

Target Practice at Littlehampton Fort; Cotton, Green and Captain Bray.

Riflemen at Littlehampton Fort.

Littlehampton Fort was constructed in 1854 with the purpose of defending the Sussex coast from possible attack from across the Channel. It was constructed with two types of weaponry in mind: cannon (guns) and rifles. The guns were placed on top of a mound (the ramparts) surrounded by a ditch, and in the ditch was a wall 12 feet (3.66m) high known as a Carnot wall. The purpose of the wall cannot have been to protect the fort from cannon fire from the invader's ships, as experiments had shown in 1824 that such a wall could be easily destroyed by cannonⁱ; it must have been built for the benefit of men inside the fort who were firing rifles. The wall had slit windows, known as loopholes, for soldiers with rifles to fire through, with the idea that they would shoot any attackers approaching the fort across the beach. Littlehampton was the first fort to be built with a Carnot wall but the design was soon copied at Shoreham Fort in 1857, and following the Royal Commission on the Defence of the United Kingdom of 1859 several forts with Carnot walls were constructed including three on the Isle of Wight. So the War Office obviously felt it was important to employ riflemen to repel the French.



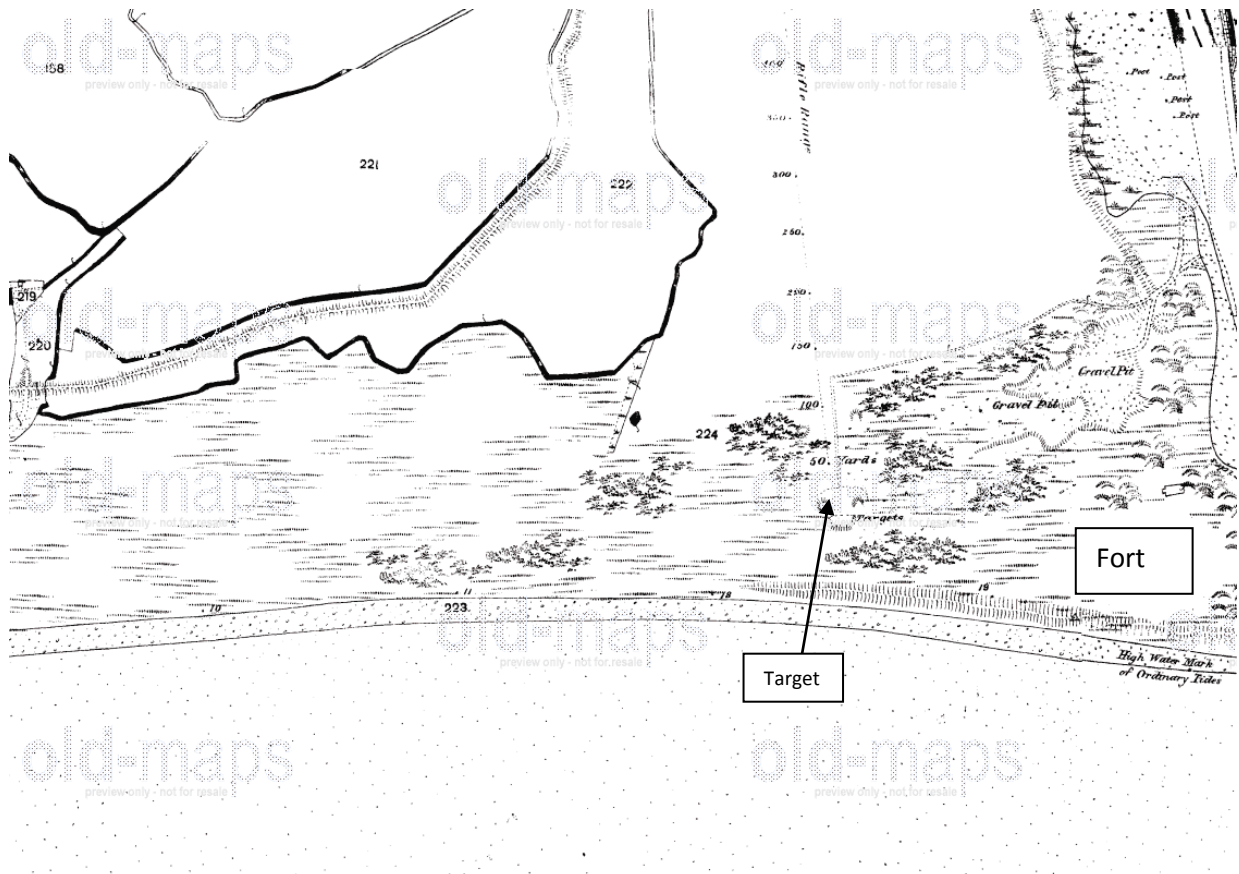
Carnot Wall at Littlehampton Fort

At Littlehampton the guns were not installed for two years after the fort was completed when three 68-pounders, and two 32-pounders arrived from Woolwich in December 4th, 1856; before that the fort must have relied for protection solely on the riflemen.

Even after the guns arrived the majority of troops at the fort were not artillerymen but infantry. In the 1861 census about 70 soldiers were there, nearly all from the 4th Foot.

The Demand for rifle training at the Littlehampton Range.

The artillery guns were never used and rapidly became obsolete but Littlehampton Fort did have its time in the sunshine, as attached to it was a rifle range and this saw heavy use throughout the 1850s and 1860s.



Map from 1876 showing the rifle range. © Crown copyright and database rights Ordnance Survey 2012

The majority of soldiers who came to the fort did so to undertake training in the use of the Enfield rifle; hundreds and hundreds of men came for instruction and target practice. In fact the fort's accommodation had to be extended in order to cater for the high demand for rifle training.

West Sussex Advertiser and South Coast Journal May 26 1859

LITTLEHAMPTON

Admiral Chads and several other officers of the military service were here a few days since on a visit of inspection to the fort, having reference, we believe, to the intention of a much larger number of men being sent her for rifle practice; in furtherance of which object Mr E. Corney has received an order to create forthwith a building 50 feet in length by a breadth of 20 feet.

Imperial Gazetteer of England and Wales, 1870

HAMPTON (LITTLE) A fort, on the most approved principles, mounting five 68-pounders, besides mortars, was recently constructed on the W side. The ground there also was appropriated as encamping ground for rifle practice; and huts suitable for it were erected in 1862.

The demand for training places was very high and, before the new hut was built, Littlehampton had struggled to meet demand.

The Standard (London), Friday, December 16, 1859

"PROGRESS OF MUSKETRY INSTRUCTION IN THE ARMY

Aldershot- The musketry instruction of the several battalions composing the division of the Army at Aldershot from time to time during the year 1858-59 has proceeded steadily. The 2nd Battalion 4th and 67th Regiment did not complete their courses of rifle training. I would remark that the 2nd Battalion of the 4th was removed to Aldershot from Chichester where for some time no range was available. At Littlehampton a portion of the practice was performed, but owing to the limited barrack accommodation only 40 men were practiced at a time. The 67th Foot was prevented from completing the course of practice by their removal to India"

The army's huge requirement for rifle training was a consequence of the invention of the Enfield rifle in 1853.

The Pattern 1853 Enfield Rifle.

*"The Enfield Pattern 1853 rifle and many of its attributes were so radically different from what had preceded it that it marks a major turning point in British military technology and outlook."*ⁱⁱ

The Enfield rifle (also known as the Enfield Rifled Musket) replaced the smooth bore musket as the weapon of choice for British army in 1853. It was vastly superior in every respect.

The smooth bore musket was a woefully inefficient weapon. It was loaded by dropping a lead ball into the barrel but the small gap between the ball and the inside of the barrel, known as windage, meant that the explosive gasses could escape round the side of the ball so reducing the musket's power and throwing up clouds of black smoke. If the ball was made a tighter fit the effort needed to ram it down made the soldier's hand unsteady and unable to shoot accurately. Muskets had a maximum range of 100 yards and could not fire more than one round per minute in actual battle conditions. They were fixed with bayonets which acted as pikes, and these were used in battle using line and square formations. A third of all battlefield casualties during Napoleonic and U.S. Revolutionary War were caused by bayonets rather than musket shot.ⁱⁱⁱ

From 1722-1838 the British Army relied on a smooth bore musket nicknamed "Brown Bess". This was the gun used in the Napoleonic Wars and the Kaffir Wars (against the Xhosa in South Africa).



Brown Bess Musket

Weight: 4.8 kg; length 1.49m; calibre (barrel diameter) 18 mm; range 90 m.

In 1859 Colonel Wilford, Assistant Commandant and Chief Instructor of the Government School of Musketry at Hythe, delivered a lecture in the theatre of the United Service Institution, Whitehall, on "Rifles and Rifle Practice," in which he outlined the drawbacks of the musket.

"The Duke of Richmond once said that in the Peninsular war our riflemen were supplied with tight-fitting bullets that would kill and plenty of small ones that would miss, in order that they might have the pleasure of shooting off. (A laugh.) It was at length discovered that the musket supplied to the English infantry was the worst in Europe- the heaviest, the shortest, requiring the largest ball, the greatest charge of powder, having the greatest windage, the shortest range, and the least accuracy.-

(Laughter and applause.) It showed what the English soldier must be when he could gain such splendid victories with Brown Bess. (Applause.) The Kaffir war was irksome and inglorious, and public attention became attracted to the shortcomings of our fire-arms. Brown Bess was clearly unable to bring the war to a close, for it was upon record that one morning 80,000 rounds of ball cartridge were fired, and only twenty-five Kaffirs were bagged. George IV was very anxious that the cuirass (breastplate) should be adopted in the British army, and that experiments should be tried to show whether it would resist a bullet. A cuirass was accordingly fixed upon a pole, and Brown Bess was set to work at it, with the advantage of a 'rest'. The experiment would have been very satisfactory, only none of the balls could be persuaded to hit the cuirass. (A laugh.) At last an officer put a musket to his shoulder, and by great good luck hit the cuirass, when the ball, of course, went through it. He believed that a man might sit in a chair at 200 yards, and let a man blaze away at him all day with Brown Bess, with one condition only, that the shooter should be bound upon his honour to aim at the mark. (A laugh.) A general officer told him that in Spain, being charged with the defence of a breastwork thrown up in a hurry, with a very few soldiers, the order was given to them to fire as rapidly as possible, not in any hope or intention of hitting anybody, but to make the enemy think they were stronger than they actually were. Firing to "make the enemy think!"^{iv}

In 1852 Viscount Hardinge, newly appointed Master-General of Ordnance, ordered that experiments be carried out to determine the best type of weapon for military service – one that combined ease of handling and accuracy of firing. The outcome of these trials was the creation of the Enfield Pattern 1853 Rifled musket. Rifling is the process of making a groove in the barrel of a firearm, which causes the projectile to spin as it shoots out, thus improving its stability and accuracy. The rifle fired a pointed bullet that was wrapped in greased cartridge paper. The Enfield had an effective range of 1,000 yards and could fire up to four rounds per minute. After various delays and modifications the Enfield Pattern 1853 was introduced into service as standard issue for British soldiers in February 1855.



Enfield 1853 Rifle
Weight 4.3 kgs; length 1.4m; calibre 15mm; range 1,000m

The advantages over Brown Bess were soon clear- as Colonel Wilford described:

"Contrast this (the performance of Brown Bess) with what took place during the mutiny at Cawnpore. An officer, in command of his company, was attacked by some sowars (Indian dragoons). He formed his men into two lines, made both kneel, and at the word "Fire!" sixty nine dragoons fell to the ground like a wall. (Applause.) One man alone escaped the fire, seeing which a soldier came to the front, fired, and brought the sowar from his horse at the distance of 300 yards. That was the way to "make an enemy think." (Applause.) Our troops were now all armed with the Enfield rifle, which is the best rifle made. Upon the beach at Hythe, the day when Sir John Burgoyne was present, a target was put up, eight feet by six feet, upon which was outlined the figure of a man on horseback. A detachment of thirty-two men were formed in line at 600 yards distance, who lodged three balls in the horse and two in the man before an officer could put a glass to his eye. Sir John Burgoyne, when he saw this, exclaimed, "No dragoon can stand before you, and no artillery can stand before you unless it is protected." Armed with the Enfield rifle, no infantry soldiers ever need form a square to resist cavalry, unless surprised. The cavalry might come down upon them, but not a man would escape the aim of their rifles."

The Enfield rifle was first put into action in the Crimean War against the Russians.

"For the first time in the history of warfare, the gunners of the artillery were at the mercy of the infantry who, with their new, accurate, long-range rifles, could pick them off with impunity, while remaining out of range of their guns."^{vi}



Durham Light Infantry in the Crimea 1855 with Enfield Rifles.

The Russian Commander Todleben wrote a description of the great battle of Inkerman 1854: "... *Notwithstanding the range, which was particularly great for light artillery, our guns caused considerable damage to the English artillery. But these injuries very imperfectly compensated the enormous losses which the enemy's riflemen inflicted on the Russian artillery. A perfect cloud of riflemen hid in thick brushwood opened a very violent and very accurate fire against our artillery at the distance of 800 paces. Some of our guns from time to time rained grape upon them, but the discharge only checked the fire of the enemy's riflemen for a moment, for, after their momentary fright, they only commenced to decimate our ranks more energetically. At the same time the English artillery hurled shrapnel on our artillery and infantry, but it was more the fire of rifled small arms than that of the artillery of the enemy which reached our artillerymen, of whom the greater part were killed or wounded.*"^{vii}

Lord Raglan described the efficiency of the Enfield at the Battle of Balaclava, 1854:

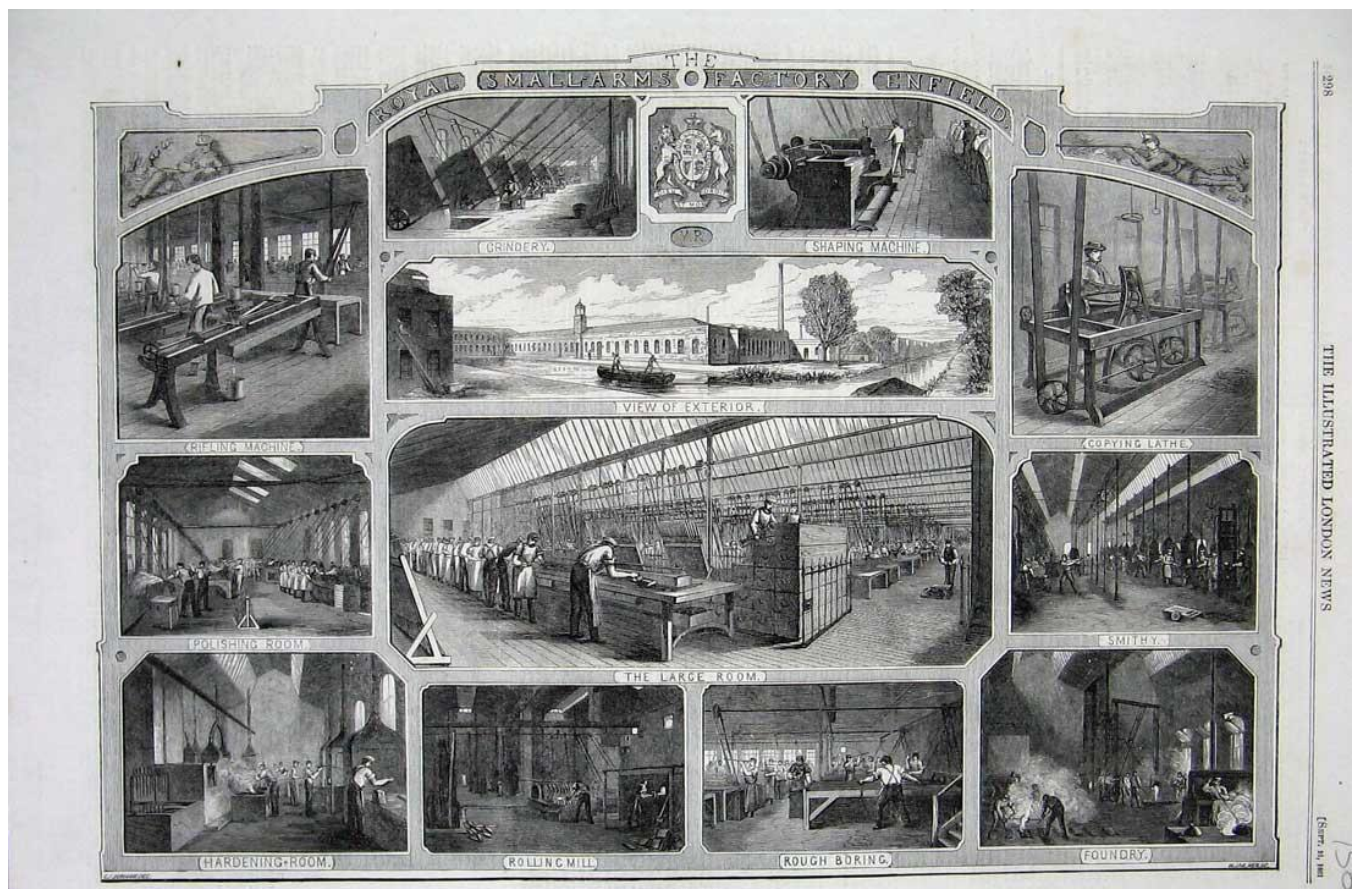
"To silence a two-gun battery of horse artillery that was playing upon them Lieutenant Godfrey (1st battalion Rifle Brigade) proceeding in advance of his battalion with a few men, under the cover of a ridge, made such excellent shooting at the Russian gunners (at six hundred yards), the men handing him their rifles as fast as he fired, that, in his own words, ' We got the credit of silencing them. None of our men were hurt, though at one time the shot came through us pretty fast and thick. ' "^{viii}

The success of the snipers against troops manning guns presumably explains why Littlehampton Fort was armed with rifles as well as canon.

The Enfield rifle proved so effective that it was adopted for use by all British troops and it remained in service until 1871.

For the first time in Britain a firearm was mass produced. The Royal Small Arms Manufactory at Enfield churned out 26,739 rifles in the year March 1857- March 1858. This was possible because the rifles were constructed by a production line of American-designed steam-powered machines rather than relying on the skill of craftsmen. In the past rifles were hand-made but machine production was not only faster, it ensured that all the rifles were identical so their parts were interchangeable and repairs were easy.

“By means of a beautiful system of machinery, a thousand complete rifles are turned out in a week, with a degree of accuracy and finish such as the hand of the most skilful mechanic could never impart. All the various parts of the lock stock and barrel are made with such a nice degree of accuracy, with reference to each other and the standard pattern employed, that a rifle with a bayonet may be put together in five minutes from any set of parts selected at random from a heap of the same kind!”^x



Royal Small Arms Factory Enfield – Illustrated London News September 21st 1861.

Rifle Ranges and the principles of the Hythe School of Musketry.

Now the government had an effective firearm available in large numbers and so it was issued to all branches of the armed forces- the navy, the regular army, the militia and, from 1859, the Rifle Volunteers. (See my essay 'Holding the Fort'.) This meant that there was a huge number of men requiring rifle training.

In June 1853 Lord Hardinge established the School of Musketry at Hythe in Kent on a vast expanse of sand and pebbles beside the English Channel. The school was designed to train selected officers who would then return to their regiments and instruct their men at local rifle ranges such as Littlehampton.

"The report on the schools of musketry at Hythe and Fleetwood for 1863-4 is most satisfactory. During the year there were trained at those establishments 363 officers—viz., three of the Royal Navy, 24 of the cavalry, and 336 of the infantry, 1,553 non-commissioned officers and privates, and 35 volunteers of all ranks, being an increase of the numbers trained in the previous year of 47 officers, and 306 of other ranks. Of the officers exercised, 77 per cent, passed into the first-class, and 79 per cent, of the other ranks. The number of sergeants who underwent a course of instruction at the schools was 732, of which number 327, or 45 per cent., qualified for the appointment of sergeant instructors of musketry, this being an increase of 14 per cent on last year. "^x



Sergeant Major Instructors with their students, Hythe 1860.

The officers of the Rifle Volunteers were especially keen to impart their knowledge to others:

"It behoves every one not only to gain all the knowledge he possibly can on arms, and the mode of using them, but to impart it to others, and to endeavour to make each one as conversant with the subject as himself. The man who gains knowledge selfishly in order to gratify his pride is no patriot... It is a mistaken notion that because we are at peace we ought not to be making warlike preparations; for assuredly the only way to keep at peace is to be prepared for war; and we trust that the people of our beloved country will never cease preparing, until every man is fully proficient to do good service on the field... and the practice and use of firearms shall become an essential part of our everyday education."^{xi}

The course at Hythe lasted 10 weeks and had two elements: theory and practice. The theory included the origins and composition of gunpowder and the effects of gravity on the trajectory of bullets. The practical work was divided into drill and target shooting. Drill was undertaken without ammunition in the rifles and was designed to develop the soldiers' motor memory.

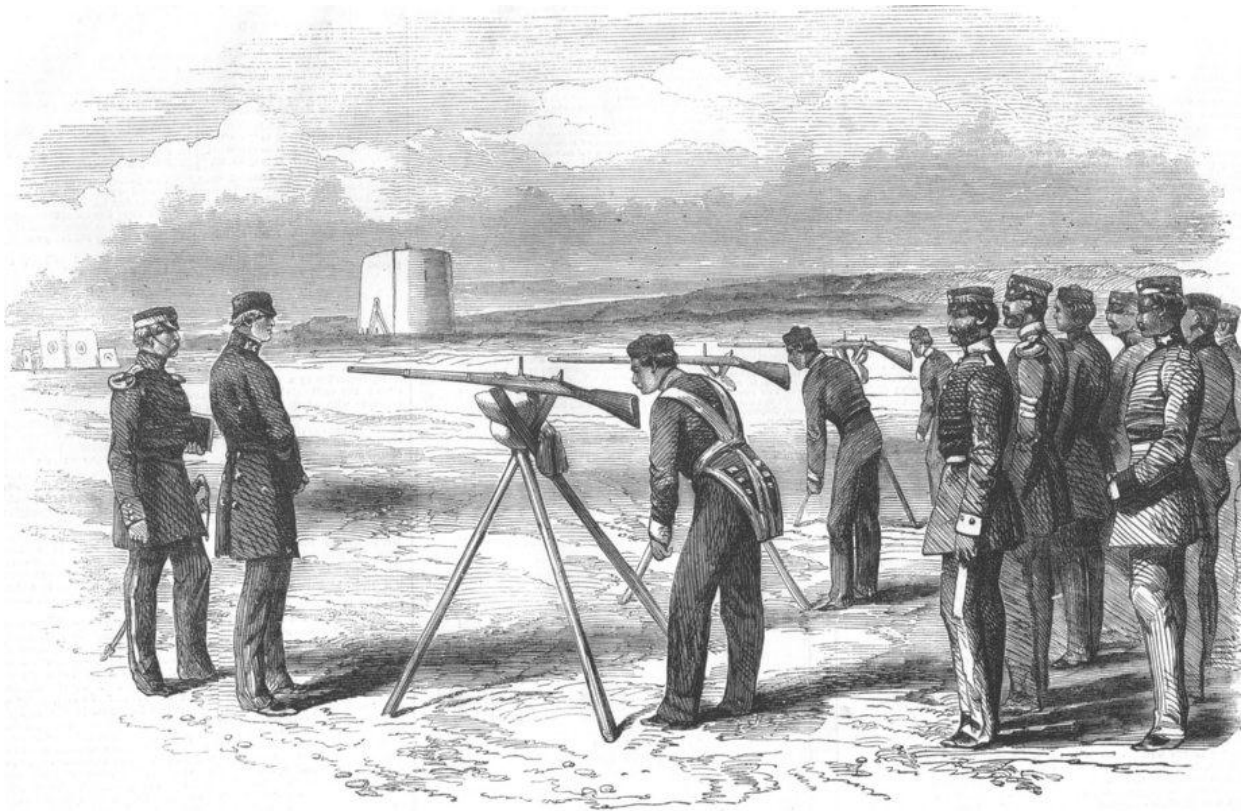
"The essentials taught at Hythe for the effective use of the Enfield rifle consist of instruction given to the mind, the eye and the limbs. The eye is taught to judge the distance of an object and to aim at it. The limbs are taught readily to assume a position which shall be steady during fire, and the limbs and eye are tutored so to act in unison under the mind, as the finger presses the trigger during a short instant, while the body steadies the rifle and the eye brings three points into one line."^{xii}

The drill manual was regarded as a bible and men were tested on it word for word like a catechism.

CIRCULAR MEMORANDUM, HORSE GUARDS, S.W., 12th August, 1857 — The General Commanding-in-Chief has desired that general officers will require the district inspectors of musketry to accompany them, when practicable, on their tours of inspection, for the purpose of catechizing officers of companies indiscriminately selected, with a view of ascertaining that they are acquainted with the theory and practice of musketry as laid down in the existing regulations. The laws affecting the flight of projectiles—the arrangement of the sights—the preliminary instruction in aiming and position drill—the judging distance drill—the details of practice in the first, second, and third periods in platoon firing and skirmishing—the number of targets for each practice—the mode of calculating the points—the preparation of the company returns—and the manufacture of cartridges, &c, will all afford matter of inquiry for the district inspector.

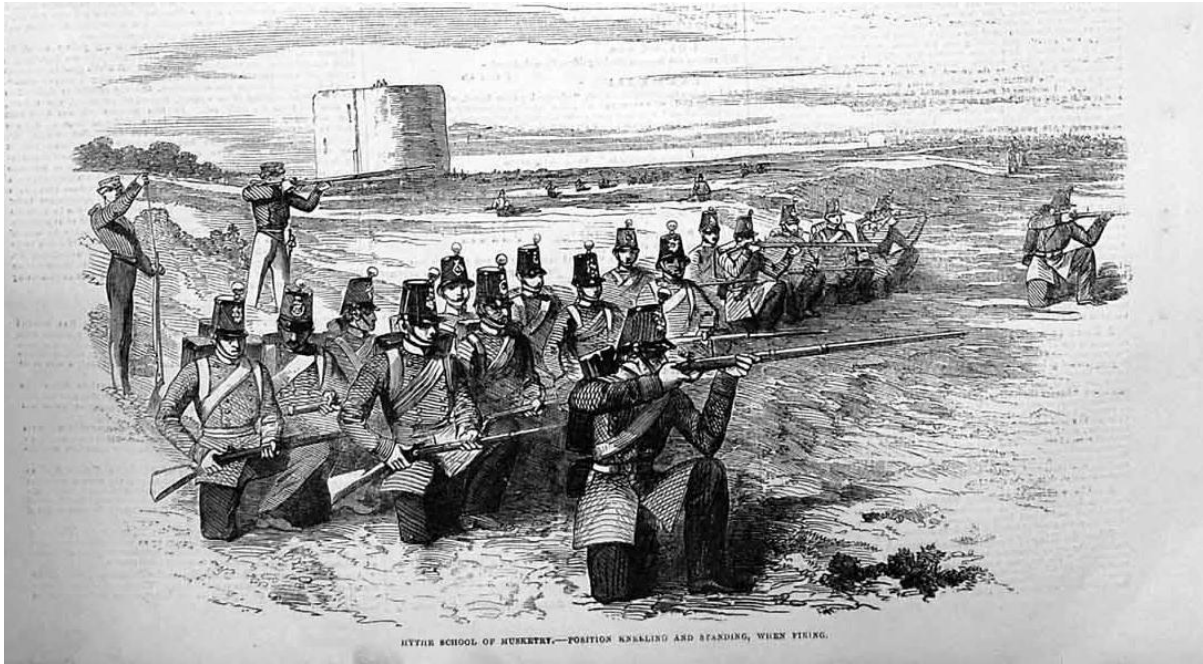
By command, G. WETHERALL, A.G

Target practice involved shooting at ranges from 100 yards to 900 yards in 50 yard stages and was designed to put the theory into action.



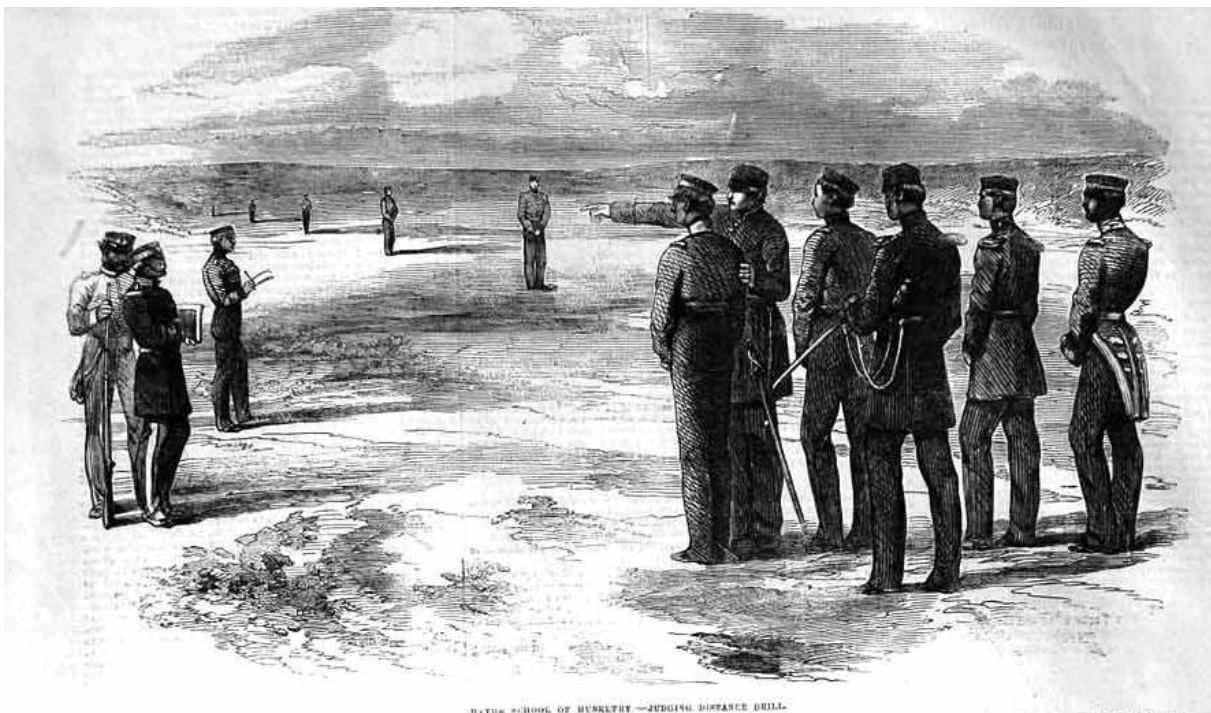
Hythe School of Musketry- Aiming drill. Illustrated London News October 13th 1855

The men stood up to shoot at the targets up to 300 yards away and after that they knelt down.



Hythe School of Musketry- Position kneeling and standing when firing.
Illustrated London News October 13th 1855

In order to improve their accuracy the trainees were taught how to judge distances by being given an understanding of perspective.



Hythe School of Musketry- Judging distance drill. Illustrated London News October 13th 1855

The targets were six feet in height by two in breadth (81 x 61 cms) and constructed of cast iron of sufficient thickness to be bullet proof. They were coloured white using a mixture of whiting and size and the bull's-eye and circles marking the "centre," were coloured black with lamp-black and size. The bull's-eye was 8 inches (20 cm) in diameter in the centre of a ring 2 feet (61 cms) in diameter. At target practice the soldiers were awarded points for their accuracy.

W. O. Form 1604. *Capt.* _____ *or* _____ *Company of Rifle Volunteers.* *Section* _____

DIAGRAM, Recording the result of the _____ Practice at _____ Yards.
Dated at _____ 18____.

1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
5				5				5				5				5				5				5				5			
4				4				4				4				4				4				4				4			
3				3				3				3				3				3				3				3			
2				2				2				2				2				2				2				2			
1				1				1				1				1				1				1				1			
2				2				2				2				2				2				2				2			
3				3				3				3				3				3				3				3			
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5				5				5				5				5				5				5				5			
6				6				6				6				6				6				6				6			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Names { _____

Bull's eyes	
Centres	
Outers	
Total Hits & Points	
" Misses	
" Rounds fired	
& average Points }	

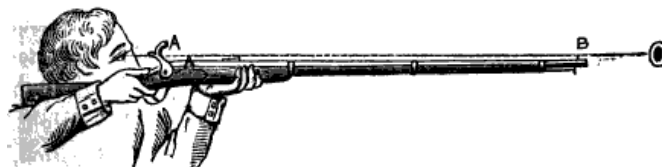
Number of Men firing _____ Rounds fired per Man _____

I certify that I was present during the performance of this Practice, which was conducted strictly in accordance with the Musketry Regulations, and that I witnessed the taking off of the hits recorded on this Diagram, which is correct.

Instructor.

Men were awarded 3 points for hitting the bull's-eye, 2 points for hitting the centre ring and 1 point for hitting the rest of the target. A man called a marker indicated to the soldier firing what score he had gained by waving flags – white for an outer, blue for a centre and red for a bull's-eye.

The men were allowed to fire 5 shots at each distance and gradually they moved back further and further from the target. A soldier who managed to achieve 15 points between the 150 yard, 200 yard, 250 yard and 300 yard targets gained the title of "second class shot". Anyone scoring 12 points between the 400 yard, 500 yard, 550 yard and 600 yard targets became a "first class shot" and anyone scoring 7 points between the 650, 700, 800 and 900 yard targets was deemed to be "a marksman".



Line of Sight^{xiii}

To encourage soldiers to practice shooting the government issued rewards to men who performed well on the rifle ranges, and this seems to have had the desired result.

By command of His Royal Highness the Duke of Cambridge,
General Commanding-in-Chief.

The General Commanding in Chief, with a view to stimulate individual exertion, and to reward the proficiency of soldiers in the use and management of the rifle musket, has been pleased to institute a system of 'prizes for good shooting;' and the accompanying regulations for the award of the same having received the concurrence of the Secretary of State for War, his Royal Highness desires that they may be strictly observed throughout the infantry and embodied militia.

G. A. WETHERALL, Adjutant-General

1. The regimental prizes for good shooting will be three, viz.:—

1st Prize.—To the best shot of the battalion, a badge of crossmuskets and a crown, worked in gold, and entitling the wearer to extra pay at the rate of 2d. per day.

2nd Prize.—To the best shot of each company, a badge of crossmuskets, worked in gold, and carrying with it extra pay at the rate of 1d. per day.

3rd Prize.—To certain of the first-class shots, to be styled 'marksmen,' and not to exceed 100 per battalion, a badge of cross-muskets, worked in worsted, with 1d. per day additional pay to each wearer.

2. The badges are to be worked on cloth the colour of the facings of the regiment, and to be worn on the left arm, immediately above the slashed flap of the sleeve.

3. In order to insure, on the one hand, a high standard of efficiency, and, on the other, to guard against the public being called upon to pay for a lower standard of merit than is necessary, as well as to secure the utmost impartiality in the distribution of the rewards, it is intended that the registers and annual practice returns shall be the data upon which the proficiency of the men shall be estimated.

March 10, 1858.

xiv

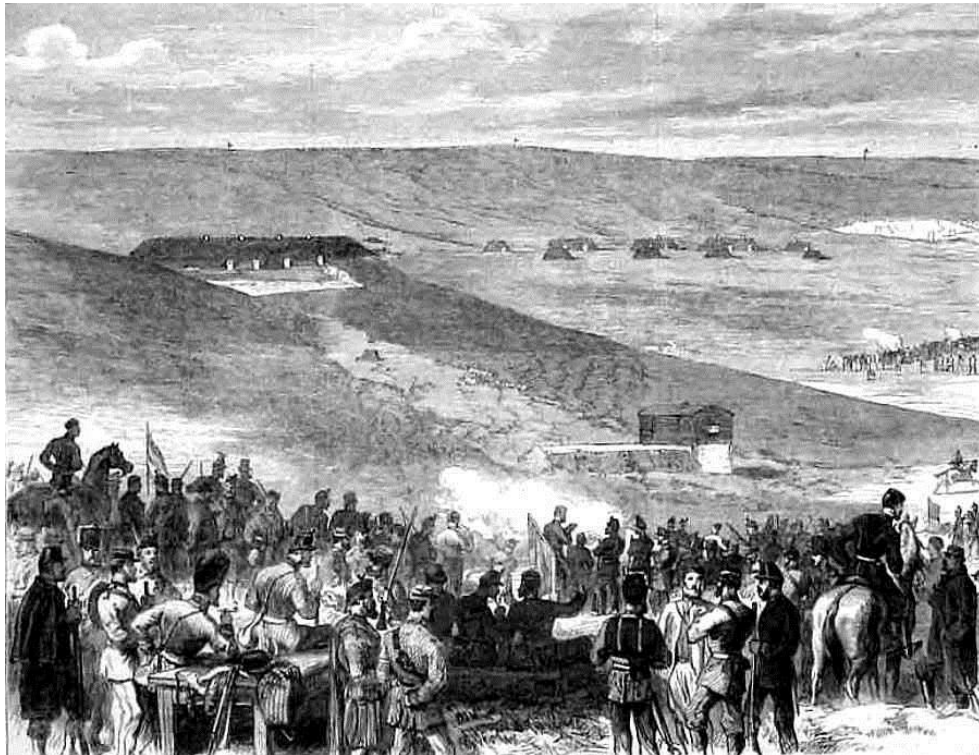
"In the infantry (in 1863-4) there has been an improvement in almost every stage of the firing practice. This has shown itself chiefly in individual shooting, nearly one-fourth of the whole array having fired in the first-class—viz., 21.7 per cent., and 13,915 men have been recommended for extra pay as " marksmen," being 4,571 men in excess of the number which the sum of £16,871 7s. 6d. allotted to this purpose will pay."^{xv}

After the success of the Hythe School of Musketry the War Office issued design details for creating rifle ranges elsewhere and it is presumed that Littlehampton rifle range followed the prescribed pattern. The men firing the rifles were to stand in sheds called 'shooting houses' which could either be simple shelters or proper brick buildings. In front of the shooting house big screens 11 feet (3.4m) high made of 8 inch (20 cm) thick wood were erected across the direction of fire to prevent wayward bullets from causing injury to bystanders. The shooters had to fire through holes in the screens. The target was set in front of a butt, which was a mound of earth 15 feet (4.6m) high, 100 feet (30m) long and 4 feet (1.2m) thick. In front of the mound was a ditch and the people keeping the score, known as markers, hid in the ditch behind a screen called a mantlet when the firing was going on.

Diagram illustrating a building layout with various rooms and dimensions:

- Room A: 18 FEET. (width) x 15 FEET. (depth)
- Room B: 10 FEET. (width) x 10 FEET. (depth)
- Room C: 10 FEET. (width) x 10 FEET. (depth)
- Room D: 8 FEET. (width) x 10 FEET. (depth)
- Staircase: Located between Room B and Room C.
- Dimensions are given in feet.

SECTION ON THE LINE A.B.



12

Butts.		£	s.	d.	£	s.	d.
Butt 100 feet long, 522 cubic yards of earth excavated, thrown up, and rammed, at 9d. per cubic yard		35	2	0			
Revetting 3102 square feet, at 9d. per square foot		64	12	6			
Retaining walls of brickwork, 900 cubic feet, at 9½d. per cubic foot		36	11	3			
Excavating recesses for markers, 21 cubic yards		0	15	9			
150 square feet of boarding for markers' recesses		2	13	7			
Total					139	15	1
Butt 50 feet long, total cost					87	0	0
Screens.							
1st screen, 63 feet long, oak posts, braces, sills, &c.		21	15	4			
567 square feet of 4-inch oak, at 2s.		57	14	0			
Facing of ¼-inch iron, at 18s. per cwt.		43	4	0			
Total					122	13	4
2nd screen, 67 feet long, oak posts, braces, sills, &c.		28	19	0			
387 square feet of 4-inch oak, at 2s.		38	14	0			
Facing of ¼-inch iron		30	12	0			
Total					98	5	0
Screen for 90-yard range, 37 feet long, oak posts, braces, sills, &c.		16	0	0			
370 square feet of 4-inch oak, at 2s.		37	0	0			
Facing of ¼-inch iron		27	18	0			
Total					80	18	0
SHOOTING HOUSES.							
House 100 feet long by 20 wide and 7 high.							
Excavating foundations		8	11	2			
Brickwork for 9-inch walls with piers at intervals, at 10½. 10s. per rod		105	0	0			
Carried forward		£113	11	2	528	11	5

	£	s.	d.	£	s.	d.
Brought forward	113	11	5	528	11	5
Roof, doors, &c.	88	4	0			
Painting, locks, hinges, &c.	2	0	0			
Total				203	15	5
House 30 feet in length, total cost				100	0	0
Shooting stands, railings, &c., for shooting-houses				18	0	0
Total cost of Rifle Range				850	6	10
If the ends of the butts were sloped off similarly to the sides, instead of being supported by retaining walls of brickwork, the saving of expense would be						
As elm or beech can be purchased in many parts of the country for 1s. to 1s. 6d. per cubic foot; wood of this description might be used instead of oak faced with iron, and a saving on the screens might be effected of at least half their estimated cost	56	15	10			
Total saving	150	0	0	206	15	10
Leaving the expenses reduced to				£643	11	0

Estimate given by Captain Petrie (14th Regiment, Topographical Staff) for building a rifle range. 1860. ^{xvii}

April fool!

THE NEW REGULATIONS These regulations are to be in force from April 1 1863.^{xviii}

FOR Musketry, prepared by the Volunteer Commission, having been submitted to First Class Musketry Instructor *Punch*, are approved as follows for presentation to Parliament:—

1. Every volunteer certified for the Government grant must attend to his health according to the Constitution.

He must rise early, and after a wash-rod may practice position drill in front of the kitchen range, with a percussion cap on his head, and kneeling in Hythe position on a danger flag. The regulation umbrella to be carried all day is the exact weight of a Government Rifle (10 lb. 2 oz.), and is to be in his left hand. With this he may toast five rounds of squad roll to be eaten with a little beeswax as a lubrication.

To accustom him to stand fire, he must eat his meals in this position, using as a screen a number of *Punch* or some lively publication with squibs—provided they be on cartridge paper.

2. Diet at lunch. One glass of gunsling with a ricochet sandwich or a good bull's eye by way of muzzle-stopper. If sweepstakes are preferred for dinner, a tumbler from the mainspring must be added, or *o-d-v* drunk from a Prize Pewter.

3. The Powder-Tax is remitted for all who use for their hair trigger at their toilette only Government ammunition, or lock oil in preparing for balls or private matches.

4. Before a match no one is to use a glass to see if a miss is fair or whence she comes, except on the 14th of February in each year.

5. While sitting on the heel, or when a gun kicks, soft tow is to be provided, and no points allowed.

6. No one is to make a butt of his comrade, unless he is a small bore or an odd file. Double barrels are permitted if one be of oysters, which may always be provided with proper foresight.

7. A score means twenty.

8. One plug of tobacco (Government returns) maybe smoked per diem: but in bed no snap-cap or bareskin may be worn (except by Highland companies), and no artificial rest is permitted.

9. The War Office is not answerable for any mistakes in notes from the bugler unless properly signed (except by marksmen).

10. If at ball practice a partner is at the shoulder, and the sights lowered and no tie ensues, the match is at an end.

11. In case of accident by which a boy, pig, goose, or other quadruped is shot, an entry is to be made according to the form below, and a shootable diagram of the same inserted in the Schedule A as below.

(Signed) MAJOR-GENERAL HAT.

Approver, *Punch*, 1st C. M. Instructor.

Instructors were warned that rifle shooting was a serious affair and could not be rushed.

"With iron targets of the regulation pattern, if the markers are good, the fatiguesmen well accustomed to their work, and the men well drilled and used to target practice with sections of the average size, a fair allowance for the time required to fire, including checking and washing-out would be:—

Half a minute per round in the 3rd class.

Three quarters of a minute in the 2nd class.

And nearly a minute in the 1st class.

For instance, a section of 12 men would take—

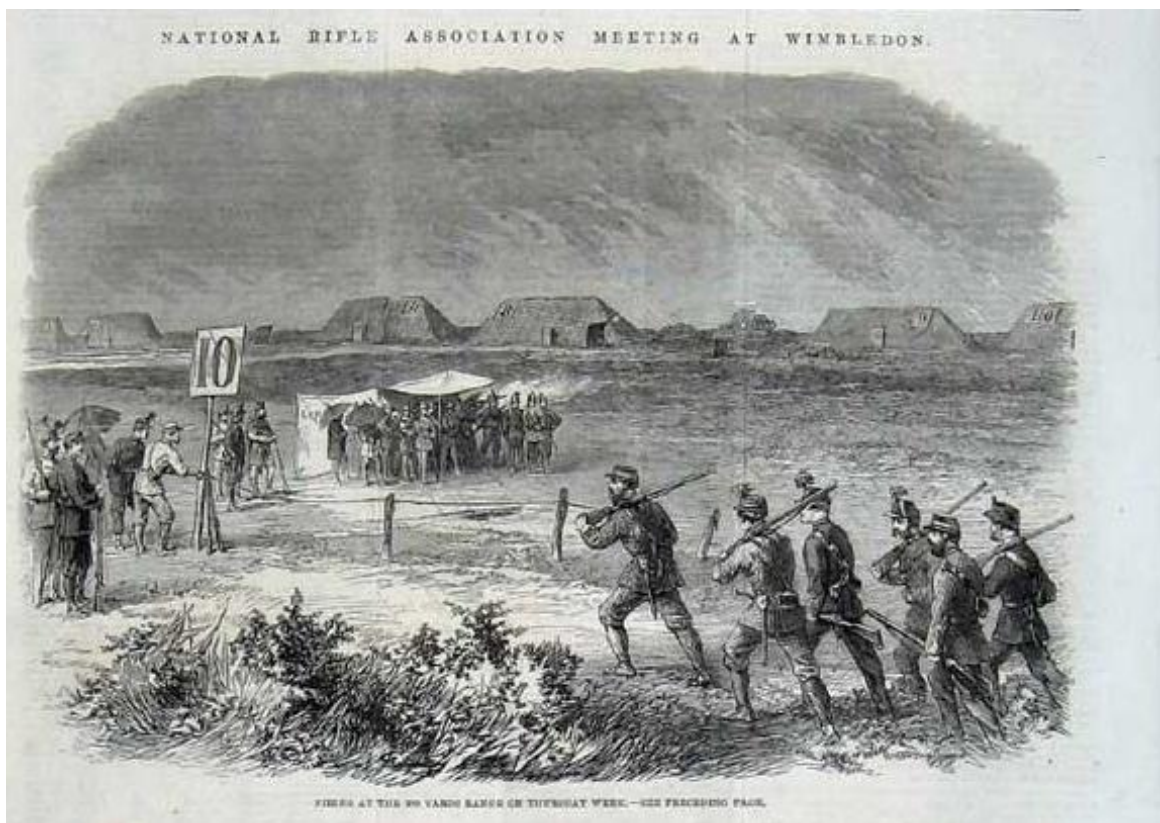
One hour to fire 10 rounds (2 distances) in the 3rd class.

One hour and a half in the 2nd class.

Two hours in the 1st class."^{xix}

(A fatiguesman kept the rifles clean.)

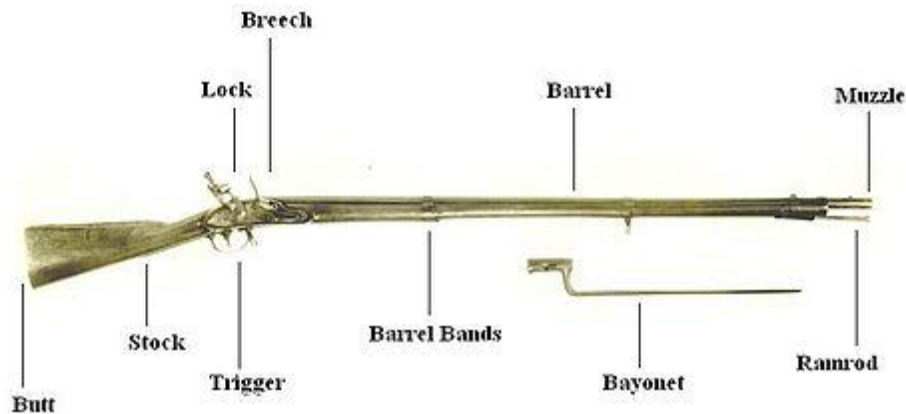
Late in 1859 the National Rifle Association (NRA) was formed and its aims included "the promotion of rifle shooting throughout Great Britain." The NRA held its first meeting on Wimbledon Common in 1860 with royal patronage and annually thereafter. This 'Wimbledon fortnight' was a great occasion attended by the élite of society.



National Rifle Association Meeting at Wimbledon. Firing at the 200 yards range.
Illustrated London News July 1861

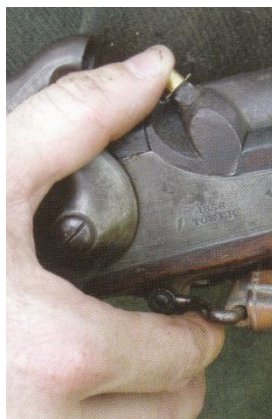
Cap Snapping.

A cap, also known as a percussion cap, was a small metal capsule that contained a substance called fulminate, made from mercury, nitric acid and alcohol. The cap was put on the lock of the rifle and when the trigger was pulled a hammer struck the cap, causing the mercuric fulminate to catch fire. The flames entered the barrel through a small tube, called a nipple, and they ignited the gunpowder in the gun barrel. The explosion caused the bullet to fire out of the barrel.



A cap

Putting a cap on the nipple of
the rifle lock. ➡



The hammer hitting the cap.



Most of the rifle training was done without any ammunition in the rifle. The cap would catch fire with a little explosion called a 'snap' but no bullet would be shot. Therefore, training was sometimes referred to as 'cap snapping'.

This was the preferred method of instruction at Hythe as Colonel Wilford told his audience in 1859:

"In the Government School of Musketry shooting was taught as a drill, without ball at all. The gallant colonel then entered into a technical description of "aiming drill" and "position drill," and strongly insisted upon the necessity of commencing rifle practice by snapping caps and firing blank cartridges. To begin with firing ball cartridge was fatal. The volunteer who did so would never become a good shot, for he would only perpetuate his errors. If there were any sportsmen who wanted to improve their shooting, let them go through a course of "position drill", then let them fire blank cartridges at swallows or other small birds, and he would promise them that when the 1st of September came round they would fire half as well again. (Applause.)"^{xxx}

Rifle Training at Littlehampton.

Littlehampton Fort rifle range was visited by regular soldiers, militia men and Rifle Volunteers and it seems to have been in constant use in the 1860s.

The Penny Illustrated Paper Saturday, June 20, 1863

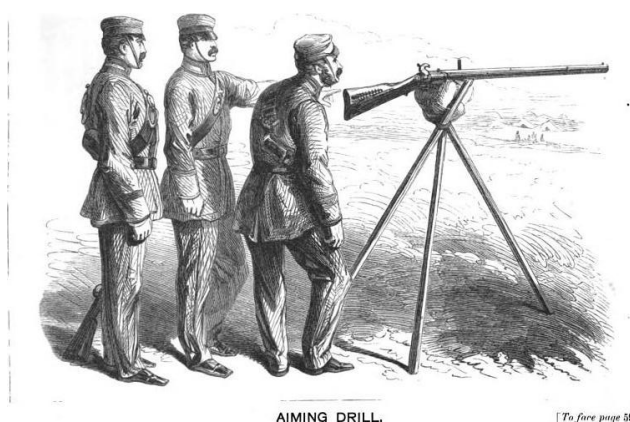
"The third annual prize meeting of the Sussex Volunteer Association was held at the Littlehampton Fort Government ranges on the 9th, 10th, and 11th of June. The competitors for the prizes on the first two days were enrolled volunteers and the disembodied militia of the county. All the prizes were shot for with three-grooved Enfield rifles of bona-fide Government pattern (1853), Government ammunition, Hythe position, Wimbledon scoring. The prizes were distributed by Lord West. Ensign Padwick, of the 7th Sussex (Horsham) Corps, carried off the county cup, value £25, and the bronze medal of the National Rifle Association, making 31 marks for seven shots, each at 700 and 800 yards range. The competition for the Littlehampton cup, value £15, was very exciting and extremely good; thirty-seven competitors made more than a point a shot; and the winner of the cup, Staff-Sergeant Daintrey, 4 bulls-eyes and 8 centres in seven shots. On the whole the shooting was superior to that of the two previous meetings."

Hampshire Telegraph and Sussex Chronicle Wednesday, September 29, 1869;

"Chichester: On Saturday afternoon last, a detachment of the 15th (the Kings) Hussars under the command of Lieutenant Cookson, arrived by the rail from Littlehampton, where they had undergone rifle instruction for seven days. Another detachment of 54 left the same afternoon for Littlehampton, under the command of Lieutenant Beck, for similar instruction."

Hampshire Telegraph and Sussex Chronicle Wednesday, July 20, 1870

"ROYAL SUSSEX LIGHT INFANTRY MILITIA- The permanent staff of the above regiment returned to Chichester on Friday morning last from Littlehampton, having finished their annual course of musketry instruction under the command of Captain and Adjutant Madden. The firing, we are informed, may be classed as very good, although the weather was not so favourable as it was last year, strong winds prevailing."



COUNTY PRIZE OF SUSSEX RIFLE Held at Littlehampton on the Size of Targets, shape of At 200 and 300 yards At 500 and 600 yards At 800 and 900 yards			
PRIZES.		WINNERS.	
Description.	Value.	Name.	Rank and Corps.
National Rifle Association Bronze Medal } and County Cup	25	Padwick, — . .	Lieut. 7th Sussex . .
Money	10	Warren, — . .	Capt. 9th Sussex . .
Do.	5	Sharp, — . .	Corp. 9th Sussex . .
Do.	10	Street, W. . .	Pvt. 9th Sussex . .
Do.	5	May, — . .	Sergt. 6th Sussex . .
Do.	3	Leaney, C. . .	Bugler 17th Sussex . .
Do.	15	Waggett, J. . .	Pvt. 1st Sussex . .
Do.	10	Scott, E. B. . .	Do. do. . .
Do.	5	Asfield, W. . .	Pvt. 9th Sussex . .
Cup. Second Prize	15	Daintrey, G. . .	Sergt. 6th Sussex . .
Do.	5	Cortis, — . .	Col.-Sergt. 11th Sussex . .
Do.	20	Cortis, — . .	Do. do. . .
Do.	10	Livesay, — . .	Corp. 1st Sussex . .
Do.	5	Goppy, C. B. . .	Pvt. 2nd Sussex . .
Consolidation Prize { Money	5	Baker, — . .	Pvt. 11th Sussex . .
Do.	3	Standing, — . .	Pvt. 2nd Sussex . .
Do.	2	Tribe, — . .	Pvt. 11th Sussex . .
Total Number of Prizes competed for during the Meeting.	Total Value. £	Total Number of Winners.	
16	153	16	

* Competitors who retired or did not complete the required number of shots.

MEETING

BY

SOCIATION,

on the 10th, and 11th June 1863.

At Littlehampton, Sussex.

At 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000, 2100, 2200, 2300, 2400, 2500, 2600, 2700, 2800, 2900, 3000, 3100, 3200, 3300, 3400, 3500, 3600, 3700, 3800, 3900, 4000, 4100, 4200, 4300, 4400, 4500, 4600, 4700, 4800, 4900, 5000, 5100, 5200, 5300, 5400, 5500, 5600, 5700, 5800, 5900, 6000, 6100, 6200, 6300, 6400, 6500, 6600, 6700, 6800, 6900, 7000, 7100, 7200, 7300, 7400, 7500, 7600, 7700, 7800, 7900, 8000, 8100, 8200, 8300, 8400, 8500, 8600, 8700, 8800, 8900, 9000, 9100, 9200, 9300, 9400, 9500, 9600, 9700, 9800, 9900, 10000, 10100, 10200, 10300, 10400, 10500, 10600, 10700, 10800, 10900, 11000, 11100, 11200, 11300, 11400, 11500, 11600, 11700, 11800, 11900, 12000, 12100, 12200, 12300, 12400, 12500, 12600, 12700, 12800, 12900, 13000, 13100, 13200, 13300, 13400, 13500, 13600, 13700, 13800, 13900, 14000, 14100, 14200, 14300, 14400, 14500, 14600, 14700, 14800, 14900, 15000, 15100, 15200, 15300, 15400, 15500, 15600, 15700, 15800, 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The training of the 21st Depot Battalion and the 1st Battalion 4th Foot, July 1860.

On 18th July 1860 two hundred men of the 21st Depot Battalion were given rifle instruction at the fort. They practiced with the long Enfield rifle at 400 yards' range. Two hundred men is considerably more than the capacity of the fort barracks and so either the men stayed for just one day or they slept in tents.

A depot battalion is a group of new recruits who undergo basic training before being sent off to other battalions. From 1858 – 1863 the 21st Depot Battalion was based at Chichester, stationed in the barracks in Broyle Road, and it provided men for the 4th Foot 1st and 2nd Battalions; the 8th Foot; the 24th Foot; the 59th Foot; the 83rd Foot; and the 96th Foot.

The battalion employed a Musketry Instructor at 3s/11d a day, a Sergeant Instructor of Musketry 2nd Class at 3s/- a day and a Sergeant Instructor of Musketry 3rd Class at 2s/6d a day. They also budgeted for markers at the butts at Littlehampton, for ferry tolls across the River Arun and for prizes for good marksmen.



Chichester Barracks – sold for housing development in 2008. © veryamateurish
(The 21st Depot left in 1863 and it became the home of the Sussex Light Infantry Militia.)

Amongst the soldiers on July 18th 1860 were privates from the 1st battalion 4th Foot who were not new recruits but were presumably updating their skills. It seems that the 4th Foot were based in Littlehampton Fort at this time as the muster rolls show them present there in groups of about 40 from April 1859, and the census of April 1861 lists 62 soldiers from the 4th as inmates.

Commanding the 4th Foot at Littlehampton was Captain Augustus Edward Henry Ansell,^{xxii} who was born in Ireland in 1832, the son of Lieutenant Colonel Augustus Francis Ansell. Captain Ansell had served with the 4th Foot since 1848 and had risen through the ranks from Ensign to Lieutenant to Captain. In November 1861 he was to be made a Major. Captain Ansell had served in the Crimean War and was present at the fall of Sebastopol. He was to die in Zante (Greece) in December 1862, leaving a wife, daughter and unborn son.

In July 1860 at Littlehampton Colour Sergeant Philip Fricker of the 4th Foot won 2d a day and Private Arthur Hopkins of the 4th Foot won 1d a day as a prize for accurate shooting.

Privates Charles Dockerell, John Dwyer, John Green, and William Cotton from the 4th Foot all took part in the target practice on July 18th.

William Cotton was a shoemaker from Cowes in the Isle of Wight. He joined the army aged 28 in July 1855 and served in Malta and the Crimea. He then deserted in July 1856 but decided to rejoin (and serve 2 months for desertion) in May 1858. In July 1860 he was aged 33.

John Green was a labourer from Wootton Bassett. He joined the army aged 21 in June 1839 and served eight and a half years in the East Indies and then in Malta and the Crimea. He had three good conduct badges and was due a fourth at the end of November 1860. He was married with two young children, including a son born in Chichester in 1860. In July 1860 John Green was aged 42.

The men at Littlehampton were divided into two squads of 15 and took it in turns to shoot. They shot at the 400 yard range then moved to the 500 yard range and waited while the officers checked the targets to record each soldier's score. This was a lengthy process and the men not engaged in firing had to sit around waiting for their turn. It seems that some of them began to muck around by snapping caps and pointing the rifles at each other. Private Dockerell put a cap on his rifle and for a laugh aimed it at Privates Dwyer, Cotton, and Green. Private Dwyer was very anxious and lay down to be out of the sight line. Dockerell believed that his rifle was not loaded, but it was. He fired a bullet at a distance of from 8 to 10 yards directly at Cotton and hit him on the right side of his nose. The bullet went straight through his upper and lower jawbones and out of his neck just below his left ear. The bullet flew out of Cotton's neck, Dwyer ducked and escaped being shot, and the bullet went into Green's throat, taking with it several teeth and a portion of his jawbone. Doctors were summoned and, when Green was admitted to Fort Pitt Hospital, Chatham, the ball was discovered lying beneath the skin a little above his Adam's apple.^{xxiii} The accident was so horrific it was reported in newspapers nationwide under the headline "Melancholy Catastrophe".

MELANCHOLY CATASTROPHE AT LITTLEHAMPTON.
—Two hundred men of the 21st Depot Battalion are receiving rifle instruction at the fort here. Last Wednesday, after the practice with the long Enfield at 400 yards' range, the men were pointing their unloaded rifles and snapping caps at each other while the officers were engaged in comparing the register of the shots made with the target. One of the men, named Dockerell, when directed to unload had not done so, and, to conceal this, when ordered, as usual, to ground arms, had removed the cap. Forgetting—so we learn on inquiry—what he had done, he joined with his comrades in pointing his rifle at one of the groups who lay around, and having placed a cap on he directed his piece at a comrade named Cotton, who, with two others, Dwyer and Green, was present at the time. The rifle, of course, went off immediately, and the shot took effect on the right side of Cotton's nose, carrying away part of his jawbone and passing out at the right side of his neck. Dwyer had moved a little on seeing the piece levelled, and thus he escaped, but the bullet, after passing through Cotton's neck, entered Green's throat, passing out at his mouth, and taking with it several teeth and a portion of the jawbone. Green was not out of danger on Thursday evening last, and but slight hopes are entertained of the recovery of Cotton.

The Times Saturday 21st July 1860

At the time of the accident it was thought likely that both Cotton and Green would die of their injuries, but remarkably neither did. However, they were both rendered unfit for service and were

discharged from the army with a pension, Green in November and Cotton in December 1860. They were said to be suffering from 'vulnus schlopetarium' which means 'gunshot wound'.

the Regiment, or at the Station.
This is to Certify that Private, William Cotton 1st Battⁿ
4th Regiment, labours under "Vulnus Schlopetarium"
accidentally received on the 18th July 1860, while at ball
practice at Little Hampton; in consequence of which
he is rendered unfit for further Military Service

Signed
OPINION of the Principal Medical Officer at Chatham 14th Nov 1860
Having examined Private William Cotton
I am of opinion he is unfit for
further Service in consequence of
gun shot injury of both jaws on right
side the result of accident
while at ball practice J D Hume
D 23
Horse Guards 4th December 1860
THE DISCHARGE of the Man above mentioned is approved by the
General Commanding-in-Chief.
A. H. Jones
Genl

Discharge Certificate of William Cotton

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Service

Years Days

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MEDICAL REPORT.—[In cases of Men to be discharged as unfit for Service, the Regimental Medical Officer is to state here the nature and origin of the Disability, and whether the same has been caused by the Man's Military Services, by Climate, by Constitutional Infirmary, or Predisposition, or is the result of indulgence in the use of Intoxicating Liquors, or other Vices. If from an Accident, under what circumstances the Accident occurred, and whether on or off Duty. In Ophthalmic Cases, or other Disorders of the Eyes, it must be stated how the Disease was contracted, and whether the same was, or was not prevalent at the time in the Regiment or at the Station.]

This is to certify that Fincke, John Green 1st Battalion
4th Regiment labours under "Tulnus Sclopetarium" accident-
ally received on the 18th July 1860, while at ball practice
at Little Hampton; in consequence of which he is rendered
unfit unfit for further Military Service.

Amable
Super Major

Signed

OPINION of the Principal Medical Officer at Chatham 18th October 1860

Having examined Private John Green
and of opinion he is unfit for
further service in consequence of fracture
of lower jaw from accidental gun shot wound
while at ball practice

DDHume
D.L.

Horse Guard

J. H. Roberts 1860

THE DISCHARGE of the Man above mentioned is approved by the
General Commanding-in-Chief.

R. Pearson
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DECISION OF THE CHELSEA BOARD.

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Private Charles Dockerell was reported by the Brighton Gazette in October 1860 to be so overcome with shock and grief at what he had done that he faded away and died from depression, the only one to perish as a result of the accident. This story was widely broadcast in the press nationwide under the headline 'A Singular Event', but the evidence for this story is not known.

SINGULAR EVENT.—It will be recollected that recently two men were shot through the head, at the Fort, Littlehampton, while at rifle practice, by a comrade snapping his gun, as he had intended, at one of them, but the piece, contrary to his belief, being loaded, the ball passed through the head of first one and then the other. It is not a little remarkable that both have recovered ; but, strange to say the man by whom the accident was produced has since died. So depressed was he, and so great had been the shock on his system, at having been the cause of the disaster, that he could not be rallied. — *Brighton Guardian*.

Glasgow Herald, Saturday 13 October 1860

There is no record of anyone named Dockerell/Dockerill dying anywhere in England at the requisite time, in fact it seems that Charles Dockerell did not die of grief; he continued his career in the army. Presumably he faced a court martial but the muster rolls do not record his punishment. He was transferred from Littlehampton to Eastbourne then Chatham and, on 15th July 1861, embarked with the regiment to India, where he was stationed in Hyderabad. He died on 19 May 1865 in Poona.^{xxiv} The circumstances in Eastbourne are not known, but several men from the 4th went there.

Captain Bray, Musketry Instructor.

The instructor of the 21st Depot Brigade on that ill-fated day was Captain Bray of the 83rd Regiment. He was based at Chichester and had held the position of Musketry Instructor since July 1858. He seems to have been instructing the 4th Foot as well as the 21st Depot although their Musketry instructor is listed as Captain J W Laurie. Laurie was then in Aden.

Edward William Bray was an Irishman. He was born in Foxford Co. Mayo in 1823, the eldest son of Lieutenant Colonel Edward William Bray CB of the 39th Regiment.

Edward Bray senior was a very well-known military figure and regarded as something of a war hero for his campaigning in India against the Mahrattas.

Memorial at All Saints Royal Garrison Church, Aldershot:

"Sacred to the memory of Colonel Edward William Bray, CB who served with the 67th Regiment through the Maharatta Campaign of 1817 and 1818, and at the siege and capture of Amulnair, Ryghur, and Asseeghur. He afterwards served with the 31st Regiment for 17 years, and was with the right wing on board the Kent Indiamen when she was burnt in the Bay of Biscay on the 1st of March 1825. He commanded the 39th Regiment at the Battle of Maharajpore on the 23rd December 1843, and was desperately wounded in the last battery taken on that day, which was stormed by his regiment with the terrible loss in killed and wounded of 300 officers and men."

Col. Bray had three sons who all joined the army: Edward junior was the oldest, and then came Theodore who died aged 19 in the battle Maharajpore, India (commanded by his father) and the youngest son was George who rose through the ranks to become a Major General.

Edward Bray junior enlisted as an ensign in 1839. He served with the 31st Regiment in Afghanistan throughout 1842 winning a medal for his part in the capture of Khytul in 1843 with the Umballa Brigade. In 1865 Bray published the diary that he had kept during the war: Journal of Affghan war in 1842. Here is an extract:

"As Affghanistan (sic) is never likely to be seen again by an English army, I have thought that my journal of the campaign in 1842, although written when I was very young, and a lieutenant of only three years service, is worth preserving; as scarcely any accounts of that campaign were ever published... The Affghan war was commenced in error, in 1839, by our sending an army into Affghanistan to establish Shah Soojah, an unpopular and banished king, upon the throne of Kabul, and to dethrone Dost Mohammed, a popular, energetic, and good king, worth five hundred Shah Soojahs. This extraordinary measure was undertaken and carried out under the impression that by our having a firm ally in the king of Kabul, all fears of a Russian invasion of India would be set at rest; this being a great bug-bear of those days. Although we failed in our intention as regards Shah Soojah, we established one fact very clearly at the cost of millions of money and thousands of men, and it is, that NO Russian army could ever invade India through Affghanistan."

Bray was promoted from Ensign to Lieutenant in 1841 and to a Captain in 1850 when he transferred from the 31st Regiment to the 83rd. The majority of men in the 83rd Regiment came from Ireland and so it was known as the 'County of Dublin' Regiment. He went with the 83rd to India in 1849 and recorded his experiences there, including the suppression of the Indian Mutiny, in a book entitled 'Memoirs and Services of the Eighty-Third Regiment, County of Dublin, from 1793-1863'. Returning to England in late 1857 he became based in Chatham. Presumably he was training to be a shooting instructor because on 22nd July 1858 he was appointed Musketry Instructor of the 21st Depot in Chichester, being paid 3s/11d a day for his services.

While he was living in Chichester Captain Bray got married to Ann Mair, daughter of Lieut. Col. Mair, in South Bersted in April 1860. He was 37 and she was 18. They had three children Beatrice (known as May) born 1863, Edward born 1865 who died aged 4 and Mabel (known as Tara) born 1867.



E.W. Bray. Taken in c1875.^{xxv}

Captain Bray seems to have been regarded as something of an expert on the subject of rifles.

Hampshire Advertiser Saturday 24 Mar 1860

"A Lecture on the Rifle was delivered on Monday evening by Captain Bray, 83rd Regiment, Rifle Instructor. The corps having mustered at the usual parade, marched to the Council Chamber, where the meeting was held, and at the termination of the lecture, which we trust will be fully appreciated by these aspirants to military fame, they marched in good order to the same place, and were then dismissed."

He was based at Chichester but he gave instruction in Littlehampton and seems to have been resident there on occasion. In September 1859 he played cricket for Mr Blaker's team and was described as 'commanding the fort at Littlehampton'^{xxvi}. In May 1860 when a soldier at the fort named Owen Burley was accused of a crime, Bray was referred to in court as 'Mr Superintendent Bray' and testified in his role as fort commander.^{xxvii}

Another of his duties was to act as field officer for the 1st Sussex Battalion of Rifle Volunteers, being responsible for their training in shooting and skirmishing.

Captain Bray in 1860.

March 29	Lecture on rifles in Chichester
May 24	Dealt with a court case concerning Private Owen Burley in Littlehampton
June 6	Wedding
July 18	The Melancholy Catastrophe
August 7	The Review of the Sussex Volunteers at Arundel

Hampshire Advertiser Saturday 11th August 1860

"On Tuesday the 1st Sussex Volunteer Battalion was reviewed in Arundel-park, and as the weather was all that could be wished, the review attracted a large number of spectators from the country round... Certainly nothing could be prettier than the spectacle which met their view... Up the opposite slope the leading companies could be seen gallantly toiling – the sharp crack of their rifles waking numberless echoes amongst the hills and woods and startling the herds of deer feeding in the distance. The puffs of blue smoke curled gracefully up from amongst the trees and marked the advance of the skirmishers, who in their grey and green uniforms were often completely lost sight of in the thick cover. After about three quarters of an hour of this most fatiguing work – for four companies actually skirmished- the skirmishers were called in, two or three rattling volleys were fired by the reserve and the line was again formed on the ground first taken up... The men of the 1st Sussex Volunteer Battalion have certainly some reason to be proud of their success until the present time... We must not forget to mention Captain Bray, Musketry Instructor to the Depot Battalion at Chichester, who by his exertions contributed not a little to the success of the day."



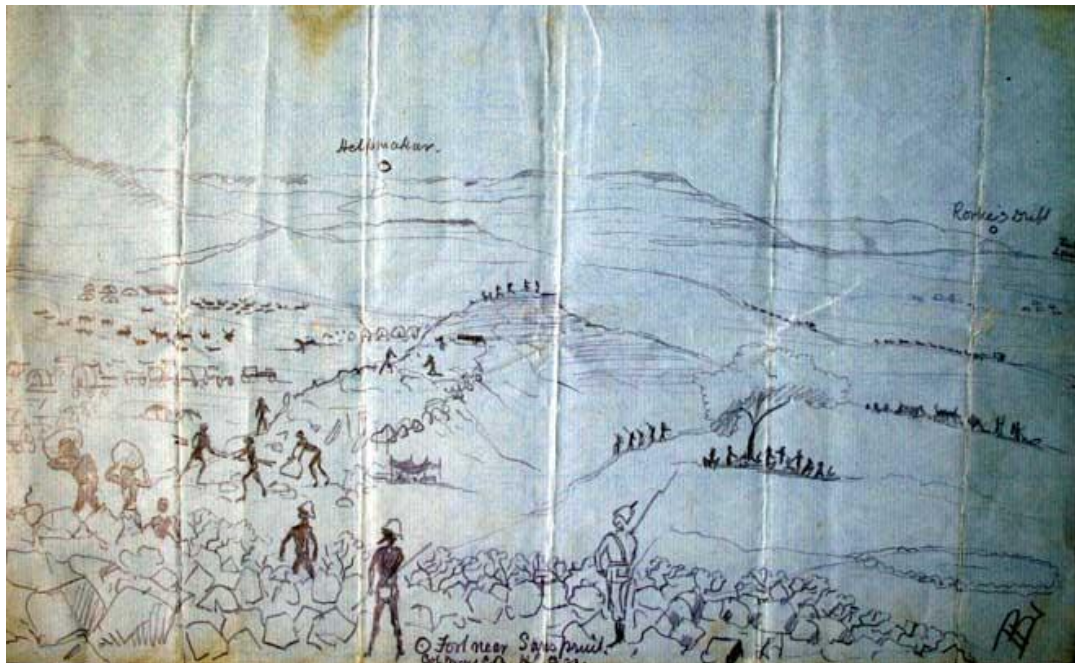
1. Advanced Guard opposed by France-Tireurs. 2. Outpost Duty. 3. Requisitioning. 4. Mid-day Meal. 5. Comfortable for the Night.

PLEASURES OF A MARCH DOWN TO THE BRIGHTON REVIEW.



Penny Illustrated Paper Saturday, April 08, 1871

Not long after the disaster with private Dockerell, Captain Bray left Chichester and moved back to Chatham becoming Brevet Major in 1862 and Major in 1865. He was in command of the troops quelling the riots in Nottingham in 1865 when fighting broke out between the supporters of Charles Paget and the supporters of Samuel Morley, the candidates for election as MP for Nottingham. The Duke of Cambridge commended him for "his admirable and praiseworthy conduct, and for the firmness and ability he displayed on that occasion." Soon he transferred to the 4th Foot and went to India again and also to Abyssinia. He became Brevet Lieutenant Colonel in 1868, Lieutenant Colonel in 1875 and Colonel in 1876. He commanded the 4th Foot during the Zulu Wars in South Africa winning a medal for his service. He finally retired with the rank of Major General in 1882 and died in Cheltenham 1891.



"Fort near Sanspruit. Colonel Bray CB. With Rorke's Drift and Helpmakaar in the distance." 1879
by Captain Henry Buckton Laurence King's Own Royal Regiment

The Closure of the Littlehampton Rifle Range.

Littlehampton Fort was decommissioned in 1891. It is easy to see why this decision was made as its guns were obsolete. However, it is not so obvious why the rifle range was closed as well, as soldiers were still using rifles and still in need of training. It seems that as firearms became more technical and more expensive, soldiers were required to become more professional and the army became more centralised. Littlehampton rifle range must have seemed too small-scale and too remote to meet the demands of the War Office in the late Victorian period.

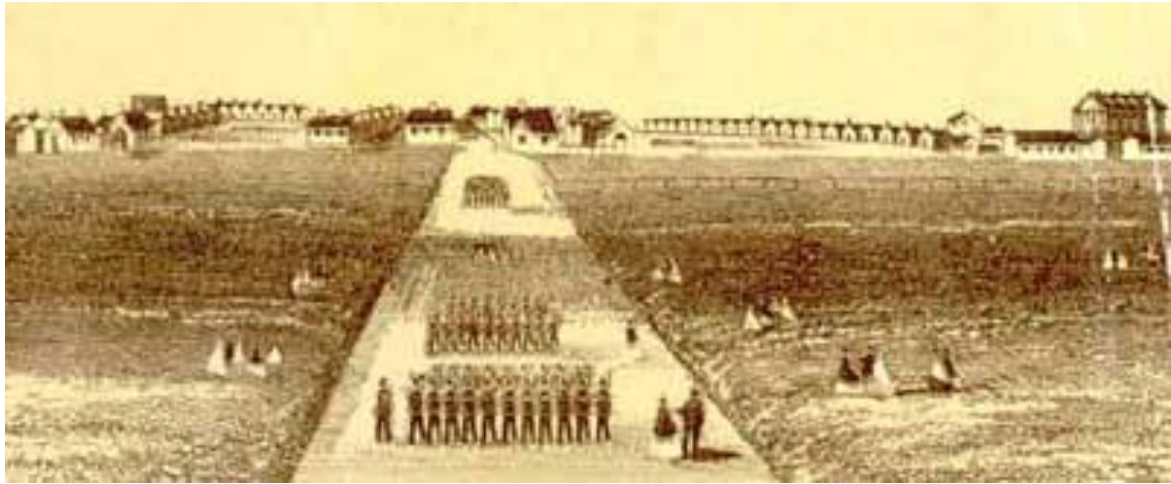
The Enfield rifle was taken out of service in 1871 and it was replaced by the Martini Henry .450 which was operational from 1871 -1888. The Martini was used in the Second Afghan War, The Zulu Wars and the Boer War. Whereas the Enfield rifle was a muzzle loader, the Martini was a breech loader which meant it could be loaded and fired much more quickly than the Enfield. At government trials a rate of fire of 20 rounds in 48 seconds was obtained with it. Also instead of firing a ball wrapped in a paper cartridge it fired a metal cartridge.



Martini Henry 450 rifle
Weight 3.8 kgs; length 1.25m; calibre 12mm; range 1,700m

The Martini was a much more effective weapon than the Enfield, and so it was essential that those who used it were properly trained. It was also much more expensive than the Enfield and so for both reasons its issue was limited to the regular army and the Rifle Volunteers did not get it until 1885. Indeed the Rifle Volunteers, a very amateurish and localised organisation when it was founded in 1859, was gradually taken under the wing of the army. In 1872 jurisdiction over the volunteers was removed from the county lieutenants and placed under the Secretary of State for War. Under the Childers Reforms of 1881 the rifle volunteer corps were designated as volunteer battalions of the new "county" infantry regiments, which consisted of regular and militia battalions. All this made the volunteers and their instruction much more professional.

The army began to rationalise its training which was done at brigade level and included large scale manoeuvres as well as musketry. It may have been that Littlehampton range was too small and too difficult to reach for large numbers of soldiers as there was no bridge over the Arun until 1908 and troops had to be carried by ferry. Much training took place at Aldershot which was 10,000 acres in size and had barrack accommodation for thousands of men.



North Camp Aldershot 1866

Littlehampton rifle range was sold off to become Littlehampton Golf Course.

West Sussex Gazette Thursday, 21st February 1889:

"For some time past, Mr R.A. Blagden has been making strenuous efforts to establish a golf course at Littlehampton and there appears to be every prospect that his labours, which have been by no means small, will be rewarded with success. At a meeting held at the Terminus Hotel on Saturday afternoon, the Club was actually formed; about twenty-five members having enrolled themselves. The old rifle range, on the west side of the river, has been secured for the ground and experienced players are of the opinion it can be made most suitable. The annual subscription is fixed at one guinea, and the entrance fee is to be two guineas. Amongst those who have already joined are His Grace the Duke of Norfolk, Earl March and Lord Walter Gordon-Lennox."

According to the official Golf Club history:

"The original course consisted of nine holes, with the Club Room, a large hut positioned near the north-eastern part of the Fort. The Rifle Butt, which was on the sea-side of the original 2nd hole, now has to be encountered when driving off at our present 9th hole."^{xxxviii}

A mound, possibly a rifle butt, on the 9th fairway is visible today from the sand dunes.



9th fairway June 2012

This is not the location marked as a range on the map of page 1, but it seems that shooting continued in the area after the golf course was set up. Presumably the shooting was on land that the golf club did not own until it bought an extension in 1938.

“By the shore are Golf Links, among the best in England. It is much to be regretted that play is allowed by the Club on Sundays, notwithstanding the Vicar’s earnest protest. Easter Day is a Heathen Festival on the Links. On the same ground is a Rifle Range for the Volunteers. ”

Clymping Church and Parish by Rev Henry Green pamphlet 1907



Littlehampton Fort from the air, showing the golf course.

So now, when you gaze across the sand dunes to the fort, do not forget William Cotton, John Green, Captain Bray and the hundreds of other men who once practiced at the Littlehampton butts.

“No more bull’s eyes at short range and centres at a thousand. The day has passed- the games are done... Butts and mantlets and tents away! Let bleating sheep and lowing kine symbolise the blessings of gentle peace on the lead-besprinkled sod. Let daisies raise their drooping heads; kissing the zephyrs that waft away the wreaths of sulphurous smoke.”^{xxix}

Hilary Greenwood
July 2012

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- ⁱ Douglas, Sir Howard Observations on modern systems of fortification: including that proposed by M. Carnot, and a comparison of the polygonal with the bastion system; to which are added, some reflections on intrenched positions, and a tract on the naval, littoral, and internal defence of England Murray 1859.
- ⁱⁱ Smithurst Peter, The Pattern Enfield 1853 Enfield Rifle. Osprey 2011.
- ⁱⁱⁱ Wikipedia: Rifled Musket.
- ^{iv} The Times Saturday, November 19, 1859.
- ^v Ibid.
- ^{vi} Smithurst Peter, The Pattern Enfield 1853 Enfield Rifle. Osprey 2011.
- ^{vii} The Defence of Sebastopol: Review of General E. de Todleben's Book in The Times Newspaper, 1864. Transcribed by David Kelsey. The Times September 13th 1864.
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- ^{xi} Jewitt, Llewellyn Frederick William, Rifles and Volunteer Rifle Corps. Ward and Lock 1860.
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- ^{xxv} <http://www.1879zuluwar.com>
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