



Research Press Journal



Issue 7 | Summer 2019

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School of Musketry, Hythe Musketry Manuals

The St. George's Challenge Vase



Match Rifle History

Research Press Journal

Editor: David Minshall

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.

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Priming

News, Events, People & Places

LRR 1,000 yard Championship

The Long Range Rifles Branch (LRR) of the Muzzle Loaders Association of Great Britain held their 1,000 yard Championship at Bisley, Surrey, UK, on Saturday 8 June. The event comprises 30 shots fired over two details, one in the morning and one afternoon.

The slight threat of rain at the start of the day was the least of shooters problems... Strong winds prevailed and became more changeable as the day proceeded. Picking up small changes in wind strength when range flags are outstretched was difficult; at least the bend in the flag poles gave some indication of the stronger gusts!

John Whittaker's excellent start helped him secure first place by just one v-bull ahead of Arnaud Lilbert. For the most part the top scores shot steadily and consistently despite the conditions. It was interesting to note some marked changes in performance; some struggled in their second detail after promising starts, others got better measure of conditions and much improved in their second detail.

Congratulations to all for staying the course in very trying conditions!

Other Branch events completed this year have been the *Asquith Cup* for .577 calibre military percussion rifles, 15 shots at each distance, 600 and 800 yards - the *Volunteer Trophy* for military match rifles with open sights, 15 shots at 600 yards - the *900 yard Championship* for the B.C. Baker Cup, 15 shots at 900 yards.

October will see the *Rigby Cup* and *Whitworth Cup* matches, each comprising 15 shots at 600 yards, for muzzle loading match rifle and hexagonally bored Whitworth rifle respectively.

For further details see: www.longrangerifles.co.uk

Righth:
Match winner,
John Whittaker



Results

Name	1-15	16-30	Agg
1 J.Whittaker	53.3	37	90.3
2 A.Lilbert	47.2	43	90.2
3 P.Wolpe	41	39	80
4 A.Beck	42	36	78
5 L.Jackson	41	36	77
6 T.van der Vlist	33	37.1	70.1
7 G.Evans	44.1	25.1	69.2
8 H.van Koot	34	34	68
9 S.Escoubeyrou	51.2	16	67.2
10 P.Cornelissen	47.1	16.1	63.2
11 D.Minshall	35	28	63
12 M.Hall	21.1	40	61.1
13 P.Hendy	32.1	28.1	60.2
14 B.Collot	35.1	21	56.1
15 F.Brouwer	15.1	40	55.1
16 M.Jouan	36.1	18	54.1
17 F.Rustichelli	22	32	54
18 C.Goed	30	23	53
19 J.Womble	23	27	50
20 A.Bonnal	16	31.1	47.1
21 D.Craven	28.1	17	45.1
22 S.Collot	22	11	33
23 B.Riaud	3	DNS	3
24 J.Mallarme	2	DNS	2

Forthcoming Events

Canada

- 23-25 August - Canadian Black Powder Championships. Connaught Rifle Range, Ottawa, ON. Dominion of Canada Rifle Association.

UK

- 3 August - National 900 & 1000 yard Championships, Bisley. Muzzle loading. Muzzle Loaders Association of Great Britain.
- 18 August - HBSA Open Long Range Championship. 900 & 1000 yards. Bisley. Breech loading service and match rifles. Historical Breechloading Smallarms Association.
- 25-31 August - 12th MLAIC Long Range World Championship, Bisley. Muzzle loading.
- 29 September - HBSA Open Mid Range Championship. 300 & 500 yards. Bisley. Breech loading service and match rifles. Historical Breechloading Smallarms Association.
- 19-20 October - Trafalgar Meeting. Bisley. Muzzle loading and breech loading. National Rifle Association.
- 26 October - Rigby Cup and Whitworth Cup, 600 yards. Bisley. Muzzle loading. Long Range Rifles.

USA

- 27-28 July - Dick Hoff Memorial Match. Miami Rifle and Pistol Club, Cincinnati, OH. 300, 500 & 600 yards. Muzzle loading and breech loading black powder rifles.
- 3-4 August - 2019 BPTRA Midrange Championships, Colorado Rifle Club, Byers, CO. 200, 300, 500 & 600 yards. Breech loading black powder rifles.
- 14-15 September - NMLRA All 1,000 yard Match, Black Powder Target Rifle Match, Camp Atterbury, IN. 1000 yards. Muzzle loading and breech loading black powder rifles.
- 19-22 September - 2019 BPTRA Creedmoor National Championships, Colorado Rifle Club, Byers, CO. 800, 900 & 1000 yards. Breech loading black powder rifles.

For further details see:

www.researchpress.co.uk/index.php/news/events

Alexander Henry's Edinburgh

Richard Brown, great great grandson of the world famous rifle maker Alexander Henry, and collaborator on Donald Dallas' book *Alexander Henry Rifle Maker*, is offering guided tours around Henry's home city of Edinburgh. The tours are based around places of special interest to Alexander Henry's life and work. They will be entirely "bespoke", by car or on foot, and can cover his early and later years, the sites of some of his homes and places of work, where his son James was tragically shot, the Hunters Bog Volunteer rifle range, the 1860 Royal Review and a visit to his grave in Warriston cemetery.

If you plan to be in Edinburgh, and for tour details and costs, please contact Richard well in advance at:

alexhenyrifles@gmail.com

Alexander Henry, Rifle Maker

www.facebook.com/groups/AlexHenryRifles

www.twitter.com/AlexHenryRifles

**Alexander Henry's
Edinburgh** By car or on foot

Bespoke guided tours of important places in the world famous rifle maker's city, by his great great grandson, Richard Brown, collaborator on Donald Dallas' book **ALEXANDER HENRY RIFLE MAKER**

Contact: AlexHenryRifles@gmail.com to discuss dates, cost and arrangements.
(Example sites shown, and all building visits are external only)

[f](https://www.facebook.com/ALEXHENYRIFLES) @ALEXHENYRIFLES [t](https://twitter.com/AlexHenryRifles)

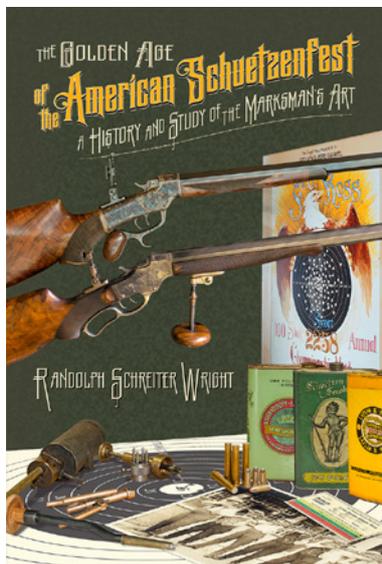
Book News

A new book by Randolph Schreiter Wright brings to life the old Schuetzen tournaments that were immensely popular at the turn of the 20th century. **“The Golden Age of the American Schuetzenfest; A History and Study of the Marksman’s Art”** is expertly narrated plus presents a captivating visual journey into the history of the Schuetzen game. The book explores several famous Schuetzen parks, tells stories of memorable Schuetzenfests and legendary target shooters who’s marksmanship was a high art.

From the 1890s until the U.S. entry into World War One, the target shooting game known as Schuetzen was in its Golden Age. The book explores how matches were conducted, highlights the various shooting events, targets and rifles of the time plus provides comprehensive detail on how to load and shoot the magnificent old target rifles using methods in vogue at the tail end of the black powder era.

The handsome appearance makes it an ideal coffee table book but at 9 1/2” X 6 1/2” it is only half the size. The hardbound book is wrapped in a full color dust jacket and has 388 pages, with more than 400 photos illustrations plus glossary and index.

This book was lauded in the Summer 2019 *Black Powder Cartridge News* by the editor, Steve Garbe who stated “I can really appreciate the huge amount of time Randy spent putting this book together and then presenting it in an easy to read, entertaining fashion. It feels like you are really sitting in his gun room having a conversation. And, because Randy is a very accomplished Schuetzen shooter himself, the information presented is up-to-date, researched and solid.”



Rondolph’s previous book on paper patched bullets has been acclaimed.

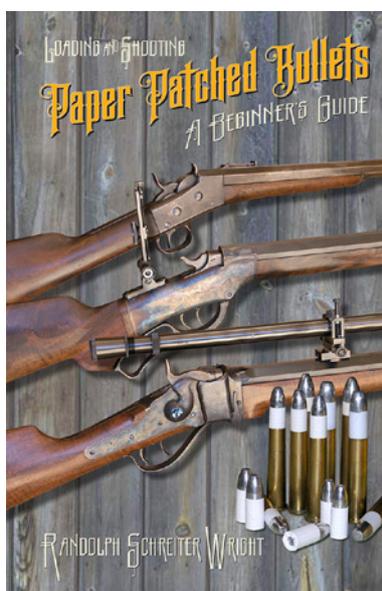
Shoot ‘em the way they were originally designed to be shot, with black powder and paper patched bullets!

“Loading and Shooting Paper Patched Bullets – A Beginner’s Guide” is intended for shooters experienced in reloading black powder cartridge rifles that are ready to try their hand at shooting paper patched bullets. With a slightly tongue-in-cheek writing style, Rondolph de-

mystifys the paper patching enigma with a simple, step-by-step approach to re-loading using off-the-self components for shooting today’s reproduction single shot black powder cartridge rifles.

The book is thoroughly illustrated and details every step beginners need to load accurate paper patched ammunition – from selecting the proper bullet diameter, through techniques on rolling patches, to range testing the first hand-loads. In addition to the basics, the book also presents an advanced studies section that details how to build on initial results to further refine accuracy.

A list of component suppliers is included and its 8.5 X 5.5 inch format packs a lot of information into a handy size book.



Both books are available online from:
www.buffaloarms.com
www.blackpowderspg.com

or from the author at
www.wrightgalleries.com

Black Powder Target Rifle Association

Robert Garibay

Beginnings of the Black Powder Target Rifle Association (BPTRA)

My first experience with black powder cartridge rifle was my Father inviting me to the Quigley Match in 2008 in Montana. He had just picked up a “Big Fifty” Sharps Rifle and figured out how to load something that fit in the chamber. He picked me up in Colorado as he headed up from Texas and off we went, without much of a clue as to what we were doing. We had an incredible experience, despite being sun beat, wind burnt and beat to hell from the recoil of that 50-90 with a military butt plate. I then went home and immediately started research on how and where to get a rifle, but probably something closer to a 45-70 with a shotgun butt plate!

That led me to the black powder target rifle matches or “BPTR” in Byers, Colorado, not far from home. Mostly we shot the Creedmoor course of fire at 800, 900 and 1000 yards. 45 shots for record. 15 shots at each distance. It took years of learning but it was always fun and more than challenging enough to keep me coming back. I then started attending some bigger Regional matches and BPTR Nationals in Raton, New Mexico.

I have been fortunate enough to meet some great people along the way. Friends, mentors and some people I just found myself wanting to beat... score wise of course.

After some time competing at the national match in New Mexico I saw numbers slowly decline and peoples frustration grow with the lack of interest in our discipline from the NRA. The reasons for this are many and subject of heated debate. As opposed to

jumping into the arguments and trying to fix something that was out of my control, I created the Black Powder Target Rifle Association, or BPTRA.

The mission of the BPTRA is to continue the discipline of long range black powder target rifle competition. We simply provide a new governing body and set of rules and membership opportunity for competitors to continue the style of matches that started in the 1870’s when the British, Irish and Americans were so keen on finding out who the best long range rifleman were. The BPTRA maintains rules and sanctions matches so that we can all compete fairly against each other in different matches and venues. Records are kept of exceptional scores at individual distances and whole courses of fire. Competitors are broken into score based classes that allow them to compete with their peers and hopefully encourage them to move up in skills and scoring. These would be Marksman, Sharpshooter, Expert, Master and Grand Master. The one difference in the BPTRA than

previous iterations of target rifle is no special categories. Meaning scopes, iron sights, age, rifle weight, paper patch vs grease groove bullets, etc., we all compete together. We see no real advantage or reason to separate people out for a special category of age or an equipment win, versus an overall win. If you shoot the best score of the match with a scope, then you win! If you’re using a Tollofson rifle, or heavy gun, and shoot the highest score, you win!



In the BPTRA we also put emphasis and reward teamwork during competition. It is not only the shooter who may be shooting a great score but the spotter who read the wind well enough to help that shooter attain that score. This aspect of competition will be evident as the BPTRA hosts the first ever BPTRA Creedmoor Nationals in September of 2019. The trophy being contested for will be the newly christened, Creedmoor Nationals Team Cup. Both winning shooter and spotter will have their name placarded on the trophy as opposed to just the shooter, as we have seen in the past. On the other side of that I was inspired by an idea of a friend and mentor who always wanted to start a "Rifleman Class" before he stopped running BPTR matches. This class within the BPTR allows a shooter to enter a competition by his or herself. Shooting alone without the aid of a spotter. Usually at distances of 800-1000 yards.

So far the reaction to the BPTRA has been very positive. There are many that want to see this discipline, competitions and traditions continue. People have been joining the BPTRA out of support, even if they are unable to make our matches that have debuted this year in Cheyenne, Wyoming and Byers, Colorado.

A bit about the discipline

The aspects of this sport for those who succeed prove you are a complete Rifleman. Not only are you shooting at extreme distances with reasonably period correct equipment, but you are dealing with fouling control, casting your own bullets, hand-loading your own ammunition, reading the wind for projectiles that get moved generally 3 times more by the wind, than high-power or modern rifles and bullets. There is an art to BPTR that may not be apparent if you haven't experienced it for yourself.

Generally, our courses of fire are from 200-1000 yards. Some of the 200 or 300 yard distances may require you to shoot offhand, sit or kneel. Usually anything shot at 500-1000 yards, most shoot in the prone position. The supine position made famous in depictions of the matches in the 1870's are rare, but occasionally still seen at other matches.

Our rifles mostly consist of modern reproductions of Sharps, High Walls, Borchardts, Hepburns, Stevens

and Rolling Blocks. Many have original actions that have been re-barreled with a modern barrel maker which there are a myriad of companies in the US still making. Most of our components like brass, primers and powder are easily available. Swiss in the 1 or 1 1/2 granulation is the dominant powder amongst successful competitors. Some use Hogdons Old Enysford or Goex in similar granulations. Some even "hot rod" 45-70's and various .40 caliber rifles to get the velocity they need to shoot at distance with 3F granulation powder or bullets that seat out very far out of the case to increase their powder charge. Grease groove bullets are the majority but people who paper patch their bullets seems to become more popular every year, with many finding and winning with great success.

I think the dominant calibers on most long range firing lines would be 45-70's, 45-90's, 45-100's and 45-110's. In midrange events many do well with .40 caliber rifles. I have not personally seen or read reports of a rifle at a big long range match that was not one of the .45 calibers mentioned above. Most of the target rifle competitors shoot .45 caliber bullets somewhere in the 510-560 grain weight range. Usually an alloy of lead to tin from 14:1 to 20:1. A ratio of 16:1 seems to be the favorite for long range. Powder weights in the .45 caliber rifles vary between chamberings. I would say most fall somewhere between 75-100 grains of powder no matter which .45 cartridge your rifle is chambered in. I personally shoot 82 grains of Swiss 1 1/2 in my 45-90, behind a 535 grain Money Bullet designed by Dan Theodore. Most competitors are using nose profiles that are Money bullets, Ellipticals, Creedmoors and some still use the Postell or custom designed bullets and nose profiles.

Our target for long range shooting is the NRA LR target, the same one used by a lot of high power disciplines including Palma. It is a 72 inch square target. The black and 8 ring are 44 inches. The 9 ring is 30 inches, 10 ring is 20 inches and X or bull is 10 inches. All rings are a circle with the exception of 6 that is a square outside of the 60 inch circular 7 ring. Both the 6 and 7 ring are in the white.

Sights for shooting vary between Soules and Vernier tang styles when shooting iron sights. Some use adjustable front globe sights for windage as well. Most use some sort of circle aperture or post in their front

sight to frame up the targets for shooting. Others are allowed to use scopes that are within the spirit of pre-1900 style with limits on eye piece and objective sizes.

All scopes have to be externally adjusted with the mounts and have fixed cross hairs or reticles.

The future of long range black powder

There seems to be a slight increase and stirring of shooters wanting to try their hand at BPTR shooting recently. Some who have wanted to transition over from Black Powder Cartridge Rifle, or BPCR, which typically refers to Silhouette shooting in the US. These competitors are now showing interest in BPTR and shooting paper targets. Others simply are intrigued by the history of the sport and have been getting their rifles up and running, working on loads to try out target rifle for their first match. BPTR is a discipline that takes time and patience working with equipment, sights and ammunition that is based on pre-1900 tech. A young new shooter in our sport is likely in his 40's. Many are in the 50-75 year age range. These people have more time, patience and appreciation of the detail that is required to make that one shot count. You cannot buy these rifles or components off the shelf at your local sporting goods store. Enjoyment is not had by a rounds per minute count of your rifle. It can be as frustrating as it is rewarding.

The BPTRA hopes to usher in some new life to the black powder target rifle shooting. We have made slight changes in our rules to be a bit more inclusive of our shooter base. The team aspect of shooting is revered and rewarded. Most of all, our aim is to provide fun and enjoyable matches with strong and healthy competition to still figure out 150 years later...who is the best long range black powder target rifleman and wind reader!

More information on the *Black Powder Target Rifle Association* can be found here: <https://bptra.org>

Robert Garibay

BPTRA LLC
competitions@bptra.org

2019 BPTRA MIDRANGE CHAMPIONSHIPS



**AUGUST 3RD AND 4TH
BYERS COLORADO**

The Black Powder Target Rifle Association and Colorado Rifle Club will host the BPTRA Midrange Championships. Day 1 competitors will shoot the MR-POS course of fire and Day 2 we will shoot the MR-ANY-500 course of fire.

ADDITIONAL INFORMATION

You must be a BPTRA member to enter. Pre-registration is required and entries must be received by July 29th. Certificates will be awarded to overall daily winners and classes depending on entries. Medals will be awarded to aggregate winners. We will have a practice/sight-in day available to competitors on Friday, August 2nd. The practice schedule will depend on interest and who's showing up when. For additional information email me at competitions@bptra.org or visit the website <https://bptra.org/>



2019
BPTRA CREEDMOOR NATIONAL CHAMPIONSHIPS
SEPTEMBER 19-22ND

2019 BPTRA CREEDMOOR NATIONAL CHAMPIONSHIPS

This year the Colorado Rifle Club and the BPTRA will host the first ever BPTRA Creedmoor National Championships. Safety, fun, fellowship and the gathering of the best BPTR competitors is our aim. This championship is designed to challenge shooters over 3 days of long range shooting to determine the best BPTR Rifleman and Wind Callers in the USA. Join us and share in the rich history of Black Powder Target Rifle and the history we will make moving forward.



Two days of
Creedmoor and
One day of
1000yds.

September 19-
22nd, 2019

Colorado Rifle
Club

Byers, CO

Must be a BPTRA
Member. Pre-
Registration
Required. Entry must
be received by 9/1/19

BPTRA
1973 S. Newark Way
Aurora, CO 80014
303-994-2138
competitions@bptra.org

School of Musketry, Hythe

from The Times, 4 January 1855

Situated in a remote corner of the kingdom, on the coast of Kent, about 18 miles from Dover, is this our new military establishment, of the existence of which the great majority of the public are probably not aware. It owes its origin to the introduction of the Minié rifle into the army, and has been established little more than a year and a half, or since April 1853. Guided by his experience of our military system, the Commander-in-Chief judged that, if it were left to the commanding officers of regiments to see that the men under them were properly instructed in the use of the new weapon, he should fail of securing throughout the army that uniformity of practice so essential to the efficiency of the service, and advised the creation of a special establishment which might serve at once as a training school for our infantry and marines. This, then, is what we have at Hythe, and if, as seems likely, the Board of Ordnance is to establish a manufactory for the construction of Rifles and small arms generally – provided such an establishment be erected in connexion with the training school the *depôt* at Hythe will henceforth bear the same relation to the Infantry of our service that Woolwich does to the Artillery. For the purpose of the new establishment, the barracks already existing there, and formerly occupied by the staff corps of the army before the dissolution of that body, were immediately available; but there was this further inducement to select Hythe as the site for the training school – that, abutting on the sea, it possesses a very extensive beach, admirably suited for “the judging distance drill” and target practice.” The barracks, however, are not capable of holding more than 200 men, an amount of accommodation which will have to be greatly enlarged if Hythe is ever destined to grow into an establishment worthy of the part which the rifled musket will play in deciding the vents of war. According to the plan laid down by Lord Hardinge, each regiment of the line was to send in its turn a party of ten men, together with an officer and non-commissioned officer, to the training school, the men to be selected with a view to their quickness and intelligence, and, after remaining there for a period of two months, to rejoin head-quarters and aid in the instruction of their comrades, under the direction of the “Officer Instructor of Musketry,” an officer henceforth to be attached to every regiment. This plan has,

however, been so far deviated from an account of the war that, while some regiments have been represented by Hythe by two and even three detachments, other have not had as yet a single party there. At present, the regiments having detachments at Hythe are as follows:– the Grenadier, Coldstream, and Scotch Fusileer Guards the 18th, 20th, 21st, 23d, 28th, 34th, 54th, 56th, 66th, 71st, 72d, 77th, 79th, and the 88th; all of which, with the exception of the 56th, just landed in Dublin from the Bermudas, are either actually serving in the Crimea, under orders for it, or in garrison in the Mediterranean. And, in its way, it is a somewhat novel sight to see these men drawn up of a morning on parade, where, side by side in one common line, you have the dark blue facings of the Guards and Royal Irish, the green of the 54th and 66th, the buff of the 71st Highlanders, the yellow of the Connaught Rangers, and the purple of the Pompadours. On, however, recurring to the list of regiments that have had parties at Hythe, it is curious to note that the 93d Highlanders, who fire at 600 yards upon the advancing Russian cavalry on the memorable day of Balaklava did not, perhaps, sufficiently attest the capacity of the Minié rifle, was the only regiment then serving in the Crimea which had never been represented there. What that weapon can effect against cavalry at such a distance is being over and over again demonstrated at Hythe, for parties of men at fire and volley firing will lodge from 87 to 92 out of every 200 shots in a target 18 feet in width by 8½ feet high, supposed to represent cavalry; and with such terrible effect is this dire delivered, that the ball, weighing one half as heavy again as the old spherical bullet, is utterly annihilated on coming in contact with the target. The probability, therefore, is that, if the 93d had had a little more experience of the Minié, the Russian cavalry would have been disorganized before receiving their second discharge. The course of instruction at the training school is confided to the direction of a Lieutenant-Colonel Commandant, aided by two assistant instructors, and comprises the theoretical as well as the practical, the practical being subdivided into two headings – namely, drill and practice; under the former of which are included the cleaning of arms, target drill, judging distance drill, and the manufacture of cartridges, while under the latter are comprised “target practice” and judging distance practice. Of all

these, undoubtedly, that which requires the most attention is “the judging distance practice;” for on the abilities of a soldier to compute with accuracy his distance from an enemy, depends on great measure the degree of efficiency which he is able to display in the use of the Minié rifle. And it was on the supposed inability of the common soldier to estimate long distances with a sufficient approximation to accuracy, and on a somewhat erroneous calculation as to the trajectory of the Minié bullet when directed against an object a long distance off, that the objection of one of our most distinguished authorities against the introduction of the Minié rifle mainly hinged. That calculation supposed the ball to rise much higher above the line of sight than in practice at Hythe it is found to do, while its descent on the object aimed at was believed to be much less gradual than it is proved to be. On issuing forth from the muzzle of the gun, the course of the ball is upwards towards a point, the elevation of which varies according to the distance of the object it is intended for; it then descends, but the descent is less gradual than the ascent, for the culminating point of the ball’s trajectory is further removed from the muzzle of the gun than from the object. In other words, supposing the rifle discharged at a target 600 yards off, the bullet would rise for probably about 400 yards, and then keep descending for the remaining 200. Previously, however, to experiments at Hythe, it was held by some most distinguished authorities that the descent was much more abrupt, and, consequently, that the chance of hitting an object a long distance off was much less than what it is. The “judging distance drill,” or the mode of judging distances by the eye, is thus conducted:— the instructor causes a line of 300 yards to be measured; this line is subdivided into equal parts of 50 yards each, by perpendicular lines, the length of which increases according to the distance from the starting point. Thus, if the first perpendicular line, drawn at 50 yards, is 10 yards long, the second, drawn at 100 yards, is 20 yards in length, and so on. At the extremity of each of these perpendicular lines a soldier is placed, standing at ease, and facing the squad about to receive instruction, so that each soldier serves in turn as a point of distance for them to estimate. The instructor then points out successively to the men the different parts of the arms, accoutrements, figure and

dress, still distinctly perceivable on the soldier placed at 50 yards’ distance, and also such as cannot be plainly discerned. He questions the men one after another on what they see, points out the differences existing between the objects stationed at the six different points comprised in the 300 yards, makes them observe the state of the atmosphere, whether it be a clear or dull day. And here the instructor is directed to take care that each days’ instruction is conducted on different ground and under different states of the atmosphere, in order that the soldier may become habituated to the diversity of circumstances in which he may have to act. The men, after they have been exercised up to 300 yards, continue to practise up to 600, and then up to 900, when after some time they are divided into three classes, according to their ability; No.3 class being limited to judging objects up to 300 yards, while the practice of No.2 extends up to 600 yards, and that of No.1 ranges as far as 900 yards. In target practice the men are divided into similar classes and are made to fire at similar distances; and it is found that, during the course of instruction, more than 50 per cent. of the men became entitled to rank with the first or second class. While at Hythe, each man is supposed to fire away 90 rounds of ammunition – 60 in individual firing, and the remaining 30 in file and volley firing and skirmishing. As for the weapon now in use by the troops, it is understood that, as soon as practicable, the present regulation Minié musket will be superseded by a new weapon, manufactured at Enfield. Its advantages, as compared with the Minié are its lightness and greater strength, while it is more highly finished as to the “sighting.” The weight of the latter, with bayonet, is 10lb. 8³/₄oz.; that of the Enfield being about 9lb. 3oz.; and, while the present Minié bullet weighs 680 grains, with a charge of 2½ drams, the new bullet will weigh but 520 grains and will only require a charge of 2¼ drams of powder. On the other hand, it is pretty clear that the wounds inflicted by the Enfield bullet will not be as severe as those made by the Minié, although it will be heavier than the old spherical bullet by 30 grains. It might also be stated that a new kneeling position has been introduced, which gives the soldier greater steadiness in taking aim. The position is this: the man kneeling on the right knee sits on the right heel, while the left elbow rests on the left knee, the left hand steadying the

musket; the body thus rests on a tripod of equilateral proportions, of which the right knee, right toe, and left foot are the feet, and this position is generally found easy and advantageous. On considering, then, the nature of the establishment at Hythe, it cannot but be hoped that it is not merely intended to serve a temporary purpose, for its existence will always insure something like a proper attention to the musket practice of the British army, which has been hitherto too much neglected, as well as a more ready application of all the new improvements in small arms to the wants of our service. It only remains to make two suggestions – the first is, that the introduction of small prizes as the recognition of merit would serve greatly to stimulate

the exertions of those engaged at the training school; while the second is, that the militia regiments, although not as yet armed with the Minié rifle, might with the greatest advantage be constantly practised at “judging distances.” With this we dismiss the school of musketry at Hythe, believing that Lord Hardinge deserves well of the country for having established it.

Below:

‘The School of Musketry at Hythe’ by W.S. Miller
(William Clowes and Sons, Limited - London - 1892)

This history of the School includes forty-seven illustrations from photographs by the Author



ANNUAL REPORT

ON THE

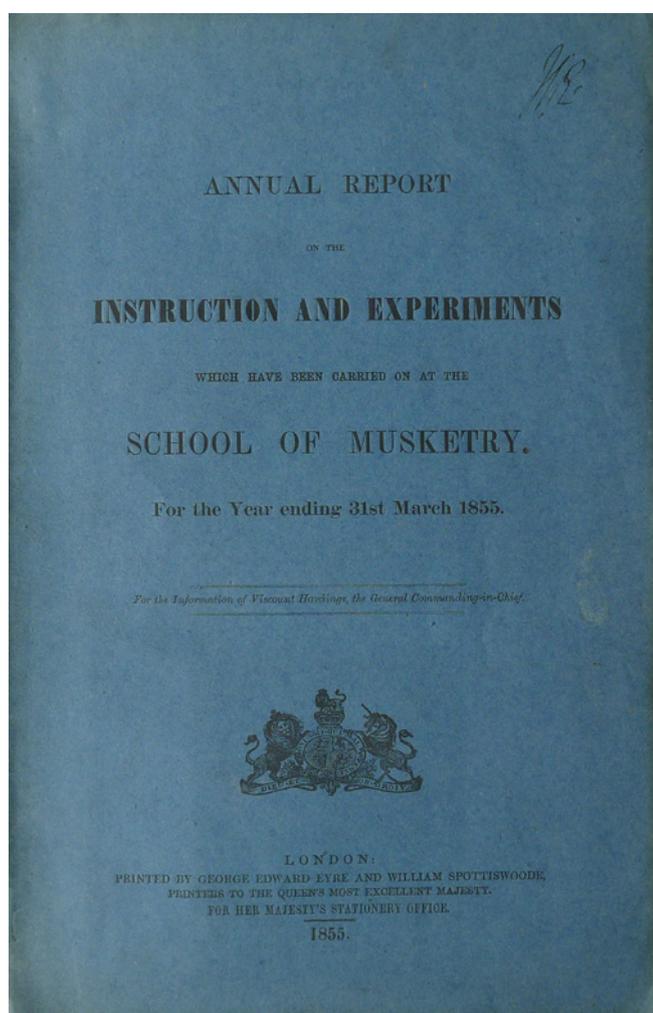
INSTRUCTION AND EXPERIMENTS

WHICH HAVE BEEN CARRIED ON AT THE

SCHOOL OF MUSKETRY

For the Year ending 31st March 1855

For the Information of Viscount Hardinge, the General Commanding-in-Chief



This being my first Annual Report, I will preface it by a few remarks on the creation and formation of the School of Musketry, before I proceed to a review of its progress and organization.

The principles and details connected with the system of instruction are so fully explained in the book of "Instruction of Musketry", and its appendix, that it will only be necessary I should very briefly notice some of the leading features, with the results, as shown by statistics very carefully recorded in the books and journal of the establishment.

In April 1853, I was honoured by his Lordship Commanding-in-Chief with the offer of my present appointment, an offer which I gladly accepted.

I lost no time in making myself acquainted with the different laws relative to instruction and practice of musketry; and having, as far as possible, read whatever had been written, whether at home or abroad, by persons qualified to instruct in this particular branch, I studied to become acquainted with the nature and working of the several systems, especially in those countries which have been found in advance of us, in training to the use of the rifle.

I found there were many points, connected with the theory and practice of shooting, in other armies, which it was clearly wise to copy; points which to us may appear mere matters of speculation and theory, but which with them have long been in active operation.

I mean no disparagement to our previous system of instruction on this head; it has been as good as public opinion demanded; as good, probably, as the nature of the old musket required; but it was very evident, that our army was far in arrear of that careful and uniform instruction and training in musketry which for many years had been carried on in some of the very best continental armies.

In proportion as I myself became instructed on the subject, the more sensible I became of the advantage to be derived from a general and careful system of training. At the same time, however, I was enabled more clearly to perceive the difficulties which prejudice would raise to an establishment so novel in this country, its character and intentions; prejudice which my own imperfect knowledge of the subject, when I first entered on my duties, enables me perfectly to understand and make allowance for.

A book of Instruction in Musketry having been approved, was promulgated by general order on the 23d February 1854, to insure a uniform system of training throughout the army.

About this time arrangements were made to establish an officers' mess for 20 members, which was duly equipped and opened on the 24th April 1854.

Having brought to a close all I proposed to say on the formation of this establishment, I now proceed to notice the progress made during the first year, viz., that ending 31st March 1855, under the following heads:—

Instruction and Experiments; which latter, however, embrace a longer period.

The information must of necessity be almost entirely statistical.

In order to circulate the system of instruction, and to prepare officers and non-commissioned officers as instructors of musketry in their several battalions, detachments, composed of one officer, one serjeant, and eight rank and file, were sent to the establishment from time to time.

The first party of detachments arrived early in April 1854; from which period the opening of the establishment as a normal school of instruction in musketry may date.

It was soon found that the infantry platoon exercise, which had been several times altered to meet the changes from "flint" to "percussion," and again to "rifle musket," was ill adapted for exercise with the improved rifle arms. A new platoon exercise was therefore prepared, and carefully tested at the School of Musketry, by which the loading was facilitated, and the position of the soldier in the several motions rendered more easy and natural; far greater steadiness in firing being thus insured.

The alterations made consisted:

- 1st In the position of the rifle when loading;
- 2d In the position of the soldier when the rifle is held at the "present," standing or kneeling.

The difference in these points will best be described, by placing in juxtaposition the leading features of the old and new platoon exercise.

1st Position of the rifle when loading

OLD

When loading, the firelock was placed on the ground at the outside of the *left leg* for the *front rank*, and inside for the *rear rank*, in a slanting direction, so that the powder when poured into the barrel was liable to lodge on one side of it, thus adding to the fouling, and obstructing the loading.

The loading standing required to be taught to the recruit, first as front rank and then as rear rank, the position of firelock being different for both ranks.

NEW

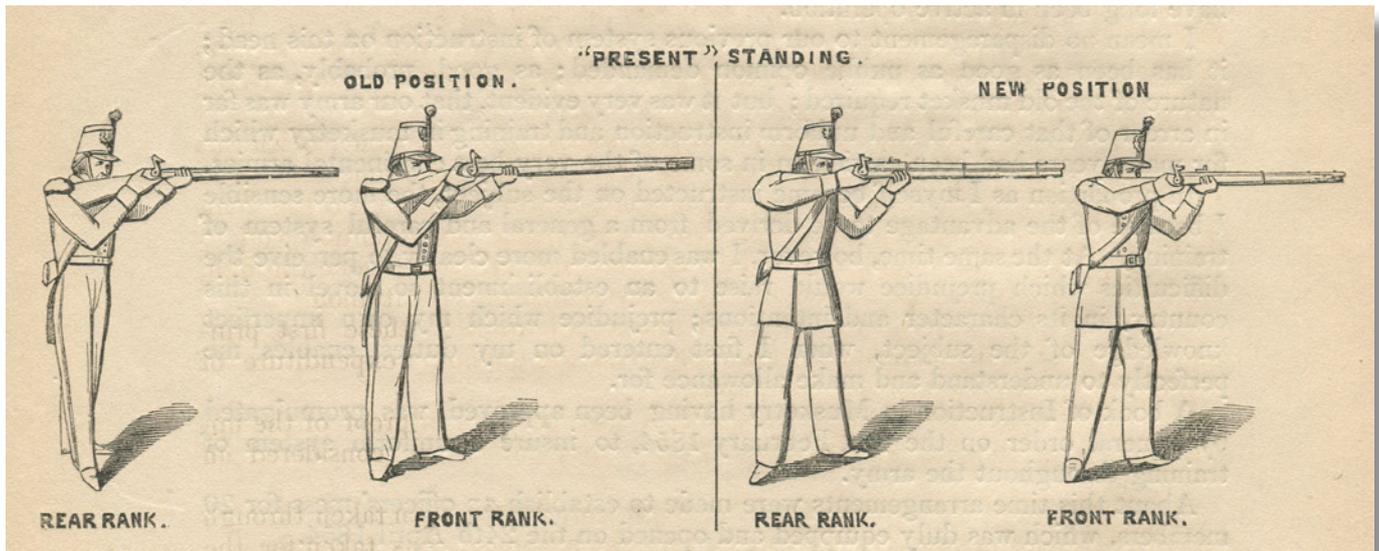
When loading, the firelock is placed on the ground six inches in front of the centre of the body, and the barrel kept perpendicular. In this position *the powder* when poured into the barrel is less likely to stick to the sides.

The manipulation, by being more minutely detailed into motions, is sooner acquired, and which, when combined in regular order, tend materially to expedite the loading.

Several motions are dispensed with, and the loading standing is applicable to either rank

2d *Position of the soldier when the rifle is at the "present."*

The following drawings will best convey the comparative merits of the old and new positions.



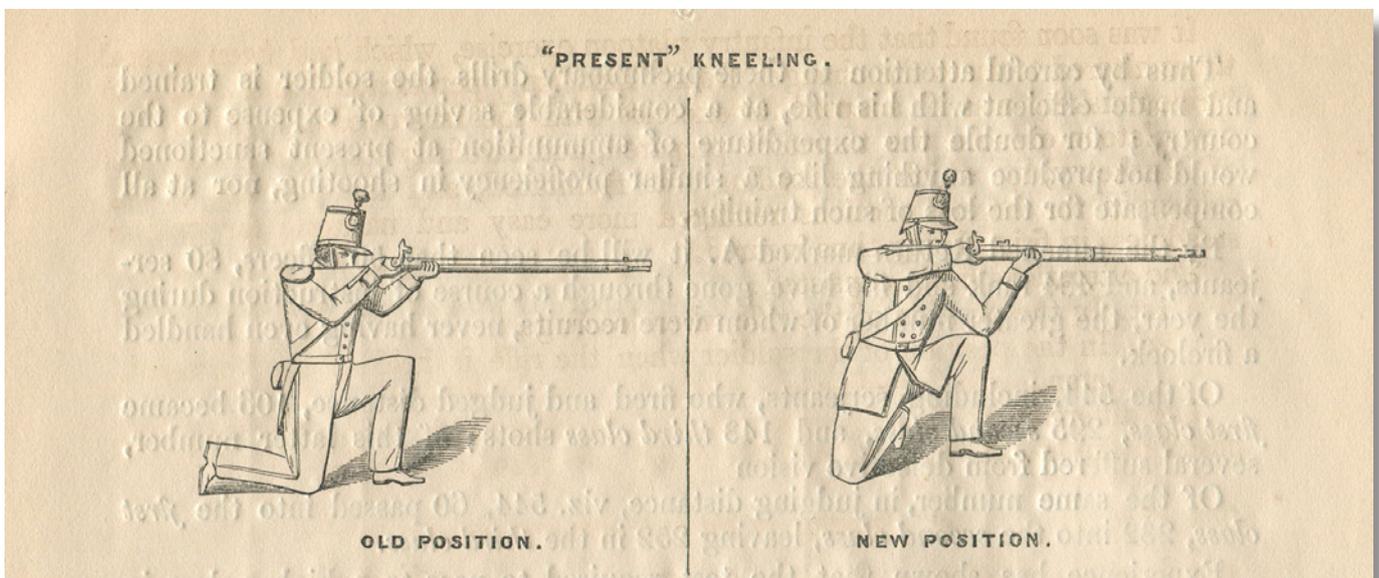
OLD

NEW

It will be seen, that the right arm, being kept so close to the body, is in a position of constraint, and does not offer a proper base of resistance to the recoil.

The feet of the rear rank man are in such a position that the least motion throws him off his balance, more particularly at the moment of firing, when the greatest firmness is required.

Here it will be seen, that the right arm is so placed as to embrace the butt, and at the same time to offer the greatest resistance to the recoil. The body and feet are in such positions as will insure firmness when firing, especially in platoon.



OLD

NEW

In this position the body has no base to rest upon, and in coming to the "present," the firelock being on the right side, the centre of gravity is on that side, and the balance is preserved with difficulty; the position therefore is one of the most unsteady possible.

By this figure it will be seen that at the "present" the body rests on a firm triangular basis; the left elbow supported by the left knee affords a steady rest for the firelock, and secures the greatest precision in firing; the body being lower is also less exposed.

The words of command which had for some time past been in use for rifle corps, being shorter, were substituted.

This new exercise is applicable to all troops, whether armed with the common or rifle musket, having long or short barrels; and thus insures uniformity throughout the army. It was approved and published in June 1854.

It having been decided about this time that the infantry generally should be armed with the rifle musket, it became obviously necessary that the troops to armed should be subjected to a course of careful training, without which the rifle musket, so far from being an improvement, would act as an incentive for the soldier to expend his ammunition uselessly at long ranges, causing him to rely rather on the efficiency of a weapon he could not use than on the stamina and good discipline which have hitherto been the main stay of the British Army.

It may be here necessary to state, that the system of instruction carried out at the School of Musketry is based on that which has for some time existed in all those countries which have been before hand in the adoption of the long range musket, the principal feature of this system being the attention paid to the *preliminary drills* and *theoretical instruction* which are to be gone through, not only by the recruits, but annually by every soldier of the battalion.

It has been found that, by careful and minute attention to these first principles, the maximum efficiency in shooting, with the minimum expenditure of ammunition, can with certainty be attained.

I will give one instance out of many which may be cited in proof of the importance of preliminary drills; their utility may almost be considered an axiom.

A detachment of nine men of the 97th Regiment, having been taken through a single course of preliminary training at this establishment, was taken for the first time to fire ball; the result of the first three practices, at which the men fired in heavy marching order with fixed bayonets, against a target six feet by two feet, is here detailed, and speaks for itself.

At 100 yards, the result of four rounds per man was at the rate of 69½ per cent.

At 150 yards, the result of four rounds per man was at the rate of 59½ per cent.

At 200 yards, the result of four rounds per man was at the rate of 69½ per cent.

At the last-named distance the hits were nearly all in the centre, viz., in a circle of two feet diameter, giving a figure, representing the quality of their shooting, of 5.33 points per man out of the four shots fired.

This party, with the exception of the serjeant (an old soldier, and the worst shot), was composed of recruits whose average service was four months, and who had never in their lives fired from any fire-arm.

Thus by careful attention to these preliminary drills the soldier is trained and made efficient with his rifle, at a considerable saving of expense to the country; for double the expenditure of ammunition at present sanctioned would not produce anything like a similar proficiency in shooting, nor at all compensate for the loss of such training.

50 officers, 80 serjeants, and 464 rank and file have gone through a course of instruction during the year, the greater number of whom were recruits, never having even handled a firelock.

Of the 544, including serjeants, who fired and judged distance, 106 became *first class*, 295 *second class*, and 143 *third class* shots; of this latter number, several suffered from defective vision.

Of the same number, in judging distance, viz. 544, 60 passed into the *first class*, 232 into the *second class*, leaving 252 in the *third class*.

Experience has shown that the test required to pass to a higher class in judging distance is severer than it need be; this has of course reduced the number of men in the first and second classes in this practice. I propose submitting for approval an alteration which will render the test less severe, while at the same time sufficient accuracy in estimating distances for all practical purposes will be maintained.

I feel safe in saying that as regards physical and intellectual development these 544 men were below rather than above the average standard of the infantry generally.

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If, therefore, the results here recorded can be attained by a single course of drill and practice, it may fairly be concluded that a far greater efficiency may be attained in the several battalions by a steady and uniform adherence *annually* to the system now in force.

I need hardly add, that trifling rewards, say one penny a day extra, with some distinguishing badge for the best marksmen in each battalion, would tend much to stimulate individual exertion, which in the aggregate would produce an efficiency never hitherto even contemplated.

I must remark that the selection of both officers, non-commissioned officers, and men has in many instances been very far from satisfactory, and must have had a direct tendency to defeat the object for which they were sent to this establishment. This I attribute in a great measure to the extraordinary demand for officers and men for active service.

I have pleasure in stating, however, that I have noticed very great intelligence and anxiety on the part of most of the privates to acquire a knowledge of the theory as well as practice of rifle shooting.

The officers and non-commissioned officers, with some exceptions, and many of the privates, are capable of rendering essential service to their regiments, should their efforts meet with encouragement from the commanding officers.

Experiments. - Experiments made on arms and ammunition have been conducted and the results recorded on a plan not hitherto practised in this country, and which, while it is calculated to ensure the most strict impartiality in the trials, at the same time reduces the test to a value represented by a figure, the merit of the arm or projectile being thus ascertained, and not that of the individual who may fire in the trial.

When it is considered that the School of Musketry has struggled, not only against the ordinary difficulties incidental to all new establishments, but against a strong flood of prejudice, I venture to hope that his Lordship Commanding-in-Chief may consider that enough has been done to show a gradual progress in the right direction, and that the results are sufficiently satisfactory to induce a steady perseverance in a system, which, when fully developed, cannot fail, in connexion with the improved arms, to double the efficiency of our infantry.

I cannot conclude this Report without expressing the high sense I entertain of the value of the services of the several officers of the permanent staff of this establishment, who have been unceasing in their efforts to assist me in giving full effect to the views and intentions of his Lordship Commanding-in-Chief.

CHARLES HAY,
Colonel Commandant,

School of Musketry,
Hythe, 6th July 1855

'Pickets' versus *Bullets*

from Chambers's Journal, 29 January 1859

The old regulation-musket, known in the army by the affectionate sobriquet of 'Brown Bess,' would sometimes, though not always, carry a bullet with a certain degree of precision about a hundred yards; but beyond that very moderate distance, no one, however expert, could make sure of hitting even a barn-door; the aim of the individual who pulled the trigger; supposing that the state of his nerves permitted him to take aim at all - which a very distinguished general, not very long since deceased, declared to be not invariably the case - having very little to do with the direction taken by the projectile. On momentous occasions, when it was important that shots should not be thrown away, the old instructions were: 'Reserve your fire, my lads, till you can see the whites of the fellows' eyes; then aim low, and blaze away as fast as you can.' That is, nobody thought of doing much execution except at very close quarters; but, like Molière's physician, nous avons changé tout cela; and science has furnished us with a musket with which we may begin to blaze away at our adversaries almost as soon as we can see that they are adversaries, and with which a good shot may almost make sure of sending a 'picket' to its mark at something like a thousand yards. The modern picket, therefore - which is the American name for a Minié rifle-ball - is a very much more formidable missile than the old-fashioned bullet; but, whatever may be its advantages over its predecessor as to accuracy of flight, length of range, and penetrating power, there is one disadvantage attending the general employment of the rifled musket from which it is fired. It is not sufficient to substitute for Brown Bess a superior description of firearm; but in order to enable our soldiers to use their weapons with effect, careful training and much practice are requisite, so that the instructing of a recruit is a much more complicated affair than it used to be. We have lately had an opportunity of seeing a great many men trained to the use of the new arm; and it may interest the reader to learn something of the process by which the lad who has perhaps never fired a shot in his life, is converted into a more or less skilful rifleman. There are certain moral results, too, which may be expected to flow from the substitution of a scientifically constructed weapon for the clumsy Brown Bess, and which it is by no means uninteresting to note.

In the first place, then, it is necessary that the future marksman should be taught to judge, with a considerable degree of accuracy, the distance he is from the object he is to fire at; for, unless he can ascertain that, the new rifle will be scarcely more destructive in his hands than the old musket. The length of range is determined by the degree of elevation; and in order to get this correctly, a sight, the height of which is regulated according to a scale, is fixed in front of the lock; but it is obvious that the true distance must be known before the 'sight' can be properly adjusted, and nothing but practice can enable a man to ascertain this by the eye alone. To some it may appear difficult to teach men to judge, within a comparatively few yards, how far they are from an object placed at from one to nine hundred yards from them; and this, too, under every variety of circumstance, such as differences of level in the size and position of the intervening and surrounding objects, and, above all, in various atmospheric conditions, and amount of light; but if we reflect with what accuracy we habitually judge of such short distances or lengths, in yards, feet, and inches, as those, with which we commonly have to do, we shall readily believe that, with practice, the eye may be taught to serve us as faithfully even when it is a question as to scores and hundreds of yards; and experience shews this to be the case. There are, of course, some thick-skulled, non-observing fellows who can never be made to guess their distances correctly; but most of the men soon acquire a considerable facility in so doing, and in practice, it must be remembered that it is not necessary that every man should be quick at it; for a few sharp-eyed lads will leaven a whole lump of stupidity, and enable every one to adjust the 'sight' of his piece with sufficient accuracy.

Instruction in judging distances is managed in this way: The class is drawn up on some open space of ground, and two or more of their number are sent on with a red flag, the men being made to face in the contrary direction to that in which the flag is being carried, so that they shall not be able to count steps, or in any other irregular manner assist themselves in forming a judgment of the distance traversed, which must be decided by the eye alone. As soon as the bearers of the red flag stop, the class faces about, and the sergeant, standing six or seven paces in front of his men, so as to be out of hearing, calls out each

man separately and asks him how far he thinks he is from it. His answer is put against his name in a book ruled for the purpose, and when all have guessed, the true distance is ascertained by measurement - every man getting so many marks or points set down to him, according to the accuracy of his answer - that is, provided he guesses within a certain number of yards of the truth; for unless he does so, he gets no point at all. If the men are out judging distances for the first time, the differences of opinion will be very wide, private Murphy perhaps thinking that he is full five hundred yards from the object that private Milligan, with great pretension to exactness, declares to be no more than three hundred and twenty-five yards distant; but after a few mornings practice, Brown and Jones, Murphy and Milligan, come to see things much more in the same light, and, their differences are reduced to a small number of yards. In short, most men soon manage to get the number of points they should obtain before being passed on to a more advanced class of students in the art of shooting with the Enfield rifle.

But besides being taught to judge distances, the men have another course of instruction to undergo, before they are put into the first class for ball-practice at the target. They must be taught the principles on which accuracy of aim depends with the peculiar weapon they are to use. For this purpose, stands - something like the stands used to support an engineer's level or the camera of the photographer - are set up at different distances from the target; and the learner, resting his musket on one of these, adjusts the aim to the best of his judgment. It is so contrived that the piece will remain on the stand as pointed, so that the instructor can show the pupil any error that he may have made, and can make him change the aim either horizontally or vertically as the case requires. When he has been made to level his musket with tolerable accuracy in this way, the pupil is ready to commence firing at the target in the first class; that is, among those who are to fire at a distance of from 100 up to 300 yards. The Enfield rifle being sighted to 900 yards, three classes have been established for practice - namely, of those in the first class, who fire from 100 to 300 yards; of those in the second class, firing from 300 up to 600 yards; and of those in the third class, who fire from 600 to 900 yards; every man being obliged to obtain so many points in

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the first class before he can pass into the second, and in the second before he can pass into the third. As soon as he has obtained the required number of points in the last class, his course of instruction is complete. All that teaching can do for him has been done, and, unless he be one of those unfortunate mortals, born fumlbers, and totally without manual dexterity, he is probably an average marksman. Only a decided genius for the thing will make him a really good shot.

Ball-practice is thus regulated. The class is drawn up in line, a sergeant standing by with book and pencil, as when the men are being made to judge distances. At the word, each man steps forward in succession, delivers his fire, and, accordingly as he has made a good, bad, or middling shot, gets good or bad marks set against his name in the register of the firing. If he misses the target altogether, no signal is made by the marker at the butt, and he gets a 'miss' put against his name; but if he makes a hit, the marker signals by different flags whether the hit is an, 'outer' - that is, outside the outer ring - a 'centre' - or within the outer ring - or a bull's-eye. An outer counts one point; a centre, two; and a bull's-eye, three. It will be proper to observe that the width of the target employed varies in proportion to the distance from which the practice is carried on. No change, however, is made in the height of the target, that remaining always about the height of a man. At first, one target, two feet wide by six high - about the size of one man - is used, and several of these targets are placed side by side as the distance becomes greater. At nine hundred yards, eight targets are employed, representing a front of about eight men, and the bull's-eye is made four feet in diameter. Nor at such a distance as half a mile is a bull's-eye of that diameter by any means easy to hit; for it is obvious that the smallest deviation from the correct line of flight becomes of immense importance when prolonged through such a distance as that. Moreover the effect of the wind on the

flight of the ball, at these long ranges, is found to be very great. A sergeant - who, as we had many opportunities of observing, is a capital shot - assured us, that when firing at the 900 yards' range during a high wind, he found his first ball driven nearly fourteen feet out of the correct course. In his subsequent shots, he allowed that much in his aim, and then succeeded in hitting the bull's-eye several times running.

For the first few hundred yards, the Enfield rifle is fired standing, like the old musket; but at greater distances, it is better to kneel if the object fired at is placed on the same level, or the great elevation given to the piece would require it to be held too low on the shoulder for steadiness. In order to shoot well kneeling, the shooter should plant him self firmly on the right heel, rest his left elbow on his left knee, and so get a capital rest for his piece in the left hand. Another mode of getting a steady aim, particularly when there is much wind - but one which can of course only be adopted under peculiar circumstances, is to lie at full length on the back, with one's 'feet to the foe' or target. The muzzle of the rifle rests on the toes of the right foot, the butt is pressed to the right thigh by the left hand, which is brought across the stomach, and the trigger is pulled as usual by the right hand, the head being raised three or four inches from the ground in order to take aim. Excellent shots are generally made in this curious position, and it may be very advantageously adopted by the sharpshooter who wishes to be particularly careful of his own person, as well as to make good shots. A sod, a few inches thick, is a complete rampart to a man lying on his back, and he could not well be hit by anything but a chance shell, for he would not expose his head and shoulders even when in the act of firing, as he must do in a greater or less degree if he lay on his stomach.

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at 300 yards' distance.*

In ordinary light-infantry skirmishing, the men are extended to the right and left in pairs at about a dozen paces apart. One man fires his piece, and stepping a pace or two aside, reloads, while his companion advances before him, and fires in his turn, and so on - each man alternately advancing to fire and reloading, so long as the forward movement lasts, the 'retiring' being conducted on precisely the same principles. Now, even this drill is carried on with ball-cartridge, so that some idea may be formed of the effect likely to be produced by well-trained men in this kind of fighting, when armed with our improved weapons. Ten or a dozen single targets, of the usual size - two feet wide by six high - are placed in a line, with the proper intervals between them, thus representing a line of the enemy's skirmishers; and a party of men, extended in pairs as above described, fire at them with ball-cartridge, advancing and retiring as if in the presence of an enemy. The men we saw at this light-infantry drill were a party of about twenty of the Royal Engineers, armed with the Lancaster rifle, which is considered to be a better weapon even than the Enfield; but the number of misses compared with the hits, even under these favourable circumstances, plainly showed how much the difficulty of taking a correct aim is increased by this constant shifting of one's ground. Clearly, in the good old days of Brown Bess, skirmishing in this fashion could not have been very destructive to life. At 400 yards, the hits were very few; but as the line of skirmishers advanced, they of course became more frequent, until, at 100 or 150 yards, there were more hits than misses. In determining the average number of shots which may be expected to take effect, however, we must take into consideration a circumstance which would assuredly exercise a strong perturbing influence. If the targets were armed with Enfield or Lancaster rifles, and were returning picket for picket, the aim would certainly not be so accurate. Soldiers soon become something given to fatalism; and where bullets are singing and whizzing about their ears, they are enabled to take things all the more coolly if they have some faith in the doctrine that 'every bullet has its billet.' Without impugning any one's courage, then, we may be permitted to believe that many more bullets are billeted for the bull's-eye, whatever that may chance to be, when they are all flying in one direction. But

besides this element of disturbance, there is another difficulty which must be taken into account in the calculation. When one party is skirmishing, the other party is skirmishing too; so that the difficulty of making a good shot is increased by the motion of the object fired at; and this element must be allowed for before we can calculate, from the results of target-practice, the probable percentage of hits. Perhaps the most striking result of the Enfield rifle-firing - at least to us - was the effect of a volley, or rather of a series of volleys, fired by twenty men at ten targets, placed close together at 300 yards' distance. The balls pattered like hail upon the iron targets; and it is clear that many a gallant fellow in future will 'lose the number of his mess' before he is near enough to the foe to see the white of his eyes.

But the change from the hap-hazard, load-and-fire-as-fast-as-you-can system of shooting with Brown Bess, to the skilful handling of the rifled musket, can hardly fail to have a very desirable influence on the morale of the soldier. The elaborate training the men now undergo, and the emulation excited among them, must have a considerable effect on their character and habits; and therefore, even in an educational point of view, we gain largely by the improvement in our weapons of war. No one can doubt that this will be the case who passes a few hours watching a class at target-practice, and has observed how lively an interest the men take in the work, particularly when compared with the bored look of the same men engaged in field-drill. For the first time since the days when powder and ball superseded the national bow and arrow, the English soldier has some employment connected with his profession in which he can take an interest, irrespective of mere drill; in which all but hopeless noodles - every day less commonly found among army recruits as elsewhere - are soon perfect; and which, if persisted in too unremittingly, more than, any one thing disgusts the soldier with his calling. If no other advantage resulted from the relegation of Brown Bess to the United Service Museum, and other dépôts of military curiosities, we should be amply compensated for the increased cost of the superior description of musket, and the extra expense of the ammunition required for practice. Any stinginess, indeed, in this latter item - ammunition - will necessarily interfere with the progress made by the men as marksmen, and

will very materially diminish the other advantages to be derived from the reformation in musketry. Enthusiasm must not be cramped by the denial of a cartridge.

It is well known that in those regiments in which such sports as cricket and foot-ball are encouraged, the men are both more healthy and better conducted than in those in which the men are accustomed to seek recreation in the public-house alone. Target-practice, therefore, may be easily made a pastime as well as a duty; and the men will take to it as willingly as Swiss peasants to practice at the village butt, or as idle fellow's to sparrow and pigeon shooting. We must expect to find black sheep in every flock, and therefore it is not surprising that some men grumble at the extra trouble and time demanded by so much ball-practice; but, generally speaking, they appear to take an interest in what they are about, which is quite refreshing to behold; and do their best, not only to win the prizes offered to the best shots, but to surpass their comrades - the 'chaffing' which constantly goes on at the expense of the bad shots, being in itself sufficient proof of the interest excited. The rewards for good shooting are considerable, reference being had to the moderate scale of a soldier's pay. A penny, twopence, threepence, or fourpence per day extra pay, may be obtained by the most expert marksmen in the company or regiment; and a more chivalrous feeling is appealed to by the giving of a decoration to the best shot, in the shape of a pair of crossed muskets worked in gold embroidery on the sleeve and cap of the prizemen. This extra pay, and this honourable mark - as we understand - the marksman retains for a certain period, and then must win them anew, or, like the holder of Dockett's badge amongst the water-men, yield them up to the better shot.

The writer, a short time since, was witness of a trial of skill between two little buglers, which will serve to shew the excellent moral effect which the new system of teaching men to use their arms skilfully will have on them. Two parties had finished the regulation allowance of ammunition for the day, and there being four spare cartridges left, the buglers - evidently what the French call *enfants de troupe*, children of the regiment - asked if they might "av a shot." Neither of the little fellows had ever fired a musket loaded with ball-cartridge before, and much delighted they were at

the opportunity of doing so; but the interest excited was not confined to them; the soldiers and the civilian on-lookers being equally anxious to see which would prove himself the better man, or, rather, boy. The distance happened to be two hundred yards; and number one, the biggest boy, fired his first shot, and got an 'outer,' counting one point. This was good work; and the party to which number two belonged thought themselves beaten; but their champion, with his first shot, got a 'centre,' counting two points. Then number one fired again, getting another 'outer,' or one point; and unless number two made at least a hit, it was a dead, heat. But number two, taking a very deliberate aim with the musket he had barely strength enough to hold out, again got a 'centre,' or two points, thus beating his opponent by two to one, whereupon his party cheered; and he, taking what is known amongst the genus gamin as 'a sight' at his adversary, danced round him like a little cannibal. Here, then, we have proof of the existence of a much healthier state of feeling than that which we find usually prevalent among soldiers who are undergoing the training incident to their calling. In truth, facing right, left, and about; marching and counter-marching, in slow time or quick like an automaton, at the will of another, must inevitably be dreary work. But the soldier has now an occupation in which he ceases to be a mere machine, and which brings his faculties into play as well as his muscles.

When guard-duty is light, as in many places it must be, a great deal of time hangs heavily on the soldier's hands - always supposing, that he is not over-drilled - and his mind is but too often a mere blank. He therefore naturally seeks at the public-house or beer-shop for the amusement and excitement which is a necessity, under one form or another, for every human being; and which, if not to be obtained innocently, will assuredly be obtained at the expense of both health and morals. Health suffers too, as it has of late been conclusively shewn, by the listlessness and weariness inseparable from the monotonous existence of the soldier; and it is of the highest importance, therefore, to find occupation for his mind, even in a purely sanitary point of view. Of course, it would be utterly absurd to expect that the serious evils - serious, if only on the low ground that the efficiency of the army is thereby diminished, and its cost increased - will be eradicated by anything

which the best intentioned rulers can adopt; but giving the men an interesting occupation will certainly aid in allaying them. It will help greatly the good effects produced by the improved barrack accommodation, the better regulation of canteens, and the establishment of regimental schools and libraries.

We have already remarked, that the pecuniary rewards offered by the government as an inducement to the men to make themselves skilful marksmen, are considerable, having regard to the scale of the soldier's pay; but if we may form an opinion from our limited experience, the spirit of rivalry will be no less efficacious than the hope of winning the pecuniary rewards, in keeping alive amongst the men that spirit of good-will without which the most elaborate and patient training must remain comparatively valueless. After all, the age we live in is by no means so prosaic as its detractors would

have us believe; numbers then are still
Seeking the bubble reputation

Even in the cannon's mouth; and admittance into the purely chivalric order the Victoria Cross is as eagerly sought for by all ranks of fighting-men as it could have been in the days of Coeur-de-Lion himself. To become one of the best shots in the British army is no mean object of ambition for the young soldier to propose to himself and, to borrow a metaphor from the Chancellor of the Exchequer, the badge which proclaims him to be so, may be justly termed 'the Blue Ribbon' of the ranks.

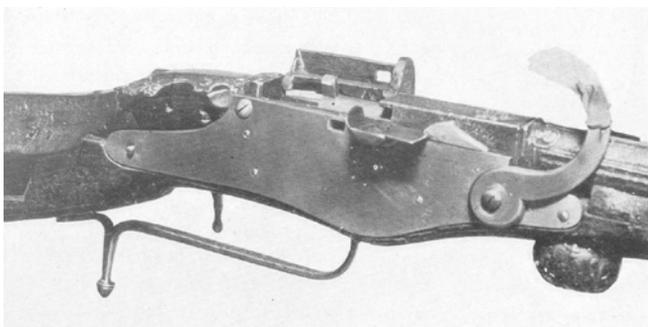
The Match Rifle - Past And Present

from Glasgow Herald, Monday, 13 June 1881

The following article published in the Scottish newspaper, the Glasgow Herald, provides an interesting perspective of the development of the match rifle up to 1881. Footnotes have been added by David Minshall, providing additional historical information. Contemporary advertising for some of the gunmakers featured has also been added.

The Match Rifle - Past And Present

The present season may be said to commence a new era in the history of match rifle shooting, for the old muzzle-loader, which has done such good service in its day, has been discarded for the breech-loader. There is a very general belief that the invention of breech-loading rifle's is of comparatively recent date, and those who hold that opinion may be surprised to know that in the early part of the sixteenth century breech-loading muskets were not unknown; and if we are not mistaken, there is in the Tower Armoury in London a breech-loading arquebus, dated 1537, ornamented with a crowned Tudor rose and the initials H.R., and is said to have belonged to King Henry VIII¹. The invention, however, does not seem to have been followed out, and we hear nothing more



1. A Breech Action of 1537. The breech-closing arrangement of this arquebus, which belonged to Henry VIII resembles the Snider. In the breech can be seen the moveable chamber made of metal – in fact a cartridge when loaded ready for insertion. (*Rifles and Ammunition*. H. Ommundsen and E.H. Robinson. Cassell and Company, 1915).

of the breech-loader, till the present century when the continuous improvement in the manufacture of small-arms led to much greater attention being paid to them. So late as the Crimean War a military breech-loader was unknown, and the needle-gun of the Prussians and the Chassepot of the French may be said to be the pre-cursors of the rifles we now possess. It is curious to observe the feeling which the introduction of such a weapon had on the military mind. In 1860, when the necessity for doing something to provide a breech-loading rifle was beginning to dawn on the minds of the military authorities, the Duke of Cambridge gave to the National Rifle Association a prize of £50 for shooting by breech-loaders. Whether this offer was only an expression of a desire to further the improvement of this weapon, or an official declaration that the Government were even then bestirring themselves with the view of placing a thoroughly reliable weapon in the hands of the soldiers, we do not know, but four years after this we have it stated that His Royal Highness was reported to have been sceptical as to the propriety of abandoning the muzzle-loader, and that to give ordinary soldiers breech-loaders would be “a grievous and lamentable mistake.” And yet at this time a committee was sitting considering various systems for converting the then service arm into a breech-loader. In March, 1865, General Lefroy's Committee reported in favour of the Snider breech-action, and in the autumn of the same year the conversion of the Enfield into a breech-loader on the system invented by the late Mr Snider was determined upon. The Austro-Prussian war quickened the movement for an arm of greater range and more precision, and in 1869 Colonel Fletcher's Committee reported in favour of the Henry small-bore² barrel with the Martini breech-action, and, as is well known, this is now the arm of the regular army.

2. Small-bore is a contemporary 19th Century term used to differentiate the generally .45 calibre target rifles from the large-bore (.577) service rifle of the time.

Our object in thus noticing the early steps taken in this movement is not to follow out the fortunes of the military breech-loader but rather to point out that alongside of these investigations the match rifle for accurate shooting at long distances was gradually evolved, until it was found that the latter was fairly outstripping the former and required to be considered as a separate weapon. For many years it may be said that there was little improvement upon this species of rifle, and little was done to apply the breech-loading principle to it. Even in these days, however, there were exceptional cases where an attempt was made to step out, in advance of the age. We remember in 1874 seeing Mr D. Fraser of Edinburgh, in the Scotch Eight competitions at Lanark, using a small-bore Henry rifle which he had got constructed on the breech-loading principle, but having an outside hammer. These days of cleaning out after every shot had not then dawned on the world³, and Mr Fraser fired all his shots without any more cleaning out than was done with the muzzle-loader. It is noticeable, however, that at that time it was deemed rather a dangerous weapon, and though he was allowed to finish the competition, yet, though eligible for the position of a reserve man in the Elcho team, he was passed by, another man being placed in his shoes. Thus did the Executive at that time give their opinion of the value of a breech-loader in a match such as that for the Elcho Shield⁴. From that time onward till 1876 little was done in this country to improve the match rifle; but our cousins in America, always ready to take a hint, saw the importance of the movement originated in 1874⁵, and began to utilise their inventive skill as to a suitable breech-action for this description of rifle. They had before their eyes the Henry, the Snider, and the Martini actions, as well as those of

other inventors, but their gunmakers seem to have clung to the idea of retaining the outside hammer, as all the earlier rifles were thus fitted. To the Remington, which was the first in the field, was attached a heavy action, having the hammer working on a pivot in the centre of the breech shoes. The Sharp and the Ballard, which also appeared about the same time, followed in the same direction. There was, however, one important point in which they deviated from the example set them in this country. When the Small-Arms Committee was sitting, a practical engineer said, after examining the various rifles submitted, that any gunmaker who should take the five-grooved navv Snider and make a small-bore rifle on that principle would in all probability produce a weapon which would give the best results as to precision. Whether the Americans had ever heard of the saying we have no means of knowing, but certain it is that they adopted the principle of the shallow-groove Snider rifling for their match weapons, and used with it a slow burning powder. This enabled them to use a larger charge, while the recoil on the firer was not so severe as in the case of the English small-bore rifle. The makers of these had all, for some reason best known to themselves, pinned their faith to the deep groove as exhibited in the Henry barrel adopted by Government, and using with it a quick-burning powder. Of, course various slight improvements were now and again made on the muzzle-loaders, but this was practically the condition of matters up to 1875⁶. In June of that year a team of six Americans visited Ireland, and shot against six Irishmen at Dollymount, near Dublin, with the result that the Irish were beaten on their own ground, the weapons used being breech-loaders by the Americans and muzzle-loaders by the Irish⁷. Being in the United Kingdom, the American team paid a visit to

3. Cleaning between shots seems to have been popularised by the success of the American Teams in the series of international long range matches at Creedmoor (USA) and Dollymount (Ireland), 1874-1880.
4. The Elcho Shield match was first fired in 1862, resulting in a challenge between Scotland and England. Lord Elcho sponsored the prize. Shooting was between team of 8, firing at 800, 900 and 1000 yards. Ireland was admitted to the competition in 1865.

5. In 1873, and following their first win in the Elcho Shield match, Ireland laid a challenge to the riflemen of America for a long range rifle match. This was accepted by the Amateur Rifle Club of New York. Under the terms of the match, rifles used were to be of bona fide manufacture of each nation. Ireland used Rigby muzzle loaders, and rising to the challenge Sharps and Remington manufactured breech loading rifles for the American team. The match took place at Creedmoor in 1874 and resulted in a victory for the American team.

Wimbledon in July, and gave the Britons the first opportunity of seeing rifles which had been so greatly lauded. We remember well the not over complimentary remarks that were then made by some as to the careful manner in which the “Yankees,” as they were called, cleaned out their rifles. Shooting men will have a vivid recollection of the “wet year,” and as our cousins did not at all shine in the competitions in which they, took a part, a corresponding feeling against the breech-loader and in favour of the muzzle-loader seemed to rise up and take possession of their minds. This was all the more assisted by the fact that the Irish were this year the winners of the Elcho match; and the Americans, having beat the Irish at Dollymount, laid claim to be the champion shots of the world, even though it was shown by their shooting at Wimbledon was inferior to that of the Britons. Before the team left the Common that year an invitation was given to the British riflemen to come over to America and contest the honours of championship. This invitation was renewed when the “Palma” was inaugurated in connection with the centennial celebrations in 1876. On that occasion no fewer than four different teams responded – these being from Scotland, Ireland, Canada, and Australia. As is well known the match took place; at Creedmoor on the 13th and 14th of September, 1876, and with the exception of the Americans all the teams were armed with muzzle loading rifles. It is also curious to observe that on the first day of the match the Scotch team took the lead, making a score of 1568 – being the largest that had up to that time ever been, made by a team at the three long-range distances. Next day however there was a change of targets and a change of wind, and though at 800 yards the Scotch team maintained their

6. William Metford’s shallow grooved rifling and hardened cylindrical bullets had in fact come to the attention of riflemen in 1865, with Sir Henry Halford’s win of the Cambridge Cup. This match was fired over two days with shooting at 1000 and 1100 yards, 15 shots at each range each day. John Rigby subsequently followed with a re-barreling programme utilising shallow grooving.
7. The American team used breech loading rifles by Remington and Sharps. The Irish team used muzzle loading rifles by John Rigby.

position, they broke down at the 900 yards to such a degree that the pull they made at the 1000 yards failed to redeem lost ground. The result was that the Americans gained over the two days, and were the winners of the “Palma,” their old opponents the Irish coming next with the Scotch team third. At this time of day it is curious to notice how little attention was paid to the character of the rifles used by the Americans, for Col. Macdonald, the captain of the Scotch team in his report makes no mention of this point but attributes the defeat to the inability of his team to gauge the peculiar wind which prevailed on that day, and to the fact that “a team shooting chiefly face-to-the-target position is handicapped to a considerable extent in a contest with teams that shoot from the back, particularly if there be any marked degree of wind.” It will thus be seen that there was still unlimited faith in the powers of the muzzle-loader, though in obedience to the dictum thus laid down a number of shots changed to the back position. Matters thus remained till 1877, when in response to the Americans, a British team was sent out to Creedmoor to try it luck. They fared no better than their predecessors of the previous year, and had to return leaving behind them the trophy for which they had crossed the Atlantic. Now, however, the eyes of the small-bore shots seem to have been opened to the superiority of the breech-loader as against the muzzle-loader, for in the report which was presented to the Council of the National Rifle Association by Col. Peel we find the following: - “To the small-bore men I would say – ‘Get a good back position, if you have not already adopted one; and treat your rifle scientifically, and try to get the best possible shooting out of it.’ . . . To the gunmaker I would say - Do not stop to discuss the merits of your respective muzzle-loaders, but, go with the times, and do not rest satisfied till you have produced a practical breech-loading rifle that will beat, all the muzzle-loaders and breech-loaders ever yet made.” And, again – “Whatever rifles may be used, the first thing to be done after picking the ten men to compose your team is to bring all the rifles together in the matter of sighting, so that they shall all have a common zero for elevation and wind, and that the minutes or degrees shall be precisely similar. . . . In a word, every rifle should be so exactly the counterpart of the rest that each man might be supposed to be shooting

practically with the same gun.” This was now the aim set before the gunmakers of this country. The Henry was allowed to lie dormant, but the Metford was made a breech-loading match rifle in 1878, the Farquharson breech – which was exhibited on the links of Irvine so early as 1870, and was the first to exhibit a breech-action with a concealed hammer – being purchased by Mr Gibbs, of Bristol, and applied to it. No alteration, however, was made on the bore of the rifle, and it still remains almost alone on the progressive system of rifling. The English seem to have profited by their American trip quicker than almost any of the other nationalities, for in the Elcho match of 1878 we find them all using breech-loaders, two being American rifles, the remaining six being Metfords, with two kinds of breech-action. The Irish, on the other hand, stuck to the muzzle-loader manufactured by their countryman Mr Rigby, while the Scotch team had no fewer than four different muzzle-loaders in use⁸. Even here the Irish conquered and gained the match a second time in succession, the English having entirely omitted the advice given by Col. Peel as to the necessity of sticking to one rifle. Their confidence thus strengthened in their



NRA Wimbledon programme, 1875

favourite arm, the Irish retained it for another year, and again appeared at Wimbledon armed with the Rigby. In the meantime English makers had not been idle, and during the year several makers who had in the previous year applied breech-actions to military rifles adapted them to the match rifle. Among these was the Deeley-Edge, which was applied to the Metford manufactured by Messrs Westley-Richards. It is heavy, and though it possesses the concealed hammer, is worked by an under-lever, which when the breech is opened exposes all the works below, and is thus liable to get choked with dust. Another action which made its appearance in 1878, and was now applied to the match rifle, was the Field, which retains the outside central hammer, works by a side lever, and is self-cocking. The outside hammer being exposed is an objection which nearly all inventors have tried to avoid. This action was attached to the Turner barrel, and along with the Deeley-Edge, the Farquharson-Metford, the Remington, and the Sharp was used by the members of the English team in the Elcho match in 1879. But here again our friends across the Border committed the mistake of having too many different rifles in the team – endeavouring to combine weapons of different construction, while, as pointed out by Colonel Peel, the aim should be to have each rifle the exact counterpart of the other. For thus setting aside the principal directions of their own executive officer the English team completely failed, and were the lowest in the list. The Irish were second; and, contrary to all expectation, the Scotch ran to the first place. Though somewhat slow in their movements, they had paid a little more

WESTLEY RICHARDS & CO., LIMITED,
 MANUFACTURERS OF THE
DEELEY-EDGE-METFORD RIFLE,

Having completed their arrangements, are prepared to supply METFORD Military and Match Rifles as under:—

DEELEY-EDGE METFORD SLIDING-BLOCK MILITARY RIFLE, for Target Practice ..	£ s. d.
Ditto, ditto, with extra set of Best Match Sights for "Any Rifle" Competitions ..	10 10 0
BEST BREECH-LOADING MATCH RIFLE, with Improved Action and Complete Set of Sights ..	16 16 0
BEST METFORD MUZZLE-LOADING MATCH RIFLE, with Sights complete ..	30 0 0
Ammunition supplied for any of the above Rifles, made with great accuracy.	25 0 0

THE RIFLING WORK HAS MR. METFORD'S CAREFUL SUPERVISION, AND EMBRACES HIS LATEST VIEWS.

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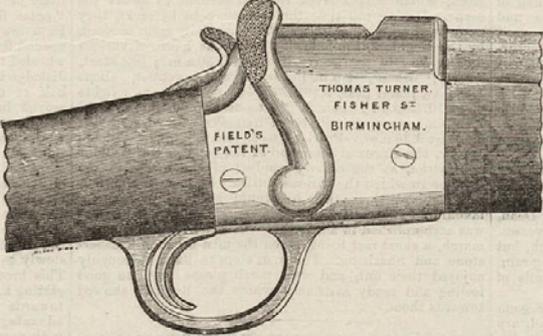
AGENTS:
 W H BALLARD, 170, NEW BOND ST., LONDON, W.
 WELCH & SCOTT, 2, MANCHESTER CHAMBERS,
 MARKET STREET, MANCHESTER.

Volunteer Service Gazette, 17 May 1879

8. The Scottish Team for the 1878 Elcho Shield used rifles by Gibbs (Metford), Ingram, McCririck and Rigby.

The Match Rifle

BREECH-LOADING RIFLES MANUFACTURED BY
THOMAS TURNER,
 FISHER STREET, BIRMINGHAM.
THE FIELD-TURNER RIFLE.



THOMAS TURNER,
 FISHER ST.
 BIRMINGHAM.

FIELD'S PATENT.

This Rifle has FIELD'S new Patent Sliding-block Action, which is acknowledged to be the handiest and neatest made. It gives a clear view through the barrel, and has an independent cocking arrangement, which also acts as an indicator, and may be worked like the cock of an ordinary Gun, or by the motion of opening the breech. All the working parts are exceedingly simple, and it is altogether one of the safest and strongest actions in existence.

FIELD-TURNER MILITARY BREECH-LOADING RIFLE.	
With THOMAS TURNER'S improved Rifling; shooting guaranteed equal to that of any existing Military Breech-Loader	8 8 0
With full Set of Sights complete; perfect accuracy guaranteed	17 10 0
MARTINI-HENRY RIFLE.	
Regulation Pattern, with all recent improvements, to pass Viewer's inspection	6 0 0
MARTINI-TURNER RIFLE.	
With THOMAS TURNER'S improved Rifling	7 7 0
SNIDER RIFLE.	
With THOMAS TURNER'S far-famed Iron Barrel	5 5 0

Manufacturer of Double and Single Express Rifles, 360, 400, 450, and 577 bores. Choke-bored Guns, Bock Rifles, &c.
 Five per cent. discount allowed for cash with order.
 LONDON AGENTS: WM. MOORE & GREY, 43, OLD BOND STREET, W.,
 Who have a Stock of Rifles on sale for cash.

Volunteer Service Gazette, 28 June 1879

attention to the points which were prominently set forth, as causes of defeat in previous years. With the exception of one man all had adopted the back position, but only two were furnished with breech-loaders – Farquharson-Metfords. The men had, however, worked hard together in preliminary trials, and, so far as was possible in the circumstances, they had come to understand each other's rifles and guide each other as a team. The result was a victory which only impressed them the more with the necessity of having a weapon superior to that in their possession, if they were to maintain the honourable position they had gained. In the course of the Wimbledon meeting, however, it was found that nearly all the best prizes for any rifles were taken by breech-loaders, and those interested in match-rifle shooting were driven to the conclusion that if success were to be obtained, the muzzle-loaders must be discarded. In the beginning of next year another match was arranged between the Americans and Irish at Dollymount. This had the effect of stirring up the Irish to a due sense of their position. Since 1876 the

Americans had made considerable improvements upon their rifles, and all their breech-actions were now constructed on the vertical block system, with the hammer concealed; and glowing accounts were crossing the Atlantic as to the extraordinary scores that were being made with the new rifles. The action adopted by the Sharp is known as the Borchardt, and is worked by means of a spiral spring. It is, however, very heavy and in order to lighten the appearance of the rifle a piece of veneer is placed over the half of the breech-block, thus deceiving the eye as to the space taken up with this mechanism. With all this information before them, Rigby determined to throw aside the deep-grooved barrel and adopt the shallow six-groove Snider principle, which had been so successful on the other side of the water. They also set themselves to the task of finding a suitable-breech-action, and they ultimately decided to adopt that of Mr Field. Having this point settled, new rifles were turned out at once, and, the practice made was sufficient to warrant hopes of a victory over their opponents. In this, however, they were disappointed, but the defeat was consolatory in the fact that the, shooting had been of a character never before equalled. In England the Deeley-Edge-Metford became the favourite weapon, and in the Elcho match of 1880, with the exception of one man who used the Sharp, all were armed with it, thus coming very nearly to the suggestion of Colonel Peel, and practically admitting their mistakes of former years. The Irish, on the other hand, completely fulfilled Colonel Peel's conditions, and were armed with the, new Field-Rigby; while the Scotch, who had been in a somewhat despondent state during the year, again staked their honour principally on their muzzle-loaders. The result was that the contest lay between the English and the Irish, in which the latter were the victors. A match with an American team also showed that the people of this country had at last made up to our Americans in the matter of rifles.

Towards the end of last year an effort was made to revive the drooping spirits of the few Scotchmen who loved the small-bore rifle. It was unanimously agreed that there was no use to face targets in the Elcho match unless all the men were armed with breech-loaders, and used the back position; and the dilemma was what rifle were they to use. It was, of course stated that a

rifle made by a Scotchman would have the preference if in all other things equal; and at this juncture Messrs. D. & J. Fraser, of Edinburgh, stepped forward to clear the air. For some time past Mr. D. Fraser, who, it will be remembered, used a Henry Breech-loader in 1874, had been turning the matter over in his mind, and he has invented a new breech-action which for simplicity and effectiveness is equal to any of the others yet before the public. It has various merits all of its own. One objection to many of the blocks already in use is their weight and space occupied. Many of them take up about four inches, while Mr Fraser's is all confined to a space of about two inches, and the weight thus saved is added to the barrel. He has adopted the concealed hammer, and retains the old mainspring, and the action is worked by a side lever. It has a very efficient safety bolt, and the limbs are exceedingly strong, and not likely to get out of order. Another benefit is that the whole of the works are concealed both when the breech is open and when it is shut, and being so compact it will be very useful for attaching to rifles for sporting purposes. It also enables him to give much better lines to the rifle, which altogether presents a beautifully artistic as well as a thoroughly useful weapon. Another improvement is the recess in the stock, which is a perfect case for the back sight when not in use. In all other rifles the back sight is screwed on, and is turned back when the rifle is being cleaned, so as to save the knuckles from being skinned while the cleaning-out operation is being performed, but the sight is apt to be broken should the butt of the rifle be put to the ground while bent backwards. All that is avoided by Mr Fraser. The sight never needs to be removed, and is thoroughly out of the way when the rifle is being cleaned. The barrel has six shallow grooves on the Snider principle, which is now recognised as the best for giving accurate results, and the turn is made in about eighteen inches. Along with the rifle there are several implements of an interesting kind. One very ingenious contrivance is that for ejecting the used caps from the shells by hydraulic pressure, and the same tool answers as well as a shell cleaner, re-capper, shell and bullet sizer, and also as an efficient wad seater. Altogether, the rifle and its appurtenances are most complete, and from the trials which have already been made with it the best results are anticipated.



NRA Wimbledon programme, 1885

Further developments and refinement of rifle actions continued. Rigby subsequently introduced a new breech action on his combined patent with L.F. Banks of 1882. Not referred to in the reprinted article is the Webley-Wyley; this was manufactured by P. Webley & Son and utilised a compact laterally moving action patented by A. Wyley in 1879. The lightness of the action permitted use of a heavier barrel, without exceeding the weight limit permitted for competition.

Other changes were later brought about by the ban on cleaning between shots introduced in 1883, following which some gun makers changed their rifling in match rifles. J.H. Walsh ('Stonehenge') noted in his 1884 'The Modern Sportsman's Gun and Rifle' that "one result of the new arrangement was the almost total disappearance of the American rifles from the prize lists."

David Minshall



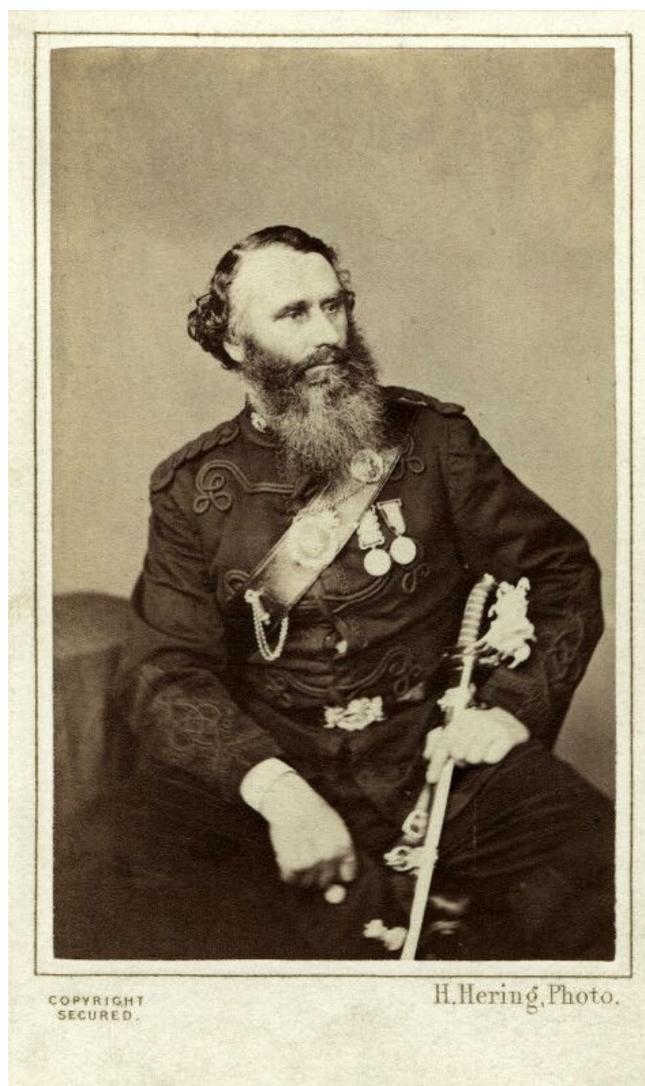
The St. George's Challenge Vase

Nick Leaper

It was during the 1862 General Meeting of the National Rifle Association, held at the Willis Rooms on the 3rd March, that it was announced the St. George's Rifles proposed to present a new trophy for competition at the 1862 Wimbledon meeting. Lt. Col. Charles Lindsay of the 11th Middlesex or St. George's Rifles proposed the trophy valued at £250 and designed and executed by Mr Ortner of Ortner and Houle Jewellers of 3 St. James, London.

Lt. Col. Lindsay was born at Muncaster Castle, and the 3rd son of James Lindsay 24th Earl of Crawford. He was MP for Abingdon from 1865-74, Lt. Col. of the Grenadier Guards, Col. of the St. George's Rifles and Groom in Waiting to Her Majesty Queen Victoria. He also held a position at the Treasury for a period.

Although referred to as a vase it was in fact an elaborate silver gilt cup and cover with a statue of St. George and Dragon styled handles. Along with the vase were to be three jewels (crosses); a 14k gold and enamelled cross to the winner of the prize, a silver cross for the runner up and a bronze cross to the



Lt. Col. Charles Lindsay

second runner up (note no mention of enamel - later examples have enamel to the arms and centre). Also a large photograph of the vase and gold jewel were to be presented to the Corp proving successful. At some early period small stamped silver badges with felt backings were presented, but it is not known when, for how long or how many were presented each year.

Three large leather bound volumes containing all the financial and competition results up to the time the fund was handed over to the NRA were produced, and are housed in the NRA Museum at Bisley, Surrey.

St. George's Challenge Vase



St. George's bronze cross



Early St. George's Vase badge



St. George's Challenge Vase

The conditions of competition were to be:

For annual competition at Wimbledon by Administrative and Substantive Battalions of Great Britain. One competitor from each battalion.

Distances 200 and 500 yards. 5 shots per distance. The highest possible score at each distance was 20 marks.

Rifle. Any rifle of Government pattern with a bore of .577 carrying Government ammunition issued to the rank and file of Volunteer Corps. Whereas only the Long Enfields were allowed in the 1st Stage of the Queen's Prize, this allowed also the three groove Short Enfield used by one or two Rifle Battalions and the Lancaster rifle of the Engineers in addition to the Long Enfield. This rule continued until 1871, when the Snider was issued, and the Competition was confined to the Long Enfield.

The Vase and Gold Jewel having a value of £250 and the silver and bronze a combined value of £30. 98 persons shot the first competition and £90 was presented to the NRA by way of entrance fees to the competition.



1862 The winner of the first competition was Corporal Ferguson of the 1st Inverness RVC with a score of 30.

The Silver Jewel being won by Pte. Leet of the 22nd Middlesex who tied with Ferguson for the 1st place and the Bronze Jewel by Pte. Hemery of the St. George's Rifles.

1863 Conditions remained the same but the 4th prize was a photograph of the Vase and the 5th prize of a photograph being presented to the South Middlesex RVC.

Gold Jewel and Vase to Pte. Jopling of the South Middlesex RVC.

Silver Jewel to Pte. Johnson 2nd Stafford RVC.

Bronze Jewel to Sgt. Robinson 7th Middlesex.

1864 £32 10s was added to the prize list and any Government pattern rifle by the rank and file could be used in the Hythe position. The Gold Jewel being won by Sgt. Penzer of the 5th Stafford's and the Silver Jewel (*pictured below*) by Col Sgt. Hugo Lawley of the 2nd Administrative Battalion Derbyshire RV. The Bronze Jewel was won by Corp Doe of the Victoria Rifles.



In addition to the three main prizes the top 10 prize winners were presented with a small enamelled St George Jewel (*below*). James Balmer in his 'Regimental Medals Volume 1' illustrates one of these jewels which he attributes to the 5th Foot, which we know to be incorrect.)

1865 The Conditions of the competition changed and any one company being fortunate enough to win the prize 3 times was to win the vase outright. The Competition was to become a two stage competition with the winner being awarded the Dragon Cup which they were to keep as a memento of their win. The Cup had a value of £50. These continued to be awarded up to the late 1980's and appear on the market from time to time. One such appeared at auction in 2018 and made over £2000.



The Dragon Cup

The top 60 scorers in the 1st stage to shoot the 2nd stage. The 1st stage of 5 shots being shot at 500yds only. The 2nd stage being 7 shots at 600 yards.

Dragon Cup at 600 yards won by Pte. Hamerton of the 12th Middlesex.

Gold Jewel and Vase to Sgt. Penzer of 4th Stafford.

Silver Jewel to Pte. Redcliff 2nd Middlesex.

Bronze Jewel to Pte. Bustard 20th Middlesex.

- 1869 After a 5 year break the awarding of the 10 miniature jewels was re-introduced.
Dragon Cup to Cpl. Egg of the Queen's Westminster Rifles.
Gold Jewel to Sgt Lowe 16th Lincoln.
Silver Jewel to Cpl. Wyatt 13th Shropshire.
Bronze Jewel to Pte Woodford 2nd Isle of Wight.
- 1870 Dragon Cup to Lt Woodford. 2nd Isle of Wight.
Gold Jewel to Lt. Porteous London Scottish.
Silver Jewel to Gunner Gren 2nd Lincoln Artillery.
Bronze Jewel to Sgt. Walmsley. 6th Denbighshire.
15 of the small jewels were presented.
- 1871 Dragon Cup to Sgt. Taylor 3rd Dumbarton RVC
Gold Jewel to Pte. Clark Queen's Edinburgh RVC.
Silver Jewel to Cpl. Carter 4th Hants.
Bronze Jewel to Pte. Bryon 3rd Monmouth.
12 Miniature Jewels presented.
- 1872 Dragon Cup to Lt. Eddison 7th West Yorks.
Gold Jewel to Sgt. M'onie 3rd Lanark.
Silver Jewel to Sgt. Tildesley 1st Bedford.
Bronze Jewel to Pte. Gilbert 41st Middlesex.
12 miniature jewels presented.
- 1873 Prize fund increased to £446.00. 1st Prize cash increased to £30.
Dragon Cup to Cpl. Hemery Cambridge University RVC.
Gold Jewel to Sgt. Tildersley 1st Bedford.
Silver Jewel to Arm. Sgt. Ingram 1st Lanark.
Bronze Jewel to Sgt. Aickin 5th Lancs.
11 Miniature Jewels awarded.
- 1874 Prize fund increased from £1008.8s to £1032.18.6d. And from 61st to 102nd place.
The Dragon Cup was to be awarded and retained by the winner of the vase.
Gold Jewel, Vase and Dragon Cup to Pte. McVittie 7th Dumfries RVC.
McVittie subsequently went to Canada with the GB team and decided to return for the benefit of his health. He attended Wimbledon Meetings representing Canada before returning to the UK just before the start of WWI but was unable to return to Canada prior to his death. Known as "Bob the Shot" due to his marksmanship skills he was without doubt one to the best marksman of the period. (For a further biographical sketch of Private McVittie, see Research Press *Journal*, No. 1, Winter 2018)
Silver Jewel to Pte. Burns 19th Cornwall.
Bronze Jewel to Lt. Bury 5th Denbighshire.
10 miniature jewels awarded.
- 1875 Prize fund increased to £1113.18.6d.
Gold Jewel, Vase and Dragon Cup to Capt. Easton 105th Lanark.
Silver Jewel to Cpl. Leggat. 3rd Lanark.
Bronze Jewel to Sgt. McIssac 1st Bute.
10 miniature jewels awarded.
- 1876 Gold Jewel, Vase and Dragon Cup to Sgt. Wooley 6th Cheshire.
Silver Jewel to Maj. Morris 39th Middlesex.
Bronze Jewel to Pte. Kelman. 1st Ross.
10 miniature jewels awarded.
- 1877 Gold Jewel, Vase and Dragon Cup to Col. Sgt. Hyslop 8th Ayrshire.
Silver Jewel to Pte. Cameron 3rd Lanark.
Bronze Jewel to Sgt. Goode 10th Leicester.
10 miniature jewels awarded.
At some point in the 1870's a large bullion badge in the shape of a shield with a red cross of St George to be worn on the sleeve was introduced. The writer is unsure as to whether these were given to the winner of the competition or to those who shot the second stage. In the report of the proceedings a few years later it was suggested these badges be made smaller. This became the case a few years later.

St. George's Challenge Vase



*The large bullion badge introduced some time in the 1870's,
with the later small badge*

- 1878 The number of shooters from each company increased to 3. The prize fund increased to £1263.00 with 135 cash prizes awarded. Gold Jewel, Vase and Dragon Cup to Pte. Gratwicke 1st Devon.
Silver Jewel to Cpl. Turnham 1st Bucks.
Bronze Jewel to Cpl. Williams. HAC.
10 miniature jewels awarded.
- 1879 Places 4-19 each received a miniature jewel.
Gold Jewel, Vase and Dragon Cup to Pte. Gentles 1st Stirling.
Silver Jewel to Cpl. Millington 12th Stafford.
Bronze Jewel to Pte. Eaglesham 1st Lanark.

- 1880 Prize fund increased to £1263.0.0d. A Silver Salver added to the runner up prize.
Gold Jewel, Vase, Dragon Cup and £30.0.0 to Cpl. John King 2nd Wilts.
Silver Jewel and Silver Salver, £10.12.0d, to Pte. Duncan 15th Middlesex.
Bronze Jewel and £20 to Pte. Whitelaw 1st Lanark.
Miniature jewels awarded to 4th-10th place.

1881 The question of ownership of the Challenge Vase arose and Col Lindsay proposed to withdraw it from competition with the view of testing such ownership. After lengthy correspondence between Col. Wilson, Hon Colonel of the Stirling RVC, and others the case was referred to the decision of the NRA Council along with the balance of cash credited to the Vase Fund. Council decided the Vase was the property of the St. George's Rifles.

Col. Lindsay stated he was satisfied with the outcome and withdrew his intension of withdrawing the Vase and at the same time announced that whenever the Vase was won outright he would hand over the balance of the funds held at the bank to the NRA on the condition a Vase of the same value being supplied for future competition. Col. Lindsay also announced the annual donation from his Committee to the NRA would be increased from £200 to £300.

At this time, it was also announced that special silver medals had been provided by the St. George's Rifle Corp Committee in 1881 for the Grand Aggregate from their funds. The Council of the NRA was of the opinion that such badges if they were to be awarded should be given by the NRA and a resolution was passed to that effect and it was subsequently decided that badges of a special pattern be prepared for the next Wimbledon Meeting. (*The Grand Aggregate will form an article of its own at a future date*). Gold Jewel, Vase, Dragon Cup and £30 to Sgt. Helton 2nd Renfrew.
Silver Jewel, Salver and £15 to Sgt. Fowler 1st Hereford RVC.
Bronze Jewel and a silver cup to Pte. Somerville 1st Lanark
7 miniature jewels.



*Grand Aggregate medal
provided by St. George's Rifles*

St. George's Challenge Vase

- 1882 Gold Jewel, Vase and Dragon Cup to Lieut Stevens 15th Middlesex.
Silver Jewel and Salver to Capt. Mellish 2nd Notts
Bronze Jewel and Cup to Q.M.Sgt. Edwards. 1st Cornwall.
7 miniature jewels awarded 4th to 10th place.
- 1883 Gold Jewel, Vase and Dragon Cup. Pte. Wilson 13th Middlesex.
Silver Jewel Lieut. Gibson 1st Aberdeen.
Bronze Jewel Sgt. McCay 5th Lancs.
7 miniature jewels awarded 4th -10th place.
- 1884 The Post numeral letter GC and SC to be added to the names of winners of the Grand Aggregate in subsequent mentions in the Proceedings.
St. George's money prizes £695.0.0.
At the AGM of the NRA Col. Farrell asked if the cash prizes could be increased in view of the increase in entries. Henry Wilmott said arrangements were entirely in the hands of the Commanding Officer of the St George's Rifles. Lt. Col Stanley Bird and Col Lindsay the Honorary Colonel replied that there was to be no change.
Gold Jewel, Vase and Dragon Cup to Pte. Osbourne 1st Warwick.
Silver Jewel to Sgt. Harries 1st Pembroke.
Bronze Jewel to Sgt. Jackson 21st Lancashire.
7 miniature Jewels awarded. 4th-10th place.
- 1885 Gold Jewel, Vase and Dragon Cup to Pte. Fergusson 2nd Perth.
Silver Jewel to Sgt. Woodcock 3rd W. Yorks.
Bronze Jewel to Pte. Ragg 1st VB South Staffs.
7 miniature jewels awarded to 4th-10th place.
- 1886 At the NRA AGM Mr Gratewick noted entry fees to the St. George's amounted to £1300 and that the St. George's Committee returned £1000 as a donation and added the St George's Committee were getting credit to which they were not entitled. Col. Stanley Bird of the St. George's Rifles thought the matter had been settled some years previous and that the St. George's Rifles never posed as benefactors but it was necessary to provide funds for a replacement vase if and when it was won outright. As soon as this was done the Committee would be glad to be relieved of the duty. He had received a letter from Col Lindsay advising the state of the funds would permit a further £50 to augment smaller prizes. Sir Henry Fletcher remarked Council had nothing to do with the arrangements regarding prizes, however the additional monies would permit the prizes to be increased from 20 to 150.
Gold Jewel, Vase and Dragon Cup to Pte. Marr 1st Cheshire.
Silver Jewel and Salver and £ 22.15.0d. to Lawrence 1st Dumbarton.
Bronze Jewel and £22.15.0d. to Maj. Despard 3rd VB West Kent.
7 miniature jewels 4th -10th place.
- 1888 Prize Fund £745.00.
Gold Jewel, Vase and Dragon Cup to Col. Sgt. Ford. 3rd VB South Staffs.
Silver Jewel and Salver to Sgt. Maj. Hawker 2nd S.DIV RA.
Bronze Jewel, Cup and £20. to Lieut Dalglish 3rd Lanark.
7 miniature jewels 4th -10th place.

St. George's Challenge Vase

1889 Col. Stanley Bird Commanding Officer of the St. George's Rifles proposed the Vase and fund of £980.17.0d be handed over to the NRA Council on condition the Association continued the St. George's Vase and Dragon Cup Competition and provided another Vase when finally won outright. The Council would be free to decide the competition rules. The NRA Council decided to present a Silver cup to Col. Lindsay the Founder and Administrator of the St. Georges Vase competition. This cup appeared at auction in 2018 and sold for in excess of £1500.

Gold Jewel and Dragon Cup to Sgt. Lawson 1st Lanark.

Silver Jewel and £12.15.6d. To Sgt. Scott 5th VB HLI. (insert picture of 2nd type 19th C cross)

Bronze Jewel Maj Spence 5th VB Scottish Rifles. 7 miniature jewels to 4th-10th place.

In 1890 the Annual Rifle Meeting of the National Rifle Association moved from Wimbledon to Bisley. The story of the St. George's Challenge Vase will be concluded in the Autumn Journal, covering 1890 to the present day.

*St. George's
NRA 1889
trophy*



Mid Nineteenth Century Musketry Manuals ~ British Official Versions

W.S. Curtis

The British Government (or the Crown) customarily issued Regulations or Manuals detailing and ordering the manner in which it was expected that the various duties of its Officers should be conducted. The antiquity of this practice is very great and it was given authority by publishing, usually on the title page, that the work was, typically, “By Authority”.

An early example from 1685 is entitled AN ABRIDGMENT OF THE ENGLISH MILITARY DISCIPLINE—Printed BY ESPECIAL COMMAND, FOR THE USE OF HIS MAJESTIES FORCES. Although this work includes the Manual and Platoon Exercise for all the arms in use at that time (although not actually using these expressions) we do not propose to dwell on this period other than to define these terms which became common by the early Eighteenth Century and continued in use until the end of the Nineteenth Century. Briefly, the Manual Exercise comprised all the drill motions for the weapon other than the loading and firing which were designated the Platoon Exercise. Bayonet drill was part of the Manual Exercise.

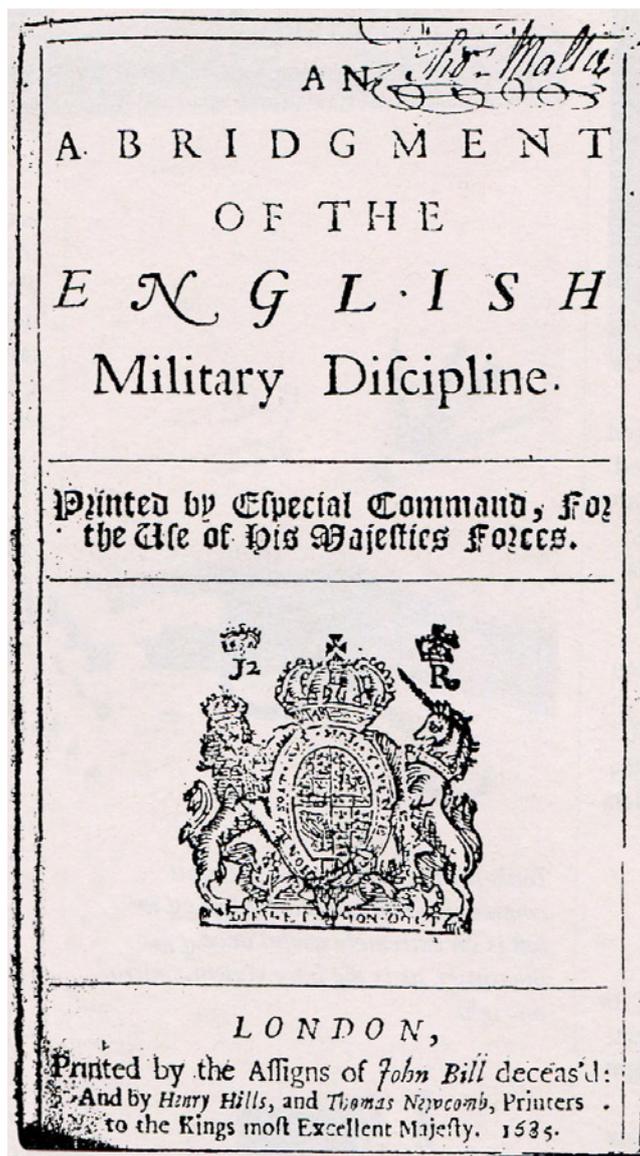


Figure 1: The Title Page of the 1685 'ABRIDGEMENT OF THE ENGLISH MILITARY DISCIPLINE'

These Manuals were continually being upgraded and re-printed throughout the Eighteenth and Nineteenth Centuries and a typical and very widely known example of one which governed the Army was THE MANUAL AND PLATOON EXERCISE, AS ORDERED BY HIS MAJESTY IN 1764 colloquially known as “The ‘64”. The wars of the Revolution and Napoleon engendered many more and the arrival of the Baker and Brunswick Rifles together with the Percussion system contributed their quota.

We shall start this review with the year 1840 and a small paper jacketed pocket book with a label on its cover reading MANUAL AND PLATOON EXERCISES FOR PERCUSSION FIRELOCKS – INFANTRY – 1st AUGUST, 1840 – 1s. (one shilling for our younger readers!). The Title Page is illustrated. It carries the inked inscription of a former owner, Lieut. Thos.

Swain, 20th January 1843, who, sadly, has not identified his Regiment. As can be seen, the Title Page bears the words “ADJUTANT-GENERAL’S OFFICE, HORSE-GUARDS, 1st AUGUST, 1840.” and “BY AUTHORITY”. To make absolutely sure that this Manual is to be taken

as an Order and not a mere guidance, the next page is headed: "GENERAL ORDER" and reads:

HORSE-GUARDS

1st August, 1840

Certain alterations being necessary in the Manual and Platoon Exercises for Regiments armed with the Percussion Muskets, Her Majesty has been pleased to approve of the following Regulations being established; and they are accordingly to be strictly adhered to in Corps armed with Muskets of the above description.

*By Command of the Right Honourable
The General Commanding in Chief;
JOHN MACDONALD,
Adjutant-General to the Forces*

The book measures 7.2 x 4.2 inches and has 55 pages. The contents already foreshadow the much more scientific approach engendered by General Hay and the Hythe School of the 1850's. Judging Distance Drill appears in a simple form and this later became essential as the range of the new rifles transformed Infantry tactics. The principal difference in the platoon exercise from the old flintlock was in the priming. No longer was the priming done first with a part of the charge from the cartridge. The powder charge in the cartridge was reduced from 6 to 4 1/2 drams and the capping of the nipple took place after the piece was loaded. Not only are the Percussion Muskets Patterns 1839 and 1842 covered, the Brunswick Rifle and the Rifled Fusil are also dealt with in their own sections. The references to the Fusil are those applicable to the arm listed by D. W. Bailey, in his BRITISH MILITARY LONGARMS 1815-1865, as the Sergeant of Foot Guards Rifled Musket of 1840 for the socket bayonet which is described in the text as a "Bayonet" which has to be turned when unfixing, as opposed to that of the Rifle which is described in the text as the "Sword". Given the great rarity of this model, virtually all of which were not long after converted for mounted use, it is interesting to see these early orders governing its use in its original form.

The new percussion musket presented the users with certain problems previously unknown such as the tendency to acute rusting engendered by the chlorate in the percussion cap mixture and the damage that can occur by allowing the cock to fall on the un-protected nipple. In 1842, George Lovell, the man mainly responsible for introducing the system to the British Army, wrote a booklet which appeared as "SUGGESTIONS FOR THE CLEANING AND MANAGEMENT OF PERCUSSION ARMS, by GEORGE LOVELL, ESQ., INSPECTOR OF SMALL ARMS FOR HER MAJESTY'S SERVICE. Published by Authority of the Master General and Board of Ordnance, AND ORDERED BY GENERAL LORD HILL, COMMANDING IN CHIEF, TO BE DISTRIBUTED TO THE ARMY FOR GENERAL INFORMATION. BY GENERAL ORDER, DATED 4th

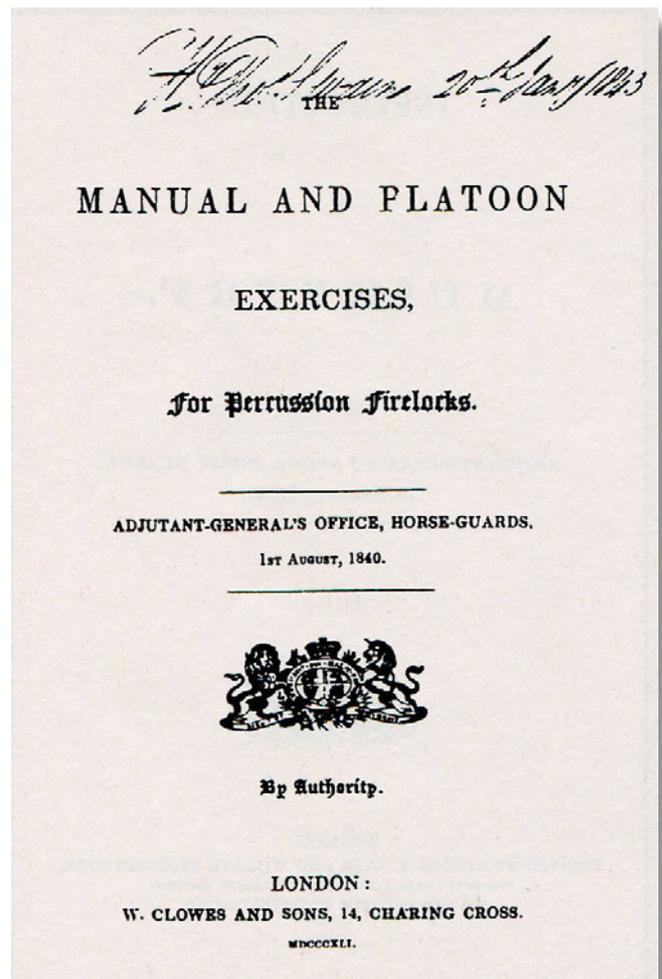


Figure 2: Title Page of the 1840 'MANUAL FOR PERCUSSION ARMS,' published in 1841

JUNE, 1842 – No. 559 – LONDON: PRINTED FOR THE AUTHOR, AND SOLD AT THE TOWER: AND BY F. PINKNEY, CHARING CROSS. 1842. - Price Ninepence.” This was a paperback volume of 32 pages in a dark blue wrapper printed as the title page but with the addition of the price information. Another edition has been seen, otherwise identical, but re-printed by the Athenaeum Press at Madras in India. The instructions are of great interest and, so far as we are aware and for the First time in any military manual, detail every part of the arms by means of individual drawings. The rare back action lock models are also described.

The Madras reprint was reproduced in facsimile some twenty years ago by Mr. Nicolle of Plymouth and may still be found but the original of either printing is excessively rare. A copy of the London Edition we have before us carries a hand written note on the inside of the front cover which reads:

‘General Order, 26th August 1844. The Master General and Board having directed that the “Suggestions for the Cleaning and Management of Percussion Arms” should be adopted in the Royal Artillery, they are accordingly circulated in the proportion of Four Copies per Company; - and Officers in Command at the several Stations, and all Captains in Charge of Companies are particularly enjoined to enforce upon the attention of their Non Comd Officers and Men the necessity of strictly adhering to the Suggestions. Signed H. D. Ross, D. A. General – TRUE COPY, J.A. Shone, Captn. Adjt. 6th. Battn. Ryl Artillery’

Coming now to 1847, we have before us a copy of THE INFANTRY MANUAL which is the same size but hardbound in the red cloth which became the norm thereafter. There are 156 pages which include a wider form of instruction dealing with drill evolutions. The Manual and Platoon Exercises are incorporated and it is interesting to see that the Fusil of the 1840 Edition has disappeared and been replaced by the FLINTLOCK Fusil (instructions are given to hold the piece by the Cock and the Hammer, the contemporary name for the steel or frizzen) although the Line Infantry-man is instructed in the Percussion Musket and the Rifleman in the Brunswick Rifle. For those who wonder how the

loading drill was carried out for the Brunswick, where the cartridge with the powder was a separate item from the ball sewn into its patch, the instruction was to bring the right hand to the ball-bag and seize a cartridge and a ball. The cartridge was brought to the mouth and the end twisted off. The powder was then shaken into the barrel. No mention is made of the paper which was, presumably, discarded unlike the musket where it was loaded complete with ball to act as wadding. The belt of the ball was then to be correctly placed in the grooves with the tie uppermost before ramming. It can be envisaged that the soldier could well have dropped the ball while trying to deal with the separate cartridge in the same hand.

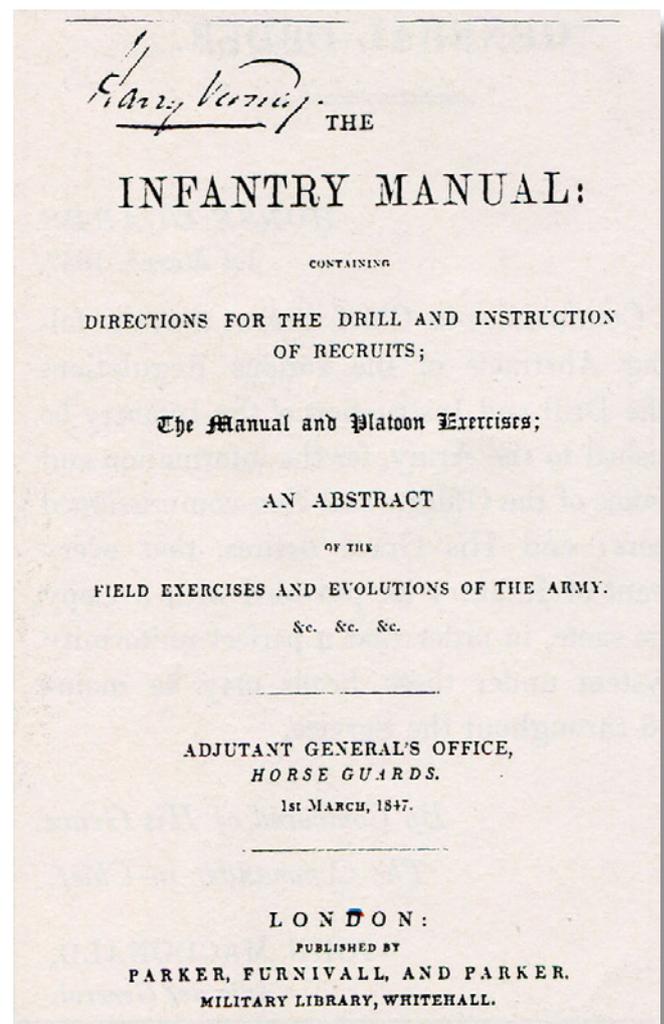


Figure 3: Title page of the 1847 INFANTRY MANUAL

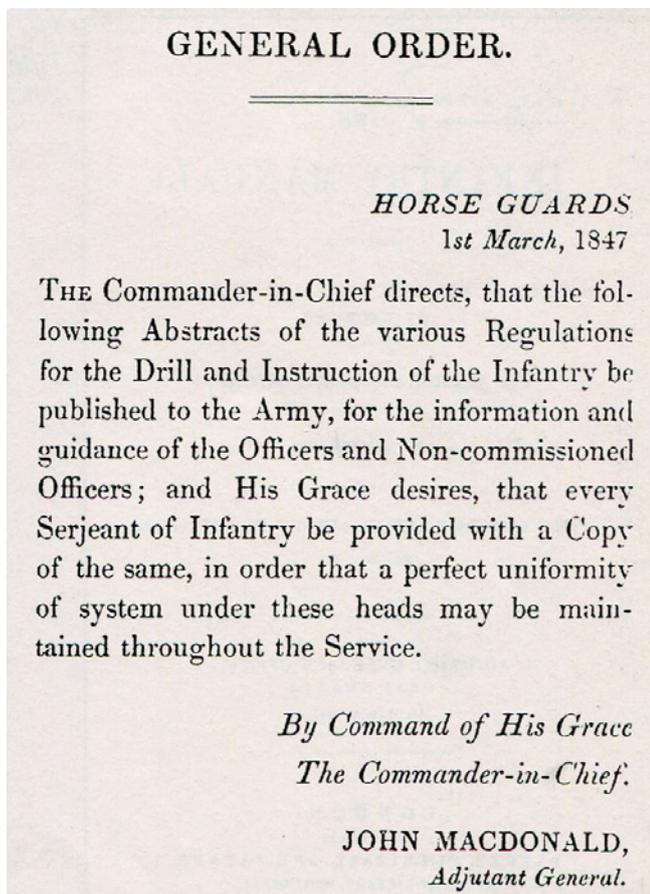


Figure 4:
The General Order
giving authority to the
1847 INFANTRY MANUAL

The New Age Arrives

The first of the modern rifles in the British Service was the Rifle-Musquet Pattern 1851, designed on the new Minie system. First issued just in time for the Crimean War, there was, presumably, a Manual of Instruction but we have not yet seen a copy. As the life of this arm was incredibly short for reasons well known to arms collectors it is un-likely that there was more than one edition of such a manual but we should appreciate the sight of a copy if any of our readers know of such.

As the Crimean War was starting in 1854, the first of the new Rifle-Muskets Pattern 1853 were coming from the contractors and at the same time The School of Musketry was being established at Hythe, under the command of Colonel Charles Hay. Later a General, Hay was appointed to the position in April 1853 and the School opened on 24th April 1854. Enormous emphasis was placed on teaching the soldier the theory

and practice of ballistics and, in general, treating him like a sentient human being instead of a mindless automaton. The results were sensational and the army started its slow progress towards sensible man management and away from drink and the lash. In his first Annual Report on the School, dated 6th July 1855, Colonel Hay stated with pleasure that he had noticed very great intelligence and anxiety on the part of most of the privates to acquire a knowledge of the theory as well as the practice of rifle shooting.

The first of the new manuals entitled INSTRUCTION IN MUSKETRY was approved and promulgated by General Order on 23rd February 1854. For the first time the manual included detail of the periods of instruction that the soldier had to complete in both theory and practice together with much technical textbook detail of a type hitherto never seen in any work intended for the instruction of the common soldier.

By 1st January 1856 it was necessary to issue a new Edition and the General Order prefacing it makes especial mention of the requirement that the proficiency of the troops in ball firing must be recorded in their Confidential Reports. A series of Appendices to the Manual detail the numerous forms and returns that must be made. These early Instructions are in a larger format than earlier ones being 9 1/2 x 6 inches although by the 1859 Edition the size has reverted to 7 1/4 x 4 3/4 inches. An Amendment greatly expanding the orders for musketry instructing officers resulted in a Revised Edition of the 1856 version being published on 1st January 1857.

Manuals of Instruction were not confined to the Infantry and one example before us is entitled INSTRUCTIONS FOR THE SWORD, CARBINE, PISTOL, AND LANCE EXERCISE TOGETHER WITH STANDING GUN DRILL FOR THE USE OF THE CAVALRY – REVISED EDITION – ADJUTANT GENERAL’S OFFICE, HORSE GUARDS, 1st JULY 1858. This is in the later small format and students of firearms will find it interesting that the carbine exercises detail both the Victoria Smoothbore and the Sharps Breech Loading Carbines. Parker, the publisher of this edition, lists the original edition of this work as being published in January of the same year which suggests rapid weapons revisions rather than great demand as reprints would not have borne the words “Revised Edition”. The edition of 1st January 1865 has changed to the Westley Richards Capping Breech Loader with a supplement covering the Calisher and Terry. The Royal Artillery, similarly, had their own manuals and that of 1860 is entitled MANUAL OF ARTILLERY EXERCISES – HORSE GUARDS, 1st JANUARY 1860. In a large format volume of 303 pages the Carbine Exercise occupies 38 pages and is, in effect, a condensed version of the Musketry Instruction for the Infantry suitably modified for the carbine, in this case the 24 inch barrelled .577 Enfield with sword bayonet. The Royal Engineers presumably had a similar series of volumes detailing the Lancaster Carbine, although we have yet to see a copy.

To be continued

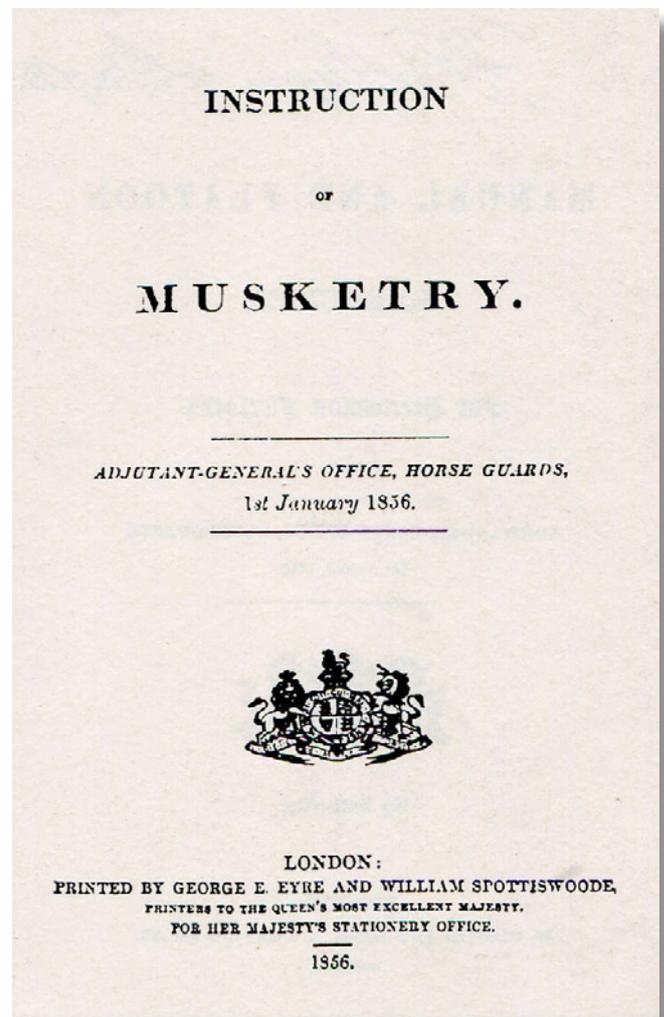


Figure 5: Title page from the large format 1856 INSTRUCTION ON MUSKETRY

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

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

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