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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. IX

OTTAWA, (CANADA,) TUESDAY, NOVEMBER 16, 1875.

No. 46.

The Volunteer Review

published EVERY TUESDAY MORNING, at OTTAWA, Dominion of Canada, by DAWSON KERR, Proprietor, to whom all Business Correspondence should be addressed.

TERMS - TWO DOLLARS per annum, strictly in advance.

TO CORRESPONDENTS.

All Communications regarding the Militia or Volunteer movement, or for the Editorial Department, should be addressed to the Editor of THE VOLUNTEER REVIEW, Ottawa.

Communications intended for insertions should be written on one side of the paper only.

We cannot undertake to return rejected communications. Correspondents must invariably send us confidentially, their name and address.

All letters must be Post-paid, or they will not be taken out of the Post Office.

Adjutants and Officers of Corps throughout the Provinces are particularly requested to favor us regularly with weekly information concerning the movements and doings of their respective Corps, including the fixtures for drill, marching out, rifle practice, &c.

We shall feel obliged to such to forward all information of this kind as early as possible, so that it may reach us in time for publication.

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First insertion, measured by } 10cts. per line.
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Subsequent insertions..... 5cts. " "
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PROSPECTUS FOR 1876 OF THE "WITNESS."

THE friends of healthy literature have, by persevering diligence, placed the *Montreal Witness* in the very first rank of newspapers. The rapid growth of trashy reading, and of what is positively vile, stimulating good people to more earnest efforts than ever to fill every household with sound mental food. A clergyman has lately secured for the *Witness* hundreds of subscribers, and declares his intention to make this one of his first duties in his present and every future field of labor, as he holds that by no other means could he do so much for the future of a neighborhood as by placing good reading in every family.

Successful attacks upon the *Witness* during each of the past three years, culminating in what has been called "The Ban" of the Roman Catholic bishop of Montreal; although not otherwise desirable circumstances, have done a great deal to concentrate and intensify the zeal of the friends of Temperance and religious liberty in

favor of the *Witness*. Indeed, the fact that the last assault has been followed up for six months with the most untiring efforts to break down the paper on the part of the most powerful moral opposition that could be organized on earth, and has resulted in cutting us off from some, at least, of those Roman Catholic readers whose good will we formerly enjoyed and highly prized, give us perhaps, some claim on the kind offices of those who value free speech and freedom of religious belief. The actual diminution of the circulation of the *Daily Witness* is of course, comparatively small, amounting to about 500 out of 13,000, or less than four per cent., and does not effect us peculiarly, as we can still claim a circulation equal in volume to that of all the rest of the daily city press, probably the majority of our old Roman Catholic readers being such still.

The progress of the paper may be gathered approximately from the following figures:

	Cir. Daily, 1st Sept.	Cir. Semi-Weekly and Tri-Weekly 1st Sept.	Ir. Weekly 1st Sept.
1871,	10,700	3,000	8,000
1872,	10,000	3,600	9,000
1873,	11,000	3,600	10,750
1874,	12,900	3,800	17,000
1875,	12,400	3,200	10,700

We have good reasons to be specially desirous to reach the whole country this winter, and have the *Witness* presented earnestly to the notice of every family. To this end we have determined to depart from the usual course of allowing our publications to commend themselves on their merits alone, and to inaugurate on a large scale a competitive effort on the part of all our subscribers to increase the subscription list. This competition will last during the month of October, and will be open to all. The list of prizes will be found below.

If this comes to any who are not familiar with the *Witness*, we may say that for twenty-nine years it has labored for the promotion of evangelical truth, and for the suppression of the liquor traffic. Our effort is to produce a *Christian Temperance Newspaper*, unattached to any political party or religious denomination, seeking only to witness fearlessly for the truth and against evil doing under all circumstances, and to keep its readers abreast with the news and the knowledge of the day. It devotes much space to Social, Agricultural and Sanitary matters, and is especially the paper for the home circle. It is freely embellished with engravings.

The *Weekly Witness* has been enlarged twice, and nearly doubled within four years, and is the very most that can be given for the price—\$1.10 per annum.

The *Montreal Witness* (Tri-Weekly), gives the news three times a week, and all the reading of the *Daily Witness* for \$2.00 per annum.

The *Daily Witness* is in every respect a first class daily containing much more reading matter than the papers which cost twice as much, for \$3.00 per an.

All of course, are post-paid by Publishers. Subscribers remitting new subscriptions beside their own are entitled to the following discounts on such subscriptions:

Daily Witness	50c.
Tri-Weekly	55c.
Weekly	25c.

PROSPECTUS FOR 1876 OF THE "CANADIAN MESSENGER."

THE PIONEER PAPER.

The *Messenger* is designed to supply the homes of the Sunday School scholars of America with family reading of the most useful and interesting sort at the lowest possible cost. It consists of eight pages of four columns each, and contains a Temperance department, a Scientific department, a Sanitary department, and an Agricultural department. Two pages are given to family reading, two ton tale in large type for children, and

one to the Sunday School lessons of the International Series, and a children's column. The paper is magnificently illustrated. There has been a very rapid increase in its circulation during the past year, namely, from 15,000 to 25,000, and the ratio of increase rises so rapidly that the proprietors have sanguine hopes of doubling the latter figure before the end of next year. There has been, as a result of this prosperity, some improvement in the style of the paper, and it will, of course, be possible to introduce more and more improvements as circulation grows. Most of the growth of the *Messenger* has been by the voluntary recommendation of its friends who have formed their own opinion of its worth, and by the introduction of it into Sunday Schools. Young correspondents say that their Sunday Schools are more interesting and better attended since it has been introduced.

The following are the prices of the *Messenger*,

1 copy	\$ 0 30
10 copies	2 50
25 copies	6 00
50 copies	11 50
100 copies	22 00
1,000 copies	200 00

Surplus copies for distribution as tracts, twelve dozen for \$1.

PROSPECTUS FOR 1876 OF THE "NEW DOMINION MONTHLY."

In general style and appearance the *Dominion* has, during the last few months, very considerably improved, and it is intended to improve on the present as much as the present is an improvement on the past, and the Magazine of next year will be read with an ease and pleasure greater than hitherto. When we say that these improvements are not to be marked by any change of price, we refer to the full price of \$1.50 per annum. Hitherto the *Dominion* has been clubbed with the "Weekly Witness" at \$1.00, which it will be simply impossible to continue now that one-fifth has been added to its bulk, along with better paper and printing. The *Dominion* is henceforth to be clubbed with the "Witness" at \$1.25, and is better worth its cost than ever before. Twenty-five cents instead of fifty will be the discount allowed to friends obtaining for us new subscribers at full rates, the inducements to subscribers being now put into the magazine itself. The object of the publishers of the *Dominion* is to develop a native Canadian literature, and very much has been accomplished in this way during its history of nine years, the age of the magazine being that of the *Dominion* of Canada. Those interested in the same object will not, we think, waste their efforts if they do what they can to make the magazine a pecuniary success, what we presume no magazine in Canada has ever yet been for any length of time.

LIST OF PRIZES.

- To the person sending the largest amount of money on or before 1st Nov., as payment in advance for our publications..... \$50.00
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The necessity for a popular medium for the representation of the productions of our great artists, has always been recognized, and many attempts have been made to meet the want. The successive failures which so invariably followed each attempt in this country to establish an art journal, did not prove the indifference of the people of America to the claims of higher art. So soon as a proper appreciation of the want and an ability to meet it were shown, the public at once rallied with enthusiasm to its support, and the result was a great artistic and commercial triumph—THE ALDINE.

THE ALDINE, while issued with all the regularity has none of the temporary or timely interest characteristic of ordinary periodicals. It is an elegant miscellany of pure, light and graceful literature; and a collection of pictures, the rarest specimens of artistic skill, in black and white. Although each succeeding number affords a fresh pleasure to its friends, the real value and beauty of THE ALDINE will be most appreciated after it is bound up at the close of the year. While other publications may claim superior guesses, accompanied with rivals of a similar class, THE ALDINE is a unique and original conception—alone and unapproached—absolutely without competition in price or character. The possessor of a complete volume can not duplicate the quantity of fine paper and engravings in any other shape or number of volumes for ten times its cost; and then, there is the chromo besides!

The national feature of THE ALDINE must be taken in no narrow sense. True art is cosmopolitan. While THE ALDINE is a strictly American institution, it does not confine itself entirely to the reproduction of native art. Its mission is to cultivate a broad and appreciative art taste, one that will discriminate only on the grounds of intrinsic merit. Thus, while placing before the patrons of THE ALDINE as a leading characteristic, the productions of the most noted American artists, attention will always be given to specimens from foreign masters, giving subscribers all the pleasure and instruction obtainable from home or foreign sources.

PREMIUM FOR 1875.

Every subscriber for 1875 will receive a beautiful portrait, in all colors, of the same noble dog whose picture in a former issue attracted so much attention.

"MAN'S UNSELFISH FRIEND"

will be welcome in every home. Everybody loves such a dog, and the portrait is executed so true to the life, that it seems the veritable presence of the animal itself. The Rev. T. De Witt Talmage tells that his own Newfoundland dog (the finest in Brooklyn) barks at it. Although so natural no one who sees this premium chromo will have the slightest fear of being bitten.

Besides the chromo, every advance subscriber to the ALDINE for 1875 is constituted a member and entitled to all the privileges of

THE ALDINE ART UNION.

The Union owns the originals of all THE ALDINE pictures, which, with other paintings and engravings, are to be distributed among the members. To every series of 5,000 subscribers, 100 different pieces, valued at over \$2,500, are distributed as soon as the series is full, and the awards of each series as made, are to be published in the next succeeding issue of THE ALDINE. This feature only applies to subscribers who pay for one year in advance. Full particulars in circular sent on application enclosing a stamp.

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THE ALDINE will, hereafter, be obtainable only by subscription. There will be no reduced or Club rates: cash for subscriptions must be sent to the publishers direct, or handed to the local canvasser, without responsibility to the publishers, except in cases where the certificate is given, bearing the fac-simile signature of JAMES SUTTON, President.

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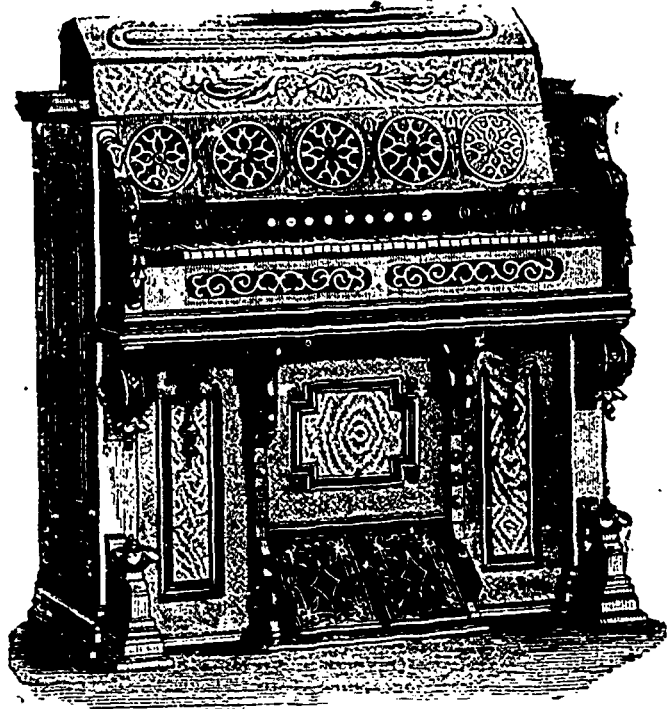
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A Journal Devoted to the Interests of the Military and Naval Forces of the Dominion of Canada.

VOL. IX

OTTAWA, (CANADA,) TUESDAY, NOVEMBER 16, 1875.

No. 46.

NEWS OF THE WEEK.

The Hon. Mr. Vail, Minister of Militia and Defence, left town on Friday evening for Nova Scotia. He will be absent only for a short time.

On Friday last the Hon. Mr. Scott, Secretary of State of Canada, received a telegraph despatch from the Lieut. Governor of British Columbia, the Hon. Mr. Trutch, stating that Major General Smyth and party had arrived at Victoria on the 21st of October. They reported pleasant weather during the entire trip; visited all the mounted police posts on the way, and reached Victoria in three months after leaving Fort Garry. At Walla General Howard and the officers of the U. S. Army entertained General Smyth and party at a ball. At Portland the visitors were treated with great courtesy by the citizens. At Fort Vancouver, as the steamboat with the Major General came down Columbia River, a royal salute was fired in honor of the distinguished visitor. The party landed and were received by the officers of the garrison with the customary honors. They embarked on the 30th for San Francisco, and left that city on the 5th inst. on their return to Ottawa. The General and party are reported to be in good health, and much pleased with the results of their trip across the continent.

We understand that Major General Selby Smyth and Captain the Hon. Miles Stapleton, A.D.C., who have been absent for the past four months on a tour of inspection to Manitoba and British Columbia, are expected to arrive here this afternoon.

We have the gratifying intelligence of the safe arrival of his Royal Highness the Prince of Wales, at Bombay on the 8th inst., after a very pleasant and prosperous voyage. On his landing from the *Serapis*, he was received by General Lord Napier, of Magdala; Sir Philip E. Woodhouse, Governor of Bombay; Hon. Sir M. R. Westropp, Chief Justice, and many others, including civil, military and municipal authorities, accompanied by seventy native princes and chiefs, who had also come to welcome the Prince of Wales to India. After leaving the royal barge at the dockyard the municipality of Bombay presented him with an appropriate address of welcome. The Prince replied briefly, after which he and his suite were escorted to the Government House. The troops and police preserved perfect order while the long procession moved through the streets. Over 200,000 spectators lined the route. The reception was of the most enthusiastic description, and was participated in alike by the European and natives. The city was splendidly decorated throughout, no fewer

than eight triumphal arches having been erected on the line of march. The apartments to be occupied by His Royal Highness during his stay in Bombay are most pleasantly situated rooms in the Government House. A grand levee was held in the evening. It is expected that while here the Prince will present colors to the 21st, the native infantry, better known as the Marine battalion, the oldest corps in Bombay, having been raised a century ago. He will also review the troops and accept the hospitality of the Freemasons of the city. The British flying squadron is anchored in the harbor, and will remain during the stay of the Prince.

From the Pacific coast we have the melancholy intelligence of the loss of the steamship *Pacific*, with all on board with the exception of one man named Jelly who was picked off the pilot house by the Captain of the *Messenger* 20 miles south of Cape Flattery. There were two hundred and fifty souls on board when the ship foundered.

A later despatch says that the steamer *Oliver Walcott*, picked up another of the *Pacific's* crew on a raft thirty miles inside the Straits of Fuca. He says Captain Howell was drowned from the same raft, and that the *Pacific* was struck by a vessel under full sale. This is confirmed by the *Gussie Telfair*, who reports having seen a vessel in distress outside the Cape with her flag union down and bowsprit gone, which no doubt was the vessel colliding with the *Pacific* steamer.

From Galveston, we learn of another fearful disaster and loss of life. The steamship *Waco* was struck by lightning in the Gulf on the 9th, and all hands are supposed to be lost. Hopes, however, were entertained that some of the *Waco's* people were saved by the *Australian*, which was lying at the mouth of San Bernard River.

A Toronto telegram of the 6th says: "The propellor Queen of the North, is reported to have been lost on Lake Erie two nights ago. She was owned by Henry Jackman, belonged to this port, was valued at \$10,000, and insured about eight o'clock this evening."

A British Columbia newspaper states that a railway surveying party, while at Gardener's Inlet, came across large tracts of the real Scotch heather.

Twenty-eight cars, laden with the hull of a new iron ship for the Pacific Ocean, passed through Harrisburg, Pa., during last week for California, via Pennsylvania and Union Pacific Railway. Forty car loads are to follow, the hull was in sections, and was manufactured in Roach's yard, at Chester.

An Indian canoe that will hold 100 men is to be sent to the centennial from British Columbia. It is sixty feet long, eight wide and four high.

A telegram from Singapore, Nov. 8th, says: "Colonel Clarke, Governor of the Straits Settlement, will go to Serak today. Intelligence received here from Penang announces that the Malayans are besieging the British Residency at Perak. All the native rajahs are suspected of complicity in the murder of the late Resident, Mr. Bierch. It is reported that the Malayans are preparing for resistance. Sultan Ismail is collecting a considerable force for the purpose of attempting to expel the British from the country."

One-third of the vessels of the Italian navy are offered for sale at auction. Their original cost was ten millions of dollars; the price now asked for the whole lot is only one million. Dealers in firewood and old iron are afforded an excellent opportunity.

A cable telegram of the 8th inst., says: The *Morning Standard's* special from Vienna states that thirty-six thousand Servian militia are assembled at the frontier. The Servian Government has sent agents to Paris and London to raise a loan.

The *Times* publishes a special from Alexandria which says the Khedive has applied officially to England for two financiers to undertake Egyptian finances, promising fullest information to the Great Powers.

The Turkish Ambassador in Vienna has been summoned to Constantinople to assume the Ministry for Foreign Affairs. He is in favor of the reforms recommended by Russia, Austria and North Germany.

The weather in England and France during the past fortnight has been very stormy. Heavy and almost incessant rains have fallen, and many parts of both countries are flooded. Vast tracts are threatened by rivers.

The brig *Centaur* from Greytown, reports October 2nd, lat. 18-27 long. 85-22, picked up a man in a boat belonging to the bark *Toronto*, of Glasgow, which was wrecked near Nevassa, when and under what circumstances cannot be learned. The man is a Spanish negro and very ignorant. It seems the entire crew abandoned the ship in the same boat and all perished except this man, who was insensible from exhaustion and exposure when found.

The Grand Vizier is seriously ill, and the present political state of affairs causes uneasiness in Bulgaria.

The *Golos*, newspaper says of a recent article in the *Gazette* that it confirms the peaceful sentiments and the universal agreement of the Great Powers on the Turkish question.

Servia has withdrawn her troops from the frontier, and countermanded the order to the militia to proceed thither, on account of the withdrawal of the Turkish troops.

The German Cavalry.

A Military correspondent of the *London Times*, writing from Welsrode, Hanover September 5, says: "Among the many Autumn manoeuvres that are now being held in all parts of Germany, perhaps the most instructive are those at present being carried out at this place. It may be said that ever since the existence of Prussia as a military nation the cavalry has been that arm in which it has specially excelled, and to which it has devoted the most unwearied attention. Ziethen and Seidlitz were probably the most able cavalry leaders that the world has known since the invention of gunpowder, and, still more, they may be declared to have laid the foundation of Prussia's greatness. To Seidlitz belongs the honor of having won the battle of Zorndorf; apart, however, from his own brilliant successes, the principles which Seidlitz inaugurated were types that every cavalry leader copied for many succeeding generations. Kellermann and Murat, the celebrated generals of the First Napoleon, were but imitators of Seidlitz, and although for many years his principle and teaching have been allowed to fade out of memory, their real value once more is being appreciated. During the long peace after the battle of Waterloo, the Prussian cavalry, like that of every other nation, somewhat rested on the laurels they had gained in the past. In 1866, though on every occasion they displayed their accustomed bravery, they cannot be said to have come up to their standard of former years, or to that which they have since reached. Poor Captain May, in his 'Tactical Retrospect,' pointed out their shortcomings, and although during his lifetime, like many other tellers of truth, he only met with resentment, his warnings were not unheeded. Four years of incessant labor resulted in the efficiency which produced such brilliant results contributed so much to the gigantic success of 1870. Still it is felt that there remains something yet to be done—the problem for the most effective use of cavalry under the altered conditions of war has not yet been solved.

"Will it ever still play an important part in a general action, or must it rest content without post duty and with holding in check the cavalry of the enemy? If used as in former days, it must inevitably suffer annihilation, like the French cavalry in every battle of 1870 where it was engaged. So convinced are the chiefs of the German army that much is now to be learnt in the handling of cavalry, that they are now busy making experiments with it, and this is the principal place where the experiments are being made.

There are now here three cavalry brigades each comprising two regiments, and together forming one division, under the orders of Major General von Witzendorff, the commandant of the riding establishment at Hanover, where there is the great central school of instruction for the cavalry of the German army. To this cavalry division an 'Abtheilung' or three batteries of horse artillery is attached, and a party of engineers. Each cavalry regiment manoeuvres on its war footing of four squadrons—now, as in war, the fifth squadron being left behind to form a depot for sick and young horses. The strength of each squadron in the field is about 120, including non-commissioned officers, men and officers being called in from the reserve to fill up any vacancies during the manoeuvres. I shall in a future letter enter into details regarding the manner in which the Prussian cavalry is mounted, from which it will be seen that, weak as the Eng-

lish cavalry appear on parade, they turn out far more horses in comparison with their nominal strength than is done in this country. In fact, the taxpayer gets his full money's worth; but whether it is real economy to work young horses, with enormous weights on their backs, before they have attained their full strength, is quite another question, and one which may well engage the most serious attention of our military authorities.

"Prince Frederick Charles came here on Thursday, and was present at the drills on Friday and Saturday. The Prince of Bavaria, who commands a regiment of Bavarian Cuirassiers, arrived on Friday afternoon, and it is understood will remain here until the drills conclude on Wednesday next. The Duke of Connaught is expected this afternoon from Hanover, where he will be the guest of Prince Albert of Prussia. General Walker has been here since the drills commenced, and is watching their course with eager and critical interest, since it may be said that they are the practical test of a new system of cavalry tactics, introduced last year as a tentative measure, or rather resuscitated from the time of Seidlitz.

"At the present time, when military science is advancing with such rapid strides, and when all the nations of Europe are devoting so much attention to its perfection, experiments in manoeuvring are just as valuable and are just as deserving of close attention and remark as torpedo, field artillery, or other trials. This is more especially the case with respect to cavalry manoeuvres as regards the English army. It is seldom possible to collect in England a force of cavalry large enough to be manoeuvred in masses, and in point of fact, there is only one district or piece of ground—namely, the downs of Wiltshire—suitable for the handling of large bodies of cavalry. In Germany, as is well known, they have very exceptional advantages from the open and clear nature of their country, which is free from serious obstacles, and as a rule, fairly open.

"In this neighborhood the land partakes of the usual characteristics of North Germany, with the exception that there are numerous plantations, which are strictly preserved, troops being on no account allowed to enter them. Probably, however, on account of the claims that would be made for compensation, the cavalry here do not manoeuvre over the open country, but confine themselves to about 5,000 acres of waste land that lie about a mile and a half to the south of his town, and are also the only available spot for extended exercises in the district. In my next letter I shall endeavor to describe in detail some of the leading principles of new cavalry tactics."

Russia the Menacing Power.

In the new number of *Macmillan* Colonel Chesney offers an altogether new solution of the so-called "French scare," which will, at any rate, be found a useful supplement to, or corrective of, the well known *Blackwood* article, by those whom the latter interested. The writer's main design, however, appears to be to do away with the common impression that because France was still very weak last May, therefore there could be no truth at all in the report that Count von Moltke, and others who thought with him, strongly urged war counsels at Berlin.

Colonel Chesney asserts roundly that France was quite as backward as the *Blackwood* writer has represented, and is positive that her exact condition was at least as well ascertained in what he calls "the giant

bureau on the Thiergarten" (Count von Moltke's new office, which is, in truth, a sort of military palace) as it could possibly have been to any writer for an English magazine. But then he points out forcibly and in great detail that it is not France as the possible ally of other first class powers, that makes Berlin strategists uneasy. In fact, putting her aside as being altogether unable to play the leading part in the new military future of Europe, Colonel Chesney declares that Russia or Austria must be the real cause of that German uneasiness which not long ago caused very serious disquietude as to the maintenance of peace. Discussing somewhat in detail the position of each of these two great empires, Colonel Chesney finally clears the ground by dismissing Austria from consideration as as affording, of herself, no real cause for uneasiness, and turns to "the formidable Muscovite Empire" as the one power in Europe which Germany has any ground to fear. In both the great motive powers which make for war are astir, and Russia is busily occupied in preparations for the ultimate realization of her dream of military grandeur. But, single handed, Germany is, according to the views put forward, more than a match for her gigantic rival. And the true secret of the longing lately shown to crush France out of sight altogether, so to speak, and certainly without any real provocation on her part, lies in the fixed belief, held at Berlin, that, if this be not done, when once France is again fully equipped, and Russia has completed the reorganization which her Czar and people alike consider necessary to her greatness, a combined attack from either flank will certainly be made on Germany.

Colonel Chesney gives a brief, but clear, outline of what this Russian reorganization is intended to do, and the means for doing it; and, if the authorities (Austrian, apparently, chiefly) that he follows be correct, it seems that Russia will ultimately have, besides a field army numbering a million and half (reserve men, ready at call, included), at least another half million troops, in the form of reserve battalions and garrison regiments, to be formed from the present depôts. These two millions of her fighting line are to be supported by the Opoltsjeni, or Lansturm, of another million, "a mature force intended to occupy a position between that of the German Landwehr and Lansturm," and very suitable, in fact, for frontier service. And these three millions of men, who would be constantly under arms in the event of any hostilities, would be backed, in the event of invasion, by two millions more of local Opoltsjeni, formed out of the older classes of discharged soldiers.

It is not easy to grasp all the details of this vast project. As the *Macmillan* article truly states, the system adopted under the new Russian law is more complicated and varied than the German, or, indeed, that of any other great nation. Still, broadly speaking, it is quite certain that Russia intends, before many years are passed, to be able to throw on a neighbor a million and a half of soldiers of the first line, closely followed by a reserve, or second line, of half a million more, and then leaving another million to guard the frontiers and cover their rear, with two millions to be called out (making five in all) if war roll back within her holy territory. And it is certain that all this is perfectly known and carefully studied at Berlin, and that the chance of having to grapple with such an antagonist, whilst France strikes her old blow across the Rhine, is not a pleasant contingency.

Colonel Chesney finally points out that

the immense pains and vast expenditure laid out on the Rhine and Moselle fortresses would be absolute waste if Germany had to fight France single handed. Their real object is to make an inner barrier against French attack, to be held by troops of the second class, whilst Germany may deal with Russia on the open side by the use of a vigorous offensive; and this design can explain the apparent inequality of strength deliberately displayed on her western and eastern frontiers. He declines to prophesy the result of such a combination, but thinks it quite possible that she might come victorious out of the struggle, provided, that is, that Austria, which would hold precisely the same dominating position on the flank of the combatants as she did just before she declared against Napoleon in 1813, does not repeat her conduct of that period, and throw "her slow but heavy sword" into the balance at the first appearance of check to the army to which she owed her humiliation in 1866. The article concludes with a warm appeal to Berlin Councillors, which, coming from a quarter friendly to Germany, should have the more weight to disarm the uneasiness and almost animosity now felt throughout Europe towards their country, and discountenancing such violent and high handed proposals as that contemplated last year, the execution of which would recall the worst deeds of Napoleon against his weaker neighbors.

Chemical Theory of Gunpowder.

Ever since the introduction of gunpowder the exact method of the action of the ingredients upon each other has received considerable attention from chemists. Gay Lussac was the first to make a systematic analysis of the products of combustion, but it was not possible satisfactorily to explain the reactions taking place, by a formula. The recent researches of Professor Abel and Captain Noble have shown that a much larger number of products is formed than was previously supposed, rendering it even more difficult to explain the nature of the changes taking place by a symbolic formula. Professor Bunsen, of Heidelberg, found by the combustion of a mixture of hydrogen and carbonic oxide with a quantity of oxygen not sufficient to burn the whole of the two gases, that the water and carbonic acid produced stood to each other in proportion of their molecular weights, or their molecular weights multiplied by simple coefficients, and these coefficients may be the same for mixtures of various compositions, but change suddenly when the amount of one or both of the gases is changed beyond certain limits. Dr. Debus has shown that the same law obtains when a mixture of baric and calcic chloride is precipitated by an insufficient amount of sodic carbonate—viz, that the barium carbonate and calcium carbonate precipitated are in proportion of their molecular weights, or their molecular weights multiplied by a simple coefficient. A necessary condition is that the reactions should be simultaneous. In the combustion of powder in an ordinary gun this condition is very nearly satisfied, and accordingly the quantities of some of the products formed obeys the laws enunciated by Bunsen. Dr. Debus deduced from the analytical results published in Messrs. Noble and Abel's most excellent researches on fired gunpowder, as well as from the analyses of the products of the combustion of powder published by Bunsen and Schiskoff, the following general results concerning the products of combus-

tion—(1) the sum of the potassium contained in the potassic hyposulphite, sulphate and sulphide, stands to the potassium in the potassic carbonate approximately in simple proportions; (2) the carbon of the carbonic oxide stands to the carbon of the potassic carbonate also approximately in a simple proportion. From this, as well as from the relation of the sum of the potassium contained in the sulphide and hyposulphite to the potassium in the sulphate, it is possible to form a theory for the combustion of powder. There are several reactions between the constituents of powder when the latter is fired. Two of these are simultaneous; the way in which the others succeed each other cannot be accurately determined, as first, when a portion of the carbon is burned, potassic carbonate, carbonic oxide, nitrogen, and carbonic acid are produced. Simultaneously with this reaction another takes place—a portion of the saltpetre and the whole or a portion of the sulphur from potassic sulphate and carbonic acid. The action of still unburnt carbon and of free sulphur on the potassic sulphate, in a succeeding stage of the combustion, causes the formation of potassic sulphide and hyposulphite. On the ground of such considerations, the processes taking place during the combustion of powder can be represented by equations. Dr. Gladstone said one great value of such a research was that it started other investigators, who, approaching it from different points of view, were able to obtain data not perhaps dreamt of by the original investigators. This observation applied to the inquiries of Messrs. Abel and Noble on the combustion of gunpowder. Those gentlemen dealt rather with practical results than with the conclusions to be derived from them. Dr. Debus, approaching the same subject from a more theoretical point of view, had been able to draw conclusions confirmatory of results he had obtained from some other reactions, to explain more fully what actually took place in the combustion of gunpowder, and to enter upon the domain of molecular physics. By the conjoint action of the chemist and the physicist, no doubt it would not be long before much more would be learnt about what takes place in chemical reactions.

English vs. German Guns.

In an article on guns and ships, the *Pall Mall Gazette* says: Referring to the trials which have taken place this summer on Herr Krupp's shooting ground at Visbeck, near Dülmen, the military contributor of the *Cologne Gazette* observes that it has now been proved that even ironclads of the class of the *Devastation* would be powerless to force an entrance into a harbor guarded with the new heavy guns worked by the German navy. "The condition," he proceeds, "in which the target, an iron plate sixteen inches thick, was left after eleven shots from the 26 centimetre coil gun and ten from the new 30½ centimetre gun, shows that any further strengthening of the iron plates of armored ships would be fruitless. It appears from the photographs taken of the target after each shot that even when the firing was only half over the target was a mere wreck, so that a plate of eighteen or twenty inches would be equally incapable of resisting the new guns as the one on which the experiment was made. These trials have also proved that there is no necessity for increasing the size of our guns, as, if the system of simultaneous discharges by means of electricity were applied to the guns on our ironclads, twenty four and twenty six centimetre guns

would be sufficient to penetrate the strongest plates known. How far the results of the trials will have an influence on naval construction remains to be seen. That in fighting at close quarters a broadside frigate firing its guns simultaneously at one point must produce a much more powerful effect than a turret ship, which can only fire two guns at a time, is beyond doubt. The latter, however, ensures a more accurate aim at distant objects, and it is therefore probable that a certain number of turret ships will continue to be used in our ironclad fleet. The *Borsenzeitung* says that the 26 centimetre Krupp, with a charge of 35 kilogrammes and a projectile of 175 kilogrammes, is now regarded by the German Admiralty as the best ship gun, and that the larger calibres of 28 and 30½ centimetres will only be used for coast defences. As to the ships with 24 inch plates, such as the new English turret ship *Inflexible*, Herr Krupp has already laid before the German Admiralty plans for the construction of guns with calibres of 35.5 centimetres, 40 centimetres, and 46 centimetres, the latter at a distance of 2,000 paces, shooting through a 24 inch plate and its teak backing. Another powerful gun which is to be used both on board ship and for coast defences is the 28 centimetre hoitzer. This gun is charged with 20 kilogrammes of prismatic powder, and its projectile weighs 192 kilogrammes. Its range at an elevation of 22 degrees is 5,800 metres, and at 60 degrees, 6,300 metres; and if it be raised to an angle of 70 degrees, a projectile fired from it will penetrate to the depth of three metres, when falling on a ship's deck. The *Borsenzeitung* adds that the competition which has existed between the England and the German guns since 1863 may now be regarded as definitely closed in favor of the latter. "The English guns have been driven step by step from the continental markets, and there is now not a single State which will use English guns for its navy or the defence of its coasts. Only the other day a trial took place in Japan of the English heavy Woolwich guns and the German breechloaders, in which the former proved decidedly inferior, and the English gunmakers have thus lost their last customer except Brazil."

The Siege of Paris.

Some American gentlemen visiting Paris last year became much interested in a Dioramic Picture on exhibition there, representing the "Siege of Paris" in the late war, and determined, if possible, to secure it for the American Centennial. This, the great popularity of the picture at home, rendered impracticable—but, after much negotiation, they bargained for a similar and better one, to be executed by French artists. The painting—which is now completed and en route to America—has cost, we are informed, exclusive of transportation, duties, and mounting, nearly 500,000f. Colonel Lineard, of Paris, the originator of the picture, accompanies it to America.

A correspondent of "Appleton's Journal" thus describes the picture: I recently inspected the "Siege of Paris," now painting in the vast building originally occupied by *Les Pompes Funebres*, and destined for exhibition, at the American Centennial. The great canvas is stretched flat upon the floor of the great building. As soon as a portion of the painting—which is worked up from miniature sketches in sections—of sufficient dimensions is finished, the surface is covered with paper and the completed part is rolled up, thus bringing a new and unfinished sec-

tion upon the vast easel, and within reach of the artist's brush. The finished picture will be over fifteen metres wide, and about 380 feet long. It will be even finer than its prototype in the Champs Elysees, being taken from a far more advantageous point of view—namely, the position of the Prussian batteries on the heights of Chatillon, which overlooked all Paris and its environs, and from which a superb view of the whole city was obtained. A peculiar and attractive feature in this exhibition will be the introduction of superb life sized figures, in papier mache, of men and horses occupying the foreground of earth in front of the canvas, by means of which the eye will insensibly be carried from reality to the painting—a perfect illusion. These figures are modelled with painstaking accuracy and ability, and are even startlingly lifelike. Special messengers were despatched to Metz for the necessary Prussian uniforms, helmets, weapons, battle paraphernalia, etc.

The artistic portions of the work were confined to a corps of illustrious painters, among whom are some of the leading exhibitors at the *salon* of this year, and notably M. Bet-sellier, whose fine equestrian portrait of Marshal McMahon was so eagerly admired. Over four hundred sketches were painted to serve as models for the work.

RIFLE COMPETITION.

RIFLE SHOOTING.

The Annual Prize Meeting of No. 1 Company took place on Wednesday and Thursday, at the Park Lane Butts. The weather, except that it was a little warm for the season, was all that could be desired. The targets used were the regulation pattern, with three divisions—the Wimbledon style has not got to this part of the world yet. There was no brilliant shooting, but some very fair practice was made. In the "skirmishing prize" running from 600 to 200 yards, and firing two shots at each range—the scores made were very creditable; 28 took the Goblet, and there were two 26's a 25, a 23, and any number between the latter figure and "hits"; four minutes was the time allowed, but the winner did it in 3.15. As the annexed prize list will show, our Victoria visitors (Messrs. Wolfenden and Fletcher) acquitted themselves very well.

No. 1—Open to all comers. Ranges, 200 and 400 yards, 5 shots. Entrance 25 cts. 1st Prize, \$10; 2nd, Meerschaum Pipe; 3rd, Year's subs. to *Guardian*.

	Pts.
E Fletcher,	33
A Peele,	32
C DeBeck,	31

No. 2—Open to members of P. R. A., and No. 1 Company. Range, 400 yards, 7 shots. 1st prize, Silver Mug and \$7 50; 2nd, Butter Cooler and \$5; 3rd, pair Tulip Vases.

	Pts.
R Wolfenden,	25
C DeBeck,	25
E Fletcher,	25

No. 3—Open to Members of No. 1 Company only. Ranges, 200, 400, 500 and 600 yards, 5 shots. 1st prize, Silver medal presented by Hon. Mr. Armstrong and \$10; 2nd, Silver Cup and \$5; 3rd, Pair Balmoral Boots; 4th, Silver Pickle Fork.

	Pts
Lt Peele,	58
Sgt Jackson,	58
Pte Loggie,	56
Pte DeBeck,	55

No. 4—Open to Members of P. R. A., and No. 1 Company, except winners of 1st & 2nd prizes in Nos. 2 & 3. Ranges, 300 and 500 yards, 5 shots. Winners to choose in rotation from a number of miscellaneous articles.

	Pts.
E Fletcher,	29
J C Brown,	27
G Page,	26
A Loggie,	24
V B Tait,	23
W Howay,	21
R Hume,	19
W H Keary,	19

No. 5—Skirmishing prize; the Julia Goblet.

Dr Trew,	28
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No. 6—Open to all comers. Ranges, 200 & 300 yards, 5 shots. Entrance 25 cts. 1st prize, \$10, 2nd, \$5; 3rd, year's subscription to *Herald*.

	Pts.
J C Brown,	32
E Fletcher,	31
A J Jackson,	30

No. 7—Open to members of No. 1 Company only. Ranges, 200, 400, 500 and 600 yards, 5 shots. 1st prize, Silver Medal, presented by Mr. Wm. Fisher, and \$10; 2nd, Silver Cruet; 3rd, Call Bell; 4th, \$3.

	Pts.
Lt Peele,	59
Sgt Jackson,	57
Sgt Brown,	50
Pte Keary,	46

No. 8—"Colts Stakes." Open to all members of No. 1 Company who have not won any prize (except Consolation prizes) since the organization of the Company, present meeting included. Range, 400 yards; 5 shots. 1st prize, Rifle and \$5; 2nd, Silver Butter Knife; 3rd, Plum Cake; 4th, Maw's feeding bottle,

	Pts.
Pte Tait,	16
Pte Wintemute,	14
Pte Hume,	12
Pte Olson,	10

No. 9—Consolation Stakes (if time allows) open to all non winners. Range 200 yards.

	Pts.
G Page,	16
W Edwards,	15
R Wintemute,	13
R Hume,	12

Supplementary Match, 100 yards, 5 shots.

	Pts.
J Devoy,	14
R Andrews,	13
J Kennedy,	13
W Howay,	12
J McMurphy,	9

Aggregate Prizes—For highest aggregate scores in matches, 1, 2, 4, 6, and 7. 1st prize, Officer's Silver Badge; 2nd, Pair Vases given by Assistant Surgeon Trew.

	Pts.
Lt Peele,	198
Sgt Jackson,	196

A barrel of salmon, specially donated for the lowest aggregate score, was won by Pte. Howay, with 127 pts.—*Dominion Pacific Herald*.

SHOOTING MATCH.

A shooting match came off here on Friday, 5th inst., between a team from the Lucknow military company, and one from Dungannon team, who beat their opponents by 37 points. The ranges were 200 and 400

yards, five rounds at each. The following is the score:

		DUNGANNON.		
Pte Stewart,	14	17	31	
Lieut Crozier,	17	10	27	
Pte Robinson,	13	10	23	
Sgt Stothers,	10	12	22	
Sgt McMath,	5	13	18	
Capt Mallough,	0	17	17	
Pte Smith,	9	6	15	
	—	—	—	
	68	85	152	

		LUCKNOW.		
Pte Wilson,	15	11	26	
Pte Spauling,	13	5	18	
Capt Copeland,	11	6	17	
Capt Hoyle,	13	2	15	
Capt Simmons,	11	4	15	
Capt Jeffries,	7	8	15	
Capt Haslop,	8	2	10	
	—	—	—	
	78	38	116	

—Huron Signal.

PRESENTATION OF PRIZES WON AT THE ENGINEERS' RIFLE COMPETITION.

Lt. Col. Macshane, Brigade Major, and Major Boyd presented the prizes won by the successful competitors at Thursday's rifle competition, Merritt's Building, last evening. The prizes were selected as follows, the names of the persons presenting them accompanying each:—

Bugler Hartt, Cup presented by Major Parks
Gunner Mills " " Col. Thurgar
Capt Perley " Lt. Col. Thurgar

(Engineers President of the Club)

Corp Thompson,

Lt Hartt 62nd,

Sergt Ewin,

J H McRobbie, Vase presented by Mr. Richard Thompson, Sheffield House.

Sapper McRobbie,

K Shives, pair of vases by Kerr & Thorne

Sergt Carmichael, Rubber coat

Sapper Black, vest, by W. F. Butt & Co.

T. McPherson, gun, by J. Hunter, Sec. Tre.

Sapper Boyd,

H H Pike, half dozen wine, by Mr T Furlong

Gun Carrab,

Sapper Gilbert,

Sapper Jones,

Capt Lovitt,

Gr Metzler,

Sergt J Hunter, box cigars, by J N Wilson

Corp Fanjoy,

Sapper Murdoch,

J L Carmichael, 1 doz. Syrup, by Capt. A J Armstrong.

Jas Melick, box cigars, by John Risk

Sapper Adamson,

Sergt J Hunter, Chart of city

W White, pair of boots, by Campbell & McDonald.

J Hegan, shirt and drawers, by J Edgecombe & Co.

Corp Hanselpecker, watch chain, J Flagler

Sapper Parks, pair slippers, by Vinca & McFate.

Sapper O Shaughnessy, pair boots

Sapper Gray, pair slippers, by Vincent & McFate.

Lt Hegan, necktie ring, by Sapper Fanjoy

After three cheers for the gentlemen making the presentations, as well as others, the party broke up.

The winner of the first prize in the above match (Bugler Hartt) promises to become a first class shot some of these days, and his friends expect to see his name on the Wimbledon team before very long. The above is the second time he has won first place in rifle competition this year, and as he is not yet fifteen years old we think he might well feel proud at what he has done.

The Turkish Army.

Herr von Wickelde, the military correspondent of the *Cologne Gazette*, contributes to that paper some interesting particulars about the Turkish army. In order, he says, to form an accurate judgment as to the military value of the Sultan's troops, an entirely different standard should be taken from that which is usually applied to a disciplined European army. "If we compare a Turkish infantry regiment as regards outward appearance, the manœuvring power of its soldiers, and the education of its officers, with one of the regiments of any of the great European Powers, we shall find that it is immeasurably inferior. A squad of raw *Landwehr* recruits has a more martial air than the best Turkish battalion of regulars that I have ever seen. . . . On open ground, where good manœuvring is in these days the most important element of success, the Turkish army would be simply useless against a well-disciplined European force. A single German corps d'armée would beat 100,000 Turkish troops in the open field. But these badly clothed and armed, ill-looking, undersized, slouching Turkish foot-soldiers possess many qualities which, under good leadership, would make them equal to the best soldiers in the world. In the first place, their bodily wants are supplied with amazing facility, and their powers of endurance are immense. A cup of black coffee, a small hard biscuit of maize, and a few handfuls of rice boiled in water, suffice for their daily sustenance, and if they get a small piece of half-dried mutton once or twice a week in addition, they look upon it as a delicacy. Their dress and equipment are equally simple. If shoes are scarce, a whole company marches barefoot; and if there are no cloaks in store, the men remain in their thin jackets without murmur. During the last war in the East I saw Turkish battalions which had not received any pay for six months, whose clothing was in rags, and among whom a pair of sound shoes—even among the officers—was a rarity; and yet, though thus wretchedly clad, and rationed in a way which would have hardly have supplied a soldier of Westphalia or Mecklenburg with a breakfast, these men marched for weeks up and down the steep snow-covered mountains of the Balkan, bivouacked in the midst of storms, in snow and ice, and never grumbled at their fate or shirked their duty. . . . The Turkish soldier never drinks any spirits, he never reasons, executes all his orders obediently and submissively, and regards all his sufferings and dangers as inevitable dispensations of Providence which should be borne without a murmur. . . . Another of his characteristics is religious fanaticism. Under the influence of this sentiment he shows extraordinary courage and determination, and it is probable that these qualities will be strongly developed in the struggle with the 'Christian dogs' of Bosnia and the Herzegovina. However much we may admire the efficiency of our present German army, it may be doubted whether 20,000 German troops in the Herzegovina would do as much as the same number of Turks. If our men had to fight day and night against an indefatigable enemy, in a half-desert country, without pay or sufficient food, badly equipped, manœuvring up and down hill, on the borders of deep precipices, in a blazing sun or an icy hail-storm, always without a roof to their heads, and often without wood or water, their military looks and spirit would soon disappear. . . . Another very important quality of most Turkish soldiers is an innate sharp sightedness, an almost

instinctively accurate measurement of distances, and the complete absence of nervous excitement. This is the reason why so many of them are either excellent shots or could easily be made so. In the Crimean war the Turkish infantry were for the most part armed with old flint muskets, in so decayed a state that it almost seemed impossible to make aim with them; and yet they shot better than either the English or the French. . . . This great quality in the Turkish soldiers has also, as I have been assured by the several German officers who served in the Turkish army as artillery instructors, considerably facilitated their training as artilleryists. Like most uncivilized nations, many Turks of the lower classes have good hearing as well as good sight. As in the case with the Cossacks, they have a sort of inborn instinct for *la petite guerre*, and do excellent service in out-post or patrol duty if they are led by tolerably good officers, which is but seldom. . . . On the other hand, most of the Turkish subalterns, and even many staff officers, do not use maps or other scientific appliances, so that in this respect, even for mountain warfare, they would be placed at a disadvantage in conflict with a well-trained European army."

The Turret Ship Thunderer.

TRIAL OF NEW HYDRAULIC MACHINERY.

The Thunderer, 4, armour plated turret ship, Staff Commander Silas Vicary, went out of Portsmouth Harbour on Tuesday and anchored at Spithead, and on Wednesday proceeded outside the eastern end of the Isle of Wight for the purpose of trying Sir William Armstrong and Co's patent hydraulic machinery, which has been recently applied to the two 35-ton guns in the fore turret of the Thunderer. In the old turret are two 35 ton guns, which are still worked according to the old system. The hydraulic machinery is the invention of Mr. Rendall, a member of the firm, who was present at the trial, and he must have been more than satisfied at the gratifying results obtained. It may now be safely asserted that the day of loading and firing guns by the old system has passed away. The Thunderer was in charge of Capt. Waddilove, superintendent of the steam reserve at Portsmouth, and the machinery in charge of Chief Engineer Slade and staff. Among the officers on board were Rear Admiral Boys, director of naval ordnance; Captain Blandeth, of the Excellent, gunnery ship, at Portsmouth; and Captains Singer and Fisher, of the naval torpedo committee. A party of seamen gunners had on board the vessel for a fortnight previously engaged in training for working the hydraulic machinery. Some preliminary firing took place before dinner, and the trial commenced at a quarter past one o'clock. The loading and firing of the two 35 ton guns, as well as the elevation and depression, were effected entirely by the hydraulic machinery. The shots fired were 700lb. in weight, with 110lb. charge of powder. The ship was under steam throughout the firing, which was at a target at various ranges. The working of the guns by hydraulic machinery as against those worked by hand was strongly in favor of the former; the average time between each shot of the firing by hydraulic power was about two minutes only. Inside the turrets the concussion was scarcely perceptible, but outside it was rather severely felt. The firing by hand was not intended as a competition against hydraulic power, but was undertaken for the purpose of showing that it might be

worked in combination, in case of an accident, without difficulty. The firing concluded about three o'clock, and the Thunderer returned to Spithead. The force of the wind was about 4, with a moderate sea, which was not felt on board. The whole of the loading, running in and out, depressing and elevating, was done by hydraulic machinery, whilst the turret was revolved by a pair of steam engines of about 15 horse power. The weight of the two 35 ton guns, carriages, and turrets is about 330 tons, and this enormous mass can now be manipulated with the greatest ease. The accuracy of the firing was remarkable, the job of the target having been carried away at the second shot. It was universally pronounced that the trial was in every respect satisfactory, and it is rumoured that in about a fortnight another trial will take place, when the Lords of the Admiralty will be present. The Thunderer returned to harbour yesterday.—*Standard*, Sept. 17.

President Grant, in reply to a party of Republicans who serenaded him on Saturday said that the rag money cry had been entirely suppressed, and that he thought the Republicans would control the Government for four years longer.

In consequence of their recent triumph on the electoral question, the French Conservatives have succeeded in carrying a vote for the dissolution of the National Assembly.

La Republique Francaise (Gambetta's organ,) characterizes the vote yesterday in the Assembly as reactionary. It says: "We are beaten, but not despairing; it is not enough to triumph in the Assembly; the country is still to be won; what has happened should stimulate our zeal. If we can enlighten the country, universal suffrage will be able to take care of itself."

Lieutenant Selby Smyth, 86th foot, son of Major General Smyth, arrived in Ottawa on Friday last. Mr. Smyth we understand is to replace Capt. in Stapleton as A.D.C. to his father, Major General Smyth.

A tidal wave ten feet high swept the river in Somersetshire, to-day. One vessel was sunk and twenty-one others were more or less damaged.

A Turkish army under Salim Pasha is surrounded by a large force of insurgents, and fighting was still going on at the latest accounts.

The Cholera is raging with great violence in Madras, and it is probable the Prince of Wales will forego his visit to that city in consequence.

There is great activity in Russian military circles, but the Government denies that it is for the purpose of hostility or aggression. Of course not!

Belgrade, Nov. 13.—Prince Milano, while reviewing troops yesterday, announced that the changed political situation rendered it unnecessary to send them to the frontier.

Rome, Nov. 14.—Luciani Frizi Armat Farina and Morrelli, who were on the trial charged with complicity in the murder of Raffaele Sanzogno, editor of *La Capitale*, have been convicted, and sentenced to penal servitude for life. Scarpetti, who was tried on the same charge, was acquitted.

The loss of life by the late colliery explosion at Z-raing, Belgium, is said to have been appalling, forty-two dead bodies having been already taken out, and several more are still supposed to be in the pit.

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The Volunteer Review,

AND

MILITARY AND NAVAL GAZETTE

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

OTTAWA, TUESDAY, NOVEMBER 16, 1875.

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

Lieut. J. B. VINTER, of Victoria, and Captain H. V. EDMONDS of New Westminster, are our authorized Agents for British Columbia.

THE Honorable the Minister of Public Works and Premier of Canada during his recent visit to Great Britain was presented by the corporation of Dundee with the freedom of that ancient burgh, and entertained on the evening of 13th July last, at a magnificent banquet—on which occasion he upheld in a manner worthy of his reputation as a statesman—the interests of this country. The following extract from his speech, as reported in the *Scotsman* of 14th July, will give our readers an idea of the general scope of the information conveyed to our fellow subjects, and from the justice done to the services of a gallant and talented soldier, an assurance that the public interests were ably supported by the honorable speaker:

"Mr. Mackenzie, after thanking the company for the honour done him, went on to say—I can only hope what you have been pleased to say may be the case—that the improved condition of commercial intercourse between Canada and this country may be the result of my visit. I need not say we consider ourselves in Canada quite

as much belonging to the Empire as any part of Great Britain or Ireland. (Applause.) And we have in Canada ceased to speak of the possibility of anything else taking place than the advancement of the intimate political relations that at present exist. We believe it is quite consistent with England's greatness and Canada's happiness that these relations should continue. We believe, as I stated in my remarks to-day, there is room in the American Continent for two political systems. We have had our little trials already. Colonel Sandeman, in speaking of the condition of the volunteer force in England, alluded to the necessity that existed in Canada for an active and efficient force. We have a force of about 45,000 men. That force we can turn out on very short notice. I shall just mention one fact as an instance of this. When the second Fenian raid took place in 1870, the Commander-in-Chief (Colonel Robertson Ross, C.B.) was able to turn out upon the frontier within twenty-four hours 24,000 men—not merely 24,000 men, but well-drilled men, thoroughly equipped and clothed, and with all arms of the service—artillery, cavalry, infantry, and rifles—fully represented. (Applause.) To that complete organization of the Militia service we undoubtedly owe the salvation of the country, and I may say I was out with the rest of my compatriots. (Cheers.) I believe that secured us from all further molestation from the Fenian bands in the United States, and destroyed all hope of United States politicians that anything like a separation of the countries could be obtained by any means in the power of man unless there should be a desire on the part of England to separate from us. (Cheers.) We believe that in that country we have the means of building up a great and powerful nationality."

We cannot touch on the political, financial or commercial, policy shadowed forth in this very able and valuable speech which has all the authority of a state document, and is now a matter of historical import, but it brings painfully to mind that the great services rendered by Colonel ROBERTSON ROSS on that and several other occasions during his four year's service as Commander-in-Chief of the Canadian Army have never met with any recognition at the hands of the Canadian authorities.

For this, however, the present administration is not to blame, nor can the neglect be fairly laid at the door of their predecessors—but it would be an act of justice and generosity if the claims Colonel P. ROBERTSON ROSS has on the gratitude of the country should be considered, and we are quite satisfied that the Premier, with his knowledge of those services, will let the comrades of that gallant officer and the soldiers who have served under his command see that those who have done well for their country shall have their exertions appreciated and their honest services properly rewarded.

His Royal Highness the Commander-in-Chief of the British Army appointed Col. P. ROBERTSON ROSS to the command of the 9th Brigade District immediately after he relinquished the command of the Canadian Army—and at the distribution of rewards for meritorious military service on the occasion of the anniversary of the last Royal Birthday he was appointed C. B., a distinct

ion he owes his sovereign for long and valuable military service. It remains for the Canadian Government to follow the examples set by such high authorities.

THE *Broad Arrow* gives us an article on "Our Aggressive Naval Strength," which will be found on another page. It states that our total efficient sea-going fleet is represented by ten or eleven ironclads, leaving out what some of the naval constructors are pleased to call the "most efficient and powerful war vessel afloat, the *Devastation*, whose special uses remain to be discovered when a naval war shall give them opportunities of exhibiting their enormous powers and developing their tactical capabilities." Our contemporary states that this alarming condition of affairs is due to a false economy—but as that principle was introduced by his "heroic friends the Whig Radicals as a necessary condition of national existence, and as they also introduced the practice of throwing everything in the state, shipbuilding for war purposes included, into open competition, and thus enabling a combination of monopolists to be effected by which the cost of material and labour was increased enormously, he should not now find fault with or raise an alarmist outcry, because the people who succeeded are unable at once to repair the ruin and disorder arising from five years of misrule and mischievous activity on the part of merc doctrinaires, whose only consciousness of England's interests or duty was confined to the manufacturing and trading class.

To the direct action of those people are due the facts on which our contemporary founds his most decisive paragraph. After showing the weak state of the effective navy and the length of time which must elapse before new vessels can be built, and the deterioration of the machinery of those in commission, he says:

"But this is not the worst aspect of the case. The repairs at our dockyards are proceeding at a very slow rate. Mr. Huxr admitted, but a short time since, that a difficulty was experienced in getting hired workmen for the dockyards. As he then explained the rate of pay offered is so small, compared with that given in mercantile yards, that the workmen require the additional inducement of a permanent engagement, which alone retains the established artisans. Here again we have the old story of estimates cut down to injurious limits."

About six years ago the Whig Radicals in a fit of economy closed a number of Government dockyards, sold off the plant and material, and even in more than one instance, the very site—scattering the trained workmen and artisans over the world—because as they pleaded the work could be done cheaper and better in the yards of private builders, and here is the result of that economy.

We quite agree with *Broad Arrow* that

activity in our dockyards should not be the consequences of a declaration of war, which, as Lord High Admiral Howard, of Effingham said, "has no affinity with saving."

The United States *Army and Navy Journal* has the following article on the wonderful productions of the Forest on the Pacific Coast. Without indulging in the speculations of our contemporary, or the probable use to which the mammoth timber described can be put. We hope our authorities are alive to our interests in this connection, as we also have large stores of timber on the Pacific Coast, and there is such a country as British Columbia on that seaboard:

"The San Francisco *Bulletin* takes a very hopeful view of the future of the Pacific coast, as the representative of our maritime interests. Certain citizens of Whitefield, Oregon, offer to furnish the Centennial Commission a mast 124 feet long, and forty-two inches through at the top. Another citizen of Nostockton, Oregon, writes to the commissioners that he will furnish Tillanook fir plank twelve feet wide and 100 feet long; spruce plank eight feet wide; larch plank seven feet wide; cedar plank seven feet wide, and also supply hard wood plank of large dimensions, including shittim wood, of which he claims Noah built the ark. With these facts for a text, the *Bulletin* discourses upon the Northwest coast as the great timber region of the United States. No other part of the country, it tells us, can compare with it in the extent of their resources nor in the quality of the timber. Outside of California we have made no impression on the vast timber resources. Alaska timber is comparatively unlimited. Washington Territory has only contributed a comparatively small part of its timber, along the shores of Puget Sound.

Iron, it argues, with our correspondent, Mr. Griffith, can never take the place of timber in shipbuilding. It is the mere resource of a country like England, poor in timber and rich in ore. With a canal across the Isthmus of Darien, an immense fleet of wooden sailing vessels and screw steamers would be wanted, not only for the Pacific Ocean trade, but for the service on the other side of the country. Now, these vessels will be constructed where there are the most advantages, or rather where they can be turned out the cheapest; that is on the Pacific coast. "During the last quarter of a century," says the *Bulletin*, "spars have been shipped from the Northwest coast to nearly all the important commercial ports of the world. These shipments attract little attention, because the vessels go directly to the bays or inlets where they are to receive their cargoes, and rarely figure in the commercial lists until they have arrived at the port of discharge. Fifty years hence one of the greatest naval depots of the world will be somewhere on this Northwest coast. A country rich in timber is rich in one of the prime necessities of modern times. It becomes richer from year to year as these resources diminish in other parts of the world and are developed at home. Let the great mast and the enormous planks be sent to the Centennial Exhibition. They will only faintly indicate the resources of the great Northwest."

There is reason and logic in these statements. The Pacific is destined to become a great highway of nations, and as its commerce develops our Pacific coast will rise in importance. A majority of the human race

are tributary to its waters, and as certain as civilization, with its multiplication of luxurious necessities, will ultimately extend its influence over Eastern Asia and Western America, so certain is it that there will in the future be a vast change in the relative importance of the States on our Atlantic and Pacific slope. But the *Bulletin* will do well to urge the importance of protecting the timber of the Pacific coast from the shameful waste and neglect which has led to the squandering by the East of similar resources. Upon this its future timber supply largely depends."

We insert the following letter addressed to the Editor of the United States *Army and Navy Journal*, for the clear mechanical statements it contains—especially as we are aware that they are incontrovertible and in accordance with practical experience. Our objection to the employment of iron for any description of ship has been founded on a knowledge of the principles illustrated:

"SIR: Could we be persuaded by an examination of his work, that the ship builder had reached the acme of his profession; that the engineer had mastered the problems of economy and utility in marine propulsion; that the iron-worker could restore strength to his disintegrated ship-plates, after punching their edges; that a vessel was strengthened by girdling the shell of the hull with rivet holes for compartments; that the ship-owner could cause his sunken iron hulk to float, as the prophet Elisha did the borrowed axe; then we might accept, without discount, the vaunting pretensions of British ship owners, in regard to the sea-worthiness of these elongated single-shelled metallic coffins which now ferry the Atlantic. The apologist for unseaworthy ships would persuade the confiding traveller that the loss of a steamer is a contingency, inseparably connected with the dangers of navigation. The announcement of the agents of Atlantic steam lines: "That if iron steamers were lost at the rate of one per week, the public would still patronize them," is well calculated to evoke the sober second thoughts of ocean travellers. Nor are we prepared to accept the remedial measures proposed in exchange for a burning or sinking steamer mid-ocean. Life boats, life rafts, or life insurance policies, furnish no guarantee against the dangers of the vessel. The idea of exchanging a ship for an open boat mid-ocean, is too absurd a proposition to be presented to intelligent men. The question arises, what are the elements which render a boat scaworthy, which the iron ship does not possess? We answer, buoyancy, elasticity and lightness. The fact that iron vessels have no buoyancy will not be questioned; their flotation depends upon cavity filled with air; when this is exchanged for water, the vessels sink. That iron vessels have no elasticity is equally true.

The primeval conditions of the materials of all constructed fabrics, whether for service on land or sea, are elasticity, rigidity, and flexibility. One of these characteristics belong to all structural bodies. These relations are determined, first, by their affinity to the mineral or vegetable kingdoms, and, second, by their specific gravity. If they belong to the mineral kingdom, they are either rigid or flexible, and when placed in water, they sink, because of their density. If they belong to the vegetable kingdom they are elastic, and float, because of their relative lightness. Iron as a material, is flexible or ductile, and must be made rigid

by combination, when used for navigable purposes, in order that sufficient strength may be obtained for cavity flotation, which is artificial buoyancy; without positive rigidity, the torsion caused by submersion in the waves at sea, shears off the rivets which hold the overlapping sheets together, when the vessel sinks. Hence the reason why iron vessels are always made relatively narrow, to escape the greater twisting strain in relatively wide, or fairly proportioned vessels. When applied to constructions which require buoyancy, the characteristic development of iron is flexibility, which is but another name for weakness. The characteristic development of elasticity is strength and lightness.

The worker in iron tells us that iron is stronger than wood. We say no! Wood is stronger than iron in equal weight. It is only in bulk that iron, or even steel, bears an approximate relation for comparison to the strength of wood. Weight bears a specific relation to buoyancy, hence all structures designed for navigable purposes, must have their strength relations determined by weight.

All substances in the material world can be brought to this standard, and must either float or sink, according to their specific gravity. Bulk is properly the exponent of displacement in air, and all structures for land service are determined by bulk; but bulk also bears a peculiar relation to buoyancy in water, and harmonizes with weight in determining the intrinsic value of all divisions of flotation. It is the constancy in the operation of this law, which makes it impossible to build one floating vessel of iron as strong as another of wood; the wooden vessel having both elasticity and lightness in the materials of which she is built, may spring and see saw in the many joints of the frames and planking, and still maintain a returning status; an equal amount of movement in the joints of the iron vessel, would increase the openings until a breach would suddenly engulf the fabric. Nothing more clearly demonstrates to an intelligent mechanical mind the crude state of ship building, than these facts, which the world is so slow to comprehend. Take a boat of the capacity of a single ton, say 15 feet long, 4 feet wide and 1.65 feet deep, as a model for a ship to be built from of iron. We make a scale to suit the length of the vessel we require, say for every foot of boat length, we have 20 feet of ship's length, the same in regard to breadth and depth, we then have 15 x 20 feet—300 feet, 4 x 20 feet—80 feet, 1.66 x 20 feet, 33.2—300 feet long, 80 feet wide and 33.2 deep.

No intelligent mechanic will dispute the premises, and undertake to show, that although the boat was a good model for sea service, the ship would not be; yet who would dare to build an iron vessel by these dimensions? Let any other proportionate boat dimensions be selected, and applied by scale to an iron vessel, the same results would be shown. The intuitions of common sense teach that if the boat was right, the ship ought to be, if the enlargement by scale was adhered to in detail. And why we ask are not the proportions carried out in the ship as the scale has determined? The scale has been changed to hide the weakness of the vessel; the boat is strong because the strength as well as the bulk has been determined by scale; but in the case of the ship we use the scale for determining the bulk only, we then drop the scale or use it inversely, hence the loss of so many vessels, especially those built of iron. Suppose we apply the scale to the shell of this assumed iron vessel; the boats planking is five

eighths of an inch thick, and no strake has more than two lengths, making due allowance for difference of the material, the shell of the iron as determined would be at least seven inches thick, and each sheet in the shell would be six feet wide, and range from one hundred to one hundred and fifty feet long, with frames proportionately large. If such vessels could be built, she would be loaded with herself. The mechanical world seems to forget that when we build vessels of inelastic material for sea service we invite the hydraulic action of the waves, which are always searching for weak places in the vessel; and that displacement and gravity act in concert, in seeking to find them. The whole strength of structures thus circumstanced, is only equal to their weakest part. There is no mechanical difficulty in building a ship relatively or approximately as strong, and at the same time as buoyant and elastic as the boat; provided we build of elastic materials, and do not increase the bulk of the vessel beyond the relative length and strength of the materials, or failing in this, make up the deficiency by the aid of equivalents. To have the ocean traveller removed from the perils of fire and fright in close proximity, and placed beyond danger from burning and drowning, is certainly an object worthy of the highest consideration. Adding to these speed and comfort in a greater degree than we now have, at once places ocean on an equality with railroad travel, and makes the sea voyage a desirable enjoyment. The first question presenting itself for consideration, is, Can it be done? The next forces itself upon us: Will it pay? To both of which we respond in the affirmative. The first calculation necessary, will be the bulk a steamer should have, if designed for passengers, mail, and bullion only. If we assume the business requirements of ocean travel during the winter months from New York to Queenstown and return, to be equal to one hundred and fifty-six passengers every eighteen days for one vessel, we arrive at the bulk such steamer should have, and can at once determine whether this bulk and the strength necessary, bear relative proportions the one to the other, for sea service during the winter months. Having settled these questions, we have a basis for the computation of the cost of such vessel, and the expenses of running her. An ocean steamer competent to make the average passage for a year within seven days, nonsinkable, and having fire dangers removed, possessing sea-qualities of the highest order, with easy roll not exceeding eight degrees; having accommodations for one hundred and fifty-six passengers in single, double and treble state rooms, would cost eight hundred thousand dollars when equipped for service. Such vessel as is herein contemplated, would be competent to make twenty round voyages from New York to Queenstown within a year; when the balance sheet would stand about as follows:

EXPENSES FOR ONE YEAR.

Coal, 40,000 tons	\$200,000
Provisions for ship and cabin	130,000
Wages	72,365
Depreciation at 8 per cent.	64,000
Interest at 7 per cent.	56,000
Insurance at 2 per cent.	16,000
Wear and tear at 1 per cent.	32,000
Port charges at 2 per cent.	16,000
Oil and waste	1,000
Office rent and shore salaries at 1½ per cent.	10,000
	\$597,365

RECEIPTS FOR ONE YEAR.

Six thousand two hundred and forty passengers, in single, double and treble state rooms	\$699,200
One year's letter mails as per average	43,035
One year's printed mails as per average	35,192
One year's bullion list as per average (1874)	6,250
	\$783,677

In all the past, the "dangers of the deep," which Infinite Wisdom adapted to our needs, have been magnified beyond measure—while the dangers of the ship, particularly ocean steamers as now constructed, have never been properly considered. The present amount of business between the Old and New World justifies the use of steamers for passengers and mails exclusively. If on the one hand, we substitute buoyancy, stability, elasticity and speed in nonsinkable steamers without freight, for flotation, with instability, and the dangers and discomforts incident to freighting steamers, from both fire and water on the other, an ocean voyage may be pleasantly appreciated by passengers and the owners of such vessels at once would be placed beyond the pale of competition.

When the foregoing shall have been digested, and measures to develop such enterprise adopted, the undersigned would be happy to demonstrate its practicability beyond peradventure.

JOHN W. GRIFFITHS.

CORRESPONDENCE.

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

(FROM OUR OWN CORRESPONDENT.)

The Fifth Royal Fusiliers.

MONTREAL, 4th Nov., 1875.

On Tuesday the 2nd inst., the re-organized Regiment of the 5th Royals were preliminarily inspected by Lieut. Colonel Fletcher, C.M.G., Deputy Adjutant General of the 5th Military District, province of Quebec, who, accompanied by Lieut. Colonel Lovelace, of the Cavalry Staff, and Lieut. Colonel Labranche, commanding the Mount Royal Rifles, entered the City Hall at 8 p.m. There was a turnout of six companies (in plain clothes only) of about 270 men. After going through a few movements they were formed in close column and addressed by Colonel Fletcher, who said he was proud to inspect so fine a body of men as he saw before him. He stated when he heard of the movement that was on foot, he was puzzled to know where the men would be obtained to fill up six companies to their full strength, but it appeared the result had been entirely successful, and doubtless if more were required they would be forthcoming. He urged upon the Regiment the necessity of strict discipline as one of the most important duties of a soldier, and had no doubt in saying, if this were attended to, the 5th Fusiliers would be second to none in the Dominion. Colonels Grant, Macdougall, and Captain K. Campbell also addressed the men, who are decidedly in point of appearance as fine a set of fel-

lows as could be met with in any part of Canada. The Fusiliers have been fortunate enough to secure the services of Captain Atkinson as Adjutant. This officer served for some time in H. M. 60th Rifles, and was Adjutant in the late Grand Trunk Brigade; he is well known in this city as a most efficient and painstaking Instructor, and holds first class certificates from the cavalry, artillery, and infantry schools. X.

MONTREAL, Nov. 10th, 1875.

On Saturday evening the 6th instant, the annual inspection of the Victoria Rifles took place in the Skating Rink, which was crowded with spectators to witness the turn out of this favorite Corps. There could not have been less than 2,000 people present. On the arrival of the Inspecting Officer, Colonel Fletcher, C.M.G., D.A. General 5th Military District, accompanied by Colonel Bacon, Brigade Major, and Colonel Lovelace, Cavalry Staff. The usual salute was given, the band playing the national anthem, the line presented a fine appearance, the men being just the size for riflemen and their appointments neat and clean. After the Inspecting Officer had gone through the ranks, Major Handyside put the Battalion through the manual and firing exercises, after which Major Whitehead, Captains Crawford and Moore, were called out and respectively commanded the Battalion; all these Officers evinced a knowledge of their duties, and the commands were given in that prompt and decisive manner that at once ensures obedience. After the inspection the successful competitors at the late Battalion matches were presented with the various prizes won at the meeting, Col. Bacon, the very popular Brigade Major of the District, performed this office. In conclusion Col. Fletcher complimented the regiment on their efficiency and smart appearance, as also those men who formed the guard of honor for His Excellency the Governor General on his recent transit through Montreal. This closed the evenings proceedings.

Lieut. Colonel Labranche, of the Mount Royal Rifles, had quite an ovation offered him on the same evening as the inspection of the Victorias, the band of the 6th Regt. or Hochelagas, having serenaded him at his quarters in the Quebec Gate Barracks on the anniversary of his twenty first year's connexion with the volunteer Force. The annual concert of the Prince of Wales Rifles under the command of Colonel Bond took place on the 9th instant (the birthday of His Royal Highness the Prince of Wales). The Hall was filled to its fullest extent, and many who arrived late were unable to obtain even standing room. The singing of Miss Wilson was as usual perfect, and Mr. J. Hurst's comic songs were much applauded: Colonel Dyde, a veteran officer of sixty years standing in the Militia Force of the County, was present on the platform, and in response to the allusion to the long service of the

gallant Colonel by Sergeant Major Johnson and Colonel Bond, expressed the pleasure he felt in again meeting the Prince of Wales Regt. which he had formerly commanded (previous to his appointment as commandant of the active force of the City) and the honor conferred upon him by being selected to distribute the prizes won by the regiment at their last rifle meeting. Colonel Dyde wore the order of *St. Michael and St. George* lately forwarded to him by order of Her Gracious Majesty, and with his commanding height and soldierlike appearance was the observed of all observers. Colonels Smith, Bond, and Sergeant Major Johnson also addressed the audience, the latter expressing the regret he felt at the sudden indisposition of their worthy chaplain, the Rev. Mr. Carmichael, who was unable in consequence to attend. The Prince of Wales concert has been a very great success, and the admirable arrangements made by the Chairman of the Committee, Sergt. Major Johnson, has given general satisfaction.

Colonel Bacon Brigade Major of the District, Colonel Lovelace of the Hussars, and other officers of the Montreal force were on the platform, and the blending of the Green, Blue, and Scarlet uniforms had a pleasing effect.

The city police are to be augmented immediately, and have lately been undergoing drill in the City Hall.

It has been snowing heavily all day, and sleighs have made their appearance.

The sparrows imported from England last year have increased rapidly since their arrival and appear to stand our climate well.

No orders out as yet for the Guibord Burial.

It is hoped the *VOLUNTEER REVIEW* will be supported by the new Regt. that has been formed; if every officer of the force would become subscribers, or even a given number from each corps, it might be enlarged. I believe the *Review* has been before the Dominion Army eight or nine years, and to those who take the trouble of having the yearly volumes bound, it forms a record of past events in the volunteer force, well worthy of reading over and referring to on very many occasions.

X.

China as a Military Power.

Just now, when so many attacks are being made on foreigners even in Perkiu itself, the following remarks by the *Hong Kong Daily Press* on the military resources of China are interesting. Our contemporary asserts that there is no country so wretchedly weak and helpless, in proportion to its size and resources, as China. With the command of an unlimited supply of men, she has comparatively few soldiers, and these are, for the most part, undervalued of the term. Miserably armed, and almost entirely undisciplined, they could not stand five minutes before a well ordered regiment of European soldiers. As a rule, too, they consist of the scum of the population, and by

their in-olent bearing and ruffianly habits are the terror of the people wherever they are stationed. Here and there a little improvement has been effected in the drill and morale of these braves when subjected, as some battalions have been, to military training under European instructors. But these instances are few and exceptional. China has plenty of raw material, but it is not easily convertible into effective troops. With regard to ordnance, the Chinese Government are not much, if any, better provided. They have spent a good deal of money in purchasing guns which they are not able to use with effect, and they have erected a great number of useless fortifications, chiefly on the Peiho. They would find these poor defences if they were mad enough to go to war with even a third rate European power. Li Hung chang has, during his administration, considerably reduced the Imperial exchequer by his lavish expenditure on the useless fortifications and munitions of war. He is not by any means alone in the belief that he is thus greatly strengthening the country against the possibility of war. There is a large number of bellicose Chinamen who firmly believe that it is only necessary to obtain European arms to render their legions invincible. It is this belief that prompts them to go on increasing their armaments, and it was no doubt with a view to gain favour with this, the noisy party, that the late Customs' Inotai at Tientsin recently made a gift of 20,000 taels in aid of the military requirements of Chihli. If the Chinese, pluming themselves on a fancied increase of strength, are therefore—as seems but too apparent—waxing insolently defiant of foreigners, and indifferent with regard to the observance of the treaties, they will have to be taught another lesson from foreign guns. Their new acquisitions would prove poor protections against English or French gunboats, and their wretchedly equipped mob of braves would prove emulous only in showing their capacities for flight. But the counsels of the peace party are still, we hope, most potent, and, though their warlike brethren may be anxious to provoke strife, and perhaps be allowed to insult and outrage Europeans, the former seem fully determined to guard against an open rupture. There are some Chinese statesmen at all events who must be acquainted with the real weakness of their country, though they would be loth to confess it. It was this consciousness of inability to meet trained troops in the field, doubtless, that mainly contributed to induce the Government of Peking to listen to the wise and pacific counsels of Mr. Wade, and agree to an amicable settlement of their difficulties with Japan after the Loochooans shipwrecked on the coast of Formosa. The real interests of China all lie in the maintenance of peace and the development of her mineral resources, at present almost untouched. The great mass of the people are very poor, and the burdens which a war would impose would infallibly cause great and widespread distress.

Steam Torpedoes.

On Saturday, the 11th inst., a steam torpedo launch, built by Messrs John Thornycroft & Co., of Church Wharf, Chiswick, for the Austro-Hungarian Government, was put on her trial on the Thames below London bridge. The dimensions of the vessel are—length, 67 feet; beam, 8 feet 6 inches, and the builders contracted that she should attain and keep up in a run of one hour's duration a speed of 15 knots. After running slowly through the Pool on account

of the number of barges and boats in the way, a start was made a little above the Thames Ironworks at 12h. 11m. p. m. The Thames Ironworks were reached at 12h. 13m., Woolwich Dockyard at 12h. 17m. 55sec., North Woolwich Gardens at 12h. 19m. 35sec., Beeton Gasworks at 12h. 23m. 10sec., Outlet of Metropolitan Sewers, Crossness at 12h. 29m. 12sec. Erith Pier at 12h. 32m. 45sec., Long Reach Tavern at 12h. 40m. 59sec., Broadness Beacon at 12h. 52m. 15sec. Gravesend Pier at 1h. 0m. 50sec. and the hour's run was completed in Lower Hope Reach at 1h. 11m. pm. During the run the number of revolutions was taken by Mr. Schneider and Mr. Walker, chief draughtsmen at Messrs. Thornycroft and Co.'s and was found to be exactly 24,700. The vessel was then run up to Long Reach, and run six times over the measured knot there, when the number of revolutions of the engines required to do one knot was found to be 1,357. The number of revolutions done during the hour (24,700), divided by the number required to do one knot (1,357), gave the number of knots done in the hour's run as 18,202, a result which is certainly most satisfactory. On the way up to London the vessel was run past a small schooner at a speed of ten knots, and a dummy torpedo was launched against her side. The torpedo struck the schooner amidships at about 6ft. to 7ft. below the water level, and had it been filled with its charge of dynamite (25lbs.) the schooner would undoubtedly have gone to the bottom. The torpedo gear on this vessel consists of two poles 35ft. long, one on either side, and so arranged that an attack may be made directly ahead of the boat, in which case the boat must be stopped and backed off her enemy immediately after the explosion, or on the broadside, when the boat may be kept going ahead all the time, and so saving the time which would be otherwise lost in stopping and backing. The importance of speed in such a dangerous operation as sinking an ironclad can scarcely be overrated. The difficulty of hitting a moving target is well known to those who have tried to hit the running deer at Wimbledon, and the velocity of a torpedo boat running at 18 knots is over 30ft. per second. High speed also gives men confidence, by affording them a chance of returning safely from an expedition which is really a forlorn hope, and this lesson the difficulty of finding men for such work. Another important matter in such operations is silence, and this is secured in Messrs. Thornycroft & Co.'s boat by making the engines condensing, so that the puffing noise in the chimney, which is almost a distinguishing feature in the ordinary steam launch, is entirely done away with. Most of the Governments are supplied with these useful little vessels.

St. Petersburg, Nov. 14.—According to special notice from Lividia, three divisions of troops stationed in the military district of St. Petersburg, are to be placed in readiness for service by the 13th inst. It is rumoured that the Fourth Division of Infantry has also received similar instructions. All troops stationed in Southern Russia are said to be in readiness for active service.

Penang, Nov. 13.—A force of 300 troops are now garrisoned in the British Residence at Perak. Sultan Abdullah is friendly to the British.

Vienna, Nov. 14.—Hezegovina will soon send deputations to Vienna, Berlin and St. Petersburg to present a petitional, drying its wishes.

THE BLARSTED HINGLISHMAN'S
LAMENT.

The Great Pacific journey I have done;
In many a town and tent I've found a lodgment,
I think I've travelled to the setting sun,
I've very nearly reached the day of judgment!
Like Launcelot, in quest of Holy Grail,
From Western Beersheba to Yankee Dan
I've been a seeker, yet I sadly fall
To find the genuine type American.

Where is this object of my youthful wohler,
Who met me in the pages of Sam Slick?
Who opened every sentence with by thunder!
And whittled always on a bit of stick?
The more the crowd of friends around me thick-
ens,
The less my chance to meet him seems to be
Why did he freely show himself to Dickens,
To Dixon, Sala, Trollope, not to me?

No one accosts me with the words, Wa'al stran-
ger!
Greets me as festive cuss; or shouts Old hosst!
No grim six-shooter threatens me with danger
If I don't quickly 'pass the butter, boss.'
Round friendly boards no cock-tail ever passes;
No brandy smash my morning hour besets;
And petticoats are worn by all the lasses,
And the pianos don't wear pantelettes!

The ladies, when you offer them chicken salad
Don't say, 'I'm pretty crowded now I guess.'
They don't sing Mrs. Barney Williams' ballad
Of 'bobbing Round,' nor add Sir-ree to Yes,
I, too, have sat like every other fellow,
In many a railway, omnibus, street car;
No girl has spiked me with a fierce umbrella
And said, 'You git—I mean to sit right thar!'

Gone are the Yankees land of my early reading!
Faded the Yankee land of eager quest!
I meet with culture, courtesy, good breeding,
Art, letters, men and women of the best,
O fellow-britons, all my hopes are undone;
Take counsel of a disappointed man!
Don't come out here, but stay at home in Lon-
don,
And seek in books the true American!

Our Aggressive Naval Strength.

Nothing is more desirable than the pos-
sion of exact knowledge regarding the
condition of a business as revealed by an ex-
amination of its books. True it is that a
falling off in prosperity may as often be dis-
covered by such an investigation as a
development in the other and hoped-for
direction. But the first step towards aver-
ting ruin is the discovery of its proximity,
and he who hesitates to examine into his
affairs from fear of unpleasant discoveries, is
as foolish as the ostrich who, having buried
his head, imagines that his body can no
longer be seen by the hunter.

Our legislators having exchanged the
voting of Estimates for the shooting of
grouse, leisure is afforded during the Par-
liamentary recess for taking stock of our
naval resources. A careful examination of
the offensive strength of our Navy will not,
we fear, prove quite so satisfactory as could
be desired. In saying this, we do not forget
that this journal has never shown, nor in-
deed experienced, any sympathy towards
those agitators who make it their busi-
ness to disturb the public confidence in our naval
administration by calling for an indiscrimi-
nate and wholesale building of ships of war.
Such persons have usually "an axe to
grind," and they wish the stone to be turn-
ed at the national expense. Our object
now, as it has always been, is to look facts
firmly in the face. Whenever we see reason
for unfavourable comment we shall never
flinch from expressing it. At the same time
we have every confidence in the judgment
and energy of our naval authorities, and
desire rather to assist them in their difficult
and responsible duties than in the least de-
gree to hamper them by cvilling, unreason-
able criticism.

The statements made by several successive
First Lords in the House of Commons show
clearly that neither of them has been able
to realize his ideal of what the development

of the Navy should be. Necessary as it is
to keep a close eye on the spending de-
partments of the State, "a penny wise and
pound foolish" policy is too often the result
of the lynx-eyed economy of the House of
Commons. In no department of the Gov-
ernment has this been more clearly exhib-
ited than in that of the Admiralty. Mr.
Goschen in 1873 admitted that we were
barely keeping pace with the "wear and
tear" of the fleet, while Mr. Hunt in the
early days of his naval administration, ere
he had acquired those wondrous habits of
official reticence peculiar to his department,
caused considerable consternation by his
allusions to "fleets on paper." The work
of the succeeding year did but little towards
adding to the strength of the Navy, either in
the form of new ships or of repairs, so that
what were paper ships twelve months ago can
be of hardly more formidable material now.
But we will not lay too much stress on all
ill chosen and barely applicable figure of
speech inadvertently used by Mr. Hunt; it
is sufficient for our purpose to show that in
questioning the sufficiency of our present
naval strength we are not at issue with their
Lordships, but rather with the false economy
which tightens the strings of the public
purse, and prevents those into whose hands
we confide our naval administration from
giving full scope to their desires.

At the present time the effective strength
of this country in ironclad ships, fitted for
aggressive operations in line of battle at
any part of the world, consists of but ten
ships. These are the *Bellerophon*, *Hercules*,
Monarch, *Sultan*, *Audacious*, *Invincible*, *Van-*
guard, *Iron Duke*, *Triumph*, and *Swiftsure*.

It would be a dangerous piece of self-de-
ception did we include such ships as the
Warrior, *Black Prince*, *Achilles*, *Minotaur*,
Agincourt, and *Northumberland*; and worse
still if we should be deluded into supposing
that the *Lord Warden*, *Lord Clyde*, *Hector*,
Valiant, *Research*, *Pallas*, *Defence*, *Resis-*
tance, and the six ships of the *Prince Consort*
class, will ever be of the slightest value in
time of war, except for such purposes as an
unarmored ship would be more suitable.
Indeed, the greater number of the last-
named batch of ships, being of wood, are now
too rotten for any purpose but that of the
ship breaker; while the armour protection
of those ships which are built of iron is so
thin that, considering the penetrative power
of the guns carried by all European fleets,
they can scarcely be counted as armour-
clad ships at all.

It will be observed that among the ships
specified we do not include those whose
primary, and in most cases sole, qualities
are of a defensive rather than an aggressive
order; or such ships—of which, by the way,
we have only one at sea—as the *Devastation*,
whose special uses remain to be discovered
when a naval war shall give them oppor-
tunities of exhibiting their enormous powers
and developing their tactical capabilities.

Our effective sea going armour-clad fleet
being thus limited to ten ships, or eleven if
we include the *Penelope*, let us see what is
at present being done to increase their
number. We confess the prospect is not a
comfortable one. The possible addition in
the course of the next three years cannot
exceed five ships. Of these the *Alexandra*
is the farthest advanced, but still far from
being ready for sea. The *Téméraire* is not
yet launched, and cannot be ready for at
least another year. She *Shannon* will oc-
cupy eighteen months in completing, while
the *Nelson* and *Northampton*, building on
the Clyde, are only partially in frame. As
the two last named ships were commenced
last year, it was confidently expected that

at least one ironclad sea-going ship would be
included in the Estimates just voted; but
instead of that, we are to have two ships of
reduced *Inflexible* type. Thus it will be at
least two years after the *Nelson* and *North-*
ampton are completed before we can have a
sea-going ironclad fleet of more than sixteen
ships. And then we wonder what will be
the condition of the hulls, boilers, and
machinery of the ships we now possess, and
to what extent the oldest of them will be
adapted for the naval warfare of the period.

But this is not the worst aspect of the
case. The repairs at our dockyards are
proceeding at a very slow rate. Mr. Hunt
admitted, but a short time, since that a
difficulty was experienced in getting hired
workmen for the dockyards. As he then
explained, the rate of pay offered is so small,
compared with that given in mercantile
yards, that the workmen require the addi-
tional inducement of a permanent engage-
ment, which alone retains the established
artisans. Here, again, we have the old
story of estimates cut down to injurious
limits.

The fear of criticism, if the number of
workmen in the yards exhibits an increase,
has kept the permanent staff far below the
necessities of the case, and men are con-
tinually entering the dockyards and leaving
them dissatisfied. Only within the past
week a dockyard official has been sent north
to seek for men, while at the same time a
manager of a northern shipyard has been
engaging men in our southern ports, to be
employed on Government work, which he is
building by contract.

Can it be wondered, then that repairs
proceed slowly? More than half the dock-
yard officers are merely acting, their time
counting nothing for promotion, while they
are liable at any moment to fall back to
their previous appointments. Such a state
of affairs is most unsatisfactory for all con-
cerned, and no less so to the public who are
willing to pay, and do pay, for an efficient
fleet, than to the unfortunate *employés*. Both
are the victims of the ill-judged oppo-
sition which our responsible men have to
encounter when they ask for a fair and
reasonable sum of money to enable them to
make up arrears, and add the necessary in-
crement to our naval strength.

It is interesting to compare the strength
of our sea-going fleet with that of the begin-
ning of the present century. At that time
we had no less than 103 ships of 61 guns and
upwards, all in commission, all fit to cope
with an enemy; in fact, all efficient. In
those days, when all our ships were on per-
fect terms of equality as regards resistance
to shot, and when the number and calibre of
her guns was the measure of a vessel's effi-
ciency, this fleet was capable, as it proved,
of maintaining our naval supremacy. We
fear the same can scarcely be said regard-
ing the puny fleet—in point of numbers—
which we can now present against a hostile
force. England must not rest satisfied in
having a larger effective fleet than any other
Power. In view of the combinations which
may be effected with a view to deprive us of
the carrying trade of the seas, we ought to
be able to meet the combined fleets of
Europe. Can we do so? Should an enemy
approach our shores we have no fear of the
result; but unless our policy is to be purely
one of defence, so that no European com-
plication is to induce us to act on the ag-
gressive, in order that we may exert more
than a merely moral influence on the affairs
of Europe, with the candour the subject
deserves we say our position is not as it
should be. Our private shipyards are filled
with work for foreign Powers, and even our

naval arsenals are open to them for repairing purposes. Our dockyard at Woolwich, which a short sighted policy caused to be closed to our naval manufacture, is open to the Brazilian *Independencia*. In short, we are not keeping pace with the times, and should we be suddenly involved in a European war our efficient naval force is not of that strength which the mistress of the seas should possess.

On the outbreak of the Franco-Prussian war, two millions were instantly voted in Supplementary Estimates for the purpose of augmenting our strength. Besides some small gunboats of the *Snake* class, the monitors *Cyclops*, *Gorgon*, *Hydra*, and *Heate* were put in hand. The war was over and a great part of the indemnity paid before these vessels left their builders' hands, notwithstanding that heavy premiums were offered to the contractors to expediate their completion. Panic building is of no service whatever. Wars are terminated too quickly nowadays for any advantage to be derived from such measures as these. What we want, and what we except, is that steady and sufficient additions shall be yearly made to our sea going ironclad fleet, while at the same time the repairs of existing ships shall be made as soon as they are found necessary. That Mr. Hunt is alive to this fact is evident; that the House of Commons realizes it is not at all clear, but that the country demands it should be distinctly intimated to every member of that House when he meets his constituents during the recess. — *Broad Arrow*.

Breechloading Ordnance.

In a recent communication to the *Times*, through Mr. Alfred Longsdon, Herr Friedrich Krupp, of Essen, has contributed some valuable information upon the subject of cast steel breechloading guns, information which no one was in a position to supply but himself, the largest private maker of ordnance in the world. The main object of this letter was to throw some light on the confused notions existing as to the powers of resistance of cast steel guns, and the reliability of the breech mechanism employed. With respect to rumors that in the course of the Franco-German war 200 field pieces failed, we are assured that not one gun burst during the whole campaign on the German side which was supplied wholly from the works at Essen, while the breech mechanism in all cases showed its complete efficiency, and not a single failure of it is recorded.

Mr. Longsdon next, taking wider ground, gives us statistics as to the failures which have taken place among the 13,000 steel guns manufactured by the magnificent establishment he represents. These failures, he assures us, are limited to seventeen. Out of this extremely small number eleven may be fairly thrown out of consideration, they were imperfect guns as far as the breechloading mechanism was concerned, having been made, tested, and destroyed before the present highly efficient system of breechloading had been adopted. Of the remaining six guns Mr. Longsdon gives us a record as follows:

In 1865 a 9 in. gun burst explosively in Russia after the 110th round. This gun was a converted muzzle-loader, and failed under excessive charges.

In 1866 a second 9 in. gun burst explosively in Russia after the 56th round.

In 1869 an 8 in. gun burst explosively in Berlin after the 65th round.

In 1871 an 11 in. gun burst at Fort Constantine.

In 1872 a 15-pounder burst in Berlin after 557 rounds.

Mr. Longsdon has, however, omitted to mention several other failures of his guns, which we may add to the above list. We take them from a paper read by Major Haig before the Royal Artillery Institution.

In 1865 a Krupp 9½ in. steel gun burst with a moderate charge of powder, a Prussian committee attributing the failure to inferiority of the metal.

In the same year an 9½ in. gun of Krupp's steel burst in Russia at the 66th round.

In the same year an 8½ in. steel gun burst at the 96th round.

In 1866 a Krupp field gun burst explosively at Berlin, killing three cadets.

In 1866, during the Austro-Prussian war, six Prussian steel field guns burst.

In January, 1867, a 7 in. Krupp gun burst at the second round of proof at Wollmich.

In the same year a 4 pounder burst at Tegel, near Berlin.

In 1868 an 8 in. Krupp gun burst on board a Russian frigate very destructively, killing and wounding in all 12 men.

The correctness of the above list is easy of verification, and it is somewhat to be regretted that Mr. Longsdon should have overlooked these important instances of dangerous failures, as they modify considerably the inferences to be drawn from his letter. In statistics of this kind nothing is so necessary as unassailable accuracy; and we should be glad to learn that Major Haig's statements are incorrect, although we have not the slightest doubt that the failures enumerated by him did take place, and the value of Mr. Longsdon's communication to the *Times* will lose all its value if we find that the assurances it contains are unreliable. And before accepting the assurance that no Krupp field guns failed during the Franco-German war, we are obliged to hesitate, because since the publication of Mr. Longsdon's letter, the public is assured that in numerous instances the Krupp field guns have burst during that period.

One correspondent, replying to Mr. Longsdon's letter, states that in 1871 he was assured by an officer on the Headquarters staff of the German army, that out of 70 long breechloading 24-pounders, 36 became un-serviceable during 15 days firing, and that had the bombardment been continued for another week, the German batteries would have been silenced owing to failure at the breech. Again on the Loire and in Brittany 24 field guns became un-serviceable, chiefly through their own fire. A second writer goes further and maintains that about 200 field guns were wholly or partly disabled, two or three through the enemy's fire and the rest through defects in the breech mechanism and bursting of shells in the bore. It is only fair to state, however, that these damaging allegations are advanced anonymously, and require corroboration.

We have to assume, therefore, despite Mr. Longsdon's assurances to the contrary, that a considerable number of explosive failures of Krupp guns have taken place; but we would call attention to the fact already recorded by us, that none of them are proved to have failed by reason of the breech mechanism (after it had attained its present form), but through the uncertainty of the metal itself.

From the experience thus gained it may be fairly assumed that the steel employed in the heavy ordnance on the Continent is not so reliable as the steel and iron used in combination in our Woolwich guns. A steel gun may show very high powers of endurance, as evinced by many admirable examples of Krupp's work, but it is impos-

ible to be absolutely sure of the absence of any flaw or other unseen element of weakness, and when it does yield, it almost certainly yields with violence.

Reconstruction of Men-of-War.

One of the largest, most difficult, and costly undertakings in the way of practical reconstruction is (says the *Times*) drawing towards completion at Portsmouth Dockyard. In 1861 three ships of the *Minotaur* class were ordered to be built—the *Minotaur*, *Northumberland*, and *Agincourt*, and seeing the important improvements which had been effected in naval gunnery, and the structural changes they have necessitated in the designs of our men-of-war, it was fortunate for the country that no more ships of the same time were constructed. They were plated with 5½-inch armour, which was a slight advance upon that of the *Warrior*, which had been designed some two years or so before; but the extra inch which was gained in the thickness of the plating was to some extent counterbalanced by a material reduction in the backing. Substantially, the defensive power of the two classes of ships was the same, but the ships of the *Minotaur* type had this important advantage, that they were armoured throughout the whole of their length, so that the vital parts—such as the rudder head, steering gear, and the watertight compartments—were efficiently protected against the penetrating force of the shot of the period. But, while the *Warrior* cost the country £356,991, the price of the *Minotaur* was £450,774, the engines in both instances being about the same. The gain, however, even at the time, was not proportionate to this important increase in the expense of construction, while at the present time the improved ships of the *Warrior* class would speedily place the five masted leviathans *hors de combat*. The great size of the ships of the *Minotaur* class (400ft.) render them unwieldy at sea, while the great difficulty which attends their steering unfits them for manoeuvring in the narrow circles in which our modern men-of-war are required to pivot. The length of their broadsides and the great height of their freeboard would also render them tempting targets for an enemy's heavy guns. These defects, however, cannot now be remedied, but much is being done at Portsmouth at the present time to make the *Minotaur* a more dangerous antagonist by adding materially to her offensive power. She has been nine months under the hands of the shipwrights, and the total cost of her reconstruction and new equipment is estimated to amount to £50,000. In addition to being new masted and rigged, painted throughout with red lead, having the flat of her double bottom coated with cement, and undergoing ordinary repairs, which in so large a vessel are considerable, the *Minotaur* will be supplied with an entirely new armament. Originally she was pierced for twenty-eight 6½-ton guns on the main deck, and she carried half-a-dozen popguns on her upper deck for saluting and boating purposes; but when she superseded the *Agincourt* as the flagship of Rear-Admiral Beuchamp Seymour, commanding the Channel Squadron, she will have an armament consisting of fourteen 12½-ton guns on the main deck, a couple of 12½-ton guns forward under the fore-castle, and a gun of the same calibre under the poop, mounted on a turntable, whereby it will command the four stern ports. She will also have on the upper deck six 24lb. howitzers for saluting purposes, and two 20lb. torpedo guns. It

will thus be seen that the number of guns on each side of the main deck has been reduced from fourteen to seven, every alternate port having been altered to suit the heavier ordnance, and to give increased room for the working of the guns, as well as additional space for elevating, depressing, and extreme training. This has been the slowest, most difficult, and most expensive part of the work, and it is understood that every port which has been operated upon has cost upwards of £250. The whole has had to be performed by hand labour, and when it is stated that the 5½ inch armour, the framework of the ship, and the 10 inch teak backing, have all had to be cut through by hammer and chisel after drilling, the exceeding difficulty of the task will be apparent. When, too, all this had been accomplished, the ports have had to be reframed in order not to weaken the ship in any way. These important alterations have necessitated others of a scarcely less formidable character. The magazines have been enlarged to provide for the greater amount of powder which will be consumed by the larger guns, and new shot and shell racks have been fitted for the storage of the larger and heavier projectiles. Extensive alterations have also had to be made in the shell room in order to accommodate the different sized shells. The accommodation, again, in the admiral's cabin having been greatly encroached upon by the turntable gun under the poop, it has been found necessary to provide the navigating officer with a cabin on the maindeck, in order to find room for the steward, whose old quarters have been annexed to increase the admiral's dining room. The *Minotaur* will be supplied with new boilers, a new screw propeller, and larger chain cables, and will also have gangways erected above the hammock nettings on the starboard and port sides to communicate between the poop and the fighting-bridge. The hydraulic gear has been removed, and in its place the ship with Forester's steam steering apparatus, the same as was fired on board the *Devastation*, care being taken to utilize as much of her old steering gear as possible. The great advantage of Forester's patent is that it can be worked from the bridge, and would consequently be of immense service in action. It is not expected that the *Minotaur* will be out of the Steam Basin before a couple of months at the soonest.

The *Cologne Gazette* predicts an unpleasant sequel to the artillery experiments with Krupp's cast-steel guns and the new steel-bronze pieces, which have been lately concluded at Vienna. Herr Krupp, the head of the firm of Essen, is at present at Vienna, with a view of obtaining reparation for very gross abuse of his patent right, of which the Austrian War Office is said to have made itself guilty. The *Cologne Gazette* intimates that if voluntary reparation should be refused, Herr Krupp will appeal to the public tribunals. When Herr Krupp, in 1872, at the special request of the military authorities at Vienna, consented to supply the Austrian War Office, gratuitously, with some of his new cast steel hooped field pieces, he expressly stipulated that the construction of all articles lent—barrels, breeches, carriages, and everything else—should be kept strictly secret. Herr Krupp has since met the wishes of the Austrian Military Department in every possible way. He has given it, without charge, everything that it required—pieces amounting altogether to a half-battery, with all the necessary equipment. He now complains that his stipulation has

not been kept, and that the Austrian government has made free with his patent both for imitation and also for communication to other parties. The steel-bronze guns invented by General von Uchatius turn out to be substantially nothing more than imitations of the Krupp barrel. This fact has been officially admitted by the Austrian authorities in an article published in an official print. The Austrian Minister of War, General von Koller, has in fine, spoken and written openly of the alleged obligation as non-existent, treating the secrecy hitherto observed only as a voluntary consideration on the part of his government which need, even as such, not be observed beyond the borders of the empire. Finding the highest authorities in the empire arrayed against him, Herr Krupp has addressed his complaint personally to the Emperor, keeping as observed, proceedings at law in reserve should his appeal to the monarch fail.

REVIEWS.

THE ALDINE.—The October number of this valuable Art Journal has been received. In point of artistic execution it is equal to any of its predecessors, and well sustains the high literary and art reputation it has earned for itself. It is sold only by subscription, and can be obtained of the *Aldine* company, 18 and 20 Vesey street, New York; or at Toronto, No. 55 and 57 Yonge street, at 50 cts. per number.

The *British Quarterly Review*, for October, republished by The Leonard Scott Publishing Co., 41 Barclay Street, N. Y., contains as follows:—Religious Art; The Atomic Theory of Lucretius; The Poetry of Alfred Tennyson; The Etruscans and their Language; The Boarding-Out of Pauper Orphans; Modern Necromancy; Isaac Casaubon; Contemporary Literature. The periodicals reprinted by the Leonard Scott Publishing Co. (41 Barclay Street, N. Y.) are as follows: *The London Quarterly*, *Edinburgh*, *Westminster*, and *British Quarterly Reviews*, and *Blackwood's Magazine*. Price, \$4 a year for any one, or only \$15 for all, and the Postage is prepaid by the Publishers.

Vice-Admiral Thomas Furber (retired), died on the 23rd ult., aged ninetyone. He entered the Navy in August, 1795, and was present at the capture of Demerara and St. Lucia. He was wrecked in the *Undaunted* on the Morant Keys in 1786, and afterwards served in the *Vanguard*, the flagship of Sir Horatio Nelson. In the action of Copenhagen, 1801, he had charge of the signals on board the *Ardent*, and he greatly distinguished himself in several cutting-out expeditions in the West Indies, 1802-4. In March 1809, when first lieutenant of the *Lively*, he was sent home with the despatches relating to the fall of Vigo and Santiago. He had not been employed since 1825. The death is also announced of Lieut-Colonel George Frederick Paschal, formerly of the 70th Regiment, and one of the few remaining Peninsular and Waterloo officers. Colonel Paschal, who was in his seventy-eighth year, entered the army in 1812, and served in the Peninsular from 1813 to the end of the war in 1814, and afterwards at Quatre Bras and Waterloo.

A railway collision took place on Thursday last near Sherbrooke between a Grand Trunk freight train and the International passenger train. No one was seriously injured. Both engines are badly smashed. Passengers and baggage were transhipped while the delay lasted.

The Radical organ of Paris, in commenting on the result of the late vote on the Electoral Bill, declares that the friends of universal suffrage are beaten, but not despairing; that the great object may still be won, and what has already happened ought to stimulate the adherents of that most salutary Legislative reform to greater exertion than heretofore.

The 13th battalion annual matches are to come off to-morrow. No member of the battalion will be allowed to take more than two prizes, but may select which two he will take. This method will increase the number of prize winners, and give a chance for a larger number of good shots.

A despatch from Rochelle says the crew of the British ship *Lenni* mutinied on the 31st of October, killing the master, mate, and boatswain, and made good their escape.

The steamer *Fanny* was coming down the upper Mississippi loaded with pig lead. As she was going over a shoal place the pilot gave the signal to heave the lead. The only man forward was a green Irishman. "Why don't you heave the lead?" "Is it the lead, yer honor? Where to?" "Overboard, you blockhead?" The Irishman snatched up one of the pigs of lead and threw it overboard. The mate, in endeavoring to prevent him, lost his balance and fell into the river. The captain, running to the deck, asked: "Why don't you heave the lead, and sing out how much water there is?" "The lead is heaved, yer honor, and the mate's gone down to see how much water there is."

DOMINION OF CANADA.



MILITIA GENERAL ORDERS.

HEAD QUARTERS,

OTTAWA, 12th November, 1875.

GENERAL ORDERS (29).

No. 1.

Military College, Kingston.

To be Commandant, with rank of Lieutenant Colonel from 16th September 1875:

Major Edward Osborne Hewett, Royal Engineers,

By Command,

WALKER POWELL, Colonel,

Adjutant General of Militia

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GOVERNMENT HOUSE, OTTAWA

Friday, 8th day of October, 1875

PRESENT:

HIS EXCELLENCY THE ADMINISTRATOR OF THE GOVERNMENT IN COUNCIL.

On the recommendation of the Honorable the Minister of Customs, and under the provisions of the 8th and 6th sections of the Act passed in the Session of the Parliament of Canada, held in the 1st year of Her Majesty's reign, chaptered 6 and intitled "An Act respecting the Customs," His Excellency, by and with the advice of the Queen's Privy Council for Canada, has been pleased to order, and it is hereby ordered, that the Out Port of Penetanguere (now known as Kincardine), attached to the Port of Goderich, in the Province of Ontario, be and it is hereby constituted a Port of Entry and a Warehousing Port, the same to take effect from the 1st day of October, 1875.

W. A. HILMSWORTH,

Clerk, Privy Council.

October 1, 1875.

31st 43

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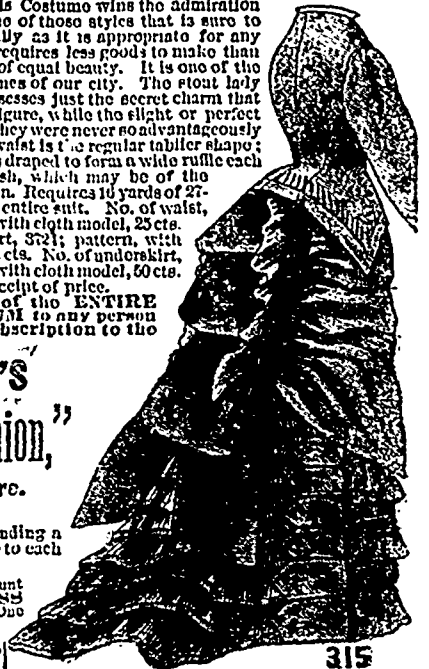
Dr. PARK & McLEISH,
No. 21 East 16th Street, New York.

FASHIONS and GOLD COIN PRESENTS!



Smith's "Instant Dress Elevator." This cut shows the Oppor. Edge of the skirt (wrong side out), with the "Elevator" inside. You can raise your skirt while passing a ready place, and then let it fall, or you can keep it raised. It keeps the skirt from the Fifth. It keeps the skirt in a tasteful and fashionable manner. It draws all the fullness to the back, making the "straight front." It has more than Ten Times its Cost. It can be changed from One Dress to another. Price, 45 cents each. Mailed.

No. 315. This Costume wins the admiration of all. It is one of those styles that is sure to please, especially as it is appropriate for any material, and requires less goods to make than any other suit of equal beauty. It is one of the leading costumes of our city. The stout lady will find it possesses just the secret charm that improves her figure, while the slight or perfect form may feel they were never so advantageously attired. The waist is the regular tablier shape; the overskirt is draped to form a wide ruffle each side of the sash, which may be of the same, or ribbon. Requires 16 yards of 27-inch goods for entire suit. No. of waist, 3723; pattern, with cloth model, 25 cts. No. of overskirt, 3721; pattern, with cloth model, 25 cts. No. of underskirt, 3725; pattern, with cloth model, 50 cts. Mailed on receipt of price.



OR the Patterns and Cloth Models of the ENTIRE SUIT will be GIVEN FREE as PREMIUM to any person who sends \$4.10 to us, as one year's subscription to the "FATELLIN BAZAAR."

A. BURDETTE SMITH'S
Monthly "World of Fashion,"

FINE ARTS and POLITE Literature.
Single Copies 25 Cents.
Subscription Price, \$3 a year, post-paid, including a premium of Two Dollars' worth of patterns free to each subscriber.

We send our CERTIFICATES for this amount upon receipt of subscription. (TWO) of our DRESS ELEVATORS will be given IN PLACE of One Dollar's worth of Patterns, if desired.

The "MONTHLY WORLD OF FASHION," the very finest, most beautiful, attractive magazine to be found in this country, and every person who begins with taking it, will NEVER discontinue it while it is published.

Smith's Illustrated Pattern Bazaar
Sample Copy, 25 cents.
Subscription Price, \$1.10 a year, post-paid.
One Dollar's worth of Patterns given to each subscriber free as premium.

\$4,500.00 IN GOLD COIN TO GIVE AWAY!

We will give \$4,000.00 in Gold Coin to 65 persons who send us the largest number of subscribers to our "World of Fashion" at \$3 each, before March 5, 1876. As follows: To the Getter-up of the
Largest Club.....\$300.00 in gold coin
2d largest club..... 200.00 in gold coin
3d largest club..... 150.00 in gold coin
4th largest club..... 130.00 in gold coin
5th largest club..... 120.00 in gold coin
6th largest club..... 110.00 in gold coin
7th largest club..... 100.00 in gold coin
8th largest club..... 75.00 in gold coin
9th largest club..... 50.00 in gold coin
10th largest club..... 35.00 in gold coin
11th largest club..... 25.00 in gold coin
and so on to the 65th largest club.

We will give \$2,500.00 in Gold Coin to 133 persons who send us the largest number of subscribers to our "Bazaar," at \$1.10 each, before March 1, 1876. As follows: To the Getter-up of the
Largest Club.....\$300.00 in gold coin
2d largest club..... 200.00 in gold coin
3d largest club..... 150.00 in gold coin
4th largest club..... 130.00 in gold coin
5th largest club..... 100.00 in gold coin
6th largest club..... 75.00 in gold coin
7th largest club..... 50.00 in gold coin
8th largest club..... 25.00 in gold coin
9th largest club..... 25.00 in gold coin
10th largest club..... 25.00 in gold coin
11th largest club..... 25.00 in gold coin
and so on to the 133d largest club.

You get a premium for every subscriber you send us. And every subscriber gets a premium. Both of these Gold Coin Presents offers will be found at full length in the September Number, besides the names and P. O. addresses of 162 persons to whom we have just paid \$2,135.00 in Gold, according to our previous offers. You can write to one or all of them, and they will tell you that we do exactly as we promise.

YOUR BEST way is to send your own subscription to either of our Magazines of Premiums, which you can show, and at once begin getting subscribers, or send 25 cts. for one copy. Send stamp for Fashion Catalogue.

A. BURDETTE SMITH,

P. O. Box 5055.

914 Broadway New York City.

HARDEE'S RIFLE & LIGHT INFANTRY

Tactics, for the instruction, exercises and maneuvers of RIFLEMEN and Light Infantry--including, School of the Soldier and School of the Company by Brevet Lieut. W. J. Hardee, to which is added Duties of Non-commissioned Officers, Military Honors to be paid by Troops. The articles of war, containing rules by which armies are governed. Relating to Courts-Martial; Suppressing Mutiny or Sedition; Granting Furloughs; Commissary of Musters; Accepting a Challenge; Chaplains; Suters; To whom any Officer may apply for Redress; Sentinels; False Alarms; Misbehaviour; Making Known the Watchword; Engineers; Spies; How Courts-Martial must be conducted, etc. Sent on receipt of price is 5c. EVERY SOLDIER SHOULD HAVE ONE.

TIMOTHY L. BROPHY,

3m.26

3 Sheriff St., New York.



CUSTOMS DEPARTMENT,

OTTAWA, 12th Nov., 1875.

AUTHORIZED DISCOUNT ON AMERICAN INVOICES until further notice, 12 per cent

J. JOHNSON,

Commissioner of Customs.

TO PRINTERS.

FOR SALE, a Second hand, No. 3 PRINTING PRESS will be sold cheap for cash. Apply at this Office.

A CHANCE FOR ALL.

100,000 GIVEN AWAY.

THE Union Pocket Book Company having secured by cash purchase the entire bankrupt stock of Messrs. H. Morton & Co., consisting of 400,000 PORTMONIES (POCKET BOOKS.)

of the best manufacture and superb quality, each pocket book being made of *Real Morocco Leather*; to effect a speedy clearance sale and having in view the old motto of the house,

CERTAIN PROFITS WITH QUICK RETURNS.

The Company have decided on giving each individual purchaser

THE FULL BENEFIT

of this remunerative bargain by **GIVING AWAY ONE HUNDRED THOUSAND DOLLARS.**

—IN—

2818 MONEY PRIZES.

The First Prizes Being \$20,000 CASH.

" 2d " " 10,000 "

" 3rd " " 5,000 "

and 2815 other money prizes as follows, viz:

25 PRIZES OF \$100 CASH, EACH.

40 " " 500 "

50 " " 100 "

100 " " 50 "

200 " " 20 "

400 " " 10 "

2000 " " 1 "

The above prizes with the cost of advertising and other incidental expenses,

GIVING THE PURCHASERS

two thirds of the profits that accrue on the entire sale, and to enable every one to have an equal share in the profits, with the certainty of receiving treble the value for their small investment and the further opportunity of surely gaining a share in

THE DISTRIBUTION OF \$100,000.

and this to be the riskless outlay of \$1 only. THE UNION POCKET BOOK COMPANY will deliver \$100 to any address on receipt of our dollar.

A GENUINE MOROCCO LEATHER POCKET BOOK.

together with a

COUPON TICKET,

entitling and giving the holder a share in the drawing of

2818 CASH PRIZES

of the aggregate value of

ONE HUNDRED THOUSAND DOLLARS CURRENCY.

The Company guarantee to return to each purchaser at least, treble the value for \$1 money.

HOW CAN THIS BE ACCOMPLISHED?

is a question many will doubtless ask themselves and for seeing this we offer the following lucid explanation:

The Trade asthene, anxious to dispose of and realize on the entire stock of the bankrupts in one sale, accepted our offer of \$20,000 cash for the lot; after advertising same for sale for one month, and not receiving a single offer, which in the present depression of business and almost total stagnation of trade is not to be wondered at; notwithstanding that our offer was one third less than the actual cost of the manufacture of the Pocket Books. The assignee having to at once realize the effects of the bankrupts, in the interests of the creditors he had no alternative but to accept this offer and sell us the lot at our own price, thereby enabling us to

DISTRIBUTE IN PRIZES \$100,000

amongst the purchasers, and at the same time retain a fair marginal profit for ourselves; thus you obtain fully double the value of the amount you forward us and it depends on your luck what amount you gain of the

One Hundred Thousand Dollar Money Prizes

The sale will positively close on

Monday, the 22nd day of November, 1875,

and orders for pocket books should therefore be forwarded us at once—no application by letter after Saturday November 21st can be entertained.

1000 of the Pocket Books are of the pretented manufacture, superior in value to the remainder, their retail price of the same being \$3, and these will be forwarded to early purchasers until disposed of.

Therefore those that send immediate orders will reap the advantage of receiving a superior article.

Remittances can be sent us either for one or any number of pocket books by draft, post office order, or green backs in registered letter, by express, etc.

Post Office orders and drafts to be made payable in favor of Frank Stewart (the Company's Manager) Post Office orders to be drawn on General Post Office, Philadelphia, and drafts on the first national bank:

THE DRAWING OF PRIZES

will take place at the Company's Principal Office, 539 Locust Street, Philadelphia, in the State of Pennsylvania, on Wednesday, November 21st, 1875, and

THE WINNING NUMBERS

will be advertised in this Journal and the principal Philadelphia and New York newspapers of Saturday November 21st.

THE PRIZES

will be forwarded in drafts, greenbacks, or by post office order per registered letter by Monday's morning mails, November 21st, or if preferred prizes can be sent by express, or in any other manner purchasers may select providing same be signified by them when forwarding orders for pocket books.

REMEMBER THIS IS NO LOTTERY.

but a bona-fide business system founded on a true financial basis which enables the Company to convert into money an otherwise surplus stock, and this to the good profit to both the purchasers and themselves, effecting a speedy clearance stock which in the present dull times is the great desideratum. In no other way can we so successfully attain.

We guarantee each pocket book to be of the best manufacture; of pure morocco leather and intrinsically worth in retail trade at the lowest rate of from \$3 to \$4.

This is an opportunity that should not be let pass by; one and all should embrace this chance; We afford every one an opportunity of realizing a share in \$100,000 at the insignificant outlay of \$1 (one dollar) for which they receive value three fold and those who let this fortuitous chance escape them will have only themselves to blame.

All letters replied to same day as received. We advise intending purchasers to forward orders immediately which will prevent disappointment and receive prompt attention.

Remember, every one that sends ONE DOLLAR before November 21st, 1875, receives

A Morocco Leather Pocket Book

of the value of from \$3 to \$4 and a COUPON, giving them a share in the drawing of \$100,000.

Address all orders, letters, etc.

The Union Pocket Book Company,

South East Corner 6th and Locust Streets, Philadelphia, Penn.

P. S.—Drawing absolute on Wednesday, November 21st. No postponement in the remote contingency of any number of the pocket books remaining unsold a slight reduction not exceeding \$500 may be made proportionately from the prizes. 4in.43

TASTELESS

MEDICINES.

A prominent New York physician lately complained to DUNDAS DICK & CO., about their SANDALWOOD OIL CAPSULES, stating that sometimes they cured miraculously, but that a patient of his had taken them without effect. On being informed that several imitations were sold, he inquired and found his patient had not been taking DUNDAS DICK & CO'S.

What happened to this physician may have happened to others, and DUNDAS DICK & CO. take this method of protecting physicians, druggists and themselves, and preventing OIL or SANDALWOOD from coming into disrepute.

PHYSICIANS who once prescribe the Capsules will continue to do so, for they contain the pure Oil in the best and cheapest form.

DUNDAS DICK & CO. use more Oil of Sandalwood than all the Wholesale and Retail Druggists and Perfumers in the United States combined, and this is the sole reason why the pure Oil is sold cheaper in their Capsules than in any other form.

OIL OF SANDALWOOD is fast superseding every other remedy, sixty Capsules only being required to insure a safe and certain cure in six or eight days. From no other medicine can this result be had.

DUNDAS DICK & CO'S. SOFT CAPSULES solve the problem, long considered, by eminent physicians, of how to avoid the nausea and disgust experienced in swallowing, which are well known to detract from, if not destroy, the good effects of many valuable remedies.

Soft Capsules are put up in tin-foil and neat boxes, thirty each, and are the only Capsules prescribed by physicians.

TASTELESS MEDICINES.—Castor Oil and many other nauseous medicines can be taken easily and safely in Dundas, Dick & Co's Soft Capsules. No Taste. No Smell.

These were the only Capsules admitted to the last Paris Exposition.

Send for Circular to 36 Wooster street, N. Y.

Sold at all Drug Stores Here.

Price, Twenty five Cents.

NEWSPAPER

ADVERTISING.

NINETY EIGHTH EDITION.

Containing a complete list of all the towns in the United States, the Territories and the Dominion of Canada, having a population greater than 5,000 according to the last census, together with the names of the newspapers having the largest local circulation in each of the places named. Also, a catalogue of newspapers which are recommended to advertisers as giving the greatest value in proportion to prices charged. Also, all newspapers in the United States and Canada printing over 5,000 copies each issue. Also, all the Religious, Agricultural, Scientific and Mechanical, Medical, Musical, Juvenile, Educational, Commercial, Insurance, Real Estate, Law, Sporting, Musical, Fashion, and other special class journals; very complete lists. Together with a complete list of over 300 German papers printed in the United States. Also, an essay upon advertising; many tables of rates, showing the cost of advertising in various newspapers, and everything which a beginner in advertising would like to know.

Address GEO. P. ROWELL & CO., 41 Park Row, New York

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The Leonard Scott Publishing Co.,

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Continue their authorized Reprints of the

FOUR LEADING QUARTERLY REVIEWS:

- Edinburgh Review, (Whig.)
- London Quarterly Review, (Conservative.)
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Containing masterly criticisms and summaries of all that is fresh and valuable in Literature, Science and Art; and

BLACKWOOD'S EDINBURGH MAGAZINE

The most powerful monthly in the English Language, famous for Stories, Essays, and Sketches,

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- For Blackwood's Magazine,..... 4 00 "
- For Blackwood and one Review,..... 7 00 "
- For Blackwood and two Reviews,..... 10 00 "
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CLUBS.

A discount of twenty per cent will be allowed to clubs of four or more persons. Thus: four copies of Blackwood and one Review will be sent to one address for \$12.50; four copies of the four Reviews and Blackwood for \$18, and so on.

Circulars with further particulars may be had on application.

THE LEONARD SCOTT PUBLISHING CO

41 Barclay Street, New-York.

A POSITIVE REMEDY

MORTIMER'S

CHOLERA MIXTURE.

A PURELY VEGETABLE COMPOUND—A sure and safe remedy for Diarrhoea and other Bowel Complaints.

At a season when the system is liable to prostrate from these weakening disorders, this valuable remedy should be kept in every household. No one can afford to be without it.

Price only twenty-five cents a bottle.

GEO. MORTIMER,

Chemist and Druggist,

255 West Street.

Ottawa, November 5th, 1875.