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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. VIII.

OTTAWA, (CANADA,) TUESDAY, FEBRUARY 3, 1874.

No. 5.

NEWS OF THE WEEK.

It is with deep regret we chronicle this week the death of the renowned and far-famed African Explorer, Dr. Livingstone, which event is said to have taken place as far back as 15th of August. He died of dysentery while travelling from Lake Bembe to Anyanyembo. His body has been embarked, and is being conveyed to England by way of Zanzibar. His death will be a grief and a loss to the whole civilized world.

Herr Brenner, the German explorer of Africa, in a letter to Dr. Helbman, of Gotha, dated Zanzibar, says Dr. Livingstone died on the 15th of August. This date differs from that of a previous report, but all doubts have been set at rest by an official despatch received by the Government to day from Zanzibar, which states the circumstances that Dr. Livingstone died in Lobisa after crossing marches, with the water at one time for three hours consecutively above the waist. The sufferings of his whole party were terrible, and ten of them died in consequence. The members of Cameron's expedition were suffering from fever and ophthalmia, but would await the arrival of the doctor's remains and bring them to Ujiji. From the latter place they would be conveyed to Zanzibar, where it is expected they will arrive next month.

Hon. Benjamin Disraeli, in an address to his constituents in Buckinghamshire, seeking re-election to Parliament, strongly condemns the course of the Government. The Premier is charged with having violated the constitutional law by persisting for several months in occupation of a seat to which he was no longer entitled, and the action of the Ministry in inaugurating the Ashantee war without communicating with Parliament on the subject is severely denounced. Disraeli says he finds nothing definite in Gladstone's address regarding the policy of the latter, except that he intends to apply a large surplus to the remission of taxation, which would be the course of any Ministry. The principal resources of relief, spoken of by Gladstone, have always been favoured by Conservatives. It would have been far better for the country if within the last five years the foreign policy of the Government had been a little more energetic. Disraeli characterizes the argument for the extension of household suffrage to counties as fallacious, and says that no one has more strongly opposed the contemplated assimilation of the franchise than the Premier.

It is announced that Queen Victoria had accepted the dedication of a sacred work, "The Annunciation," composed by M. Gounod, on the words arranged from the Prophets and the Gospel by Mrs. Weldon. M.

Gounod has also expressly arranged, for four hands, "Joanne d'Arc" for her Majesty and Princess Beatrice. These works will shortly be published.

At a recent meeting of the Cork Harbor Commissioners, a report of a committee was read recommending great works on the Lee. The recommendation of the committee is that jetties be erected in the river, the river be deepened at a cost of £20,000, and subsequently that a tidal basin be constructed in the park at a cost of £100,000.

At the last meeting of the students of the literary society in connection with St. Andrew's University, the debate was whether Bohn's translations or Bass' beer were the greater benefactors to students. The subject called forth a lively discussion, and at the close the meeting decided in favour of the beer by the casting vote of the chairman. The debate was just prior to the dispersion for Christmas holidays.

An English paper suggests a useful opening for the employment of women a right woman. The baggage train in the British expedition on the Gold Coast is made up chiefly of women, who are found to be more useful than the men, and who claim the right to whip those of the latter who refuse to fight. It is proposed that some strong-minded women might be advantageously employed as officers over these black Amuzons.

The Russian troops employed in the Khivan expedition were fed chiefly on biscuits composed one third of flour of rye, one third of beef reduced to powder, and one third of sauerkraut also reduced to powder. The soldiers are stated to have had a great relish for this food, and their good health during the expedition is attributed in great part to the use of it.

Gen. La Marmora has published a letter maintaining the truth of his statements in regard to negotiating at one time for the cession of German territory to France, in which he says Prince Bismark participated. The letter is a reply to Prince Bismark's recent denial of the whole story in the Prussian Landtag.

Reports have reached Madrid that General Moriones commanding the army of the north has raised the blockade of Bilbas.

The repairs to the Madeleine, in Paris necessitated by the injuries received by that building during the Commune, are now completely terminated. They have cost 20,000 francs.

The cheapest newspaper in the world is the London *Daily Sun*, which is sold at the rate of six copies for a penny, yet its circulation is only 40,000.

A telegram from Rome says: It is highly probable that an English prelate will be ap-

pointed Cardinal at the second Consistory, which is to be held at Easter.

Sir Walter Scott's novels are now sold at three pence apiece in London, and the dealers say that his books are read now only by the humblest class of buyers.

Mr. Nolan, Secretary of the Irish Amnesty Association, announces his intention of contesting the election of Mr. Gladstone in Greenwich.

The French Assembly have appointed a Committee to liquidate the Civil List of the late Emperor Napoleon. It is said that the majority of the members of the Committee opposes the Convention lately entered into between the Government and the Empress Eugenie.

Leicester Square has been presented to the city of London, and is to be converted into an ornamental park.

The Spanish Government has issued an order closing the Alphonist clubs in Madrid.

The Carlists report that Santander and Portuguese surrounded unconditionally their forces on the 22nd inst., and an entire Segovia battalion, a number of artillerymen and engineers, 1,200 Remington, 400 Minto rifles, and two cannon fell into their hands.

General Wolsely, says an exchange, has written a private letter to a gentleman in Winnipeg, dated at the seat of war, in which he remarks: "I wish I had two hundred Canadian volunteers with him."

The *Army and Navy Gazette* of the 9th January, contains the following notice: Quarter Master Higgins was in Montreal with the Rifle Brigade during the time Prince Alfred was serving with the 1st Battalion in Canada, and has many friends who will be glad to learn of his good fortune. "The officers now serving, and many who have served in the 1st Battalion Rifle Brigade, on his leaving the regiment, with a very handsome silver and tea and breakfast service in silver, as a mark of their friendship and esteem, and in recognition of his services in the Battalion during the last thirty five years. Quarter Master Higgins was recently transferred to the 45th Depot Brigade at Canterbury."

Frederick Douglass received from the coloured citizens of St. John, N. B., a testimonial in the shape of a gold-mounted cane containing a telescope and a murriner's compass.

A testimonial, consisting of a toy service and an address, was presented to George Brown, the champion orator, by some of his Picton admirers. The presentation was made amid great applause.

THE CANADIAN MILITIA.

We see from critiques in some of our contemporaries, that Lieut. Col. Fletcher has written a pamphlet on the Militia system of Canada. We intended reproducing the fullest we could find, that of the *Globe* before this, but have been prevented by the pressure of political matter that would stand no denial. However, we publish, to-day, our contemporary's review, which we doubt not will possess an interest for most of our readers, though it is a little old. We need hardly say that the subject is one in which the people of this country have always manifested lively concern. Events for the last twelve years would have kept the Militia before the public eye, whether inclined to think much about the property of a permanent institution of this kind or not. People had begun to grow indifferent as to the Militia, when the American Civil War broke out, but a change then took place, and the occurrence of the Trent difficulty evoked general enthusiasm in regard to its improvement in organization, strength and all the conditions requisite to an efficient defensive force. We had next the Military Schools, of the Sandfield Macdonald Ministry, changes in machinery, in the staff, and a variety of experiments intended to render our citizen soldiery capable of any service, defensive or offensive. In our opinion some wise measures were taken, and some good achieved. It would be wonderful not to say very discreditably, were it otherwise. For have we not had Colonels of the Regular Army, and the officers of all grades below them in our Militia, gives us the benefit of their experience, which has been supplemented by that of the Generals and other officers in command of Her Majesty's Army in Canada for many years? We have had Generals Lord Russell Sir John Michel, McDougall, Wolseley, Cols. Atcherley, Ross, and a host more. With all his professional light and skill we might have been expected to strike out some system worthy of confidence and adapted to our circumstances. Moreover, though not a wealthy people, we have spent a good deal of money on our Militia, about a million and a half per annum of late years, and have given our Regular Commanders in chief, or Adjutants General, ample opportunity of distinguishing themselves as military organizers, tacticians and administrators. They have experimented, planned and executed both in the field and the closet. The upshot of it all is dissatisfaction at the state of the Militia, owing to conspicuous failure in many parts of the country, discontent among officers, and apathy with the men. Of course a large turn out can be got in certain parts of Ontario, with energetic drumming up on the part of popular officers, but such displays are due more to respect for individual commanders than interest in the cause, or any agreeable operation of the militia machinery. From various causes the force is not in good humour, *esprit de corps* is wanting, and that pride which stimulates officers and men to do their best to master their drill and make a good appearance on parade. We have not space, even had we the requisite knowledge, to analyze the causes of this state of things; it is as well, however, to point it out, leaving to competent authorities the duty of providing a remedy for the ills and deficiencies existing. There is considerable difference of opinion abroad as to the best force for Canada. Some, though we shall not say we are of the number, believe that a good force like the Irish Police, picked men, trained and quartered like sol-

diers ready to move wherever ordered, and not constantly changing in *personnel*, would be the best for us. This idea, springs from the assumption that war with the States is unlikely. Others contend that a militia upon the present plan, but improved in many respects, would be more suitable. Col. Fletcher would prefer a small military force as a model for our militia, and a nucleus, with a set of training schools for commissioned and non commissioned officers. All these schemes are worthy of consideration, with a view to the adoption of some one promising permanence and efficiency.

We have had, it must be confessed, a fair experience of British military officers in connection with our Militia. They have had large grants of money and abundant latitude in their, no doubt, well meant undertakings. Admitting then, that the force is not what it ought to be, might it not be well to see if we have not in Canada some men capable of dealing with this question, and suggesting the necessary reforms? Canadians, like Col. Powell, for example, the Acting Adjutant General, know best the resources of the country in men and material, while their acquaintances with the temperament and habits of our people is far more intimate and reliable than that of mere military birds of passage from England, such as we have had already. The above officer has spent nearly twenty years in the force, has risen through its various grades, has helped to work the different systems introduced here, and, being an intelligent, painstaking official, must have noticed their virtues and defects. He is, like Col. Stevenson, of Montreal, a man who takes a pride in the force, who has devoted all his time and talents to its demands and interests, and must be competent to propound views on the subject deserving of public consideration. Col. Powell is now engaged in the preparation of the Annual Militia Report, we understand in which he will set forth some careful reflections upon the Militia and make well-considered recommendations, with the object of its improvement, to the advantage and satisfaction of the people of Canada. We shall look for this report with no little interest.—*Ottawa Times*.

COLONEL FLETCHER ON THE MILITIA SYSTEM.

Colonel Fletcher, the Military Secretary of His Excellency the Governor General, has in a pamphlet of 20 pages, given the people of Canada his views on the present condition of the militia in the Dominion, and on what he believes to be necessary to make it really efficient for the purpose it was intended to serve.

The basis of the present system is that all the male population from 18 to 60, not exempted or disqualified by law, and being British subjects, should be enrolled for military purposes. This force, numbering for the four older Provinces 694,008, is divided into four classes. The first of these consists of the unmarried and widowers without children between the ages of 18 and 30. The second the same description of persons under 45. The third, all those between 18 and 45 who are married, or are widowers with children. While the fourth comprises all the enrolled population from 45 to 60. From this number the active militia, limited at present to 43,000, is raised by voluntary enlistment and engaged for three years. If necessary a ballot may be restored to, but this has never yet been tried. The period of yearly drill for this force is, according to

to law, not more than sixteen days and not less than eight. The force assembled for such drill in 1872 was 30,144, and the estimated cost for the whole was \$1,549,400. It may be, then, concluded that to have a little over 30,000 volunteers drilled, as we have them at present, costs about a million and a half of dollars. The question then proposed by Colonel Fletcher, and discussed in this pamphlet, is, whether or not for the money a more available and soldierly body of troops could not be organized, and one more suitable for purposes either of attack or defence, should either in the course of time be necessary. The point is discussed with perfect fairness, though, of course, with the strong leaning of a military man for a regular standing body of troops, and with, perhaps, and undue fear of possible hostilities between this country and the States. At the same time, it is only fair to keep in view that possibility is the only reason for having a militia force at all; and if it is desirable to have such an organization, it is desirable to have it thoroughly efficient and prepared for every emergency.

We do not even give an outline of Colonel Fletcher's argument. Sufficient to say that he holds that the tendency—as things are at present, with no regular forces to be taken as a standard of what military training and effectiveness ought to be—will always be towards deterioration both in drill and the whole military organization of the force. To counteract this while the defence of the country would always be in the militia, the Colonel would have a small permanently embodied force which might form a model, and which might also furnish competently trained officers, both commissioned and non-commissioned to the active militia when on drill or on active service. He would have three training schools, at each of which part of this small force, consisting of the three arms—cavalry, artillery, and infantry—would be stationed and drilled. To these schools all officers recommended for commissions would be required to go for six months, and the receipt of their commissions would depend upon the ability displayed during the course of instruction. Whenever a regimental promotion took place (and no other should be allowed), the person so promoted ought to attend three months at one of these military schools, and be required to secure a certificate before such promotion was confirmed. Then the privates, &c., at those schools he would have enlisted for a year from the localities to which the militia regiments of the district belongs with further enlistment, if they chose, of five years more. These could go out at the yearly drill, and be corporals and sergeants in their local companies. In this way there would be diffused in time, in the estimation of the Colonel, a thorough military drill, and a sufficiently high standard to be held up to all the embodied volunteers as a model. There are other suggestions as to the best manner of having the yearly drill of the general force made as effective as possible.

The expense of the whole, according to Colonel Fletcher's idea, would not be more than a million and a half dollars, and that according to the following scale:

Three schools, each \$200,000.....	\$600,000
Allowance to cadets undergoing training.....	95,000
Yearly training, of 23,000 officers and men for sixteen days.....	400,000
Ordinary Contingent Militia Service.....	489,000

—*Toronto Globe*.

\$1,584,000

OBSERVATIONS ON COAST DEFENCE.

We are indebted to Lieutenant-Colonel von Hluddt, of the German Marine Artillery, for the following valuable ideas on this interesting subject:—

General Ideas.—Coast defence implies the aggregate of the defensive measures required to repel hostile attacks from the sea. To protect each individual point on a line of coast would entail needless expenditure and an injudicious extension of the forces available for the defence. The erection of defensive works should, therefore, be restricted to certain important points commanding the approaches to great naval establishments and the principal commercial ports. As a rule, the defensive works should be at a distance of 7000 metres (4½ English miles) from the points to be defended, but this must, of course, depend upon the circumstances of each locality. In every case, the assistance of a committee of experienced naval officers will be requisite to secure reliable information as to the number of vessels which it will be practicable to bring into action in the waters under consideration. The number and sizes of the works must be proportioned to the possible development of the attack. The greater the number of ships the enemy can deploy, the more powerful must be the defence.

Position of the Works.—I. The defensive works should be so placed that the enemy's ships can only engage them in very limited numbers at ranges under 3800 metres (two two-fifths English miles). If the enemy could bring five or six powerful ironclads into action at this range, he would find little difficulty in silencing at least the outer line of defence. He need not fear serious loss, and his ships could easily be relied out of action if disabled. If, on the contrary, at a like range, he could only command a front of 1500 to 1800 metres, at most two or three ironclads could attack in company, and then care would be required to prevent fouling in the heat of action. Heavy ironclads—despite their size—are not very formidable if they have not room enough to manoeuvre with ease and facility.

3. Coast batteries should bring a cross fire on the whole surface of the adjacent water, and also sweep the shore, so as to render a boat-attack impossible.

3. Lines of defence should be so traced that they may not be exposed to enfilade from the enemy's ships. Traverses would be of no use against the heavy ordnance now carried. Enfilade fire from any point on shore is less to be dreaded, as traverses would probably be an efficient protection against any guns which it would be practical to land.

4. Every scheme of coast-defence should include some forts or batteries at points where the enemy's fire, even with modern long ranges ordnance, cannot reach, which shall remain intact until the decisive moment of attack. There should also be some advanced batteries to prevent the enemy's ships at once engaging the main works.

5. When the coast allows of such an arrangement, the shore-batteries may be constructed on heights. The higher the site of a coast battery, the greater its superiority acquired by its artillery fire over that of opposing vessels, decreases rapidly in accuracy as the angle of elevation increases. When a battery has a sufficient command, its projectiles strike down almost vertically on the enemy's decks—a description of fire peculiarly destructive to rudders and screws, and therefore particularly detrimental to ironclads. A height of 36·4 metres

(100 German feet) above the sea-level is considered very favourable; one of 15·7 mètres (50 German feet) only is considered insufficient.

6. Batteries to cover lines of torpedoes or the important obstacles should have at least two thirds of their armament of heavy calibre.

Obstacles to bar the entrance of a channel or harbour are usually arranged in a double line—an outer or advanced line, and a main line. The outer line is to delay the enemy's vessels as long as possible under effective fire of the batteries, and so to check the rigour of the attack against the main line. It should consist of a line of torpedoes moored with chain-cable of suitable lengths. It should be 700 to 900 metres from the main line.

The main line should be sufficiently strong to render it impossible for the enemy's ships to break through it without first silencing the fire of the works on shore. It may be formed of several lines of torpedoes or floating obstacles.

7. Many officers consider it best to have a large number of batteries with a few guns in each, so as to compel the assailants to divide their forces as much as possible. The advocates of this plan overlook an important consideration, i.e., the difficulty thus entailed in the general direction of the defence. This difficulty can only be met in one way, i.e., by increasing the number of officers of the Coast Artillery, so that there may always be a sufficient number of properly-qualified officers available to undertake the responsibility of defending individual forts and batteries.

Coast defences may be broadly defined to consist of two sorts:—1. Covered works; 2. Uncovered earth works.

Covered Works.—The destructive powers of the enormous projectiles used with modern naval ordnance are so great that armour is indispensable for all works near the sea-level, particularly for those in the exterior line of defence. In such cases, the guns are placed in ranges of shot proof iron-turrets, or behind armour-plated breast-works. Recourse is had to turrets when it is necessary to occupy sandbanks or low-lying islands, or any important point sufficiently low-placed to be commanded by the fire of the enemy's vessels. As a rule, works having their *terre pleins* 10 to 15 metres or more above high water mark do not need turrets; it is sufficient to plate the battery and its traverses with iron. The thickness of the armour-plates should be such that they may not be penetrated by projectiles of large calibre. There should be no backing or filling-in with earth. Earthen merlons and traverses are very unsatisfactory defences in such cases. The bursting of a shell of large size in the vicinity of a gun will place it, for a while, as completely *hors de combat* as though it had struck it direct. The bursting of an elongated projectile in the earth between armour-plates will place guns temporarily *hors de combat*, even at distances of 75 mètres (82 yards). The bores of the pieces, the brakes of the hydraulic lifts, the slides, and the platforms themselves get so much clogged with the loose earth scattered about in all directions that it becomes absolutely necessary to cease firing. We may instance a case at Gruson's works, of a 28 centm. spherical chilled iron shell, which lodged in an earthen mound, and bursting, scattered the earth over other guns, at distances varying from 35 to 75 metres, in such quantity that a considerable time elapsed before they could be cleared again ready for action. We can imagine

what would be the effect of an elongated projectile of equal calibre. The men of the gun detachments, too, in this way often received contusions incapacitating for the performance of their duties for some time. By putting the guns in shot proof turrets we secure the advantage of both guns and men being completely under cover. Traverses are not needed; and so spare and labour are saved also. But, turrets are enormously expensive; financial considerations therefore require that they should be employed only where they are absolutely essential.

When works are simply protected by cast-iron armour plating the cost is, of course, less. Taking into account the penetration powers of modern naval ordnance, these plates should have a thickness of 12 (German) inches (0 m. 314). It is useless to exceed this limit, as the artillery contest will rarely be carried on at ranges under 1500 metres, and even at this distance a 23 centm shot will not go through a 12 inch iron plate.

To cover the men and guns efficiently, the armour should be carried up to a height of at least 5½ (German) feet (1 m. 68). B-rhettes and traverses on a sea-front should have their reverse slopes plated as well. Heretofore it has been usual to place traverses on either side of each gun and to carry them up above the level of the adjacent merlons. In this way they give an embrasure like appearance to the crest of the work when raised in front which plainly indicates the positions of the gun and affords a convenient mark at long ranges. The advantages gained in respect of defilade, by high traverses have therefore been abandoned, and they are not now carried higher than 1 m. 78 above the *terreplein*,

Earthen Works.—Earthen works on elevated sites have no need of a shot-proof mask of the above description. The guns, in point of fact, are only exposed to the fire of the enemy's ships at considerable distances, at which the chances of hitting are greatly diminished. A bombardment would have little effect on works at a distance of 150 to 225 metres from the water, and separated from it by a smooth, sloping glacis. In such a case, the majority of the enemy's shells would burst in front or in rear of the mark. The nearer the vessels might approach, the less effective their fire would become. Forts, like Korugen and Oberjagersburg, or Kiel roadstead, are so well placed that it appears very questionable whether they could be silenced even by a considerable force of ironclads. The thickness of the parapet should be at least forty German feet, so that it may withstand the shock of the heaviest projectiles.

Precaution against Sudden Attacks.—After a declaration of war, within a very few days at farthest, coasts will be liable to attack. Now at this time the augmentation-men will probably not yet have come in, and the coast-garrisons will still be very weak. Should the enemy succeed in effecting a landing the works might soon be carried. An hour would suffice to put the heaviest calibre *hors de combat*. But, even under the conditions just supposed, this could not be accomplished if the works had been properly finished beforehand. An escarp of masonry, and a few flanking caponnières, well supplied with mitrailleuses, ought to enable a very small number of men to hold out against the attacks of a far superior force until the arrival of reinforcements from the neighbouring garrisons. If palisades are considered requisite, they should be put up in peace-time; at any rate, in the case of the more advanced works.

Shelter for the Garrisons.—Casemated shelter, out of reach of the direct fire of the enemy, should be provided for the entire garrison of a coast fort or battery. Redoubts and other constructions in the interior of another work are not to be recommended. After a while they get beaten down and impede the movements of the garrison. We must never lose sight of the fact that coast defences—unlike works further inland, which, as a rule, are liable to be attacked with ordnance of medium calibres only—are subject to the attacks of the heaviest descriptions of ordnance known. Under these circumstances earthen works and earthen covered defences of all kinds have the defect before alluded to—the earth gets scattered about, blocking the interior communications, often seriously impeding, if not stopping altogether, the working of the guns. If the casemates formed in the body of a work are insufficient to furnish shelter for the entire garrison, additional cover may be formed in the ditches communicating with the *terreplein* of the work by means of covered staircases. It will be found that the interior square of the first is the place where the majority of the enemy's shells will burst.

OUTSIDE CARTHAGENA.

The following interesting views of "Outside Carthagena," is by a correspondent of the *London Standard*, writing from Murcia:

I counted on a friend who had promised to use his influence to obtain me a pass; "the only difficulty you would have," he said, "will be to return." So confident was I of getting the pass that I hired a tartana of the *alcalde* of Marcelinos to take me to the extremity of the lines. My friend, however, had volunteered to do more than he did. One presenting myself at the house temporarily occupied by the general chief I was told he was breakfasting. Perforce I had to dance attendance. But the minutes spent in "doing the ante-chamber" were not lost. The scene I witnessed was worth studying, such a one as would have furnished Charles Lever with the text for a characteristic chapter. Not that there was rollicking fun about it, but it was full of military colour. At the door stood a youthful sentinel, who might as well have been practising with a dumbbell, so constant was the stream of officers passing in and out. It was a perpetual shift of his rifle from the "support" to "the shoulder" (the Spanish equivalent for the "present") with this martyr to military etiquette. Apparently there is as great a luxury of aide-de-camp here as with the Carlists. In addition to the personal followers of General Ceballos, there were the aides de camp of the brigadier who is chief of staff to the general in chief, and those of the generals who were taking their morning meal with the general in chief and the officers of the escort of mounted civil guards of the general in chief, and the mob of officers of the staff corps, each with his plan of El Campo de Carthagena in a roll under his arm, and of the medical and administrative branches, the latter more resplendent in embroidery than all the rest. I am not exaggerating when I say every branch of the land service was represented, to judge by the time I was left cooling my heels. I turned the occasion to profit, however, by adding to my stock of information about the Spanish army. Ceballos, I can now inform you, holds rank of *teniente general* which corresponds with our *lieut.-general*; Pasaron, who is "chief of the lines,"

is *mariscal de campo*, which corresponds with our major general; the rest are only brigadiers. The rank of captain-general is the highest military grade. Over and above the three brigadiers commanding the attenuated right, centre, and left of the attack, we have brigadiers of engineers, of artillery, and, I suppose, of the staff corps. I should not be at all surprised if we had a brigadier of veterinary surgeons. In fact, there is a plethora of exalted martial personages in this thin-bodied army, and I learned that a reinforcement of four brigadiers had just arrived by train from Madrid to assist in taking stiff-necked Carthagena. A couple of hundred muscular sappers and a couple of thousand smart light bobs would have been more to the purpose. This is an invidious comment; but, recollect, I was cooling my heels. The cavalier was a military man? "Yes"—boldly. The affirmation on my part was not a lie; at all events, I reconciled it to my conscience, for is there not a threadbare uniform of the Bloomsbury Rifle somewhere in a wardrobe in London, and did I not recollect that I was a corporal in the *corps civique de securitie*, a cross between a special constable and a *compier de Nanterre*, during the siege of Paris? The cavalier had seen service? "Under two flags"—boldly again. I trust the recording angel will pass over the exaggeration, for have I not indeed been blown about on Brighton Downs on an Easter Monday, and did I not do duty once at the door of a butcher's shop in the Rue d'Amsterdam? When it was discovered that I was a military man, and not a mere poor devil of a civilian, the ice was broken immediately. The Spanish officer has his grievance—the smallness of his pay, always after that the biggest grievance of all, that he is serving not Spain but a clique of professional politicians in Madrid, none of whom have any property save their tongues, or any stake in the interests of the country save the offices they hold and turn to account to rob it. The Spanish officer was great in his grievance. The soldier was the best paid soldier of any service in the world—and this is true; the Spanish private now receives from 10d. to 2s. a day, besides his plentiful rations of bread, meat, and wine, and the officer amongst the worst. He could not go into a tavern like a private; he had to keep up a certain appearance; and the consequence was before he attained the rank of commandant when he could live on his pay, he had to eat into his private means. He has more gold on his shoulders than in his breeches pocket. This is one of the causes of the frequency of pronunciamientos, for a captain may jump to a captain generalcy on the back of a pronunciamiento. As a case in point illustrative of the poverty of the Spanish subaltern, I may mention that a hawkier arrived with a bottle of chartreuse, and five had to club their pesetas to pay for it. From talk of emeluments the gossip changed to other topics, the Carlists, the *Virginus* business, and the like, but invariably returned to the bitter old grievance, and I was put through a regular course of cross-examination as to what was the officer's position in the British service—his salary, his chance of promotion, &c. Of two things I convinced myself; impoverished Spain cannot long afford to give the soldier the disproportionately high pay he now gets; and if the officer's pay is not soon increased there is likely to be a strike. All this will bear in mind pray, as we were conversing, audible mid noise of speech and laughter, the jingling of spurs and sabres, the clattering of hoofs, and the echoes of bugle-calls, rumbled the angry diapason of

big guns. The bombardment was going on—people were being killed—is still going on but in a mitigated form. My heels were pretty cool by this, but my friend never turned up. At length a door opened, and General Ceballos appeared—A tall, portly, handsome man, of aristocratic bearing, ruddy cheek, but with hair softly white as snow. The uninformed mob, stood up forming a lane; the comely handsome general passed, bowing to each and all, was assisted to a caparisoned charger at the door, and disappeared with his glittering *entourage* before I could button-hole him for the pass. I had sent in word I wanted one, but the fact was—there is no concealing it—I had been civilly thrown over. All is fair in war. I can understand a man who knows much about the position and strength of an army outside being refused the possible chance of conveying his information to the enemy; but what I do object to is having been kept in the vestibule so long. Could they not have straightforwardly told me to go to the duce at once? I would have taken my hat and thanked them. It is awkward to return to people after you have bidden them good-bye. I had not the moral courage to confess that I had been graciously snubbed. I drove to the railway station, dismissed the tartana I had uselessly hired, told my servant that urgent private affairs called me to Murcia, and here I am. On arriving I discovered that I had made a great mistake in coming away—Carthagena was positively to be taken that day. It was the first time I had heard in Spain that anything was to be done then and there, and not tomorrow. That was a comfort. But Carthagena was not taken, and will not be taken—bar some unforeseen event—before the 15th inst, at the very, very shortest.

Of course, not having succeeded in obtaining official permission to risk my life by skirting the Castle of St. Julian on my way to Escombreras, I felt bound to go there without permission. I wished to show my Spanish friends that with determination and little gold, the apparently impossible was possible. As very often occurs in this world, my detention was all for the best. On arriving at Murcia I met the courier of a friend I had been particularly anxious to see; he had come over from Escombreras direct, and he told me not an English ship was there: the last yacht had left the day before, and the foreign squadrons, our own included, had moved to Porman. It had been hinted to them that they were in the way of the combatants; so they shifted their quarters. Not an Englishman was left in Escombreras but Mr. Walker, a gentleman connected with mines in the vicinity; Captain Pauli, R. N., our vice consul, and one solitary, forlorn, special correspondent. "It's summat orful, sir, the things we've a-born obliged to heat," said the melancholy courier; "there used to be a bit o' grub when the ships was there, but there ain't nothing Christian now." Poor courier! I sincerely wish him a happy return to the delights of the areas around Buckley squeezer, with their Christian roast goose and mutton outlets. This undeniable Cockney, whom it was a reminiscence of Lent to look upon, told me he and his master had to sleep on the floor in one cupboard of a room in Walker's house, that gentleman having kindly given asylum to a couple of refuge families. It was useless to go to Escombreras on the chance of getting into Carthagena, the Numancia fired at every speck on the waves outside the breakwater; there was no possibility of entering except in a boat flying a foreign flag, and sent officially from one of the squadrons. Under

the circumstances I gave up my intention of going to Escombreras. The courier further made it clear to me why we had not heard the guns of the Spanish fleet for a few days. Even if the wall of coast hills had not intervened we could not have seen the Spanish fleet for a reason as old as the "Critic"—because it was not in sight. General-Admiral Chicarro had gone to Alicante to coal, as I have already acquainted you by telegram. The advantage the insurgents took of the coast being clear was to send out one of the ships they seized off Valencia, the *Datro*, manned with convicts, not to escape, but to make a raid on the unprotected sea board. The *Datro* steamed close to Cape Palos, the crew took hold of the fishing boats cruising in the locality, went on shore, and did a nice little bit of freebooting. They sacked several houses and farm yards, and carried back with them in the annexed fishing boats all the poultry, pigs, and sheep they could lay hands on. Now that the foreign squadrons have left—and it is well, for the Government complained that they gave a moral aid to the insurgents, and the insurgents might have complained with justice that San Julian could not well live at the Government fleet without the risk of sending a shot through neutral timber—we are very anxious to witness the great exploit General-Admiral Chicarro will achieve. He has no further excuse for inaction, for surely by this time his newly flogged sailors ought to have learned the distinction between a captain and a hatchway.

M. GUIZOT.

It is rather startling to hear that a statesman who was Ambassador of France to England in 1840, and who was then fifty-three years of age, has been within an ace of filling the same post in 1873, at the age of eighty-six. Yet such is the fact. Marshal Mac Mahon, or rather the Duc de Brogue, has asked M. Guizot to go back to his old post at the Court of St. James's, and the venerable statesman has replied that he would have been happy to do so if he had not been hard at work on a History of France for young people, if he had not wished to spend his last years among his grandchildren, and if he did not feel it needful to prepare for a more ethereal residence than Albert Gate. Otherwise, there is no reason why M. Guizot might not have reached the Embassy next week. Old as he is, his step is still light, his voice is still strong, and his whole manner full of vivacity. At Val Richer, where he lives with his son-in-law, he does more work than many a man of thirty. His mornings are taken up with the composition of his History of France, which he began to write for his own grandchildren, but which is growing into a book that may instruct the most mature of students. He takes a keen delight in the talk of English and French visitors. He corresponds with the members of his political party respecting the state of public affairs. About Christmas he goes to Paris, and then he becomes once more a political man. His writing is laid aside for a time, and his modest house is a favourite place of resort for the Orleansists. His receptions draw much of what is westmost in the letters and the politics of Paris, and they are too more agreeable because M. Guizot no longer lives in an atmosphere of intrigue. Nor does he miss a meeting of the French Academy when he is in Paris. Visitors regularly look for the small and attenuated figure, the pale and emaciated face, the high retreating brow, the eagle nose and eye, the glance of fire which ago

cannot dim, and the marks of that iron will which is as strong now as it was when it made shipwreck of Louis Philippe's Government rather than counsel concession. This might be termed the age of old statesmen in France. M. Thiers seem almost a miracle of youthful vivacity as he steps from the railway station at Versailles to the National Assembly, talks all the way to a crowd of admiring Deputies, and then sits for hours amid a hurricane of debate and interruptions. But M. Guizot is almost ten years older, and he is scarcely less vivacious. The two statesmen have still strength enough to govern France between them, as they did in 1832. M. Guizot would be an admirable Minister of Public Instruction, or even of the Interior, as he was forty years ago, and the men of these degenerate days might complain now, as his critics complained then, that he was possessed by a demon of restlessness, which would allow neither himself nor any other person within his reach to remain quiet.

Mr. Guizot's biography, when it shall be written, will seem as wonderful as that of any living man, and it will, indeed, be the history of France from the time that he laid his hand on political life in 1812, to the time at which the Revolution of 1848 drove him into exile. Coming to Paris armed with the moral training of Protestantism and the literary culture of intense study, he made mark at once as a writer. Chateaubriand saw his powers, Madame de Stael praised and encouraged him, and the Ministers of Napoleon tried to draw him into the public service. Young Guizot had no reason to lament the fall of the Republic, for it had sent his father to the scaffold, but neither was he an Imperialist, and his political hopes lay in the restoration of a Constitutional Monarchy. He did not, however, absolutely refuse to serve the Empire, and his first political work was to draw up a memoir on a proposal for an exchange of prisoners between England and France. That was to be a test of his fitness to serve Caesar. But he seems to have filled it with phrases which grated on the ears of the Empire, and, rather to his own relief, he heard no more of the invitation to place his talents at the service of Napoleon. He did not go into the public service until the restoration of Louis XVIII. The release of the Emperor from Elba found him Secretary General at the Ministry of the Interior, where he had to employ his literary talents in the draughting of State papers. Meanwhile, a Bonapartist Minister of Public Instruction, M. Fontaines, who happened to have felt keen sympathy with literary talent and independent thought, had placed Guizot in a position which offered him a splendid opportunity for displaying his powers. He gave him a chair of Modern History at the Sorbonne. There in successive years, Guizot delivered those lectures which are the chief grounds of his literary fame. He discoursed on the history of representative government, on the history of civilisation in Europe, and the history of civilisation in France. His chair was suppressed once because his polemics against the Minister of the day had been unpleasantly veracious; but banished from the Sorbonne he went to his liberty, and there he wrote as many books in three years as some men would think a task for a lifetime. At last the interdiction was removed, and he returned to his class. It was then that he lectured on civilization. His discourses on that subject would suffice to keep his name alive, even if they stood alone, and they form only a few volumes of a series which

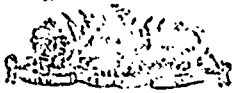
would fill a considerable library. M. Guizot did not take a leading place in political life till 1830, although he had for years before seen one of the foremost men of France. The Monarchy of Louis Philippe gave him the Ministry of the Interior. It made him a colleague of M. Thiers and the late Duc De Broglie. It also began that rivalry between him and M. Thiers which never ceased so long as they sat in the same Parliament. As Minister of Public Instruction, he was able to effect a great reform by founding the system of primary instruction—a system still miserably defective, but which was deemed magnificent in its day. Sent to England as Ambassador, he brought with him a profound knowledge of English history in its most critical stages, a keen sympathy with its institutions and its ways of life, a Protestantism as earnest as its own and a Puritan austerity of morals. Going back to France to be Foreign Minister in reality, and soon become such in dignity, he ruled the country with a rod of iron for seven years. The voting power lay in the hands of 200,000 electors who were systematically worked by the officials of the Government so as to return obedient Deputies. Never before was there such a system of corruption in any civilized State. Hence there was a vehement cry for an extension of the suffrage, but Minister Guizot would not listen to the demand. He put it down with angry contempt. And then came, in rapid succession, the banquet of February, 1843, the riot in the street, the fraternising of the troops with the people, the flight of the King, the exile of the Minister; and his subsequent retirement from political life.

His political career was not successful at any time, and it led the country to an immense disaster, nor is it difficult to see the causes of his failure. M. Guizot is an incurable doctrinaire. A professor when he began he was such until the end. He did learned politics in the closet, and there he had luted his system with so rigid a set of principles that it would not bend in obedience to the rough forms of public life. He never learned the great art of humouring men, and of going with them one mile in the hope that they would then go with him three. The people of France, like the students of the Sorbonne, were beings to be lectured and led. He spoke as loftily from the tribune as from the professor's chair, and he treated his foes with as much scorn as if they had been so many unruly children. One famous specimen of this temper is connected with a visit which was made to the Comte de Chambord, when he was living in Belgrave square, by some well-known Legitimists. The pilgrimage to the London residence of Henry V. raised intense indignation among the partisans of Louis Philippe, and gave rise to one of the fiercest debates ever heard in a French Chamber. M. Guizot went to the tribune and began to lecture the Legitimist pilgrims with far more than usual arrogance. Maddened by his invective and his taunts, some of them tried to climb to the tribune as if to drag him down. Then came the famous sarcasm, "Come up, gentlemen, come up, do what you will. You will never reach the heights of my disdain?" No wonder that a Minister who could treat his opponent with such Olympian contempt should have been hated by his enemies, and in truth he was more detested than any other man in France. Another cause of his weakness was part of his doctrinarism, for it was an inveterate belief that the English Constitution could be applied to France. Nor has he ever

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The Volunteer Review,

AND

MILITARY AND NAVAL GAZETTE.

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

OTTAWA, TUESDAY, FEB. 3, 1874.

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 at 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.

We republish an article from the Ottawa Times of the 15th January, on "The Canadian Militia," as well as the critique on Lieut. Colonel FLETCHER's pamphlet from the Globe. The idea broached, in the article from the Times, of substituting for the present Militia Organization, a force similar to the Irish Constabulary, as being better adapted to the wants of Canada, could only be entertained by mere speculative philosophers, as there is nothing really practical about it; because the force that could be maintained for the sum now annually expended in keeping up 45,000 men, say 1,000,000 of dollars, would hardly suffice for 1,000 policemen. In Ireland there are some 20,000 men, and they are barely sufficient to keep the peace alone, without military duty in a population of a little over five million. As soldiers even with their training they would be utterly useless, inasmuch as they would be scattered in small bodies throughout the country—could not be easily concentrated and would not have acquired the habit of acting together. It is quite possible to get a military force to do the duty of police officers for the

time being, but it would be utterly impossible to get the police to perform military duty effectually. It is utterly untrue to describe the volunteer force as being either inefficient or disorganized; it is simply dissatisfied, and in a recent article we showed what the cause of that feeling was. Those who argue that the force is useless and the expenditure unnecessary, should recall the events of the Fenian invasions extending from 1866 to 1871 and ask themselves whether they would like a repetition of the experience; and the writers on the question of the military organization ought to know that such are designed to provide against *unlikely assumptions*. No sane man at the close of 1866, would believe a great internecine war was probable in the United States, nor would any man be bold enough to assume at the close of 1865 that a Fenian invasion of Canada from the same country would come off in 1866, or that the same danger would threaten the amicable relations between the Empire and the United States for five years. With such facts before us it surely ought to take little time to decide on the best course to be pursued to maintain the efficiency of a force whose effectiveness have been proved on more than one occasion. It should strike those people who are so anxious to relieve the taxpayers, that it is rather an anomaly to suppose that the interests of this country can be defended at a cost of about \$25 per annum, for every man with sufficient spirit to venture life and limb in the operation; while the same individual can in perfect safety earn \$400 to \$500 per annum. On the average of 50 cents per day for 16 days each year is not a heavy tax on the people to pay for each soldier that comes to the front when danger calls. It does not appear a difficult matter to realize the idea that the individual gets tired of rendering services which are reaped so cheaply, and that simple fact would account for all evils affecting the Militia Force at present.

The facts really are that the Militia Law wants some trifling revision; the Force does not want reorganization, but encouragement and justice; it has now reached that period when its interests would be best served by the administration of officers trained in its ranks; and it gives us sincere satisfaction to endorse all our contemporary has justly said of Lieutenant Colonel POWELL, his training, the share he had in framing the present Militia Law, which was cordially acknowledged by the late Sir G. E. CARTIER, the part he has borne in the subsequent organization of the force under its provisions, his long acquaintance with the duties of his office, as well as his thorough knowledge of the social condition of the people, combined with his popularity in the Force—all point him out as the proper and fitting man to fill the position of Adjutant General. And while we are so far from advocating a scheme which would embody the worst features of know-nothing-ism as to be earnest

adherents of the necessity of making the Canadian Troops part of the Imperial Army, for reasons apparent and tangible, we also advocate the opening of its highest commands to *qualified* officers whose interests are identical with the mass of the rank and file they command.

It does not matter what idle speculation may be indulged as to the form the organization should take, it must be drawn from the population at large; and from the fact that Canada does not need a standing army, it must partake largely of the civil element, that is, no large body of troops will be required during times of peace to remain permanently under arms; and with those conditions existing there is very little doubt we have the organization best adapted to our social needs, and financial capacity; *revision* of the Militia Law, not reorganization of the Volunteer Force, is what we require; and our correspondent, *Centurion*, points out the preliminary step.

To Colonel FLETCHER undoubtedly belongs the honor of having awakened discussion on this subject, by his very able and well considered pamphlet; it is not the first and we are sure it will not be the last benefit that gallant and accomplished soldier has bestowed on the Canadian Militia.

In another page will be found "Observations on Coast Defence," by Lieutenant Colonel VON HUNDR, of the German Marine Artillery, in which the interesting subject is handled with much skill from a purely technical point of view, based on the assumption that the existing systems of fortifications are adapted to resist the increased power and range of the attack.

We have discussed this subject in a recent article on Major MONOMEFF's system of Mounting Ordnance and are persuaded that a total revolution in the *art* of fortifications is imminent, in which view we are borne out by the expressed opinions of several skillful naval officers and others thoroughly acquainted with the details and power of resistance of the system now in use.

The real value of the paper, which we reprint, is to be found in the hints given for selecting the site of defensive works and adapting those to the topographical and hydrographical features of such site, as well as selecting the position so that the full power of the works can be developed without allowing anything like the same opportunity to the attack.

It is evident that the advocates of detached batteries are right, although difficulties may arise in action by reason of want of complete control in the command of the whole; but the batteries should be so placed that no doubt ought to exist as to the work to be performed, and the rest should be confided to the skill and care of the individual commander.

We are no believers in shields or turrets—it would be only a question of time to de-

molish either—a ship is a moving object and presents a very small mark to a gun on shore, while a one-gun battery on the old system is stationary and easily made out from a vessel within possible range, vertical fire is to be especially dreaded by such a structure while a vessel constantly under way has much less to fear in that respect; a plunging fire from a height is dangerous, but those who serve the guns on that elevation are in much more peril than the rudder or screw of the assailant.

What is wanting then is a battery that will present no mark at even one thousand yards, and one in which the gun can be shifted during action without exposing the operation to the assailant. Moncrieff's system provides a gun carriage that needs no expensive concrete platform, that needs no parapet to cover the gun, nor embrasure to fire it through, and in order to utilize his invention the idea of expensive raised works of fortification must be abandoned; because as Colonel Von HUNDT points out, a shot striking the parapet will result in silencing the gun. It is sufficiently obvious that when there is no parapet such a *contretemps* cannot occur, and both men and guns must be equally well protected.

As a matter of course it is as desirable to obtain the command with the new as with the old system, but the crest of a hill will not be precisely the position selected for that purpose, the *gun pits* will be below it, in other words, *under bank*, and will present no exterior mark whatever to point out to the assailant their position. The objections as to expense in the new system is one of its striking features, there is no need for masonry, armour or turrets; the cost is a mere bagatelle compared with that of batteries on the old system, and adaptation to coast defence need only be limited by the difficulty or otherwise of supplying the requisite number of guns. Beyond the necessary service of selecting the site skilled labour is hardly a requisite, and although it would be better to have the pits and their connections constructed at once; yet the works necessary can be improvised, so to speak, in a very short time, by such labour as can be obtained in the locality.

The paper, nevertheless, gives our readers a large amount of valuable knowledge, most of it available under any system, and the author appears to have studied his subject thoroughly. We are particularly pleased with the recommendation that skilled naval officers should be consulted in any scheme of coast defence.

The following which we clip from the United States Army and Navy Journal of 10th January, is suggestive of the manner in which our neighbours are attempting to solve the problem of harbor defence. Our opinions on the *torpedo* question are well known, its latest developments have not been made public, but we are quite satis-

fied the inventors will not set the Thames or Hudson on fire with it.

"The British steamship *International*, which arrived at New York, January 2, brought a cargo of iron torpedoes and 1,640 miles of torpedo cable for the United States Government, and large numbers of electric batteries to be used in working the cable. The *International* is a screw propeller, of iron, 900 tons burden, built a few months ago for the India rubber Telegraph and Cable Manufacturing Company of Silvertown, near London, especially for this kind of service, and contains a large number of tanks for the reception of the cables and torpedoes. The order for the cables and torpedoes was given three months since. The torpedoes are empty and ready for filling with powder, which are composed of iron and copper composed of the best metal. The *International* commenced to discharge her cargo at Fort Schuyler, Willett's Point, Long Island, on January 3, where the cables and torpedoes will be stored. The vessel is engaged on a similar mission to another port in Europe."

The great problem yet remaining to be solved in connection with the improvements in modern artillery, is the invention of an appropriate shell; one that will not only bear firing from a mortar for vertical effect but also be applicable to horizontal firing from one of the larger pieces of artillery now in use.

As the principal difficulty consisted in the small capacity of the projectile to take a powerful bursting charge, because a large cavity would leave the walls of the shell too thin and increase the danger of bursting in the gun, the solution of the problem seemed to lie in the direction of a more powerful explosion than gun powder. The following extract seems to intimate that the requisite agent has been discovered:—

"Experiments are now being made in England to ascertain how far a common shell may be made to act like a shrapnel, or still more truly, like a segment shell, by means of a small charge of gun-cotton inserted in a shell filled with water. It will be readily seen, says the *Engineer*, that the water transmits the explosive shock directly to the shell, and as in the case of a hydraulic jack, its absence of elasticity in its recommendation. Elastic gas with an air cushion suffers compression in the act of bursting, and stores up projectile force in the fragments into which it eventually breaks the shell. That it does not so is seen both from the distance to which they are thrown, and from the circumstance that it finds out the lines of least resistance in the shell. A small charge of gun cotton fired by detonation, and acting in a shell filled with water, as might be expected, shivers into a great number of small fragments with but little scattering. Two 16-pounder common shells recently fired in the arsenal in this way gave the following results: No. 1. Blown into 280 fragments, total weights 14lbs. 2oz., viz., one of 6½oz., one of 5oz., two of 4oz., eleven of from 3 to 4oz., thirty-two under 2oz., twenty-three under 1½oz. 63 under 1oz., and 142 under ½oz. No. 2 blown into 245 fragments, total weight recovered 13lb. 2oz., viz., two under 12oz., two under 6oz., five under 3oz., ten under 2½oz., twenty under 2oz., twenty-six under 1½oz., fifty-five under 1 oz., 125 under ½oz. The explosion of these shells

took place at rest in a confined cell. The main difficulty to contend against when fired from a gun is the danger of premature explosion either of the detonator used to fire the cotton, or of the cotton itself. These having been overcome by Mr. Abol, experiments are now in progress at Shoeburyness to test the actual effects produced on targets. The action obviously most closely represents that of segment shells, the main difference being that the bursting charge is more sudden, but meets with more resistance, while the weight of the missiles after explosion is rather less. The system cannot be expected to give the prolonged shower of the shrapnel bullets however little may be the dispersion because the specific gravity of the metal and the form the fragments prevent their keeping up their velocity to the same extent as the shrapnel bullets."

"Vice Admiral G. Greville Wellesley, who hoisted his flag on board the *Bellerophon*, fourteen guns, armor plated ship, at Portsmouth some few months since as successor of Vice Admiral E. G. Fanshawe, the commander-in-chief of the British squadron in North American and West Indian waters, has arrived at the station and relieved the latter officer in the command. Admiral Fanshawe returns to England, where his flag ship, the *Royal Alfred*, will be paid off. The commander-in-chief, Admiral Wellesley, is a deservedly popular officer throughout the entire British navy, and during the short period he held the command of the ships in these waters, a few years since, earned for himself the esteem and good will of the inhabitants of the various ports at which his flag-ship touched, but being suddenly recalled to England to assume the command of the channel squadron, the intercourse which promised to tend to so much good feeling was abruptly cut short. We have no doubt that now the Admiral will renew his old acquaintances and make many new ones during the three years he is likely to be in our neighborhood."

The above tribute to the courtesy and kindness of the new Commander in Chief on the North American Station is taken from the United States Army and Navy Journal of 10th January. Admiral WELLESLEY is a good seaman and doubtless will justify the kind opinion our contemporary has expressed.

The following description of "The Taylor Mitrailleuse" is taken from the United States Army and Navy Journal of the 17th January, it was accompanied by two views of the front and rear of the Gun and Carriage. Our readers are aware that we place little value in this style of toy ordnance:—

"It is constructed with twenty four barrels arranged in two concentric circles and supported by two horizontal arms or projections of a cylinder at the breech. This cylinder contains a diaphragm of disk into which the barrels are screwed, and from which they all (except two) radiate at very slight angles so as to disperse their shot over a horizontal plane in order to do the most execution upon a line of battle. The spread of the balls is twenty two feet at a range of 500 yards, striking at intervals of one foot. The two barrels excepted above, being on the vertical centre line of the piece, do not possess this radical arrangement, but project their

balls on a line identical in direction with that of the sights. They may be used separately from the others when the gunner desires to fire at any individual object. The calibre of the barrels is 42 100 inch; but the invention admits of any desirable size of calibre, from 42 to 100.

The breech arrangement consists of a combination of cylinders, termed respectively, the breech cylinder, the outer or rotating cylinder, the lock cylinder, and the cascabel. Through the two first named cylinders there is, for the introduction of the charging case, a slot which is opened and closed by the reversible rotation of the outer cylinder. This is rotated the third of a revolution by means of a projecting lever provided with suitable handles. By means also of this partial rotation, motion is communicated to the lock cylinder through the medium of studs working in spiral grooves cut on the exterior surface of the said lock cylinder, whereby the cartridges are driven from their cells in the charging case, into the breech of the barrels. To the front end of this follower or lock cylinder are attached twenty-four breech bolts or "locks," which serve both as rammers and abutments to first introduce the cartridges into the barrels, and then receive the shock of their explosion.

These bolts or "locks" are each provided with a firing plunger and extractor. This extractor operating upon the cartridge with a positive motion, draws the empty exploded hulls from the barrels and leaves them again in the coils of the charging case whence they were at first expelled to be fired, and are thus removed from the gun in the same manner as they were inserted. With the cavity of the lock cylinder is a mechanism for the actuation of the firing pins or plungers within the locks, which combines two different modes of firing *i. e.*, by volley, or by fusillade, whereby the balls may be discharged either simultaneously, or one at a time, at the option of the gunner. The fusillade is fired by means of a crank, and the volley by the use of a lever.

The chief points of excellence and superiority claimed for this invention are:

- 1st. The radiation of fire, thus avoiding the oscillation of the piece and at the same time evenly distributing the balls.
- 2nd. Superior accuracy of shooting by reason of the rigidity and steadiness of the barrels.
- 3rd. Combining in one and the same battery-gun the volley and the fusillade fire—the former being effected without inconvenience from recoil.
- 4th. Unsurpassed rapidity of fire.
- 5th. Facility and rapidity of charging.
- 6th. Absence of liability to be checked and clogged in its movements by a misrepresentation of cartridges.
- 7th. Forcing the cartridges entirely into the barrels, thereby securing a perfect gas-check, and avoiding firing across a joint.
- 8th. Simplicity and compactness.
- 9th. Entire absence of any apertures or openings about the breech cylinders, through which any water, mud, or dust, can enter, to foul and obstruct the working parts.
- 10th. Symmetry of shape.
- 11th. Capability of rough usage without damage.
- 12th. Strength and durability.

It is also claimed by the inventor that the upper barrel, being upon the vertical centre line of the gun, can be fired with more accuracy than a rifle, as it is held rigidly in position, and does not move by recoiling. At a recent trial, at a distance of 800 yards, three shots, he informs us, were

fired, two of which struck nearly central, and the third between the centre and edge of the "bull's eyes"—a circle of one foot in diameter. At 1,000 yards all the bullets struck the target, after the sight was adjusted. At 500 yards, it is added, "with the fusillade and volley fire the bullets were dispersed regularly over a surface of twenty two laterally and two feet vertically, being positive in their spread, always giving the same results. By proper drill and practice of the gunners the volley fire will discharge 720 shots per minute, and the fusillade at least 180 shots per minute. A series of tests already made and now being made are very satisfactory, and show results as above stated."

CORRESPONDENCE.

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

MITRAILLE.

It may perhaps be permitted to persons who take an interest in the Dominion Forces, to enquire at what periods, and in what manner, the necessary corrections for the Army List, are furnished to the Under Secretary for War? Is it done by the Ottawa headquarters, by commanders of corps, or, is it left to the attention of individual officers?

If the former, the Militia headquarters would appear to take their time. If the work be devolved upon corps commanders, there might be a chance that the desire to see things connected with their commands correct, would be sufficiently strong to induce them to take the necessary trouble. If it be left to individuals the Army List will probably remain in a perennial state of uselessness as a record of reference.

I have been led to venture the above queries by the fact that alterations which took effect, by the "Canada Gazette," as long ago as last June, remain unnoticed in THE ARMY LIST FOR DECEMBER.

Would it consist with your convenience to furnish such as are desirous of marking the real progress (or otherwise) of the Canadian Army, and to favor your subscribers and readers with a statement shewing the numbers of all arms that have been actually mustered for duty at the various camps, &c. of instruction, from 1868 inclusive, that being, if I remember aright, the first year in which battalions assembled (in billets and otherwise) at their regimental headquarters.

We have heard a good deal at various times during the last seven years, from a large and respectable section of Canadian officers, of the adverse influence which have appeared to them to weigh on and depress the volunteer energies of the Dominion Forces. I am inclined to believe that, in the majority of instances, those who have taken the trouble so to express their sentiments, have been of the Reform Party in

politics. To those who have been willing to ascribe credit where credit has been due, it has been impossible to ignore the merits of a system of organization, the basis of which is legitimate, and the progress of which has been undeniable. But even to those it has, from the moment when it became apparent that the active force was dependent for its continuance on the zeal of an energetic minority, been matter of deep regret that resort to the ballot, the only just principle, has been steadfastly refused, against the representations of the best and most experienced officers.

Viewed by the light of recent revelations, it may be said to cease to be a matter of surprise that the late Government should not have been anxious either to elect or to encounter any expression of the "vox populi."

It is now to be seen whether the calm conscience of the present rulers will inspire them with a better courage.

The late Government in its last days has been accused of the desire to permit the Active Force of the Dominion to die out. The Reformers, on the other hand, have been held to be indifferent to its existence *ab initio*. And there is reason to believe that truth has been at the bottom of each opinion.

Except the adoption of the ballot, it is not easy to see what the present Government can do to improve the condition of the force, which was not done by the last. A more liberal appropriation is scarcely to be expected. Nevertheless it is to be presumed that those who have found so much amiss in the late *regime* will be prepared with remedies for the shortcomings so often cried.

Canadian officers will have the opportunity of observing whether the Government of Corruption, with a definite policy, or the Government of Purity, (as yet untried) with no presently visible policy at all, will do the best for their men and themselves, and the most to utilize and encourage the magnificent military material of the country.

Let them boldly try the ballot to begin with. "*Fiat justitia ruat cælum*"! If the country will not stand it, let the Force go, or if a compromise be preferred to so wholesale a concession to annexationist proclivities, institute the system of maintaining cadres of battalions only.

If the Force be really in the state described by your correspondent "Royal," (Dec. 23rd) it is of little consequence what becomes of it. But the Colonel and Brigade Major whom he mentions; as well as the person who threatened the latter, ought to be known to the public. It is a pity that "Royal" (whose able letters must be remembered by many) does not consider it worth while to explain why so few men of "standing and position now remain as volunteers."

It is pleasant to those who love "Canada, First," to receive the "Canadian Monthly" for January, in a new garb better befitting its claims as the first magazine of the Dominion, and a first class magazine anywhere. If I do not accord to its contents unqualified praise, it is for the love I bear it, and by reason of my earnest desire to see it attain as near unto perfection as may be. Those articles stand first in its pages, and may perhaps be fairly styled its "leading articles," as the "Ten years progress" of the January number, are always valuable not only from the mass of information combined in them, of the highest import to the student of his country's progress, but from their statesmanlike tone, a tone which also pre-eminently distinguishes the able and impartial summaries of "current events." The extract from "French Home Life" entitled "Furniture," is an attempt to reduce the system the slippery and almost intangible abstractions of "taste," which is in itself graceful and interesting to a cultivated mind, and is worthy of the keen insight and earnest observation of a writer, who has shown remarkable power of appreciation of the habits, manners, customs, virtues, and vices of a people whose extreme dissimilarity of tone to that of the Anglo-Saxon race, renders their peculiarities an interesting, if sometimes provoking study. Provoking is the only term also to apply to the kind of folly which furnishes the staple of such stories as the "White Rose," nor do I see why a magazine of a high order should feel it necessary to inflict trivial romance on its readers. One good novel is doubtless necessary and surely sufficient. "Wild Duck" is fresh and pleasant, but I do not like to see a good writer debase the precision and tone of his style by the use of the vulgarism "hunting" for "shooting." "St. Januarius" is amusing and not uninteresting, but I fancy Robt. Houlton or the Wizard of the North, would not be very hard put to it to combine a liquefaction as evident as that of the saint's blood, even if they should fail to discover the actual secret of the present miracle. The poetry of the number is not above par, except perhaps "Salutary," by Alice Horton.

It is satisfactory to common sense to observe that the writer of "current events" speaks of the Upper House as "the anomaly of a Senate which represents nothing." An upper chamber is the representative of an aristocracy; where, therefore, there exists no aristocracy to represent, such second chamber is an useless excrescence, which only represents an useless expenditure. The timid apprehensions of hasty legislation which have usually influenced its advocates are the remnants of English conventionalism of ideas from which so far as it is mischievous, it is to be hoped emancipation is not far distant.

(To be continued.)

A MILITARY SCHOOL FOR CANADA.

To the Editor of the VOLUNTEER REVIEW.

SIR,—The conclusion to which all who have given the subject any practical and careful attention, is that Canada now requires a small regular Military Force to support the civil authority; and since the whole Imperial Force has been withdrawn, it is necessary that a regular force should be placed in charge of the strategic points, as well as centres of population. The Force being small it should be thoroughly efficient in officers at least. The officers should be thoroughly educated military men, and should be Canadians.

The scheme of Lieutenant Col. Fletcher, as outlined in his Report, seems fairly adapted to meet the case, but if carried out as he proposes would still leave us practically dependant on the British Army for the higher officers. We shall be dependant on them for any scheme for some time, but let us have Canadian officers as soon as we can educate them for the position.

In the Military School at Quebec we have the place, and the *modus* to organize a Military School of permanent character, where young Canadians can get military education, the term of attendance being, say three years, the outlet being 18 or 19 years of age on entering, and on completing the course a commission should be given him in the Regular Force, or he can be employed on Public Works. The Military School would thus give us a class of educated men quite as important as those educated at Literary Colleges, available as railway and civil engineers, as well as military men.

The Regular Force proposed by Lieutenant Colonel Fletcher, should be organized, gradually, as they are required, and placed as indicated above at centres of population, and important points, but wherever placed, and of whatever arm of the service it may be, it should be "a school" which volunteer officers should be required to attend for say three months on appointment to the lowest commissioned rank, and should also be a school, or, its officers, a board, which officers should pass on promotion to the rank of field officer of volunteers. There is no need to argue about Lieutenant Colonel Fletcher's proposal for officers of volunteers to attend a military school for six months on first appointment and three months again on promotion, for it would be simply impracticable to get proper men as officers to attend so long.

St. John, 24th Jan.

M.S.

MONTREAL.

(FROM OUR OWN CORRESPONDENT.)

The No. 1 Troop Cavalry, Lieutenant Tees in command, was inspected on Tuesday 26th inst., by the acting D.A.G., Colonel Bacon. The troop was put through several

movements, single and double ride, increasing and diminishing the front by files, half sections, fours, &c., also sword exercise by Lieutenant Colonel Lovelace, the instructor. The whole inspection was very satisfactory, and the troop had a thorough soldierly appearance. Colonel Bacon complimented Colonel Lovelace and Lieutenant Tees on the efficiency of the men and intimated that he could not do otherwise than to send to Ottawa a very favorable report.

A movement is on foot to purchase the Rifle Ranges at Point St. Charles as they are about to be encroached upon for building purposes,

Montreal, 29th Jan., 1874.

B.

REVIEWS.

We have received from the Publishing House of LEONARD SCOTT & Co. No. 140 Fulton Street, New York, per Messrs. DUMEX & SON of this city, *Blackwood's Magazine* for January. It contains the conclusion of "The Parisians," which adds one more to the list of Bulwer's charming novels. Another serial, "The Story of Valentine and his Brother," is commenced in this number, and promises to be a narrative of great interest.

We also find the second number of "International Vanities," treating of "Forms." It tells of the wording of diplomatic and other documents and the languages in which they are written, is interspersed with quotations showing the style of royal letters, treaties, etc., and is written with a touch of humor that makes it quite an amusing article.

Then we have "John Stuart Mill: an Autobiography," telling the story of a precocious and isolated childhood, and its effect on the whole future life of the man. It will have a peculiar interest for those who have the guiding of youthful minds, though no one should pass it by without a careful perusal.

The "Note relating to the Story of the Missing Bills" is as entertaining as the story itself, and should be read by all lovers of the marvellous as well as by those of a more practical turn of mind. As yet no one seems able to find a satisfactory solution of the mystery.

It is followed by "Piece of Heather," a saucy little poem ending with a slight dash of sentiment.

"The Indian Mutiny: Sir Hope Grant." The writer of this article evidently feels deeply on the subject of this terrible revolt, and portrays the sufferings of the British from the heat of the climate, as well as the barbarities of the rebels, in a graphic manner. He does not fail to recount deeds of heroism, nor to give honor where it is due.

An account of the "New Years Political Aspect" brings us, all too soon, to the end of this number.

The increased size of the type is a decided improvement, making the page larger and handsomer, and still more closely resembling the original.

REMITTANCES Received on Subscription to THE VOLUNTEER REVIEW up to Saturday the 31st ult.

Brantford, Ont.—Cornet C. Weir, to Sept. 1874 \$2.00
 Brooklyn, Ont.—Lt. Wm. Batty, to June, 1874 4.00
 Clarksburg, Ont.—Lt. S. Robinson, to Aug. 1874 2.00
 Elginburgh, Ont.—Ens. J. Healy, to Jan. 1874 8.00
 Elora, Ont.—Lieut. Jos. Whimp, to June, 1874 2.00
 Frankville, O.—Capt. A. Lauder, to Aug. 1874 2.00
 Halifax, N.S.—Capt. L. J. Bland, to Oct. 1874 2.00
 Sackett's Harbor, U.S.—Lt. C. Chase, to J. 1875 2.00

WINTER.

Thou dark robed man with solemn pace,
 And mantle muffled round thy face,
 Like the dim vision seen by Saul
 Upraised by spells from Death's dark hall;
 Thou sad, small man,—face thin and old,
 Teeth set, and nose pinched blue with cold,—
 Ne'er mind! Thy coat so long and black,
 And fitting round thee all so slack,
 Has glorious spangles, and its stars
 Are like a conqueror's fresh from wars,
 Who wove it in Time's awful loom
 With woof of gory, warp of gloom!
 Jove's planet glitters on thy breast;
 The morning stars adorn thy crest,
 The waxing of the waning moon
 Clings to thy turban late or soon;
 Orons belt is thine—thy thigh
 His jewelled sword hangs brightly by,
 The Pleiades seven, Gipsy's star,
 Shine as thy soldier knots afir;
 And the great Dog-star, bright, unknown,
 Blazes beside thee like a throne.
 Take heed of thy coat so long and black,
 For it is powdered by the Northern Lights
 Those silver arrows shot by sprites,—
 Is powdered by the Milky Way
 With awful pearls unknown to-day,
 Which well make up for all the hues
 Proud Summer bridegroom-like may use
 Proud Summer with his roses sheen,
 And dress of scarlet, blue and green,
 Foods us with such a sea of light
 We miss the faint far dales of Night,
 And thoughtless dance, while he with lute
 Beguiles us or assists to fruits;
 But, like a shade from Spirit-land,
 Dim Winter, beckons with his hand—
 He beckons; all things darker grow,
 Save white churned waves and wreathing snow
 We pause; a chill creeps through our veins;
 We dare not thank him for his pains;
 We fear to follow, and we creep
 To candle light, to cards, to sleep.

Yet when we follow him how deep
 The scarlet he has got to keep!
 How wonderful! how passing grand!
 For peering through his storms there stand
 The eternal cities of the sky,
 With stars like street-lamps hung on high;
 No angel yet can sum their worth,
 Though angels sang when they had birth.
 —Chambers' Journal.

ON COLONIAL DEFENCE—A PAPER BY
CAPT. J. C. R. COLOMB (LATE R.M.A.)

READ BEFORE THE ROYAL COLONIAL INSTITUTE,
ON 28TH JUNE 1873.

(Continued from Page 48.)

Supposing it to be neutral, it must be remembered that if purely naval power can not be entirely relied on for the local protection of our outposts, neither can it be relied on to prevent the entry into the Nile of vessels of our enemy, and once there they would have the whole of our possessions at their mercy, unless we have a force sufficient to blockade the Red Sea. But as the necessity for the existence of such a force rests on the possibility of our direct communications being cut somewhere between the Red Sea and the English Channel, it is important to consider how our fleets in the East could exist, without adequate means of supply and repair, independent of our home resources.

Such considerations as these point to the absolute necessity of having a commanding and strongly defended great naval arsenal in the Eastern hemisphere. Here we might have ships and stores in reserve; here should be the great base of naval operations in peace and war for all our Eastern fleets. It is safe to assume that the resources of Portsmouth, Chatham, and Plymouth would be equal to the task of supplying our war fleets throughout the world at such time with ships, stores, and means of repair? Can we dream of private firms during maritime war, taking contracts to maintain, in a state of efficiency, war fleets 6,000 and 1,000 miles off?

With the development of the resources of India, Australia, New Zealand, and a host of smaller possessions, the necessity for

securing their roads increases, so also increase the power of providing and supporting adequate means of defence. (a) With a Russian sea-board on the one hand, and an American sea board on the other, it cannot be said that by their remoteness from us they are removed from danger of attack: nor must it be forgotten that the very fact of their distance from us adds to our difficulties in defending them, unless by a judicious combination of Imperial resources—to which India should contribute a large proportion—we render the fleets for their defence independent to a large extent of home support.

If naval protection without military protection be productive of danger to the Empire, great disaster may also be expected to result from attempting to hold distant possessions by military force, if that force might be completely isolated and locked out from its sources of supply and reserves for want of the naval protection of its communication with the Imperial base. If it be asked what we have done to guard against the possible isolation of our army in India? the reply is, we have abolished the Indian navy and substituted nothing in its place! Though India supports the army necessary for its safety, it contributes nothing (b) towards a fleet for the protection and security of the communications of the army, without which it cannot exist.

Two circumstances have lately occurred to threaten our command or this direct route—the opening of the Suez Canal, and the removal of the restrictions placed upon Russian power in the Euxine. We agreed to the latter on moral grounds. But if on moral grounds we have practically shown our sympathy with the desire of Russia to accumulate physical force in the Black Sea, we should extend our sympathy to India and our Eastern Colonies, and be careful it takes an equally practical form, by the creation of a naval arsenal adapted to the probable requirement of the defence of their communications: thus balancing the power of resistance with the increased power of aggression which our "moral sympathy" has so generously provided.

To attempt to determine the exact site for such a reserve naval arsenal for the Eastern portion of the Empire would be beyond the scope of this paper, but considerations respecting climate, and its effects on stores, &c., point to some port of Australia as best adapted for the purpose. The strategic importance of Bombay, however, cannot be overlooked. It must be borne in mind that the appliances, such as docks & machinery for repairs, &c., would be available for our commercial fleets in peace; and hence that Imperial resources expended to provide for the contingency of war, could not be regarded as money thrown away in peace.

4th line: To India and the East, and Australasia, round the Cape. Here the points are Sierra Leone, Ascension, St. Helena, Simon's Bay, the Mauritius and King George's Sound.

5th line: From Australasia and Vancouver's Island, round Cape Horn. Here we have Sierra Leone, Ascension, the Falkland Islands, and Sydney. These points are, however, valueless for the defence of the line between Vancouver's Island and Australia, but a commanding position for this

(a) The total value of exports and imports of India, Ceylon, and Australasia is about four-fifths of the total value of exports and imports of the United States.

(b) The contribution of £31,627 per annum from the Indian Government, on account of the expense of a fleet on Indian stations, is practically nothing.

part of the line has been offered to the Government—the Fiji Islands. It remains to be seen whether the Government accepts the offer. It is a position of great importance from an Imperial strategic point of view. The Hydrographer of the Admiralty thus speaks of it: "The Fijis lie nearly in the direct track from Panama to Sydney, and if a steamer touched at one end of them for coal she would only lengthen her voyage about 320 miles, or one day's run, in a distance of 8,000 miles. In like manner, in the voyage from Vancouver's Island to Sydney, the touching at Fiji would lengthen the distance 420 miles in a voyage of 7,000. An intermediate station between Panama and Sydney will be most desirable—indeed, if the proposed mail route be carried out, it is indispensable. In the above statement I have confined myself to answering questions referred to me by the Colonial Office; but, on looking into the subject, I have been much struck by the entire want of Great Britain of any advanced position in the Pacific Ocean. We have valuable possessions on either side, as at Vancouver's Island and Sydney, but not an islet or a rock in the 7,000 miles that separate them. We have no island on which to place a coaling station, and where we could ensure fresh supplies."

A comparison between the value of our property passing and repassing in the vicinity of these islands with that of other nations, will show that we have a vastly greater interest in maintaining freedom of communications in that district than any other power. It therefore follows that the military value of the position to any other maritime power is greater when regarded as a means of aggression than as necessary for purposes of defence. But to us its possession is vital as a rallying-point of defence, though of small value as a base for offensive operation. On the principle, therefore, of "defence not defiance" the military arguments for the annexation of the Fijis should meet with the approval of the Government.

This very hasty sketch of the ground to be defended must necessarily be subject to modification and alteration on more accurate and minute survey. It must be regarded only at present as an attempt to apply general principles to the Empire as a whole.

In the selection of the points the following conditions should be fulfilled—1. They must be in our possession, and on or near a line of communication. 2. They should possess natural advantages, such as safe and commodious shelter for the war and commercial fleets, easy of access, and capable of defence. 3. They should be as far as possible the natural rendezvous at all times of vessels passing and repassing along the line, and the chief, if not the only, coaling station of the district they command.

Too much attention cannot be paid to the selection of the coaling stations of the Empire. They should be under our control. Take for example the West Indies. The great coaling station in that district—St. Thomas—is not in our possession. The consequence is, that were we engaged in hostilities in that quarter, a large portion of our force would be necessarily employed in the blockade—so far as our enemy is concerned—of this point, and would be so much deducted from the force available and required for other purposes.

It is possible at first sight Sierra Leone and Ascension may not appear to be of Imperial value, or to fulfil these conditions.

It is therefore necessary to draw attention to the fact that the Imperial roads round the Cape and round Cape Horn cross each other at a point on the Equator about 23 deg. W. If a comparatively small circle with that centre be described on a mercantile chart, it will be found to include the path of nearly all vessels passing along those roads. It therefore follows that the defence of the sea area so included is of the greatest importance to Australasia and Eastern and Pacific possessions, and that it would be useless to distribute force for the protection elsewhere of the commerce of those places unless we can command that small area. But we cannot maintain a patrol at these Imperial cross roads without bases of operation from which that force can draw supplies: we have no choice, therefore, but to adapt Sierra Leone and Ascension to the purpose of fulfilling this Imperial requirement. It is further essentially necessary for the safety of Australia and the East, that these points should not fall into other hands, and if we do not adopt measures for their defence, there is nothing to prevent such a contingency.

Now, though the Imperial strategic points I have named are numerous, I think it will be found difficult, even on close inspection, to reduce the number without risk to the safety of the Imperial lines. It must be remembered that a point near a line of communication, if not secured to our own use by means of defence, is placed more or less at the disposal of our enemy. The position we abandon, because we have others in its neighbourhood, may be of vast strategic importance to the power having none. The immense and Imperial importance of the great majority of strategic points named, I think, be much doubted, and therefore for purposes of illustrating general principles require no further remark. We have seen that military garrisons are required to prevent their capture by assault. Where are they to come from? What provision has the Empire made for the safety of positions which command her roads?

It is our boast that we are at last secured from invasion, because we have 100,000 regular troops at home. But when we are threatened with invasion, we are in imminent peril of investment. As the regular army is the only military force we can move, it clearly follows that, if 100,000 or any large proportion of that number of regular troops are necessary to guard against invasion, no force is available for garrisons of places on which the safety of our communications depends. We should have to choose, at such a time, between risking invasion or courting investment, partial or complete. When this argument is used, it is generally met by the assertion that we have, or shall have, a powerful fleet, and therefore shall command the sea. Now the "command of the sea" is a vague term, conveying no precise meaning to the mind. It is, from its vagueness, most valuable to mystify constituencies, or to confuse the conception of our true military requirements, both in times of "panic" and intervening periods of "parimony." By war ministers it is used alternately to full the awakened consciousness of military weakness, or as an argument for the reduction of military force. To most people it means something purely naval. To some it conveys the idea of covering the seas with numerous fleets; to others, the possession of a few ships more powerful than those of our neighbours. Few realize that the command of the sea can only be maintained by a scientific combination of three things—strategy, purely mili-

tary force, and purely naval power. The command of the sea is nothing more nor less than the command of the Imperial roads, the securing of the first lines of Colonial defences.

It is important to bear in mind that the more war fleets rely on machinery and artificial motive power, the more necessary are fixed bases of operation to their action, and the greater must be the resources of those bases. Hence it is that, as the science of naval warfare advances the necessity for developing these resources at the great strategic points, and for efficiently protecting them, will probably increase.

But "an ounce of fact is worth a pound of theory;" and while others dwell on the political results of the exploits of the *Sumter* and *Alabama*, it is desirable not to lose sight of the lesson in Imperial defence the cruise of these vessels teaches. Captain Semmes, writing on board the *Sumter*, in the West Indies, remarks: "The enemy has done us the honour to send in pursuit of us the *Powhatan*, the *Niagara*, the *Iroquois*, the *Keystone*, and the *Sao Jacinto*." Not one of these vessels ever caught her, and if we read on we shall see the reason. "The Mona passage being the regular track of U. S. commerce, it was looked upon as almost a certainty that at least one cruiser would be stationed for its protection." The supposed certainty, however, was a delusion. Months afterwards we find Captain Semmes exclaiming, "Where can all the enemy's cruisers be, that the important passages we have lately passed through are all left unguarded?" And then he sarcastically adds, "They are off, I suppose, in chase of the *Alabama*." Again he said: "The sea has its highways and byways, as well as the land. . . . If Mr. Welles had stationed a heavier and faster ship—and he had a number of both heavier and faster ships—at the crossing of the thirtieth parallel, another at or near the equator, a little to the eastward of Fernando de Noronha, and a third off Bahia, he must have driven me off, or greatly crippled me in my movements. A few ships in the other chief highways, and his commerce would have been pretty well protected. But the old gentleman does not seem to have thought of stationing a ship anywhere." (a)

It is impossible that anyone carefully studying the cruise of the *Sumter* and *Alabama*, can avoid the conclusion that we have had to pay £3,200,000, not so much for letting the *Alabama* escape, but as compensation to the United States for damage directly resulting from the vague notion the head of their naval department had respecting the "command of the sea," and his utter incapacity as a sea strategist. All the naval force of the United States was powerless to arrest a single ship in her progress, simply because it was applied without reference to general principles which guide the distribution of force for the protection of communications.

It is important to observe that there is no proportion between the force used in the interruption of sea communications, as compared with the amount of force required to secure them. To cripple the action of a single steamer we find it acknowledged, by one who ought to know best, that several cruisers would be required at certain points. A regular attack upon sea communications, therefore, involves the employment of an enormous force in their defence; and as the stations and positions are necessarily fixed, so must bases of operation be at

(a) "My Adventures Afloat," by Admiral Semmes.

hand to supply the wants of that defending force.

There is, however, another lesson we may learn from the cruise of the *Alabama*, which, if we profit by, is well worth £3,000,000 to our Empire. It is the value of coal to offensive and defensive operations at sea. We find considerations regarding the consumption and supply of coal constantly regulating and limiting the action of the *Sumter* and *Alabama*. While we congratulate ourselves that "even the stores of coal needed for marine locomotion are principally ours," we must remember that they are only ours so long as we protect them from destruction by bombardment or from capture by assault. It is therefore of paramount importance that our coal depots along the Imperial lines should be efficiently and thoroughly defended; that they should not be selected at haphazard, or or situated at places in the possession of any foreign power when it can possibly be avoided.

The closing scene of the career of the *Alabama* is, however, yet more instructive to those who have the defence of the empire at heart. True, she was sunk near to our own coast, almost in English waters, by the guns of the *Kearsage*; but if we would know what it was that forced her within the range of those guns we must carry our thoughts far away to the Indian Ocean. In the far east we find Captain Semmes writing as follows: "My ship will have to go into dock to have much of her copper replaced, now nearly destroyed by constant cruising, and to have her boilers overhauled and repaired, and this can only be done in Europe." And so to Europe the *Alabama* came. Defective and without adequate means of repair, she was no longer able to efficiently fulfil her mission, nor quite free to choose the fields of her action, so dragging her damaged boilers and dilapidated hull down the Indian Ocean, round the Cape and up the broad Atlantic, (a) she sought refuge and repair in a French port. The rest of her story is soon told. Denied the means necessary to restore her to her original efficiency as a ship of war, and with defective ammunition, she was compelled to engage an antagonist, whose challenge she was from her condition neither fit to accept nor able to avoid. In seventy minutes she was sunk. For want of means of repair in the Eastern hemisphere she lies beneath the waters of the English Channel, silently warning us to profit by the lessons she has taught.

There is one other popular view respecting the command of the sea to which it is necessary to refer. It is that the command of the sea can be secured by the blockade of our enemy's coast. The experiences of the American war throw some light upon this argument. In the *Singapore Times* of December 9, 1863, we read: "From our shipping list it will be seen that there are no fewer than seventeen merchantmen at present in our harbours. Their gross tonnage may be roughly set down at 12,000 tons. Some of them have been lying here now upwards of three months, and all this at a time when there is no dulness in the freight market; but, on the contrary, an

(a) "On May 2, we recrossed the Equator into the northern hemisphere . . . and ran up to our old tollgate, where, as the reader will recollect, we halted on our outward passage and used the passports of so many travellers. The poor old *Alabama* was not now what she had been then. She was like the wearied fox-hound, limping back after a long chase, footsore and longing for quiet and repose."—"Vide 'My Adventures Afloat,' by Admiral Semmes.

active demand for tonnage to all parts of the world. It is indeed to us a home picture—the only one we trust to have for many years to come—of the widespread evils of war in modern days. But it is a picture quite unique in its nature, for the nation to which these seventeen fine ships belong has a navy perhaps second only to Great Britain, and the enemy with which she has to cope is but a schism from herself, possessed of no port that is not blockaded, and owning not more than five or six vessels on the high seas. The tactics with which the Federals have to combat are without precedent, and the means to enable them successfully to do so have not yet been devised."

It is well to remark, that at the time this was written the naval force of the Federals consisted of about 700 ships and some 40,000 men! Yet it was not equal to preventing the interruption of American commerce in distant seas, although it maintained a strict blockade of the enemy's ports. Now Singapore was a neutral port, and therefore afforded protection to the Federal vessels; but where are the available ports likely to be neutral, along our lines, to afford protection to our commercial fleets under similar circumstances? The natural rendezvous of commercial fleets are in our possession, and could only afford protection in proportion to their means of defence.

By securing bases of operation for our war fleets, we also provide safe refuge for our traders at places where it is most required. If ever we are in real danger of invasion, we shall be actually engaged in a naval war: we shall not have the excuse that the tactics we have then to combat "are without precedent," but we may bitterly regret that the means "to enable us successfully to do so have not been devised," not from the lack of power, but from want of will.

While it is essential to guard the strategic points from capture by military force, it is equally necessary to secure their resources from destruction by bombardment from the sea; and in many instances military force would be—*from natural circumstances and situation*—powerless to prevent such a contingency. The destruction of several coal depôts might be accomplished in a few hours by a single ship with very few guns; and heavy requisitions, on pain of instant bombardment, might be hastily levied on a fleet of merchantmen within an hour by "an intelligent maritime Valer" in the shape of an insignificant cruiser, even in the presence of military force. This danger can in several instances only be met by port defences, vessels, and torpedoes. A very small local force, if trained and provided with these weapons, would meet the requirement. But where are the weapons? Where is the force? It will be too late to await the outbreak of war to provide the weapons and to train the force, for an attack on our coal depôts at the strategic points will not be the last, but the first act in the drama of future war. The means for their destruction are always at the disposal of any maritime power, but the measures for their adequate defence take much time to develop. A single cruiser bringing her guns to bear on one of our coal depôts, would in a few hours paralyse the action of our fleet for months.

It is not possible here to enter more fully into details respecting the defence of the Imperial roads, which is the first, and can be made the strongest line, of Colonial defences. In no way can our Colonies and possessions be so efficiently protected as by

a firm command of their communications, for with the exception of Canada and India they would thus be exempted from the possibility of attack, and unless Canada and India are to be cut off from succour and support, their communications must be held, come what may.

The lines of Colonial defences may be thus summarized:—

1. The defence of their communications, which involves fortifying the imperial strategic points and the existence of a purely naval and a purely military force; the one equal to the task of keeping open the roads between the points, the other sufficient to secure those points from capture in the necessary absence of the fleet.

2. The interior line of sea-defence, which must provide against the destruction, by bombardment from the sea, of naval resources at the strategic points in cases where that object cannot be secured by land batteries and military force. It also includes similar provision for the protection of Colonial mercantile ports to prevent their commercial reduction by enormous requisitions.

3. The defence of the soil of all Colonies and places not necessary to the Empire as military and strategic positions.

Having thus briefly viewed the nature of our requirements, it is desirable to draw some practical conclusions as to how they can best be met.

The communications of the Empire being the common property of all its component parts, each portion, according to the use it makes of them, has a direct interest in their defence, and should contribute to that object.

The forces intended for the defence of the communications must be Imperial, and not Colonial. They must be prepared to act at any point on the Imperial lines where they may happen to be required. Naval Colonial forces created under the Naval Defence Act of 1855 are only of value, and that to a very limited extent, to meet the necessities of the second or interior lines of Colonial Defence.

The force necessary for the defence of the Imperial communications should be under the control of one directing head. As military force is necessary for the support of naval power, as is in our case military is in its turn dependent upon a naval power, the distribution of the one must have reference to that of the other. If, therefore, the military force is under the control of one department, and the naval force under that of another, the defence of our communications is, to use a homely phrase, "between two stools." In vain might our "Admiralty" despatch fleets to distant seas, if the bases of their operation are not secured by the "War Office," equally valueless would be the distribution of military force for the protection of those places by the War Office, if the Admiralty do not keep the communications between them open. Unless there be a war minister responsible for, and controlling the general principles which should govern the action of each department, nothing but confusion can result when the Imperial communications are in danger.

If the Colonies are really in earnest in matters relating to their defence; if it is time they should combine to force on the attention of the Imperial Parliament the neglected state of the Imperial roads, and the necessity for devising adequate means for their security. They must, however, be prepared to bear their fair share of the burden.

(To be continued.)

(Continued from Page 53)

parted with his early faith in such a Monarchy as that which the *Wing Revolution* planted in England. At the age of eighty-six his opinions are much the same as they were at the age of twenty-five. A professor then, he is a professor still, although he has no chair, and lectures only with his pen. He is still a doctrinaire and a Royalist. While his old and flexible rival, M. Thiers, has been converted to the belief that peace can be brought to France by a Republic alone, M. Guizot is as rigid as ever in his Louis Philippism. Born a Protestant, he is a Protestant still, and instead of growing more Liberal with years, he has become more Puritan. It was he who led the orthodox party in the Protestant Consistory last year, and he has been trying to induce the Council of State to put the Liberal Protestants out of the Church. If consistency be a virtue, M. Guizot merits a high place among the saints. But, whatever may be said of his faults and his failings, the fact remains that stands among the most remarkable men of his time, and that his life is an object of interest to Europe as well as to France.

The *Broad Arrow*, in criticising some of the weak points of the "new drill," notes the following as among its peculiarities: The captain of a company is no longer a mere guide, but is posted where he can be of real use in superintending his command. Yet the field officers are still encumbered with the cares of dressing and covering. The sword is returned in skirmishing, yet it is still carried drawn to the great inconvenience and even danger of its bearer, in battalion movements, when the troops are not firing, nor even supposed to be in sight of the enemy. Several terms and words of command have been assimilated to those in use in cavalry. The difficult and intricate "countermarch by ranks" is retained instead of the simple and speedier "countermarch in files" or "fours." In marching past in quarter column, the troops armed with the long rifle are to carry it at the trail instead of at the slope. The long process of teaching recruits their "fours" could, our contemporary urges, be much condensed by simply instructing them to form *fours-deep* at once at the word "Fours" and then to turn as required on getting the further command "Right," "Left," or "About." Criticising the useless subtleties of the drill, it says: He has to remember (1) whether he is in front or rear rank; (2) a right or left file; (3) an odd or even number; (4) the number of his company; (5) of his half company; (6) of his section, and whether he is in a right or left half battalion or company; (7) which is his proper front; with many other things "too numerous to mention." Is it desirable or expedient to add to this load on his mind, simply for the sake of show, or to save his officer's breath.

Philadelphia despatches confirm the statement that the children of the dead Siamese Twins have consented that their remains shall be sold to medical authorities for scientific purposes. Dr. Hollingsworth having arrived from North Carolina with that object in view. Physicians in New York and elsewhere will contribute towards raising the sum required, which is believed to be about \$10,000.