

nduce them to embrace it. If the service be honorable, there is precedent enough to show that it will be preferred by young officers to a more lucrative employment; but a guarantee might, if thought advisable, be exacted that at least five years, irrespective of the time passed in their education, should be given to the State. Judging however, from the example of other armies, slowness of promotion is more to be feared than failure to embrace a military career after a military education.

Such given very generally and with outlines merely sketched in is an attempt to adapt the system of West Point to the requirements of the Canadian Militia. Those who know the country, are best aware whether the plan is feasible, but if the idea of establishing military colleges is put into practice, it may be well to consider how far so successful an institution as the Academy at West Point can be imitated in a country where the conditions which lead to its foundation are somewhat similar, and where the end in view is not unlike that which presented itself to the statesmen who assisted in the development of the military system of the United States.

In this paper I have dealt only with general principles, but if further information be required, I shall be ready—as far as lies in my power—to discuss the details connected with the formation of an Academy of which the system and object would somewhat resemble those of West Point.

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ENGLAND, THE WORLD'S BANKER.

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It is interesting to notice the fact that, whereas England has so wonderfully thriven through the demands upon her trade by the nations of the world, she has in turn become the banker of every nation, loaning them capital whenever wanted. In this respect, the heaviest demands have been made during the ten years from 1862 to 1872 either indicating an increase during that period of internal and costly disbursements, as in the United States, and in France, or the accumulation of progressive ideas. England herself in that time decreased her debt, owing to her own people, \$175,000,000; the only other like instances being Holland to the extent of \$30,000,000. On the other hand, we find that the above named governments in that time have prodigiously increased their indebtedness—France to the extent of \$2,500,000,000, and the United States \$1,750,000,000. It is somewhat of a financial surprise to find that Italy ranks next; that country is now groaning under a burthen of \$1,250,000,000. Then follows Spain, with an increase during the decade of \$1,000,000,000, perhaps less able to see her way through liquidation than Italy. Russia with her vast domain, and energetic emperor, and imbued with ideas expanding to a proper appreciation of her prodigious internal resources, had only added the lighter burden \$510,000,000. Next on the list is Turkey, adding since 1862, \$535,000,000. Austro-Hungary has increased \$450,000,000; Egypt, \$350,000,000; Brazil, \$275,000,000; Portugal, \$200,000,000; and Peru, \$160,000,000. Other states have increased in lesser amounts, but, perhaps, heavier in proportion to their ability to carry; whilst Mexico, Greece, Ecuador and Venezuela have

remained stationary for the reason that no one was found willing to loan. According to the figures previously given, I found the aggregate of national securities subscribed for and dealt in here to reach the stupendous amount of \$11,113,385,105, a sum great as it is, very far short of the actual indebtedness of the nations included in the summary. Upon the authority of "Fenn on the Funds," it appears that \$10,000,000,000 of indebtedness were added during the period 1862 and 1872, of which not less than one half was directly referable to war, in which the United States and France were the most conspicuous, expending jointly \$4,250,000,000 and that by no means including all the disbursements occasioned by the wars in which they were unfortunately engaged. The other half of the augmented debt, it is estimated, has been put to higher purposes than human destruction, but only a part of that half can be clearly traced. The sum of \$6,075,000,000 went into the state coffers of Russia, Spain, Turkey and Egypt. The first spent a portion of this in building railroads, not wholly intended to cultivate the arts of peace. The second applied part in the development of internal industries. Concerning the disposition made of her quota by Turkey, very little is clearly known. The caprices of the head of the state, the costly construction of iron clads and sustenance of corrupt officials may have spared but a small portion for direct application to reproductive works. Egypt, the vassal state, presents a better record. The khedive can point to the Suez canal and instance other works connected with the industrial progress of his people. With regard to the colonies and India borrowing during the period named \$235,000,000, no part was used as blood money, all of it having gone to reproductive purposes and the civil uses of the state. England, it will be seen, has been no borrower; on the contrary, diminishes her debt, manfully aids peaceful progress of her dependencies, and banks for the nations of the world, all of whom are her debtors.

LATEST IRON CLAD.—The London Daily Telegraph says, "Mention was made on Monday in the House of Commons of the Inflexible, the latest pattern of war ship building for our navy. The belief of Admiral Elliot that the days of armour plating are nearly over, is certainly not justified by this extraordinary vessel. The exact drawings and particulars of her build are very naturally kept from public knowledge, but we may, without any breach of patriotism, give a general conception of the design adopted in this the youngest of our iron clads. What may be called the distinguishing characteristic of the Inflexible is that she will have, in the sense of vulnerability, no "wind and water line" at all. Every one must know that the traits of a man-of-war lie along the belt of her flotation—a breach of her sides in that region lets in the sea and swamps her. The Inflexible carries all her side armour upon a central space 110 feet in length. It is twenty four inches thick, and protects with that monstrous wall of solid iron her engines, her screw, and her battery of four eighty ton guns. Along the rest of her—fore and aft—there is no vertical armour, but a thick inside cushion of cork of enormous buoyancy, more than sixty feet in section, surrounding bunkers full of coal for the supply of the ship. A horizontal deck of thick metal extending fore and aft from the citadel, at a depth of six or seven feet from the water-line, will cut off all this unarmoured upper portion from the real hold of

the vessel. Thus if the enemy should send shot or shell through every coal bunker and corner of the Inflexible, forward and aft, letting in the water everywhere, he could only—if the design answers expectation—lower her a single foot in the sea. Her citadel, it may be confidently expected, he could not pierce; at any rate with guns at present in use. In a word, the constructors of the Inflexible give an enemy the upper slices of the ship, except her citadel, to do as he likes with; and it is by making the ends floating under any circumstances that the iron works of the ponderous citadel, with its turrets and freeboard, can be carried. The ram and the torpedo are therefore the only perils which threaten this forthcoming fighting ship; but perhaps these also might be provided against if her bottom under the water deck were constructed in many compartments. Enough however, has been already hinted about our newest Behemoth to show that, whatever her success, the age of armour plating is certainly not ended yet.

The Rev. W. R. JOLLEY, R.N., has invented a method of preventing loss of life at sea, which he calls the "patent deck house," or "ark saloon." It is, in fine, utilisation of deck houses for the purpose of preserving life, by making them water tight, and of such a form as to float easily apart from the ship itself. The Ark Saloon is, in fact, an ark shaped structure or chamber placed upon the deck of an ordinary ship, in lieu of the usual deck house. It is bolted to the main deck in such a manner as to be very easily cast adrift, or rather afloat, should the vessel be found to be in a sinking condition. The saloon is lighted by skylights in the roof, for which, of course, dead lights are provided. The stability and buoyancy of this extraordinary vessel, for we may consider it as in itself a separate craft, are said to be remarkable. "Its stability," says a writer in Colburn's *United Service Magazine*, "is secured horizontally by timbers fitted closely round its base, which are fastened by strong iron teeth and bolts into and through the ship's beams. Still further to prevent all possibility of its moving horizontally, rows of spikes fore and aft, like those in a cricket shoe, are placed so as to fit into holes prepared for them in the main deck." It is calculated that an Ark Saloon of six or seven feet in height will, when afloat, draw about two feet of water. As compactness must obviously be one of the first considerations in a patent safety vessel of this character, Mr. Jolley has contrived to almost apply every part and almost every fitting to two or three different uses. For example, the sides are lined with galvanised iron tanks, which, according to the exigencies of the occasion may require, can be used either as receptacles for fresh water and provisions or as water tight compartments to add to the buoyancy of the vessel. The saloon tables turn out to be only a moreable keel, and a locker for the masts, sails, rigging, etc., of the ark. "The Ark Saloon," Mr. Jolley says, "is of stronger construction, and more securely fixed to the ship than the ordinary deck house. It affords a commodious poop deck, and has a clear passage around it for working the ship. It is perfectly navigable and even weatherly vessel when afloat. It supercedes the necessity for a large number of lifeboats in passenger, troop, or emigrant ships. It utilizes material and resources already existing in the ship. And, finally the cost of construction is estimated at about 30 per cent more than the ordinary deck house."