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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. VI.

OTTAWA, (CANADA,) MONDAY, DECEMBER 16, 1872.

No 51.

NEWS OF THE WEEK.

Europe has been visited with a tremendous series of hurricanes during the first week of the present month, on the 8th and 9th inst., they reached Great Britain and Ireland. Many towns were flooded by yesterday's storm. Several vessels went ashore in Cork harbor, and the damage to property in that city is very great. Three pinnacles of the tower of St. Thomas' Church in Exeter, Devonshire, were blown down while the congregation was at worship, and falling on the roof crushed through into the body of the church. The congregation was seized with panic at the first intimation of danger and rushed from the building. No one was killed, and their escape is regarded as miraculous.

Telegraphic despatches of the 9th, state a terrific westerly gale, causing great destruction, to property of all descriptions, prevailed yesterday throughout England. Telegraph wires were prostrated and many buildings demolished and others damaged. In this city (London) a large number of pedestrians were dashed to the ground by the violence of the hurricane. Street lamps and advertising boards were blown down and many persons injured by the flying debris.

Despatches from sea-port towns report numerous marine disasters. Eight ships were blown aground in the harbor of Plymouth.

The flagship 'Narcissus' parted her moorings in the harbor of Davenport, but the crew succeeded in again anchoring her before any serious damage was done. The German ship 'Cambridge' and three small merchantmen, lying in the same harbor, parted from their anchors and were blown ashore. The crews were in great danger, but were rescued from their perilous position.

Several of the gas stokers, who were summoned to appear and answer to the charge of conspiracy, have been found guilty and sentenced to six weeks' imprisonment.

The telegraph wires in Ireland are prostrated by gales and have not yet been fully restored.

On the 10th advices state that the gale continued yesterday, but not with the severity of Sunday. Despatches continue to come to hand bringing intelligence of disasters both on sea and land. The damage in this city (London) is considerable. Houses were blown down, and forty persons known to have been injured by falling buildings.

A brig, the name of which has not been ascertained, foundered off the coast of the Isle of Wight, and every person on board perished.

The bark, Stralsund, from Hamburg for New York, wrecked on the Rim Ridge ledge, but the crew were saved.

The gasometer attached to the Royal Arsenal at Woolwick, was damaged by the gale and the capital has been without gas for the past nights.

Communication is yet very much impeded.

And on the 10th we learn that the ship *Franklin* which sailed from Hamburg several days ago for San Francisco, with a large number of emigrants on board, stranded on the coast of Vlickland, an island of the Netherlands in the North Sea, and went to pieces. Eighty passengers are known to have perished.

No hope is now entertained for the recovery of the Vicountess Beauchfield, wife of the Right Hon. Benjamin Disraeli.

A special despatch from Paris to the *Daily News*, says the gales there on Tuesday last were dreadful. Versailles was also visited by the hurricane. The damage to property was very great and several persons were killed in both cities.

It is with great regret we learn that the noble talented wife of Mr. Disraeli, the Viscountess Beauchfield, is seriously ill.

The number of petitions for the dissolution of the National Assembly circulating for signatures throughout Paris and departments, is greatly increasing. The Prefects of the several departments where the movement has assumed formidable proportions, have been summoned to Versailles. The members of the moderate left are in favor of the dissolution of the Assembly.

The Duke de Broglie, a monarchist, has been elected a member of the committee of 30, in place of M. Fourtin, who has just been appointed Minister of Public Works.

This city (Paris) was visited by a terrible gale yesterday. Several buildings were demolished and others damaged.

The River Po has again overflowed its banks, and inundated the adjacent country. At last advices the flood was spreading.

The floods in the north of Italy continue to spread. Some of the larger towns are threatened.

The *Egalite*, a newspaper of Marseilles, has been suppressed for violating the press laws.

A manifesto, signed by M. Gambotta, Cremieux, Louis Blanc, Quinret, and 85 members of the Extreme and Moderate Left

is published to-day. It demands a pacific and legal dissolution of the National Assembly as the only means of averting present dangers to the country. The divisions in the Assembly render the Government powerless. The address expresses strong disapproval of the pressure now being exerted to bring about disorder, which as has been hitherto proved, can only result in the advantage of the enemies of France. New elections will constitute a compact majority in the Assembly, securing majorities therein to the administration of M. Thiers, and for the establishment of Republican institutions. The right of petition to the Assembly is claimed to be inviolable from attacks upon the principle of universal suffrage.

Cape of Good Hope advices state that a fierce battle took place in the interior, between the Krelipot people and Tambookies, in which the latter were whipped and from 400 to 1000 slaughtered; many of the natives were armed with Enfield and other European arms.

Under date of 12th December, New York advices state that a letter from Gaspé Bay, dated the 6th inst., states that the light house on Anticosti Island was completely destroyed in the late hurricane. The house of the light-house keeper was also destroyed, and Mr. Baxter, the keeper, his wife, and six children were killed.

Several small fishing vessels were also wrecked.

And from San Francisco, of the 9th this afternoon the second officer of the Pacific Mail Company, steamship Sacramento, who here from Panama on Wednesday, arrived at San Diego in an open boat with the news that the steamship had struck a reef 200 miles south-east of that port, off San Antonio, Lower California. When the officer left the ship the Captain was making preparation to land the passengers all safe.

The steamship 'Montana' leaves San Diego at daylight to-morrow, with orders to proceed to the wreck and relieve the passengers, and return with them to San Diego if he does not succeed in getting the 'Sacramento' off the reef.

The 'Sacramento' had 150 passengers and 100 tons of freight. Details of the disaster have not yet been given.

A telegram from Treckas states that the Creek Indians have been got into their reservation, and are now quiet.

John W. Southwell was arrested last night on a charge of altering checks of the First National Bank of this city. One from \$45 to \$45,000, and the other from \$30 to \$35,000. The prisoner at one time was in the insurance business in Chicago.

THE AUTUMN MANOEUVRES.

THE SCENE OF OPERATIONS.

(From the Broad Arrow, Sept. 7.)

(Continued from Page 593.)

WEDNESDAY SEPT. 4TH.

The Northern Army on Salisbury Plain.—It was anticipated yesterday that a very early march of the division of cavalry would take place, and it subsequently became known that Parko's Brigade of the 3rd Division of Infantry was to be sent on with them. The cavalry seemed to have stayed up all night, to be up so early in the morning. After tattoo and before reveille, when in war time no sound ought to be heard in a camp, they were making a good deal of noise round their bonfires, so much that the stumbers of those who were tented in the headquarters portion of Rushall Park were disagreeably disturbed. From ten o'clock the lightning was frequent, and about the hour when General Shute and his mounted officers were supposed to be setting out, the rain would have been announced heavy even in the tropics. The 3rd and 4th Divisions were under orders to march at half past six, and precisely at that hour they and the headquarters of the corps d'armée set out from the grounds on which they encamped last night. General Walpole, accompanied by his staff, set out in advance of the 3rd Division, following the route by the left bank of the Avon. The 4th Division took the right bank, and had a magnificent march of it on to Salisbury Plain, by Stonehenge, and on to the encampment. The column was led by Maxwell's brigade, having the usual advanced guard, and closely followed by Colonel Pakenham's brigade. The 2nd Middlesex, better known as the Edmonton Rifles, were the first regiment in the order of march. Their band was at their head, and the manner in which they acquitted themselves on the march was highly creditable to them as a Volunteer corps. There is an easy spring, and at the same time a firmness in their step which might well be emulated not only by other auxiliary corps, but by more than one regiment in the regular army. The 2nd Middlesex were followed by the 102nd Fusiliers, and they were succeeded by the 46th Regiment. In Col. Pakenham's brigade, the 2nd Battalion of the 4th Regiment led, and was followed by the 28th and South Gloucester Militia. Col. Stephenson's brigade, composed of the 30th Regiment, the 2nd Battalion Rifle Brigade, and the 3rd Provisional Brigade Rifle Volunteers, brought up at the rear of the column. Each Brigade, was, of course, followed by its battery of Artillery and detachment of Engineers. As the Volunteer men were passing through the village of Upavon the general spoke in laudatory terms of their style of marching. The morning was a beautiful one for marching; a warm atmosphere, without too bright a sunshine, was fast drying up the roads and fields. The regimental wagons marched with the column but the heavy Control wagons and carts were sent by another route. The one taken by the troops was a very long one. In taking Amesbury by the way, and passing through that village, their way was two sides of a triangle, of which the direct road from Upavon to Winterbourne forms one side, but as two divisions and their transport were all travelling between the same two points at the same time, it would have been impossible without causing great confusion, and as a

result great delay, to send both divisions by the direct route, and the 4th Division had certainly nothing to complain of except having to walk a little farther than if they were ordinary wayfarers. As the column came out of the village of Upavon and crossed the bridge, it had the narrow River Avon close to it on the right, and on the opposite bank, moving in a line almost parallel to its own, was the 4th Division. On its left were those beautiful land undulations, the Everley Downs. By a gradual ascent the troops reached a point commanding a charming view of the hamlets of Haxton and Netheraven, on the opposite sides of the river. At this elevated point it halted ten minutes, and then resumed the march at the sound of "Bonnie Dundee," played by the Edmonton Rifles. At Longstreet all the villagers turned out to view the moving column. About half a mile outside Amesbury the columns came on the field ovens in the temporary control depot there. The bakers were hard at work drawing out batches from the ovens at the time the troops were passing, but it appears that in respect of the supply of fresh meat a very unforeseen accident had occurred. The lightning in the night had so badly "turned" what had been killed a day or two ago for the use of the troops that it was quite unfit for use. This had only been discovered early in the morning, when fresh oxen and sheep were at once purchased and slaughtered. At Amesbury the division found not only the inhabitants awaiting them at the windows and doors, but ladies and gentlemen on horseback and in carriage at either end of High Street. It had been determined to order a halt for breakfast somewhere about this point, and some large fields at Little Amesbury, about half a mile beyond the village, and to the left of the road leading up to the Normanton Downs and Stonehenge, were selected. Close to these fields is a farm, and here the general and staff dismounted. It is with regret that we record that soon after leaving Upavon Lord Mark Kerr sprained a muscle in his thigh, by the sudden starting of his horse. He refused to avail himself of the use of a carriage. He managed to ride on horseback for the rest of the march, but not without difficulty and pain. Scarcely had the headquarter staff sat down on the turf for some light refreshment when a number of distinguished visitors arrived at the temporary headquarters in rapid succession. First came Lord Melville, next the Duke of Buccleuch, then the Duke of Northumberland and Lord Algernon Percy; almost immediately afterwards the Baron de Graney, and several other of the foreign officers; and lastly Mr. Cardwell and Mr. Bouverie. The Secretary for War rode about the field in which the troops were breakfasting. The fresh meat for the troops were served out during the halt; it must have been rather tough, seeing how recently it had been killed, but no doubt the men preferred it to salt pork. After about an hour the order for resuming the march was given. A delay was caused to a portion of the column by a number of the South Gloucester Militia having strayed to some distance for water. The commanding officer felt it necessary to send a guard to bring them back. When the order for putting on packs were given, and the brigades were once more put in marching order, the scene at the camping ground was one of the most interesting that has been witnessed in the whole course of the march from Aldershot. The battalions faced Normanton Down, and the ancient Stonehenge was in front of the troops at a distance of less than a mile. The sun was

shining over Salisbury Plain, and those huge stones stood up and out in the boldest relief from the wide plain beneath. General Maxwell's Brigade was in front in column of companies, the 2nd Middlesex in their black uniform to the extreme right, the 102nd Fusiliers in their busbies next, and the 46th, with a battery of artillery, to its left. There was a crowd of ladies and gentlemen in the field, and every battalion passed out on the high road with bands playing. On Normanton Down, just opposite Stonehenge, Mr. Cardwell again rode up to the division, and Mrs. Cardwell and many other ladies had also assembled at a point near Stonehenge to see it pass. Fields near Borwick St. James was the destination of the division. On its arrival there, it found that the 3rd Division had already pitched its tents not far from Winterbourne Stoke, and it received orders itself to encamp on Winterbourne Stokehill; all but the 3rd Brigade. This, with Colonel Lestrangle's battery of artillery, was sent forward. There is joy in camp that General Shute has been successful in capturing fords; but the decision said to have been given by the Duke of Cambridge in respect of the fords on the river which separate the two armies—namely, that those to the south east of Staploford to Salisbury are not neutral—has the effect of very considerably widening the front of the defending army and of the 4th Division, and consequently, of rendering the work which our troops have to perform very much more difficult. Vedette and outpost duty are in full operation, but it is not expected that a general engagement will come off before Friday.

(To be continued.)

CORRESPONDENCE.

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

FROM BRITISH COLUMBIA.

(FROM OUR OWN CORRESPONDENT.)

Victoria, Nov. 21, 1872

There is at present, little to write about here. The city has been a little lively lately, in consequence of two or three Dramatic Troupes having, one after the other, made sojourns of a few days each. The survey parties coming in, and some miners coming down, also add to the life of the place, but it does not amount to much, and no real change will be perceptible till the railroad is at least, begun. I have several times in the course of my travels, imagined myself at the "ends of the earth," but, I really think Victoria is the jumping off place; tho' its beauty is considerable, and its capabilities great, if only its extreme isolation be once destroyed, and a stream of immigration set in.

H. M.'s ship, *Scout* has gone to San Juan, to take off the British garrison, as Captain Delacomb's six years absolute monarchy, comes to an end, so will the pride, and power, and honor of England, in a few years more, if she goes on as she has done for the last few years. I believe there is an island in Lake Superior, that our southern neighbors want now, England may as well let

them have everything they ask, without going to the expense of an imbecile farce of diplomacy, which only keeps men's minds in suspense, while it in no way affects the result.

Several gentlemen of standing here, have at different times, asked me questions about the Militia, and expressed an interest in its organization, but I fancy now that the Adjutant General, favourable as was the impression he created has been, and is gone again, and nothing is known, except that the arms &c. are stored in the H. B. store-houses, and, for aught any one can tell, may lie there for another year or two, whatever interest in the question may have been felt is fast dying out of inaction induced by long suspense.

You know I have always been, even against your own opinion, an advocate of the ballot. I think it much to be regretted that it was not put in force this year. It is easy to imagine why this year would have been an inconvenient period to select, nevertheless if it had been done, it would have gone down well enough here.

The authorities (if they mean to do anything next year, or even the year after) would do well, in the meantime, to "prepare for action" by securing from Parliament a grant towards obtaining land, if that cannot be arranged with the local government, and erecting drill sheds, and a storehouse for the Dominion stores at Victoria.

H. M. Ships in these waters now are the *Scout*, *Cameleon*, *Petrel*, and *Boxer*. The new flag ship, the *Repulse* (ironclad) flag of Rear Admiral Charles Farrell Hillgar, C. B., is on her way out.

DISCIPLINE.

It more docility, without the more spirited adjuncts to the character of a true soldier, be but a tame and inadequate qualification, it is yet equally certain that all other material attributes are annulled in the absence of what is implied by, or comprehended in, the word "Discipline," which is, after all, the supreme military virtue.

We would not be understood to mean by the term "Discipline" simply the quality of a stolid submission to the caprices of an irrational Martinism, but such an intelligent exercise of the principle of self control as enables the soldier to perceive and appreciate both the wisdom and the dignity of a conscientious adherence to regulations which interdict such actions or lines of conduct as would, if allowed to be pursued, tarnish his individual reputation, no less than his military honor and virtue.

If men were in the constant habit of bearing in mind, in such a way, as that they should hourly influence their thoughts and actions, (in the way that good men are, unobtrusively influenced by their religion) the fundamental principles which should guide

them in the conduct of their calling for the time being, it would be sufficient for purposes of monition merely to advert to the significance of those principles, and, assuming a general intelligent comprehension of them, such reference would carry with it all the force which we are now constrained to derive from citation of the weightiest known authorities.

But the subjection of impulse to reason is as yet so imperfect, that we are only too glad to avail ourselves of the stimulant afforded by historical illustration to enhance the flavor of an ethical bill of mental fare which would otherwise probably prove both dry and insipid.

Excellent as is the conduct of the forces of the Dominion, instances of violation of military propriety, have been sufficiently numerous, and so not sufficiently recent, to render unnecessarily any apology for an earnest endeavor to attract to the subject the serious consideration demanded by its vital importance.

Let us, therefore, in the first place, hear what Napier, the historian of the Peninsula War, has to say concerning two or three notable cases of breach of discipline. An historian, be it remembered, whose ideas even on military subjects, partook almost as largely of the views of the advanced political liberal, as of those of the professional soldier, yet whose clear, and well balanced judgment cannot be questioned.

Writing of the siege of Zaragosa, he says:

"The two circumstances that principally contributed to the success of the defence, were the bad discipline of the French soldiers, and the system of terror established by the Spanish leaders. Few soldiers can be restrained from plunder when a town is taken by assault, yet there is no period when the moral responsibility of a general is so great. Will military regulations alone secure the necessary discipline at such a moment? The French army is not deficient in a stern code, and the English army, taken altogether, is probably the best regulated of modern times; but here it is seen that Lafore failed to take Zaragosa in default of discipline, and no wild horde of Tartars ever fell with more license upon their rich effeminate neighbors than did the English troops upon the Spanish towns taken by storm.

"The inference to be drawn is that national institutions only will produce that moral discipline necessary to make a soldier capable of fulfilling his whole duty; yet the late Lord Melville was not ashamed to declare in Parliament, that the worst men make the best soldiers, and this odious, narrow-minded, unworthy maxim, had its admirers."

The last paragraph of the above quotation should be of weighty significance to the soldier of the Dominion Forces. There are, it

is to be supposed, few Canadians who do not believe that their constitution is the best in the world, combining the fullest degree of political liberty with just so much of the sobriety incident to a monarchical polity as to induce a repose, so to speak, the absence of which is so painfully felt by Canadians who sojourn long in the States. Canadians are justly proud of the cheapest and best Militia system of the day, and they rightly entertain the highest opinion of their system of national education. And in truth the result of the Canadian form of Government, and Canadian educational institutions, is citizenship of a high order of intelligence, and possessing a strong sense of social and public duty.

So happy a political and social condition should furnish the army of the Dominion with the most intelligent, and therefore, the most self controlled soldiers in the world.

The fact that, as a general rule, Volunteer corps composed chiefly or entirely of what are conventionally termed "gentlemen," are the best disciplined, the most easily managed, and the smartest in manœuvring, is familiar to Volunteers of any extended experience. Numerous instances are within our personal knowledge. The admirable proficiency of the famous "Devil's Own" or Inns of Court Corps in London, will occur to the reader as a prominent example. A Volunteer Rifle Regiment in Victoria, Australia, so constituted, whose drill and discipline were irreproachable, also recurs to our remembrance.

But the same amenability to the requirements of discipline, is, apart from the conventional status above mentioned, also perceived among men whose social surroundings have been those of earnest religion, of high morality, and of the pride of respectability, and integrity. Of such, the Highland Regiments have at all times been conspicuous examples, and the remarkable testimonials to their admirable behaviour in the occupation of foreign towns, from the native people and authorities, are such as probably, no other forces either ever received, or perhaps, so thoroughly deserved. The Puritan soldiers of Cromwell's armies, men whose minds were enlightened and sobered, if not enlarged, by speculation in republican theories, and by study, intense if narrowminded, of the scriptures, may also be adduced as instances; as well as, to a certain extent, the soldiers of Gustavus Adolphus; and of William of Orange, largely drawn from countries standing comparatively high in the scale of intelligence, and political freedom of their day.

It would, perhaps, be little calculated to cause surprise that an occasional escapade should occur among bodies of men whose strong political feelings, under particular temporary circumstances, have been diligently wrought upon by unscrupulous political partisans; tho' it is undoubtedly, a mat-

ter of astonishment to find, as, if common report be correct, we have recently found a person in the position of an officer of the Force disgracing his commission by publicly expressing his opinion and his hope that the Dominion Forces if called out to suppress an infamous riot, would not obey their officers. Yet under our conditions of culture, our citizen soldiery ought to be beyond the influence of vulgar demagogues, and to be able to perceive clearly that his duty as a soldier is, while acting as such, to put aside all political party feeling, and regard himself simply as the representative of law and order in its highest form.

Let it be remembered in this connection, that the mischief of a violent and insubordinate spirit is not confined to its moral aspect or to its effect on the mere honor and responsibility of a corps, but that the most disastrous effects may result from its indulgence.

Loss of credit and honor to an army, or to a regiment, is a serious evil. And the grief inflicted upon a commander, by insubordination is so poignant, that, could those who have never held command under such circumstances, realize it, they would surely shrink from inflicting it. But the consequences of infringement of military regulations, or even of the indulgence of a capricious and fault-finding spirit, without absolute disobedience, may cause the wreck of brigades, of divisions, of armies, or snatch from a successful general his most glorious opportunity of victory. Let us, both from history, and from our own experiences, illustrate these positions. This is the language in which Napier describes the state of Sir John Moore's army during the retreat to Corruna.

But at this time the bad example of murmuring, given by men of high rank, had descended lower, many regimental officers neglected their duty, and what with the dislike to a retreat, the severity of the weather, and the inexperience of the army, the previous fine discipline of the troops was broken down. Such disgraceful excesses had been committed at Valderos, that the general issued severe orders, justly reproaching the soldiers for their evil deeds, and appealing to the honor of the army to amend them."

Let any man of feeling, picture to himself the state of mind of Sir John Moore at this time, the anxieties of the command of a retreating force, aggravated by the conduct of his own government, tenfold intensified by the misbehaviour of his officers and men, to him who can at all estimate the position, must needs be a pitiable one.

Now, we do not suppose that in the serious work of even a discouraging campaign, the cheerful alacrity, and the healthy stamina, the induration to hard work, and the generally high intelligence of the Canadian soldier would fail to sustain in his mind the conviction, that no adverse circumstances—no

depression consequent on them—can be, in the very smallest degree alleviated, but, on the contrary, must be very seriously aggravated by a reckless and undisciplined spirit. We believe, that the great majority are fully aware of the higher dignity of the man who can control his feelings of momentary irritation, and submit to wholesome, tho' at the moment, unpalatable restraint, for the general good, and indeed we may point to a proud example of discipline under suffering in the conduct of the Red River Expedition of Oct. 1871, under Col. Scott.

If encouragement in this direction be necessary, let men call to mind the conduct of highly disciplined crews, in numerous cases of wreck. That of Blight's boats crews for instance, in his terrible boat voyage, after the mutiny of the *Bounty*. The heroism of those noble soldiers who went down in parade order in the *Birkenhead*, after all means of escape had been devoted to the women and children, and those necessary to their attendance. Never was there a grand or example of the principle that if it come to a bitter end, and there be nothing before us but death inevitable, it is surely better to meet that death as brave men, than as cowards.

Yet, believing as we do, in the sterling qualities of our splendid national soldiery, and believing that they would not be found to fall short, in serious emergencies of any of the soldiers noblest attributes, we cannot blind ourselves to the fact, that there have been instances of a levity, to use the mildest term, which, is unworthy of the general character of our soldiers, and which has, at various times, tarnished regimental honor, and inflicted on officers the deepest obloquy.

What shall we say for instance of the by-stander's impatience which will manifest its disgust at the loss of a meal from the fault of bakers in supplying bad bread, by riotous conduct, instead of quiet and serious representation and remonstrance.

What can we say of men who will break open, and rob without any provocation or want, the canteen of a camp, and behave with such insolence to another regiment, as to cause the utmost difficulty to its officers, in preventing a serious breach of discipline in retaliation.

What shall we say of whole guards violating their almost sacred trust, and actually descending to robbery of the above, confided to their charge.

What can we say of men, who will consent to sully the reputation of their corps, by violent interference with the civil law, which it is their most imperative duty to sustain, or of officers who should countenance the instigations, by which men are led to such acts.

Yet these, and similar acts, are within our cognizance, to say nothing of others, which have been the subject of General Orders at various times, within the last six years.

It is very painful to us to li recathem, yet we hold it better to face and know our weaknesses, than to set them aside, as if they did not exist, and we cherish a firm belief, that by resolutely bringing sensible men face to face with them, we pursue the course most likely to guard against their recurrence again.

In order to exemplify the terrible effects of a caustic spirit amongst officers, it is only necessary to refer to the destruction of the light Cavalry Brigade at Balaklava. Kinglake is singularly and minutely graphic in his analyses of the bearing on the carrying out of orders, of the idiosyncracies, and peculiarities of mind and temper, of those entrusted with their execution. Read by the light of his interpretation, it is impossible not to perceive with perfect clearness, that the awful mistake which, while it crowned the English name with glory, consigned to destruction a brigade of the finest cavalry in the world, was the result of placing in high commands, two officers, who habitually allowed their mutual personal antagonism and a spirit of adverse criticism, of the orders of their Commander in chief, so to influence their reception and interpretation of them as to substitute an irritable, impatient, yet dogged submission, for a patient cheerful, and intelligent obedience. In fact, judicial blindness was the simple result of want of self abnegation, and terrible were its consequences.

On the other hand it must be conceded, that the Prussian army combines to a rare extent, the union of a stern but not vexatious discipline, with the intelligence naturally resulting from a sterling system of national education. To the presence of these conditions in the German forces, and their comparative absence, (especially the inferiority of discipline) in those of France, may be very materially attributed, the disastrous results to that great and gallant nation, of the war which is now furnishing us with the latest examples of the effects of arms, of tactics, of strategy, and of logistics.

Now, taking into consideration the advantages to the civilian soldier, so to speak, (by which expression, we mean to convey the idea of a soldier who is not a soldier all the year round) of the happy simplification of drill, which is continually progressing, and our comparative freedom from war office red tape, we would confidently ask what country, if not Canada, is best calculated to produce a citizen soldiery, possessing many of the best of those qualities which made the Germans victorious? Let this question sink deeply into the minds of those who, proud of their country and army, will necessarily have the spirit to desire that the latter may not fall short of any degree of excellence attainable.

Let us consider in one more aspect, the deplorable effects which may ensue from indulgence in that reckless and self seeking

spirit which leads men on, like overgrown school boys, to breaches of discipline at the moment apparently of trivial importance, but which, as the following example, also quoted from Napier, will show, have sometimes even saved a hostile army from utter destruction, and might easily, in that manner be fraught with the destiny of a nation.

Wellington, occupying the hills between Elisondo and St. Estovan, had Soult nearly hemmed in, in a deep and narrow valley.

A few hours gained, and the French must either surrender or disperse. Wellington gave strict orders to prevent the lighting of fires, the struggling of soldiers, or any other indication of the presence of troops; and he placed himself among some rocks at a commanding point, from whence he could observe every movement of the enemy. Soult seemed tranquil, and four of his gendarmes were seen to ride up the valley in a careless manner. Some of the staff proposed to cut them off. The English General, whose object was to hide his own presence, would not suffer it, but the next moment three marauding English soldiers entered the valley, and were instantly carried off by the horsemen. Half an hour afterwards, the French drums beat to arms, and their columns began to move out of St. Estovan, towards Sumbilla.

"Thus the disobedience of three plundering knaves, unworthy of the name of soldiers, deprived one consummate commander of the most splendid success, and saved another from the most terrible disaster."

Let us, if we can, imagine the state of mind of a man who should find that his reckless selfishness had been the means of losing a great victory. It is easier to imagine the state of others' feelings towards the delinquent. Any death would be too good for so miserable a scoundrel, were it not, that the inadequacy of any punishment to atone for the stupendous wrong, leaves the memory of the offender nothing but sickening contempt. Disgust and contempt, are, in fact, the predominant feelings with which the true soldier regards causeless breaches of discipline. There is far more misery wrought in the world by fools, than by knaves. Unhappily, we have seen in military life, folly and knavery combined, and the result is correspondent.

Believe us, brother soldiers of the Canadian Army, the calling of a soldier is high and honorable. It is not from the refuse of a population that any army should be recruited, least of all a defensive national force such as ours. Let us all remember what terrible effects may be produced by insignificant causes. Let us all resolve that each of our corps shall do no discredit to the intelligence of our country, and let us hope, that the bond of brotherhood existing between all members of our Militia, may, in the future, be strengthened and cemented by that mutual respect between all classes—privates, non-commissioned officers and officers—which can only rest on the basis of thorough responsibility.

On the Gunboat, *Prince Alfred*, arriving at Chatham, Ont. there to take up her winter quarters, the following addresses were presented to the officers and men, and an appropriate reply was made to each on their behalf by Captain WERT, the Government Gunboat Agent.

CHATHAM, Nov. 25th, 1872.

To the officers and men of the Gunboat *Prince Alfred*.

SIR.—Allow us, the undersigned, on behalf of the officers and men composing the 24th Battalion, Kent Active Force, to extend to you, on your first visit to the heart of this county, in your fine vessel, a hearty welcome. Your presence amongst us, brings to mind the fact, that the *Prince Alfred* is the second armed British war vessel that has ever ascended our river, the Thames—the first vessel of the class alluded to, being H. M.'s steamer *Mohawk*, which, in 1849, conveyed his Excellency Lord Elgin and suite, to the town of Chatham. In October, 1813, three gunboats of a foreign power, and on a hostile mission, did ascend the Thames but they never descended that river. Their remains now rest imbedded in the sands, and the iron balls, that were to spread havoc amongst the hearts and homes of the Canadian people in the old Western district, are now being occasionally fished up, to be exhibited as mementoes of a period in the history of our country, which produced great and good men, whose memory Canadians of the present day delight to honor.

We have no doubt, that if those brave spirits of half a century ago, had the presence on their side of so fine a boat as the *Prince Alfred*, manned and equipped with the skill of her present officers and men, a different page would occupy a position in Canadian history, than it at present contains. As to the future, we hope your mission may be one of peace; but, if it should be otherwise, we feel that the land force of our new fair Dominion, should have few more efficient, and valiant auxiliaries, than your noble vessel.

So far as the 24th Battalion, Kent is concerned, we feel, that we, officers of that Battalion, are, especially entitled to welcome your presence, since we have, on several occasions, had the pleasure of being on active service with the *Prince Alfred*, which enables us, the more accurately to testify to her general fitness for the service, and the thorough efficiency of her officers and crew.

Again, we most heartily welcome you, one and all, and may your stay in our midst be a pleasant one.

(Signed.)

DAVID SMITH, Lt. Col. Commander,
24th Batt.

A. B. BAXTER, Major.

JOHN J. J. THOMPSON, Capt. and
Paymaster.

T. K. HOLMES, M. D. Surgeon.
JAMES T. RILEY, Captain and
Adjutant.
H. G. REED, Lieut. and Quarter
Master,
RUFUS STEPHENSON, Capt. No. 2
Company,
B. M. SMITH, Capt. No. 1 Com
pany.
HARRY MENON, Lieut. No. 2 Com
pany.
JAMES G. WILES, Ensign No. 1
Company.
G. K. ATKINSON Ensign No. 2
Company.

To Captain WERT. The officers and men of
Her Majesty's gun boat *Prince Alfred*.

GENTLEMEN:

It is with pleasure, that the Members of the Board of Trade of the Town of Chatham welcome you, on this, your first visit to our harbor. It is a visit that we shall long remember, for many reasons, amongst which we may be permitted to mention a few.

1st. It is the second occasion on which a vessel of war belonging to Her Majesty's Government has been seen in our harbor.

2nd. It established beyond question, the fact, that vessels of the largest draft, sailing on our western waters, can navigate with safety our river, and can bring with them the products of the world, and can take from here the fruits of our industry.

3rd. But by no means the least, we feel a delight in honoring and welcoming to our midst those, whom it has pleased our Gracious Sovereign to honor. It is a matter of congratulation also to us, that you have come to remain during the winter, as it shows also, that our Government has not overlooked the importance of our harbour, a harbour that, we believe, has but few rivals, and none superior. We trust, that your association with our citizens during your stay amongst us, may be fraught with the most kindly feelings, and the warmest friendship, and the time may be far distant when you shall be obliged, at the call of duty, to lay aside the pleasant garb of peace, and assume the stern discipline of war.

Again, bidding you hearty welcome, we are

Yours etc.,

On behalf of the Board.

(Signed.)

A. W. SMITH, President.

N. B. MCINTOSH, Vice President.

SAMUEL BETLER, Secretary.

REMITTANCES Received on Subscription to
THE VOLUNTEER REVIEW up to Saturday,
the 14th Inst.

LONDON Ont.—Eas. Thomas Peel, \$1.00.

ST. ANDREWS, Que.—Lieut. A. LeRoy, \$2.00.

MARKHAM, Ont.—Capt. Robert Reesor, \$1.00.

CAMPBELL'S CROSS, Ont.—Lieut. Peter H. Mc-
Collum, \$1.00.

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The Volunteer Review,

AND

MILITARY AND NAVAL GAZETTE.

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

OTTAWA, MONDAY, DECEMBER 16, 1872.

LIEUT.-COLONEL WAINWRIGHT GRIFFITHS, at present on a tour through British Columbia, has kindly consented to act as the Agent for the VOLUNTEER REVIEW in that Province.

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

On and after the 1st January next, the VOLUNTEER REVIEW will be discontinued to parties in arrears. All those desirous of continuing their subscription will please forward them direct to the office of the paper. The expense of paying a travelling agent to collect subscriptions is too great, and we mean to discontinue it for the future. To those who have regularly paid their subscription in advance we return our sincere thanks

We have quite recently discussed the history of "Modern Artillery," and its application to warfare, especially with respect to its use at sea.

Our readers will remember that very decided opinions as to the value of arming ships with *smooth-bore* guns in preference to Rifled Artillery have been repeatedly enunciated by the VOLUNTEER REVIEW, and we now have to present to our readers an article from the *Scientific American* of 14th December on this very interesting subject,

It is the description of a *twenty-inch* smooth-bore gun, manufactured for the Russian Government, and presumably part of the armament of the *Peter the Great*, the iron-clad which has created so great a sensation in England.

"The weight of the weapon in a finished state is 41,022-22 tons; the weight of the projectile to be employed—a cast-iron spherical one—is 900lbs. In trying the gun, in all 313 rounds were fired, the nominal charge of prismatic gunpowder being about 117lbs. The experiments of firing were conducted on the river Rana, the high bank across the stream serving as a butt, which was at a distance of about 1,000 yards from the gun. The weapon was placed under an iron-plated covering of a peculiar construction. On the discharge of the piece, the concussion of the air was so great that in the village of Matorilow, situated at a distance of one-third of a mile, the chimney stacks fell in when the wind was blowing in that direction. The sound itself, although loud, was not deafening, and persons standing even under the iron plated covering were able to support both the noise and concussion of the air. The iron gun-carriage weighs 6.14-32 tons. The breech of the gun is elevated and depressed by means of a screw ratchet key. For facilitating the running forward of the gun a system of cog-wheels is introduced, and for the diminution of the recoil and the hoisting of the charge and projectiles special appliances are provided. The moving of this enormous mass of iron can be effected easily by three men.

"After the introduction into the military art of rifled cannon, the conviction became established of their unconditional superiority over the smooth bores. As regards guns of small calibre this opinion may very likely be correct, but with respect to naval guns of the largest calibres it would be difficult to give the preference either to the one or the other system. Without going into particulars of the merits or demerits of the one or the other description of weapon we will point to one important difference in the effect of the spherical projectiles of the smooth bores and the oblong ones of the rifled guns, the latter will hit an iron-plated target at a greater distance than the former, and, so to say, pierce it through; on the other hand, the former will produce a far

greater amount of concussion, shaking loose the rivets of the plates and bolts of the target and bounding on the plates and cracking them. Besides the difference in the destructive action of these weapons, there is an enormous difference in the cost of production. Thus for instance, according to a statement of Mr. Grassloop, the price of a 20-inch smooth bore gun will cost when produced in quantities about \$8,000, whereas an 11-inch steel rifled piece corresponding to the same could not be produced under \$30,000."

There is another point which has to be considered, and it is this, the introduction of rifled artillery into naval armaments has not improved the chances of hitting either at close quarters or at a distance; a vessel could be struck in practice at sea as many times and with as great an amount of certainty by the old 32-pounder gun as she could be by the best rifled gun with Diapart sights, range finder, and all those other appliances which the practical naval gunner in action would consign to Davy Jones' locker.

It is, moreover, notorious that a smooth bore can be fired more rapidly than the rifled gun, and it is not by punching holes in the sides of an iron clad an action will be decided, but by smashing her plates, starting the bolts and rivets of her armor, and driving in her broadside.

A very interesting problem would be decided by substituting this 900lb. spherical shot for the 600lb. rifled shot of the *Hotspur* in her trial of the strength of the *Glatton's* turret; we are of opinion that at a cable's length it would have demolished the turret altogether.

Taking the velocity of both projectiles as the same, 1,350 feet per second, then according to the *rule of work* the impact of the *Glatton's* turret would be 7,580 tons from the rifled gun, the smooth-bore according to the same rule would exert a force of 11-370 tons with an average charge of 31ls. less powder.

Except some great improvement, which the mechanical ingenuity of the age does not seem equal to, takes place in rifled artillery, it must give way to smooth bores of the power of this 20-inch gun, against which nothing yet invented in the shape of armor could stand.

We are entirely of Major MONRIE's opinion, that the *last-inch* of armor has been reached; that the scientific and mechanical ingenuity of England will become disabused of the sham system, with its ridiculous nomenclature, that a crude Yankee experiment forced on them, and a rational view will be taken of what should be the war ship of the future.

It is easy enough to determine that it will not be an "Island of Iron," like the *Devastation*, whose fighting as well as floating capabilities are doubtful, and whose

power of locomotion is dependent on accident; neither will it be the absurd turret ship with its principal weights on deck, the exact pattern of the unwieldy galleon of the sixteenth century, with castollated poops, forecastles, and low waists; but it will be what Major MONROE has pointed out, a vessel of a good capacity with a shot and-shell-proof deck, under which her armament will be, and over which her guns will rise to deliver their fire and sink below when it is done. She will carry many guns and little armor, except on deck.

The philosophy of this system depends on the fact, that naval actions are not fought inside the smooth water of a port or under the shelter of a break water, but in an open sea-way where the opposing vessels will have a list to port or starboard exposing more or less of the deck, and that is precisely the weak point of every ironclad yet constructed. No vessel at sea will lie on an even keel, hence the chance of hitting with rifled artillery is not greater than with the smooth-bore, for the motion of the gun-carriage and target are not the same, the roll and heel of any vessel being in proportion to her build and the disposition of her centre of gravity as well as of her rigging, spars, &c., if she have such appurtenances.

Russia and the United States, having the best deposits of iron in the world, will take the lead in producing cast-iron smooth-bore artillery for naval purposes. It is quite another question, however, whether either will under any circumstances become a great naval power. We think not. The constitutional aptitude of the people of both countries is entirely in another direction.

THE attention of our readers is directed to the following description of *Torpedo Engines* from the United States Army and Navy Journal of 7th December. The trial trip described took place on 21st November at the United States Torpedo Station, Goat Island, off Newport, R.I., in the presence of a distinguished party of officers of the United States Army and Navy. The vessel as described is 25 feet long, 2½ to 3 feet deep, and floats nearly submerged. The trial took place at high water. We have expressed a very decided opinion as to the value of such means of defence, and there is nothing in the detailed experiment that would warrant our altering it.

A good deal has been written to prove the efficiency of the *Torpedo* as a weapon of warfare, but it has not materially improved since GIANABELLI attempted to blow up the bridge which ALEXANDER FARNESE had thrown across the Scheldt during the siege of Antwerp in 1587.

The readers of "Mortley's" History of the United Netherlands won't find any material difference in the *modus operandi* on that occasion and in Mr. LAY's experiment. The value of the machine in both cases is just

the same whether operated by carbonic acid or clockwork. It may succeed once in ninety-nine times and with care can always be avoided.

Knowing what stress is laid on those experiments in England, and on the precedents furnished by the late internicine war in the States, we have collected material for a full history of recent experiments with submarine mines during that war, and shall give it to our readers as extracted from the United States' historical records.

It will be seen that the evidence is by no means favorable to the employment of the *torpedo* as an engine of defence, and it is totally against its offensive character, although it was tried under the most exceptional and favorable conditions for its success in both capacities in narrow rivers where it could be operated from either bank, and where its opponent had no choice but to go over it, or in shallow estuaries where the same conditions existed. On the whole, it was a decided failure.

"Mr. Lay's boat, the trial of which we described last week, as it appeared when resting on the ways ready to be launched for the experiment, is a cigar-shaped craft of boiler iron, twenty five feet long and pointed at both ends. At the stern is visible a screw propeller, and in the space beneath the sloping shell, forward of the screw, is the rudder, turning on a vertical post through the centre, instead of one end, of the rudder-blade. From the top of the shell rise two iron rods, near the bow and stern respectively. To the tops of these shielded lanterns may be fixed at night, enabling the navigator on shore to observe and direct the boat, while she remains comparatively invisible to the enemy. The bow contains a chamber for an explosive charge to be used when the boat itself is to be sacrificed for the destruction of an enemy's vessel; and if the charge is to be exploded by contact, as appears most suitable under the circumstances, percussion caps may be affixed to the tip itself, and to several nipples provided for the purpose. On other occasions torpedoes may be carried, as was the case in this trial, at the end of poles attached to the bow, and they may be exploded, to destroy small craft or remove obstructions, without detriment to the *torpedo-boat*.

"From the middle of the boat's bottom a double telegraph cable consisting of two insulated copper wires enclosed together in a gutta-percha coating, proceeds to the galvanic batteries of the navigator. These comprise twelve Bunsen cups, enclosed on the present occasion in a wooden case resembling that of a hydrant. On the top of this case, which forms a convenient table are the dials and keys or levers by which the operator makes and breaks or reverses the currents of electricity passing over the two wires already mentioned. On one of these is marked at opposite points the words *port* and *starboard*, on the other *stop* and *start*. The intermediate position between *port* and *starboard* is one in which the key or lever completes no circuit, it is marked *steady*.

"This is all that can be seen beforehand. The boat having safely slid into the water and been fairly afloat, the signal was given to the operator to start the engine, and the little craft, her light greenish back scarcely visible above the water, moved away at the

rate of about six knots an hour. The course was taken westward down the harbor, and maintained in this direction for about one third of a mile; then several turns were made to port and starboard, the boat obeying with great promptness the commands of the navigator, who stood on the shore watching the boat through a glass, and giving his orders to the operator at the dial. With equal promptness and ease, the engines were stopped or started at will. The boat can move in any direction except backward. There is no way of reversing the engines, though this could be provided if it were sufficiently important to justify the extra mechanism required.

"After the complete control of the navigator over the movements of the boat had been demonstrated to the satisfaction of all present, the order was given to return, and the boat came back with perhaps slightly diminished speed, and ran toward an old launch moored near a cluster of piles opposite the fort. It was intended to explode a *torpedo* against this launch, but a miscalculation of the course, or an unexpected eddy around the piles, caused the boat to swerve a little, and it was evident that she would neither strike the launch, nor be able (by reason of the mooring rope) to pass between it and the piles. The engines were instantly stopped, and in a minute or so the boat had drifted clear, when she was started again, and this time struck the launch fairly, exploding the small *torpedo* carried at her bow. Some splinters flew, but the damage inflicted was not clearly visible, and as it had nothing to do with the question under trial, no one cared to inquire into it. The great point was the controllability of the *torpedo boat*, and this was triumphantly demonstrated. Questions of speed, power, and method of attack are important; but they are mere details of expense or policy in construction and management.

"The party then partook of an elegant collation at headquarters, after which it was announced that the interior of the *torpedo boat* could be inspected. We shall not undertake without the aid of drawings to explain to our readers the somewhat complicated details of mechanism and arrangement. It will be sufficient to point out the leading features of the plan.

"The boat is divided into compartments. At the bow is the compartment intended for the explosive mixture. Next follows a compartment containing strong wrought iron flasks filled with liquid carbonic acid. The pressure in these flasks is 600 pounds per square inch, but they are tested when manufactured, to bear 1,700 pounds. They contain when charged about 400 pounds of acid. In the next compartment is the reel of wire cable, which is paid out through the bottom as the boat moves. This chamber is accessible to the water; but the tight bulkheads on either side prevent the entrance of water into either of the adjoining compartments, except in one place where an adjusted cock, opens while the boat is moving, and closes when she stands still, admits water into an iron water-bottom under the flasks of carbonic acid, at a certain rate, just enough to preserve the uniform flotation of the craft, which would otherwise rise farther and further out of water as the wire cable was reeled off.

"Forward of this reel compartment is that in which the driving and steering machinery is located. This consists of two electric batteries, "reducers" for the carbonic acid gas, and a pair of oscillating engines. Still further forward is the mechanism for steering, which will be presently explained.

"The throttle-valve is opened or closed by the operator on shore in this way; a current is made through one of the wires in the cable, having its ground connections in a copper plate sunk in the earth near the battery, and a copper plate on the boat, in contact with the sea-water. This current is conducted through a small electro magnetic apparatus, in which it determines the movement on the principle of the galvanometer, of a central armature. When the current is reversed, the direction of this movement is reversed; and in this way the course of a strong current from one of the boat batteries is directed upon one of two helical electro-magnets. The movement there produced is exactly on the principle of the ordinary telegraph machine. It operates on a valve admitting the high-pressure gas behind a small piston, the movement of which opens the throttle-valve proper. A reversal of the shore current changes the route of the local current, and in a similar way drawing the small piston back closes the throttle and instantly stops the engine. The apparatus for steering embodies a similar principle, only that the alternate action of the helical magnets is made through the change of a valve, to admit carbonic acid gas to one or the other of the two small pistons, the motion of which moves the rudder arm right or left, putting the helm hard "up" or "down." When the steering shore current is not reversed, but interrupted altogether, the rudder assumes, by virtue of an ingenious arrangement, the medium position of "steady."

"We have told how the gas is carried in liquid form. There is enough of it to drive the boat two miles. When it expands as vapor a great loss of temperature is the result, and this might diminish the pressure seriously. This evil has been experienced in other carbonic acid motors, in some of which the volatilization of a part of the liquid froze the remainder, causing the pressure to cease altogether. It is counteracted in this machine partly by the large size of the wrought-iron reservoir or flask, partly by the method of conducting the gas past the reel compartment to the reducers, viz., through small pipes running along the outside of the shell, and thus exposing a large surface to the water, which imparts some heat to the gas within. The same end is facilitated by the use of the reducers. These are small flasks in which the gas is expanded before entering the engine. The pressure in the original flask is, as has been said, 600 pounds per square inch, but this is reduced before entering the engine to 90 pounds.

"It will be seen that there is no attempt in this machine to employ electricity as a motor, except in the subordinate and light work of opening valves. Even this in the case of the throttle is performed by the gas. What the shore-currents do, is to determine the route of the local currents, and through them the motions of the rudder-pistons and the throttle piston. Every expert will see that this plan offers greater advantages of ease and certainty of operation than any in which electricity alone supplies the power either of driving or steering, or both."

The United States Army and Navy Journal of the 7th December, contains the reports of the secretaries of War and the Navy. From the first we learn that the military force of the United States cost last year \$35,372,157.20; that a sum of \$3,725,000 is to be expended

in fortifications, and \$12,302,800 on river and harbor improvements.

It advises that a large arsenal be erected on the Atlantic Coasts, that facilities of communication obviate the necessity of having one in every State, (but it is probable that the ease with which the Southern States armed during the late conflict had something to do with this recommendation.)

But the most important portion of the report refers to the services of the engineer corps, whose services appear to have been utilized for the following general purposes: works for coast defence, river and harbor improvements, and for the protection of the navigable rivers of the United States from deterioration whether from bridging or other causes. Geodetic and hydrographical surveys and reconnaissance, geographical and geological surveys; the construction of light houses, and the demarcation of the boundary between the United States and Great Britain.

The works on harbor and coast defence have so far progressed that "a large number of positions for guns and mortars of the largest calibre to be mounted behind sand parapets have been provided while others are in an advanced state of construction."

The battalion of engineers numbers 315 men, is in a high state of discipline, and furnishes instruction in engineering to the cadets at the Military Academy; while it has formed a school for torpedo defence at Willets Point.

Major H. S. Anson, commanding the engineer battalion has brought the torpedo system to such a satisfactory state that it has enabled the department to devise a plan of defence in connection with fortifications, simple in working and effective in results.

A most comprehensive system of hydrographic surveys for the lakes and River St. Lawrence has been in progress, and partly completed; while meteorological, geological and topographical statistics have been accumulated with great skill and the most valuable results.

It is very evident, that the Government of the United States understands the value of its military Engineer Corps, and we question whether, in any other country in the world, the trained services of such a body, have been utilized to as good purpose.

Our own military organization is totally deficient in this arm of the service, and it is inconceivable, how it has been neglected hitherto. We have been engaged in experimentalising on this matter in connection with the artillery arm of the service, but it is evident the people south of the 45th degree of latitude, understands the value of each service, and keeps them separate.

The navy of the United States consists of 173 vessels, carrying 1,378 guns, exclusive of howitzers, as follows:—

68 steamers, 929 guns.
31 sailing vessels, 322 guns.
51 ironclads, 127 guns.
28 Tugs.

This is a formidable force on paper, but it is explained, that of the steamers, five are unfinished, two in the service of the quarantine establishment at New York, nine under repairs, thirty seven in commission, and fifteen in ordinary. The sailing vessels, two are on the stocks, six in commission, six are used as store ships, six are hulks for quarters at navy yards, two are under repairs and eight in ordinary. Of the ironclad fleet two are in commission, 1 in use at the naval academy, and the balance undergoing repairs or laid up at League Island near New Orleans.

The report details the special duties of the squadrons on the following stations, where the United States are represented as follows:—

European Station	6 vessels,	110 guns.
North Atlantic "	11 "	77 "
South " "	3 "	33 "
Asiatic " "	12 "	116 "
North Pacific " "	5 "	65 "
South " "	5 "	51 "
Special service	3 "	10 "

Total 41 vessels 462 guns afloat.

The Inter-oceanic Canal, the work effected by the hydrographic office. Scientific experiments on steam boilers, a recommendation for the annexation of the Navigators Islands, and other minor matters comprise the bulk of the Report.

The last paragraph on the Torpedo System is the most important in the Report, altho' we differ with the Honorable Secretary on the historical fact that Fulton was the inventor of torpedoes, or rather submarine mines. There is little doubt but the Yankees were the original inventors of juck knives, and none at all about that of wooden nutmegs and baswood hams, but of the historical fact alleged, we are sceptical; the concluding sentence we are prepared to endorse.

"These cheapest but most powerful weapons of defence, called torpedoes by Fulton who invented them, were at first little regarded, but their use is now established as a necessity of naval warfare. England, Germany, Austria, and even China, are devoting much attention to their preparation and employment. This weapon seems to have an especial value to the United States. Our separation from the political complications of Europe produces a security which has resulted in notorious unreadiness to meet any sudden hostile emergency, which can come only from the sea, by an armed Navy in proportion to our strength or to the extent of our coasts. A well developed system of torpedo warfare would, to some extent, possibly to a large extent, meet this condition of unreadiness. Naval construction had not yet even remotely indicated any floating structure which can withstand the destructive power of the modern fulminate, skillfully applied. While

torpedoes are the cheapest of naval weapons, and within the means of the poorest nations, they are irresistible to the strongest and best prepared. The idea, even, of their employment appeals so strongly to the imagination, that powerful fleets have been kept aloof simply by their supposed presence. During the war of our Rebellion means had to be constantly used for warding off or catching floating torpedoes, and the bottoms of Southern harbors were dragged for stationary ones, which were pulled from their places to the shore; or exploded from a safe distance. The earlier use, both for attack and defence, of these means, devised under the pressure of immediate necessity, employed at the moments has already been largely improved upon, and needs still further elaboration. Further experiments are requisite, and the use of methods of attack and defence in the same hands, in order that each may perfect the other.

Torpedo warfare is still in its infancy: but it is the infancy of a most powerful development, and it is especially the policy of the United States to foster its growth as a weapon adapted to our situation.

The attention bestowed upon this subject by our service has not been without much fruit. A torpedo-boat, just tested at Newport, almost submerged, is controlled by human will acting at a safe distance. It advances, turns, or stops, at the touching of an electric key connected from the operator's hand by a wire unrolled from the boat. This boat carries 500 pounds of explosive material, which can be fired on contact with an enemy.

This subject is in its nature not a matter for much public illustration, and I will at this time only point to the many instances in which torpedoes have played an important part in recent wars, and add, that the judgment of the most careful and experienced officers in our service is unanimous and strong in favor of the use of every means of enlarging and improving our knowledge of torpedoes and of providing liberally for their investigation and use.

"It would be a grave error, however, while advocating the importance of torpedoes as one means of attack and defence, to forget that these will not alone suffice for naval purposes.

"The history of our own recent war show some of the uses for naval vessels, in which torpedoes can take no part.

"Men-of-war add to the security of our citizens in foreign countries, often semi-barbarous; they give protection to our commerce against illegal violence; they strengthen the hands of diplomatists in hostile or half-civilized courts. Situations are frequent in which the words of peace and of reason will, only be heard when supported by the argument of the presence of a man-of-war's battery.

"These considerations have already been frequently presented at length, and it is hardly necessary that I should pause to do more than call attention to them again."

REVIEWS.

The *London Quarterly* for October contains the following articles:—

The Duke of Wellington as a Cabinet Minister.

The completion of St. Paul's.
Baron Stockmar.

The Consciousness of Dogs.
Velasquez.

Journal of a French Diplomatist in Italy.

East African Slave Trade.
The position of parties.

The article on the completion of St. Paul's contains excellent views of St. Peter's at Rome from the south-east, and a front view of St. Paul's—ground plans of both buildings—a section of St. Peter's in elevation, a half section of transept and dome, and half section of nave and half elevation of dome and transept.

The Review is republished by the LEONARD SCOTT Publishing Co., 140, Fulton Street, New York.

We have to acknowledge the receipt of the *New Dominion Monthly* for December, it has an admirable portrait of the celebrated chief of the Mohawks, Joseph Brant, and the usual amount of valuable as well as instructive literary matter.

We have much pleasure in publishing an extract from the minutes of the Council of Manitoba, and correspondence relating to the conduct of the troops under Major Irvine, previous to the arrival of the present reinforcements, during a rather exciting period. As a large number of men, of whom the extract speaks, have returned home, we would wish our contemporaries in Canada, to see that the members of our Canadian army are not likely to lose their prestige in Manitoba:—

PROVINCIAL SECRETARY'S OFFICE,
Winnipeg, Oct. 4th, 1872.

Sir,—I have the honour to enclose herewith for your information, an extract from the Minutes of a Meeting of the Executive Council, held at Government House, Fort Garry, October 1st.

I have the honor to be, sir,
(Signed) Your obedient servant,
THOS. HOWARD
For the Prov. Secretary.

MAJOR IRVINE,
Acting Deputy Adjutant General,
Militia, Fort Garry.

Extract from Minutes of Council held at Government House, Fort Garry, Oct 1. 1872.

"The attention of the Council is called to the fact that the troops now on duty here are about to be relieved to return to the Eastern Provinces. The Council avail themselves of the opportunity to place on record, in their minutes, the high sense they entertain of the loyal and efficient manner in which officers and men alike have discharged their duties here.

They further advise that the Major commanding shall be desired to receive for himself, and convey to the officers and men under him the Council's appreciation of their services here, in which they have exhibited in a marked manner, the qualities which distinguish the British soldiers."

HEAD QUARTERS,
Adjutant General's Office,
Ottawa, Oct. 18, 1872.

Sir,—I have the honor to acknowledge the receipt of your letter of 8th inst., enclosing extract from Minutes of Council held at Government House, Fort Garry, on the 1st inst., relating to the conduct of the Force on duty there; and in reply have to express to you the great pleasure with which I have received intelligence of the men's good and soldierlike conduct, and to acquaint you that I will take an early opportunity of bringing the facts you have communicated to the attention of the Government at Ottawa.

It is a pleasure to know that the Council in Manitoba appreciate the services rendered by the Troops, and the knowledge that the conduct of the men has been good and

soldierlike, is highly satisfactory to this department.

I have the honor to be, sir,
Your obedient servant,
W. POWELL, Lt.-Col.,
—Manitoba] Dep. Adj. Gen. Militia.

REMARKABLE EXPEDITION.

The expedition about to be despatched by the British Admiralty, to undertake a scientific circumnavigation of the globe is described at great length by *Nature*. The vessel set apart for this purpose is the corvette *Challenger*, of 2,300 tons, under the command of C. S. Nares, R. N., well known as the author of a valuable work on seamanship who has seen a great deal of active service, formerly in Arctic exploration, and latterly in the Suez survey, which he now leaves to head this expedition. On the scientific staff are Professor Wyville Thompson, F. R. S. as Director; J. Y. Buchanan, of Edinburgh University, chemist; A. N. Mosely, of Oxford, naturalist; Dr. Von Willemoos Solm, of Munich, naturalist; John Murray, of Edinburgh University, naturalist. The three naturalists take charge respectively of the invertebrata, the vertebrata, and botany. Professor Thompson assumes the charge of the general zoological work. A photographer is also assigned to duty. The whole expedition is under the immediate direction of the hydrographic department of the Admiralty, and the ship is fitted out with a magnificent collection of scientific apparatus.

It is difficult (says the *Nature*) to over estimate the immense benefit which science must derive from an expedition such as this. Apart from the results of intense interest which may be expected from the deep sea work the principal object of the expedition and which must go far to elucidate a subject on which our knowledge is at present of the most imperfect description, abundant opportunity will offer for the accurate investigation of the animal and vegetable life of many highly interesting and yet imperfectly known or totally unexplored regions. The investigation of the floras of such islands as Fernando Noronha and the Morion Crozet, groups cannot fail to yield most instructive results, and it is needless to speak of the intense interest which centres in New Guinea.

The *Challenger* will sail from Portsmouth for Gibraltar, the first haul of the dredge will be made in the Bay of Biscay, if the weather should change to be favorable. From Gibraltar she will proceed to Madeira thence to St. Thomas, the Bahama, Bermuda, the Azores; from thence to Bahia touching at Fernando Noronha; thence cross to the Cape of Good Hope, and after a stay in that neighborhood, southward to the Crozetts and Marion Island Kerguelen's Land. A run southward will then be made as far as possible to the ice, and the course thence be made to Sydney. New Zealand, the Campbell and Auckland groups, Torres Straits, New Guinea, and New Ireland will then be visited. A long cruise of perhaps a year will then be made among the Pacific Islands; thence the expedition, passing between Borneo and Celebes, and visiting Luzon and its neighborhood, will proceed to Japan, where a stay of two or three months is expected. Thence northward through Behring's Straits, and then through the Aleutian Islands, southward to Vancouver's Islands, and so through the deep eastern region of the Pacific by Easter Island, and possibly by the Galapagos Archipelago to the Horn, and thence home. The voyage is expected to take about three and a half years.

THE TRAVELLER.

AT THE SOURCE OF THE NILE.

By Mrs. Hemans.

In sunset's light, o'er Afric thrown,
A wanderer proudly stood
Beside the well-spring, deep and lone,
Of Egypt's awful hood—
The cradle of that mighty birth,
So long a hidden thing to earth.

He heard its life's first murmur sound,
A low mysterious tone—
A music sought, but never found,
By kings and warriors gone;
He listened, to his heart beat high—
That was the sound of victory.

The rapture of a conqueror's mood,
Rush'd through his burning frame,
The depths of that green solitude
Its torrents could not tame;
There stillness lay, with Eve's last smile
Round those far fountains of the Nile.

Night came with stars; across his soul
There swept a sudden change,
E'en at the pilgrim's glorious goal
A shadow dark and strange
Breathed from the thought, so swift to fall
O'er triumph's hour—and is this all?

No more than this! what seem'd it now
First by the spring to stand?
A thousand streams of lovelier flow
Bathed his own mountain land,
Whence far o'er waste and ocean track
Their wild sweet voices call'd him back.

They call'd him back to many a glade,
His childhood's haunts of play,
Where brightly through the beechen shade
Their waters glanced away;
They call'd him, with their sounding waves,
Back to his father's hills and graves.

But darkly mingling with the thought
Of each familiar scene
Rose up a fearful vision, fraught
With all that lay between—
The Arab's lance, the desert's gloom,
The whirling sand, the red simoom.

Where was the glow of power and pride?—
The spirit born to roam?
His alter'd heart within him died
With yearnings for his home—
All vainly struggling to repress
That gush of painful tenderness.

He wept! the stars of Afric's heaven,
Behold his burning tear,
E'en on that spot where Fate had given
The mead of tolling years—
O happiness! how far we flee
Thine own sweet paths in search of thee!

INFANTRY LESSONS OF THE
MANŒUVRES.

(Continued from page 602)

Resuming this subject our contemporary observes that it was pointed out in the first article how plainly the manœuvres showed that the stiff British line is not adapted to the requirements of modern war; for the choice at the manœuvres being only between line and heavy columns, the columns were usually employed for advances even under artillery fire on ground which was especially favourable for line formation, by reason of its openness and freedom from obstacle; deployments being constantly made under heavy fire. When during the manœuvres line had been formed, their old advantages were lost, because the fire of rifled guns at ranges practical for them, but useless for the old smoothbores, flanked the line, so as to take them in the direction of their greatest depth. The next important question (our contemporary proceeds to say) is whether the flank attacks so constantly made were wise or the reverse. We hold them to have been wise, though not always perfectly carried out, and we will now attempt to show how modern improvements in guns and rifles render flank attacks almost imperative, and why they are now superior to the tactics of the great Napoleon, who, as a rule, broke through the centre of

the enemy's line. Napoleon and Wellington, carried the principles respectively of attack and defence to their highest development—highest, that is, so long as men fought with the old weapon. The Napoleon and Wellington of to day would change their system, not because they used to be wrong, but because the two great commanders would know how to adapt their tactics to the new circumstances. Leaving out of question for the moment the advantages of pursuing an habitual system of attack or one of defence, we will consider how attacks should be made for it is certain that one side at least must attack.

If we examine the old treatises on war, we find a number of plans given for arranging troops in order of battle. Two opposing armies used to proceed leisurely, and neither attacked till the other had made its dispositions. They were like two chess players arranging their pieces in the regular order before the commencement of a game and no wonder, for in those days war was constant; men of rank made it the business of their lives, looked to it for their name, their fame, and often even for their wealth, while the soldiers were either feudal servant, or mercenary who sold their services for pay and plunder sometimes to one nation, sometimes to another. The fiery attacks of the French in their wars of the Revolution gave the death stroke to the whole system, and Napoleon's genius found in the use of requisitions combined with contracts means of moving his troops so rapidly as to out-manœuvre and demoralise all armies led by generals who had been trained on the old system. What happens invariably in such cases occurred now. Napoleon's ideas were adopted and his methods copied to a great extent by other Powers. Some received them in their spirit, others according to the letter. England alone neither copied the letter nor accepted the spirit. Wellington's system was to act on the defensive, tactically, so it is assumed that the defensive must be right for all time. Wellington used his troops drawn up in line with artillery so mixed with them as to be able to take shelter in infantry squares when attacked, so nothing new must ever be introduced. Wellington met the offensive centre attack by a steady front and won, therefore the English must stand with solid impassiveness in every battle for ever and ever. This pride in old achievements and in the memory of a great chief is an excellent virtue worthy of a great and ancient people, but it may be overdone. Now that stiff line of battle and steady endurance of fire without replying have become impossible, may it not be well to ask what would Wellington have done had he lived and retained his youthful faculties unimpaired in 1872?

Suppose, first, that he would have adhered to the defensive, and that he was attacked by a Napoleon in the old centre attack fashion. He would have argued that his artillery, even if belonging to an army three times as numerous as any he ever commanded, would be able to concentrate its fire upon the advancing columns on the enemy without moving a single gun, supposing the pieces had been well placed at the commencement of the battle. His infantry fire, combined with that of the guns, would throw the enemy into disorder long before they came within reach of a possible charge, and they would inevitably break up. Would he then cause his infantry to charge with fixed bayonets? No, for the enemy would be too far off, and broken as they would be, their fire and that of their artillery would hinder his advance. He would know, however, that the flanks had been weakened to strengthen the front

attack; he would have made his dispositions beforehand, and while driving the defeated columns before him—not with the bayonet, but by fire—he would make a flank attack at the same time. Such, we believe, must be the fate of concentrated centre attacks in our days, and Napoleon, if he lived now, would not practise them, because at different ranges nearly the whole artillery of the defenders could be directed against the attacking columns. All reasoning from facts, all experience of the late war, tend to prove that a trained army, properly covered, either naturally or artificially, properly armed and supplied with ammunition, is unassailable in front with any hope of success. So long as a French regular army existed it never once failed to meet and hold back a front attack until its flank was turned. The author of the *Tactical Retrospect* 1866 tells how the fire of a defending force caused the attacking force to steam naturally towards the flanks. With later experience before us we may say that what the troops did by instinct was the right thing to do, and must in future be done systematically and by order of the generals. Von Moltke, in an article published by the *Militair Wochen Blatt*, in July, 1865, says that a line of troops with open ground in front of them can defend themselves against any front attack and be pretty sure of success. On the other hand, "As the chance of a front attack being successful becomes smaller so much the more certain is it that the enemy will direct his attention to the flanks, and so much the more important does it become that these should be well protected." His words have been verified in every battle between armies provided with breechloaders, and it seems impossible to avoid the conclusion that flank attacks supersede all others for the real decision of battles. Front attacks must be made, of course, to hold the enemy fast, and we now come to a very important conclusion based upon the rapidity of fire from breechloaders. *If an enemy attacks us boldly in front and we reply by a simple defence, it is almost impossible to know his strength, or to be sure that he is not very weak in front and massing his troops on our flanks.* For, if an equal force can hold its ground with ease against front attack, an inferior one can make the same impression for a certain time and aggressively. Such work was actually done frequently in 1870. Take for example, the battle of Mars-la-tour. The object of the Prussians was to hold Bazaino fast and prevent him from making his escape from Metz. The Third Corps was the first to arrive in contact with the French Army. There was no hesitation or doubt about its conduct, though the French were immensely superior in strength. It laid hold of Bazaino's army like a bulldog and never ceased its apparently reckless attacks, though perfectly certain not to succeed in driving the enemy back. It held him fast, and though it lost nearly 7000 men, maintained its position and its hold upon the enemy until supported by the successive arrivals of other corps. It is now a golden rule with the Prussians never to yield an inch of ground, because once yielded it is so hard to regain it. It is recognised that an inferior force in position can hold its own for a long time against front attack—and for this reason they are not afraid of weakening their front in presence of the enemy, so only that they can use the troops taken away for the purpose of a flank attack. In this the action on the last day of the manœuvres the battle of Amesbury as it was called, was wisely conducted against an enemy so prone to act on the defensive as was the Northern Army. A small ford did, in fact, hold the

attention of the Northerners directed upon itself for a long time, and would have held it still longer if the fighting had been real. Meanwhile, the Southerners turned the left flank of their enemy and, as we have previously shown, enfiladed his lines.

Close allied with the question of front or flank attack is that of a system of offensive tactics. There can be no doubt that almost all the German writers support the principle of active aggression in war. Yet we find an excellent example of their defensive fighting when Bourbaki attempted to raise the siege of Belfort and make a diversion in the east to assist Chanzy in his march upon Paris. Of course, the whole strategic plan of this movement was ridiculous, but that has nothing to do with the fact that the Germans, very inferior in force, entrenched and defended themselves for three days against all the efforts Bourbaki's superior, that is, in numbers, not in fighting quality. But on this occasion the Germans were only doing on a large scale what we have just said can be done on a small one. They were only holding their own to give time for the flank and rear attack of reinforcements hurried down to their support from the North.

Lieutenant Maurice, in the Wellington Prize Essay, recommends a defensive system of tactics for the English Army at present, but in doing so, his mind seems to have been strongly influenced by the consideration of the impossibility of attacking with any hope of success until the army has been trained to a more pliable formation than that of the stiff line. He says:—

"For this reason, then, if for no other, until a greater manœuvring facility—due as much to organisation as to training—has been acquired by our army, the defensive would be the *rôle* we ought to seek. Unhappily, no army can limit itself to the defensive. Even on the defensive, all that now remains in the power of the commander is to determine the moment at which he shall abandon his absolute dictation, and trust, as he launches his troops into counterattack to their readiness to conform, and their capacity for conforming, to the essence of his instructions."

Lieutenant Maurice speaks of the difficulty of decision upon such subjects, and their tendency to turn round in the hand when examined. He is greatly struck by the defensive power of modern firearms and by the enormous losses sustained by the Germans in their attacks upon positions. He proposes as system for the British Army regular endeavours to seize such positions as will be strategically offensive, and therefore oblige the enemy to attack them.

Now, we entirely refuse to argue upon the supposition that the British Army is not going to improve its formations for battle. Whether on the offensive or defensive something must be substituted for the stiff lines of battalions, or at least added to them to be used at discretion. We must suppose that an English force is able to attack. Otherwise, it may be as well not to take the field at all, for no one shows more clearly than the author of the Wellington Prize Essay, that the defence, to be of any value, must at some period or another be changed into counter attack. Surely the turning round process of which Lieutenant Maurice speaks show that one side alone of the tactical question will never give a perfect form. To our mind the answer to the tactical question of offence or defence is perfectly simple, though its practical application in war is more complicated than ever. If two thoroughly good generals were placed opposite to each other in command of troops,

equal in all respects as to marching and fighting powers, we believe that both of them would act partly defensively and partly aggressively. Everything else being equal, superior information as to the movements of the adversary would carry the day. Let us suppose, then, that both armies are being extended eastwards, in the endeavour to turn, one the right flank the other the left of the opposing force. We will suppose that A discovers the design of his opponent B. He will neither continue his own movement towards that flank, because it would be useless, nor will he make a decisive centre attack, because it would be both vain and costly, but he will avail himself of the defensive power of modern weapons by placing a detachment, inferior, perhaps, to the force with which the enemy is attempting to outflank him, in a position where it can defend itself vigorously and for a long time against the flanking force of the enemy. At the same time, he will himself attack the other flank of B's army, not hesitating to weaken his centre for the purpose. His attack may, perhaps, be answered in a similar manner by the enemy, if the latter obtain proper information. Indeed, we have as yet no experience of what will happen when two armies, equally trained, armed, and commanded, meet on the field of battle. If the troops be animated with the same antagonistic spirit of race which possessed the French and Germans during the late war, we can well conceive that the result may be bloodier than that of an action yet known to history. There may, evidently, be special occasions when a distinct offensive or defensive part must be played, as with Alvensleben's corps at Mars-la-Tour or the Germans near Bedford when attacked by Bourbaki; but, as a rule, when the forces are anything like equal, we believe there must be both attack and defence on either side. Two great powers—one moral, the other intellectual—are always on the side of the assailant. The spirit of men rises with the sensation of attacking. An enemy on the defensive seems by that very defensive action to be hiding, and therefore inferior in numbers or courage, and the assailants feel that they are making the battle, or at least giving its tone. The other power is that of actually carrying out your own plans while checking the development of those of the enemy. Both of these are very strong in favour of the attack, and we may add a third, which springs out of them. If attacked, you know not what is behind the enemy's first arriving troops; if you attack, you soon find out the weak points of his harness.

No greater proofs of the difficulty of front attack could be cited than the blockades of Metz and Paris, and the battle of Sedan. In these three cases the action of the Germans was eminently aggressive to begin with. All their marching powers, all their courage and aggressive faculty were used at first and only by means of their aggressive action vigorously carried out. For days together did they succeed in placing themselves in that strategically offensive, but tactically defensive, position where the enemy must attack the *in front*, for there was no flank to attack.

We do not argue against the proper use of the defensive in its place, but against plans based on the defensive as a universal system. English troops can resist its demoralising influence better, perhaps, than any other; but why should they be tried? Why not see what we can get out of them by a system based quite as much upon attack as defence? Call our habitual action as a nation by what smooth name you will, a

looker-on will explain it by asserting that there is no more aggressive nation in existence. How else come in that the empire extends over every quarter of the habitable globe, and that the sun never sets on the possessions of a group of small islands? What is missionary enterprise but aggression? What but aggression animates our mercantile spirit, which has led us as conquerors into the heart of China and Japan? Why do our athletes challenge the world to box or swim or row? why do we send yachts and cricket elevens to America, but because we have an insatiable thirst for aggression? If ever we should, unfortunately, be driven to make war, being prepared beforehand, we may be sure that the nature of the English soldier will show itself quite as adaptable to attack as defence, and we hold that English Generals should be as well prepared for the one phase of war as the other. We have previously remarked on the extraordinary abandonment of positions by the Northern Army, and we would now ask if the constant habit of acting on the defensive has not a direct tendency towards ideas of retreat? An excellent rule, and one worth impressing on the infantry, is that since, without doubt, the greater losses are incurred by those who are running away, the best way to act when in inferior force before the enemy, is to hold your ground, or even to attack boldly, trusting to be reinforced. But for success in such bold tactics it is necessary that all officers should have more responsibility, more to take the initiative than is permitted in our army. Every column should support every other column without waiting to get leave from the general, and furthermore, the bodies permitted to act with some independence must be smaller.

A very remarkable improvement in the marching power of the infantry was manifested this year at the manoeuvres. How it had come to sink so low as it had two or three years ago is not worth inquiry now. They who lamented the fall are now overjoyed at the rising. It had come to be a sort of axiom that British troops were slow marchers. Now we may speak without shame of the marches of the Germans or of our own Peninsular veterans. No doubt the English soldier is accustomed to a very high scale of food, and would feel the want of good living during a campaign. But English armies will always be small, and therefore easily supplied, providing a proper organisation is prepared in peace; and, when the actual necessity is before him, no soldier in the world faces hunger and sickness better than the Englishman. Much of the infantry at the manoeuvres had really hard work, and they had on several occasions to rest satisfied with salt pork and biscuit—officers and all. Yet the health of the troops was excellent, and they were rather improved than otherwise by their labours. The country may rest satisfied that the infantry soldier is as good as ever he was, and only needs steady persistence in the course of education so happily commenced to fit him for the foremost rank both in attack and defence. He is also much more intelligent than is supposed, more intelligent, indeed, than the average infantry soldier of some Prussian corps. Only the system pursued both with officers and soldiers in the infantry has a direct tendency to check independence of thought and action, and tie thinking beings down to a dull routine of monotonous marching and countermarching, instead of training them to the interesting study of the changes and the chances of modern war.

AN AUSTRIAN VIEW OF THE DEFENCE OF ENGLAND.

(From Macmillan's Magazine.)

BY BARON VON SCHOLL, MAJOR GENERAL, AUSTRIAN ARMY. EDITED BY LIEUT. COL. O. C. CHESNEY, R. E.

Since the death of Sir John Burgoyne, there is perhaps no one living who has made that special branch of strategy which deals with the value of fortifications so completely his own as the writer of this memoir. His Excellency General Baron Scholl is well known as lately occupying the post of Minister for National Defence in the Austrian Cabinet, an office which may be said to have been created for the time in order to give the reviving Empire of the Hapsburgs the special benefit of his counsels under new military conditions. He had previously held a post equivalent to our Inspector-Generalship of Fortifications; and his services had been specially called on for the necessary defence of the great Quadrilateral fortresses in 1859 and 1866. The very strength of their works, and the defensive strategy adopted by the Austrians, combined to prevent their engineers from being called on for more than preparation. But Baron Scholl is far more than an engineer. No scientific part of the military profession has escaped his grasp; whilst his study of military exigencies in other countries than Austria is so close that it is the Editor's belief, the result of personal conversation on the subject, that it would be difficult, perhaps impossible, to find any Frenchman at this moment so thoroughly conversant with the past and future of the defences of Paris (for example) as this distinguished foreigner. It cannot be a matter of indifference to the public to see his thoughts on our own defences frankly given us, and they are the more important as his views differ widely from those of the highest authority we possess.

The Editor of *Macmillan* having kindly offered this memoir, as of national interest, the benefit of its wide circulation it is necessary to say that its late appearance, considered as a review of Colonel Jervois' Royal Institution Lecture on "The Defences of England," delivered last year, is explained by the latter's having only fallen, in a complete form, into Baron Scholl's hands this spring, when visiting England after a close professional inspection of the works of Paris and by the delay of translation—for it was in English dress that it came over. The duty of compressing it has fallen to me in order to bring the paper within magazine limits; but I have striven to do this without treading on the author's ground, or depriving the reader of the benefit of any of his opinions on important questions. It is enough to add that the subject which Baron Scholl treats with such startling knowledge is doubtless studied on the Continent elsewhere than Vienna.—C. C. CHESNEY.

Colonel Jervois's pamphlet* was put into my hands during my last visit to England, with the request that I would give my opinion frankly upon the whole subject, and especially upon the fortifying of London.

The circumstance of my not being an Englishman may arouse suspicion in the reader, that I may not care to write what I really think, or that the proposals I may make would be contrary to the public inter-

ests of the country. May I be allowed as far as possible to clear myself beforehand from suspicion of this kind?

As an Austrian, I belong to a country which has never yet been at war with England, but, on the contrary, has often been its ally, and it is hoped may be so again. That Austria is the natural ally of England has indeed become almost a proverb; and when I had the honour, in the year 1851, of being presented to the Duke of Wellington, he said, "It is always a pleasure to me to see one of our old allies." I have also been personally connected with England, through a series of years, by ties of friendship and relationship, which my recent visit has served to strengthen. And if a man's word has any weight with the reader, will he accept mine, that I shall endeavour to treat this subject as though I were myself none other than a loyal Englishman?

Colonel Jervois' pamphlet appears to me divisible into two parts. For, while the first eight chapters treat of the general conditions affecting the defence of the mother-country its coasts, its colonies, and its commerce, the rest are exclusively directed to the necessity of the fortification of London. And it would seem to me as though this were in the main the object the writer had in view.

I not only agree with Colonel Jervois in all that he advances in his first eight chapters, but would also add to his arguments the following:—

I. AS TO GIBRALTAR.

In an article which appeared in 1869 in the publications of the Austrian Engineer Committee, I endeavoured to set forth the great importance of Gibraltar to England. The Straits, indeed, are not actually so narrow at that point that they could be closed by means of heavy guns planted on Europa Point; yet the bay of Algeiras, adjoining on the west, affords good shelter for a fleet ready to attack in flank any enemy who should venture to pass the Straits. By this means, England, in the event of war, at once cuts in two the navies of all such Powers as possess fleets on both sides of the Continent, as is the case with Spain, France, and Russia; she may at her will confine the navies of the Mediterranean (as the Italian and Austrian) to that sea, and prevent all others from entering its water.

Besides this, Gibraltar forms a station for coaling on the all-important road to India through Egypt; and Nature herself has already so fortified it that it has become a proverb to say of any other very strong place, "It is a second Gibraltar." I agree therefore, in strongly combating the opinion of those who talk of giving up Gibraltar.

In view of the interests of England I would not even hear a word in favour of taking Ceuta in exchange for Gibraltar, for Spain could not reimburse the expenditure which has been made upon Gibraltar; and besides, the Bay of Ceuta is unfavourably situated with regard to the Straits compared to that of Algeiras, and is more exposed to the weather. Ceuta could never be made by any art so strong as Gibraltar; and finally the glorious memories which attach to the Rock would be wanting to inspire the garrison in case of an attack.

It is undoubtedly true that the Spaniards could incommode ships lying in the Bay of Gibraltar, and could even cannonade the harbor. But for this there are two remedies—either let England acquire the Spanish

territory about the Bay of Algeiras and fortify it; or let England keep good friends with Spain, which is all the easier, because Spain is at present much interested in cultivating the support of England.

(To be continued.)

BREAKFAST.—EPPS'S COCOA.—GRATEFUL AND COMFORTING.—The very agreeable character of this preparation has rendered it a general favorite. The *Civil Service Gazette* remarks:—"The singular success which Mr Epps attained by his homoeopathic preparation of cocoa has never been surpassed by any experimentalist. By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition and by a careful application of the fine properties of well-selected cocoa, Mr. Epps has provided our breakfast tables with a delicately flavoured beverage which may save us many heavy doctors' bills." Made simply with boiling water or milk. Sold by the Trade only in 1lb., 1/2lb., and 1/4lb tin-lined packets, labelled—JAMES EPPS & Co., Homoeopathic Chemists, London, England



TO CONTRACTORS.

INTERCOLONIAL RAILWAY.

THE Commissioners appointed for the construction of the Intercolonial Railway, give Public Notice, that they are prepared to receive Tenders for the erection of Passenger and Refreshment Building, Freight Building, and Engine House, at Campbellton, N.B., and for Passenger and Refreshment Building, at New Castle, N.B. Plans, Specifications, and forms of Tender may be seen at the Office of the Chief Engineer, Ottawa, and the Engineers' offices at Rimouski, Dalhousie, New Castle and Moncton.

Tenders may be for the whole, or any less number of the buildings, and will be received marked "Tenders for Buildings," at the Commissioners' office, Ottawa, up to 12 o'clock noon, on FRIDAY, the 31st January, 1873.

A. WALSH,
ED. B. CHANDLER,
C. J. BRYDGES,
A. W. McLELLAN,
Commissioners.

Commissioners' Office,
Ottawa, Dec. 4th, 1872.

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WELLAND CANAL ENLARGEMENT.

Notice to Contractors.

CONTRACTORS are hereby informed, that the Plans, Specifications, &c., of the nine Locks, Weirs, and other works, on the new portion of the Welland Canal, between Thorold and Port Dalhousie, will not be ready for inspection before FRIDAY, the 20th instant.

By order,

F. BRAUN,

Secretary.

Department of Public Works,
Ottawa, 7th Dec., 1872.

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* "The Defensive Policy of Great Britain considered in a lecture delivered at the Royal Institution on May 14th, 1871." By Colonel W. F. Drummond Jervois, R. E., C. B., Secretary of the Committee on Defences, and Deputy-Director of Fortifications. London: 1871.