part of his life in this country. He became a member of Company C, Seventh Regiment, three years ago. His skill as a military marksman dates from that period. He had previously won a reputation as a "gallery rifle-shot." During the past two years he has been a member of the team representing the regiment in the Autumnal prize meeting at Creedmoor.



#### *Biographic sources include*

- New York Times, 19 August 1882
- Spirit of the Times, 26 August 1882
- Spirit of the Times, 26 May 1883



# Firearms

Charles Hibbs

## *Firearms – Improvements in the Rifle – Breech-Loading – Selection of the Service Weapon – The Snider and Martini-Henry*

*This article was found in 'Great Industries of Great Britain' published by Cassell, Petter, Galpin & Co. (London, Paris & New York) c1877-1880. As part of coverage of the Iron and Steel Industry, the volume devotes a series of articles to firearms. They provide the reader with an interesting history of firearms and eventually discuss the then 'state of the art' facilities at the Royal Smallarms Factory, Enfield. The series will be reproduced over the next few issues of the Journal.*

Many successive stages of improvement were necessary before the rifle could be adopted as the ordinary service arm. The greatest objection was the difficulty of loading it. In order that the grooves should bite, and give the necessary spinning motion to the bullet, it was essential that the latter should fit very tight in the barrel. At first – in the old American match-rifles, for instance – the bullet was cast a trifle too large, and was driven down the bore by an iron rammer and a mallet; another and an easier method, if not so effectual, was to wrap round the bullet a piece of soft leather. The old rifle used by the sharpshooters of the British army had two deep and wide grooves, and the bullet was cast with a projecting belt, which roughly fitted them. Then the idea was hit upon of spreading out the bullet after it had passed down the barrel, allowing the piece to be loaded more easily, and overcoming the difficulty, formerly alluded to, of *windage*. The first contrivance used for this purpose was a spike fixed in the breech, at the bottom of the bore, long enough to pierce the cartridge beyond the powder. The bullet was driven upon this with a blow or two, and was thereby made to fill up the grooves. None of these methods was satisfactory, and those in which hammering was required were specially objectionable, not only because of the trouble, but because the missile was beaten into irregular shape, which interfered with the accuracy of its flight.

The late Mr. Greener was the first to suggest the important improvement which was afterwards carried into effect by Captain Minié, of the French service. The principle of the Miné rifle was two-fold: the use of an

elongated pellet instead of a spherical ball, and the expansion of that pellet by the force of the explosion. A Minié bullet was about two diameters long; the front part bluntly pointed, like a sugar-loaf, and the base hollowed or cupped out in a tapering form to about half the length. When first introduced, a wooden plug was inserted in this orifice, and the explosion of the powder drove the plug like a wedge into the body of the bullet, causing it to expand and fit the grooves. After a while, however, the plug was found to be unnecessary, as the bullet would expand well enough without it. Many important advantages resulted from this form of projectile. Its elongated form gave the necessary weight with a much diminished diameter, thus permitting the use of a gun of smaller calibre, and reducing to a minimum the extra weight and substance always necessary for a rifled barrel over a smooth bore. At the same time, it traversed the air with less resistance in proportion to its weight: this object being further assisted by its pointed end. The hollow at the base served the twofold purpose of expansion and throwing the centre of gravity forward by lightening the weight behind, so that the bullet always pointed ahead. The more complete expansion, and consequent perfect bite of the grooves, insured the rapid rotation on a horizontal axis, which enabled the missile to fly with deadly and unswerving accuracy to its mark. Now for the first time became possible that wonderful execution at long ranges which we yearly admire in our national contests at Wimbledon, and which has caused a complete revolution in military tactics all over the world.

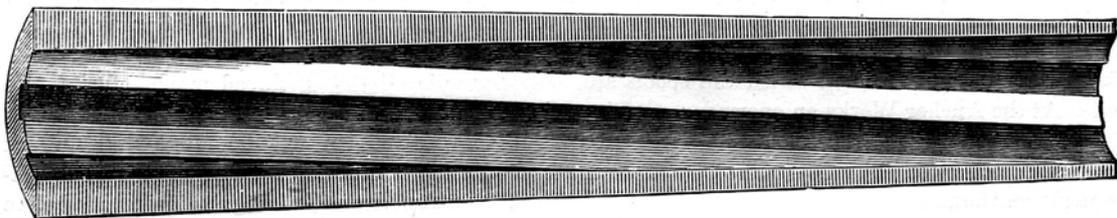
---

*Sir Joseph Whitworth conducted an elaborate and costly series of experiments, which resulted in the production of the well-known Whitworth rifle, by far the most accurate weapon that had been yet made.*

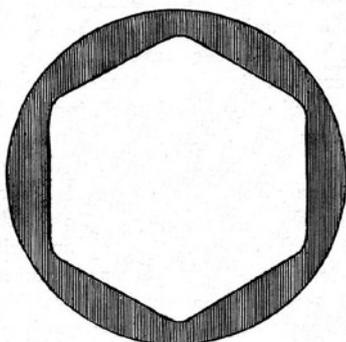
---

We know the advantages we get out of the modern rifle, but we are not always so sure how we get them. We get a better direction given to the bullet through its long surface sliding down the barrel; we utilise all the force of our powder through the perfect fit of the bullet in its tube; and we have overcome, perhaps as far as is practicable, the atmospheric resistance which retarded or deflected the bullet in its flight. These things are clear; but it is not so clear how we overcome the force of gravitation. The rifle not only carries a longer distance and with more speed than an ordinary gun, but it does so with a lower trajectory – i.e., the flight of the projectile more nearly approaches a straight line. No doubt the force of gravitation is overcome to some extent by centrifugal force: the whirling motion of the bullet sustains it in the air. Mechanical science will furnish many examples of this: the gyroscope hangs, while it is spinning, in seeming defiance of gravity; and the fly-wheel of a steam-engine will lift itself out of its bearings if its speed be sufficiently increased.

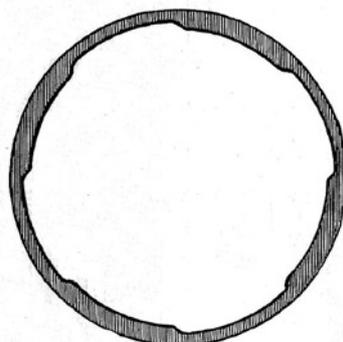
When this much had been accomplished, it became a mere matter of experiment how to get the most perfect gun. The number, twist, and depth of the grooves; the diameter of the bore, and the length of the bullet; the quantity of powder, and its degree of fineness: these alone remained to be considered. At the instance of our Government, Sir Joseph Whitworth conducted an elaborate and costly series of experiments, which resulted in the production of the well-known Whitworth rifle, by far the most accurate weapon that had been yet made. The Queen's Prize was shot for with this gun for one or two years after its introduction, and some few were ordered by the War Department for trial use in the service, but its costliness and the nicety required in loading it proved effectual barriers to its adoption. Mr. Lancaster also gave much time and attention to the subject, and the gun produced by him, and called after his name, maintained a considerable reputation for some years. Many other experimenters were in the field; but the three representative systems – the Minié, the Whitworth, and the Lancaster – alone call for description.



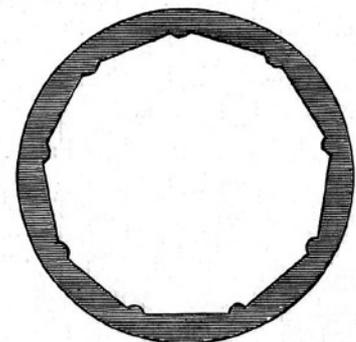
*Longitudinal Section Of Rifled Barrel*



*The Whitworth Barrel:  
.45-in. Bore*



*The Enfield Barrel:  
.58-in. Bore*



*The Henry Barrel:  
.45-in. Bore*

---

*Lancaster's was a bold and original conception. He went back to the principle of a smooth bore, but ground the bore to a slightly oval shape, giving it a turn in the barrel that became sharper as it approached the muzzle.*

---

The Minié, or Enfield rifle as it was called after its adaptation to our service, had four wide and very shallow grooves, with all corners smoothly rounded off, and having a pitch or twist of only half a turn in the whole length. The bullet was made of very soft lead, so that it might readily mould itself to the interior surface of the barrel. Now, the fault of the system was this – that the twist was scarcely sufficient to give the ball a very rapid spin. If the twist had been increased, the cuts must have been made deeper, to get a tighter grasp of the ball; and then there would be a danger that the soft lead would strip – that is, leave its projections sticking in the grooves, and pass down the barrel as down a smooth bore. As a matter of fact, the bullets did sometimes strip in the Enfield barrel when it became hot from firing, and the gun was fouled and rendered useless. If a harder kind of bullet were used, then the chances were that it would not expand sufficiently to fill up the grooves; or, if it did, the enormous strain would necessitate the use of a barrel of much greater strength and weight. Whitworth set himself to overcome these defects, and succeeded to a very great extent. He discarded the use of grooves altogether, and made instead a barrel with a hexagonal bore, which he ground out to a spiral of one turn in twenty inches. He used a hard bullet, and planed it to fit the bore exactly. This gun made splendid practice, and was, no doubt, the very perfection of a rifle; but besides the objections we have named, its inventor had not been able to overcome the difficulty of weight. Mr. Lancaster's, again, was a bold and original conception. He went back at once to the principle of a smooth bore, but ground out that bore to a slightly oval shape, giving it a turn in the barrel that became sharper as it approached the muzzle. The twist began with one turn in thirty-six inches, and ended with one in twenty inches. Thus he reduced

the strain and difficulty of expansion to a minimum, and effectually prevented all chance of fouling. This principle had a good trial in the service, as applied both to ordnance and small arms, but although it made some wonderful practice at long range in the Crimea – where Lancaster's "express trains," as the shells were called, were known by the peculiar sound they made in the air – it was found not to be depended on for the extreme accuracy of aim which had now become a *sine qua non*. This brief explanation of three widely differing systems will serve to make clearer what we have to say further on, when treating of the selection of our present service rifle. We must now take up, in chronological order, the subject of another, and perhaps greater, revolution in firearm manufacture: that of loading at the breech.

The victory of the Prussians over the Austrians in 1866, which was attributed in no small measure to the superiority of the needle-gun, long in use by the Prussian army, forced upon all the Governments of Europe the immediate question of adopting breech-loading arms. France took the lead in discarding all her old weapons in favour of the Chassepot, a change which was effected in her large army with marvellous rapidity; England, as is her wont, proceeded in a more cautious and tentative manner. Experimental trials had been made with arms brought out by different inventors, for gun-makers had long been exercising their ingenuity on this subject, but it was felt that the breech-loader of the future was yet to come. Moreover, it was seen that some strong effort should be made to save the expense of an entire re-armament so soon after the costly changes which had just been effected. Therefore, the War Department first considered the feasibility of converting the Enfield rifle into a serviceable breech-loader, and a committee was appointed to receive inventions, make trials, and report. The following sentence from the report will show the view taken of the whole question:—

“The ultimate armament of the infantry with breech-loading weapons is determined upon. It would be done at a comparatively small cost by conversion; but it is now well known that the calibre, twist, and form of rifling of the 'Enfield' are not the most favourable for fine shooting, and it is quite certain that no converted arms can possess the precision which will be easily

attained in a new breech-loader of smaller gauge and quicker twist. Nor will the soldier be able to carry that increased quantity of ammunition which is so desirable without a reduction of calibre.”

---

*It is the metallic cartridge alone which has rendered breech-loading practicable, under the rough conditions of ordinary warfare.*

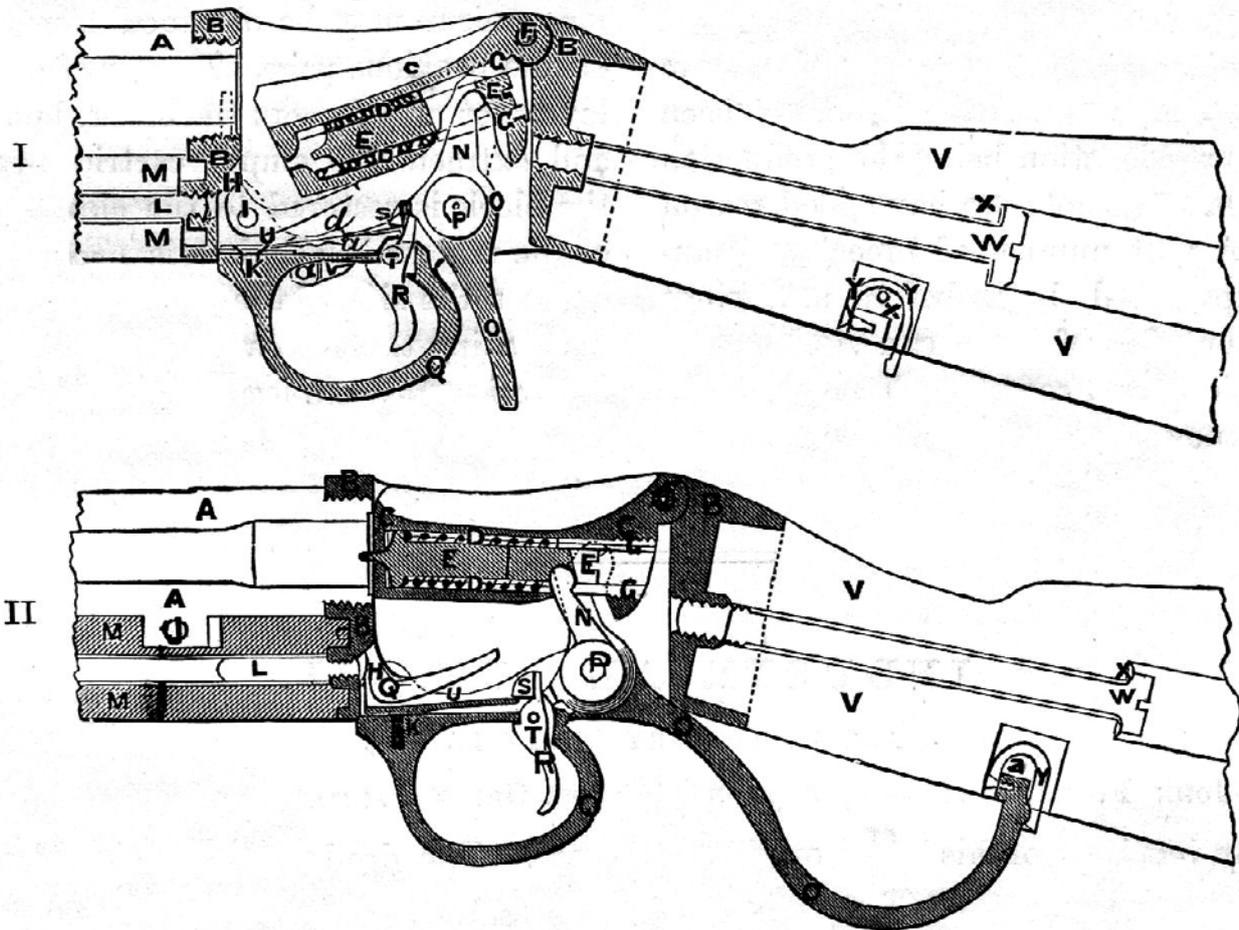
---

The committee recommended that a thousand “Enfields” should be converted into breech-loaders as an experiment, upon the result of which the War Department might be guided in their further action; and that the system invented by Mr. Snider, which out of the many submitted to them they considered to be the best, should be the one adopted. So successful did this experiment prove, that in due time all the rifles in the service were converted into Snider breech-loaders. The system in question was exceedingly simple, and is so well known that a very brief description of it will suffice. The top part of the barrel, at the breech, is cut away for about three inches, and a cylindrical block, hinged at the side, falls into and fills up the cavity. To load and fire the piece, it is simply necessary to lift up the block, push in the cartridge, shut down the block again, and pull the trigger: the cartridge being ignited by the thrust of a small piston, which passes through the body of the block and is struck by the hammer behind. Thus the piece cannot be fired until the block is safely in its right position. But the adoption of this system, or any other that the committee had before them, was consequent upon the adoption of a metallic cartridge, carrying its own means of ignition. This was also recommended by the committee, and has since come into universal use. In fact, it is the metallic cartridge alone which has rendered breech-loading practicable, under the rough conditions of ordinary warfare.

Our Government followed up this experiment by offering, in 1866, prizes for the best military arm, and a new committee was appointed to conduct a preliminary inquiry, and afterwards a series of the most searching

competitive trials. First of all, the committee invited evidence from eminent military authorities as to what were the most important qualifications for a military arm, and from eminent practical mechanics and gun-makers as to how those qualifications could best be secured. From the data thus obtained they were enabled to lay down conditions for the competition. They fixed upon the length, weight, and calibre of barrel, also the weight of powder and bullet; and they decided upon separating the question of breech mechanism from that of barrel. Invitations to compete were issued to gun-makers of all countries, and, in answer, no fewer than sixty-five systems were presented, including many from Continental and American makers. The trials as to breech mechanism were taken first, and each arm was put through the following severe tests:— (1) Twenty-one rounds fired as rapidly as possible from the shoulder, as a test for rapidity. (2) Sand thrown over the breech actions, both open and closed, and the rifle fired without any cleaning except what could be done with the hand. (3) Three rounds fired with cartridges purposely damaged, being filed so as to insure a considerable escape of gas; the damaged part placed in a different position each round. (4) A hundred rounds fired on four consecutive days, and the rifles left in the open air, exposed to rain or to water artificially applied during the intervals, the breech action being left alternately closed and open. (5) Cartridges of extra sensitiveness, made purposely defective so as to jam in the breech, were used, to test whether the working of the breech mechanism would cause an accidental explosion. Most of the arms succumbed in the course of these trials, although the committee allowed inventors to make such alterations or improvements as they desired, wherever practicable, the utmost fairness being shown to all competitors; and eventually the choice lay between two systems: those of Mr. Henry, of Edinburgh, and Mr. Martini, of Switzerland; both systems being considered to fulfil equally well the conditions of safety, strength, and facility of manipulation. The final award was given to Mr. Martini, on the ground of the superior cheapness and simplicity of his weapon.

There now remained the trials for accuracy of shooting, flatness of trajectory, and penetration; and these concerned the barrel alone. The number of barrels in competition was comparatively few, but they



Section Of Breech Of Martini-Henry Rifle: I. Open : II. Closed

(A) Barrel; (B) Body of Breech-action; (C) Block; (D) Mainspring; (E) Striker; (F) Block Axis-pin; (G) Stop Nut; (H) Extractor; (I) Extractor Axis-pin; (J) Pin for Barrel Stud-hole; (K) Trigger and Rest-spring Screw; (L) Cleaning-rod; (M) Fore-part of Stock; (N) Tumbler; (O) Lever; (P) Lever and Tumbler Axis-pin; (Q) Trigger-plate and Guard; (R) Trigger; (S) Tumbler-rest; (T) Trigger Axis-pin; (U) Trigger and Rest-spring; (V) Hind Part of Stock; (W) Stock-bolt; (X) Stock-bolt Washer; (Y) Lever Catch Spring; (Z) Lever Catch-block and Pin; (a) Locking-bolt; (d) Locking Bolt-spring.

---

*There can be no doubt that England possesses a good trusty weapon in the Martini-Henry, but whether it is a perfect weapon, or even the most perfect extant, has often been questioned.*

---

comprised the three representative systems of rifling we have described – viz., the Whitworth, the Lancaster, and the system of which the Enfield might be called the type. There was also a fourth – the system of Mr. Henry, a combination or modification of the principles of the Whitworth and the Enfield, combining, as the result proved, their excellencies without their defects. Of Mr. Henry's system it is now time to give some account. It had nine flat cuts, or sides, but at each angle of the cuts there was left a small beading, the centre of the cuts and the edge of the beading being equi-distant from the axis of the bore. In other words, the bore was polygonal and ribbed. The twist of the rifling was one turn in twenty-two inches. The bullet was nearly three diameters long, and was composed of twelve parts lead and one part tin, giving considerable hardness. The shooting was from fixed rests, and, as far as was practicable, under similar conditions for each weapon, the breech mechanism to which the barrels, with two exceptions, were fixed being identical in construction. One hundred rounds were fired from each barrel at different ranges, at first without cleaning out, and afterwards with cleaning out after every twenty rounds. In every respect the Henry barrel proved the best. It was superior to all others in accuracy at any range except 300 yards, at which distance all the rifles were nearly equal. Its trajectory at 500 yards was 3 feet 6 inches lower than that of the Snider-Enfield; while its liability to deviation from wind was less than one-half. In penetration, it far surpassed the old weapon, as tested through planks, balks of timber, iron plates, rope mantlets, gabions, sand-bags, &c. As for fouling, it shot even better without cleaning than with it, and after long firing its practice seemed actually to improve. With regard to the combination of the Martini breech-action and the Henry barrel, the proofs of soundness and durability were everything that could be wished for. Upwards of 3,000 rounds were fired from one of these arms for the satisfaction of the committee, and not the slightest deterioration was visible. Indeed, they had evidence before them that as many as 30,000 rounds had been fired from a single Henry barrel, which yet showed no indications of wear. In conclusion, the committee reported that the arm combining these two systems was, in their opinion, the best adapted for the requirements of the service, and that it surpassed in nearly every particular the

standard fixed by the War Office advertisement. They also recommended that the arm should be called the Martini-Henry, and that Mr. Martini should receive a reward for his breech mechanism, and Mr. Henry for his barrel and ammunition.

There can be no doubt that England possesses a good trusty weapon in the Martini-Henry, but whether it is a perfect weapon, or even the most perfect extant, has often been questioned. Naturally, those makers who were unsuccessful in the competition have been ready enough to point out its faults and weaknesses, which have thereby been brought into the strongest light, and some of them amended. Some prejudice has, no doubt, been excited from the breech-action being the production of a foreigner. On the whole, we have good reason to be satisfied. A vast number of breech mechanisms have been patented, both before and since the competition, but few of them can vie with the Martini for simplicity and easy handling, while the Henry barrel has never had a rival. It would take far too long to describe even those weapons which are actually in use in the armies of Europe and America, but they may be roughly classed under two heads – viz., those on the bolt system, and those on the block system. The bolt system resembles, in its main feature, that very old-fashioned door fastening: the bolt being pulled back to open the breech, and pushed in and turned down to close it. The Chassepôt and needle-guns are good types of this principle. The block system is well represented by the Snider, which, again, had its prototype to some extent in the Armstrong cannon. The Martini is also a block gun, and some idea of its mechanism may be obtained from the engravings on the previous page. The act of pushing down the lever not only lowers the block, but cocks the piece and extracts the empty cartridge-case; and when the block is restored to the closed position, a pull of the trigger is all that is necessary. The small stud on the side of the closed gun is a contrivance for locking the mechanism, to obviate the danger of an accidental explosion while the gun is being carried about in a loaded state.

# *Military Match Rifles & Their Sights: Kerr and Turner*

*David Minshall*

The muzzle loading small-bore military match rifle saw use in National Rifle Association (UK) and other regional 'any rifle' matches in the early 1860s. Small-bore in this context is a rifle of between .44 and .46 inch bore and the contemporary term was used to distinguish between the large-bore (.577) military rifle of the time.

The military match (or target) rifle was fully stocked, fitted with barrel bands and carried a steel ramrod. Windage adjustable foresights were fitted and back sights of a refined Enfield pattern or finely calibrated versions were used. Some military match rifles will be found with tang sights often an update during the 'working life' of the rifle. By 1864 however match rifles with their half stocks, pistol grips and refined sights were well established. This and the development of the military breech loader saw decline in popularity of the small-bore military muzzle loader.

Today the military match form of rifle will be recognised by those familiar with the Parker-Hale 'Volunteer' and 'Whitworth' rifles. Similar reproductions have been made by others, including most recently Davide Pedersoli & C. Although good shooting can be had from these rifles with their open sights, to get the best from them, and remain competitive against muzzle loading match rifles, aperture sights are often fitted.

Established in 1990, the Long Range Rifles Branch of the Muzzle Loaders Association of Great Britain held its first competitions at Bisley that year. Since then a comprehensive programme has been established for percussion muzzle loading military, military match and full match rifles, usually commencing at 600 yards. The competition for military match rifles (for the *Volunteer Trophy*) is fired with open sights at 600 yards and will usually see a good mix of original and reproduction rifles in use.

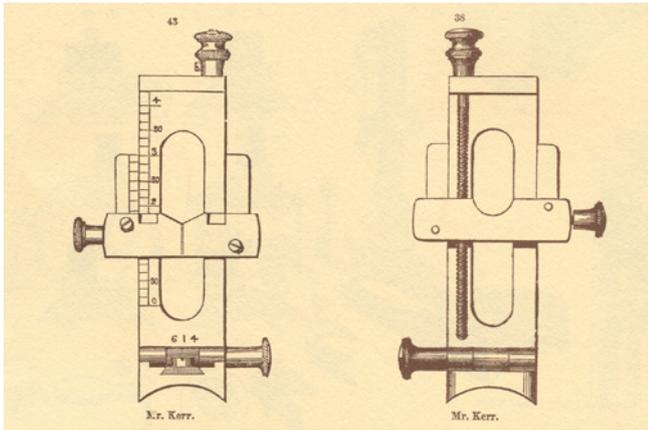


*London Armoury Company Kerr Rifle*

Two interesting rifles were noted in the April 2018 *Volunteer Trophy* match; a London Armoury Company Kerr Rifle and a rifle by Thomas Turner of Birmingham.

### London Armoury Company Kerr Rifle

Lieut.-Col. Viscount Bury, in his 'Manual of Rifling and Rifle Sights' (1864) illustrates (below) a sight simply described as "much used on the 'Kerr' small bore rifle". This is the same pattern sight used on the Kerr rifle pictured and includes a vernier scale and screw adjustment, rather than the more common slide.



*Detail of the London Armoury Company Kerr Rifle sight*



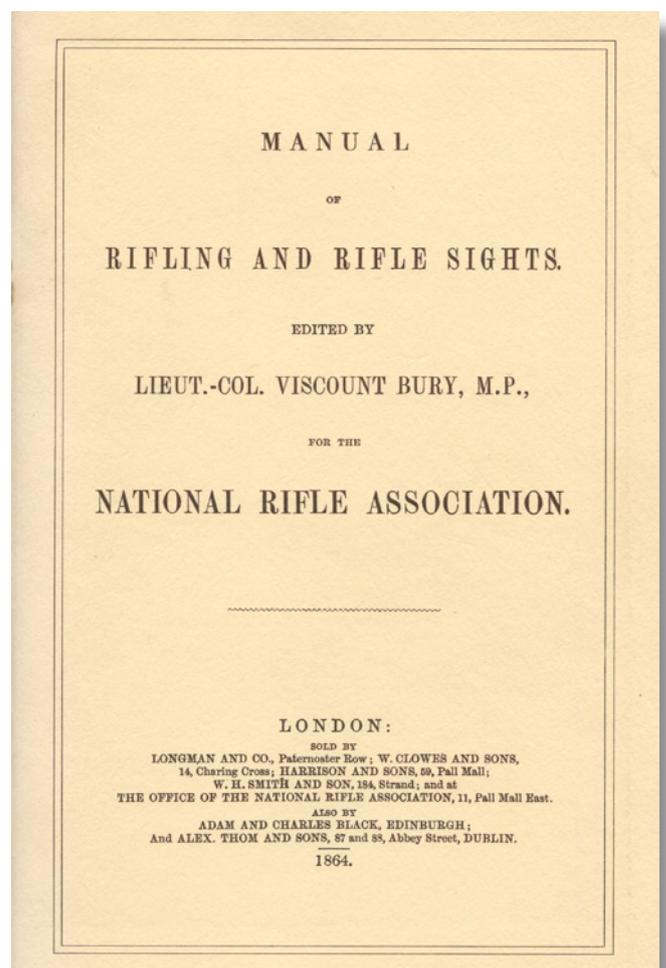
### Thomas Turner, Birmingham

The barrel sight seen in use above carries a simple slide for adjustment and lacks the refinement of that on the Kerr. It will however be noted that on the rifle pictured there is a tang sight folded down (the sight not being permitted under this competition rules). This is an interesting graduated single staff sight which carries a simple eye piece, with a screw to adjust the elevation. This may be an early sight by Turner (perhaps a 'budget' sight?), or installed by another sight maker.

William Blanch was one such supplier of sights and other accessories. On 3 March 1863 Lord Haddo wrote to Thomas Turner noting, "I have lately had Blanch's Back-Sight fitted to my Turner, and since then I have made very good shooting with it. To-day. out of eighteen consecutive shots at 400 yards, seventeen were bull's-eyes."

*'Manual of Rifling and Rifle Sights',  
edited by Lieut.-Col. Viscount Bury, M.P.,  
(Longman and Co., London, 1864).*

*Reprinted by Ray Riling Books Company,  
Philadelphia, USA, 1971.*

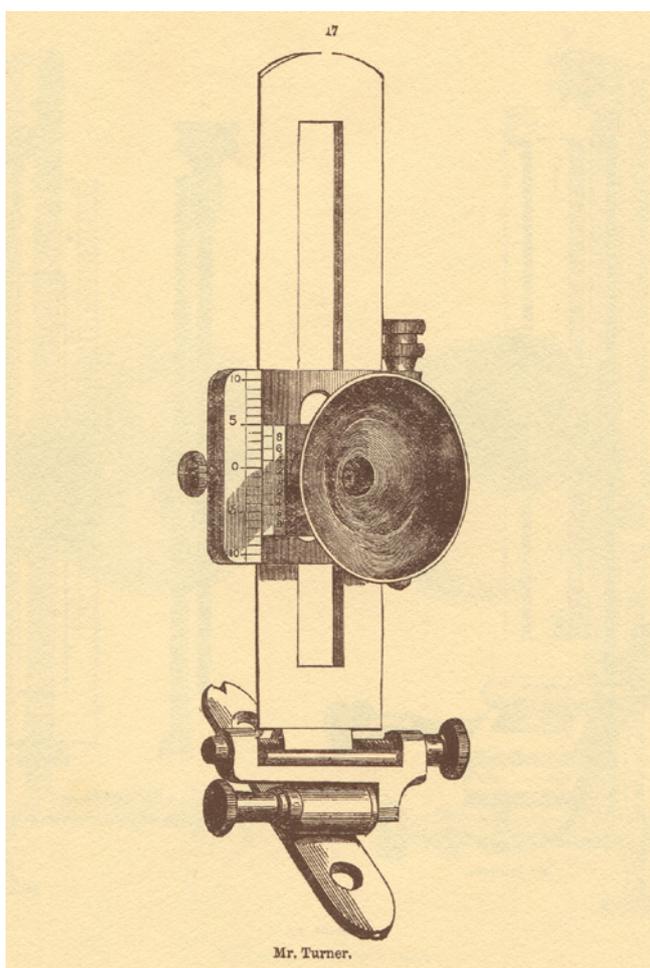




In Bury's 'Manual' referred to previously, a far more sophisticated Turner sight is illustrated (left) and described:

Turner's best aperture sights for head of stock, with lateral and vertical screw movements, with vernier scale.

The slide of this sight is moved up to the mark for the range required, and fixed by the tightening pin on the left; the screw on the right will raise or lower the disc as required, the vernier scale being for the purpose of registering the elevation above or below the one marked on leaf. The screw at foot moved the sight right or left as required.



*Do readers have pictures of other contemporary sights that can be shared?*

# Arming Georgia

Southron Sanders

---

## Part II

### *With The Beginning Of The War, Governor Joe Brown Turned To Domestic Production And Britian To Supply Georgia's Needs For Arms*

---

At 4:30 A.M. in the pre-dawn darkness of April 12, 1861, a Confederate Siege Mortar on the Waterfront Battery in Charleston, S.C. fired a shot. One account has it that the Virginia Agricultural Expert and Southern Fire-eater, "Mad Dog" Ruffin had been invited by the crew of the siege mortar to fire the historic shot. Ruffin joyfully fired the mortar at the appointed moment.

The spherical shell, with its fuse burning brightly, traced a fiery, parabolic arc through the deep blue indigo night sky above Charleston Harbor. The shell reached the zenith of its arc and then began its fall towards Fort Sumter out in the Harbor.

A hundred or so feet, directly above the fort, the fuse burned into the explosive powder charge in the falling shell, and the shell exploded; showering the fort below with red hot iron shrapnel from the projectile. The rest of the Confederate siege gun crews, awaiting the signal of that shot, opened up on the fort, and The War Between The States began.

Georgia had joined the new Confederacy, made up of the Southern States that had Seceded from the Union. The newly elected Presidency of the Confederacy, Jefferson Davis, had to literally create a functioning national government overnight. This included a huge army made up of the enthusiastic volunteers from every state in the new nation. First and foremost, the new army had to be armed and equipped. One of the first official acts of President Jefferson Davis, was to appoint Massachusetts born and West Point educated Caleb Huse as the overseas chief purchasing agent for the Confederate government in England and Europe.

Huse was probably recommended for the position by General Robert E. Lee. Lee had been Superintendent of West Point in the early 1850's when Huse served as the Professor of Chemistry at the U.S. military academy.

Lee had been impressed with Huse's many good qualities and Huse had grown to admire the eminent Virginian.

Then in the late 1850's when the unruly students at the University of Alabama got out of hand and threatened to take over the school, the Alabama Legislature had a simple solution: convert the school to a military academy. Huse was hired in 1860 to become the Commandant of Cadets at the university and set up the military program modeled on that of West Point. Huse also married a Southern lady and when Alabama Seceded from the Union, Huse cast his lot with the new Confederacy.

At the same time, in Georgia, Governor Brown could not take much solace in the fact that supposedly, the central Confederate government would provide arms for Georgia troops serving in the provisional Confederate armies. The Confederate Ordnance Department was still being organized and a shooting war had just started. To make matters worse, most of Georgia's soldiers were still armed with obsolete smoothbore muskets purchased through Gazaway Lamar or seized at the Augusta Arsenal. All of these smoothbore arms would have to be replaced, sooner or later, with more modern rifles.

Governor Brown had the Adjutant General, Henry C. Wayne call for a convention of gunsmiths to meet in Atlanta at the end of August in 1861. The "pattern arm" Georgia wanted was a simplified version of .58 caliber U.S. Model 1841, "Mississippi Rifle."

Of course, the Georgia "Mississippi Rifles" would be made the "old fashioned" way by hand craftsmanship. To aid in the production of these arms, it was decided by the state that four forges and several lathes in the state owned railroad shops in Atlanta would be set aside for gun barrel production. It was estimated that

The brass mounted U.S Model 1841 military rifle had acquired its nickname in the hands of the 1st Mississippi Regiment under the command of Colonel Jefferson Davis in the Mexican War.

During the desperate battle at Buena Vista in Mexico in February of 1847, just when the American battle line was on the verge of breaking, Colonel Davis marched his 1st Mississippi Regiment on to the field, and deployed them in an inverted “V” formation. When the Mexican Lancers charged to break the American line and reap another victory for General Santa Ana, their charge was smashed by the accurate rifle fire of Colonel Davis’ Mississippians.

Colonel Davis and his troops won the hard fought battle. Colonel Davis became an instant national hero and the model of the rifle carried by his men immediately acquired the nickname of the “Mississippi Rifle.”

10 gun barrels and even possibly more per day could be fashioned.

The barrels of these arms would be produced in the state railroad shops and then issued to the individual gunsmiths. Then the state would pay each gunsmith \$16.00 for every gun made with a state issued barrel and delivered to the state armory at Milledgeville.

Of course, the handmade “Georgia Rifles” would be much inferior to machine made arms and even at best, Georgia gunsmiths could only deliver a small trickle of the rifles needed to equip the state’s military forces.

Governor Brown also undertook steps to set up an armory in Milledgeville for the manufacture of “Georgia Rifles,” these were basically another variation of the Mississippi Rifle. In a little over two years and after spending a tremendous amount of money to buy machinery to equip the armory, less than 600 rifles were produced. By 1863, the armory was shut down so the machinery could be used to turn out cotton cards.

---

*It was obvious to everyone that Georgia’s best chance to obtain modern military arms in quantity would be to send agents to England to purchase the celebrated English Enfield Rifles.*

---

Another concurrent arms acquisition program was started by the state. Agents were hired that visited homes in villages and farm houses offering to purchase old arms from individual citizens.

The “Country Rifles,” some dating as far back as to the Revolutionary War, were purchased, then sent to gunsmiths to modify them for military service. This usually involved cutting the long barrels back to 33 or so inches, boring and reaming the barrel out to .58 Caliber and then rifling the barrel so it could fire military issue ammunition. Some were even modified to take a bayonet. Again, this program provided only a small dribble of inferior arms to the state.

### **A Purchasing Mission To England**

It was obvious to everyone that Georgia’s best chance to obtain modern military arms in quantity would be to send agents to England to purchase the celebrated English Enfield Rifles. The British gun trade that had developed over the previous three centuries had grown large enough, by supplying arms for military forces of the British Empire, to turn out large numbers of high quality arms given enough time.

Georgia planters and businessmen had a long history of doing business in England that went back to the earliest days of the Georgia colony. Georgia cotton was more often than not shipped to cotton mills in England. In turn, Georgians often purchased their manufactured goods from England and then imported them into the state through the ports of Savannah and Brunswick.

In the late 1850’s, George A. Trenholm\* had become rich in the cotton trade with England. He was the owner of the Charleston, South Carolina based firm of Fraser, Trenholm & Company. The company also had branches in both New York City and Liverpool, England. The company provided factoring and banking services for their clients, Southern planters. The company also owned and operated five steam ships that hauled passengers and freight.

Before the outbreak of the war, Fraser, Trenholm & Company had been in the process of establishing a regular maritime service between Charleston, Liverpool and New York City hauling freight and passengers.

\*DID MARGRET MITCHELL MODEL HER HERO, RHETT BUTLER, IN GONE WITH THE WIND ON GEORGE A. TRENHOLM?

Margret Mitchell was very familiar with the history of the Old South and The War Between The States. Like the fictional Rhett Butler, George A. Trenholm was a wealthy Charlestonian. In GWTW Rhett Butler cynically avoided service in the Confederate army and made another fortune as a Blockade Runner.

George A. Trenholm purchased more ships and also made another fortune from his ships that ran the Blockade. Following the Fall of Atlanta in 1864, the fictional Rhett Butler joined the Confederate army. Trenholm did not join the army but accepted an appointment from President Jefferson Davis to become the Confederate Secretary of the Treasury.

Recall that after the war, Scarlett, was desperate to raise money to pay the taxes on Tara. She fashioned a green dress out of curtains and went to visit Rhett who was in jail. The purpose of her visit was to borrow money from him to pay the taxes on Tara.

When she visited Rhett, he explained that the Yankees threw him in jail to get him to reveal where the "Lost Confederate Gold" was hidden. Exactly how Rhett Butler, serving as a soldier in the Confederate Army of Tennessee would know where the "Lost Confederate Gold" was hidden was unexplained in the book and movie.

Following the war, George A. Trenholm was imprisoned in Fort Pulaski, near Savannah, because the Yankees believed Trenholm knew where the "Lost Confederate Gold" was hidden! Like Rhett Butler, he was eventually released when the Yankee's search for the "Lost Confederate Gold" ended without finding any gold. After the war, in GWTW, Rhett Butler made another fortune in business-just like Trenholm really did! Trenholm passed away in 1876 long before he inspired Margaret Mitchell's fictional character, "Rhett Butler."

---

*Almost before the gun smoke from the first mortars and cannon that had opened fire on Fort Sumter was blown away, a throng of American buyers, from both the North and South arrived in England to purchase munitions.*

---

After the outbreak of the war, the ships were converted into Blockade Runners, sailing between Charleston and Liverpool. While Blockade Running was hazardous, the profits from even a single voyage could be tremendous. Trenholm's ships fortunately avoided the Yankee picket ships trying to stop Blockade Runners entering Charleston Harbor and again, Trenholm reaped tremendous profits.

Trenholm's financial prospects increased even further after the new Confederacy was founded and Jefferson Davis appointed Fraser, Trenholm & Company as the "Financial Agents" for the Confederacy abroad. When Caleb Huse arrived in Liverpool on his purchasing mission, it was no coincidence that he had his office in the same building as Fraser, Trenholm & Company. Huse carried around with him a cheque book for the Confederate accounts in the Fraser, Trenholm & Company bank. Those accounts were brimming with huge amounts of cash made from Confederate cotton sales in a "seller's market" in England and France.

President Jefferson Davis had also appointed Edward C. Anderson as another purchasing agent abroad and then Governor Brown asked Anderson to also act as a purchasing agent for Georgia and provided him with funds from the sale of state bonds. Davis had instructed Anderson to coordinate his purchasing activities with Huse.

Edward C. Anderson was a distinguished Georgian. A native of Savannah, Anderson had served many years as an officer in the U.S. Navy. After leaving the navy, he had become a successful businessman in Savannah. With the outbreak of the war, he was commissioned as a Major in the Confederate army.

### **A Game Of Intrigue**

Almost before the gun smoke from the first mortars and cannon that had opened fire on Fort Sumter were blown away by the sea breezes that blew in Charleston Harbor, a throng of American buyers, from both the North and South (with most being from the North) arrived in England to purchase munitions to be shipped back to the warring Union and Confederacy.

George Schuyler from New York City was one of the buyers working for the Federal government. Other buyers worked for the individual Northern and

Southern states and were attempting to purchase enough arms and military equipment to outfit their rapidly increasing state military forces. In addition, there were individual businessmen, speculators if you will, that were attempting to purchase military equipment to ship back to America to sell on the military goods market in both the North and South.

This was the situation that Anderson found in England when he arrived to assist Major Huse in his purchasing mission for the Confederacy. In addition, Anderson had been appointed by Governor Joe Brown to purchase Enfields for the state of Georgia.

Shortly, another distinguished Georgian arrived, James D. Bulloch. Like Anderson, Bulloch had served as an officer in the U.S. Navy before leaving it to become a Georgia businessman.

President Davis had sent Bulloch to England to not only keep an eye on the purchasing activities of Caleb Huse but to also to arrange for the building of ships for the Confederate Navy in England. The situation in England that all these men found was somewhat delicate, to say the least, and it rested on the finer points of international law and British law.

England recognised the Confederacy as a "Belligerent" that gave it a certain amount of diplomatic status but at the same time, England had not "Recognised" the Confederacy. The British government had to tread lightly because there was the possibility that IF Britain recognized the Confederacy, the U.S. would declare war on Britain. A Declaration of War by the U.S. would probably be shortly followed by an invasion of British Canada. So Britain had a lot of gain by staying "Neutral" in the conflict.

To complicate matters further, the American Ambassador to the British government was Charles Francis Adams. Adams was the Grandson of President John Adams and the son of President John Quincy Adams. The Bostonian was also a good diplomat and a canny political operative.

Almost as soon as Huse arrived in England, Adams knew about it. Adams hired an army of private detectives to dog and if possible, to sabotage the buying mission of the Confederate agent at every step. Adams also, of course, was always trying to get the Confederate agents expelled from England on one pretense or another.

### **English Armories Are Opened To The Confederacy**

In the early 1850's, in the Crimean War, British military forces had been hampered by the lack of an adequate supply of modern arms. In the mid-1850's, to assure that Britain was never again plagued with an arms shortage, the British Government embarked on a program of bringing the latest American technology for the mass production of arms to Britain. Orders for then modern production machinery were placed with the Ames Company in Chicopee, Massachusetts, Robbins & Lawrence in Windsor, Vermont and the Colt Armory in Hartford, Connecticut. Over the next year or so, the American machinery was built and then delivered to the government armory at Enfield Lock, right outside of London.

In addition, Virginian James Burton, the former Master Armorer at Harpers Ferry, was hired to be the Superintendent of the Enfield works and to "set up" the machinery for full scale production making "fully interchangeable," machine made Enfield Rifles. At the same time, numerous workmen from Springfield Armory, Harpers Ferry Armory and Colt's Armory were hired and put to work at Enfield to not only produce arms but to train British workmen in the techniques of high precision, mass production.

The transition was so well done that by January of 1860, Enfield Armory was turning out 1,000 1st Class P-53 Enfield Rifle-Muskets per week! At the same time, more American machinery and American workmen were engaged to set up the privately owned London Armory Company to also make "fully interchangeable," machine made P-53 Enfields.

Tolerances were held so closely that parts made at the London Armory Company and the government factory at Enfield would fully interchange. Once the London Armory Company was in full production in early 1861, the British ordnance Department signed a two year contract with them calling for the manufacture of 1,500 P-53 Enfields per month to supplement the production of Enfield.

### Sinclair, Hamilton & Company

Major Huse, when he first arrived in Liverpool in the spring of 1861 knew all about the London Armory Company. One of the first things he did after arriving in Liverpool was to catch a train to London. He wanted to meet with the President of the London Armory Company, Archibald Hamilton, and to see about purchasing fully interchangeable Enfields from that company. There were no finer military rifle-muskets in the world than the LACo and Enfield products.

The P-53's made at the government armory at Enfield Lock were not for sale at any price, but were property of the British Crown and needed to equip British military forces scattered all over the globe. However, the situation at the privately owned London Armory Company was different.

Mr. Hamilton listened with interest when Huse told him that the Confederacy would sign a contract with the London Armory Company calling for all the arms they could produce over the next several years. While the proposal sounded very attractive to Hamilton, reality was that the British Government would not let the London Armory Company out of their contract. The best Mr. Hamilton could do was to hire some additional workers and boost the production to 1,600 or maybe even 1,800 Enfields per month-with every arm over 1,500 (required by the British government contract) going to the Confederacy. That was the best deal that Huse could get at the time, and he took it because the LACo Enfields were fully interchangeable and of very high quality, even though it would provide only a very small number of the arms needed by the Confederacy.

However, Mr. Hamilton was far from finished with his proposal. He was also a partner in the military goods firm of Sinclair, Hamilton & Company. Previous to the mechanisation of Enfield Armory and the London Armory Company the years before, the needs of the

British military for small arms had been furnished by 25 or so major contractors who relied on several hundred sub-contractors, literally small "cottage industries," to furnish all the parts required to be assembled into complete arms. For these contractors and sub-contractors the writing was literally on the wall: either merge and build fully mechanized factories to produce fully interchangeable arms in the future to win British military contracts or survive on manufacturing only sporting arms.

These contractors and sub-contractors, for the most part, were located either in or around London or Birmingham. Mr. Hamilton was very well acquainted with all of these contractors and many of the sub-contractors. Archibald Hamilton offered Major Huse a very attractive deal: Sinclair, Hamilton & Company would provide the Confederacy lots of 30,000 1st quality, "non-interchangeable" Enfields from the numerous contractors in the British gun trade on a "cost" plus a 2 1/2% "mark-up" basis.

Mr. Hamilton took Major Huse and Major Anderson on a tour of sorts to many of the London and Birmingham contractors that were facing a loss of business from the British government. Mr. Hamilton enjoyed a sterling reputation with these contractors and in July of 1861, Huse signed a contract with Mr. Hamilton of Sinclair, Hamilton & Company, calling for the delivery of 30,000 Enfields by September of 1861. All parties understood that as soon as this first contract for 30,000 arms was fulfilled, more contracts would immediately follow.

The contracts with Sinclair Hamilton & Company represented a major coup for Huse and the Confederacy. First and foremost, the Confederacy was getting 1st Quality, non-interchangeable Enfields at a fair price. Many of the arms in storage at the contractor's premises were already finished, but were technically "under contract" for the federal government.

George Schuyler, the purchasing agent for the U.S. government, had visited many of the very same contractors and had signed contracts for Enfields with them earlier, but Schuyler did not have funds to pay for the arms immediately. So many contractors delivered finished Enfields to SH & Co. destined for the Confederacy that were supposedly "earmarked" for the federal government. The contractors knew that

---

*The contracts with  
Sinclair Hamilton & Company  
represented a major coup  
for Huse and the Confederacy.*

---

they would be paid immediately when they delivered Enfields to Sinclair, Hamilton & Company.

Caleb Huse knew having ready cash from the sale of cotton in the Confederacy's banking accounts at Fraser, Trenholm & Company's Liverpool bank gave the South a tremendous advantage in the purchasing arms and other munitions in both England and on the Continent. Huse made maximum use of this "ready cash" advantage.

Contrary to the popular perception that the industrialised North didn't need arms at this stage of the war, the reality was that while the U.S. government signed many contracts for the production of 1861 Springfield Rifles-Muskets with companies located in the Northeastern U.S., it would be at least a year or so before these factories started to deliver arms as many new factories had to be built and equipped with gun production machinery. In the meantime, the Union Army was just as desperate for arms as the Confederate Army.

Mr. Archibald Hamilton along with Sinclair, Hamilton & Company proved to be an invaluable asset to Huse and the Confederacy for within a little over five months, by September of 1861, all of the 30,000 Enfields called for in the first contract had been delivered! Without even slowing down the delivery of Enfields from the contractors, a second contract with Huse was signed for an additional 30,000 Enfield rifles. Anderson had also signed a contract with Sinclair Hamilton & Company for several thousand Enfields for the State of Georgia.

However Huse did not confine his business to only Sinclair, Hamilton & Company. He also dealt with the British supply firm of S. Isaac, Campbell & Company. The company was a full line "military outfitter," handling everything from arms to uniforms to tents and accoutrements. Unfortunately, for the company, they had lost most of their contracts with the British military. That business had evaporated almost overnight when the company was accused of shady practices in their dealing with the British military. So, the company was more than happy to have Huse and the Confederacy as a new customer.

One of Huse's questionable deals was the purchase of almost 15,000 obsolete .70 caliber P-51 Muskets from S. Isaac, Campbell & Company. These were old

arms, surplus from the early stages of the Crimean War that had been stored for over 5 years in very poor conditions by the government. The P-51's were rusty and had many broken parts.

They had then been sold very cheaply to the London gun making firm of Barnett & Son that had then overhauled. Barnett then sold them to S. Isaac Campbell & Company who immediately re-sold them to Huse at a mark-up. Huse's justification for the purchase was that the arms were cheap and badly needed by the Confederate armies at the time. Huse also purchased a lot of obsolete Brunswick Rifles that dated from the late 1830's. Huse also purchased Enfields from the Liverpool arms dealer, William Grazebrook.

### Getting The Enfields To The Confederacy

Because of the constant difficulty the private detectives hired by the U.S. Ambassador Charles Francis Adams caused, warehouses in London and Liverpool had to be rented in fictitious names and the arms delivered from the contractors surreptitiously. It was not a simple matter of just loading them aboard a ship bound for the Confederacy.

First and foremost, when the arms were delivered to the warehouse, each and every Enfield had to be numbered and inspected - no small task when one considers that there were 30,000 Enfields in the first contract alone. Enfields did not have serial numbers stamped on them at the factory. So, for Confederate accounting purposes, a 4 digit "serial number" was hand engraved on the brass tang of each butt-plate followed by a letter suffix after the first 9,999. For example "1259 A" would represent one of the 30,000 Enfields delivered by Sinclair, Hamilton & Company in that first contract.

Now, a century and a half later, probably only about 1% of the Enfields purchased by the Confederacy survive today. Because records were kept of the "serial numbers" placed on the Enfields in England and the ships they were shipped out on, a modern collector lucky enough to acquire an original arm can consult the historic records and often learn which Blockade Runner the arm was shipped on, which Confederate port it arrived in and the date it arrived.

Before the "serial number" was placed on the butt-

---

*Hundreds of crates of Enfields, ammunition, cannon and hundreds of kegs of gunpowder along with a variety of other military supplies were dispatched from the warehouses in both London and Liverpool.*

---

plate, the arm had to be inspected and passed by a professional arms inspector. Apparently, Major Huse hired a Mr. James Smiles (or John Southgate, no one is certain which) as a full time Inspector. Most of the Confederate Enfields that still survive today have the initials "JS" above an anchor stamped in the wood of the stock under the tang of the trigger plate.

Then the Enfields along with their bayonets were repacked in the wooden cases they came in from the contractors, each wooden case weighed a little over 200 pounds and contained 20 Enfields and their bayonets when filled up. As with all non-interchangeable Enfields, the hand fitted bayonet for each rifle was tied to the trigger guard with a string so the two items would not be separated. The Enfields were now ready to be shipped.

In the late summer of 1861, Huse and Bulloch quickly found out that no British Ship Captain or owner was willing to accept a charter to run munitions into a Confederate port because of Lincoln's Blockade of Southern ports. (Later that would change drastically when British Captains and ship owners discovered the tremendous profits to be made from Blockade Running.) Adam's private detectives also kept the docks at both London and Liverpool under constant surveillance, which made it advisable that the arms in the first shipment to the Confederacy be loaded somewhere else.

James D. Bulloch came up with an igneous plan. Simply buying a ship and loading it with munitions and sailing for the Confederacy under a Confederate flag was not a good idea because Ambassador Adam's detectives would quickly discover the fact and the destination of the ship. Then it was a simple matter for Adams to send a telegraph over the trans-Atlantic cable to the Lincoln Administration in Washington giving a

description of the ship along with its expected date of arrival in American waters. Then the U.S. Navy would have warships lying in wait for the Confederate ship off shore.

Somehow, through extensive connections with the British shipping industry Fraser, Trenholm & Company enjoyed, Bulloch found that the Scottish steam ship Fingal was available for charter or sale. Bulloch managed to slip the detectives that were following him in Liverpool and caught a train for Scotland. After another change of trains, Bulloch arrived in Greenock, Scotland to meet the owners of the Fingal.

Bulloch learned the owners of the iron hulled, steam ship, the Fingal, were willing to work with him for the right price. The ship was literally brand new, having been built at the Clyde Bank Shipyard in Scotland and launched the previous May.

The Fingal was 204' long and had a beam of 41' and with a full head of steam, was capable of doing almost 14 Knots. The Fingal had been used for a few months hauling passengers and freight between various Scottish ports.

The agreement that Bulloch made with the owners of the ship was that he would secretly charter it with a special provision for buying it at an instant if necessary. The agreement specified that the Fingal would sail from the British Isles under a "Neutral" British flag and crew. If the ship was challenged by a U.S. Navy Blockader on the high seas, the British captain had a Power of Attorney from the owners of the ship to sell the ship to the Confederate Navy on the spot.

With that legal formality done, Bulloch, a former Captain in the U.S. Navy and an officer in the Confederate Navy, would immediately take command of the ship. The British flag would be lowered and the Confederate flag raised while the ship made a run to escape from the blockading ship or ships.

### Outsmarting Adam's Detectives

The Fingal was taken out of service in Scotland and secretly made ready for a trans-Atlantic voyage. These preparations went unnoticed because Scotland was far away from the prying eyes of Adam's detectives. Then over the next several weeks, hundreds of crates of Enfields, ammunition, cannon and hundreds of kegs of gunpowder along with a variety of other military supplies were dispatched from the warehouses in both London and Liverpool where the arms and munitions were concealed to Greenock, Scotland. Some of the supplies went by coastal steamers and others by rail. When they arrived, the arms and munitions were loaded aboard the Fingal moored to the pier in Greenock.

Adam's detectives were keeping a sharp eye on the docks at London and Liverpool were looking for arms shipments being loaded aboard ships heading to Cuba, Bermuda, the Bahamas or anywhere else in the Western Hemisphere close to the Confederacy.

By the 10th of October, 1861 the Fingal was finally fully loaded in Greenock with cargo of arms, munitions and military supplies. The ship sailed from Greenock on a beautiful day. The Captain set a course across the Irish Sea towards Holyhead, Wales. Bulloch, Anderson and several other Confederate officials heading back to the Confederacy had slipped the detectives in Liverpool following them and had caught the train to Holyhead.

On the night of October 14th, the Fingal was steaming slowly around the breakwater outside of Holyhead in the darkness and collided with an anchored brig, the Siccardi. The brig was swinging on its anchor cable and was displaying no lights. The iron prow of the Fingal drove deeply into the side of the Siccardi and within a very short while, the brig sank. This accident was unavoidable but fortunately no lives were lost.

The Captain stopped the Fingal and boats were lowered into the dark water to begin the rescue of the unfortunate brig. The whole purpose of having the Fingal show up at night at Holyhead was so Bulloch and the other Confederates in his party could board the ship in the darkness. That way, even if somehow one of Adam's detectives had followed them, the detective could not get a good look at the ship, so no description of the Fingal could be telegraphed by Adams to the U.S. Navy.

---

*The cargo of the Fingal included:  
14,000 Enfield Rifles, 1,000,000  
cartridges, 2,000,000 musket caps,  
3,000 cavalry sabers, 1,000 Enfield  
Naval Rifles complete with Cutlass  
Bayonets, 1,000 rounds per rifle...*

---

### Escape To The High Seas

Bulloch sent a quick message ashore to Fraser, Trenholm & Company to pay the owners for the value of the brig even before the rescue operation was completed. As soon as the rescue was accomplished and the crewmen of the unfortunate brig were sent ashore, Bulloch ordered the Captain to immediately put to sea. Bulloch realized that the Fingal could not afford to stay around Holyhead and wait for the official investigation of the accident to take place. So, within a few hours after colliding with the Siccardi, the Fingal had left Holyhead far behind her wake.

When the Fingal arrived in Bermuda weeks later, Bulloch was delighted to find the CSS Nashville in port. This proved to be a fortunate meeting because the Nashville provided the Fingal with more than enough coal to make it into Savannah. The Nashville also had a Savannah pilot aboard who was familiar with the locations of the ever shifting sandbars at Wassaw Sound and at the mouth of the Savannah River. The pilot was looking for a way to get back home, so he was more than happy to pilot the Fingal into the Savannah River and to Savannah for Bulloch.

Any pretense that the Fingal was a British ship was pretty much destroyed when the ship was seen taking coal from a Confederate warship. While the Fingal was tied to the dock in Bermuda, the British crew was granted liberty to go ashore. The U.S. Consul contacted many of the Fingal's British crew members and pleaded with them to desert or refuse to allow Bulloch to sail the ship into a Confederate port.

Caught up in the adventure of the Fingal's novel voyage (plus the wages that they would get when the ship made it into a Confederate port,) the members of the Fingal's crew turned a deaf ear to the pleadings of

the U.S. Consul.

As soon as the Fingal put back to sea from Bermuda, Bulloch had the British Captain sell the ship to the Confederacy. Then Bulloch called the crew to the main deck and addressed them. He explained that the Fingal was heading into the Port of Savannah and intended to “Run the Blockade.” He also informed the crew that they had a free choice.

Any crew member that did not want to face the hazard of running the Blockade into Savannah would be put ashore back in Bermuda. Every crew member agreed to make the rest of the voyage with Bulloch, come what may.

Bulloch ordered the two 4.5” Blakely cannon and the two 2.5” boat guns pulled out of the hold and mounted on the decks of the Fingal. This was more of a “brave gesture” than anything else because it would be foolhardy in the extreme to attempt to fight it out with a heavily gunned U.S. Navy warship. With 400 barrels of gunpowder stacked in the Fingal’s holds and several million small arms cartridges, one lucky shot from a U.S. warship could turn the Fingal and crew into a brilliant fireball.

As the Confederate Coast was approached, many lookouts were placed on duty to keep a sharp eye out for masts on the far horizon. The Fingal’s only real hope was to out run any Yankee Blockader. Fortunately, no masts were seen on the horizon.

In the early morning hours of November 12th, the Fingal ran into a fog bank off of the Georgia Coast. Bulloch ordered the ship to slow down but when the sun rose, the fog still remained. The fog bank was very fortunate because it allowed the Fingal to slip into the mouth of the Savannah River unobserved by the U.S. Navy.

Just when it looked as if the Fingal had eluded the Yankee Blockade, and was in the mouth of the waterway a misfortune occurred. The crew knew that when they passed Fort Pulaski that guarded the entrance to the Savannah River, they would be safe. With Fort Pulaski almost in sight, the Fingal crunched to a sudden, unexpected stop.

The Savannah Pilot had made a mistake and the ship had run into an oyster bank. Despite Bulloch’s frantic efforts to reverse the engine and back the ship off of the bank, his efforts were in vain. To make matters worse,

the fog lifted and for any Yankee ship that came along, the Fingal would be literally a “Sitting Duck.” So near and yet still so far away from Savannah.

The only option that Bulloch and the crew of the Fingal had was to wait several hours until a rising tide floated the Fingal off of the oyster bank. The time ticked by slowly but then the Fingal was spotted!

Fortunately for the Fingal and the Confederacy, a tug was coming downriver from Savannah. In short order hawsers were passed from the stern of the Fingal to the tug. The Fingal’s engines’ were reversed again and along with the tug pulling, the Fingal was free of the oyster bank! A few minutes later, the Fingal and passing under the protecting guns of Fort Pulaski as the garrison, standing on the ramparts, cheered!

When the Fingal docked in Savannah, wild celebrations were the order of the day. The arms arrived at the very moment they were most needed by the struggling Confederacy. The cargo of the Fingal included: 14,000 Enfield Rifles (including 1,000 Enfields for the State of Georgia,) 1,000,000 cartridges, 2,000,000 musket caps, 3,000 cavalry sabers, 1,000 Enfield Naval Rifles complete with Cutlass Bayonets, 1,000 rounds per rifle, 4 cannon, 400 barrels of gun powder, a large quantity of blankets, military clothing and also large quantities of military cloth that could be sewed up into uniforms.

### Epilogue

Years later, James Bulloch reminisced about the voyage of the Fingal: “No single ship ever took into the Confederacy a cargo composed entirely of naval and military supplies [like the Fingal]...and every bit of it was desperately needed by Confederate forces.”

The two 4.5” Blakely cannon, brought to Savannah from Liverpool by the Fingal were soon sent back down the river to become part of the defenses of Fort Pulaski. Those cannon are still there today and can be seen by any visitor to the Fort Pulaski National Monument. Those two cannon are one of the very few artifacts in existence today that remain from the voyage of the Fingal.

Later in the war, the Fingal was converted into an ironclad and re-named the CSS Atlanta. Captured in

1863, the ironclad was renamed the USS Atlanta and served in the U.S. Navy for the remainder of the war. After the war, it was sold as surplus to the Republic of Haiti. The ironclad never arrived in Haiti, being sunk in a storm off of Cape Hatteras on the delivery voyage.

Agents working for Governor Joe Brown continued purchasing Enfields in England and dispatching them to Georgia via Blockade Runners. Brown ordered that Enfields belonging to the state be marked with a large, capital "G" on the butt stock. Today, "G" marked Enfields bring a premium on the collector's market, usually in excess of \$12,000.00

By 1863, Georgia purchased Enfields were being landed from Blockade Runners in the port of Wilmington, N.C. Usually upon arrival, the "G" marked Enfields were seized by the Confederate Ordnance Department and issued to troops in the Confederate armies. The seizure of Georgia Enfields, along with other issues, poisoned relations between Governor Brown and the Confederate government.

Also, by 1863, the Confederate Ordnance Department had taken over the entire responsibility of providing arms to all the troops in the Confederate armies, so Georgia troops fighting in the Confederate armies were well armed.

Blockade Runners served the Confederacy well because it was arms, munitions, uniforms, medicines and much of the other items to supply the Confederate armies arrived in large quantities via Blockade Runners. Confederate soldiers never suffered for want of arms nor ammunition (much of it imported from abroad) during the many battles of The War Between the States. In the latter stages of the war it was the want of adequate provisions and medicines that hampered the Confederate armies and most importantly, the lack of manpower.

James Bulloch soon returned to England and became head of the Confederate Secret Service. Ambassador Charles Francis Adams considered Bulloch to be the most dangerous Confederate agent in England or Europe. Bulloch commissioned and oversaw the construction of the Confederate commerce raiders the CSS ALABAMA, the CSS SHENANDOAH, the CSS FLORIDA and many others. It was these raiders that swept U.S. commerce and the whaling fleets off of the oceans.

After the war, Bulloch was not pardoned, so he remained in England. He became a cotton merchant and returned to the U.S. annually on cotton buying expeditions. Every year he stayed with his sister and her family in New York City for a week or so.

"Uncle Jimmy" was idolized by his nephew, a young Teddy Roosevelt. Bulloch helped his nephew write his first book on a history of the Naval War of 1812. Teddy, in turn, encouraged Bulloch to write his two volume history of the activities of the Confederate Secret Service in England. Other than his annual visits to the United States, Bulloch lived the rest of his life in England and is buried there today.

Caleb Huse remained in England after the war and became involved in the arms business on a commercial scale. Years later he returned to the United States and opened up a Prep School for boys that were going to West Point. In his advanced years, he wrote a book about his role as a purchasing agent for the Confederacy.

Major Edward C. Anderson who had returned to Georgia on the Fingal travelled to Richmond and was soon assigned to a command in the Confederate army. Anderson survived the war to return to Savannah and resume his business career. In the later years of his life, he was elected as the Mayor of Savannah.

*Editor's Note: This concludes the article on "Arming Georgia", Part I of which appeared in the Spring 2018 edition of the Journal. I am most grateful to the author, for permitting this fascinating story to be published.*



# ***The Urge To Volunteer, 1850 to 1859***

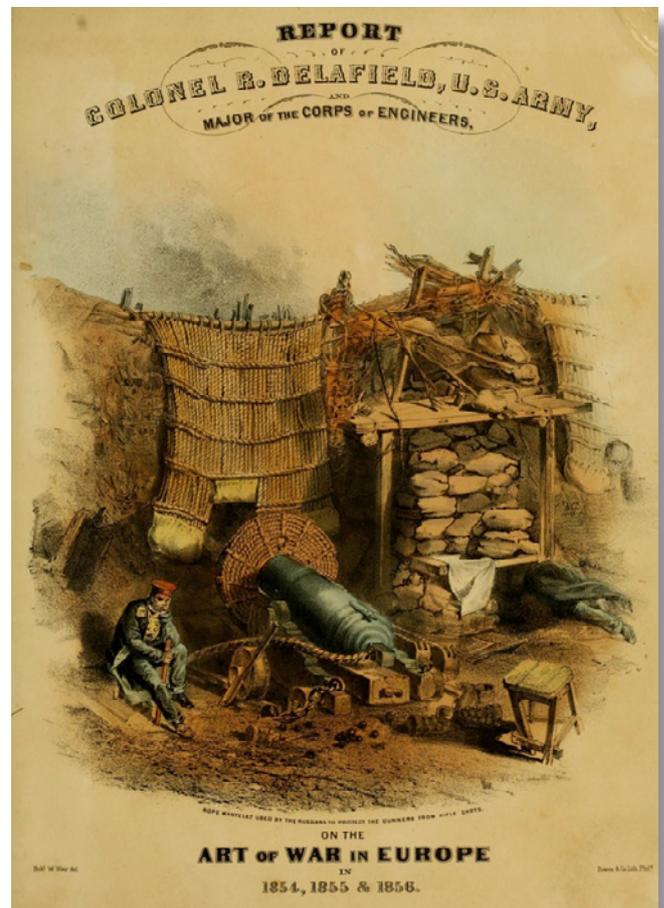
*W.S. Curtis*

A study of the books influencing the Volunteer Movement must, of necessity, commence with those appearing during the years leading up to 1859. Volunteering had flourished during the Wars of the French Revolution and Napoleon and was, therefore, still sufficiently recent in the memory of most people to permit of its being revived. The great Duke of Wellington, himself, had already been sufficiently concerned to make his views on the necessity for national defence known as far back as 1847. Two further developments in the early 1850's had helped to bring this about.

Chronologically, the first was the quite sudden development of long range rifle shooting. This evoked considerable interest and from around 1850 a number of books dealing with the subject of the new Minie System started to appear. Existing rifle clubs, although not many, had continued the traditions of the earlier period in a manner analogous to those of our own Home Guard Rifle Clubs, which flourished after the end of the Second World War, and in some cases still do. The second major factor was the Crimean War which brought home to the public something of the nature of modern war and the perils of foreign invasion. The advent of steam navigation had opened our shores to surprise attack. The Indian Mutiny served to reinforce the general interest in matters military and in rifle shooting. At the same time the Continental Powers were all engaged in re-equipping their troops with the latest in small arms after observing their effects in the Crimea.

This was not only happening in Europe. In the United States of America, Congress authorised a Military Commission to tour Europe, visit the conflict in the Crimea and submit detailed reports of their findings. Two massive reports were prepared after this visit and published at Washington in 1860 and 1861. The first is entitled **MILITARY COMMISSION TO EUROPE, 1855 AND 1856 - REPORT OF MAJOR ALFRED MORDECAI, OF THE ORDNANCE**

**DEPARTMENT.** The second is entitled **REPORT ON THE ART OF WAR IN EUROPE IN 1854, 1855 & 1856; BY COLONEL R. DELAFIELD, U.S. ARMY, AND MAJOR OF THE CORPS OF ENGINEERS, FROM HIS NOTES AND OBSERVATIONS MADE AS A MEMBER OF A "MILITARY COMMISSION TO THE THEATER OF WAR IN EUROPE," UNDER THE ORDERS OF THE HON. JEFFERSON DAVIES, SECRETARY OF WAR.** The Secretary of War mentioned gained great fame, or a few would say notoriety, shortly afterwards as President of the Confederate States of America. These two reports are very large and well worth reading but the date of their appearance precludes them from having had any influence on the British Volunteer. They

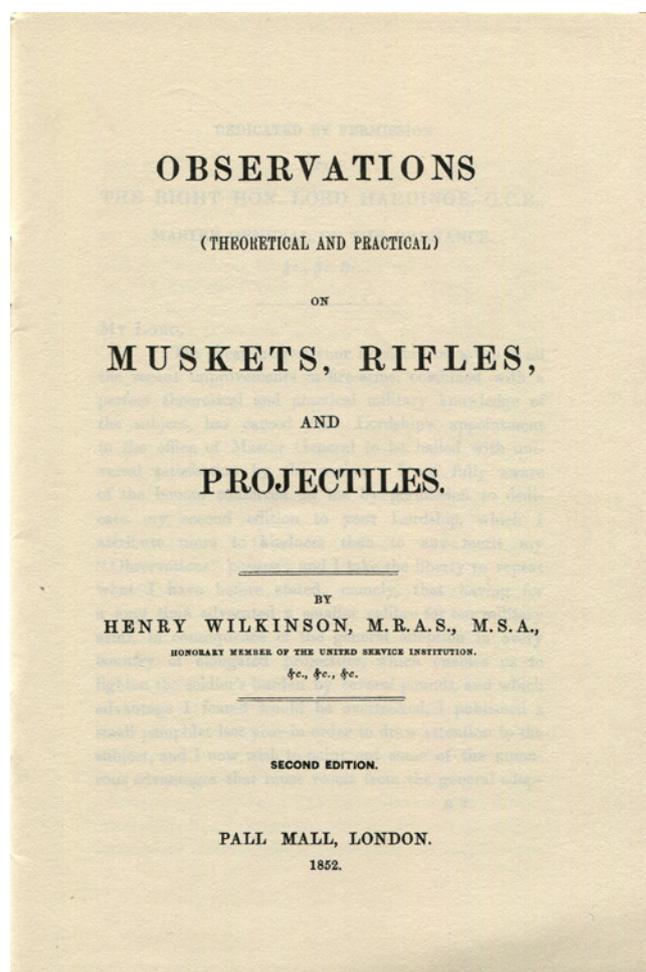


are mentioned solely as illustrating the nature of the international activity that was going on. The Mordecai Report is listed by Riling as No. 744 and the Delafield Report as No. 761. The preamble to the Reports states that 20,000 copies were to be printed.

One of the earliest books on the new system for British readers was published by Henry Wilkinson, the gunmaker of Pall Mall, in 1851. In a small green soft covered booklet of only 24 pages entitled *OBSERVATIONS (THEORETICAL AND PRACTICAL) ON MUSKETS, RIFLES, AND PROJECTILES* (Riling 613), Wilkinson, already well established as an author with his *ENGINES OF WAR* (1841), discusses the latest theories and draws upon the work of Captain Gustave Delvigne, the co-developer with Minie of the new system. The book went into a second edition the following year when it was expanded to 38 pages and although Wilkinson expresses doubts about the Minie system, as he is pressing his claims for his own bullet design, it added materially to the public interest in the subject. Wilkinson's bullet, although not taken up by the British, was adopted by the Austrians as the projectile for the Lorenz rifle and was very successful in that role. The second edition of *WILKINSON'S OBSERVATIONS* was republished in facsimile some years ago (pictured right). A Third Edition of 60 pages was published in 1858.

The year 1852 brought three more titles. We have not been able to examine the first but will cite Ray Riling, who gives it the number 621, *THE RIFLE: ITS USES AND ADVANTAGES IN WAR, IN THE VOLUNTEER SERVICE AND IN SPORTING PURSUITS ...* by "Long Range". Published in London by T. Bosworth with seventy pages, it is worth mentioning because of its specific reference to the Volunteer Service.

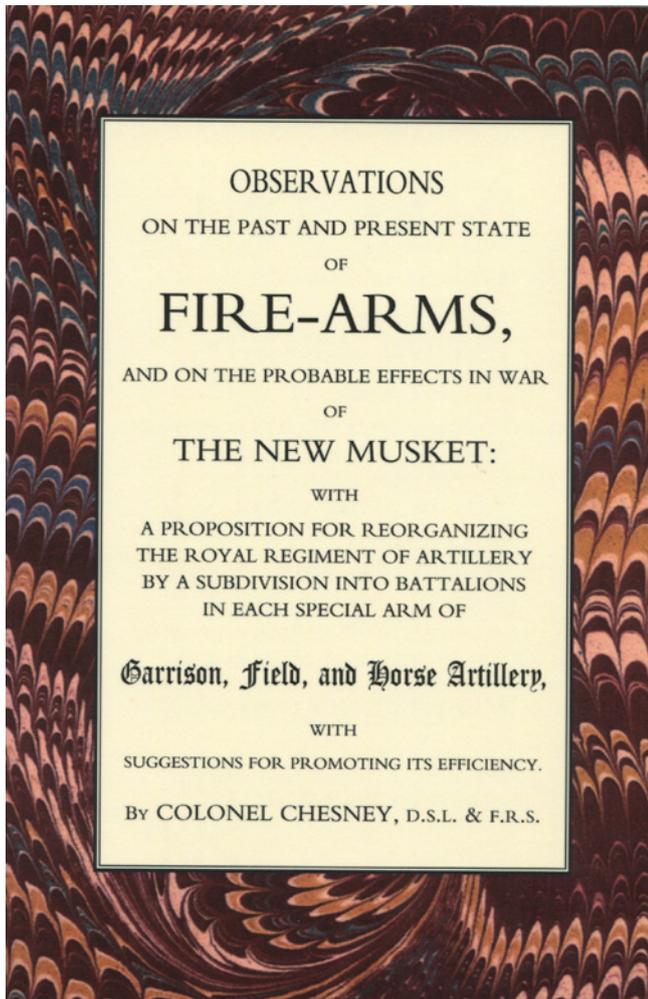
Another gunmaker, Charles Lancaster, also produced in 1852 a small pamphlet of 26 pages entitled *BY HER MAJESTY'S ROYAL LETTERS PATENT. 1851. LANCASTER'S SMOOTH-BORED RIFLES*. This is excessively rare today, is not mentioned by either Riling or Gerrare, and only two copies are known to exist, neither of which are in the British Library. Although this is mainly an advertising effort on behalf of his Oval Bore system, he does go at length into the comparison trials then being held between the latest types of rifle. He quotes from Colonel Chesney's Exhibition Lecture



at Cork in Ireland in which the Colonel details the results of trials made at the request of the General Committee of the Management of the Cork Exhibition, for the purpose of testing the relative merits of the recent improvements in fire arms. The shooting was conducted at the range at Belvelly and specific mention is made of the use of a pattern of rifle that Lancaster was making for the Stock Exchange Club, evidence of the continuing relationship between the target shooting fraternity and the still surviving element of Volunteering. The list of rifles tried was impressive and it included those of Lancaster, Wilkinson, Truelock, Rigby's Polygroove, Minies by Rigby, Allport and the Pattern of 1851, Captain Cowper, Nellican, Knox, Lippold, the Prussian Needle Gun, and rifles from Germany and Norway, as well as smooth bore muskets and carbines.

## Literature of The Volunteers of 1859

Colonel Chesney, himself, produced a substantial volume in the same year entitled *OBSERVATIONS ON THE PAST AND PRESENT STATE OF FIRE-ARMS, AND ON THE PROBABLE EFFECTS IN WAR OF THE NEW MUSKET: ...* (Riling 617). In its 376 pages he includes not only a history of warfare and firearms but also a completely new system for reorganising the Royal Artillery. Two chapters are devoted to the “New Musket” and, being a Gunner, he immediately comprehends the danger to Field Artillery from rifle armed infantry. These fears were only too realistic as the Russian Gunners found two years later in the Crimea. The recognition of the value of trained marksman was, in itself, one of the main influences leading to the great Volunteer Movement of 1859.

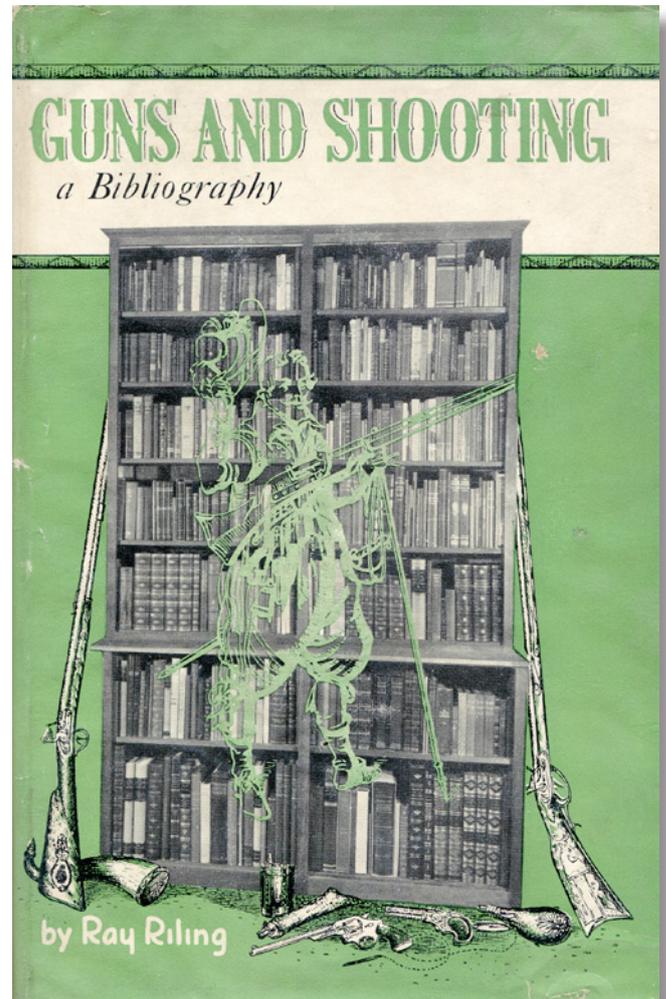


**Part 2** will look at some of the many books that appeared discussing technical aspects of the Enfield rifle and ammunition, plus drill.

*Note:*

‘Riling’ references are to: ‘Guns and Shooting: A Selected Chronological Bibliography’ by Ray Riling (Greenberg, New York, 1951)

∞



**Muzzle Loaders  
Association of Great Britain**



*The MLAGB was formed in 1952 and is the Governing Body for muzzle loading within the UK.*

*Its objectives are to encourage an interest in muzzle loading firearms, to promote, regulate and safeguard their use and to preserve their freedom of collection.*

*[www.mlagb.com](http://www.mlagb.com)*

**Historical Breechloading  
Smallarms Association**



*The HBSA was founded in 1973. The fundamental aims of the HBSA are to encourage the Preservation of Historic and Heritage Breechloading firearms and to foster the research and study of all aspects of the subject, from the aesthetics of sporting guns and the engraver's art to the functional aspects of firearms used by the soldier, target shooter and the sporting shooter.*

*[www.hbsa-uk.org](http://www.hbsa-uk.org)*

**Long Range Black Powder Rifle  
Target Shooting**



Long range target shooting with the percussion muzzle loading rifle and black powder cartridge rifle.

Historical study and shooting today.  
19th Century competition at Wimbledon, Creedmoor and Dollymount. The rifles, ammunition and equipment, riflemen and gunmakers.

[www.facebook.com/groups/researchpress](http://www.facebook.com/groups/researchpress)

# Advertising

Contact Research Press

for

Competitive Advertising Rates

[journal@researchpress.co.uk](mailto:journal@researchpress.co.uk)

David Minshall

***Metropolitan Rifle Corps in Hyde Park***

*From Left to Right; Working Men's College, South Middlesex, South Kensington, London Scottish, London Scottish & Kilt Company, St. George's, 1st Surrey, Honourable Artillery Company, City of London, Civil Service, Volunteer Guards, Inns of Court, Victoria Rifles, 1st Middlesex Artillery, Queens Westminster, London Irish, West Middlesex, 1st Surrey Mounted Rifles (The Illustrated London News, 27 October 1860)*

