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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, SEPTEMBER 30, 1872.

No. 40.

NEWS OF THE WEEK.

The weather throughout England has been very tempestuous: snow fell in Sheffield on the 23rd Sept., and considerable damage has been done on the coast.

As we anticipated the advance in the price of coals has caused increased expenditure in running the Lancashire Mills, and this is sought to be obviated by reducing the hours of labor.

The opinion of Sir Alexander Cockburn disagreeing with his colleagues of the Geneva arbitration on the legality of their decision is published in the *London Gazette*. It makes a pamphlet of 250 pages.

The English Court will go into mourning for the King of Sweden.

The Princess of Hohenlohe, half sister of Queen Victoria, is dead.

Sir John Colridge and other Jurists are advocating a codification of English laws.

A meeting of the members of the League Sebastian at Dublin on the 20th, took steps for the formation of an organization to afford material aid towards the restoration of the temporal power of the Pope.

The abuses to which steerage passengers are liable in crossing the Atlantic is exciting considerable attention in England. It is a disgrace to our civilization that this whole question of Emigration has not long since been specially dealt with by the Imperial and Dominion Governments.

There is a movement on foot in France to appoint a Vice President, the Republican ideas having left the welfare of 33 millions of people dependent on the life of a frail old man over 76 years of age.

Edmund About was discharged from custody at Strasbourg.

The Public banquet at St. Etienne in celebration of the advent of the Republic was prohibited.

The Russian Minister, Count Orloff, assured M. Thiers that the Czar would not have attended the meeting at Berlin if it involved anything prejudicial to France.

The French Government has paid 57,000,000 francs to Germany, completing the first half milliard of the war indemnity.

In addition to the creation of the office of Vice President it is proposed to create an Upper Chamber and a new electoral law.

Eighteen thousand communists are yet held in confinement by the Government; it is intended to reduce the number one half retaining only such as are charged with murder, theft, and arson for trial.

The German Minister says he cannot reside in Paris owing to the incivility with which he is treated. It is announced that he will be withdrawn and Germany be represented by a Consul.

It is also stated that as the Bishop of Ermeland still persists in denying the sovereignty of the State. The Government intends at the next session of the Prussian diet to provide means for meeting the scruples, reservations, and encroachments of the church, The State appears to be thoroughly intent on clearing out the Jesuits.

A telegraphic despatch in cipher of four hundred words, signed A. Napoleon, was stopped at Berlin by the authorities.

It is reported that a large reduction of the army would follow the payment of the second milliard of francs of the French indemnity.

The *Old Catholics* are holding a large and interesting congress at Colonge; several English and United States Bishops attended its opening.

The Spanish Budget proposes to meet the excess of expenditure over receipts by withholding the subsidies of the clergy.

The Spanish Court has gone into mourning for the King of Sweden.

The Minister of Finance expresses a hope that the Budget, which will be presented to the Cortes on Monday, will have the effect of permanently restoring the financial equilibrium of that country. The Cortes made a complete organization on Monday, and the annual Budget is to be laid before it on Tuesday. The Finance Minister's estimates for expenditure of next fiscal year is understood to be no less than 580,000,000 peseta.

The Austrian red book has just appeared. It contains 69 documents, the most noteworthy is Count Andressy's diplomatic circular, on assuming his present office, and the replies of the Austrian representatives, showing the confidence which his appoint-

ment inspires abroad. There are interesting despatches also, on the rights of private property at sea, in time of war, and on the labour question in England.

The Financial Committee of the Reichstag is busily engaged with the annual budget of the Minister of War.

The anniversary of the occupation of Rome, by Italian troops, was celebrated on the 24th inst. with much enthusiasm. The city was profusely decorated. The Pope had visits of condolence from his adherents, and addressed his visitors, lamenting the misfortunes of the Catholic Church and the injustice done to it by the Italian Government.

A despatch announces the safe arrival of Adjutant General Robertson Ross at Rock Mountain. He is accompanied by his son. He has had a fine grizzly bear on his way.

Colonel MacPherson, late Deputy Assistant Adjutant General, has been appointed chief clerk and accountant of the Militia Department.

A detachment of the B Battalion of Canadian Artillery and some volunteers, to the number of 49, left Quebec, on the 23rd for Fort Garry, Major E. Taschereau, of the B. Battery will command the Artillery in Manitoba, and Capt. M. Duchesnay will command the detachment of Canadian Artillery on St. Helen's Island.

Gunner Samuel Sally, B. Battalion, aged 18 years was found dead last night on the road between the Grand Trunk Station and Russell's ship yard, Levis. An inquest was held on the body to-day, the result being a verdict of "Death from congestion of the lungs." Deceased was a native of Montreal, belonged to a good family, and possessed a superior education.

A Washington special says, that nothing has yet been settled concerning the time and method of auditing private claims growing out of the deprecation of the Anglo-rebel cruisers, but it is quite probable that Congress will provide at its next session for their ascertainment, without waiting for payment of the money to this government by Great Britain.

WIMBLEDON CAMP.

The picturesque beauty of the county of Surrey is proverbial in England, and, if there is one part of it in the vicinity of London more exquisitely pretty than another it is the spot selected for the July annual meeting of the British National Rifle Association. Wimbledon is one of those country resorts occasionally to be met with in England on the confines of great manufacturing cities, almost touching upon the black smoke, but offering to the weary citizen, in place of the heat, dirt, and unrest of crowded streets, fresh air, and green fields, and by lanes. But half-an-hour's ride in the train from Waterloo bridge, during which one appears to be perpetually travelling through interminable London, and but ten minutes ride from the river-side town of Putney—the scene of many a well-contested boat race—the common of Wimbledon, on which the camp is pitched, overlooks some of the most charming scenery to be found anywhere in Surrey. Richmond in the distance, close upon Bushy Park, with its glorious acres of towering chestnuts; the Thames meandering along like a thread of silver in the beautiful landscape, for the time cut off by the trees, and again reappearing from behind some picturesque spot, the country beyond undulating throughout, now opening into table lands of rugged heather-covered commons, then falling into cultivated valleys, or rolling in deeply wooded plantations to the verge of well-trimmed fields and gardens; and the substantial well-looking English houses dotted here and there, go to make up a picture whose charming combination of natural beauties cannot be found elsewhere out of England. Saying that we have chosen the direct line from the huge city by the London and Southwestern railway, conveyance for the moderate sum of sixpence can be had from Wimbledon town to the common itself, approaching which one catches sight of a dazzling range of distant tents, breaking the luxuriant view of Richmond park, with its magnificent groves of trees. For a shilling that goes towards defraying the expenses of the meeting, we are free of the camp, which perhaps the reader will be good enough to join us in inspecting. The ground upon which the tents are pitched is enclosed by a boarding, running round nearly the whole extent of the common for about five miles. Entering by the main, or "Putney carriage entrance," which is almost blocked by constant and successive arrivals of omnibusses, carts, cabs, vans, barouches, gigs, and phaetons, the first object that strikes the eye is the admirably appointed tramway managed by troopers of the Royal Military train, and laid down by men of the Royal Engineers for the use of volunteers and others in camp. This railroad, as we should term it, runs from a little beyond the 600 yards range, past nine other ranges, extending probably for a distance of a little over half a mile, to the executive officer's tents, thus affording facilities for the immediate adjustment of any nice point that may arise at these ranges during the shooting. The charge for a ride is three pence, and adopting this inexpensive method of getting to the extreme left of where we entered, we find ourselves in the camp of the Grenadier Guards—select men from that regiment who for a slight remuneration act as "markers" at the butts. A special feature of this camp— which, by the way, is a perfect model of cleanliness and neatness—is its field hospital tent. This, with another in the immediate vicinity of the volunteer camp itself,

is under the charge of one of the most experienced surgeons in the British army—Surgeon Major Wyatt, of the Coldstream Guards—an officer who originally earned his reputation for treatment of gun shot wounds in the Crimea, and who since then has added to his military surgical knowledge by passing through the horrors and privations of the Prussian siege of Paris as a volunteer on the Medical Staff of that capital. His colleague is an officer who should be known to us, for he saw service with our army at Vicksburg. His name is Mayo—Assistant Surgeon Mayo of the "Devil's Own"—and he wears upon his breast the decoration of the Iron Cross the services rendered in the German hospitals during the late war. Peeping into the officers mess tent, rough and tumble, but redolent of the good things that lay temptingly displayed for the seven o'clock dinner, and bestowing a cursory glance upon the tents of the men and the military canteen, we walk a short distance to the two 1,000 yard ranges. The thought at once occurs to us, "But who on earth can see the targets."

"Do you mean to say," we ask in a friendly way of a staff sergeant in scarlet standing at the firing point; "Do you mean to say men put a bullet scientifically, without 'fluking'?"

"I rather think they do," replies our new found military friend, "if they didn't do something more than merely to put the bullet upon the target, if they didn't for instance make a bull's eye occasionally, or maybe a 'contro,' the Queen's prize of £250 I'm thinking would go a begging."

We express our astonishment, the targets appearing to our inexperienced eyes like upright posts on the horizon, and pass on. A few yards, and we are at one of the firing points of the 600 yards range, where we find a match going on. There are four targets at this one range, and consequently there are four squads hard at work, an officer of the regular service and a staff sergeant being in charge of each squad. Every man is in the uniform of his corps, black, gray, green or red, and the weapon used is the Snider breech loading rifle. A man steps forward with military precision, there is no slouching, halting or hesitating, a perfect silence is maintained, crack goes the rifle, ping flies the bullet, a disc appears from the mantlet of the marker, over the spot made by the bullet upon the target, and "outer" says the sergeant, "two" says the officer, and "two" is scored on the books of both. We stay here awhile and find that the contest is the second stage of the "Alexandra" prize, founded by the Princess of Wales, the value of the prize is £50 and the conditions are seven shots from any position at 600 yards. This £50 is in addition to £752 worth of prizes shot for in the first stages of the "Alexandra"; the winners in the first being allowed to shoot in the second. Further on we come to a second 600 yards range with targets marked 5, 6, 7, 8; shooting going on as before. An officer was good enough to inform us of there being more than fourteen of these 600 yard ranges ahead so we got back to the tramway, and in a few minutes found ourselves in the Volunteer Camp, and in the group of council tents, where are to be found the official staff each in his separate department. A few brief remarks about the council, of which it may be as well to state the Earl of Ducie is the present President. During the meeting the council resides *en permanence* in the camp, and upon it devolved the routine administration of every matter connected with the inner life of the camp; the arrangement of the details in accordance with the varying

items of each days programme; the determining of disputes which are constantly arising between the several competitors, requiring great nicety and discretion in their adjustment, and the general receipt and disbursement of the funds of the Association. Subordinate to this species of supreme court any decision of which is absolutely final, is the executive officer, a captain of Royal Engineers; the secretary an army officer, the head of the Statistical Department, army officer, and the resident royal engineer, Captain Drake. Besides these, officers of the regular army likewise fill the positions of camp commandant, camp adjutant, and camp quartermaster but, it must be borne in mind that all officers of the regular service on duty at the camp are employed there at the special request of the Association itself, and not by way or interference on the part of the War Office. The meeting lasts for a fortnight, and during that period the most rigid military discipline prevails in camp. No amusements whatever are permitted in camp after eight p. m., and all dances, picnics, and fireworks, are absolutely prohibited until the last Saturday before the camp is struck. At daybreak is gunfire, and at 5 a. m. the bugles sound the reveille. At 8.30 the parade is called, and at 8.45 the different squads are marched off to the ranges, where firing takes place at nine precisely. At twelve noon, "cease firing," is sounded, and an interval of rest is allowed until two, when firing commences again and continues to gun fire at six o'clock. After this hour the time is the men's own until "last post" is sounded at 9.30 p. m., when all lights must be put out, and the officer of the day go his rounds. As to the convenience of the camp: The War office for a trifling sum lend the tents to the Association, one with the necessary bedding, water proof sheeting, etc, being allowed to every four men except of course in case of officers. All cooking utensils are provided by the men themselves, and each regiment also provides its own cooks, and makes its own arrangements for messing; it may be observed, however that there is a fine building on the ground kept by an experienced restaurateur from which are daily issued provisions most excellent by thousands. We subjoin some items in the list of prices laid down by the Association.

FIRST CLASS.

	s.	d.	c.
Breakfast.....	1	3	0
Dinner with soup.....	1	6	36
Ditto. with soup and fish.....	3	6	85
Supper.....	1	0	25
Cup of tea or coffee.....	0	3	6

SECOND CLASS.

Breakfast.....	1	0	25
Dinner.....	1	6	36
Supper.....	1	0	25
Cup of tea or coffee.....	0	2	4

The personal comfort of the men in camp is not lost sight of, there being an excellent covered lavatory with accommodation for one hundred, vases for a penny, soap, clean towels, and all the necessary convenience for washing, and brushing up, are provided; moreover the association permits a shoe black brigade to reside in the camp for the benefit of members. Before "doing" the camp *in extenso*, it must be remembered that we are but yet at the council tents, it would be as well possibly to note certain other conveniences in this camp of the British National Rifle Association. First and foremost we have a police camp and a police office, very necessary to warn off evil doers. Then we have a telegraph office un-

der the direction of competent clerks, close upon the sister department, the post office. A short distance from both is a newspaper office, hard by to a very large tent forming a canvas club room, the lounging and reading place of the camp *quid nunc*. Exactly opposite to the large refreshment building is the exhibition tent, which we have no time to go through; but just peeping into it we see upon lengthy blue velvet covered tables, guarded by policemen, thousands upon thousands of pounds worth of prizes; two especially catching the eye, the Elcho challenge shield of oxidized silver, that requires four stout fellows to carry it, and the yet more massive silver cup presented by China, of such exquisite workmanship, that it occupied its engraver, Lee Ching by name, two long years in engraving it. Leaving the "exhibition" we next come upon the great "bell tent" erected to protect the camp folk from the sun's rays during the celebration of divine service on Sundays; and another excellent Wimbledon institution, a place of gossip and a haven of rest erected exclusively for the use of lady visitors.

Starting from where we were before entering upon this last digression, nearly opposite to us running almost due south, is the Wimbledon bazaar, a bazaar in the Indian sense, a long narrow street of tents gaily decorated with flags and banners, thronged by volunteers of every color and pattern, some with Indian puggheries, some with white cotton turbans (for the heat is great) all hurrying to and fro like ants upon a sand hill, every other man carrying a gun upon his shoulder, each with a look indicative of business. This bazaar is simply a street of tents owned by many of the leading London tradesmen selected by the Association who offer for sale articles for volunteer and military use, and novelties in the form of camp necessities. We'll just for a moment look into one to give the reader an idea of the kind of things offered for sale. Here in tent No. 1, for instance is an excellent and simple valise kit, tested and found to answer well in the field, for carrying the regulation 40 lbs. weight of necessities to which all subalterns in the British army is restricted. Not far off is a camp bedstead, which in one form is a comfortable bed, being convertible in a few seconds into a table and two chairs, the whole weighing but 20 lbs. Here is another little camp luxury in the shape of a valise weighing 7½ lbs. in which the inventor packs a trundle bedstead, air pillow, bath, wash stand, basin, bucket, campstool, box of candles, and lantern, the weight being 29½ lbs. 10 ozs.

Stay, what is this? Office of the *Earwig*: *Editor's Box*. Yes, the volunteer camp at Wimbledon has its daily newspapers printed in camp, and edited in camp and sold exclusively in camp, and the proceeds of its sale, after paying expenses, go towards buying a charming work of art, of blue enamel and gold in the shape of an *Earwig* for the supporters of the journal making the greatest score at 500 yards with the Snider rifle.

Now we must have a look at the arrangements of the camp of those volunteers who are the actual supporters of the meeting. Facing south still, the *coup d'oeil* is exquisitely pretty. To the right is the Windmill left for picturesque beauty, but never working. Then the cottage with its charming tents, gardens, parterres of beautiful flowers—hospitable owner of the whole for the time being—Earl Ducie, the President. In front runs a perfect forest of flagstuffs from one of which flies our National ensign side by side with the ensigns of France and England. Then the group of council tents, to which I have already referred; to the im-

mediate left of us being the fine building, ornamented with flowers, baskets and decorations—known to the residents as "Jamie-sons," but to the reader as the Wimbledon refreshment tent. Away to the front are the butts again, ranges, 1,000, 800, 600, 500, 200 yards, not forgetting the "running deer"—with the rich back ground of Coram Wood in the distance. It is just after "gun fire" at 6 o'clock, and the evening is getting on, and the canvas city with, to be precise—its 2062 residents, wears a good deal of the look assigned to Vanity Fair in old illustrated editions of the "Pilgrim's Progress." The work of the day is over, the firing has ceased, the excitement of making up the scores has been got through and the deserted butts look like phantom targets. The mess dinners have been finished and have reached the cigar and coffee stage, and the volunteers are out and about, enjoying themselves in the eventide; as we pass the well kept garden of the N. B. Association's Secretary to turn round by the tasteful encampment of the camp Staff, glorious with the floral display of bedded plants, and trickling fountains, on our way to the camp of the Civil Service Regiment. We find that the London corps having regimental camps here this season are the Victoria's, the Hon. Artillery Company, the Civil Service, the 37th Middlesex, the London Rifle Brigade, the 2d and 3d City of London, the London Irish Regiment, the St. George's, the South Middlesex, the 19th Middlesex, and the Queen's Westminster volunteers. Pasing down through a long alley of tents some eight lines deep on both sides, each tent, with a pretty little pennon of the colors of the regiment flying from its peak, we come upon the camp of the Victoria's, a celebrated London corps, some nine hundred strong, whose uniform is of black, thickly braided with black velvet facings, something after the style of that worn by the Black Brunswicks in the picture we are all so familiar with. This camp is a perfect model as far as all its arrangements go, from the tent troughs dug to let off the rain, to the admirable field kitchen under the supervision of volunteers corps. The band of the regiment is playing in the enclosure in front of the officers' mess tent, which, by the way, is a perfect gem of a garden, and there are some hundreds of guests present in the shape of a bevy of ladies in the lightest of muslin dresses.

Marking down an index pointing to Glen Albyn, our our eye catches sight of "the Ruddy Lion rampant in gold" and we know that we are upon the camp of the London Scots regiment. There right in front of us forming one side of a square of tents as a beautiful marquee well decorated with stags' horn moss, stags' heads, and thistles, reminding us at once of the Lind o'cakes, the mess tent of the officers and members of the Scottish regiment of London volunteers. Hardly any of the tents as far as we can guess by peeps through the open curtain chinks are occupied solely by their lawful inmates, and in the gaily planted enclosure reels are being danced, and Scottish sport and pastimes indulged in, the sight of which would rather astonish some of us Americans who don't know what an immense amount of fun a Scotchman gets out of throwing about an average sized cannon ball. Nearly all the regimental camps are in appearance the same except in the matter of distinctive floral decorations. The St. George's Rifle regiment, for instance, prides itself on its roses, the badge of the corps, the Civil Service on a very choice collection of carnations and geraniums; the London Irish volunteers, as befits them, are nice in the matter of shrubs,

everything looks very green, the turf is well watered, and well rolled in front of their encampment; the Hon. Artillery Company pay much attention to ferns; the Queen's Westminster to little beds of mignonette and geraniums, and so on; each encampment vies with its neighbor in presenting as charming an appearance as possible. It is scarcely necessary to dwell upon the amount of hospitality shown to visitors to Wimbledon, most camps that we have visited are in this respect the same, but if there be one regiment at Wimbledon more hospitable than another, it is the regiment recruited from members of the English Civil Service, and to this camp we take upon ourselves to advise all American gentlemen to go, if they want to understand what is meant by English hospitality, refinement, and courtesy. The stranger shall know this camp by its blue ensign, with the Prince of Wales' crown and feathers as its heraldic bearing; and the members of the Civil Service regiment by their uniform of iron gray, blue facings, and silver.

We are warned that the length of this article has already exceeded its proper limits, before bringing it to a close we must just say one word about the shooting. The Government weapon, the Snider breech loading Enfield rifle, is what the association requires of volunteers to shoot with in competing for the principal prizes, and the ranges obligatory are from 200 to 1,000. Heading this list is the Queen's prize, the aggregate value of which this year is about eight thousand dollars. The first prize is £250, which entitles the winner to the gold badge or claspionship of the meeting. A certain excellence is required at every one of the ranges from 200 to 1,000 to enable a man to win. Besides these are others found by the late Prince Consort of the aggregate value of £3,000; any rifle may be used in this competition provided its weight does not exceed ten pounds. Then come the Alexandra prizes of the aggregate value of \$3,800; the Windmill prizes of \$1,800; the Swiss Canton prizes of \$3,500; the Prince of Wales' prize of \$500, in all of which competitions the ranges vary from 200 to 800 yards, and the rifle to be used is the Snider-Enfield. The total value of the prizes to be shot for, including challenge cup, exceeds considerably one hundred thousand dollars, the conditions mostly varying in each competition. We hadn't an opportunity for witnessing much of the firing, but that the men made excellent scores may be known from the fact that at one of the ranges there were so many top scores as to rise to the saying that "a bad 20 (i.e. the maximum number of points) was useless because it would be beaten on working out the ties."

C. EYRE PASCOE.

COAL AND PEAT.—Coal has risen so much in price in Britain that there is a strong agitation getting in favour of using peat, and setting paupers and criminals to dig it in large quantities. The supply, it is said, is in Scotland and Ireland unlimited. We heard a great deal about peat companies in Canada a year or two ago, and the possibility of turning out any quantity with profit at \$3 a ton, quite equal in heating power to a cord and a half of wood. What has become of the project? Has it gone to join many other unrealized projects? Coal and wood are still dear enough in Canada to encourage, one would think, such competition.

E. Figerola, the Ministerial candidate, was elected President of the Senate, vice-Presidents and Secretaries were elected, also members of the Ministerial party.

ROCK ISLAND ARSENAL.

A correspondent of the Chicago *Inter Ocean* has the following description of the Government Works at Rock Island:

Rock Island is of irregular shape, about two miles and a half in length, and three fourths of a mile wide. The main channel of the Mississippi river, half a mile wide, lies between the island and the Iowa shore. On the south side, between the island and the Illinois shore, the channel is only one-eighth of a mile wide. The foot of the island between the thriving cities of Davenport and Rock Island, is a limestone bluff, on which once stood Fort *San Carlos*, a defence against Indians and a military post in the early settlement of the country. This greater part of the island has never passed from the possession of the Government. It has a surface of 1,000 acres, lies above the high water, its shores protected by rocky ledges.

The present policy of the national Government is to consolidate the arsenals of the country into two grand establishments, one on the Atlantic slope, and the other of larger proportions, in a central position on the Mississippi river; and for the latter Rock Island has been selected.

Though recommended in 1850 as a suitable point for an arsenal, the use of the island for this purpose was not decided upon until 1852. In 1866 a commission was appointed, of which General Schofield was President, to settle points of proprietorship as to the water power, and to secure its title.

The question of title satisfactorily adjusted the first work undertaken was to develop the water power. For this purpose a dam of solid masonry was constructed, imbedded in the base rock, twenty one feet high, eight feet thick at the base and four at the top supported by heavy counterforts. This dam commences on the Illinois shore, in the upper part of Moline, and extends down the channel 1,900 feet.

It is pierced by thirty seven gates for the supply of water wheels. The dam is continued 1,870 feet further along the channel, by an embankment sixty feet wide at the base, fourteen at the top and twenty three feet high, built of stone with a cement core. This embankment terminates on the Illinois shore, turning the channel towards the centre of the island. To complete the tail race for the Moline power, a canal was cut through the point at the head of the dam, 2,000 feet long, emptying into the channel below the Government dam, now building from the northern extremity of this point across the channel to the island. This canal is 200 feet wide at the top excavated to an average depth of eighteen feet most of the way through the rock.

The greater part of the island is laid out as a magnificent public park.

Through the centre of the island, from end to end runs Main avenue, sixteen feet wide, which is the site for the workshops. Between Main and North avenues are located the armory buildings, for the manufacture of muskets, pistols, sword and carbines. The central building will be occupied as a forge and rolling mill. Beyond these, also fronting south on Main avenue, are two shops for wood work, and for putting the arms together. Each of the shops will have a frontage of 234 feet and two long wings extending back nearly to North avenue. Both wings and front are sixty feet wide. The forge will be only one story in height; the others will have two stories and a base.

ment. Each shop covers about one acre. In rear of each will be storehouses. These will be devoted to the manufacture of material of war—gun carriages, implements, and equipments, artillery harness, etc. Altogether it will be seen that there are thirty five acres of floor space in the ten shops and ten storehouses named above. Three of these shops are nearly completed and others are rapidly building.

The shops now built are of Joliet stone, roughly dressed, and laid in thick, regular courses. The floors are supported by stone piers and iron columns. The roof frames are of wrought iron and the covering of slate. The buildings are very handsome and massive, but built for service, no attempt having been made at ornament that would not serve a useful purpose.

The motive power of the shops will be the water power of the Government dam above mentioned. Provision is made for the turbine wheels placed between the counterforts of the dam, which are twenty five feet high. These wheels will all connect with a common shaft twelve inches in diameter and 700 feet in length, resting upon the top of the counterforts. The distance from the dam to the furthest shops is three-fourths of a mile.

The work on the dam is now progressing favorably, and it is expected that the shops will be supplied with power from it early in the spring of 1873. When all the shops are built, this will be by far the largest and most complete establishment of the kind in the world.

When driven to its fullest capacity, as in case of war, a force of from 10,000 to 12,000 skilled mechanics will be required.

The streets on the island will be paved and sewered. There will be a wharf for receiving and shipping goods by water. All the shops will be connected by rail with the system of railroads centring here.

The magazines, laboratories, offices, quarters, barracks, and hospital will be located near the centre part of the island, and generally with reference to the shops. Some of these are built, and others will be erected as they may be required. All of them will be in keeping with the general plan of the Arsenal.

There are 1,200 men employed on the work at the present time. An undertaking of such magnitude will of course show but little progress from day to day. The work is in efficient hands, however, and all will be done that is possible for men to do.

The building at the lower end of the island, which forms such a prominent landmark in the cities of Davenport and Rock Island, was built before the adoption of the present comprehensive plans for the Arsenal. It was one of three small arsenals which local influences secured at Columbus, Indianapolis, and this place. It is 180 feet in length, and has a clock tower ninety feet high. The clock has four dials twelve feet in diameter, and is one of the finest in the country. Under the present plans this building will be used as a receiving and issuing store-room.

Besides Colonel Flagler, now in charge of the Arsenal, the following officers of the regular army are at present assigned to this post: Captain J. P. Farley, Lieutenant W. P. Butler, Lieutenant E. M. Wright, and Lieutenant Charles Shaler, Jr.—U. S. Army and Navy *Journal*.

Khalil Cherif Pasha has been appointed Minister of Foreign Affairs.

RIFLE MATCHES.

ANNUAL RIFLE MATCH OF THE 33RD HURON BATTALIONS.

The Annual Rifle Match of the 33rd Battalion came off at Seaforth on Thursday and Friday, 12th and 13th inst. The first day was so wet that very little was done, but by the indefatigable exertions of Captain Murray, who was in charge of the range, and the other officers present, the various matches were completed on Friday. The attendance was small, but the shooting considering the unfavorable weather, was very good. The following are the names of the successful competitors in the various matches.

BATTALION CHALLENGE CUP.

This prize was competed for by five men from each Company. Ranges 200 and 400 yards, five shots at each. The best shot in each Company receiving a prize of \$4, and the best shot in the whole, \$4 additional. As will be seen by the score, No. 3 Company (Seaforth) won the cup, and Private Sparling, of the same Company carried the money prize.

No. 3 Co. (Seaforth.)

	200 yds.	400 yds.	Total.
Capt. Wilson	2334—15	24323—14	29
Lieut. Wilson	3433—16	32232—12	28
Sergt. Campbell	2222—10	02003—5	15
Corp. Menary	32240—11	20230—7	18
Pte. Sparling	4232—13	34442—17	30
	65	55	120

No. 4 Co. (Clinton)

En. Proctor	23223—12	32343—15	27
Sergt. Cook	34323—14	24242—14	28
Pte. Daly	22020—6	00423—9	17
Pte. Robertson	20302—8	00423—5	11
Pte. Masten	3333—15	32334—15	30
	55	45	91

No. 5 Co (Ainleyville.)

Pte. Chapman	22222—10	30242—11	21
Pte. Roddick	03232—10	32022—9	19
Pte. Ainley	23222—11	00004—4	15
Pte. Mpooney	20220—6	32003—8	14
Pte. Wilson	20223—9	33430—13	22
	46	45	113

No. 7 Co. (Porter's Hill.)

Capt. Sheppard	22232—11	32424—15	26
Segt. McDonald	00332—8	04002—6	14
Segt. McDougall	03322—10	40430—10	20
Pte. Perdu	20320—7	00000—0	7
Pte. Biggar	22233—12	43330—13	25
	48	44	92

No. 8 Co. (Gorrie.)

Capt. Kane	00002—2	00000—2	2
Corp. Roberts	20022—6	02203—6	13
Pte. Pyke	4232—14	03320—8	22
Pte. Warnock	23022—9	24364—16	25
Pte. Skilling	22232—11	00000—0	11
	42	31	73

Nos. 2 and 9 did not muster in sufficient numbers to enter the match, and were apportioned \$1 each for local competition.

SECOND MATCH.

Open to Non Commissioned Officers and Privates. First prize from Col. Ross, \$20, and 11 other prizes from \$11 downwards. Ranges 400 and 600 yards; three shots at each.

	400	600	Tot.	Prize.
Pte. Sparling	341-11	223-7	18	\$20
Pte. Footo	323-8	322-7	15	11
Pte. Maslen	342-9	222-6	15	10
Corp. Johnson	433-10	320-5	15	9
Sgt. McDougall	443-11	202-4	15	8
Pte. Ainley	244-10	003-3	13	7
Sgt. Bates	403-7	202-4	11	6
Pte. Downing	322-7	220-4	11	5
Sgt. Cook	233-8	030-3	11	4
Pte. Warnock	332-8	002-2	10	3
Sgt. Williamson	233-8	200-2	10	2
Sgt. Potts	033-6	002-2	8	1

THIRD MATCH.

Open to Commissioned Officers. Five prizes. Ranges 400, and 600 yards: 3 shots at each.

	400	600	Tl.	Prize.
Capt. Wilson	333 9	033 6-15		\$10
Ens. Proctor	322 7	003 3-10		8
Lieut. Grigg	332 8	020 2-10		6
Capt. Murray	322 7	020 2-9		4
Capt. Sheppard	430 7	200 2-0		2

FOURTH MATCH.

Open to Non-Commissioned Officers. Nine prizes. Ranges 400 and 600 yards, 3 shots at each.

	400	600	Tl.	Prize.
Sgt. Williamson	434 11	320 5-16		\$10
Sgt. Bates	434 11	023 5-16		8
Sgt. McDougall	433 10	300 3-10		7
Sgt. Potts	033 6	023 6-12		6
Sgt. McMath	322 7	004 4-11		5
Corp. Johnston	302 5	032 5-10		4
Sgt. Joslin	322 7	003 3-10		3
Sgt. Campbell	023 5	220 4-9		2
Corp. Graham	204 6	020 2-8		1

FIFTH MATCH.

Open to Privates only. Eleven prizes. Ranges 200 and 400 yards: 3 shots at each.

	200	400	Tl.	Prize.
Pte. Maslen	033 6	433 10 16		\$11
Footo	223 7	243 9-16		10
Sparling	320 5	424 10-15		9
Robertson	033 6	333 9-15		8
Wilson	222 6	432 9-15		7
Ainley	222 6	233 8-14		6
Downing	232 7	232 7-14		5
Chapman	022 5	332 9-13		4
Warnock	222 6	330 6-12		3
Roddick	223 7	302 5-12		2
Pyko	222 6	023 5-11		1

RIFLE ASSOCIATION MATCH.

Open to all members of the Huron Rifle Association. Eight prizes. Ranges 400 and 600 yards, 3 shots at each. Any rifle.

	400	600	Tl.	Prize.
Sgt. Bates	343 10	434 11 21		\$8
Lieut. Wilson	432 9	433 10-19		7
Capt. Wilson	233 8	422 8-16		6
Pte. Maslen	342 9	223 6-15		5
D. McTavish	433 10	032 5-15		4
Pte. Sparling	233 8	024 6-14		3
Sgt. McDougall	344 11	003 3-14		2
Capt. Murray	322 7	220 4-11		1

ALL COMERS MATCH.

Open to any person paying 50 cents entrance fee. Five prizes. Ranges 200 and 400 yards: 3 shots at each. Any rifle.

	200	400	Tl.	Prize.
Pte. Maslen	333 9	434 11-20		\$10
Sgt. Joslin	232 7	244 10-17		8
W. Ransford	332 8	333 9-17		6
Sgt. Williamson	332 8	342 9-17		4
Pte. Downing	232 7	333 9-16		2

—Huron Signal.

The matter of the Peruvian ship *Maria Luse*, is occupying the attention of the Japanese authorities, and threatens to assume serious proportions from the reasons that several questions of International law are brought into the matter. The *Maria Luse* left Macao for Peru loaded with coolies, in command of Lieut. Heno, of the Peruvian navy. She put into Yokohama in distress, having encountered extremely bad weather. After leaving Macao one day a coolie jumped overboard from the ship and swam to an English man of war the *Iron Duke*. The officers of that ship delivered him over to the Japanese authorities, who returned him to the ship *Watson* newly arrived. The British charge d'Affairs took the matter up and complained to the Japanese authorities intimating that the coolie traffic was the slave trade in disguise, and urging upon them the necessity of taking some steps in the matter. The *Watson* then quietly left Yokohama for Hakodadi. The Japanese, however acting upon his suggestions. They stopped the ship and are now engaged in examining the coolies as to their treatment while on board, and the nature of their contract. The commander will probably lose 4 or 5 days more, and the result is uncertain though it is thought probable the Japanese will release the coolies or send them back to China, and then allow the vessel to go. The captain has protested against these proceedings.

SAN FRANCISCO, Sept 24—Mr D J Williamson, the U S Consul at Callas, writes that small pox is in an epidemic at many of the seaport towns on the coast between Valparaiso and Penama. The character of the disease, he says, is more pernicious than ordinary small pox, and much more destructive of life. The letter further states that in one hospital at Santiago, Chili, out of 53 patients entered in one week, 56 died, and as there are eight or ten such hospitals in that city, its destructiveness can be conceived. The disease is making its way steadily to Callais. There are many cases not of epidemic from it in the hospitals among the authorities in all Spanish American towns in sanitary affairs given this disease and yellow fever a greater field to spread over than they otherwise would have if the necessary precaution were taken.

About half-past eight o'clock last night a violent thunderstorm broke over the city and neighbourhood for upwards of an hour. The most vivid lightning flashed incessantly, accompanied with deafening peals of thunder and torrents of rain. Mr. Brown's rope walk, at La Canardiere, was struck by the electric fluid, and speedily burst into flames. The rope walk, with a large amount of stock, was destroyed. Mr. Brown's loss, which is heavy, is covered by insurance in the Quebec and the London, Liverpool and Globe insurance offices. A girl was killed by the lightning in a house near the ropewalk. The storm has been followed to day with a warm temperature, the thermometer having risen to 72° in the shade.

A personal altercation occurred in a restaurant in Columbia last evening between Mr. Montgomery, President of the State Senate, and Samuel Milton, regular Republican candidate for the office of Attorney General. In the meeting Mr. J. D. Caldwell and Major J. M. Morgan, two friends who interfered to separate the combatants, were shot. Caldwell was instantly killed, and Morgan but slightly wounded. The tragedy grew out of criminations and recriminations of a political nature.

DESVEN, Sept 25—A wonderful discovery has been made recently, six miles west of Caribou, of an enormous silver ledge, or a system of ledges, so looked and woven together as to be practically one ledge. It measures 63 feet in width, and can be clearly traced over five miles. It assays \$75 to \$100 per ton. The surrounding formation is primary granite, and the ore carries galena, black and gray sulphurate. A large number of men are already at work upon it. Great activity exists every where in the mines, and reports came from all quarter of a larger yield than ever.

A special despatch from Constantinople to the London Times says that one of the last public acts of the late Djemel Pasha was to hold an interview with the Czar. The meeting took place on the 19th inst. The Czar on that occasion expressed his desire to render the relations between Russia and Turkey more friendly.

A London special says that King Johannes, of Abyssinia, has sent a message to England with letters for the Queen, asking the intervention of England against Egypt. The same messengers has letters for Franco, Russia, and Germany. The King of Abyssinia in making his appeal to the Queen of Great Britain, relies on an African right to do so, as it existed previous to Her Majesty's war against Theodoros.

FORT GARREY, Sept. 21—Smith is elected for Selkirk, Cunningham for Marquette, Schultz for Lisgar. There was much disorder. The Ontario Orangemen carried off the poll books at St. Boniface. Many shots were fired, and the offices of the *Melis* and *Manitoba* were destroyed, and Mr. Plainval Chief of the Police was seriously wounded. The excitement is very great; life and property are endangered.

The cyclones in Eastern Bengal are reported to have done damage to the jute crop.

It has been snowing along the Union Pacific Railroad, from Cheyenne westward, since last night.

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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, SEPTEMBER 30, 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

As stated in a previous article the largest cast iron smooth bored gun in the British Service was the 68 pounder of 112 cwt, according to the new system an 11 inch gun. The descriptions of all Ordnance under the old regime was Guns, Mortars, Howitzers—Caronades are obsolete—in service the range only fitted them for close quarters, and from their shortness they were looked on as a handy gun in the Navy.

There were two kinds of smooth bored guns used—the solid shot gun and the shell gun—the latter from which no shot can be fired was generally designated by the calibre and weight of the metal, as the 10-inch cast-iron gun of 87 cwt.

The different *natures* of cast-iron shot guns were 6, 9, 12, 18, 24, 32, 42 and 68-pounders of the latter there were two varieties, one for land service of 112 cwt., the other for sea service of 95 cwt. There are two varieties of 42-pounders, one being 84 cwt., the other 67 cwt. and no less than *eleven* varieties of 32-pounders weighing from 58 cwt. to 42 cwt. There are four different kinds of 24-pounders, four of 18-pounders, two of 12-pounders, and two of 9 pounders.

The cast iron shell guns were merely long howitzers, they were introduced in 1824, they are two *natures*, the 10 inch noticed before and the 8-inch of 54 cwt.

Since 1816 British artillery appears to have been in a transitional state, subject to constant change and a good deal of empirical experimentation.

The immense impetus given to the development of *metallurgy* by the expansion and success of the Railway system supplied the necessary mechanical skill for making accurate experiments as to the capacity of cast and malleable iron and steel, and brought into this speciality an amount of scientific skill which could not be supplied by the professional artillerist. The great changes in the arm were effected by civilians Armstrong, Whitworth and Moncrieff.

There are four *natures* of bronze guns in the service 3, 6, 9 and 12 pounders, they are altogether field artillery, and in battery, are associated with bronze howitzers of nearly equal weights, as follows: four guns to two howitzers.

12-pdr. Battery.	32 pdr. Howitzer of 17 cwt.
9 " " 24 " " 13 "	
6 " " 12 " " 6 "	
3 " " 43 inch " 2 1/2 "	

for mountain service.

Mortars are short pieces of ordnance used to throw shells at high angles generally 45°, the charge varying with the range; they are distinguished by the diameter of their bores, are made of cast iron or bronze, the former being used for garrison battering trains and the naval service, the latter which are light are chiefly employed in sieges.

The cast iron mortars for land service are

13-inch of 36 cwt.
10 " 18 "
8 " 9 "

And for sea service—13-inch of 100 cwt. of which there are two patterns, and 10-inch of 52 cwt.

The bronze mortars are—

5 1/2 inch Royal of 1 1/2 cwt.
4.25" Coehorn 3/4 "

Howitzers were originally introduced for the purpose of firing shells at low angles, and their advent in naval operations rang the knell of the *wooden walls* of England, the *shell* guns being an improvement in accuracy and range has to a considerable extent, if not entirely superceded them. There are two *natures* of cast-iron howitzers, 10 inch of 42 cwt. and 8 inch of 22 cwt.

Caronades were introduced by the direc-

tors of the Carron foundry in Scotland in 1779, they were peculiarly a ship gun, and were adopted because they were shorter, lighter, and more easily handled than guns of the same calibre, having less *windage* their range from 400 to 600 yards was more accurate, and they were *bell muzzled* (wider in the bore at the mouth) to facilitate loading, and to enable the burning wads to pass out easily, thus saving rigging and hammock nettles; they had no *trunnions*, but were cast with a loop underneath through which a bolt passed attaching the gun to its carriage; they had a *sight* on the reinforce ring, their chambers cylindrical, the charge being one-twelfth the shots weight.

They were constructed of all calibres from the 6 to the 68-pounder, four *natures* are retained in the service, 24, 32, 42 and 68-pdrs., they are very unsteady in recoil owing to the lightness of the metal, are liable to kick over smashing breeching, tackle and bolts when heated from firing.

As the ignition of the charge takes place at or near the end of the chamber or bottom of the bore, it is evident that the greatest strain has to be borne at that point because of the sudden development of the latent force of the gunpowder, and this consideration determines primarily the length of the bore—the only variation being in the quality of powder used—the object to be attained is that the whole should become ignited before the projectile left the muzzle of the gun, or at the same instant.

Experimentally it has been found that maximum ranges have been attained from smooth bore artillery by making the length of the bore to range from 12 to 19 calibres; the proper length for the bores of rifled ordnance has not yet been determined.

The calibre itself as well as the amount of windage was originally determined by the diameter of the shot which was divided into twenty parts, one additional being allowed for windage, thus making the bore 21/20 of the diameter of the shot.

Modern experience has established the windage of smooth bore field guns at .1 of an inch—cast iron guns 125 to 233 of an inch—iron 10 and 13 inch mortars .16 of an inch, and the brass mortars have .025 for the Coel. orn, and .066 for the Royal. Muzzle loading rifled guns have a windage of .08 of an inch which has been lately considerably reduced.

In all S. B. mortars, howitzers and shell guns which have comparatively small charges there are chambers for the purpose of producing the greatest useful effect; they are of two kinds, cylindrical or conical, the former being best adapted to small and the latter to large charges. This device to some extent obviates the evils of windage as it enables the explosive force to be concentrated on the axis of the projectile.

Cast iron as is well known has less relative tenacity than wrought-iron; the latter, good scrap iron, will bear a strain of 53,400 lbs. to

the square inch, while the former will not bear more than 19,484 lbs, so that wrought iron will bear very nearly three times the strain of cast-iron.

Experiments with a 42-pounder S. B. cast iron gun gave the following results, as the pressure per square inch sustained at the bottom of the bore:—

Charge 21 lbs.,	shot 2,	wad 1,	press. 64,510 lbs.
" 14 "	" 2 "	" 1 "	55,622 "
" 21 "	" 1 "	" 1 "	47,785 "

The reduction of 33 per cent of the motive power or force only produced a reduction of pressure of 14 per cent in the second experiment, while the reduction of 50 per cent in the weight of projectile produced a reduction of nearly 26 per cent of pressure, illustrating the impossibility of getting cast iron to stand the strain required for heavy projectiles of modern warfare, and with what ease a slight jam or obstruction in the bore would instantaneously double or treble the strain producing the instant velocity of the shot.

In the present instance the mere lifting out of a 42 lb. shot reduced the pressure over eight tons and seven-tenths on the square inch.

It is evident that the pressure on the bottom of the bore is not due to the quantity of the powder ignited, but to the obstruction from the shot and the difficulty experienced in imparting the initial velocity.

Subsequent experiments made with muzzle loading S. B. heavily built up 8 and 10-inch guns shews that nearly twice the compliment of slowly burning powder, and nearly ten times the weight of shot will not double the pressure. Calibre 10 inch, shot 400 lbs., charge 60 lbs. velocity, in feet per second, 1313, pressure per square inch, 53 tons R. L. G. powder; with the same charge and shot the velocity was 1298 feet per second, and pressure 15 tons, the powder being that known as *pebble*; with a charge of 70 lbs. of the same powder the velocity was 1432 feet per second, and pressure 21 tons per square inch. Calibre 8-inch, shot 180 lbs., charge 30 lbs. of R. L. G. powder, velocity 1324 feet per second, pressure 29.9 tons; with a charge of 35 lbs. of pebble powder the velocity was 1374 feet per second, pressure 15.4 tons per square inch.

The force or power of the gunpowder is suddenly applied, the metal around the bore therefore takes the greater strain before that on the outside receives any; and as from the manner of casting the interior of the gun block contains the inferior metal it is relatively weaker there than the exterior and will rupture dangerously before the other shows symptoms of danger.

The cast iron produced in Canada and the United States has a tensile strength of 31,829 lbs. to the square inch; the variety used for gun metal is said to approach 45,970 lbs. to the inch, and in casting they have substituted a hollow core through which a column of water plays, so that the interior and exterior of the gun block are cooled simultaneously;

the English practice is to cast the block solid and bore it out when cooled.

When a gun is discharged the effect of the force applied tends to expand the bore, and the further any part of the metal is from the axis thereof the less strain it has to bear. It follows, if, by any device, the strain on all parts could be equalized the strength and durability of the gun would be at least doubled, and there is a limit beyond which it would be useless to increase the weight of metal in a gun, and is how the force exerted upon the surface of the bore before the exterior received any strain.

In order to equalize the strain as far as possible it will be necessary to give the exterior of the gun an instant *tension* gradually passing into *compression* in the interior; this has been attempted in many ways: by *shrinking* rings or tubes of wrought iron or steel over a cast or wrought iron or steel cylinder, or by winding iron wire or bar coils over an inner tube of cast-iron or other material; and it is reported that in the Gun Foundry of the Turkish Empire at Tophana, field artillery has been formed by casting bronze as high as the second reinforce around a steel tube.

As all those outer coatings are put on hot they contract when cool, thus compressing the inner tube while they are in a state of tension. It is on this principle the *built up* guns are constructed.

The larger the calibre of the gun the greater the strain exerted upon it by the charge, the density of shot being alike and the weight of the charge always bearing the same proportion thereto.

With a S. B. gun the weight of the ball increases as the cube of its diameter, the strain from its reaction being in the same ratio; with any piece of ordnance as the calibre is greater the mass of charge increases more rapidly than the surface of the bore on which it acts—the former increasing as the *square* of the calibre, the latter as the *calibre*—less heat is extracted from the gas by the cold metal in the larger guns, and the loss of force by windage is also less as its dimensions are the same.

The strain on the metal of a gun increases with the angle of elevation; when the axis of the gun is horizontal the gas in moving the shot has only to overcome the friction between it and the bore, but when it has elevation the shot has to be lifted as well, thus giving time for a larger proportion of the charge to ignite before it moves and the gun is less able to recoil.

As no attempt has been made to construct a heavier gun of cast-iron than a 68-pounder of 112 cwt., it is an open question as to what position the system will yet hold in the British service.

We give the text of the award of the Geneva Board of Arbitration in our issue today, for the reason that it is now become an historical document and not because of its value as defining any principle of Inter-

national law as an exposition of Statesmanship, or an equitable judicial decision.

Under this aspect there is no intention to insinuate that the Arbitrators acted otherwise than in accordance with the principles laid down by the provisions of the Treaty of Washington; but as those were retrospective, injustice to one party was contemplated from the first; and as only two of the great powers were parties thereto, the adoption of those principles as International law does not follow; they simply establish a precedent between Great Britain and the United States to be evaded by the latter and a constant source of irritation and trouble to the former.

It is a rare occurrence for the Monarch of the Wilds of the North West to fall by the hand of a single individual among the aboriginal tribes, the person who achieved that feat of arms took foremost rank as a warrior, and the slaughter of the terrible "Grizzly Bear" of the Rocky Mountain has been frequently a more difficult task to achieve by well armed white men than the discomfiture of a whole native tribe.

An encounter with this animal has always been attended with considerable danger from its fierceness, strength and tenacity of life; our gallant Adjt. General has achieved the feat of killing one of them near the Rocky Mountain House on the overland route to British Columbia. Any one who knows Colonel P. ROBERTSON ROSS will be satisfied that he possess the energy, courage and coolness necessary for a far more difficult feat of arms, and sufficient to leave Grizzly a small chance in the encounter.

It is evident that the *war ship* of the future—or for that matter—the present—has yet to be designed and constructed, the ironclads may do very well for harbour defence, for offence they are worse than worthless.

The *Broad Arrow* appears to be of the same opinion, as the following paragraph will shew:

"A contemporary informs us, or rather lead us to infer, that a celebrated engineer has brought our armaments to their present condition, and that the said engineer is "no mean authority" on naval matters. Without criticising in detail the arguments from which we are expected to make this deduction, we may remark on independent grounds that although the thickness of the armour and the weight of the guns have been largely increased, by the exertions principally of those who have had to use them—viz., naval officers—still there is no relation between the thickness of the armour and the size of gun. An unarmoured ship is capable of carrying either a larger number and size of guns from the armour being dispensed with or the weight saved may be used to give more powerful engines and larger coal-carrying power, &c. That we have a large number of thickly armoured and powerfully armed ironclads cannot be doubted, for our fleet is more than equal to any two fleets of other nations; but in unarmoured ships of

sufficient size, speed and gun power of protect our commerce in distant seas, we are very deficient, having only one vessel of the *Inconstant* class, and one other, the *Blonde*, in course of construction with one of the smaller class, the *Raleigh*, also building. This vessel is, we believe, the best size and type for a powerful cruiser, for she could carry four or six 18 ton guns, which, with her high speed, would render her no despicable opponent for most of the foreign ironclads, and she could likewise carry those smaller guns which the exigencies of naval warfare imperatively require in a cruiser. A vessel of the *Raleigh* size, armed as we have indicated, appears to be the type of cruiser in favour with our ablest naval officers, and will, doubtless be well considered by the present able Admiralty Board."

The equipment of an army for actual service is the most difficult operation with which military science has to deal. The moving and massing of the force with its material, and provisions, is the greatest effort of skill, to which human ingenuity can aspire; and yet, to render its operations certain, the whole must be accomplished with precision and accuracy.

Various methods have been resorted to for this purpose, but all appears to have culminated in one idea, and that is the division of the military service proper into two sections—the fighting, and the civil branches—whereby for every two men placed in line of battle, another will be engaged in supplying the necessaries, to make their service effectual.

This duality, involving expensive and complicated arrangements without corresponding responsibilities, has frequently led to disaster, and was always liable to confusion. The failure of the French system of *Intendance*, is a fearful example of the former case, as is the break down of the English commissariat in the Crimean campaign, and of the "Control System" which has succeeded it in the Autumn Manœuvres of last year.

It may be true that in those countries, no other system is possible, but it is evident that it removes from the category of military science—*Logistics*—altogether; and confining the soldier to strategy and tactics, which is evidently a grave mistake, inasmuch as a thorough knowledge of the former, would be the best possible preparations for the latter, and a thorough soldier should understand the whole theoretically as well as practically.

These wonderful soldiers the Romans, were the first to develop the laws governing military science, and their *centurion's* command represented the tactical unit. In the British service theoretically at least, the same unit is represented by the captain's command, but in reality the regiment represents it, and, as a consequence, the individuality of the immediate commanding officer is lost in that of those above him.

As a consequence, it is notorious that the life of a British officer in barracks or else-

where, is not conducive to the development of energy of character, or the growth of enterprise.

The reasons are self evident, the abstraction of the practice of "Logistics," from the military science of the day, leaves the mass of the regimental officers little or nothing to think of or do, once they have acquired a knowledge of drill and the skill to manoeuvre a company in battalion. There is not the opportunity or necessity for that acquisition of knowledge which the military art demands, and the "Civil branch" abstracts from its efficiency by removing the motive for the exercise of brain power.

Modern historical records points clearly to numerous instances of the disasters produced by the system described. The inevitable crippling of operations by the failure of commissariat supplies, or the impossibility of providing transport. The Franco Prussian war showed that in the latter respect, the Prussians had organized respectable transport, but the force of officers and non-combatants it required was nearly as many as the fighting force. It was, in reality an amplification of the old system of Frederick the Great, one line of men and another line of non-commissioned officers to keep them to their duty.

In a country sparsely populated such a process would not be applicable; for instance: now in Canada we could place say 100,000 men in the field, but it would be too great a strain on our resources to deduct 50,000 from the reserve, merely to attend on the fighting men. We must, therefore, devise some other mode, and luckily the circumstances of the case offer a practical solution of all difficulties surrounding this interesting problem.

Our troops, raised from the whole mass of the population, and therefore local, in the strict sense of the term, make the captains command the natural unit of the force, and as it rarely assembles at headquarters except for battalion drill, the individuality of the officer commanding is never lost in that of the field officer of the battalion.

On occasions of emergency the company officers have to provide transports and provisions for their commands, and it is in this direction we must look for the strictly Logistical training, which is absolutely necessary to provide for a military force, before it can be said to be reliable or efficient.

The first and primary questions in the proposition is, whether man or horse power is the more costly and valuable; here, at least, man's power is beyond all proportion. The transport of troops, material of war, and provisions becomes then a question of what can be effected by animal power or mechanism, in the removal of a given weight.

Taking 55 men and three officers as the full compliment of a company, and allowing to each four carts and eight horses, with four drivers, we have a full force of 62

individuals to provide material for, and forage for eight horses.

Each cart should carry 1,000 lbs. as ordinary load, making in all 4,000 lbs. allowing to each individual 40 lbs. for baggage, irrespective of arms and ammunition, all which are carried by the troops, we have for actual necessaries which must be transported.

Five sets of Camp Cooking utensils	40 lbs. or	200 lbs.
Six days' provision at the rate of	3 lbs. per man	1,116
Five large tents and one small do.		340
Spare ammunition		350
Intrenching tools—		
15 pickaxes, each	4 lbs	60
15 spades	" 3 "	45
15 shovels	" 3 "	45
15 axes	" 5 "	75
Forage for 8 horses for six days,	25 lbs. hay per diem	1,200
Forage for 8 horses for six days,	15 lbs. oats per diem	720
Total		4,151 lbs.

The spare horses could be used in the transport of field artillery, which must, from the nature of modern warfare, revert to its pristine position of battalion guns worked by soldiers of battalions to which they are attached, or as additional horse power in case of necessity for a rapid advance; this would necessitate a more careful and thorough drill for our soldiers; they should be, as they are good riflemen, gunners, drivers, and mechanics in general, for the necessity for entrenching involves all those qualities.

If it should become necessary to push the troops forward for some decisive movement the mens' knapsacks could be transferred to the spare horses, and would be sure to arrive within three or four hours after the position for the night was taken up.

A well trained quarter-master sergeant to each company should have charge of the transport, and it would be his business to see it halted in a place of safety within easy reach of the company.

An arrangement of this kind would give our officers sufficient employment, would make each tactical unit complete in itself, and would more than double the fighting power of any force.

Moreover, the health and comfort of the men would be adequately attended to, and every precaution taken to render the *infectives* less.

Every company being dependent on its immediate commanding officer for supplies, the men would take care to see that he attended to their wants while the cost to the country would be immeasurably lessened.

The duties of the commissariat would be confined entirely to supply of depots, there would be no hosts of civilian teamsters to impede retreat or add to a panic by cutting their horses traces, and riding away precisely at the moment their services might have repaired a disaster.

In lieu of all this there would be a line of carts and waggons in rear of reserves in action that could be promptly turned into an efficient barricade, behind which repulsed troops could be rallied, and if properly held would be difficult to force.

This system would also do away with large escorts, the drivers being soldiers, carrying their own equipment and marching in the immediate rear, not liable to surprise.

It would not be a very great labour to train Canadian troops to fulfill all the proposed duties; nearly every one of our country lads knows how to bake bread, all that is necessary is to give him a *baking kettle* with a cover, it is either cast or Russia sheet iron, he will keep his risings, as he calls the leaven in the flour sack; when he goes into camp he sets his baking, working it up in the aforesaid sack, puts it to rise opposite his fire in the lid of the kettle; when the proper time arrives it is put into that vessel, the lid put on, the embers of the fire raked aside, a hole dug underneath the size of the kettle in which it is placed, the embers raked over it and in one hour or so a 20lb. loaf of as good and wholesome bread as ever was eaten is the result.

Pea soup, pork, beef, boiled or fried, tea and any other material that comes to hand in the edible way, is made into dishes of good wholesome food without any particular fuss, while the cooking equipage for 12 men need not exceed 45 lbs. in weight, and all this can be effected without extra waste of any kind.

When we read of all the equipments of field ovens, waggons, and the other impediments of an European Army, the natural conclusion arrived at would be that the Canadian people could not maintain prolonged hostilities for lack of supplies, but a little closer acquaintance with the people and resources of the country will dispel that idea.

The resources in men are not to be measured by the numerical force able to take the field, but the actual amount of work that force can perform, and when every man is almost a tradesman, little doubt can be entertained that 100,000 Canadian soldiers will be as effective—i.e. place as many men in line of battle—as double the number of any other troops, and it is upon this quality as much as on its fighting power the value of an army depends.

The sequel of the case of sub Lieutenant Tribe, we copy from the *Broad Arrow* :—

“The court of inquiry which investigated into the case of Lieut. Tribe have reported in a manner unfavorable to that officer. The complaints which he thought proper to urge, whether connected with regimental or social matters, are declared to be baseless, and Mr. Tribe's conduct in both these relations is found to have been gravely censurable. In consequence of the nature of this report the authorities of the War Office considered it their duty, severely to reprimand Mr. Tribe, as a prelude to releasing him

from arrest and permitting him to return to his duty. This reprimand was accordingly administered yesterday, and Mr. Tribe, who had been left at Woolwich when his regiment marched lately for Aldershot, has been relieved from arrest, and has left Woolwich for York, whither the depot of the regiment has proceeded to await the conclusion of the manoeuvres. Mr. Tribe does not join his regiment for service in the field, as he has not yet been dismissed recruit drill. It is to be expected that in justice to the officers of the 9th Lancers, who have suffered by comments made in ignorance of the facts, the authorities will make public, if not the detailed report of the court of inquiry, at least the course of action which has seemed fitting to them to take thereupon.”

The following pleasing and characteristic incident occurred during the Autumn Manoeuvres in England, is copied from the *Volunteer News* :

“On Saturday as the Prince rode back from the inspection of his regiment, the 10th Hussars, a very touching incident occurred. An old Waterloo pensioner Hiscott by name, who formerly served in the 10th Hussars, had come to the park to see his old regiment and his young Prince. Lord Ashley determined to introduce the old man to the Prince of Wales, and after the inspection, he stepped forward and asked His Royal Highness's leave to introduce a faithful subject who had done the State some service in his day. The Prince readily assented, and the old man tottered slowly forward. Slooping from his charger the Prince shook hands heartily with the old soldier, and in a few well chosen words expressed his pleasure at meeting one who had done his duty so well at the last great English victory with the regiment the Prince was so proud to command. His Royal Highness then asked some questions as to the length of the old man's service, and seemed much struck at being told that for thirty one years the brave old fellow had been on duty abroad without once returning to England. After shaking hands with him again the Prince rode on, leaving Sohn Hiscott a prouder and a richer man. More than one person among the witnesses of this little incident remarked on the pretty picture that was formed by the young Prince in all the glory of youth and strength, bending tenderly down from his charger to shake hands with the faithful old soldier, white with the snows of many winters, and bowed down with age.”

The Secretary of the Navy has received a very interesting despatch from Captain C. F. Hall, commanding the North Pole Expedition, dated at Tossac, Greenland, August 27, 1871. It comes by way of Copenhagen, and has been one year *en route*. It is therefore the latest official information from the expedition. The despatch is dated “Latitude 73 21 10, longitude 56 5 45 W., U. S. steamship *Polaris*, Tossac or Tus su-is-sak, Greenland, August 22, 1871.” Captain Hall reports that his outfit has been completed, and that the progress of the *Polaris* so far has been quite favorable, making exceedingly good passage from port to port—first from Washington to New York, thence to New London; then to St. John's, N. F., and thence to Greenland. First to Foscaenas, then to Holsteinberg, thence to Godhaven, Upernavik, and Tossac the last link to the

land of civilization. The actual steaming or sailing time of the *Polaris* from Washington to New York was sixty hours, and from the latter place to this—the most northern civilized settlement of the world, unless there be one to discover at or near the North Pole—has been twenty days, seven hours, and thirty minutes. Evening, August 23, 1871; he adds: “We did not get under way to day as expected, because a heavy dark fog has prevailed all day, and the same now continues. The venture of steaming out into a sea of undefined reefs and sunken rocks, under the present circumstances, could not be undertaken. The full number of dogs required, for the expedition is now made up. At the several ports of Greenland where we have stopped, we have been successful in obtaining proper food for the dogs.” Still later, August 24—1, p. m. he says, “The fog still continues, and I decide we cannot wait longer for its dispersion, for a longer delay will make it doubtful of the expedition securing the very high latitude I desire to obtain before entering into winter quarters. A good pilot has offered to do his very best in conducting the *Polaris* outside of the most imminent danger of reefs and rocks. Now half past one, p. m., the anchor of the *Polaris* has just been weighed, and not again will it go down till, as I trust and pray, a higher, a far higher latitude has been attained than ever before by civilized man. Governor Elberg is about accompanying us out of the harbor and seaward. He leaves us when the pilot does. Governor Lowertz Elberg has rendered to this expedition much service, and long will I remember him for his great kindness. I am sure you and my country will fully appreciate the hospitality and co-operation of the Danish officials in Greenland, as relating to our North Polar expedition. Now 2.15, the *Polaris* bids adieu to the civilized world. Governor Elberg leaves us, promising to take these despatches back to Upernavik, and to send them to our Minister at Copenhagen by the next ship, which opportunity may not be until next year. God be with us.”

THE GERMAN MANOEUVRES.—The *Vossische Zeitung* intimates that the great manoeuvres which are to take place at Spandau on the occasion of the interview of the Emperors will extend over a large tract of territory, which will be divided into 20 sections, comprising the districts of Ritzbeck, Nauen, Marwitz, Spandau, and a number of others. The troops designed for the proceedings are already taking possession of these quarters. At Nauen alone 5,000 men are accommodated. The manoeuvres being on the 8th, after the great review at Berlin on the 7th, and will terminate on the 14th.

Australian exchanges inform us respecting the growth of population in Victoria and New South Wales, as shown by the census returns for 1871. The latter Province has progressed in this respect far more rapidly than the former. In 1861 the population of New South Wales was 350,860; in 1871 it amounted to 503,981. During the same decade the population of Victoria increased from 540,322 to 731,528, the rate per cent in the latter case being about 13 less than the former.

BRENNUS.

The chieftain stood by the weighing scale :
Ounces by ounces, and pound by pound,
He watched the weights till the bargain'd into
Weighed down the balance, and, all around,
The conquered shouted, "Nay I stay!" quoth he
"This is not the weight of victory."

Gold in Ingots and coined gold,
Emeralds, rubies and pearls were there ;
Sculptures and paintings worth wealth untold, —
All that the world holds precious and rare.
"Your ransom, covards, is paid," quoth he,
"But where is the price of my victory?"

So saying, he throw on the trembling scale's
The ponderous sword that had won him Rome;
Might makes right when true manhood falls,
And the vanquished or a nether soul nor
home.
E'en the gold that buys for them life and wealth,
Is light when weighed against the victor's
steel.

The lesson has yet to be learned again,
Our gods are the molten calves of gold ;
We look for treasures and not for men,
So our sons and daughters are bought and
sold.
And love's gold weighed against hearts of steel,
Lies valueless under the victor's heel.

The following communication which appeared in a late issue of the *United States Army and Navy Journal*, refers to a very gallant defence of a British post during the old Revolutionary war, a detailed account of the action is to be found in the *VOLUNTEER REVIEW*, Vol. IV., Page 17, under the title of "The Revolt of the British American Colonies."

We hope our contemporary will follow up the suggestions of his correspondent, and acquire those journals for the purpose of giving the world a record of historical incidents of great value.

The site of the British fortifications were not known as Castine, nor does it appear that they received any other name than Machias. They are described as standing on the Peninsula forming the harbor of Magabagaduce at the mouth of the Penobscot River.

To the Editor of the *Army and Navy Journal*,

Sir,—Since I came here a few days ago, I have seen in the possession of Dr. Joseph L. Stevens, a gentleman now in his 83rd year, a journal kept by two men of the British army, giving all the details of the attack on this place, and its continuance from day to day, commencing July 25, 1779, and ending August 14, of that year. This attack on the British by 3,000 Provincial troops, under Brigadier-General Solomon Lovell, commander-in-chief of the forces of the State of Massachusetts Bay, and by 18 war vessels under Commodore Saltonstall, was handsomely repelled by 700 British regulars of the Seventy-fourth and Eighty-second regiments, under Brigadier-General Francis McLean, and three sloops of war of 16 guns each, under Captain Henry Mowatt. The English land forces were entrenched. On the 14th of August, 1779, an English fleet from New York, under Sir George Collier, hove in sight, when the Americans took to their ships. These ships were pursued, and all captured or destroyed; the most of the men escaped. Lieutenant John Moore of the British army, then only 18 years of age, hero heard for the first time a hostile shot. His subsequent career, until he fell while in command of the British army at Coruna, is known to all. Wolfe has immortalized his name in the never-to-be-forgotten lines on his burial, when

"Not a drum was heard, nor a funeral note."

Lieutenant Moore, in a letter giving an account of a skirmish which took place here on the 28th of July, 1779, says: "On the 28th, after a sharp cannonade from the shipping on the wood, to the great surprise of General McLean and the garrison, the Americans effected a landing. I happened to be on picket that morning, under the command of a captain of the Seventy-fourth regiment, who, after giving them one fire, instead of encouraging his men, who naturally had been a little startled by the cannonade, to do their duty, ordered them to retreat, leaving me and about twenty men to shift for ourselves. After standing for some time I was obliged to retreat to the fort, having 5 or 6 of my men killed, and several wounded. I was lucky to escape untouched."

I think it would interest the readers of the *Journal*, if you would get a copy of these papers and publish them. They should be rescued from oblivion.

Names of American vessels taken and destroyed:

SHIPS.

Warren, Saltonstall, 32 guns (250 men), 18 and 12 pdrs., burned.
Sally, Holmes, 22 guns (200 men), 9 and 12 pdrs., burned.
Putnam, Waters, 20 guns (130 men), 9 pdrs., burned.
Hector, Cairnes, 20 guns (130 men), 9 pdrs., burned.
Revenge, Hallet, 20 guns (120 men), 6 pdrs., burned.
Monmouth, Ross, 20 guns (100 men), 6 pdrs., burned.
Hampden, Salter, 20 guns (130 men), 9 and 6 pdrs., taken.
Hunter, Brown, 20 guns (130 men), 6 pdrs., taken,
Vengeance, Thomas, 18 guns (140 men), 9 and 6 pdrs., burned.
Black Prince, West, 18 guns (100 men), 6 pdrs., burned.
Sky Rocket, Burke, (120 men), 16 guns, 6 pdrs., burned.

BRIGS.

Hazard, Williams, 100 men, 6 pdrs., burned.
Active, ———, 100 men, 16 guns, 6 pdrs., burned.
Tyrannicide, Cathcart, 90 men, 14 6 pdr. guns, burned.
Defiance, ———, 90 men, 14 guns, 4 pdr. guns, burned.
Diligence, Brown, 90 men, 14 4 pdr. guns, burned.
Pallas, Johnstone, 89 men, 14 4 pdr. guns.

SLOOP.

Providence, Hacker, 50 men, 12 6 pdrs., burned.
Castine, Maine, September 9, 1779.

AWARD OF THE GENEVA COURT OF ARBITRATORS.

The decision of the tribunal, awarding damages to the United States, begins with the recital of the formal language of the terms of the Treaty of Washington, then the names and titles of the arbitrators and agents assembled at Geneva, exchange of powers, presentation of the cases, and continues verbatim as follows. The Tribunal, having fully taken into consideration the treaty cases, counter cases, documents, evidence, arguments, and all communications made him impartially and carefully examined the same, and has arrived at the decision embodied in the published award.

DUTIES OF BELLIGERENTS.

Whereas, having a regard for the sixth and seventh articles of the treaty, the arbitrators are bound by the seventh article in deciding the matters submitted to be governed by the three rules therein specified and by such principles of international law not inconsistent therewith, as the arbitrators shall determine to be applicable to the case, and where as the due diligence referred to in the first and third of the said rules should be exercised by neutral governments in the exact proportion of the risks to which either belligerents may be exposed by the failure to fulfill the obligations of neutrality on their part, and whereas the circumstances out of which facts the subject matters of the present controversy arose, were of a nature to call for the exercise, on the part of Her Majesty's government, of all possible solicitude for the observance of the rights and duties involved in the proclamation issued May 13, 1861

COMMISSIONS OF BELLIGERENT POWERS.

and whereas the effects of the violation of neutrality committed by means of the construction, equipment and armament of vessels is not done away with by any commission which governments of belligerent powers, benefited by the violation of neutrality, may afterwards grant that vessel, and the ultimate step by which the offense is completed, cannot be admitted as ground for the absolution of the offender, nor the consummation of his fraud become the means of establishing his innocence;

COURTESIES TO WAR VESSELS NO JUSTIFICATION

and whereas the privilege of ex-territoriality accorded to vessels of war is admitted into the law of nations not as an absolute right but as founded on the principle of courtesy and mutual deference, and therefore can never be appealed to for justification of the acts done in violation of neutrality;

NEITHER THE LACK OF PREVIOUS KNOWLEDGE.

and whereas the absence of previous knowledge cannot be regarded as a failure in the law of nations in a case in which the vessel carries its own condemnation;

SPECIAL CIRCUMSTANCES NECESSARY TO PERMIT OF COALING.

and whereas, in order to impart to supplies of coal, a character inconsistent with the second rule prohibiting the use of neutral ports and waters, as a base of operations, the necessary supplies must be connected with special circumstances of time, person and place; and whereas, respect to the vessel called

THE ALABAMA

it clearly results from all the facts relative to her construction in the port of Liverpool, and her equipment, and armament in the vicinity of Terceira, through the agency of other vessels, despatched from Great Britain for that purpose, that the

BRITISH GOVERNMENT FAILED TO USE DUE DILIGENCE

in the performance of neutral obligations; and notwithstanding the official representation of Agents of the United States during the construction of the said ship, omitted to take effective measures of prevention; and that the orders of detention which the Government did finally give were issued so late that the executing of them was not practicable;

MEASURES OF PURSUIT IMPERFECT

and whereas, after the escape of that vessel the measures taken for her pursuit and arrest

were so imperfect that they led to no result and therefore cannot be considered sufficient to release Great Britain from the responsibility incurred.

ALABAMA ADMITTED TO COLONIAL PORTS

and whereas, despite the violation of neutrality committed, the same vessel was on several occasions freely admitted to ports of the colonies of Great Britain, instead of being proceeded against, as she might have been, in any and every port of British jurisdiction where she might have been found; and whereas the Government cannot justify itself for its failure in due diligence by the plea of insufficiency to legal means of action it possessed,

FOUR OF THE ARBITRATORS,

for the reasons above assigned—and the fifth Lord Cockburn, for reasons separately assigned by him—are of opinion that Great Britain has, in this case, failed by omission to fulfill the duties prescribed in the first and third rules established by the treaty of Washington. And whereas, in respect to

THE FLORIDA,

it results from all the facts that the English authorities failed to take measures adequate to prevent the violation of the neutrality law, notwithstanding the representations of the agents of the United States to Her Majesty's government, it failed to use due diligence to fulfill the duties of neutrality. It likewise results from the stay of the *Areto* at Nassau, where she had issue there to her enlistment of men, supplies and armament, with the co operation of the British vessel *Prince Alfred* in Green Bay; that there was negligence on the part of the British colonial authorities; and whereas, notwithstanding the violation of the neutrality law of Great Britain committed by the *Areto*, the same vessel, later called the *Florida*, was on several occasions freely admitted into British ports.

JUDICIAL ACQUITTAL AT NASSAU OF NO VALUE.

Whereas, the judicial acquittal of the *Areto* at Nassau cannot relieve Great Britain from the responsibility incurred under the principles of international law, nor can the fact of the entry of the *Florida* into the Confederate port of Mobile, and her stay there during four months, extinguish the responsibility previously incurred by Great Britain; for these reasons the tribunal, by a majority of

FOUR VOICES TO ONE,

is of opinion that Great Britain has, in this case, failed by an omission to fulfill the duties prescribed in first, second, and third rules, established in article sixth of the Treaty of Washington. And whereas, with respect to

THE SHENANDOAH,

it results from the facts of the departure from London of the *Sea King*, and her transformation into a cruiser near Madeira that the English Government

NO FAILURE IN DILIGENCE TILL ARRIVED AT MODERIA

is not chargeable with any failure down to that date in due diligence to fulfill the duties of neutrality; but whereas, it results from facts of the

STAY OF SHENANDOAH AT MELBOURNE,

and especially the augmentation which England admits to have been clandestinely effected in her force by enlistments at that port, that there was negligence on the part of the authorities at that place; for these

reasons the Tribunal is unanimously of opinion that England has not failed by any act omission to fulfill duties prescribed by the three rules of the treaty, or by the principles of International law in respect to the *Shenandoah* during that period of time anterior to her entry into the port of Melbourne, and by

A MAJORITY OF THREE TO TWO

votes the Tribunal decides that Great Britain has failed in her duties as prescribed by the second and third rules in the case of the same vessel from and after her entry into Hobson's Bay, and is therefore responsible for acts of that vessel after her departure from Melbourne, February 18th, 1865. As relates to 'no

TUSCALOOSA, CLARENCE, TACOURY AND ARCHER, tenders to the Alabama and Florida, the Tribunal are unanimously of opinion that these accessories must follow the principals, and be submitted, the same decision. As relates to the

RETRIBUTION,

the Tribunal, by a majority of three to two voices, is of opinion, that England has not failed to fulfill her duties prescribed in the three rules. So far as relates to the

GEORGIA, SUNPETER, NASHVILLE, TALLEHASSE AND CHICKAMANGA,

the Tribunal is unanimously of opinion that Great Britain has not failed to fulfill her duties prescribed by the three rules, or by international law. It is of opinion that

THE SALLIE, JEFF. DAVIS, MUSIC, BOSTON AND JOY,

are excluded from consideration for want of evidence. And whereas, so far as relates to the

INDEMNITY CLAIMED

by the United States, costs of pursuit by the cruisers are not in judgment before this Tribunal, and are properly distinguished for general expense of war. The Tribunal, therefore, is of opinion that there is no ground for awarding any sum by way of indemnity under this head. Whereas

PROSPECTIVE INJURIES

cannot properly be made subject to compensation, inasmuch as they depend on native, on future and uncertain contingencies, the tribunal is unanimously of opinion that there is no ground for award on this head; and whereas in order to arrive at an equitable compensation for damage sustained it is necessary to set aside all double claims for gross freight, so far they may exceed net freight; and whereas it is just and reasonable to allow

INTEREST AT A REASONABLE RATE,

and whereas, in accordance with the spirit and letter of the

TREATY OF WASHINGTON,

it is perferable to adopt as a form of adjudication a sum in gross rather than refer the subject of compensation for further discussion and deliberation to the board of assessors, provided by article ten of the treaty; the tribunal using the authority conferred by article seven of the treaty, by a majority of four voices, awards to the United States the sum of

FIFTEEN MILLION FIVE HUNDRED THOUSAND DOLLARS

as indemnity to be paid by Great Britain to the United States for satisfaction of all claims referred to the tribunal. The considerations of the tribunal were conforma-

bly to the provisions contained in article seven of the treaty; and, in accordance with the terms of article eleven of the treaty, the tribunal declares that all claims referred to it are hereby fully, perfectly, and finally settled; and it furthermore declares that each and every one of the said claims, whether the same may or may not have been presented to their notice or laid before their tribunal, shall henceforth be considered and treated as settled and barred. In testimony whereof the said decision and award has been made in duplicate, and signed by the arbitrators, who have given assent thereto; the whole being in exact conformity with the provisions of the treaty of Washington.

Made and concluded at the Hotel de Ville, Geneva, Switzerland, Sept., 1872.

(Signed)

CHAS. FRANCIS ADAMS,
SCHLOPIS,
STAEMPFELI,
ITAJUBA.

MITRAILLEUSE EXPERIMENTS AT WOOLWICH.

A further series of experiments have taken place at the Royal Arsenal practice range this week with the English Gatling gun, the mitrailleuse yet introduced into the service, and that but sparingly, the object being to ascertain the precise value of that arm as an auxiliary either of artillery or infantry, or both. From the opinions already submitted on the subject in official quarters it is believed that the use of the mitrailleuse will, in the British service at least, be restricted to boats and fortresses, where the length and breadth of the space to be swept lies within very narrow limits, and when as heavy a fire as possible has to be concentrated on one spot—in such positions, for instance, as the flanks of the main ditch before a fortress, rendering its passage by an assailant almost impracticable, while the weapons themselves offer so small a mark, being placed low down, so as to bring a grazing fire on the ditch that they can hardly be hit by the besiegers. It appears to be the general opinion throughout Europe that they cannot in any way rival artillery in the open field as grape and canister are far more effective against living objects; and shrapnel or common shell, besides being able to reach the enemy under cover, are much more destructive against resisting objects and at longer range. On the other hand it is thought that they cannot compete against infantry either in usefulness for practical purposes or in number of effective shots per man, and, except in Russia, where 15 batteries of Gatlings are being provided, one for each infantry division, they are not being introduced to any large extent by any European nation. Although the system has been under trial for about two years, there are probably at this time not more than a dozen mitrailleuses in the whole of England.

An Imperialist newspaper says that General Cathlineau and Timdall will soon meet at Bayonne, France, to perfect the arrangements for the next Carlist rising in Spain. Gabrea, a well known Carlist, has been invited to join in the movement, but refuses. General Timdall served under Maximilian in Mexico.

Several trains on the railway between Saragossa and Barcelona have lately been fired upon by Carlists. So bold have these desperadoes become that the drivers, in fear of their lives, have refused to work, and the running of trains between the two cities has been suspended.

THE GENEVA AWARD.

OPINIONS OF THE PRESS.

From the London Advertiser.

"What a farce has been played at Geneva, where England has been adjudged to pay tribute to a bully who repudiates his own obligation. America is not yet contented with the settlement of the claims against England."

From the London Herald.

"The breach between the two countries has only been widened. Of course had the Arbitrators decided upon a larger sum of indemnity, England would pay it; if they had awarded nothing America could but show her teeth. What humiliation next awaits?"

From the London Standard.

"We went to Geneva for justice and reconciliation, but instead met with invectives from the American counsel and a partially adverse award dictated rather by a desire for compromise than by equity. The whole proceedings in connection with the arbitration are entirely unsatisfactory to England."

From the New York Herald.

"Probably a more through imposition than the Treaty of Washington has never been palmed off as a great diplomatic triumph upon a credulous people. We have gained by it neither honor, credit nor pecuniary advantage. As a settlement of our direct losses through the acts of the Anglo-Confederate privateers during the war of the rebellion, the Alabama claims portion of the treaty is neither honorable nor so profitable as would have been the settlement proposed by the Johnson-Clarendon Convention, rejected by the Senate in 1869. The discarded plan of adjustment was a plain, straightforward business arrangement, made by the clear heads of an able lawyer and ripe statesman, and looking to a speedy and satisfactory settlement of the moneyed part of the dispute. The other has been a glittering fraud, puffed into importance by the breath of scheming politicians and ending in less practical benefit to the United States, in a material point of view, than the rejected Johnson-Clarendon Treaty would have secured."

From the New York Tribune.

"The controversy, it says, has grown stale, and every one will be glad so hear that it is at an end. But it scarcely could have ended worse. We have lost every point we tried to make. By asking too much we have gained nothing. The thousand millions which would have made our case sublime if they had not made it ridiculous, have dwindled to fifteen and a half. This petty sum will doubtless be greatly diminished by the English claims against the United States which are yet to be allowed. Of course the mere matter of money is the least important feature of so grave and authoritative a decision which forms a sort of epoch in international proceeding. But this trifling sum is positively all we have gained. In every point of view the great moral advantage is with England, and against us. There was a great opportunity presented for an important and beneficent improvement in international procedure. But it has been thrown away on our side by the vacillation and incompetency of our Government."

From the New York Express.

"When it is remembered how high the American eagle perched in the magnitude of its pretensions at the close of the Treaty

Commission and how low he roosts now, the conclusion is not at all encouraging to American pride."

From the New York Star.

"As diplomats the present Cabinet are no more capable of contending with the statesmen of the Old World than a lamb is with a tiger. They have been beaten on every point. We shall not receive the award made by the Geneva Tribunal until all these claims are fixed. All claims other than those growing out of the depredations of the Alabama and other cruisers were, by the treaty, to be referred to a mixed commission of three members, one each appointed by the two contending powers, and a third appointed by them conjointly. This commission was in session at Washington during last winter, and will recommence its sittings next month. The majority of cases before this commission are claims upon our Government for cotton and blockade runners alleged to have been wrongly seized; and it is already plain that a considerable sum will have to be paid by the United States on the damages. It is estimated that the British Government will obtain at the least \$5,000,000. This will reduce our little bill to \$10,000,000. England damaged this country all she could, assisted to run up our debt to an almost fabulous sum, and now gets everybody to agree that this sort of thing was wrong, and in future it shall not be tolerated. Cunning John Bull, having every thing to gain by the establishment of this principle, practically insures his commerce from danger in future wars; soothes the mighty American Eagle with £2,000,000 and laughs in his sleeve at the stupidity of American statesmen and the imbecility of the Government at Washington."

From the New York World.

"The United States as plaintiffs before the Court of Arbitration come out non suited and made rather more than ridiculous. All that the Court has recognized is the private claims of sundry American citizens for damages in certain specified cases. This claim might have been quite as well adjusted under the Johnson-Clarendon treaty, which was so spitefully rejected by the Senate in a passion of partizan malice, under the pretext that it failed to adjust those claims of 'the nation' which we have just united with Great Britain under the Treaty of Washington and President Grant's diplomacy in branding as unfounded and untenable."

From the Courier des Etats Unis.

"Under the circumstances one might ask at first sight which of the two parties has reason to complain. But it will appear from an attentive examination that the United States have no reason to congratulate themselves. The verdict accords no more, neither to national pride nor the principles sustained, than was to be found in the Johnson-Clarendon treaty, which the Senate rejected in 1869."

GERMAN TROOPS.

The New York World has the following rather startling editorial summary of the state of affairs in Berlin:

The accounts received on all hands from Berlin point to a terrible state of disorganization in the capital of Germany. Rents are doubled, and whenever a family is evicted the populace take sides with it, attack the police, and very often win the battle. As it is the official theory that the soldiers must always win if called out, at any loss of

life, and as a Berlin mob is composed of soldiers who do not like to fly, the Government is most reluctant to appeal to the military, and the police are often very hardly treated, Crime too, is rapidly on the increase; Berlin is full of swash bucklers, who get into willful quarrels with civilians; and the sanitary condition of the city is the worst in Europe. There is no scientific drainage whatever, the death rate is double that of London, and if the cholera effects lodgment it may become epidemic. The Government, however, with the \$1,000,000,000 taken from France, will not give the Berliners even the \$40,000,000 extracted from Paris, and the town council cannot get rid of its old tradition of saving pennies.

HOW A PRESIDENT IS ELECTED.

The question is often asked as to how the President of the United States is elected. We will answer.

Each State is entitled to as many electors for President and Vice-President as it has Senators and Representatives in Congress.

In each State the electors are chosen by a plurality vote. That is, if there are three sets of electors voted for, the highest number of votes is chosen.

But a candidate for President, in order to be successful, must have a majority of all the electors.

If there be three candidates for President and none of them receive a majority of the electoral college, there is no choice, and the election then goes to the House of Representatives.

The House must confine their choice to the three highest candidates voted for by the electors. The Representatives vote by States, and each State has but one vote; so that the power of Delaware is as great as that of New York. A candidate, to be successful, must receive a majority of all the States, or nineteen States. If the delegation is divided, the vote of the State can not be cast, and therefore is lost.

TESTING OUR HEAVY ORDNANCE.—A 9-inch Woolwich gun, returned from Portsmouth, with a transverse fracture of the A tube, or outer wrought iron skin, about 18 inches from the muzzle, and of considerable extent, is being tested at the Royal Arsenal proof butts to ascertain how far a gun so injured may be relied on for further work in an emergency, and to ascertain other facts of value to artillerymen. About forty rounds have been fired with the ordinary service charge, but at present without any visible effect either upon the external fracture or upon the steel inner tube, which remains intact. With some of these rounds a trial has been made with Captain Maitland's expanding wad, fixed in the base of the projectile to prevent the escape of gas between the shot and the bore, but so far the experiments have been attended with uncertain results, and further trials will be necessary before any opinion can be pronounced on the value of the invention.

NEW CHINESE STEAM FRIGATE.

A steam frigate of 2700 tons, 400 horse power, and armed with twenty 40 pounder and two 90-pounder rifled guns, was lately launched from the Chinese Arsenal at Shanghai. Everything about her except the shaft was made at the arsenal by Chinese artisans, and under the superintendence of only five foreigners from first to last.