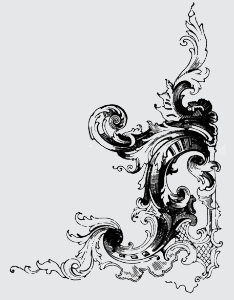




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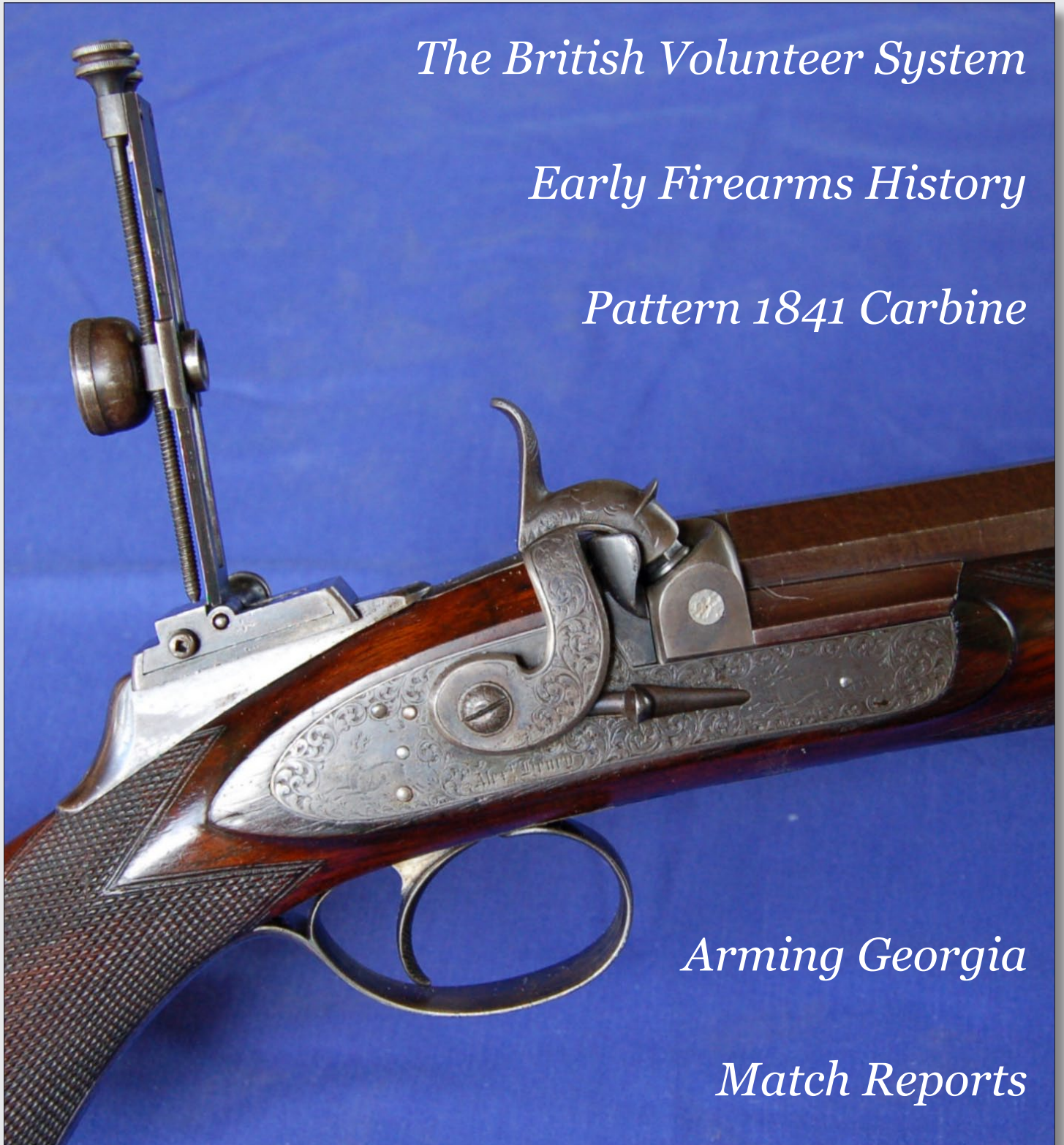
Issue 2 | Spring 2018

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The British Volunteer System

Early Firearms History

Pattern 1841 Carbine



Arming Georgia

Match Reports

Research Press Journal

Editor: David Minshall

journal@researchpress.co.uk

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

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

19thC Riflemen

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

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On The Cover

Alexander Henry
Best Single Muzzle Loading Rifle
serial number 429
Can you help with A. Henry rifle research?
see page 11

Priming

News, Events, People & Places

USIMLT Nationals - 2018



The United States International Muzzle Loading Team (USIMLT) Nationals 2018 were held at Ben Avery Shooting Facility in Phoenix, Arizona, 5-7 March. Events were not confined to muzzle loaders, but also open to cartridge, vintage sniper, bench, and scope shooters. Course of fire was 10 shots at each distance, 300, 500 and 600 yards plus 15 shots at each distance, 900 and 1000 yards.

Cees and Marieke Kalfsvel from the Netherlands attended. Writing of the first days shooting at 300, 500 and 600 yards, Marieke noted that “the wind was difficult, changing all the time and too hard to shoot high scores. But it was a very fun day! There were only a few shooters, but far more are expected for 2019. Of the seven muzzle loaders and five breech loaders, two shooters were from New Zealand and two from the Netherlands, so the match had an international spirit.”

Marieke continues, “The shooting team from a high school did the target pulling all day, and at the end of the day we switched places in the butts. The markers were rewarded with a few shots each with these ‘old fashioned firearms’ which they loved.”

The NMLRA Western Nationals were held at Ben Avery Shooting Facility 27 February - 4 March. The USIMLT Nationals 5-7 March, following which the Arizona State Rifle and Pistol Association sponsored a 1000 yard match 8-11 March (see following report). Marieke enthuses, “so if you are thinking of coming to Phoenix next year, you are able to shoot for 2 weeks!

The weather is lovely, around 22 degrees. There’s lots of shops and sightseeing in the area, Grand Canyon, Las Vegas and many other National Parks.

Ed Decker, Match Director and Captain USIMLT Long Range Team reported, “No matter what organization you belong to, what country you are from, or what type of rifle you shoot, we are all shooters. At our Nationals, we worked well together and had fun, great cooperation among all, good weather and plenty of wind. How about those volunteers on the line, in the pits, and those awesome target pullers! Many thanks to Skip Burks, Ray Hanson, Bob Englebach, Rex Powers, Margo Hanson, Arleen Decker, Laurie Kerr, John Stanton, and George Taylor. Ben Avery bent over backwards to make sure we had everything we needed and provided us with a superb range and facility for our lunch and awards ceremony. The wind was about as fierce as I have seen anywhere but placing shots on paper in those conditions is what makes us better competitors. If it was easy, we wouldn’t learn anything. Remember “The Wind is Your Friend.”

“It was very special to have our friends from New Zealand and the Netherlands with us. I expect our attendance to double next year from both foreign and US shooters. We will be at Ben Avery again next year shooting between the NMLRA Western Nationals and the 1000 yard shoot. I will post dates as soon as I receive confirmation.”

www.usimlt.org

Priming



Left:
Range briefing with Ed Decker

Below:
Cees Kalfsvet & Dave Gullo

and shooting in the back position
Laurie Kerr, from New Zealand.



USIMLT NATIONALS										
MARCH 5-7, 2018	CLASS	300	500	600	MID AGG	900	1000	LR AGG	GRAND AGG	
John Ciccone	ML	76	53	37	166	50	7	57	223	
Mike Gephardt	ML	80	52	45	177	73	52	125	302	
Dave Gullo	ML	89	70	64.1	223.1	95	124.1	219.1	442.2	
Ray Hanson	ML	88.1	72	78.2	238.3	87	102	189	427.3	
Cees Kalfsvel	ML	86	57	50	193	91	83	174	367	
Laurie Kerr	ML	90.3	82.1	66	238.4	101.1	87	188.1	426.5	
John Stanton	ML	83	43	59	185	69.1	61	130.1	315.1	
Stephen Fogler	Cartridge	44	21	58	123	76	60	136	259	
Don Johnson	Cartridge	80	84.1	58	222.1	83	101	184	406.1	
Blair Svihra	Cartridge	82	67	55	204	105.1	76	181.1	385.1	
George "Zack" Taylor	Cartridge	56	52	79	187	109.1	87	196.1	383.1	
John Venhous	Cartridge	81.1	70	72.1	223.2	DNF	DNF	DNF	223.2	



There were competitors from New Zealand, the Netherlands and USA

*Above:
Muzzle Loading Grand Aggregate
1st Dave Gullo
2nd Ray Hanson
3rd Laurie Kerr
with match Director Ed Decker*

*Right:
As a thank you, competitors enabled the markers to shoot with their rifles. Our next generation of black powder rifle shooters.*



Photographs courtesy Arleen Decker & Marieke Kalfsvel

1000 yard World Championship Match - 2018 Ben Avery Shooting Facility, Phoenix, Arizona, 8-11 March

Practice day for the 3rd Annual 1000 yard World Championship at the Ben Avery Shooting Facility in Phoenix, Arizona dawned calm and pleasant, but with a forecast of unseasonable rain coming our way. *The first match day* dawned overcast and cool, with wind flags fishtailing in an uncertain breeze. Zack Taylor led the field as overall winner, with Dave Gullo and Pat Taylor nipping at his heels. Our New Zealander, Laurie Kerr, shooting muzzleloader, was High Muzzleloader while Tim Thorne, having worked the kinks out of his vintage sniper rifle, came in first place Vintage Sniper. Our match was curtailed by one relay because of an unforeseeable occurrence.

Day 2 shooters enjoyed a brilliant red sunrise over the desert followed by stormclouds that, happily, failed to deliver until the end of the final relay. The wind was again inconsistent, easing off in the later relays. Bryan Youngberg crushed the competition, coming in First Overall, with Dave Gullo and Robert Garibay IV capturing 2nd and 3rd Overall. Robert Garibay turned in high score for Vintage Sniper Rifle, and Laurie Kerr again took High Muzzleloader. Everyone enjoyed a Famous Dave's BBQ dinner and door prizes generously donated by our sponsors.

Day 3's first relay had to be postponed because of rain. Dave Gullo, came in First Overall, with

Dave Robert Garibay IV Second Overall and Bryan Youngberg grabbing Third Overall. Nori Thorne squeaked High Vintage Sniper by one point. Of course, the 3-Day Aggregate tells the whole tale, and Dave Gullo remained consistent enough on all three days to garner the Grand Aggregate World Champion title. The Steve Rhoades Memorial World Championship award was a very special one, created by Danny Rhoades, the talented son of Steve Rhoades who passed away this year. Dave's spotter, John Venhous, received the Dan Theodore Memorial Top Spotter Award as well as 2nd Vintage Sniper. Robert Garibay's impressive score on Day 3 helped him win 1st Overall, Zack Taylor cruised into 2nd Overall position with Pat Taylor taking 3rd Overall winner. Laurie Kerr with his muzzle stuffer received Top Muzzleloader, and Robert Garibay took Top Vintage Sniper Rifle. Nori Thorne thought she should receive a prize for the most X's (maybe next year!). Gayle Boyle came in First Woman, Iron Sights.

Kudos go to Greg Burri, Assistant Match Director, for efficiently calling the match and to our juror, Klaus Schattleitner. Thanks to everyone who joined us this year. We hope to see more vintage sniper rifles and muzzleloaders on the line next year!

Tim Thorne

Match Director

www.arizonavintagerifle.com



Above:
Laurie Kerr,
Overall Muzzleloader Winner



Below:
Nori Thorne Shooting Swedish Mauser

Priming



Shooters Prepare for Day 1 of Match



Gayle Boyle Spotting for Steve Fogler



Robert Garibay, Vintage Sniper Overall Winner



Dave Gullo, Grand Aggregate Winner, with Danny Rhoades

SHOOTER	CLASS	GUN	I/SC	SPEC	DAY 1	X	WINNER	DAY 2	X	WINNER	DAY 3	X	WINNER	AGG	X	AGG WINNER & SPECIALS
Englebach, Bob	1 Master	BPC	I	SS	DNF			DNF			DNF			DNF		
Garibay, Robert IV	1 Master	BPC	I		151			242	3	3rd Master	174	2	2nd Master	567	5	1st Overall Winner, Dan Theodore Memorial Spotter
Gephardt, Michael	1 Master	BPC	I	SS	DNF			DNF			DNF			DNF		0
Gipson, Glenn	1 Master	BPC	I	SS	141			207	4		146	4		494	8	3rd Master
Grey, Rick	1 Master	BPC	I	SS	119			201	4		97			417	4	
Gullo, Dave	1 Master	BPC	I		174	2	2nd Master	254	2	2nd Master	176	3	1st Master	604	7	Grand Aggregate Winner
Johnson, Donald	1 Master	BPC	I		149	2		237	2		123	2		509	6	2nd Master
Martin, Kirk	1 Master	BPC	I		135	3		235	1		DNF			DNF		4
Mate, Chip	1 Master	BPC	I		130			174	2		DNF			DNF		2
Porter, Jason	1 Master	BPC	I		161	1		168			156	2		485	3	Dan Theodore Memorial Spotter
Taylor, Pat	1 Master	BPC	I	SS	163		3rd Master	242	3		151			556	3	3rd Overall Winner
Taylor, Zack	1 Master	BPC	I	SS	177		1st Master	231	3		158	1		566	4	2nd Overall Winner, Top Super Senior
Youngberg, Bryan	1 Master	BPC	I		131	3		259	4	1st Master	163	2	3rd Master	553	9	1st Master
Boyle, Gayle	2 Expert	BPC	I	W	101	1	2nd Expert	184		2nd Expert	128		2nd Expert	413	1	2nd Expert, Top Woman
Cumming, Charles	2 Expert	BPC	I	SS	131	1	1st Expert	188		1st Expert	145	2	1st Expert	464	3	1st Expert
Boychuk, Mitch	3 SS	BPC	I		71	1	2nd Sharps	159		2nd Sharps	100	1	2nd Sharps	330	2	2nd Sharpshooter
Gose, Ken	3 SS	BPC	I	SS	71	2	1st Sharps	166	1	1st Sharps	110	3	1st Sharps	347	6	1st Sharpshooter, Dan Theodore Memorial Spotter
Caldwell, Tim	4 MKS	BPC	I		154	3	1st Marksmn	202		1st Marksmn	145	2	2nd Marksmn	501	5	1st Marksman
Fogler, Steve	4 MKS	BPC	I		93		3rd Marksmn	103		3rd Marksmn	101		3rd Marksmn	297	0	3rd Marksman
Hubenka, Terrence	4 MKS	BPC	I		41			84			74			199	0	
Muratori, Walter	4 MKS	BPC	I		113		2nd Marksm	186	1	2nd Marksmn	148	1	1st Marksmn	447	2	2nd Marksman
BPTR, SCOPE SIGHTS																
Chism, Leon	1 Master	BPC	S	SS	136	1	1st Master	193		2nd Master	129	1		458	2	3rd Overall Winner
Schattleitner, Klaus	1 Master	BPC	S	SS	130		2nd Master	230	3	1st Master	142	3		502	6	1st Overall Winner, Top Super Senior
Svihra, Blair	2 Expert	BPC	S		157	1	1st Expert	186	1	1st Expert	130	1		473	3	2nd Overall Winner
Brownlee, Sherman	3 Shrps	BPC	S		123		1st Sharps	163	1	1st Sharps	114			400	1	1st Sharpshooter
Kidwell, Jim	3 Shrps	BPC	S	SS	82		2nd Shrps	158	1	2nd Sharps	DNF			DNF		1
Kerr, Laurie	N/A	MZZ			166	1	1st Muzz	221	3	1st Muzz	118			505	4	1st Overall Winner
Stanton, John Lewis	N/A	MZZ			93	1	2nd Muzz	149	1	2nd Muzz	105	2		347	4	2nd Overall Winner, Top Super Senior
Bumbalow, Lee	N/A	VSR			161	1		275	8		DNF			DNF		9
Eggleston, Jim	N/A	VSR		SS	107	1		236	5		DNF			DNF		6
Garibay, Robert	N/A	VSR		SS	181	1	2nd VSR	279	9	1st VSR	186	4	2nd VSR	646	14	1st Overall Winner, Top Super Senior
Muratori, Jeffrey	N/A	VSR			175	1		207	1		180	3		562	5	3rd VSR
Rosnick, Mitchell	N/A	VSR			175	2	3rd VSR	259	2		184	3	3rd VSR	618	7	1st VSR
Thorne, Nori	N/A	VSR			168	8		276	7	3rd VSR	187	2	1st VSR	631	17	3rd Overall Winner
Thorne, Tim	N/A	VSR			182	5	1st VSR	276	7	2nd VSR	181	1		639	13	2nd Overall Winner
Venhous, John	N/A	VSR		SS	170	2		254			170	3		594	5	2nd VSR, Dan Theodore Memorial Spotter

Oak Ridge Long Range Muzzle Loading Match - 2018

Weather forecasting and shooting never mix well, it's the main concern when shooters travel to destinations - certainly understanding. The Oak Ridge, TN, weather forecast was not good for day 1 and only better for the afternoon on day 2 - so, it was decided to shoot 200 yards and if we could get 600 yards on day 1 we would. If we had to drop a range of shooting, I preferred to do so on the shorter distance of 300. 27 shooters in all showed up and it was good to see everyone again as well as some new shooters (Don Howe) and my hat is off to Laurie Kerr and John Stanton from New Zealand who came to participate.

Starting at 200 yards, we did have a quick shower (5min) at 200 yards in both relays. Somehow, 2 shooters (Brent Danielson and Lee Shaver) shot 100-5x each followed closely by a 99 (Laurie Kerr) and with a few 98's right behind them. I believe every one of us and all our gear were wet, but no one complained or stopped (we'll I did, for about 5 minutes thinking - "I'm not shooting in this" more worried about my rifle than myself), only to resume after it stopped to complete my 10 record shots within the 1 hour relay.

In the afternoon on day 1 at 600 yards, the clouds were low and the wind was high - but no rain, yet! Brent D. shot the top score of 88 followed closely again by Laurie K. with an 85. We were able to get both relays in and headed to the club house.

What a sight to see at the clubhouse. I had asked some of the shooters to bring their original Whitworth's and Alex Henry's as Tom Rowe wanted to take photographs for an upcoming Whitworth book and we recently found that Alex Henry's 200th Birthday is in June (more on that later). I counted 16 Whitworths, 15 Alex Henry's and 4 other ML rifles by other makers. What makes this so great to me is that nearly all these rifles are still being shot (or have been shot in recent years), they are not just hid away... Yes, they are worth bookoo \$\$\$ but they were made to shoot - all of them. Someone gave the display the nickname "Museum at



Oak Ridge", I'd have to agree because rifle for rifle it compared (actually exceeded) most museums I've been to.

Dinner was catered and nearly 50 people with wives, relatives and guests came to socialize. To me, this is another great part about shooting - the people. Some who attended were past their shooting times and just wanted to visit and catch up - life is good when you can shoot, eat, handle nice original pieces of history and visit with old friends!

Thursday was cloudy and temperatures started near 50 (about 15 degrees cooler), but the wind was still around. We picked up at 300 yards since the forecast was good for the day and we would be about to get the entire match shot. Ray Hopkins topped the scores with 94-1x at 300 yards and a slew of people right behind him in the 90's. Moving to 1000 yards showed how things can change. Although Dave Munch was the top 1000 yard shooter with a 76, he unfortunately had problems at 600 yards or he'd have been in the hunt. Ray H. posted a 71 to Brent's 61 allowing Ray to Claim The Championship as only 2 points separated them. Congrats to both shooters.

This year I wanted to expand the match to include a Volunteer Rifle style rifle match - basically a Military style rifle with fixed military front with a rather basic



rear sight on the barrel compared to the Vernier used on the LR Match rifles. There are a lot of Parker Hale rifles that fit this category that I hope more will consider attending. Myself and Al Roberts both shot original Alex Henry Volunteer rifles and Mike Pifer shot his Parker Hale. This match ends at 600 yards due to the sight configuration.

Thanks to all who participated and support our ability to do so.

Rick Weber

Left: Ike Leggett at 600 yards

See page 10 for the "Museum at Oak Ridge"

31st LRML Match

Oak Ridge, TN

March 29-30, 2018

	Name	State	200	x	300		600	x	1000	x	AGG	x	Gun Type	Bullet	Alloy	Powder	Wads	Lube
1	Ray	Hopkins	OH	98	5	94	1	80	1	71	343	7	Custom IRA	547gr PP	20:1	96gr Swiss 2F	Lubed wad	
2	Brent	Danielson	IA	100	5	92		88		61	341	5	Custom Don Brown-Alex Henry	514gr PP	16:1	82gr Swiss 1.5F	fiber/wax	
3	Laurie	Kerr	N Zea	99	4	93	1	85	1	54	331	6	Custom Don Brown-Alex Henry	540gr PP	20:1	100gr Swiss 1.5	None	
4	Lee	Shaver	MO	100	5	91	1	77		63	331	6	Custom Ferris - Lee Shaver	PP	20:1	Swiss 1.5F	card	
5	Art	Fleener	IA	94	2	89		83	1	60	326	3	Custom Don Brown-Alex Henry	540gr PP	20:1	95gr Swiss 2F	Fiber Wad	
6	Bob	Wetzler	IN	98	5	89	1	71		56	314	6	Pedersoli Gibbs	530gr PP	Pure	90gr Swiss 2F	None	none
7	Bill	Damen	OH	98	2	83	1	76		56	313	3	Pedersoli Gibbs	540gr PP	20:1	95gr Swiss 2F	card	Balistol+card
8	Kenn	Heismann	KY	94		86		67		65	312	0	Custom Ferris - Lee Shaver	540gr PP	50:1	95gr Swiss 1.5F		
9	Ike	Leggett	VA	96	1	78	1	76		61	311	2	Custom Ferris - Lee Shaver	530gr PP	30:1	84gr Swiss 2F	None	Ballistol
10	Karl	Kuehn	OH	96	1	91	1	67		54	308	0	George Gibbs Match rifle	550gr PP	30:1	85gr Swiss 2F	Wonder Wad	
11	John	Stanton	N Zea	95		92		65	1	54	306	2	Custom Ferris - Lee Shaver	550gr PP	20:1	97gr Swiss 1.5	None	
12	Willard	Lamb	TN	84	1	90		66		57	297	1	Underhammer - custom	550gr PP	Pure	92.5gr Swiss 2F		
13	Willie	Riggle	AL	84		84	1	71		51	290	1	Beasley - Target rifle	530gr PP	Pure	85gr Swiss 2F		
14	Kirk	Page	NY	87		84		64		55	290	0	Pedersoli Gibbs	548gr GG	30:1	100gr Swiss 1.5		
15	Chris	Christensen	MD	96	1	86		51		56	289	2	Pedersoli Gibbs	500gr PP	20:1	65gr Swiss 1.5F	None	Custom
16	Jason	Day	IN	91	2	92	1	68		37	288	3	Pedersoli Gibbs	530gr PP	20:1	95gr Swiss 2F		
17	Kim	Kelley	FL	91		92	1	64		34	281	1	Custom Don Brown-Alex Henry	540gr PP	25:1	93gr Swiss 2F		Sperm oil
18	Dave	Munch	OH	98	1	93	1	8		76	275	2	Custom Ferris - Lee Shaver	535gr PP	20:1	95gr Swiss 2F	Felt	
19	Dean	McKibben	MO	66		77		76	2	45	264	2	Coulthard Sporting rifle					
20	Bob	Boswell	KY	62		89	1	79		34	264	1	Pedersoli Gibbs	535gr PP	25:1	95gr KIK 1.5F	Cork 1/8"	
21	Craig	Faubion	VA	92	1	70		48	1	37	247	2	Rigby - custom	545gr PP	20:1	90gr Swiss 2F	0.06 veg wad	
22	Rod	England	SC	94	2	DNS		72		DNS	166	0	Custom Alex Henry -Don Brown	500gr PP	30:1	80gr Swiss 2F	Felt	
23	Don	Howe	PA	72		26		19		24	141	0	Custom Don B, Rod E. -Alex Henry	525gr PP		2F		
24	Richard	Page	VT	54		51		0		DNS	105	0	Pedersoli Gibbs	548gr GG	30:1	100gr Swiss 1.5	Home	

Volunteer Rifles

1	Rick	Weber	TN	67		81		67			215	0	Alex Henry Volunteer Rifle	530gr PP	Pure	75gr Swiss 2F	None	
2	Al	Robert	AL	84	2	79		49			212	2	Alex Henry Volunteer Rifle	525gr PP	60:1	85gr Swiss 2F	None	Sperm Oil
3	Mike	Pifer	VT	57		57		16			130	0	Pedersoli Volunteer	525gr GG	20:1	90gr Swiss 1.5F		SPG

Priming

“Museum at Oak Ridge”



A rack of Whitworth rifles



Cased Whitworth and Alexander Henry rifles



A Whitworth sporting rifle

Firearms Research Support

Pattern 1843 N.S.W. Mounted Police Carbines & Pistols

Virtually all collectors of British military and colonial firearms will have heard of De Witt Bailey and will be familiar with at least some of his excellent works. Recently De Witt has forwarded Board of Ordnance records pertaining to the production of New South Wales Mounted Police Carbine and Pistol, Pattern 1843, along with a request to locate, identify and publish findings of these arms for the benefit of all collectors. Hence if you are reading this call for assistance it is our hope that you have a carbine or pistol that fits the broad descriptions below and that you will make contact and participate in a survey, without such help any quest to identify these arms will be fruitless.

CARBINE – broad description.

Little is known of its physical description, it is uncertain as to whether or not it has a swivel ramrod, sling mounts, provision for a bayonet or even what barrel length and calibre it is.

What we do know is:

It has a percussion lock that will have a date of 1842, 1843 or 1844. Most likely it will be marked TOWER and will have the usual British Govt inspection and proof etc marks. We know how many were made as well as the names of all the contractors whose names and initials will be stamped on the carbine's component parts. It is these marks that will be the key to identification.

If you have a British Govt type percussion carbine with a percussion lock dated 1842, 1843 or 1844 (Victoria, Constabulary, Yeomanry or unknown type Carbine) can you please contact the author to participate in a research survey (all personal details kept strictly confidential). See contact details below.

PISTOL – broad description.

Slightly more is known of the pistol's description. It has a swivel (captive) type ramrod, a swivel mounted on the butt and a percussion lock held with one side screw (side nail) and will have a date of 1842, 1843 or 1844. Most likely it will be marked TOWER and will have the usual British Govt inspection and proof etc marks.

Many pistols fitting this description are to be found in collections with 6 inch barrels and any of these that fit the date range etc above are certainly of interest. If you have a pistol of interest please contact the author to participate in a research survey (all personal details kept strictly confidential). See contact details below.

ACCOUTREMENTS – broad description

Black leather pouch able to hold 20 cartridges. Also belts with brass buckles and sword carriage provision.

If you have something that fits this description please also contact the author as these were part of the same order.

CONTACT DETAILS:

Please contact Adrian Roads via email at: adrian@stonehenge.com.au to be sent a survey questionnaire.

Alexander Henry Inventory

As we approach the 200th anniversary of the birth of Scottish gunmaker Alexander Henry (4th June 2018), and as his great great grandson, I'd like to create an "inventory" of his rifles and shotguns, so that we can have an idea of how many are still in existence. I realise this can never be "complete", and will be "out of date" as soon as it is created!

Donald Dallas' book "Alexander Henry Rifle Maker" lists all serial numbers from no. 120 (starting when he took over Samuel Gourlay's business in 1852) to no. 8545.

If you own one – and you'd like to help ... please let me know:

- the serial number
- some idea of where you live (country or city or post/ZIP code)
- anything especially interesting about the gun or its history

Name and address don't need to be given – no need for it, really. Personal information will not be shared with anyone – this is purely for my interest and research.

I will be putting this message up on internet forums,

and also trawling through auction sites to see what they have sold in the past. In time, I'll map the data on a world map (anonymity still totally preserved) using something like BatchGeo.

If you know other Alexander Henry owners, please let them know too! If you know of museums with Alexander Henrys, please let me know!

Please reply to: alexhenryrifles@gmail.com

I hope this will be very successful – it will be very interesting! Thanks, in anticipation.

Richard Brown

Alexander Henry's great great grandson
Collaborator on "Alexander Henry Rifle Maker"

British Ordnance Pistols

Together with two colleagues I'm starting a new book project. This has the working title 'British Ordnance Pistols' and will cover single shot pistols from the early 18th century until the end of single shot Ordnance, percussion pistols in the mid 19th century.

With detailed colour photographs and descriptive text including dimensions and any special features we will describe heavy and light dragoon pistols, sea service and coast guard pistols produced by or for the Ordnance as well as at Dublin Castle.

As with previous books, the success of the project depends on being able to obtain high quality photographs of pistols held by dealers, auction houses museums and collectors. We are, therefore, appealing for help with our search for suitable images and data.

We are already in a position to photograph most of the required patterns but need help with the following pistols:

- Early Land service Heavy Dragoon pistols
- Patterns 1703, 1715, 1719, c1722-1725, 1730
- Pattern 1756 Life Guards Pistol
- 1740-1750 and c1750 Light Cavalry Pistol
- Royal Horse Artillery double barrelled Pistol
- Pattern 1842 percussion Pistol
- Dublin Castle Pistols [*the 3 Pistols below were recently offered for sale by Tortuga Trading and were featured in a previous book with low quality images*]
 - c1756 [or other] Land service Heavy dragoon Pistol
 - c1756 Dragoon Pistol with 10in barrel
 - c1760 Light dragoon Pistol
- Coast guards & Customs Pistols
- Customs & Revenue pattern 1839

If you have any of the above pistols then I can send you a Specification Form which will guide you through data and photographs required.

If you think you may have one of the above but are not sure then email us a few photos and we will identify the pistol.

Barry Chisnall

Author: 'British Non Ordnance Carbines 1750-1900'
and with Geoff Davies 'British Cavalry Carbines & Pistols of the Napoleonic Era'

Email: mail@britishcarbines.co.uk



A Pattern 1738 Land Service Dragoon Pistol

Rigby, Quicksilver & Bullet Alloys

David Minshall

For a period during the 1870s long range target shooting captivated the public and much coverage of the sport was given by the press. Following the Centennial Rifle Match of 1876, the *New York Herald* devoted an article to small arms. In considering the shooting made at Creedmoor for the Centennial Trophy (now known as the Palma Trophy) on 13-14 September 1876 the following was noted with regards to bullets:

The greater number of misses at Creedmoor by the American team than that recorded against their opponents is to be accounted for easily enough. The Rigby bullet is hardened with quicksilver, the percentage of which has not been altered for years, whereas the Americans were using projectiles hardened with tin, and different percentages of that alloy were employed in different batches of the bullets, some of which were, of course, harder than others. The consequences of this inequality was that some of the softer bullets had too much "upset" and leaded the bore, while others were too hard and did not take the rifling. Notwithstanding this great drawback, which was understood by few present on the day of the match, the Americans won; and when they shall have obtained a bullet of more uniform density that that now used they will, in future contests, be further ahead of their rivals than hitherto.

New York Herald, 11 November 1876

Reference above is made to Rigby bullets hardened with quicksilver; this is a common name for the chemical element mercury. Some further passing reference was made to hardened bullets in use by John Rigby & Co in the *New York Herald* in 1880, when discussing the forthcoming Ireland vs USA long range match at Dollymount that year.

A NEW WEAPON

The Messrs. Rigby are hopeful of being able to supply the Irish Team with a new breech-loader, for which superior advantages are claimed. The new system consists of a certain combination of rifling and of the bullet. The bullets used with the new weapon are much harder than those of the Sharp or Remington rifles, and the friction between them and the barrels has been reduced to a minimum. English powder is used, and the Messrs. Rigby

hope the necessity of elaborate cleaning will be obviated, while unaccountable misses are completely abolished.

New York Herald, 20 May 1880

At this time, riflemen in the US were using hard bullets; the relative hardness of the Rigby bullets and American bullets may not therefore be as great as suggested by the article above. There does however appear to be a shift to hard bullets by Rigby, likely associated with the shift to breech loaders. A further description of Rigby bullets can be found in Lieut.-Colonel H. Bond's "Treatise on Military Small Arms and Ammunition" (1884) in which he describes the bullet used in Rigby military breach loader and match rifles as:

530 grains in weight; point ogival, rather acute, and hardened by a certain process which gives them a specific gravity greater than the alloys of lead and tin in general use.

To date no specific information as to the alloy employed has been identified. Can anyone help?

Footnote

With reference to the above and the use of quicksilver, the late Peter Jacques (past President of the Muzzle Loaders Association of Great Britain) sent me information he found as a 'side note' within one of Alexander Henry's (1818-1894) original shop books:

Match and military bullet formula

Lead 94lbs 5oz

Antimony 3lbs 4oz

Mercury 2lbs

Bismuth 7oz

Are there any other formula known that have made use of mercury as a bullet-hardener?

Wikipedia: Mercury poisoning

http://en.wikipedia.org/wiki/Mercury_poisoning



Firearms

Charles Hibbs

Firearms – Early Weapons – First Principles Of Gunnery – The Rifle

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

Since man first conceived the madness of killing his fellow-creatures at close quarters, he has always endeavoured to hit upon some method of killing them at a distance. The throwing of javelins or spears by the hand preceded the employment of any machine for the propulsion of projectiles. It is curious that the first propelling-machine of which we find any mention in English history is identical with that simple implement with which David prevailed over Goliath – a sling and a stone. In the time of Henry III., we are told by Matthew Paris, the slingers always headed the army, and began the battle with their slings. The sling consisted of a thong or strap of leather, fixed at the end of a long staff, which was wielded by both hands, and from which could be cast a stone of considerable size. The bow was for many centuries the favourite weapon in English warfare, and must have been a terrible weapon too; for an old historian relates, that at the battle of Halidon Hill, in the reign of Henry IV., “the Lord Percie’s archers did withall deliver their deadly arrows so lively, so courageously, so grievously, that they ran through the men of armes, bored the helmets, and pierced the very swords; beat their lances to the earth, and easily shot those who were more lightly armed, through and through.” Contemporary with the bow, was its more elaborate relative, the crossbow. This was simply a bow mounted on a stock, with a contrivance for discharging it by means of a trigger. The missile was a short, stumpy kind of arrow, called a bolt or quarrel; and a good crossbow would send a quarrel forty rods. The crossbow could not be bent by a man’s unaided strength, but required to be wound up by an apparatus of wheels and pulleys. The dexterity

of the English in the use of these weapons was long proverbial, and we can understand the distaste with which the use of “villainous saltpetre” was viewed on its first introduction.

Hand-cannons, as they were called – the first of that long line of weapons whose descent we shall endeavour to trace, and whose latest descendants have taxed the skill of modern science to perfect them – were first introduced to England by Edward IV. When he landed at Ravenspur, in 1471, he brought with him 300 Flemings, armed with hand-guns. These were very likely ruder instruments than the toy cannon which a schoolboy fires off on the 5th of November. In the library of the British Museum, there is an illuminated manuscript, supposed to belong to this reign, since it bears the symbol of the White Rose, in which are seen some soldiers with long tubes resting on their shoulders, and held up by both hands. They are without stocks, and are very crude and heavy. There is an uncovered touch-hole, and they were probably let off with a match, while resting on the shoulders of two men. An improvement on this primitive contrivance soon appeared in the invention of the *arquebus*, so called from the Italian *arca bouza* – a bow with a tube or hole. The Italians must have the credit of discovering that an adaptation of the stock and trigger of the crossbow might be made to suit the hand-gun. The first form was very simple. The tube was let into a stock, which was in shape like a rail bent to suit the shoulder; and the touch-hole, instead of being on the top, was placed at the side, where was a pan to hold the priming. This pan had a cover, which was removed when the piece was to be discharged; and a cock, with a match of twisted-tow between its jaws, was pressed downward by the trigger until the lighted end touched the powder, and fired the piece; after which a spring restored the cock to its former position. The arquebusier was compelled to blow frequently “upon his match to keep it alight; and a shower of rain must have thrown all the guns of an army out of action-for the time. This was the matchlock, the earliest form of the modern musket.

The extreme liability of this weapon to accident, from the possibility of a spark from the smouldering

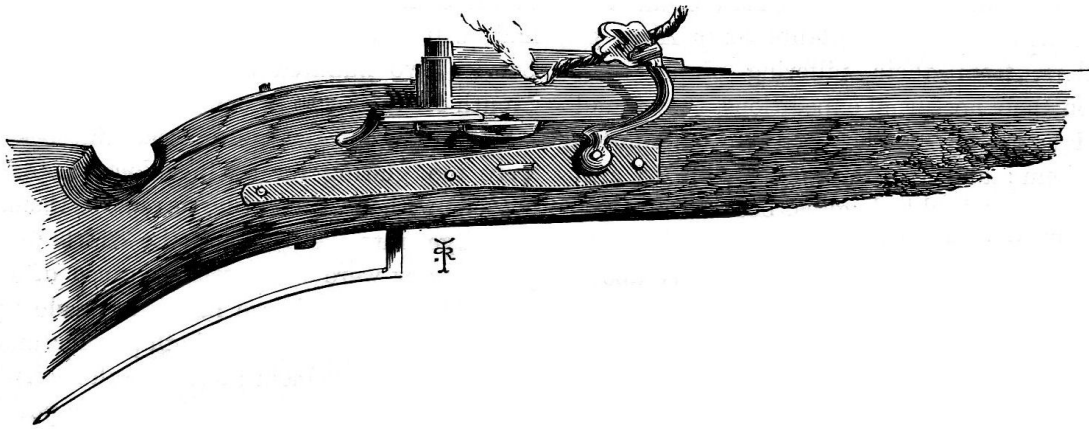
tow reaching the powder in the pan, led to an attempt to produce fire at the moment it was wanted. The Italians again must be credited with the first success in this direction. The wheel-lock, which continued in use down to the time of Charles II., was an elegant substitute for the matchlock, and a really ingenious invention. To the side of the gun, a little behind the touch-hole, was fixed a toothed or furrowed wheel, having a spring, barrel, and chain. This being wound up with a stout key, called a spanner, until the spring was in perfect tension, the gun was ready for use. When it was required to be discharged, the cock, containing a piece of pyrites, was let down on the rough surface of the wheel; a pull of the trigger released the spring; and the wheel, spinning round, and grating against the pyrites, threw a shower of sparks into the pan. This was sometimes called the firelock, a name which has survived to this day. The invention which followed next upon this had a curious origin. According to Grose, the antiquary, a band of marauding soldiers infested the Low Countries, and were called by the inhabitants *Snap Hans* or fowl-stealers, from their pilfering propensities. When upon their nocturnal expeditions, they found that the light of the matches in their matchlocks betrayed them; and they were not able to arm themselves with wheel-lock guns, because of their expense. They therefore hit upon a method of fixing an upright piece of steel immediately above the touch-hole; and, placing a flint in the cock in place of a match, they brought it sharply down, and struck fire from the steel into the pan. This was the predecessor of the flint-musket, the service arm of our infantry till a few years ago, and the celebrated Brown Bess with which Waterloo was won. For a long time after their introduction, they were called snaphance muskets, after their roguish inventors; and as they gradually became adopted in all the armies of Europe, their form and qualities began to improve.

In the early days of firearms, the equipment of the arquebusier had been cumbrous in the extreme. He had to carry, besides his heavy matchlock, a pointed staff with a forked top, which he stuck in the ground to rest his musket upon, it being too heavy to be fired from the shoulder. He had several yards of twisted hemp for matches wound round his middle. He had hanging from his belt a number of small canisters, each containing a charge of powder, which were called *Bandealers*. He

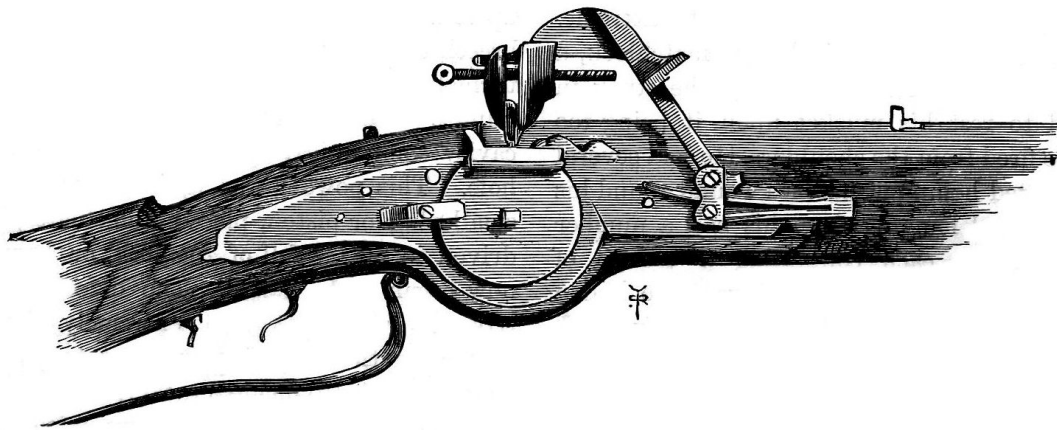
*The inherent defects of the
flint-lock musket were too glaring
for an ingenious people to rest content
without attempting to remove them.*

had a pouch full of bullets, of which he kept a few in his mouth ready for use. He was instructed not to aim high, lest he should shoot over the heads of his foes, but he was to take care that his bullets rolled not out through his pointing too low. He had to blow the ashes from his match immediately before every discharge, at the imminent risk of blowing himself to pieces by a spark getting into his *bandealers*. No wonder that the weapon was unfashionable with the early military authorities, who knew how much could be done with the bow. We have now reached the period at which the gun-manufacture commenced in England. It was in the year 1689 that Sir Richard Newdigate was commissioned to test the capabilities of the Birmingham smiths in the manufacture of firearms. The essay being successful, a small trial-order was given in 1692, and was followed the next year by a regular contract with five persons, "Gun Smithes," who did "severally covenant and agree to and with the said principall officers of their Maties Ordnance on the behalfe of themselves and the rest of the Gun-makers of Birmingham that they shall and will make and provide for their Maties Service two hundred Snaphance Musquets every Month for the space of one Year."

The inherent defects of the flint-lock musket were too glaring for an ingenious people to rest content without attempting to remove them. Rain would get into the pan; and the efforts to keep his powder dry were an incessant cause of worry to the soldier. The charge had been made up into a cartridge, which contained both powder and bullet – a great improvement; but the soldier had to bite off the end, and pour a little of the powder into the pan for priming, every time he loaded his piece. It was a Scottish clergyman, a Mr. Forsyth, who first conceived the idea of using detonating powder – fulminate of mercury – as an igniting medium. His patent was taken out in 1807; and the mechanical means he adopted were very ingenious. Could he have



Early Match Caliver, From Penshurst (1590)



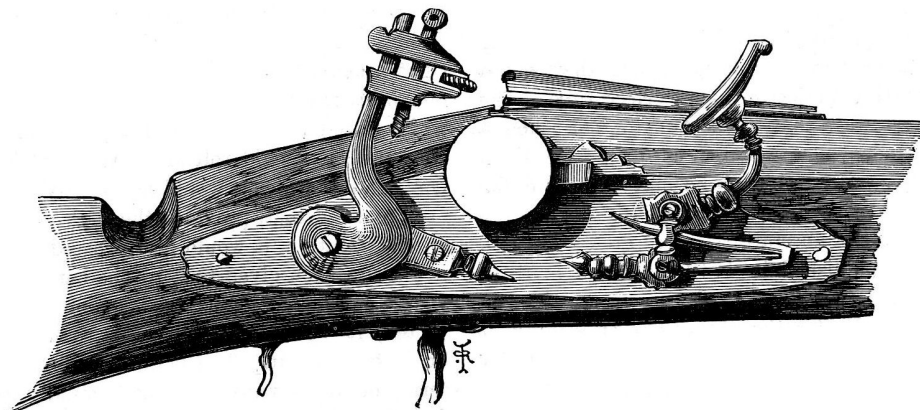
Wheel-Lock, From the Tower of London

succeeded in making them safe, his method would have been preferable to any in use up to a very late period. He had, attached to the breech of the piece, a small magazine, which, being turned round a little at each loading, dropped a minute quantity of detonating powder into a cavity communicating with the barrel by a vent-hole. This powder was ignited by the blow of a small plug or piston, placed immediately over, and driven in by the fall of the cock, or hammer as it now began to be called. The defect of this contrivance was that the extremely inflammable powder in the magazine was apt to go off all at once, like a badly-made cracker, and do a deal of mischief. Various methods were tried after this, but with small success. One was to stick a patch of detonating powder on the face of the hammer, and strike it down on the touch-hole. Another was to crush a small globe of it into the touch-hole, and strike

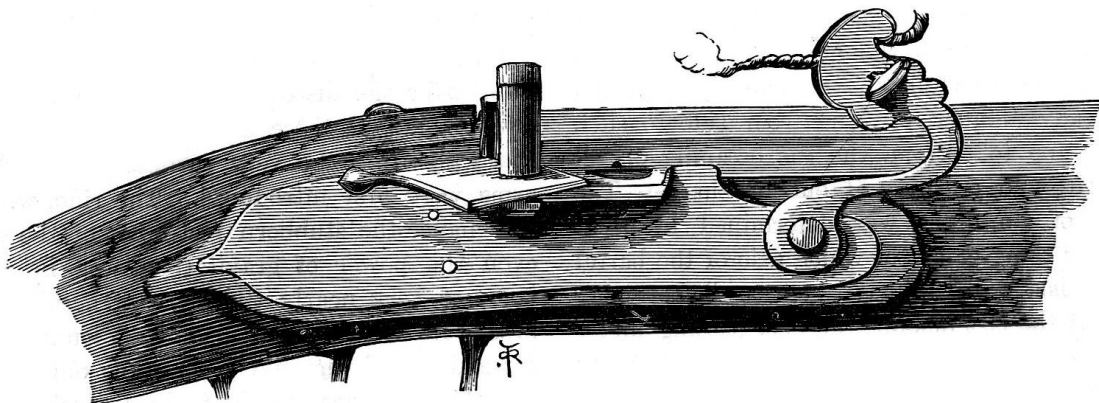
it with a steel point; but every other method was at once superseded on the introduction of the percussion cap. It was in 1816 that this neat invention was brought out; but so slowly does conviction penetrate official minds – it was not adopted in the service till 1839!

From this point the manufacture of military firearms began very rapidly to improve, and the improvements became of a highly scientific character. The most important had reference to the flight of the projectile, the laws regulating which were just beginning to be understood. We shall have to take the reader with us on a short excursion into the elementary principles of the science of gunnery, in order to render intelligible what follows.

Every tyro will be aware that the long barrel or tube is intended to give direction to the flight of the bullet. But the tyro might possibly suppose that the bullet



Firelock or Snaphance (About 1620), From Haddon Hall



Last Matchlock in the British Service (Time of William III), From the Tower

would follow the direction given to it, in a straight line, until its force was spent, when it would gradually droop, and fall to the ground. Such could not be the case with the most perfect tube that could, by any possibility, be made. The bullet is acted upon, from the first instant of its course, by a force more irresistible, if more gradual, than the force which has impelled it forward. That force is gravitation. A falling body approaches the earth with a constantly accelerating motion, partly because the attraction between them increases, and partly because the body is acquiring momentum as it falls. It will fall 16 feet in the first second, 48 feet in the next, 80 feet in the third, and so on. A cannon-ball, dropped from a height of 1,600 feet, would reach the ground in 10 seconds. Now, suppose the cannon-ball to be projected from a cannon pointed in a perfectly horizontal direction on the top of a rock 1,600 feet high. The force of the discharge may

carry the ball forward one mile or ten miles; but during the first second it will droop 16 feet; during the next it will have drooped $48 + 16 = 64$ feet, and it will strike the ground in 10 seconds, the utmost possible duration of its flight. In its course, whether long or short, it will describe a parabolic curve, constantly bending more and more towards the earth, and during the last instant its descent will be almost perpendicular. There can be no such thing, therefore, as a point-blank range. If the cannon had been directed at an object which the ball was capable of reaching in one second, the ball would strike a spot 16 feet below the point aimed at. If the velocity of the projectile could be increased so as to traverse the distance in less time, it would be nearer the mark, but it could never absolutely hit the mark with a point-blank aim. In order to hit it, the muzzle of the piece must be elevated, and a nice calculation must

Another condition requisite to good shooting was unattained by our fathers, and that was a perfectly-fitting projectile in a perfect tube.

be made of the distance to be traversed, the projectile force to be used, and the attraction of gravitation to be overcome, in order to determine the proper degree of elevation.

We have so far been supposing an impossible condition – a vacuum to fire into. The gunner has also to take into account the resistance of the air, which produces effects far more powerful and varied than might be supposed. The ancients imagined that the air, being so impalpable, could not sensibly retard the flight of a heavy projectile; but modern science has taught us better. We now know that the resistance of the air increases, not in simple ratio to the velocity of the substance passing through it, but as the square of that velocity. Thus, taking any velocity as a starting-point, that same velocity increased three times will meet with nine times the resistance; increased four times will meet with sixteen times the resistance; and so on. It is conjectured that there is an ultimate velocity which it will be impossible to exceed – that we may reach a point, if we go far enough, at which the resistance of the air will balance the force we oppose to it. The late Mr. Greener, of Birmingham, once tried a series of experiments with a view to test the strength of different kinds of gunpowder. He made a gun sufficiently heavy to withstand any strain, and with it fired an ounce ball at a piece of half-inch iron boiler-plate; increasing the charge till the ball went clean through. He then tried the effect of the same charge at different distances, and found to his surprise, that the nearer he approached the plate the less impression he made. At twenty yards he could perforate it well, but at five yards he could only indent it. The explanation, no doubt, was that the column of air in the barrel, crushed into a compact mass by the rapid egress of the bullet, had not time to disperse itself in the surrounding atmosphere, and acted as a temporary check. An attempted assassination at

New York, some years ago, was prevented by the same cause. The assailant planted the muzzle of his pistol full against his opponent's chest, and fired. To the great surprise of both, the intended victim remained unhurt, and on the removal of the weapon the ball rolled harmlessly on the floor. The imprisoned air had acted like a cushion to stop the progress of the ball. We now see the reasonableness of the idea that a projectile may not only be greatly impeded in its passage through that resisting medium, the atmosphere, but that it may be greatly acted upon in other ways; it may, for instance, be deflected from its course by coming in contact with a stratum of different density.

Another condition requisite to good shooting was unattained by our fathers, and that was a perfectly-fitting projectile in a perfect tube. The consequence was, that their bullets took such a perfectly independent course as to puzzle them exceedingly. Mr. Robins, who may be styled the father of modern gunnery, succeeded in discovering the cause of the aberrations, after great research. His work, published in 1742, has been more or less the foundation for all subsequent treatises on the subject. Under the old system of loading, it is obvious that a mechanically-fitting and perfectly air-tight bullet could not be pushed down the barrel, on account of the imprisoned air. The bullet had to be made a little smaller than the bore to allow room for the air to escape, and this was called windage. But if there was room for the air to rush past, there was room for the explosive gases to rush past too, and so a considerable part of the force of the powder was lost. This was not the worst part of the business. The ball, never very tight, got looser as the barrel became expanded with the heat and force of the explosion, and went down the bore in anything but a steady manner, striking from side to side, and from top to bottom, the gas escaping on all sides of it, and crushing it out of shape. The direction of its flight was determined in great measure by the accident of which side of the barrel it struck last. If it happened to be pressing upwards at the last instant, the gas, passing under it, would give it an upward direction; if it struck the lower side of the bore, it would be deflected downwards. There was another cause of deflection, not so obvious as this, which Mr. Robins had the sagacity to discover. The ball, in striking or pressing against the sides of the bore, acquired a rolling motion, which

increased to a very rapid rate of rotation after it had left the muzzle. The direction in which it was rotating had a great deal to do with the line of its flight. Mr. Robins conceived that, by a purely mechanical action of the air, the ball would be deflected from its course in an opposite direction from that in which it was rotating. For instance, if the axis of rotation were vertical, and the ball were rotating from left to right, it would be deflected to the left. The reason is, that the motion is on one side against the air, while on the other side it goes with it. The ball is proceeding at a rate which leaves a vacuum behind it, and the effect of this frictional resistance is very considerable – quite sufficient to push the ball out of its course. In order to test his theory, Mr. Robins took a musket-barrel, and bent it to the right a short distance from the muzzle. He then put in a moderate charge of powder, and a ball which fitted loosely, so that when it came to the bent part, it should roll along the left side of the bore, against which it would necessarily be pressing. He predicted that, provided the ball maintained its axis of rotation, it would first proceed to the right, in the direction given to it by the barrel, and afterwards, as the frictional resistance of the air began to tell, it would gradually veer round to the left. So it turned out. The ball, being fired through a series of light paper screens, actually took the direction Mr. Robins marked out for it. Practically, however, there were no means of determining with certainty how a ball would fly, even with a bent barrel, because it was always liable to change its-axis of rotation. The irregular shape that it was often crushed into would be very likely to produce such a result. From one cause or other, our military firearms were anything but arms of precision down to a very late period.

Singular to relate, men had been almost stumbling over the discovery that would enable them to overcome all these difficulties – natural and mechanical – from the

*The rifle, which sets at defiance
the stubborn resistance of the air,
and even the power of gravitation,
was in the first-instance
very nearly the birth of accident.*

very earliest period when firearms were first introduced. The rifle, which sets at defiance the stubborn resistance of the air, and even the power of gravitation, was in the first-instance very nearly the birth of accident. The first grooved barrel was made, in Vienna, in 1498. Its maker had very likely no other object in view than to find space for the fouling which came from the impure gunpowder then in use, so that the friction of the bullet might be less. The grooves were straight, and of no great depth. In 1620, a gunmaker of Nuremberg made a gun with spiral grooves, for the purpose of giving the ball a rotary motion, on an axis coincident with its line of flight. It is very likely that he had no thought whatever of counteracting the accidental rotation we have spoken of, and which was perhaps unknown to him, but that he was acting upon a discovery made long before his time, when bows and arrows were the weapons of our men-at-arms. The fletcher used to feather his arrows in a spiral direction, which gave them a spinning motion in the air, and was found to give precision to their flight. It was little thought, probably, that the introduction of the rifle was destined to revolutionise the whole science and practice of gunnery.

Most persons know what a rifle is. It has the inside of the barrel cut with spiral grooves, like the threads of a female screw; but the turn, or twist, is very gradual, varying from half a turn to two and a half turns in the whole length, according to the system adopted by different makers. The ball is made to fill up these grooves by means more or less perfect, which we shall describe further on, and the result – as has been proved often enough – is this: – When the gun is discharged, the bullet is made to turn itself round in the barrel by the bite of these spiral grooves, and the motion it thus acquires while flying like lightning down the tube, becomes a spin of inconceivable rapidity the instant it leaves the muzzle. This spin is maintained, if the system of rifling be correct, during the whole time of its flight.

*Part 2 will be published in
the Summer Edition of the Journal.*



The Muzzle Loading Match Rifle in Great Britain

David Minshall

During the late 1850's there was growing apprehension as to the prospects of French invasion of Great Britain. This culminated in 1859 with the Government authorising the formation of Volunteer Rifle Corps (See *'The British Volunteer System'*, page 34). There was an immediate rush of Volunteering, but it was not expected to last. The formation of the National Rifle Association (NRA) late in 1859 did however put measures in place to secure the long-term prospects of the Volunteers, its aims including "the encouragement of Volunteer

Rifle Corps and the promotion of rifle shooting throughout Great Britain." The NRA established an annual rifle meeting with matches at distances of up to 1,000 yards. The NRA held their first annual national rifle meeting on Wimbledon Common, in July 1860. Pictured above is a firing point at Wimbledon, c1865

For the gun makers of the time this development created a new market in the form of discerning riflemen seeking accurate long range arms. Following principles established by Joseph Whitworth, there developed a special class of 'small-bore' target rifle. The majority of these rifles were around .451 calibre, and the



contemporary term 'small-bore' was used to distinguish them from the 'large-bore' service rifle of .577 calibre.

Rifles used for competition evolved, during the decade of the 1860's, from variations of the military pattern to specialised items not suitable for military use. The early rifles outwardly appeared much the same as the service arm of issue, with full length military stocks and open sights, the bore and form of rifling being where the major differences lay. These are generally described as military match rifles (*see Whitworth rifle pictured below*). By the mid 1860's the small-bore match rifle was evolving into a highly specialised form of target



Whitworth rifle



Rigby rifle

rifle. The full length stock reducing to a half stock with 'pistol grip', and the ramrod no longer attached. These features allowed more weight to be concentrated in the barrel (the overall weight limit of the rifle being restricted to 10lb for NRA competitions). Open sights had been replaced with aperture sights; foresights took interchangeable elements, and incorporated a spirit level to aid eliminating cant. Sight mountings were also included on the heel of the rifle stock to permit the use of the back position. This is the match rifle (see *Rigby rifle pictured above*).

Captain Heaton, in his 1864 'Notes on Rifle Shooting' describes a number of small-bore rifles: Baker, Beasley, Bissel, Crockart, Edge, Henry, Kerr, Lancaster, Newton, Parsons, Rigby, Turner and Whitworth. These are just a few of the gunmakers connected with the history of the small-bore rifle.

By 1870 Whitworth's deeply rifled hexagonal bore and mechanically fitting bullet, together with other makers who had followed these principles, were being supplanted by designs by Metford and Rigby, which used shallow groove rifling and hardened lead bullets. These latter rifles dominated in long range shooting for a number of years.

In the right hands the match rifles are extremely accurate. One notable achievement was made by J.K. Milner of Ireland, firing at Creedmoor in the Centennial Match of 1876. Using a Rigby muzzle loading match rifle he scored an unprecedented 15 consecutive bulls-eyes at 1000 yards.

Demise of the Muzzle Loader

In 1874 the first of a short series of international rifle matches took place at Creedmoor, USA. These matches were long range team events fired at ranges of 800, 900 and 1,000 yards and drew huge crowds of spectators and much press coverage. In the 1874 match between America and Ireland, the Americans used Remington and Sharps breech loading rifles, while the Irish used Rigby muzzle loaders. This was a close run event with the Americans winning by just 3 points. This competition marked the beginning of the end for the muzzle loading match rifle.

Subsequent international long range team competitions at Dollymount, Ireland, in 1875, and Creedmoor in 1876 and 1877 were won by the Americans using their breech loading rifles. A final match fired at Dollymount in 1880 between America and Ireland was notable for the fact that for the first time both teams used breech loading rifles.

By 1878 there were calls from within the ranks of the NRA to abandon the muzzle loader in competition. Given that many muzzle loaders were still in the hands of private persons, it was however pointed out that this would destroy their value and many would not face the expense of new rifles, with resultant loss in competition entries. Finally it was resolved that muzzle loaders would still be permitted provided that competitors were ready to fire when called upon to do so. In practice there was a gradual phasing out of the muzzle loading match rifle as the breech loader gained popularity.

Arming Georgia

Southron Sanders

“The Windsor Enfields Affair and Other Incidents”

*As War Clouds Gathered in 1860 & ‘61,
Georgia’s Ante Bellum Governor,
Joe Brown, Directed a Highly Successful,
Covert Arms Purchasing Program
in the North until a Suspicious New York
Policeman’s Discovery Exposed the Plot,
Creating National Headlines!*

In early 1860, Georgia’s Governor, Joe Brown, was deeply concerned about the future of his state. Would Radical Northern Abolitionists spark a slave revolt in Georgia that would drench the state in blood? Would Georgia remain in the Union? Would Georgia leave the Union and become one of 11 or 12 Independent Southern Republics or would Georgia become part of a new Southern nation?

Governor Brown felt that regardless of what the future held for Georgia, a well armed and disciplined Georgia Militia, loyal to the state was Georgia’s best insurance against insurrection, mayhem or invasion. Georgia already had numerous militia units, some tracing their origins back to the Revolutionary War era.

In the Old South, membership in a local militia unit was not only considered a patriotic obligation, but with many of the older, well established units such as the Chatham Artillery, the Georgia Hussars or the Oglethorpe Light Infantry, membership denoted a certain status in the upper crust of Southern society.

Each militia unit, more or less, designed their own uniforms and in many cases those uniforms were both elaborate and resplendent. While all of the units drilled from time to time to meet their legal military obligations, in many Georgia towns the highlight of the social season was the formal military balls that the militia units sponsored. Militia members, dressed in their colorful uniforms danced the night away with their wives or sweethearts. All in all, it was very romantic and entertaining.

The well established old militia units in Georgia were indeed, well armed, thanks to a piece of Federal

legislation entitled: “The Militia Act of 1808” passed by Congress in that year. The legislation directed that Congress appropriate \$200,000.00 annually to the U.S. Army’s Ordnance Department that would be used to purchase arms and other military equipment for the state militias. These arms and equipment, in turn, would be issued annually to the various states based on the numbers of men listed in the “Enrolled Militia” returns from each state.

Each year, each state governor would select from literally an “equipment list” provided by the Army’s Ordnance Department of what arms and military equipment was available that year to his state. Items included such things as muskets and bayonets for the state infantry, cannon, caissons and harness for artillery units and even saddles, bridles, sabers and pistols for state cavalry units.

But then, a traumatic event caused a tremendous growth of new state militia units throughout Georgia and the entire South. This event sparked such a great increase in enrollments of the state militia, that it was impossible for the limited annual appropriations of The Militia Act of 1808 to even begin to arm them all.

The event was John Brown’s Raid on Harpers Ferry, Virginia in October of 1859. Brown’s raid had all of the chilling facets of modern Terrorism: innocent people were taken hostage and some of them were murdered, all for a murky political goal. Ironically, Brown’s first murder victim in the raid was an innocent, free black, night watchman at Harpers Ferry.

The avowed purpose of the John Brown Raid was to spark a slave revolt throughout Virginia. Brown and his followers were attempting to seize the U.S. Armory at Harpers Ferry so the arms stored there could be then distributed to revolting slaves. Brown and most of his rag tag band of followers were quickly overcome and captured by U. S. Marines dispatched from near-by Washington, D.C.

Brown was tried by the Commonwealth of Virginia for treason and murder. A strong legal defense could have been made that insanity ran in Brown’s family, but Brown would have none of that. He used his trial as a political stage. He was sentenced to hang for his crimes.

After he was hanged, some Northern Abolitionists mourned his passing as if he was somehow a religious deity. Ralph Waldo Emerson stated that Brown had “made the gallows as glorious as the cross.”

Of course, all of this was shocking to conservative, white Southerners who were stunned at the ferocity of the Abolitionist rhetoric and hatred. If matters weren’t bad enough, in the Election of 1860, the Democratic Party split and a “Back Republican” by the name of Abraham Lincoln was elected President with only a plurality of the vote.

A Smooth Running, Covert Arms Purchasing Operation

With a national crisis looming, Governor Brown received some unexpected aid from a South Carolina plantation owner by the name of Thomas Drayton. Drayton was a West Point Graduate that had served as a U.S. Army officer for several years before resigning his commission and returning to the life of a Planter. South Carolina had recently appointed Drayton as the state’s purchasing agent for arms and munitions.

Upon receiving this appointment, Drayton had immediately left South Carolina and headed to Washington, D.C. for a personal interview with the then current, lame duck, Secretary of War for the Buchanan Administration, John B. Floyd. Floyd was an ardent Southerner and a former Governor of Virginia.

Following the John Brown Raid on Harpers Ferry, on his own initiative, Floyd had begun a low key program of ordering more and more military arms shipped from federal arsenals in the North to federal arsenals in the South. Presumably, so these arms would be available to state militias in the event of any Abolitionist inspired slave uprisings.

As the arms purchasing agent for South Carolina, Thomas Drayton received a warm welcome in the office of Secretary of War Floyd. Drayton wanted to purchase surplus federal arms for the State of South Carolina from Floyd. While Floyd wanted to accommodate Drayton, he was very well aware of the negative political implications of surplus federal arms being sold directly to South Carolina - a state that might secede from the Union at almost any time.

Floyd suggested to Drayton that he contact Gazaway B. Lamar, a well-known New York businessman who was President of The Bank of the Republic in New York City. Lamar would purchase the arms in his name. In effect, Lamar would serve as the “Front Man” in the sale and transfer of federal arms to South Carolina.

Lamar had been born and raised in Augusta, Georgia. As a young man he had shown a “good head for business” and soon established a steamboat line that plied the Savannah River between Augusta and Savannah. The steamboat business proved to be especially profitable during “Cotton Season” because his boats picked up bales of cotton at landings on both sides of the river. The bales were conveyed down to Factor’s Walk in Savannah to be sold and then loaded on ships headed for the cotton mills in New England, Britain and Europe.

Lamar established steamboat lines on other Georgia rivers and invested in warehouses in Savannah. Then, in 1846 he moved to New York City and became involved (and very successful) in both the insurance business and banking.

Following Floyd’s advice, Drayton caught the train from Washington to New York and soon made an appointment with Lamar. Whether or not it was Lamar or Drayton that wanted to allow Georgia “in” on the “Musket Deal” is unknown. Governor Brown was contacted and he definitely wanted to purchase surplus federal arms for the state if possible.

*The muskets for sale,
U.S. Model 1822 .69 caliber
smoothbore muskets converted to
percussion were technically obsolete.
The arms, when loaded with the
issue “Buck & Ball” cartridge was a
fearsome weapon at close range.*

Lamar wasted no time:

“New York, November 21, 1860

*Hon. John B. Floyd
Secretary of War,*

SIR: I understand that you have a large quantity of muskets changed from flint to percussion now at Watervliet [Arsenal in Troy, New York] for sale. Will you do me the favor to state the lowest price and terms, and whether they can be delivered here [to New York City] immediately...A prompt reply will be acceptable.

Very Respectfully

G.B. Lamar”

The muskets for sale, U.S. Model 1822 .69 Caliber smoothbore muskets converted to percussion were technically obsolete. The arms, when loaded with the issue “Buck & Ball” cartridge of one .64 Caliber round lead ball and three .36 Caliber lead buckshot, all propelled by 110 Grains of black powder was a fearsome weapon at close range, but it had a “maximum effective range” of only 80 or so yards. (The new rifle-muskets, adopted in 1855, were deadly out to a range of 600 yards.)

Because of their “technical obsolescence” Floyd sold the lot of smoothbore muskets at the “Bargain Basement” price of only \$1.70 each to South Carolina and Georgia! Georgia purchased 5,780 of these arms. The arms at Watervliet Arsenal were crated up and delivered to G.B. Lamar’s warehouse in New York City. They were then promptly trans-shipped to Savannah by Lamar and were soon delivered to the state arsenal at Milledgeville. Governor Brown’s first “clandestine” arms purchasing mission in the North was a decided success. Best of all, Governor Brown had found a strong ally in the South’s “Front Man” in New York City, businessman Gazaway B. Lamar.

Another purchasing “coup” in the North conducted by Brown and Lamar involved Maynard Carbines. Several years earlier a brilliant Washington, D.C. dentist who liked to dabble in mechanical inventions had designed a new type of breech loading carbine. The new carbine used a metallic cartridge with the base pierced by a small hole. The cartridge was ignited by

the flame of an external percussion cap or percussion tape. [Dr. Maynard’s percussion tape was a failure when applied to firearms, but toymakers over a half-century later adapted Dr. Maynard’s percussion tape system to become the basis of the modern “Cap Pistol.” The toy gun that has brought joy to millions of youngsters over the years!]

Dr. Maynard had patented the carbine and he was so sure of its superiority to other carbines of the era, he talked several capitalists into putting up the money to organize a new company to manufacture and sell the carbines. The company, Massachusetts Arms Company, acquired a plant in Chicopee, Massachusetts, equipped it with the latest machinery, hired skilled workers and was soon turning out high quality Maynard Carbines.

Dr. Maynard was certain that the U.S. Army would purchase a large number of carbines and, yes indeed, a Board of Army Officers did test the Maynard Carbine and pronounced it a wonderful new arm. Instead of purchasing thousands of carbines, the army purchased only 400 carbines as the peace time budget was rather limited.

Then the company tried to sell their carbines on the civilian market, and a few carbines were sold “to the trade,” but sales lagged so badly that with an inventory of almost 4,000 carbines unsold, things did not look good for Dr. Maynard’s latest venture.

Senator Robert Toombs of Georgia had acquired a Maynard Carbine and was suitably impressed with the arms many fine qualities. Whether or not, he recommended the carbine to Governor Joe Brown is unknown. What is known is that Gazaway B. Lamar purchased a large number of the unsold Maynard Carbines in the Massachusetts Arms Company’s inventory and they were shipped to New York City from Chicopee. 620 of those Maynard Carbines were purchased by the State of Georgia and soon arrived in Savannah. Governor Brown, through Lamar also purchased 400 Adams revolvers made by the Massachusetts Arms Company. Both Mississippi and Tennessee also purchased Maynard Carbines through Lamar in large numbers. So many Maynard Carbines were in the South at the beginning of the Civil War, the Maynard Carbine was actually listed in the Confederate Ordnance Manual!

Perhaps the ultimate purchasing coup occurred

when Georgia purchased 1,600 .54 Caliber, “New Model 1859” Sharps Cavalry Carbines from the Sharps Arms Company of Hartford, Connecticut. Mr. Palmer, the President of the company agreed to accept a small cash down payment and the balance of the price of the carbines in Georgia 6% Bonds! In effect, these bonds were “Georgia War Bonds!” At the time, the Sharps New Model 1859 Carbines were the finest Cavalry Carbines in the world. The Sharps Carbines soon arrived in Milledgeville and placed in the arsenal.

Governor Brown’s “Clandestine Arms Purchasing Program” was working very successfully. Some of the other arms acquired were: 1,225 U.S. Model 1855, .58 Caliber Rifle-Muskets, 1,570 Sets of Infantry accoutrements (leather cartridge box, leather cap box, bayonet scabbard and belt), 370 U.S. Model 1841 .54 Caliber, “Mississippi” Rifles, 100 U.S. Rifled Cavalry Carbines, 100 Enfield Rifles, 1,200 Colt Revolvers, 950 Light Cavalry Sabers, Nine 6 Pounder Field Pieces and Four 12 Pounder Howitzer Cannon.

An Arms Bonanza For The State!

Everything changed on January 19th, 1861 for that was the day that the Georgia Legislature, meeting in the state capitol at Milledgeville, voted to Secede from the Union. Wild celebrations ensued in cities and towns throughout the state. While American history teaches us that the South was wrong in Secession, the American nation broke up in 1861 for many of the very same reasons the French and British Empires (and even the Soviet Union) broke up in the 20th Century: Central governments, governing large empires make decisions and implemented policies that the populations in the individual states of those empires often found unacceptable. It seems that “Home Rule” is the best after all.

*The “War Fever” that gripped Georgia
in January and February of 1861
caused new militia companies
to be organised overnight
in every corner of the state.*

Governor Brown travelled over to Augusta on January 27th and took command of several local militia companies that deployed in front of the U.S. Arsenal at Augusta. The garrison at the arsenal consisted of only a U.S. Army Captain and 80 soldiers. Governor Brown demanded the surrender of the arsenal:

“The ceremony of this surrender was very simple. There was no parade and no opposition. The demand for its surrender was made, and after a few preliminary exchanges of courteous notes, and without any violence whatsoever, a committee of citizens accompanied by the Governor in the formal ceremony of lowering the United States flag and raising the flag of Georgia.”

The U.S. arsenal at Augusta was literally stocked to the walls and roof with military arms. A quick inventory revealed that the state had acquired 3,000 U.S. military rifles and/or rifle-muskets and 28,000 smoothbore U.S. Muskets. This accounting did not include bayonets, pistols and all the accoutrements normally issued as part of a “Stand of Arms.”

The “War Fever” that gripped Georgia in January and February of 1861 caused new militia companies to be organised overnight in every corner of the state. By February 26, 1861 the Georgia’s Adjutant General, Henry C. Wayne, could report that already over 10,000 Georgians had joined local militia companies:

“Of the Arms in the hands of the volunteer companies, of which we have recorded one hundred and seventy three, averaging about, according to returns, sixty to the company, and embracing Cavalry, Artillery and Infantry...”

For the time being, at least, with the seizure of the U.S. Arsenal in Augusta; Georgia temporarily had enough arms to issue to the state’s volunteers. Distribution of the arms from the Augusta Arsenal was made by the state on the following basis:

Usually, a militia unit was organized by a local prominent individual or individuals. When approximately 60 members had enlisted in the “company,” elections were held. The company officers, a Captain and Lieutenants were usually elected. In

some cases, the Sergeants and Corporals were elected, in others, they were appointed by the officers after the officers were elected.

The commander of the unit, usually a "Captain" would then see that the roll of all the members in the unit was sent to the Adjutant General's office. If the state accepted the unit, then the Commander was notified.

The Commander then had to purchase a Bond for the value of the arms to be issued to his company. Each enlisted member of the unit would be issued from Augusta a "Stand of Arms" which consisted of one musket, one bayonet and a set of leather accoutrements which contained a leather cartridge box, cap box, bayonet scabbard and a belt (and in most cases, an additional cross belt.) The arms were usually shipped via Railway Express to the nearest RR station to the location of the new unit. It was up to the Commander of the unit to arrange to pick up the arms at the station and distribute them to the new company.

Although Georgia had an "official" militia uniform, the uniform was only a suggestion. Most of the new units that were organizing had their uniforms made locally of their own design. They adopted a colorful name for their company and generally some of the local ladies made a unit flag that was presented to the unit in a moving ceremony.

Brown's Covert Arms Purchasing Program Is Exposed!!!

Governor Brown and Gazaway Lamar's clandestine arms purchasing program in the North was working smoothly until January 22rd 1861; just three days after Georgia Seceded from the Union. Down on Pier 12 in New York Harbor, the coastal steamer, S.S. Monticello was being loaded with wooden crates delivered from Lamar's warehouse to the wharf. The crates were stacked on the wharf and addressed to a company in Savannah, Georgia. To a New York Harbor policeman, the crates looked to a certain extent like arms crates.

His suspicion aroused, the policeman found a screwdriver and opened one of the crates lying on the wharf, soon to be loaded on the steamer. His suspicion was correct because he pulled out a 2nd Model, .577 Caliber Enfield Rifle (the finest military arm in the

The "Windsor Enfields" in the shipment seized by the police were not British made Enfields, but 100% American made. They had been manufactured by the firm of Robbins & Lawrence of Windsor, Vermont.

world at the time) marked "Windsor" on the lock plate. A crowd of curious onlookers quickly gathered and the policeman displayed the rifle-musket to them. The crowd was electrified. A quick count showed that there were 38 crates in all, containing 950 Enfields, enough to equip an entire Southern Infantry regiment!

More policemen quickly arrived along with a newspaper reporter. When the Superintendent of Police, John A. Kennedy learned that the arms were addressed to a company in Savannah, Georgia, a state that had Seceded from the Union a few days previously, he ordered the entire shipment seized and placed in impound in the New York Arsenal. That evening, the seizure of the arms made headline news in the New York papers and newspapers around the country the next day. Governor Brown's and Lamar's "covert" arms purchasing program had been uncovered and was making headline news all over the country.

The "Windsor Enfields" in the shipment seized by the police were not British made Enfields, but 100% American made. They had been manufactured by the firm of Robbins & Lawrence of Windsor, Vermont three years before. At the time the arms were manufactured, the Robbins & Lawrence firm was one of the most technically advanced arms manufacturing companies in the world.

Sixteen years before, in early 1845, Robbins & Lawrence had been a small arms manufacturing company, tucked far away in the rolling green hills of Vermont. The little firm's fortunes changed dramatically when the company received a contract on February 8th, 1845 for 10,000 .54 Caliber, U.S. Model 1841 Rifles from the U.S. Ordnance Department. The firm greatly expanded their plant facilities, built and purchased the latest arms production machinery and hired some of

the most skilled workers in the New England area and put them to work. The company was so well managed that the firm delivered all of their arms 18 months ahead of schedule to the Ordnance Department.

This was very much appreciated by the Ordnance Department because of the demands placed on arms from that department during the Mexican War which broke out in 1846. Then, in 1848, the Ordnance Department placed another contract with the firm, this time calling for an additional 15,000 U.S. Model 1841 "Mississippi Rifles." Again, the firm exceeded expectations and delivered all of the arms called for in the contract, well ahead of schedule in 1852.

Unfortunately, for Robbins & Lawrence, by 1852 the Mexican War was long over and there were no more contracts forthcoming from the Ordnance Department. Management of the company had no choice but to lay off most of the workers and severely curtail production in the factory.

The company did manufacture another line of arms that kept it away from bankruptcy, but basically the firm drifted in the financial doldrums, surviving on small profits. Then in March of 1854, the Crimean War broke out. The British allied themselves with the French against the Russians.

The British had not fought a war against another European power since the Duke of Wellington had defeated Napoleon at Waterloo almost four decades before. The long peace had affected the British army adversely. The year before, in 1853 the British Ordnance Department, with the help of the civilian gun trade (including the famed British gun maker, Westley Richards) had developed and adopted the best military arm in the world at the time, the .577 Caliber, P-53 Enfield Rifle-Musket.

The British Ordnance department, following centuries' old customs, made up "Pattern Arms" and then placed contracts with dozens of domestic gun makers and also gun makers in Belgium and France. In England and Europe, at the time, arms were made by the time honored tradition of hand craftsmanship. Under this antiquated system, arms production was slow and expensive.

Manufacturing arms by machinery had been developed in the United States beginning in the late 1790's and the system had matured by the 1850's.

Under the "American System," arms could be mass produced on machines with a high degree of precision in a much shorter time than was required by the old craftsmanship methods still in use in England and Europe.

By early 1855, the British Army in the Crimea was desperate for new P-53 Enfields. British Ordnance was well aware of the Robbins & Lawrence firm and their excellent record in providing high quality arms to the U.S. Ordnance Department during and after the Mexican War.

A British Purchasing Commission travelled to the United States, met with the directors of the Robbins & Lawrence Company and signed a contract in March of 1855 calling for 25,000 2nd Model, .577 Caliber, P-53 Enfield Rifles. Members of the British Purchasing Commission also made hints that much larger contracts would soon follow.

Robbins & Lawrence went deeply in debt to several different banks to greatly expand their factory buildings and re-tool to produce Enfield Rifles under their British contract. Then in 1856, the Crimean War ended unexpectedly. With only (an estimated) 10,000 Windsor Enfields delivered (and paid for,) the British government abruptly cancelled their contract with Robbins & Lawrence.

The firm was literally devastated by the unanticipated cancelling of their contract for the balance of the 25,000 arms, worse yet, they had a huge amount of capital tied up in (an estimated) 6,000 Enfields already produced for the British Government but not delivered (nor paid for.) The firm's debts to the bankers were far from paid. Robbins & Lawrence had no choice but to file for bankruptcy. Everything was sold at the bankruptcy auction: the plant, machinery and those 6,000 undelivered Windsor Enfield Rifle-Muskets.

Stalemate

Three years later, in late 1860, Gazaway B. Lamar had purchased the 38 crates of Windsor Enfields from The Bank of Hartford (Connecticut) in the name of D.C. Hodgkins & Son, a gun dealer in Macon, Georgia (of course, the arms were really for the State of Georgia.) Lamar was in the process of shipping them to Savannah when the New York Police intervened and

seized the Enfields. All of this was accompanied with lurid accounts in the Northern Press of the entire affair.

Former U.S. Senator Robert Toombs (he had resigned from the Senate when Georgia Seceded) probably at the prompting of Governor Brown, dispatched a long telegram to the Mayor of New York, Fernando Wood. Wood's pro-Southern sympathies were well known, as he had observed, and had been quoted in the press as saying that perhaps New York City should also Secede from the Union! New York City had a lot of business connections with the South.

Toombs telegram to Wood got directly to the point:

"January 24th 1861

Fernando Wood

Mayor of New York City

...is it true that arms intended for and consigned to the State of Georgia have been seized by public authorities in New York?"

Wood replied: *"In reply to your dispatch, I regret to say that arms intended for and consigned to the State of Georgia have been seized by this state, but the City of New York should in no way be made responsible for this outrage... As Mayor, I have no authority over the police..."*

In the meantime, Superintendent of Police, John A. Kennedy had clearly exceeded his legal authority by seizing and then impounding those Windsor Enfields. Kennedy's actions, at least in ordinary times would be blatantly illegal, but these were extraordinary times with the recent Secession of South Carolina and Georgia. Kennedy wrote a letter to the U.S. District Attorney, James A. Roosevelt (the Uncle of future President Teddy Roosevelt) and another similar letter to the new Secretary of War, Joseph Holt, attempting to justify his actions:

"I do not desire to interfere in the least with the duties of the U.S. officers in this city; but when arms and other munitions of war are being passed through it,...to be used for the subjugation of the constituted authorities of the country, and it was in my power to stay their progress, I felt it my duty to do so..."

Police Superintendent John A. Kennedy did find a certain amount of support from New York Governor Edwin Morgan, if not for patriotic reasons, then for the fact that Kennedy's seizure of the Georgia arms had unleashed a firestorm of favorable publicity in the New York newspapers for Kennedy's actions.

Gazaway B. Lamar began working from his end to get the Enfields released. He contacted Kennedy directly and Kennedy told him that supposedly the arms would be soon released. Several days later, on January 28th, Kennedy received a reply to his letter to Secretary of War, Joseph Holt. Holt, a distinguished lawyer, informed Kennedy in his letter that he (Kennedy) had no power to intervene and stop the shipment of Enfields bound for Georgia.

Both Police Superintendent John Kennedy and Governor Edwin Morgan were basking in the popular acclaim of the New York press. Kennedy was dragging his feet on releasing the Georgia owned Enfields. Both Morgan and Kennedy made the mistake of severely underestimating Governor Joe Brown's determination to get those Enfields.

Extralegal Retaliation?

Governor Joe Brown, Senator Robert Toombs, Gazaway Lamar and others had spent two weeks and had exhausted every legal avenue to get Police Superintendent Kennedy to release those Georgia owned Enfields from impound. Kennedy, backed by Governor Morgan kept saying he was going to release the Enfields, but still, they weren't released. Kennedy was probably hoping that the entire affair would quickly blow over, but it didn't. Governor Joe Brown raised the stakes.

Governor Brown simply ordered the Sheriff of Chatham County, Georgia to seize every ship in the Port of Savannah that was owned by a New York company or citizen of New York on February 8th! The ships seized were: The Brigs, "W.K. Kirby," and the "Golden Lead," the Barks, "Adjuster," and the "C. Colden Murray" and the Schooner, "Julia A. Hallock."

In 1861 a tremendous amount of freight and passengers travelled up and down the Eastern Seaboard on sailing vessels or coastal steamers. Even with Georgia's Secession from the Union, trade between the

North and Savannah continued at its usual brisk pace and Savannah Harbor was full of ships. The Sheriff seized the New York owned vessels. Needless to say, the Captains and owners were outraged.

Brown had no intention of releasing those vessels even though there were assurances from New York authorities that the Enfields would soon be released. A few more weeks dragged by and the Enfields were still not released. Governor Joe Brown simply decided to bring the entire “Windsor Enfield Affair” to an end, one way or the other:

“EXECUTIVE DEPARTMENT

Milledgeville, Georgia-March 2, 1861

Col. Henry R. Jackson

Aide-de-Camp, Savannah, Georgia

SIR: Unless the property of which citizens of Georgia have been robbed by the police of the City of New York, who act under the authority of the Governor of that State, I direct you advertise immediately, and expose for sale on Monday, the 25th day of this month...the following New York [owned] vessels, with their tackle, furniture and apparel, now held under military seizure by my order of reprisal, to wit, the ship Martha J. Ward and the schooner Julia A. Hallock. These vessels are to be sold for cash for the purpose of indemnifying citizens of Georgia for the losses which they have sustained on account of the robberies perpetuated by the New York authorities...

*JOSEPH E. BROWN
Governor”*

Even in his Executive Order, Brown tried to maintain the fiction that the Enfields were the property of individual Georgia businessmen rather than property of the State of Georgia. By then, all of that was a moot point anyway.

What Brown’s order to auction the ships off did was to force the hand of the Governor of New York. To the state of New York, the shipping industry was an industry that returned huge profits to many citizens of the state every year. The fact that the Superintendent of Police in New York City and the Governor who had supported him had blundered and caused New York owned vessels in Savannah Harbor to be seized and possibly

auctioned off did not sit well with those businessmen. Governor Morgan and Police Superintendent Kennedy quickly got the message. Suddenly, much more was at stake now than just a nine hundred and fifty Enfield Rifles.

Governor Brown quickly won the confrontation. The Georgia owned Enfields were released from impound and put on the next steamer heading for the Port of Savannah. Georgia got its Windsor Enfields. Everyone breathed a sigh of relief when Governor Joe Brown ordered both the *Martha J. Ward* and the *Julia A. Hallock* and all the other vessels released from seizure. The public auction of the vessels was cancelled.

The “Windsor Enfield Affair” marked the end of Brown and Lamar’s “Clandestine Arms Purchasing Program” in the North because less than a month later, the actual “Shooting War” started with the bombardment of Fort Sumter over in the Charleston, S.C. Harbor. Within a short time, with more and more recruits flocking to the colors - the armories in both Milledgeville and Augusta were soon empty; the arms having been issued out to eager volunteers.

Governor Joe Brown’s arms purchasing program for arming the Georgia militia was far from over. Next issue we will learn how future President Teddy Roosevelt’s other Uncle, Georgian James D. Bulloch, became involved in purchasing Enfields for the State of Georgia in England and how he “Ran Them Through Blockade” into Savannah Harbor aboard the S.S. Fingal.

The concluding part of this story will be published in the Autumn 2018 edition of *Research Press Journal*. Editor

The Pattern 1841 Carbine

W.S. Curtis

*Introducing a quite rare British longarm:
the Royal Sappers & Miners, &/or Royal Artillery Carbine*



This comes from the design of George Lovell and is the ultimate smoothbore. The 30 inch barrel is in the new Reduced Bore of .733, a reduction of .020 from the Regulation .753 of the Infantry Musket but intended to still use the same cartridge loaded with a ball of .685.

Barrel by Millward, lock by William Partridge, assembled by J. Cook, stocked by S. Butler, main contractor Potts & Hunt.

Bayonets fitted with the Lovell lug are different from the usual Lovells as they have sockets four inches long instead of the usual three inches. Those for the Artillery had the common infantry triangular blade but for the Sappers used a long flat sword blade.

In the Crimea the Sappers used this firearm model but the Royal Artillery were equipped with the new Pattern 1853 Carbine Rifled with 24 inch barrel in .577.

This Carbine carries the B/|O stamp on the right side of the butt, but worn down by use. On the left side of the butt (pictured) there is another similar mark much fresher and seen on other arms from Irish Ordnance.



Pattern 1841 Carbine



Proof marks and stocker (S. Butler - text inverted)



Enfield Rifle Research

Jon Huggett



Over the last 5 years I have been writing and researching a book on Enfield Rifles - Patterns 53 to 62.

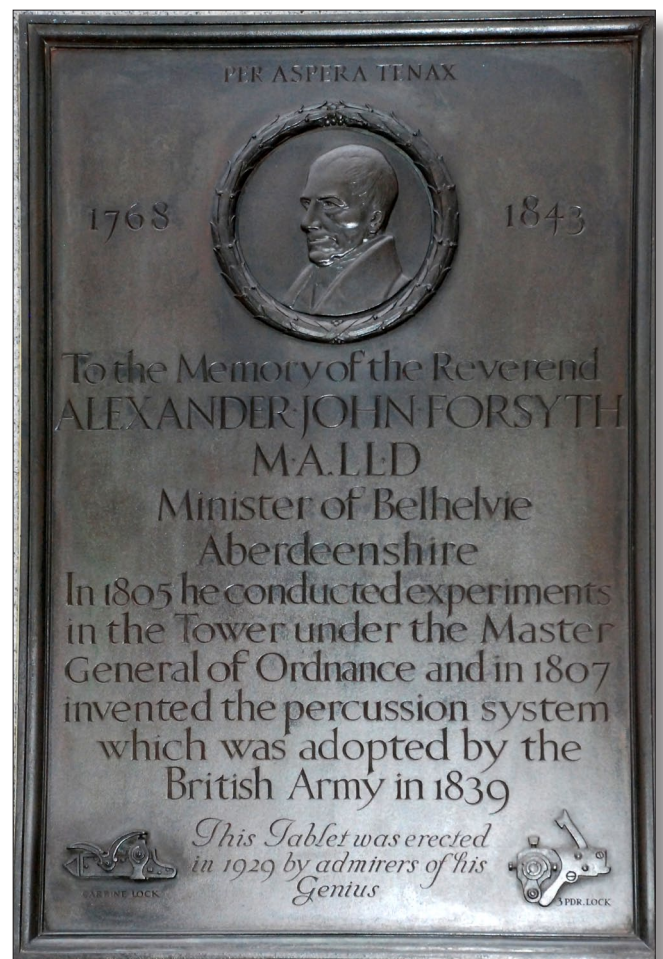
The journey has taken me all over the country taking photographs, with a professional photographer, of rifles and I have read many dozens books and articles. I decided very early on that the information in the book should be interesting and varied... and indeed not always strictly about the Enfield rifle per se – it contains other things that I have found interesting related to the class of arm as well. For instance, did you know there is a plaque dedicated to the inventor on the percussion system, the Reverend Forsyth, at the Tower of London? I'm told (by the nice lady Yeoman Warder, Moira Cameron) it was cleaned in 2016 with Ajax and Brasso as it had gone an unattractive streaky green colour which was staining the wall...

Known to many of us, the Crimea Guards Memorial, St James', London, is an excellent piece of sculpture to a



long forgotten (to many) war... but can anyone tell me why the middle guardsman ought to be 'on a charge'...? You'll have to buy the book when published to find that one out I'm afraid!

Again not strictly an Enfield thing, but used by soldiers and Volunteers alike, have you ever seen Chadburn's Rifle



See: Crimean War Memorial

http://en.wikipedia.org/wiki/Crimean_War_Memorial

Distance Gauge? This innovative little bit of kit helped the shooter to judge distance of a man at 50 to 900 yards, which then lead me onto a fantastic, but a bit grim, piece of text in Captain Thackery's book (*The Soldier's Manual of Rifle Firing*) about how much lead to give a galloping horse, with an Enfield at 600 yard. The answer, by the way, is 75 feet before head, with a standard 70 grain military load..... in case you were interested.

As I draw to a close of my book and start drawing it all together I'm now searching for other things that

are Enfield related and that you think I might not have, and would be interesting for others to see. An Enfield related trophy, an original pouch of percussion caps, a sight protector, an NRA Wimbledon Rule Book.... I'm not sure where to stop but at some point, soon I guess, I'll have to "publish and be damned".

So far, the book is a little over 280 A4 pages long, with hundreds of high quality colour photos and prints useful to the knowledgeable and novice alike.

If you think you have something that might be helpful or interesting, please drop me an email at web@mlagb.com.

Many thanks in advance, Jon.



The British Volunteer System

The Rt. Hon. Earl Brownlow

This article was published in The North American Review (USA), May 1900. The author, The Rt. Hon. Earl Brownlow, was formerly Under-Secretary of State for War.

The early years of the century found England in the possession of a large body of volunteers. They were not a part of the permanent military organization of the country, but were raised in a hurry, and for a special purpose, and were only intended to meet a sudden emergency. At that period, Napoleon I had massed a great army at Boulogne in sight of the British coast; but the British cruisers held the Channel, and day after day and month after month passed, until the naval battle of Trafalgar put an end forever to his ambitious dream of the conquest of England. It was to meet this contingency that the Volunteers of 1803 were raised, and the danger having been averted, they were disbanded and never brought together again.

With the organization and efficiency of this force, this article is in no way concerned, and it is only mentioned here to explain that volunteering for defense of the country is no new idea, but that the volunteers of 1803 have no relation to those of 1858. They served their purpose; they came together to the number of 463,000 men, and when the emergency ceased, they died out and disappeared.

They seem to have incurred at that time a certain amount of "chaff" on account of their somewhat crude idea of military duties, and it is said that one regiment having repeatedly pointed out to Mr. Pitt that they only volunteered to repel invasion, and were on no account to be sent out of the country, he replied that he would promise not to send them away "except in the case of invasion."

There is, however, one volunteer corps – the Honorable Artillery Company of the City of London – which is quite exceptional. It dates from the time of Henry VII, at which period it wore a picturesque dress, had nothing to do, and "did it very well;" and it consists of artillery, cavalry and infantry. It is not a "company" in the military sense, but has many of the attributes of the City of London companies, and has property and funds of its own.

This ancient corps has its counterpart in the

Honorable Artillery Company of Boston in the United States, the members of which some time ago visited London and received a cordial welcome as a link between the Old and the New Worlds.

Until 1858, the Honorable Artillery Company was the only old-established Volunteer Corps. At that time, the country was thirsting for peace and rest. The Crimean War had disclosed a state of military disorganization in the army which had caused misery and disaster to the troops during the war, and it was felt that only the bravery and pluck of the officers and men had saved the country from actual defeat; but when peace with Russia had been obtained, no time was given for reorganisation. The Indian mutiny, following on the heels of the Crimean war, called forth all the resources of the Empire; but, when tranquillity was again restored, the public mind once more turned to the contemplation of army reform.

The opportunity seemed favourable. The Emperor of the French was in close alliance with England, and we were at peace with all European nations. There was no cloud upon the political horizon, and there seemed every prospect that this happy condition of things would be lasting.

At that moment, a bolt from the blue – as far-reaching as it was unexpected – spread dismay throughout Europe. On January 14th, 1858, an Italian named Felice Orsini, attempted the life of the Emperor Napoleon III by throwing a bomb under the carriage containing the Emperor and Empress as it was drawing up at the door of the opera house; and although the intended victims escaped unhurt, the missile spread destruction all round the spot where the outrage was committed.

It soon became known that the would-be assassin had hatched his conspiracy and manufactured his bombs in England; and, in the excitement that ran like wildfire through the French army, a hundred French colonels signed a petition to the Emperor, praying him to put himself at their head and lead them against "Perfidious Albion." It was not certain whether the Emperor would be able to resist the pressure thus put upon him, and the ugly fact of a possible invasion of our coasts stared us in the face. It was felt that our army – most of which was abroad – was inadequate to cope with the large forces which were at the disposal

of France, if they should once gain a footing on our shores, and excitement little short of panic ensued.

The people of England demanded arms that they might at least make a stubborn resistance, and the volunteer force of Great Britain sprang into life.

In its infancy its constitution was hardly worthy to be called "organisation." A large number of enthusiastic civilians of all classes enrolled themselves under officers who, for the most part, had little or no military training, and drilled and equipped themselves in isolated companies. All worked with an energy which only determination, coupled with a grave sense of danger, could inspire. Drill went on in every town in England and Scotland; rifle butts were hastily erected, and the first rudiments of shooting were taught by sergeant-instructors from the regular army. But in spite of all this activity the volunteer army was a mere "crowd of men with muskets," without transport, without battalion formation, and with only one suit of clothes apiece; and with such a force the only rôle assigned to them was to rush to meet the enemy, to line the hedges and walls in inclosed country; to worry and annoy the invaders in every possible way, and to die fighting to the last in order that the regular army and the militia might gain time to assemble and make their dispositions for defense. The action of the French franc-tireurs in the Franco-Prussian War shows how much may be done by such means. While matters were in this state, the scare which had created the volunteer force came to an end as suddenly as it had arisen. Napoleon III, loyal to his alliance with England, succeeded in quieting his excitable colonels, and the danger of immediate invasion was averted.

The volunteers now entered upon the most critical period of their whole history. The officers of the regular army looked upon them as almost useless, and either gave them good-natured but half-hearted support, or advocated their being disbanded altogether; for the British officers of that day believed only in long-service troops, drilled with all the precision of machines; controlled when in barracks with an iron discipline, and perfect in parade movements. The country would not hear of conscription; the army would not hear of short service. So for years nothing was done to reorganize the army, and the volunteers were left to live and die in an atmosphere of neglect or ridicule.

A slight advance was made by the scattered companies being formed into provisional battalions for purpose of drill, and being given a retired officer or militia officer as adjutant; and as they marched through the streets headed by the band, a crowd of street urchins ran beside them shouting such ribald cries as "Who shot the dog?" "How are yer poor feet?" and (to the mounted officers), "How much an hour for yer horse, gov'nor?" And when the battalion had reached its drill ground and deployed into line, the gamins formed line opposite to them, waiting, like the French line at Fontenoy, for the English to fire first. Then, as the rattle of the locks proclaimed the volley which terminated the "platoon" exercise, they fell down with shrieks and groans, and writhed in simulated agony of death on the battlefield, while the lookers on shouted with laughter at the performance.

When the parade was dismissed each individual volunteer went home in a storm of chaff, and the clever pencil of John Leech made fun of them in "Punch." How they survived this ordeal seems now a miracle; but survive it they did, and set to work with a will to increase their efficiency.

It is obvious that an armed man – whether regular soldier or volunteer – is of little value for fighting purposes, unless he can shoot fairly well with a rifle; and the volunteers, recognizing this fact, proceeded at once to establish a shooting organisation throughout the country. The centre and head of this organization was, and is, the National Rifle Association, which held its meetings at Wimbledon until they were transferred to Bisley.

In every county or district, an association was formed under "Wimbledon Rules," which held its meetings once a year, and battalion and company meetings also offered a chance of winning prizes to those who were not sufficiently expert in the use of the rifle to compete at Wimbledon. Thus an inducement was given to every volunteer to practice rifle shooting, in addition to the class firing ordered by the volunteer regulations.

The artillery have an association of their own called the National Artillery Association, which is quite separate from the National Rifle Association, and holds its meetings at Shoeburyness. It works on strictly military lines, and forms a camp where the mounting and dismounting of heavy guns, etc., as well as target

The British Volunteer System

practice, is a part of the regular training.

This, briefly, is the organization which, with some alterations and improvements, has continued to the present day.

The first meeting at Wimbledon opened on July 2, 1860, when Queen Victoria fired the first shot, with a rifle fixed in a rest and laid by the most experienced rifle-shot of the day, and the "bull's-eye" flag went up amidst the cheers of a large crowd of spectators. To promote shooting at moving objects, a life-sized stag made of iron was mounted on a small railway, and ran down an incline on one side of the range, and nearly to the top of the incline on the other side, on the principle of a switchback railway, the shot having to be fired between two white posts, thirty yards apart. Sir Edwin Landseer, the celebrated animal painter, drew the stag life-size, and this splendid sketch and the "Queen's" target are preserved by the National Rifle Association as their two most valued treasures.

In the year 1883 a team of the American National Guard came over to England to shoot against an English volunteer team. At the beginning of the match, the visitors gained a considerable lead; but at the long ranges the English team not only wiped out their loss, but succeeded in securing a hard-fought victory. In the evening both teams dined with the president of the National Rifle Association, on which occasion there were present Her Royal Highness the Duchess of Teck, the Duke of Teck, and the Hon. J. R. Lowell; the Minister of the United States in England. After dinner the rule of the association that no speeches are to be made was so far relaxed as to allow of the health of the American team being proposed by the president; and Mr. Lowell, in returning thanks for his countrymen, made one of those short and happy speeches which did so much to promote a cordial feeling between the two nations. He said on this occasion: "May God grant that in all rifle competitions between the two nations, all the rifles may always be pointed the same way" - a sentiment cordially echoed at the present day on both sides of the Atlantic.

Englishmen noted with interest during the late war of the United States with Spain, the readiness with which volunteers came forward in large numbers and at very short notice to serve their country. English volunteers in particular observed with admiration their

cheerful endurance of thirst, hunger and privations of all sorts, in occasional circumstances of peculiar hardship.

That they should show courage in the field was taken for granted; but that with such short training, and in spite of hasty and, in certain cases, inadequate equipment, these citizen soldiers should develop such splendid qualities of discipline, self-restraint and self-reliance was the subject of much and hearty praise among English military critics.

The system pursued by the National Rifle Association has worked well, and although it is described as "pot-hunting" by those who wish to decry it, it has produced many first-rate shots, and may fairly claim to have carried out the object for which it was formed.

It would be impossible in the limited space of a magazine article, and would be tedious to the general reader, to treat in detail of the improvements in organization which have been carried out, from time to time, in the volunteer force; but a few words on the present state of the force may not be out of place.

The battalions are now united into brigades, commanded by brigadiers who have most of them served in the regular army, assisted by brigade majors, who are all retired officers, and a sufficient staff. These brigades assemble yearly in camp, and when at Aldershot or any other military centre come under military law, and take part in field days with the regular troops. The men learn all the duties of camp life; to pitch and strike tents, to cook and to make themselves at home in camp. A hearty and cheerful spirit animates all ranks, and the men look upon the annual training in camp in the light of a holiday, and are cheerfully prepared to perform readily all the various duties in return for the change of scene and work, and amusement and relaxation after the parades are over for the day.

As to their fighting qualities, it can only be said that they have never been tested, but there is no reason to believe that they would fight with less pluck and determination than any other men of the Anglo-Saxon race. In case of emergency, they would fight in their own country for all they hold most dear, and history has proved over and over again that men fighting under these circumstances are not to be despised, even by the best-disciplined and most highly trained troops. As regards "discipline," that word which may mean

so much or so little, it must be remembered that the average volunteer lives a disciplined life. He is not a raw boy taken from the ploughshare, nor is he a young man of fast habits who has got into some minor scrape; but he is a respectable tradesman or superior mechanic, who has a character to lose, and I have myself seen a man, when brought up for judgment in camp, tremble and turn pale at the thought of being dismissed from the service, or sent out of camp in disgrace, which, when not camped with regular troops, is the only punishment the commanding officer has power to inflict.

Such a man returns to his native town or village with a mark against him. He gets "chaffed" by the men, and - what is more important - is despised by the women. It is known that he has failed to acquit himself with credit in a duty which he has voluntarily undertaken to perform, and he has to bear the consequences.

From want of experience a volunteer sentry will, from time to time, present arms to a showy uniform, and a smart non-commissioned officer of cavalry in full uniform will receive greater honor than a general in a blue coat; but this comes from want of knowledge of details, and not from want of discipline.

A simple and practical form of drill has been introduced, which is far better suited to the volunteers than the slow, antiquated drill of thirty years ago. It is easily and rapidly acquired, and thus time is available for the teaching of outpost duty, advance and rear guards, and many other details of which in their infancy the volunteers were profoundly ignorant. The officers of the new school now at the head of the army, who no longer cling to old traditions because they were good enough in their youth, recognize that modern weapons have altered the conditions of warfare, and have long ago discarded the drill of the time of the Duke of Wellington, who for many years opposed the introduction of the percussion musket because he said "the men would fire away their ammunition too quickly." The volunteers are now recognized as an integral part of the defenses of the country, and in consequence panic from fear of invasion is now unknown. The necessity for conscription, which is hateful to the country, and now only exists in a very mild and modified form in the militia ballot act, which is never carried out, has been averted, and it is therefore fair to claim that the volunteers carry out in an adequate measure the

purpose for which they were raised, and England sleeps the sounder for the knowledge that the manhood of the population is armed for her defense.

There is, however, another important advantage which has been gained for the country. In old days the average villager had no idea of the duties of a soldier, whose occupation was described as "being shot at for a shilling a day," and a story is told of a mother parting from her son, who had enlisted, saying to the recruiting sergeant: "How many hours a day will the poor lad have to fight, Mr. Soldier?" The idea existed that the soldier's time was divided between fighting and debauchery, and the enlistment of a son was looked upon as a family disgrace. Many villagers never saw troops under arms in their whole lives, and the soldier and civilian were as much separated as if they were different races. This feeling is growing less and less yearly, and there is every hope that it will die out in the near future. This improvement is partly owing to amelioration in the condition of the soldiers, and the care shown for their welfare by the authorities in modern days; but it is also due to the fact that civilians are now able to give some attention to, and gain practical knowledge of, military affairs by means of volunteering. They wear a uniform, and are proud of it; they come into contact with regular troops in military centres, and make friends with the men and learn from them the details of military life. Tommy Atkins is delighted to make friends with the volunteer, and the volunteer takes a military pride in "chumming" with Tommy Atkins, and thus they gain a mutual respect and regard for each other. The days are long passed when the volunteers were alternately inflated by exaggerated praise or depressed by scorn and ridicule. They have taken their place as auxiliary to the regular army, anxious only to prepare themselves for the duties which would be assigned to them in case of emergency, and desiring to act up to their motto of "Defense, not defiance."

Research Press Library

Research Press has a library of free downloadable reference texts for students of firearms, target shooting and associated history.

English and Welsh Gunsmiths and Gunmakers, 1550 – 1850

- This document contains a list of English and Welsh gunsmiths and gunmakers from around 1550 to about 1850, but excluding London gunsmiths/gunmakers. The list has been compiled from free on-line sources such as County Record and Archive Offices and The National Archives, but it must not be considered a definitive list, as new information is added from time to time.

The Crossed Sceptres & Crown Mark

- Proof marks on English firearms made outside London and the developments which led to the establishment of the Birmingham Proof House in 1813, with its familiar “V” and “BPC” marks under crossed sceptres.

Why The Tombstone?

- Some arms proved in Birmingham after 1813 show additional stamps which take the form of “tombstone” shaped impressions with a variety of numbers and symbols enclosed therein.

English Provincial Makers’ Marks

- Provincial makers’ marks, i.e., those struck by gunmakers who were not members of the London Gunmakers Company. The fundamental question is whether these marks were struck merely to identify the maker of the piece, or whether they also signified that the item had actually passed a proof test successfully.

The Gunmakers of Oxford

- The development and growth of the gun trade in Oxford during the 17th and 18th centuries. Features: William Upton, John Nicholes, William Hawkes, William Emms, John Collis, Martin Brown (Browne), Samuel Sykes, Thomas Beckley, John & James Forrest, William Dupe, Frederick Rudolph Beckhusan, John Venables, Field, Pether, George Webb.

Ketland Guns in America

- A fresh look at the family of English industrialists who dominated the early American firearms trade.

A Pair of Early Samuel Nock Detonating Pistols

- This article documents a previously unknown and very rare pair of early detonating pistols by Samuel Nock. The pistols are designed to be fired by an early form and variant of the percussion system, known by collectors today as a pellet-lock, which uses a round detonating wafer. Samuel was the nephew of the celebrated London gunmaker Henry Nock. He was apprenticed to his uncle in 1791 and he opened a shop at 180 Fleet Street in 1806. In 1823 Samuel moved his business to the more upmarket and fashionable Regent Circus where he remained until his death in 1852.

The Probin Gunmakers of 18th Century Birmingham

- This article attempts to trace the fortunes of the Probins, a family (indeed, one might say, a dynasty) of Birmingham gunmakers.

John Townson and His Pistol

- The small flintlock pocket pistol that features in this article was once part of the collection of the late John Cooper, an authority on 17th century English pistols. The pistol is a magnificent example of the quintessentially English pistols that were produced during the middle decades of the 17th century and of which very few have survived. It was made by John Townson of London during the 1660s, a period when London was embroiled in a succession of the most dramatic and life changing events.

The English Snaphance Lock

- The English snaphance is not only one of the most innovative “flint-locks” but is probably one of the rarest gun mechanisms to have survived. Recent research has found that only about 80 English snaphance muskets, pistols and detached locks have survived worldwide, although this does not include excavated, converted or incomplete locks. Modern tests by the author have proved it to be a fast and reliable mechanism and it must have been a serious challenger to the matchlock and wheellock in the 16th century. This article looks at the history of the lock and examines two examples.

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

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www.mlagb.com

**Historical Breechloading
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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.

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