





# The Volunteer Review

## AND MILITARY AND NAVAL GAZETTE.

A Journal Devoted to the Interests of the Military and Naval Forces of the Dominion of Canada

VOL. VII.

OTTAWA, (CANADA,) TUESDAY, JUNE 24, 1873.

No 25.

### NEWS OF THE WEEK.

At a meeting of the building operatives last evening (18th inst) it was resolved to adhere to the demand for an advance of 3d. per hour on wages, and if the master builders refuse to give the increase asked for, that a general strike be inaugurated.

Macdonnell and other bank forgers were brought before the Mayor on Wednesday, 18th inst. The Attorney General for the Crown took occasion to make a suitable acknowledgment of the services of Mr. Schenck, the United States Minister, and of the authorities in New York, in securing the extradition of Macdonnell and thus forwarding the ends of justice. All the papers in the case not having come to hand the case was adjourned.

The Shah of Persia crossed the channel on the 18th inst in the Royal yacht, accompanied by a fleet of iron clads, and arrived at Dover at 2:30 p.m.. The city was gaily decorated and crowded with visitors, and the shipping in the harbor covered with flags and streamers. As the Royal visitor landed salutes were fired from the fleet and shore. He was received by the Duke of Edinburgh and Prince Arthur. The Mayor and Corporation of Dover then presented an address to which the Shah replied by thanking them for his kind reception on entering Her Majesty's dominions—a reception, he said, which made him feel that he was among friends. The Shah and suite, accompanied by the Prince, then took a special train for London. They arrived at Charing Cross station at six o'clock. A heavy rain prevailed, but immense crowds surrounded the place and filled the adjacent streets. On alighting from the cars the Shah was met by the Prince of Wales, Prince Teoh, Prince Christian and the Duke of Cambridge, who cordially welcomed him to England. The entire party then entered carriages and drove slowly to Marlborough House. Notwithstanding the inclement weather which somewhat marred the splendor of the streets, windows and house tops along the line of procession were filled with people

who kept up a most enthusiastic cheering. The Shah dined at Marlborough House on the 18th inst., with the Prince of Wales.

A Brussels despatch says that the Belgium Government has refused Cluseret, the French Communist, a safe conduct to visit Belgium, also says that General Cluseret was further informed that if he came into the country he would be arrested and surrendered to the French authorities.

The Lord-Lieutenant of Ireland lately opened a dock at Limerick, which cost about £20,000. Though the weather was beautifully fine, it is stated that the populace took no part in the ceremonies, which were joined in solely by the upper classes.

It has been announced by the Duke of Cambridge that the camp at Wimbledon would be ready for occupation on the 5th of July, and the shooting would commence on the 7th.

At a late meeting of the Royal Geographical Society, Mr. N. Elias, gold medalist of the year, and the first European who has made a journey through Western Mongolia, read a paper upon that remote district. Sir Henry Rawlinson said that Mr. Elias' journey had been one of about 2,000 miles, and during its entire length Mr. Elias had made a series of accurate and connected astronomical observations of the latitude of hills and places above the sea level. These observations were now being worked out, and proved to be most valuable. They were in fact, the first accurate observations we had ever had of Central Asia, and would enable us to lay down correctly the physical features of the region on a mathematical basis. It was for this important service to geography that the council had determined to award the gold medal of the Society to Mr. Elias.

The offertory has been adopted in Wilton parish church. The Earl of Pembroke has expressed his willingness to resign all claim on his own family seat, and to continue the payment of his usual church rate which amounts to a large sum, if the church is thrown open free and unappropriated.

Advice from Paris states that the floor and galleries of the Assembly were crowded, 18th inst., in anticipation of an exciting debate over the case of M. Roux, the Deputy for Lyons. The report of the special committee, recommending that authority be granted for his prosecution, was read, but the debate thereon was postponed until tomorrow.

A Vienna despatch says the number of visitors to the exhibition is less than was anticipated, and trades people are generally greatly discouraged at the absence of strangers, and the price of living which deterred persons from visiting the city have been reduced.

It is said that ex-Queen Isabella is about to proceed to Rome to confer with the Pope upon the prospects of the Bourbon family in Spain.

A despatch from Berlin says the Emperor William continues very weak and requires absolute quiet in order to effect a restoration of his health.

A Paris despatch says an alliance has been effected between the supporters of ex-President Thiers and the radicals in the assembly. M. Thiers is said to have had frequent conferences with M. Gambette since his retirement from the Presidency.

The Carlist forces, commanded by Hizarra and Olla, with other bands of insurgents entered the Spanish province of Biscay.

An engagement took place between the Carlists and Republicans. The former were victorious.

A report has reached this place that Gen. Mouvillas has defeated the Carlists under Duviegarry, near Vittoria, and that three hundred insurgents were killed and wounded, and seven hundred taken prisoners.

Senor Pi y Margall, President of the Council, in the course of a speech, delivered last evening in the Cortes, said the Government must first pacify the Peninsula in order to discourage disaffection in the Island of Cuba.

## SPECIALIZATION OF SHIPS OF WAR.

(Translated from the Russian in the *Revue Coloniale et Maritime* for May, 1873.

(Concluded.)

In times past the fighting powers of a ship of war was measured by the weight of metal thrown by her broadsides. Obviously, the old standard is no longer applicable. What then is the true measure of fighting power in the present day.

The fighting powers of a vessel of war are dependent on:—1. Her gun power. 2. Her degrees of invulnerability in regard of ramming and projectiles. 3. Her speed. 4. Her handiness in manœuvring. 5. On the powers of her spur and torpedoes. 6. On the absence of rigging, which by its fall in action might foul the screw. 7. On her seagoing qualities enabling her to engage with out tactical disadvantages in all weathers. 8. On the skill and capacity—general as well as special—possessed by her commander and crew. Ships designed for special duties should possess in addition, the special qualities requisite for the accomplishment of such duties. Thus, ships for coast defence should have a light draught of water, so that all the channels and refuges along the coast may be accessible to them. Ships designed for naval sorties and sudden attacks, should be as much as possible, invisible at night; ships for ocean cruising should be good sailors, and carry an ample store of provisions, &c. &c.

Passing by the qualities indispensable to the performance of particular duties, let us examine, rather more closely, some of those elements of fighting power, to that we may recognize more clearly the inconsistent nature of the conditions which admit of an increased development of particular qualities. 1. The gun power of a vessel is dependent on: the calibre and description of her ordnance; the number of her guns; the ease and expedition with which the latter can be worked, and their angle of fire.

Pieces under a certain calibre—small bore guns more especially—may be regarded as useless against ironclads, as an increase in their numbers pronounces scarcely any augmentation of the tactical power of the vessel. High gun power implies heavy weight, and this, together with the arrangements necessary for fitting and working the guns, causes an increase of gun power in any particular vessel to be accompanied by a very considerable increase in her draught of water. Consequently, it is only ships of a very large size that can carry any number of the heaviest guns. But an increase in the dimensions of a ship causes a loss of turning power and handiness in manœuvring. It is only at the sacrifice of seagoing qualities and speed that we can place heavy armaments in vessels of small size.

2. To increase the invulnerability of a vessel, it is necessary to protect her with heavy armor. Heavy armor involves loss of manœuvring power. On the other hand, invulnerability to ramming depends on speed and turning power to increase the manœuvring power, a decrease in the size of the vessel becomes necessary. Here we see that invulnerability at all points would suppose the co-existence of two diametrically opposite conditions—an increase and decrease in the size of the vessel. Rigging diminishes invulnerability, as a vessel with masts may easily be deprived of the latter, and so rendered powerless in action.

3. The speed of any given vessel depends

immediately upon the power and height of her engines, so that she would attain the maximum speed possible for her if she carried her machinery alone. To armour a vessel of given dimensions, possessing the highest speed attainable with those dimensions would necessitate the cutting down of her engines, and consequently a reduction of her speed. To put guns in her would only be to reduce her powers of speed further. To rig her and place in her a liberal supply of provisions &c., would be to diminish her speed still more; and so on. Thus we see that the conditions essential to speed are incompatible with the existence of every other quality, which necessitates the carriage of weight over and above that of the machinery. It should be observed that the larger the vessel the greater the speed attainable; in practice, the greatest speed is always attainable with ships of the largest size, the enormous weight they carry in other ways notwithstanding. Still, there can be no doubt that were the same engine power given to vessels of a smaller size, the speed attainable would be even greater.

Of the proportion between the breadth of the midship section and the length, which we know, exercises an enormous influence over the speed, we shall not speak, preferring to confine ourselves to the elements of fighting power dependent on—draught of water, motive power and thickness of armour.

4th. Handiness in manœuvring depends on draught of water and engine power. The greater the draught of water in a vessel of given dimensions, the larger will be the circle she describes in turning, and the longer she will be in passing over it; on the other hand, the higher the speed the shorter will be the time required for the same purpose, and the more readily will the vessel answer her helm. Thus, the qualities which facilitate manœuvring, are those that favor an increase of speed. Although relatively to the draught of water, they are reciprocally incompatible, so that it is impossible to unite maximum speed with the highest degree of turning power; still if other circumstances do not interfere therewith, a very high degree of each of these qualities may be combined in one and the same vessel.

5th. The excellence of a vessel as a ram or torpedo ship depends directly on her speed and turning power, so that what ever is unfavorable to these qualities will militate against her efficiency in the performance of the special duties aforesaid.

All the most recent tactical authorities recognize ramming and torpedo warfare as at least equal in importance to artillery fire. This appears to have led to the practice of giving a spur to armor clad vessels without exception, although in the majority of cases, these vessels do not possess the special qualities necessary for the effective employment of this weapon. It cannot be otherwise, as the objects aimed at in designing them have invariably been limited to gun-power, thickness of armor plating, ocean going qualities, and the possession of auxiliary sail power. The spur, generally speaking is added as something of quite secondary importance, so that the same power of the vessel is sacrificed for the sake of other considerations, not one of which is suffered to be abated. Nevertheless, spurs and torpedoes will, beyond all doubt, become powerful indeed well nigh irresistible weapons, when the vessels carrying them possess the requisite speed and turning power in combination.

6. The existence of masts and rigging implies an increase in the draught of water,

so that they exert a direct and injurious influence over the speed and handiness of the vessel carrying them. Besides, in rapid changes of position, they render the vessel less obedient to her helm, as they check her speed in going against the wind. Lastly, masts and rigging diminish the invulnerability of a vessel, because, as before observed, falling portions may easily foul the screw in action, and so deprive the vessel of her powers of locomotion, and render her incapable of continuing the combat.

7. Seagoing qualities in combination with fighting powers are only attainable by largely increasing the dimensions of a vessel, so that to have good seagoing qualities in a vessel of given size, we must be content to sacrifice some portion of her fighting capabilities.

8. The professional skill possessed by the commander and crew is, no doubt, one of the most important elements of fighting power in any vessel. The art of handling a ship can never be brought to absolute perfection, it must always be more or less relative in degree. Independently of personal capacity and profound technical knowledge, superiority in this respect will depend very greatly on the individual faculty of concentrating the attention upon any one particular object.

Let us suppose the case of two commanders of equal capacity placed in similar circumstances. One devotes his attention exclusively, either to ramming his opponent or to attacking him with torpedoes; the other brings his guns into play as well. The advantage on the side of the former will be incomparably greater; that is to say he will commit fewer errors, because his attention will be less divided. We may express the conclusion in other words by saying, "The handling of a vessel under given circumstances will be more perfect in proportion as it is more special in its objects."

The rapid review of the several elements of fighting power shows clearly what was already evident to every seaman—that to combine qualities of all descriptions in one and the same vessel is a practical impossibility. Still, the desire to do so remains, and the results are to be seen in the monster constructions to be found in the fleets of the present day. All these—vast cost and unprecedented large dimensions notwithstanding—cannot unite all the essentials of fighting power, seeing that each one of these qualities is only really formidable when possessed in a supreme degree.

Gun power will have reached its maximum only when it can penetrate any thickness of armor plating, and continue so to do throughout an engagement. Armour plating is only of service when it protects the vessel carrying it. Speed is only advantageous when it enables us to attack an opponent suddenly, or to show him our heels, or for ramming or torpedo warfare. Turning power is only really useful in enabling us to avoid the onsets of the enemy's rams. The spur will only prove truly efficacious when the vessels carrying it have the speed and turning power requisite to give full effect to a weapon of this description.

All these considerations indicate the necessity of combining certain special and predetermined qualities in individual vessels so as to secure the maximum of effect; they show too, that it is as impossible to institute a comparison between the tactical values of ships of different types as it would be to draw a parallel between those of a regiment of infantry and a battery of artillery. Each has its fullest tactical value under cer-

tain conditions, and in all other conditions will be comparatively useless.

Now, let us return to our starting point, and endeavor, as in few words as possible, to formulate the results of the foregoing considerations. The attempts we have made to solve the various questions which have arisen have led us, without exception, to conclusions affecting some or other particular type of vessel; they show, therefore, the necessity for a careful classification of these types. This classification should be based on tactical considerations, in which case alone will it be possible to determine, from a tactical point of view, the role most fitted for each individual vessel. They have led us also to the conclusion that the satisfactory accomplishment of tactical ends requires the employment of vessels of special types constructed *ad hoc*; and that the vessels, in which attempts have been made to combine a variety of fighting qualities, will answer very imperfectly to the sanguine hopes entertained of them.

Finally to leave no argument unused, we would quote some observations contained in a lecture delivered by an English officer, Captain Colomb, and published in the *Journal of the Royal United Service Institution*. Amongst other things Captain Colomb said: "If I were to make the assertion that the designs of our ships arise more out of instinct and tradition than out of any comprehension of how they are liable to attack and how they are capable of defence, I should at first raise a feeling of credulous surprise in the minds of my hearers. And yet I do make this assertion."

And in this accusation none of his naval hearers seemed to take exception. Further on, speaking of ramming and gun power, he remarked:—"But who can say of any ship in our navy in which the two weapons are combined that her gun power is properly sacrificed to assist her ram, or that her ram power is judiciously curtailed to admit of increased ordnance?"

Again, describing an imaginary naval combat, he said:—"It seems to me that a gunless ram of equal speed with the *Monarch*, but about one fifth of her size, would meet her on equal terms on the open sea."

ANNUAL REPORT ON THE STATE OF THE MILITIA FOR 1872.

(Continued from Page 267.)

The force assembled in camp was formed into a division, composed of one regiment of cavalry, three field batteries and three brigades of infantry. The brigades were commanded by officers belonging to the force of the district, as well as the staff of the brigades. Being the first time these officers were placed in such a position, much credit is due to them for the manner in which their various duties were carried out.

Company and battalion drill was carried out for the first few days with marked good effect. When brigades were formed and drilled under their respective Brigadiers, it was surprising to observe how both officers, non commissioned officers and men fell into their respective places in so very short a time.

Having been taken unwell at the time of your arrival in Niagara, the division was paraded and passed under your personal supervision and inspection. The general appearance of the force, the arms, clothing, &c. as well as the steady manner in which the different corps moved, I was gratified to find received your praise and approbation, as well

as the general arrangements of the camp and rifle ranges.

In order to give a practical idea, or trial of attack and defence, a sham fight was arranged by Lieut. Colonel A. Brunel at the request and with the approval of the Adj. General, under orders issued on that occasion, by which the force was divided into two divisions, the one numerically inferior to the other (or defending force) which consisted of two squadrons of the 2nd Regiment of Cavalry, one battery of field artillery, and the Rifle Brigade of five Battalions, under the command of Lieut. Colonel Gillmor, 2nd Battalion Queen's Own Rifles; the other numerically superior or attacking force, and which consisted of the Governor General's Foot Guards, and one squadron of the Regiment of Cavalry, two batteries of Field Artillery, and two brigades of infantry, under the command of Lieut. Colonel Denison, Brigade Major. The defending force was placed in position in front of Fort St. George, overlooking the Niagara River, further strengthened by certain passes or approaches being allowed, by which only the position could be attacked all other grounds or roads being considered impassable. The attacking force was supposed to be advancing from Queenston Heights, a strong position, being considered as an equivalent to superior numbers. The Adjutant General and Divisional Staff acted as umpires. Being unable to be in the field, I beg leave to forward the accompanying report of the fight, by Lieut. Colonel Brunel, who acted as Assistant Adjutant General: of what passed under his personal observation on this occasion.

The Governor General's Body Guard and the 2nd Regiment of Cavalry, under the command of Lieut. Colonel McLeod, mustered well, averaging 3 officers and 45 troopers per troop.

The three Field Batteries, under the command of Captain Smith, Hamilton Field Battery, as usual mustered strong—in fact, I may say, in full strength, were well horsed and performed their shot and shell practice under Lieut. Colonel French, Inspector of Artilleries.

The three Garrison Batteries performed their annual drill of 16 days, as follows:—

Toronto Garrison Battery, in barracks at Toronto. St. Catharines and Collingwood, at Kingston; and were inspected by the same officer as the Field Batteries.

The Independent Rifle Company at the Sault Ste. Marie, performed its annual drill under the command of Captain Wilson at the above place.

TARGET PRACTICE.

In order to enable the force ordered to assemble at Niagara—being stronger than last year—to perform the usual annual target practice, it was necessary to rearrange the ranges, butts, &c. at that place. Having received the necessary authority, I accordingly laid out afresh the ranges, &c. in question, adding an additional range and target to each of the three sets hitherto required; thus making three sets of four ranges and targets each—one set for the 200, 400, and 600 yards respectively—in all twelve targets four of each class; in the discharge of which duty I was ably seconded by Lt. Col. Denison, Brigade Major.

The ranges and butts thus laid out worked well, with perfect safety, affording better facilities for firing, marking, &c., as well as diminishing the labour of the superintending officer.

The following are the names of the best shots in the District, according to the An-

nual Target Practice Return; also the average figure of the several arms, which I beg to bring before your notice:

Name of the best shot in the District—  
Corporal Wilson, No. 6 Company, 38th Battalion.

Score.	Points.
200 yards.....	3 4 4 4 3 18
400 ".....	4 2 3 3 3 15
400 ".....	4 2 3 4 4 17
	70

Cavalry.

Average regimental figure of merit: 6.61

Artillery.

Field Batteries:—Performed their shot and shell practice under Lieut. Colonel French.

St. Catharines Battery, returns not received.  
Collingwood Battery, returns not received.

1st Brigade.

The best shooting Company:—No. 5 Company, 38th Batt. 25.12.

The best shooting Battalion.—38th Batt. 17.62.

2nd Brigade.

The best shooting Company:—No. 2 Company, 36th Batt. 23.52.

The best shooting Battalion:—35th Batt. 13.49.

3rd Brigade.

The best shooting Company.—No. 6 Company, 31st Batt. 21.33.

The best shooting Battalion.—31st Batt. 18.77.

The best shooting Company in the District:—No. 5 Company 38th Batt.

The best shooting Battalion:—38th Battalion.

Brigade and Divisional Figures of Merit.

	Fig. of Merit.
1st Brigade.....	13.42
2nd do.....	14.49
3rd do.....	11.81
Divisional.....	12.26

The highest Battalion figure of merit obtained in 1871-72 was..... 17.07

The highest figure of merit obtained in 1872-73 is..... 17.62

A slight increase.

The above information relative to the target practice, I have obtained from the annual target practice return for 1872-73 as well as the report (annual) for the same year, by Major Dartnell, who acted as the Divisional Musketry Instructor in camp at Niagara, both of which I beg leave to forward for your information and consideration.

The muster for annual drill this year was fully as strong, if not stronger than last year, and when it is considered that force of 6,000 men mustered at Niagara in a little over 24 hours, moving by wagon, rail, and steam boat, and on the march from their respective headquarters, to camp, (and returning) went overland, and were duly rationed and provisioned—underwent the daily routine, and performed the duties of a soldier's life,

in camp, drill, and target practice, all within the sixteen days allowed, the only casualty being, unhappily, the loss of a private of the 13th Battalion, accidentally drowned, whilst bathing at a dangerous part of the Niagara River, contrary to orders. No little credit is due to the officers, non-commissioned officers and men of the force.

Very little sickness occurred.

The general conduct of the force in camp, I am glad to be able to report, was very good. In fact, the whole camp worked smoother in every way this year. The contractor's supplies this year, were much better than last year.

Niagara, holding as it does a good central position on the frontier, easily reached by land and water, affording as it does good local facilities a good camping ground, rifle range, healthy, &c.—is no doubt the best place for assembling the force for annual drill in the district. Drummondville is also a good central position, but does not afford the same local facilities as Niagara. I know of no means which will conduce more to the permanency, and efficiency of the force than to continue the camps of instruction which have been carried out for the last two years. With reference thereto, I would respectfully refer to the suggestions made by me in my report of last year,

#### MILITARY SCHOOL OF INSTRUCTION.

Number of cadets admitted during the past year.....	75
Number of cadets who obtained first class certificates.....	14
Number of cadets who received second class certificates.....	64
Withdrawn by permission.....	5
Struck off the strength of the school, by order of the Adjutant General.	0
<b>Total.....</b>	<b>83</b>

Of this number, or cadets received first and second class certificates.

Of the above number, twenty eight were officers of the Active Militia, eight were non-commissioned officers; the remainder were young gentlemen, number of whom have been gazetted as officers of the force.

Average number of days required to obtain a 2nd class certificate. 57

Average number of days required to obtain a 1st and 2nd class certificate. 61

It gives me no ordinary pleasure in being able to report in the most favourable manner of the support received by me, and ability displayed in the performance of their respective duties, by the undermentioned officers, who acted on the Divisional Staff, Camp Niagara:—Lieut. Colonel Denison, Brigade Major, Assistant Quartermaster General; Lieut. Colonel Brunel, Unattached, Assistant Adjutant General; Surgern De La Hooke, Principal Medical Officer; Major Alger, District Paymaster; Major Dartnell, Divisional Musketry Inspector; Lieut. Mason Supply Officer; Lieut. W. T. Holwell, Orderly Officer.

(To be Continued)

**BREAKFAST.—EPPS'S COCOA.—GRATEFUL AND COMFORTING.**—The very agreeable character of this preparation has rendered it a general favorite. The *Civil Service Gazette* remarks:—"The singular success which Mr Epps attained by his homoeopathic preparation of cocoa has never been surpassed by any experimentalist. By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition and by a careful application of the fine properties of well selected cocoa, Mr. Epps has provided our breakfast tables with a delicately flavoured beverage which may save us many heavy doctors' bills." Made simply with boiling water or milk. Sold by the Trade only in 1lb., 1lb., and 1lb. tin-lined packets, labelled—JAMES EPPS & Co., Homoeopathic Chemists, London, England.

## DOMINION OF CANADA.



### MILITIA GENERAL ORDERS.

#### HEAD QUARTERS,

Ottawa, 20th June, 1873.

#### GENERAL ORDERS (13).

##### No 1. ACTIVE MILITIA.

###### Corps on Service in Manitoba.

Errata in No.1 of General Orders (10) 16th May, 1873, read: "The rates of pay, per month, are as follows: Sergeants fifteen dollars, Corporals thirteen dollars," instead of "Sergeants sixteen dollars, Corporals fourteen dollars" as stated in that General Order,

#### PROVINCE OF ONTARIO.

##### Napanee Troop of Cavalry.

Lieut. Chas. B. Perry, C.S., 1st class, to have the rank of Captain, as a special case, he having held the rank of Lieutenant and satisfactorily performed the duties thereof for a period of more than seventeen years.

##### Picton Troop of Cavalry.

To be Cornet, provisionally:

Sergeant John B. White, vice James P. Thorn, whose resignation is hereby accepted.

##### 12th Battalion of Infantry or "York Rangers."

To be Quarter Master:

Quarter Master Sergeant William Henry Bowden, vice William Parkhill, whose resignation is hereby accepted.

##### 26th "Middlesex" Battalion of Infantry.

Paymaster Charles Murray to have the honorary rank of Captain.

##### No. 1 Company, Delaware.

To be Captain:

Lieutenant Henry Cope Garnett, M.S., vice Wm. Cox, deceased.

##### 30th "Wellington" Battalion of Rifles.

##### No. 4 Company, Elora.

To be Ensign:

Sergeant David Ross, M.S., vice George Leshe, whose resignation is hereby accepted.

##### 35th Battalion of Infantry, or "The Simcoe Foresters."

##### No. 4 Company, Vespra.

The Head Quarters of this Company are

heroby changed from Bradford to Vespra.

To be Captain:

Lieutenant Alexander Russell, M.S., from No. 5 Company, vice J. Wilson retired.

To be Lieutenant:

W. Alfred Sneeth, gentleman, M. S., vice W. Neilly, resigned.

##### 30th "Peel" Battalion of Infantry.

To be Paymaster:

Lieutenant Francis Grant Dunbar, from No. 2 Company, vice Captain Christopher Stork, who is heroby permitted to retire retaining rank,

##### No. 9 Company Charleston.

To be Lieutenant, provisionally:

William James Dodds, Gentleman, vice James Dawson, left limits.

To be Ensign provisionally:

Gilbert Vanwick, Gentleman, vice Cornelius Campbell, left limits.

##### 48th "Lennox and Addington" Battalion of Infantry.

To be Lieutenant Colonel:

Major and Brevet Lieutenant Colonel Stephen Fairfield, M. S. vice William A. Fowler, who is heroby permitted to retire retaining rank.

#### BREVET.

Erratum in G. O. (23) 6th September, 1872 read: "To be Major: Captain John William Selby, V.B. No. 7 Company. 12th Batt. from 28th June, 1872" instead of "Captain John Wilkinson Selby V.B., from No. 7 Company, 12th Battalion, from 1st June, 1871,"

#### LEAVE OF ABSENCE.

Major William D. Otter, 2nd Battalion, for three months from date of embarkation to proceed to England.

Major William Dempster, 1st Regiment of Cavalry, for ten weeks from 14th instant.

Captain Henry R. Smith, No. 4 Company, 47th Battalion, for three months from 15th instant, to proceed to Europe on private affairs.

Honorary Major and Paymaster Herbert S. McDonald, 41st Battalion, for three months from 18th instant, to proceed to Europe on private affairs.

Second Lieutenant Edward A. Mara, No. 6 Battery, O. B. G. A., for six months from 2nd instant.

Second Lieutenant and Adjutant Patrick Anderson, 2nd Brigade G. A. G. T.R. B., for three months from date of embarkation, to proceed to England.

#### CONFIRMATION OF RANK.

Lieutenant Jon Alexander Smyth, M. S.,

No. 1 Company, 56th Battalion, from 9th May 1873.

PROVINCE OF QUEBEC.

*Quebec Provisional Brigade of Garrison Artillery.*

*No. 1 Battery.*

To be 2nd Lieutenant, provisionally:

Henry Collings Shoppard, Gentleman, vice R. L. Sewell, left limits.

*23rd "Beauce" Battalion of Infantry.*

*No. 6 Company, Lotbiniere.*

To be Lieutenant:

Ensign Victor Elzebert Courteau, M. S., vice Joseph Honore Laliberte, whose resignation is hereby accepted.

To be Ensign:

Sergeant Major Ernest Filteau, M. S. vice Courteau, promoted.

*52nd "Brome" Battalion of Light Infantry.*

*No. 5 Company, Mansonville.*

To be Lieutenant:

Sergeant Samuel C. Drew, M. S. vice David A. Manson, whose resignation is hereby accepted.

To be Ensign, provisionally:

Sergeant Everette E. Perkins, vice C. C. Perkins, appointed Adjutant.

*53rd "Sherbrooke" Battalion of Infantry.*

*No. 1 Company, Sherbrooke.*

To be Captain:

Lieutenant William Alexander Morehouse, M. S. vice Arthur H. Whitcher, who is hereby permitted to retire retaining rank.

To be Lieutenant:

Ensign Robert Henry Stansfield, M. S., vice Morehouse, promoted.

*61st "Montmagny and L'Isle" Battalion of Infantry.*

To be Major:

Paymaster George William Colfer, M. S., formerly a Captain in the late Service Militia, vice C. F. D. Gagnier, deceased.

*Wotton Company of Infantry.*

The resignation of Ensign Pierre Chenevils Belisle is hereby accepted.

BREVET.

To be Lieutenant Colonel:

Major Nathaniel Jones Handyside, V. B., 3rd Battalion, from 6th March, 1873.

LEAVE OF ABSENCE.

Captain James Morgan, No. 2 Company,

8th Battalion, for three months from date of embarkation, to proceed to England.

Captain J. B. Richards, Wotton Infantry Company, for seven months from 1st instant, on private affairs.

Captain Louis E. Frenette, No. 1 Company, 9th Battalion for three months from 7th instant, on private affairs.

Captain Gilbert E. Michaud, No. 4 Company 61st Battalion, for six months on private affairs.

Lieutenant William M. Andrews, 3rd Battalion, for three months from date of embarkation, to proceed to England.

PROVINCE OF NEW BRUNSWICK.

LEAVE OF ABSENCE.

Major William S. Morris, 71st Battalion, for three months from date of embarkation, to proceed to England.

Assistant Surgeon Edwin Vail, 74th Battalion, for three months, from date of embarkation, to proceed to England.

CONFIRMATION OF RANK.

Ensign Robert Vince, M. S., No. 3 Company, 67th Battalion, from 9th May, 1873.

Adverting to G. O. (11) 23rd May, 1873, omit the words "Lieutenant Charles White, M. S., No. 2 Company, 67th Battalion, from 12th April, 1873," the rank of Lieutenant White having been previously confirmed on a certificate obtained from a board of officers.

PROVINCE OF NOVA SCOTIA.

*63rd "Halifax" Battalion of Rifles.*

To be supernumerary Lieutenant provisionally.

Douglas McLeod, Gentleman.

To be Assistant Surgeon.

George Law Sinclair, Esquire, M. D., vice Walsh resigned.

LEAVE OF ABSENCE.

Brevet Major and Adjutant, John E. Starr, 69th Battalion, for 12 months from 10th ultimo, to proceed to South America on private affairs.

Captain James R. Graham, Halifax Field Battery, for three months from date of embarkation, to proceed to England.

GRAND TRUNK RAILWAY BRIGADE.

To be Major:

Captain and Adjutant Edmund William Windeat, G. S., vice Thomas Patterson, left limits.

To be Adjutant, with the rank of 2nd Lieutenant.

Sergeant Major Patrick Anderson, G. S., vice Windeat promoted.

*1st Battalion Rifles.*

To be Lieutenant:

Ensign William Foster, V. B. vice James Elicott, who has left the G. T. R. employ.

To be Ensigns:

Frederick Richard Clarke, Gentleman (provisionally) vice Bell resigned. Joseph Tinker, Gentleman, M. S. vice A. Ritchie, resigned.

By Command of His Excellency the Governor General.

P. ROBERTSON-ROSS, Colonel, Commanding the Militia of Canada, and Adjutant General of Militia.

Our readers will see by the following authentic list of the "Wimbledon Team" for 1873. It is to be under the charge of Lieut. Colonel PETERS, with Major OTTER as assistant, or second in command; the list shews that some of the best scores have withdrawn, and although we wish the Team every success, we cannot but feel that it is imperialized to a certain extent by withdrawing it from the control of the Militia Department. We have to thank Lieutenant Col. STUART, Assistant Adjutant and Secretary of the Dominion Rifle Association for his courtesy in furnishing the list.

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SYNOPSIS.

Competitors.

Ontario .....	5
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New Brunswick .....	3
Nova Scotia .....	6
Total .....	20



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The Volunteer Review,

AND

MILITARY AND NAVAL GAZETTE.

"Unbribed, unbought, our swords we draw,  
To guard the Monarch, fence the Law."

OTTAWA, TUESDAY, JUNE 24, 1873.

To CORRESPONDENTS.—Letters addressed to either the Editor or Publisher, as well as Communications intended for publication, must, invariably, be *pre-paid*. Correspondents will also bear in mind that one end of the envelope should be left open, and in the corner the words "Printer's copy" written; and a two or five cent stamp (according to the weight of the communication) placed thereon will pay the postage

[In another column will be found an article from the *Woodstock Times* on "Our Militia System," which is the best and ablest we have yet seen on that subject. The editor is a gallant and experienced officer of the force, whose practical opinions are worthy every attention, and whose knowledge of Canada, with, and without an army, gives weight to the deductions arrived at in his article.

There is, however, another aspect of affairs which prudence would force upon us for serious consideration, and it is the threatening position of the relations between Great Britain and Russia, which are sure sooner or later to culminate in a general European war, in which our neighbors will find or make a pretext to be involved, and we may rest assured that it will not be on our

side of the quarrel; so that the Treaty of Washington is good; for just so long as either party find it convenient to abide by its provisions, and no longer; and our political economists that make it the pretext for a reduction of our military force, and a relaxation of military development, are simply preparing a bait for our Yankee friend to abrogate the Treaty whenever England is in difficulty, for the purpose of making the temporary provisions by which they profit, permanent, and facilitating annexation by removing every obstacle to the overrunning of this country by any armed rabble, Fenian or otherwise, the Washington Cabinet may encourage and protect. They (the political economists) are also employed in the not very creditable attempt to lessen the value of Indian stocks in Great Britain, and diminish the confidence of the people thereof in the stability of the institutions of this country.

Moreover, the Treaty of Washington has not closed vexed questions of diplomacy as between the United States and Great Britain, Mr. GLADSTONE, in his place in the British House of Commons on 26th May last made a most remarkable statement respecting the claims for the Fenian raids, which we republish in another column, and which clears up completely a much contested and rather obscure portion of the negotiations connected with that famous piece of diplomacy, and we may add, very much to the credit of all the parties concerned on our side. The reasonable results of all those considerations are that at any moment collateral questions may arise which would endanger the relations as between the two countries, and that those as well as similar claims would be insisted on when Canada would be totally unprepared to take the part due to her own safety and independence; and this state of affairs would be brought about by the ignorant crazes of men playing the role of political economists pandering to class selfishness.

We differ from our contemporary as to the advisability of training our military force wholly at the local Head quarters of the corps, and for the reason that if we are engaged in hostilities, the defence of Canada will not depend on detached efforts, and that troops to be worth anything except for more parade shows should be taught to act in masses, neither can we agree that the compensation awarded is sufficient for the purpose, and we are assured the late proceedings before the Committee on Public Accounts when the political economists wasted \$2,400 of the public money in the effort to investigate an attempted fraud where the possible loss could not exceed \$160, has opened the whole question as to the value of the services of our volunteers.

The organization itself is a necessity of the commercial prosperity of Canada; the great mass of the force is drawn from the the agricultural class, these men are both producers

and consumers and therefore pay the whole taxation of the country. The commercial class contribute nothing thereto. Now the question will arise as to what right have the already burthened majority of the population to bear the cost of the defence and conservation of its commercial interests for less money than they can earn at their proper vocations? And this is a question which has for a length of time occupied the minds of the people most interested, especially as they find the commercial class who don't pay, foremost in raising the cry of economy and the last to come forward in its support, by sacrificing time or person in the defence of the country.

There is possibly an improvement required in the militia law; it is, however, the only one; and that is a stringent clause enforcing organization and drill of the whole available force including reserve of cities and large towns, and that without pay. This would enable a considerable addition to be made to the allowance of the rural battalions without increasing the grant, while it would provide efficient garrisons for the commercial centres, at the least possible expense and would distribute the burthens of military service on a class who have hitherto successfully evaded their share of it.

We hope the *Times* will keep the subject before the country, it needs ample discussion as the volunteer officers in the House of Commons appear to have ignored their connection with the force altogether.

FRIDAY, the 13th June, 1873, will always be a memorable day in the annals of Canada, as that on which all that was mortal of its great son and statesman, the late Sir GEO. ETIENNE CARRIER, Bart., was consigned to its last resting place in the cemetery at Montreal, amid the sorrowful regrets of the people and with all the pageantry and pomp which a mourning nation could accord.

At seven o'clock, a.m., the streets leading to the *Champ de Mars* and JACQUES CARTIER Square were thronged by crowds of civilians and soldiers hastening to the appointed rendezvous at which the procession that should accompany the remains of the lamented statesman would form.

The military force assembled at Jacques Cartier Square, and consisted of the Garrison Artillery and Engineers of the Grand Trunk Railway Brigade, the force including cavalry numbered over 700 men; a large number of officers had arrived during the previous day representing every district in Ontario and Quebec, except No. 1. The following were the officers present—No. 2 district, Lieut. Colonel's Denis and Gilmour; No. 3, Lieut. Colonel Jarvis, D.A.G.; No. 4, Lieutenant Colonel Jackson, Acting D.A.G.; No. 5, Lieut. Colonel Bacon, King and Fletcher; No. 6, Lieutenant Colonel Harwood, D.A.G.; No. 7, Lieut. Colonel De Bellefeuille. British Columbia was represented by Lieutenant Colonel Ingleton, D.A.G. The Regimental

and Staff officers present were—Lieutenant Colonel French R.A. commandant of the Kingston School of Gunnery; Lieut. Col. Strange, R.A., Commandant of the Quebec School of Gunnery and Garrison, Capt. Cotton of A. Battery of Artillery, Kingston; Lieut. La Rue of the B. Battery, Quebec; Lieut. Colonel Ibbotson, 53rd Battalion; Lieut. de Salaberry Chambly; Lieutenant Colonels Bethune, McKay, and Ferrier; Majors Handyside, Crawford, Wilson, and F. W. Kay; Captains Oswald and Sinton; Lieutenant Colonel Thomas Ross, Commanding Governor General's Foot Guards; Captain Lee, Lieutenant Vankoughnet, Captain Tilton, Ensign Aumond, Lieutenant Colonel Aumond, Col. Coffin, Major G. H. Perry (VOLUNTEER REVIEW); Capt Stewart, Ottawa Field Battery; Captains Eagleson, Graham, Lieut. Patrick, and Assistant Surgeon Corbet, Ottawa Brigade Garrison Artillery, and other officers.

The whole Force under the command of the Adjutant General, assisted by Major Worsley, Brigade Major Grand Trunk Railway Brigade.

The order of the procession was as follows:—

The Band of the Governor General's Foot Guards.

The Fire Brigade in Uniform.

High School Cadets, commanded by Capt. Cushing.

Militia Officers in Review Order, Right in front, Artillery Officers leading followed by the officers of the Governor General's Foot Guards, Regimental and Staff Officers.

Band of the Montreal Garrison Artillery, followed by 30 rank and file of the same corps.

The Trades Associations.

The Members of the Civil Service.

The Mayors and Corporations of the various cities in Canada.

The Band of the Grand Trunk Brigade.

The Corporation of Montreal, headed by the acting mayor.

The National Societies.

Band of B Battery.

The Funeral Car—a magnificent structure—drawn by eight horses with black housings, accompanied by military escort.

The Pall bearers—Sir Francis Hincks, Judge Sicotte, Hon. Mr. Archambault, Sir A. T. Galt, Lieutenant Governor Howland (Ontario), Sir N. F. Belleau, Judge Meredith, Judge Polette, Hon. T. Ryan, Hon. A. A. Dorion, Hon. Letellier Ste Just, Hon. J. Ferrier.

The male members of the family of the deceased baronet.

The Privy Council of Canada, viz. :—

The Hon. Sir J. A. Macdonald, K. C. B.; Hon. P. Mitchell, Hon. Alex. Campbell, Hon. J. C. Aikens, Hon. H. L. Langiven, C. B.; Hon. J. H. Pope, Hon. T. Robitaille, Hon. L. S. Tilley, Hon. Chas. Tupper.

The Governor General was represented by Lieutenant Colonel Fletcher, Scott's Fusilier

Guards, military Secretary; and the Lieut. Governor of Quebec by Lieutenant Colonel Amyot, A. D. C.

The Executive Councils of the Provinces.

The Dominion Senate preceded by the Usher of the Black Rod; and the Mace, followed by the Speaker, Hon. Mr. Chaveau; the judiciary and clergy.

The House of Commons preceded by Sergeant-at Arms with Mace, the Hon. the Speaker, Hon. J. Cockburn.

The Foreign Consuls, the Bar, and the learned professions.

In this order the procession moved off from the Court House at nine o'clock, under a salute from the escort, and the Mounted Field Battery, commanded by Major Stevenson. The line of march was along Notre Dame Street, St. Denis, St. Catharine, St. Lawrence, Craig, and Place d'Armes to Notre Dame Church. This immense structure which is capable of seating 12,000 persons was filled to its utmost capacity—draped in the most tasteful and solemn manner, with a splendid catafalque in the main aisle in front of the Great Altar. The solemn and impressive service of High Mass was performed by Monsignor Fabre, Bishop of Gratiopolis, the *Dies Irae* was chaunted with striking effect and the *De profundis* rendered in a masterly manner by the magnificent choir. For perfect ventilation, acoustic effect, and a first rate choir, Notre Dame can challenge comparison with any church on this continent.

At the close of the service the procession was reformed and marched along St. James Street, up Beaver Hall Hill and along Sherbrooke Street amidst the solemn strains of the bands playing the Dead March, and the boom of minute guns to the cemetery where the mortal remains of Canada's greatest son was hidden from mortal gaze, at 5 o'clock p.m., as the sun was gilding with slanting ray, the glorious prospect of city, river, lake, and back ground, formed by the two noblest streams of that country the dead Statesman loved so well.

The military arrangements of the procession was like everything that passes through the hands of the Military Chief of the Canadian Army, faultless; and we need not tell our military readers how much the success of such a mixed affair depends on the skill with which the military portion thereof is organized, and it is generally admitted that the funeral procession was a complete success. The Canadian Army has done itself honor by honouring the mortal remains of the Statesman that called it into execution.

We have to thank the Secretary of the New York "National Rifle Association" for a copy of the programme for opening the range at Creedmore, Queen's County, Long Island, on Saturday, 21st June, and to express our regret that this very useful pamphlet did not reach us in time for publication, as it might probably induce our volun-

teers to make up a team for competition.

The programme is contained in a neat little pamphlet of twenty two pages, and embraces the matches of which there are four altogether. The first commencing at 10.30 a. m. at targets, numbering one to ten, open only to members of the the National Rifle Association. Distance 200 yards, position standing, weapon, any rifle. Five rounds, with privilege of two sighting shots. Entrance fee one dollar. Prizes, Gold badge and \$50, in seven ranges, from \$20 and gold badge to \$5.

Second match same hour, on targets numbering 11 to 20, same distance, and position weapon. Any rifle weighing less than 10 lbs. excluding hair triggers and telescopic sights. Entrance fee the same as No. 1. Prizes the same.

Two competitors will be allowed to use the same rifle in the match, provided no delay is occasioned by so doing.

Third Match.—National Guard Competition, commencing at 12.30 p.m., at all Targets, Open to teams of twelve men from each regiment of the National Guard. All competitors to appear in uniform, and to be regular members, in good standing of the Regiment they represent.

Distance 200 yards standing, and 500 yds. any position. Weapon, the regimental rifle. Five rounds, with two sighting shots at each range. No one failing to score eight points at 200 yards will be eligible to compete at 500 yards. Prizes a gold badge, and \$300 (including a gold mounted Winchester rifle, valued at \$100) in sums from \$50, which takes the badge to \$10.

Fourth Match.—The *Ward breech loading* competition for rapidity and accuracy. Open to all comers. Commencing at 2.30 p.m. Targets number six to ten. Target the size of a man on slab, 6 x 2 feet. Distance 100 yards. Position standing. Weapon, any military breech loader. The loading to be from a cartridge box, to be approved of by the range Committee as being of a practical character. Time one minute from command "fire," The competitor making the greatest number of hits to be the winner; a hit will be deducted from any shot fired after "time" is called. Entrance fee five dollars. Prizes \$175—first prize, \$150; second prize \$25.

The remainder of the pamphlet is occupied with instructions for the range officer, superintendents of firing points, for register keeper, for superintendents of Butts, for markers in Butts; Rules of the range of the National Rifle Association, regulations adopted by the National Rifle Association to govern all competitors in marksmanship.

We shall probably take an early opportunity of laying before our readers the details of the organization of the National Rifle Association of the United States. The peculiarities of the first meeting are sufficiently marked, and require no comments from us, but we would wish some of our Ca-



nadian experts would give us a review of the points of difference between the matches and those carried out at Wimbledon, and by the Dominion Rifle Association.

The short ranges appear to be the most remarkable feature developed, but it is a first match and the Council did well to be cautious.

For the information and pleasure afforded by the perusal of the pamphlet, the Secretary of the United States National Rifle Association, GEORGE W. WRIGHT, Esq., will please accept our best thanks.

In our last issue a brief notice of Captain O'HEA's valuable lecture was given, and according to promise we now proceed to review at more length one of the most interesting pamphlets that has yet appeared on rifled fire arms, especially as scientific deduction; has been confirmed by practical experiment, and the gallant lecturer has combined rare skill in the thoroughly practical manner the splendid results he details were worked out.

With reference to the title of the lecture "Rifles and Rifling" occasion is taken to refer to the origin of the name and weapon. The first he adduces from the Tuotonic word *riffelin* "a kind of whetstone face fluted (in the early rifles the bore was channeled or fluted) others assert that it comes from the Danish word *riffel*, a chamber or groove, again it is said to be derived from the Anglo Saxon word signifying to *rive* or *tear*. This last derivation having reference no doubt to the manner of forming the rifling. This difference of opinion indicates the absence of definite knowledge of the origin of the word."

The date and place of the origin of the weapon itself is equally obscure, but the lecturer suggests that it originated in imitation of the early ordnance, which were built of longitudinal iron bars bound or hooped together, an opinion similar in every respect to that expressed in the article on "Artillery," at page 464. Vol. VI. VOLUNTEER REVIEW, (date September 23rd, 1872,) only we differ as to the purposes for which rifling was employed. The talented lecturer assuming that it was first adopted to "facilitate loading from the muzzle," and the grooves "simply intended as channels to drain off the fouling of previous discharges and thus render loading less difficult; our view of the question being that while the discovery of the mechanical effect of the principle was accidental, the built guns giving far better range and accuracy than the cast ones, rifling was employed for its present specific use, while the advantage he points out may have had its due weight; and the *spiral* of *curvo* was copied from one of the guns being built of bars twisted round a central core or *mandrill*, and this has the greater force as all the bullets used in early days were of lead. Whatever may have been the origin of the weapon, there

can be no doubt but that ROBIN'S was the first to bring within the scope of practical science the laws that governed the flight of rotating projectiles and to arrive at a true conclusion as to their value, although a century and a quarter was to elapse before his remarkable prediction was realized.

Captain O'HEA defines the rifle as "nothing more than a compound mechanical power, i.e., a *female screw*, and the projectile or bolt as a *male screw* driven through the former at a greater velocity according to the power applied, the agent that puts the *mechanical power* in motion is described as being "essentially unmechanical, inasmuch as when that power—gun powder is put in action—it is not under control. All ordinary powers used in mechanics are capable of being controlled, but gunpowder once ignited is, of course, to a great extent unmanageable. It appears strange that up to the present time beyond the slight variation obtained by difference in the size of grain or the position of point of ignition in the charge, but little practical effort has been made to control, even to a limited extent, the combustion of gun powder in fire arms or to apply judiciously and gradually to projectiles—according to different weights and to the resistance offered to initial motion—the power stored up in the charge."

The subject of rifling is divided into the pattern or quality of screw used—the pitch or power—the manner of forming the screw, and the effect produced on the projectile, with reference to its velocity and accuracy of flight, and on the weapon with reference to recoil and wear and tear. It is shown that very little alteration has taken place in the manner and mode of rifling since the earliest period; the grooves twist and the depth of each being as much a variable element in the manufacture of a rifle as they were in the days of ROBIN'S; the lecturer, however, divides the existing systems into three distinct classes, as follows; 1st, the land and groove patterns; 2nd, the elliptical of which the Lancaster system is an example; 3rd, the polygonal system exemplified in the Whitworth guns, and what may truly be called an entirely new system to the elucidation of which the lecture is especially directed, which has been patented within the last two years and known as—part rifling. The lecturer has modestly rated this as a class, but we think it may much more properly be called an entirely new system, from the fact that its mechanical construction is shown to be in accord with the known laws that govern the flight of projectiles—a quality only partially attained in the older system.

The defects of the various classes are dealt with—the first class comprises the Enfield Chassepot and Metford—its definite defects are the large frictional area of resisting surface in the bore and projectile modified, by making the grooves shallow and less angular.

Its best form approaches the *fluted* rifling of the early patterns—the grooves being segments of a circle—that called ratchet rifling is a modification of this system—it is a union of angular rib and inclined plane and is the invention of Captain SCOTT, R.N.—it is the only pattern which compels rotation of projectile around the axis of progression, and by the effort of forward motion combined with rotation "forces the shot to centre itself in the bore."

The faults of the second system are that it is a smooth bore, in shape elliptical, the difference between major and minor axis being only .005 and this necessitates not only that the pitch of rifling should be increased towards the muzzle, but that the bore should lessen in both diameters to that point.

It will easily be seen what the defects of this is when applied to ordnance, although Captain O'HEA says he has got fair results from a Lancaster rifle small arm. The Polygonal or Whitworth rifle involves great windage, necessitating wads or wrappings. The rifling of the Martini Henry is a modification, having a rib in each angle, by which the windage is considerably reduced; it, however, appears to have two faults—first, the projectile, hardly ever bears the mark of rifling, and it consequently must get rotation by means of the wrapping or case; the second, is the great recoil to which this pattern is subject due to the weight of projectile, charge and sharp pitch (one turn in 18 inches).

It is then shown that the mode by which the bore is rifled is imperfect, and the effect of *pitch* accurately defined and described as resistance to the direct progressive motion of the projectile through the bore, and consequently the greater the pitch the quicker the rotation of the projectile round the axis of progression; the greater the initial resistance, the greater the recoil; the lower the velocity the higher trajectory; and the less the force of impact. And this definition comprises at once the whole cause of failure in the *monster* artillery manufactured on the Woolwich system.

If Captain O'HEA had been an unknown man, the practical proofs he has afforded of the truth of the foregoing propositions would be sufficient to raise him to fame and eminence at once, but he has not only practically worked out the problems involved in the principle of rifled small arms at his own expense, and with the patience of a true scientist, but he has let in a flood of light on the vexed questions *pitch*, *trajectory*, and *velocity*, which are as applicable to the great gun of 35 tons weight as to the small arm of 9lbs.

It is conclusively proved that the errors in rifling, the misapprehension of the true principle on which rotation of projectiles depends, and the effort to remedy by mere mechanical means, scientific errors, are the causes why the accuracy of the rifled

gun over the smooth bore in direction have produced such poor results, as well as the constant failure of the elaborate and costly machines to achieve any work corresponding to their pretensions. It is well known that the percentage of hits in artillery fire, has not been increased by rifling. We shall give our readers a synopsis of the remainder of this valuable lecture in our next issue.

The Montreal Herald of the 12th instant, contained a sneering article from its Quebec correspondent on the late fatal and lamentable accident to Bombardier ELI WELFARE, while firing the salute on the occasion of the arrival of the *Druid* with all that was mortal of the great Canadian statesman and patriot, the late Sir G. E. CARTER, Baronet. In our correspondence this week, we publish two letters detailing the circumstances which led to the deplorable occurrence, and the details of the accident itself, from one of those simulated shams who bore a principal share in working the gun, and who holds the rank of master gunner in the Royal Artillery if the Herald's lying correspondent knows what such rank means, which is more than doubtful.

As that Journal has systematically endeavoured to decry the institutions and constitutional Government of the Dominion of Canada, it is no way wonderful to find its columns open to any manufacturer of falsehood whose object would be to depreciate the insurmountable obstacle, to annexation, which the Canadian army opposes, and to vilify while living, as well as bear false witness against when dead, the great and far seeing statesman who successfully baffled the projects of the little knot of traitors and schemers who have made Montreal their headquarters.

But if the Herald has rendered itself notorious as an annexationist sheet of the most rabid character, inferior, and only inferior, to the Witness, (it should be called the false witness.) Its compatriot the Globe has enveloped itself in such a dense atmosphere of wilful and malicious falsehood, as to lead to grave doubts on the part of its readers as to whether a single line of truth is to be found in its columns except it gets there by pure accident. The Montreal journals allow their correspondents to manufacture falsehoods, but try to maintain their respectability under the idea that they are themselves imposed on. But the Globe has long past the stage of respectability in rascality, and hange on to a falsehood with the tenacity of a bull dog. While aiding its confreres by its own inventions, it has not failed to add its mite to the general chorus, so that the route ensemble presented by the trio strongly reminds the observer of the picture of the donkeys braying at the dead lion.

The latest effort of the Globe is the following extract from its issue of the 14th inst. describing the arrangements of the

funeral procession of the late Minister of Militia and Defence, on the 13th inst.

"The recent absurd Militia order giving precedence to the Governor General's Guards got its quietus to day. The Adjutant General ordered the officers of the Guards to take the right of the line; but the officer commanding the artillery having said that if the order was carried out he would march his officers away, the Adjutant General withdrew the obnoxious order, and the Guards took their proper position as the junior regiment of militia."

The whole of the above quoted paragraph is a willful and malicious falsehood. First, because the Guards got no precedence by General Orders, or otherwise, which would place them on the right of the artillery. Secondly, the Adjutant General never gave any such orders. His orders were that the militia officers should form in parade order right in front, the artillery officers leading, the Guards on the right or in front of the infantry officers, and they were not treated as the junior regiment of militia (they were only represented by five officers). As an officer of the militia present on this occasion we give the facts as they occurred, leaving to the Globe the satisfaction of having lied for nothing. But that journal resembles Pope's description of the unprincipled scribblers of his day:

"Destroy the fib or sophistry in vain,  
"The creature is at its dirty work again."

A portion of the Provincial press appears to be very busy just now with sensational articles in the shape of rumours, another name for the infamous character known as common fame. Our contemporaries may as well possess their souls in peace. There is not a shadow of a shade of truth in the rumoured changes in the command of the militia. The wish is father of the falsehood, in this case, and has no cause to be proud of the bantling.

MR. GLADSTONE ON SOME CANADIAN MATTERS.

On the 26 ult., the Imperial House of Commons debated the bill for the payment of the Alabama award to the United States. In the course of this speech, Mr. Gladstone replied to the assaults made by some members respecting the Fenian Claims, the Fisheries, and the position of the Dominion Government. We submit his remarks on all three subjects to the "irritated banditti":—

"Then the hon. gentleman refers to the Fenian Raids, and complains that they were not included in the Treaty of Washington; founding upon this complaint the further observation that a great wrong was thereby done to Canada, and must be felt by our fellow subjects in the Dominion. Now, the conclusion at which the Government arrived was that it not part of their duty to insist that the Fenian Raids should be made subjects of discussion and settlement along with the other matters included in the Treaty. It would, however, be a mistake to suppose that the Government on that account forfeited their title to bring forward claims

arising out of the Fenian Raid. Nothing has at any time been said or done by the Government to weaken their title to claim compensation from the United States on account of the Fenian Raids. The only question we decided was as to the propriety, or at any rate the necessity, of mixing up the consideration of this subject with other questions included in the Treaty. It is quite true that the Government have made separate claims upon the United States in the matter of the Fenian Raids. (Hear hear) But that fact does not bear upon the credit or the discredit of the Treaty. The Treaty of Washington did no surrender and did not include these claims (Mr. Bentinck.—Why did it not include them?) I need not now go back to the considerations which influenced the decision of the Government, because Parliament know well what our decision was, and did not press us to include in the Treaty the question of the Fenian Raids. And I say that claim, whatever it may be, suffered no prejudice whatever from the proceedings in connection with the Treaty, but stood upon its own merits after, as it did before, the conclusion of the Treaty. (Hear hear) Then, Sir, I wish to remove an entire misapprehension—that the non inclusion of this claim in the Treaty was a wrong done to Canada. The question as regards Canada was a question of money. Canada was informed by the British Government that we were perfectly ready to recognize her claim for the damage done by the Fenian Raids, and the Canadians, so far from being discontented, appeared by no means disinclined to entertain that view of the matter. The losses they suffered were fully discussed between the Government of the Dominion and this country, and the question of a money payment was considered, but the views of the Canadians rather inclined to a different form of compensation. It finally resolved itself into an Imperial guarantee for the purpose of a great work in the Dominion; and the Canadian Government recognized this guarantee as in full satisfaction of any losses sustained through Fenian Raids. (Hear, hear.) The hon. member, then, should bear in mind that the Canadian Government had nothing to complain of in the shape of pecuniary losses from Fenian raids, for which they received amply compensation—and I apprehend that they think so too. Further, Canada herself had a far greater interest than any other part of the Empire in the conclusion of the Treaty of Washington. The fishery question alone continually menaced the peace of Canada. No doubt it also menaced the relations of this country and the United States, but Canada had the most direct and vital interest in the speedy and complete settlement of all these questions. So far, then, from admitting that the Treaty of Washington ought to be a subject of dissatisfaction there I believe that the Canadian people do not view the Treaty at all in the same light as the hon. member, and that great satisfaction prevailed throughout the Dominion at the settlement of these alarming and menacing differences. Let me remind the hon. member that Canada possesses a free and effective Parliamentary Government, and that Government has had its conduct tested since the Treaty was concluded. The hon. gentleman (Mr. F. S. Powell) has just paid a visit to a distinguished member of the Canadian Ministry, whose recent loss we all deplore; and the test applied at the elections to the conduct of the Government has been to give it the approval, and not the disapproval, of the people of the Dominion.

## THE SOUTHERN BANNER.

"Furl that banner, for 'tis weary,  
Round its staff 'tis drooping dreary;  
Furl it, furl it, it is best;  
For there's not a man to wave it,  
And there is not a soul to save it,  
And there's not one left to lay it,  
In the blood that heroes gave it,  
And its foes now scorn and brave it—  
Furl it, hide it, let it rest.

"Take that banner down—'tis tattered,  
Broken in its shaft and shatter'd,  
And the vallant hosts are scattered  
O'er whom it floated high.  
Oh! 'tis hard for us to fold it,  
Hard to think there's none to hold it,  
Hard that those who once unroll'd it  
Now must furl it with a sigh.

"Furl that banner, furl it sadly—  
Once ten thousand hail'd it gladly,  
And ten thousand wildly, madly,  
Swore it should for ever wave;  
Swore that foeman's sword could never  
Hurt like theirs er' 't was dissolved,  
Till that flag should float forever  
O'er their freedom or their grave.

"Furl it! for the hands that grasped it,  
And the hearts that fondly clasped it,  
Cold and dead are lying low;  
And the banner, it is trailing,  
While around it sounds the wailing  
Of its people in their woe.

"For though conquer'd they adore it,  
Love the cold dead hands that bore it,  
Weep for those that fell before it,  
Pardon those who trall'd and tore it,  
And oh! how wildly they deplore it,  
Now to furl it and fold it so.

"Furl that banner! true 'tis gory,  
Yet 'tis wreathed around with glory,  
And will live in song and story;  
Though its folds are in the dust;  
For its fame on brightest pages,  
Penned by poets and by sages,  
Shall go sounding down the ages.

"Furl that banner, softly, slowly,  
Treat it gently—it is holy—  
For it droops above the dead;  
Touch it not, unfold it never,  
Let it droop there furled forever,  
For its peoples hopes are dead.

W. H. W. in *Christian Guardian*.

## AUSTRIAN FIELD BATTERY DRILL.

(Continued on Page 287).

In the formation of column from line there is one movement which might be borrowed with advantage, and that is the advance from the centre in column of subdivisions or route. This is done by an advance from the right by the left half battery. Line to the front can, of course, be formed more quickly than if the advance were from either flank of the battery. But it strikes us that this movement could be better done by advancing the guns of either half battery alternately. Thus, with a six-gun battery 3 would lead, followed by 4; 2 would follow 4, then 5, 1, and 6. It would, no doubt, break the right and left divisions for a time, but double column of subdivisions could be so readily formed from this, by the guns of the half battery inclining to the right, and those of the left half battery to the left, and the rear guns closing up at a trot, that probably the advantages would outweigh the disadvantages. For example, suppose battery had to cross heavy ploughed land traversed by a narrow farm road, in the direction in which it had to move to come into action. By advancing from the centre, as above described, advantage could be taken of the road, till the guns had nearly arrived at the point where they would be brought into line, when double column of subdivisions would be formed, and from that line can be formed quicker than from any other column. In an advance from the centre of the position; and when a position has to be rapidly selected, there is an advantage in

this, as the eye naturally fastens on the center rather than upon some point of either side to which the flank of the battery is to be led.

There are no echelon movements. We are surprised at this, as they are very useful when, in advancing or retiring, there is an uncertainty about the position of the enemy. Instructions are given in "the opening, carrying on, and cessation of fire," and on "movements and formations on coming into action," which are well worthy of a careful study. We give a few extracts:—

On taking up position for action the battery commander hastens forward at an increased pace before his battery. He halts at a little distance beyond whereabouts the centre of the intended formation will be; selects the object when it is not prescribed to him, judges the distance and decides what projectile is to be used, and what is to be the mode of fire. The battery advancing with its centre upon the battery commander, is ordered to halt, unlimber, and (as may be required) to reverse the carriages.

The battery commander orders, according to the provisions of the regulations for a single division, what is to be the range, the nature of the projectile and the mode of firing; he then orders by command, "Battery (or independent) fire," what the nature of fire is to be, and points out clearly the object to be fired at; he then betakes himself to that flank from which the fire is to begin, and conducts the trial shot for finding the range (das Einschieszen). The fire is immediately thereupon opened.

With the exception of fire with case shot the first few rounds are trial shots. They should be given in slow succession, and be watched with the greatest care, and to this end be always caused to explode somewhat in front of the object. The bettering of the elevation should first be commenced by 100 paces, at least, at a time, and carried on at this rate until the object is struck, or till, with the same elevation, one shot is thrown in front and one beyond the object.

After the ascertaining the range the battery commander betakes himself to where he can observe the ground in his front, can watch the progress of the action, and can, under all circumstances, make his dispositions in proper time.

The fire is to be very slow in cases where the judgment of the distance and the observation of the effect of the shot is difficult. It is more rapid under circumstances favourable for its effect and at distances under 2,000 paces, and quickest of all when a decisive result is in immediate prospect. All over-hasty firing is to be strenuously avoided.

The commander of a battery attached by itself to other arms is, in every respect, subordinate to the commander of the body of troops to which his battery is attached, and is responsible for employing his command in a proper manner. He always cooperates in the general reconnaissance of the ground, and looks out the positions for guns suited to the object in view, taking care that no obstacles exist to the advance which would impede the usefulness of the battery and occasion heavy losses.

As long as the battery is not actually engaged, the battery commander should remain as much as possible with the commander of the body of troops to which it is attached, in order to acquire knowledge of the situation of the probable designs of the enemy and of the progress of events, and be able to receive orders personally, and, in pursuance thereof, to take his own measures for the accomplishment of the main object.

During this time, the battery will be led by the next senior officer, according to the instructions of the battery commander.

In action the battery commander will act independently, but always in the spirit of the dispositions common to the whole force, reporting at once any necessary deviations therefrom. He must know the designs of the superior commander, and learn what he decides to do. In compliance therewith, he appoints the object of fire, the nature of projectile, and mode, as well as rate of firing, and regulates the replenishing of the ammunition.

Under all circumstances it is very important that the battery commander should, at a rapid pace, precede his battery to select the ground for its position.

In order to hinder the enemy from seeing the strength brought against him, and to increase the effect of the fire by opening it rapidly, the battery should advance to the attack covered as much as possible from view, and to this end should take advantage even of rather circuitous ways of approach.

In previously prepared defensive positions the battery should only take up its ground at the moment when it is going to open fire.

A position chosen for guns should command a free view of the ground, should be favourable to the action of the fire of the battery, and, as far as may be, afford cover against the enemy's fire.

A moderate command over the enemy is generally more suitable than high tops of hills; because in shooting from a hill on to a plain, the space swept by fire and the explosive effect of shells, is lessened, and in case of retreat the driving down hill consumes time and is hazardous. The position for action should be as near as may be in a straight line, but departures from this are admissible when a better effect of fire or better cover can be obtained, and the service of the neighbouring guns is not impeded. In such cases the intervals may be made somewhat greater or less than twenty paces as may be required. The placing the guns between hedges, bushes, in standing corn or in depressions of ground, tends to withdraw them from the enemy's view and makes it difficult for him to judge the distance and to lay his guns.

In the attack on unshaken infantry, the battery should be kept as far as admissible outside the effective range of musketry (500 paces) in order not to suffer great losses without being able to render essential service.

In preparing an attack on enemy's cavalry the battery should fire away rapidly at about 500 paces until checked by an advance of its own cavalry. It then awaits the result of the attack, ready to repulse a counter attack by fire of case shot, or to evade it, under special circumstances, by a rapid withdrawal.

Against artillery the battery should avoid prominent conspicuous positions which the enemy could accurately command with his fire. It should also take up the largest allowable intervals. Against guns of heavier calibre action should be sought at a closer range, but the battery should not come within range of case shot.

A position once chosen should be retained as long as possible, and all changes of position of less than 200 paces should be avoided, unless there be special cause for them. The principal considerations are always these: to be able to see the enemy, to keep him under fire within an effective range, to watch the striking of the first shots, and to better the laying in conformity thereto.

The battery should resist an attack in front as long as it can fire without danger of being captured. It must not shrink from infantry fire, or even from the loss of guns, if the obligation of remaining in its position demands this sacrifice.

During the initiation of the engagement the battery can generally choose its position with the greatest relative freedom, and with reference principally to the effect of its own fire.

In the further progress of the action it must, for the sake of security, close more upon the troops; it must support them in their advance to the attack by firing from positions correspondingly chosen, and, according to circumstances, if its fire would otherwise be hindered, it must accompany them even to the limit of the most effective range of infantry fire.

Positions on the flanks on somewhat advanced points have the greatest advantages, since the range thence is unobstructed, the movements of other troops are not impeded, all parts of the line are swept by fire, and the support of the line is facilitated in the case of sudden flank attacks.

Formations behind other troops with a view to firing at the enemy over their heads at high angle are only to be taken up exceptionally in ground of a terrace like form, and where the position gives a command over the other troops.

There is little or no instruction in our Drill book upon the handling of a battery. It would be well in any future Red book that some principles should be laid down to aid a commander in placing his battery and carrying on the fire.

The instructions for a division and a single battery is followed by the drill of a brigade, which consists of two, three, or four batteries. The principles are the same as those laid down for a single battery, and do not call for any particular remark.

The work we have been noticing contains all that is important in the original, the translator having judiciously committed that which is unimportant. Whether we can avail ourselves of much or little of the Austrian drill, there can be no doubt of the importance of its study to English artillerymen, and we heartily commend Colonel Goodenough's translation to their careful consideration.

#### OUR MILITIA SYSTEM.

"If," say our Clear Grit Statesmen, "the country is to have perpetual peace through the Treaty of Washington, what necessity is there for any kind of a defence force? Before answering that question it might not be out of place to take a retrospective glance at affairs in a country at one time less likely to require the presence of an armed organization than the Dominion of Canada. From the time of England's cessation of hostilities with the Republic across the border in 1815 the only enemy the United States had, was to be found in the scattered bands of Indians along the western and north-western frontiers. It is true that our cousins had the Burr rebellion as we had the McKenzie fiasco. These risings were insignificant affairs; and after Texas had been stolen from Mexico and California had been secured after the same fashion, there did not appear, in the future, the possibility of danger or the shadow of necessity for an armed force. It was, we are told, a nation of brothers. It was a republic in which but one feeling predominated, and that feeling was of amity between the component parts, and to hand

down to the remotest age a continent swept throughout with the genial zephyrs of christian regard and of brotherly love. We were accustomed to be told from the forum and the pulpit that war was a resort not to be thought of in the economy of a country with universal suffrage; and that peace for all time to come was assured in the purity of thought of the source of all power, the people. The illusion of the great American people suffered a rude shock in the rising of South Carolina; and in the turning of the guns of Sumter upon Federal authority our consins awoke to the consciousness of having made a terrible mistake. In the four years following the memorable events referred to, the people of the Republic more than once found themselves introduced to the horrors of war; and the wounds inflicted by one section upon the other are not all healed yet.

What has happened in the Republic is so unlikely to happen again; and a war in such close proximity would entail grave responsibilities upon the Dominion. More than this nothing is so certain to provide for internal tranquility as the means to make tranquility certain; and we know of no means to that end, or so likely to prove effectual, as the presence of a body of men who only know duty and to execute that duty. So much may be said in answer to the question of our captious opponents. Our credit in the old world has to be maintained: and making every allowance for the good intentions of neighbors, and with the disposition among ourselves to pursue our way in peace, and to keep faith in respect to all our obligations, still the capitalist of Europe and the intending emigrant has a guarantee in our militia that is not inconsiderable; and not indirectly but directly we have a full return for the outlay of a million dollars spent in preparing young men for whatever contingency may arise. No one will advocate the depletion of the public treasury that an empty parade may be kept up. No one will advocate the waste of time or of money in maintaining what is unnecessary. The difficulty is to determine what force is required, and to make that as efficient as possible, and at the least possible expense. One step in the right direction was the abolition of camps as a yearly feature. But it is not advisable that the force shall come to end like the Yankee's calf that was not killed and did not die but just "g'ien" out.

The latest, indeed the only data as to the cost of our Militia System, is to be found in the Public Accounts; and the document before us only brings us down to 30th June 1872. As the vote for that year and the vote for the year following differed but little, and as the drill was on the same scale, or nearly so, we have authority sufficient for saying that the vote of a million dollars is ample to carry out the programme of present arrangements. It will be found when the cost of transportation and of sustenance at camps are deducted, with such other items as are not features of the Order of May last, that the Commons voted a sum sufficient to clothe and drill for *eight full consecutive days* at Company, or Battalion Headquarters the entire force. The necessary tents and blankets are in store, and beyond the carriage of these to and from points on our railways back to store, the annual drill put in as it should be under canvas, will only cost eight dollars per man and two dollars for each officer; which with a force of say forty thousand men will not be considered a very great waste of money. There is not, we repeat, any necessity for dwelling on the parsimony of the Opposition. It rests with

the Militia authorities to say what force shall be maintained and how. On a future occasion we shall endeavor to point out in what way economy may be judiciously applied, and without in any way militating against the efficacy of the force or interfering with the drill of the men.

#### CORRESPONDENCE.

*The Editor does not hold himself responsible for individual expressions of opinion in communications addressed to the VOLUNTEER REVIEW*

#### THE UNIFORMS OF THE MILITIA.

##### PAPER No. 1.

It is a very well known fact that almost every day now, some change or other takes place in the uniform of the British Army—why is no attention paid to it by the Militia Department at Ottawa, so that the Force may derive some benefit (or otherwise) from it? Who is to blame that these several changes are not notified to the militia at large?

On reference to the Army List for September 1872, we find the following order:—  
G.O. 71—OFFICERS' DRESS.

(Specially issued, 21st August, 1872.)

I. Her Majesty has been pleased to appoint a scarlet patrol jacket for officers of infantry.

II. The jacket is to be of scarlet cloth or serge, according to the climate, of the same shape and size as the blue patrol jacket, with collars of the regimental facings. The sleeve braided as the shell jacket, according to rank. Scarlet shoulder strap with a small button and the number of the regiment in gold embroidered figures, three quarters of an inch high and half an inch from the lower end of the strap. White cloth edging all round, except the collar and around the shoulder strap. Scarlet lining. Field officers wear gold embroidered collar badges.

III. The scarlet patrol jacket is to be worn without the sash at drill, and on parade when the men are dressed in frocks.

IV. The blue patrol jacket may be worn on regimental boards and on fatigue, stable, or orderly duties, but not on parade.

Officers of line regiments are not obliged to provide themselves with blue patrol jackets, but may wear the scarlet jacket on occasions when the blue is authorized to be worn.

V. A pattern of the scarlet patrol jacket is deposited in the officer's pattern room, Horse Guards, War Office, Pall Mall.

Now, with reference to the above, not the slightest notice has been taken of it by our department, nor did they ever issue an order, i.e. the blue jacket, though nearly every line officer in the force has either a cloth or serge one. The only infantry regiment left in Montreal, have the blue jacket, also a white linen one for summer, and are now getting the scarlet—according to the new

regulation—made as fast as possible. They never have seen any order to the effect that they are to wear these different jackets—issued by our Militia Department—why? we ask again—echo answers why? There must be something wrong somewhere! Again, look at the "Dress Regulations" issued from the War Office at home in December, though given in full in the *VOLUNTEER REVIEW* in January last—they have never—or such parts as affect our force—been promulgated in General Orders yet.

Infantry adjutants are now wearing the "Sabretache"—this we know for a fact, as a letter from H.R.H. the Field Marshal Commanding-in-chief's office, dated May, 16th, 1873, wherein he states so, and the first to adopt it, as he was the steel scabbard, (who issued an order for that change too?) was the Adjutant of the 6th Battalion in Montreal, who on Friday last, 13th inst., appeared at the funeral of the late Sir Geo. E. Cartier with one on—and all seemed astonished at him. Why should they? He maintains, and we say he is right, that an Infantry Adjutant is just as much in want of one as a Rifle or Artillery or Cavalry one. Is he not right?

In my next I purpose taking up the question of "Sashes," "Pouches," and "Chakos," &c., and we trust these papers will prove as interesting subjects to those concerned—the Infantry—as they are to the author.

June 16th, 1873.

IXION.

To the Editor of the *VOLUNTEER REVIEW*.

CITADEL, QUEBEC,

14th June, 1873.

Having heard that some newspapers have made sneering remarks as to the manner in which the gun was served on the occasion of the accident to the late bombardier El; Welfare; permit me to give you a brief account of the accident, without, however, hazarding any remarks as to its probable cause. I might here remark that it is not the first time that such an accident has occurred even in the Dominion of Canada. On the 18th July, 1868, when firing a salute in honor of the Dominion, at Halifax, two gunners of the Brigade of Royal Artillery to which I belong, were blown away from the muzzle of a gun and were picked up dead. Many others might be stated. If these accidents are attributable to carelessness, then not only the artillery militia of Canada but the artillery of Great Britain must also be careless.

I was acting as No. 1 of the gun, and firing; the late Bombardier Welfare, No. 2; Gunner Boyd as No. 3; and Gunner Gibson as No. 4. Brigadier Major Fraser, Q.V.G.A. was standing immediately in rear of the gun. We had fired about 66 rounds from three guns, the interval from the time a gun was fired until it was fired again being three minutes. On firing the gun at a previous round I observed that a quantity of wet powder was blown out of the gun, I drew

No. 2's attention to it and told him to be careful. I also pointed it out to Major Fraser who cautioned him to be careful, he (No. 2) replied that he would, as he didn't suppose if he were killed a gun would be fired over him. I had moved from No. 3 to No. 1 gun, took a tube out of the box, made ready, and stood with the lanyard taut, waiting for the command to fire. When I heard the explosion, I at first thought that I had accidentally fired the gun I was at, but on assuring myself that I had not, I looked round and saw Bombardier Welfare lying on his back, diagonally in front of the gun, I asked Major Fraser how it happened, he told me that No. 2 was in the act of ramming home at the second motion, when the premature explosion took place.

I am fully convinced that the accident was not through any act of carelessness on the part of the deceased, as I saw him dip the sponge in a bucket of water each time before putting it in the bore, and No. 4 Gr. Gibson, who was the only other responsible gunner, and serving the vent, had his thumb split open, a sure proof that he performed his duty.

I might add that the deceased was a man in the prime of life, he had served 15 years in the Royal Artillery, I know him myself for 12 years, and always found him steady and trustworthy.

I am, Sir,

Your obed't avt.

J. B. DONALDSON,

M. G. R. A.

To the Editor of the *VOLUNTEER REVIEW*.

The Citadel,

Quebec, June 18th, 1873.

The enclosed is the straightforward statement of a soldier, who evidently does not think it advisable to comment on the fact patent to every one, viz., that the shortsighted cruel parsimony which forces upon the soldiers of B Battery, duties hitherto performed by six times their numbers of Imperial troops, must in all human probability be a fruitful cause of accident.

The salute of sixty six guns had to be fired by six men and one officer; such figures speak for themselves.

There were not sufficient men or material available to make up the necessary ammunition in time, and a few charges in cotton cartridges, originally intended for the noon and evening guns (which being a solitary round, would cause no danger if the cotton were not unconsumed) were made use of in this emergency.

The reduction of the charge from five to three pounds is also a source of danger unless silk cloth is used for cartridges, as in the Royal Artillery. The small charge of three pounds becomes, in a 24-pr. gun cartridge, a round ball which is very apt to turn in the bore, and be fired with the choked end in-

wards; thus not being blown out, it becomes a smouldering lump likely to ignite the next charge prematurely. This could not occur with the full service cartridge which is a long cylinder.

Three guns only could be used, there being only that number on standing carriages, and there would have been a greater chance of accident from physical exhaustion, if the poor fellow spunging had a greater number of guns on dwarf traversing platforms. *Veritas Magna est prevalebit.*

MILES.



### SOUTH CROSBY—ORDNANCE LANDS SALE.

**PUBLIC NOTICE** is hereby given that on **THURSDAY**, the 10th day of **JULY** next, at **NOON**, will be sold by Mr. **WILLIAM MURRAY** Auctioneer of Kingston, a large number of Lots, being half an acre each, more or less, being subdivisions of the Ordnance Reserve at Jones' Falls, on the Rideau Navigation, in the Township of South Crosby, as shown on a plan by Gibb, P.L.S., 31st March, 1873, to be seen at the Auctioneer's Rooms.

**TERMS OF PAYMENT.**—One-tenth of the purchase money to be paid down at the time of sale, and the remainder in nine equal annual instalments, with interest on the unpaid balance of the purchase money, at the rate of six per cent.

Further conditions will be made known at the time of sale.

**E. PARENT,**

*Under Secretary of State,*

**WILLIAM F. COFFIN,**  
*Ordnance Lands Agent.*

Department of the Secretary of State,  
Ordnance Lands Branch,  
Ottawa, 11th June, 1873.

25-11n.



### CITY OF KINGSTON ORDNANCE LANDS SALE.

**PUBLIC NOTICE** is hereby given that on **WEDNESDAY**, the 9th day of **JULY** next, at **NOON**, will be sold by Mr. **WILLIAM MURRAY**, Auctioneer, of Kingston, a large number of **BUILDING LOTS** of divers sizes and dimensions, being subdivisions of the Ordnance property, known as Herchmer Farm, as shown on a plan thereof by Nash, P.L.S., to be seen at the said Auctioneer's rooms.

**TERMS OF PAYMENT.**—One-tenth of the purchase money to be paid down at the time of sale, and the remainder in nine equal annual instalments, with interest on the unpaid balance of the purchase money at the rate of six per cent.

Further conditions will be made known at the time of sale.

Copies of plan may be had on application to the Auctioneer.

**E. PARENT,**

*Under Secretary of State,*

**WILLIAM F. COFFIN,**  
*Ordnance Lands Agent.*

Department of the Secretary of State,  
Ordnance Lands Branch.

Ottawa, 11th June, 1873.

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