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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, MAY 30, 1870.

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. No communication, however, will be inserted unless the writer's name is given, not necessarily for publication, but that we may know from whom it is sent.

We have for the past nine years endeavored to furnish the Volunteer Force of Canada with a paper worthy of their support, but, we regret to say, have not met with that tangible encouragement which we confidently expected when we undertook the publication of a paper wholly devoted to their interests. We now appeal to their chivalry and ask each of our subscribers to procure another, or to a person sending us the names of four or five new subscribers and the money—will be entitled to receive one copy for the year free. A little exertion on the part of our friends would materially assist us, besides extending the usefulness of the paper among the Force—keeping them thoroughly posted in all the changes and improvements in the art of war so essential for a military man to know. Our ambition is to improve the *Volunteer Review* in every respect, so as to make it second to none. Will our friends help us to do it? Premiums will be given to those getting up the largest lists. The *Review* being the only military paper published in Canada, it ought to be liberally supported by the officers, non-commissioned officers, and men of each Battalion.

Broad Arrow of 5th April has an article on "Our Unarmoured Navy," which will be found on another page. From it and the tone of Commander Noel's prize Essay, it would appear that the people of England are at last awaking to the knowledge that Naval Warfare is not to be carried on below the deck of impregnable ironclad floating batteries; and that those costly constructions, the offsprings of Mr. E. J. REED's great mechanical ingenuity and fertile brains, are only after all fit for coast defence; a conclusion at which, amongst hundreds of others, the *VOLUNTEER REVIEW* had arrived before the loss of the ill-fated *Captain*

for ed the current of Public Opinion out of the groove so ingeniously prepared for it by theorists.

Our contemporary while giving up one theoretical fallacy flies to the authority of another theorist in the person of "Dr. BOXTON," whoever he may be, but whose sole claim to the distinction appears to be taken from an enlargement of Admiral PORTER's *spread eagle* report, which had the effect of frightening GLADSTONE, BRIGHT & Co. into the *faux pas* of the Washington Treaty with its corollary the thivish blunder of the Geneva arbitration.

Sensible people would naturally ask if the United States could build those *fleet and enormous sea racers*, why did they not do so during the four years of their own internal contest? The force of the *Alabama* and *Sumpter* were too contemptible to take into account, yet it would appear that neither the "Admiral" nor the "Doctor" had such faith in their own prescriptions as to offer advice to their own Government who were obliged to look helplessly on while their mercantile marine were swept from the seas by a small *passenger steamer* and her tender. Neither can be complimented on their patriotism to say nothing of the foresight which kept their valuable theories cool till after the close of the war.

In jumping from one theory to another mischief is likely to ensue. Our contemporary is right in the major propositions of his argument, but the minor are untenable, because a sea going cruiser must be a light handy vessel working equally well under canvass or steam, and it is necessary that she should carry the heaviest possible armament.

Commander NOEL says the weight of the battery of H. M. S. *Hercules* including allowance of ammunition is 640 tons or *one thirtieth* of her displacement. A sea going cruiser to carry a similar amount should not exceed 2,500 displacement, and would not be enormous in any sense of the term. But after all this question of Ocean cruising depends as much on strategy as on the class of vessels employed therein. Admiral SEMMES, in his "Narrative of the Cruise of the *Alabama*," shews conclusively and very plainly too, that if the United States Secretary of the Navy, or any of the superior officers of that service, understood this question of Naval Strategy, the career of that famous cruiser would be of brief duration, and would meet a sudden termination by a vessel or vessels of less speed. The lesson taught is that of having powerfully armed vessels at certain well known points, with a few swift cruisers to keep up communications &c., and none of those need be *ironclads*—the return to the old type of frigate is therefore a necessity—for harbour coast or river defence *ironclad floating batteries* should be employed; and for line of battle, ships partially armoured vessels carrying the heaviest artillery.

Commander NOEL says the present types cannot carry a sufficient armament owing to the great weight of armor which he shews to be useless for purposes of defence.

As an auxiliary guard against improvised *Alabamas* or merchant vessels, steamers and sailing ships over 500 tons burthen should carry a proportionate armament; this would be merely a return to the practice of a century ago, and would lessen the risks of capture considerably as well as secure contingent advantages.

THE following notice of a most instructive essay on gunpowder is taken from *Broad Arrow*, of 18th March, and displays the value of the principle affirmed in the *VOLUNTEER REVIEW* that the "real improvement in modern fire-arms was to be sought for in the direction of obtaining complete control over the action of the explosive agent or motive power." The invention of the *large grained* gunpowder is a step in that direction:

"An interesting paper was read by Major Morgan at the Royal United Service Institution on the 20th inst., on 'Some Special Features in Large and Small Grain Powders.' Lieutenant Colonel Lord Eustace B. H. Gascoyne Cecil, M.P., presided. Major Morgan stated that it was not many years since two sorts of powder only were sufficient for nearly every requirement of the Service, viz., large grain, or i.g., for guns, and fine grain, or f.g., for small arms. Both of those powders were manufactured in the same manner from the same description of charcoal—alder or willow—differing only in the size of the grain. On the introduction of rifled small arms, f.g. was found unsuitable, and the first and most important alteration was the substitution of dogwood for alder or willow charcoal. That necessitated the entire separation of the manufacture of small arm powder from that of powder for guns. The first powder of the new description was made in 1850, and was known as Enfield rifle. In 1860 the size of grain was increased, and in 1865 the name was changed to rifle fine grain, or r.f.g., and no powder excelled that in shooting qualities in the Enfield rifle. When the Martini Henry rifle was introduced it was found that r.f.g. could not be used because it fouled the rifle. Shortening the charge by chambering simplified the problem of finding a suitable powder, but still it was found that it was only by increasing the charge from seventy to eighty-five grains, using a very slow-burning powder, that satisfactory results were to be obtained. After numerous experiments a powder was made which was first called q, and afterwards r.f.g. 2, which continued to give satisfactory results. The charcoal was burned for eight hours at a low temperature, and the milling was continued for eight hours. The glazing was for twelve hours, and seemed to be a refinement by which the density of the exterior of the grain was increased, and thus more time was given for thorough and complete ignition. Slow burning of the charcoal and long milling had considerable effect in quickening the powder, and with both sizes of grain in dogwood powders the longer milling had proved beneficial in increasing the velocity and reducing the pressure; a longer milled powder was very much the best able to resist the action of the weather. Major Morgan then proceeded to speak of powder for guns, and summed up the different features in powders