

Navy, rather more than twenty years ago, the coast defence of that vast possession has been entrusted to about a dozen small vessels of the Imperial Navy. At the present time our East Indian Squadron consists of an old wooden frigate, two corvettes, and eight sloops. With the exception of the two small ironclad turret-ships *Magdala* and *Abyssinia* at Bombay, these are all the vessels we have to defend the shores of India from the Indus to the Ganges. In 1868 the Indian Government made a start in the direction of reconstituting an Indian Navy. They ordered the two turret-ships—already referred to—of two private builders on the Thames, and received them at Bombay early in 1871. Since then nothing further has been done in that direction except laying down torpedoes at different parts of the coast, and instructing a small staff in the details of torpedo warfare. It was at the close of 1877 that the India Office decided upon the torpedoes, and at that time the *Broad Arrow* pointed out that something more than this simple precaution was necessary in order to ensure ample protection to our Indian harbours. It was urged that it is the duty of the Government to continue in the direction which they took in 1868. About ten more such vessels as the *Magdala* and *Abyssinia*, supplemented with an efficient torpedo force on shore, would render the coasts of India safe against the attack of any naval force which would find its way to that part of the world. For defensive purposes, or indeed any other than that of mere ornament, our East Indian Squadron is useless.

Mr. Brassey, who has long since come to the front as a shrewd and far-seeing seaman and legislator, has recently made a speech on the subject of colonial defence. His appointment as one of the Royal Commissioners to report on the means available and required for the defence of the colonies is a sufficient claim for a careful attention being given to whatever proceeds from Mr. Brassey on this important question. As the member for Hastings very truly stated, "England without her colonial and foreign possessions would fall to the second rank in the family of nations." In showing how much our commerce depended upon the extent of our colonies, he mentioned that in the nine years from 1869 to 1878 our colonial trade had grown from 25.3 to 35.4 per cent. of our total commerce, and that, too, while our exports to foreign countries had diminished in value. After showing the extent, value, and rate of our Canadian, Australian, New Zealand, and Tasmanian dependencies, also the advantages we derive both on account of the large consumption of our manufactures, the food supply they yield us in return, and the employment they give to our surplus population, Mr. Brassey wisely remarked that "the noble confederation should not be broken up for the sake of a paltry reduction in the Navy or the Army Estimates."

Nevertheless, Mr. Brassey is not of opinion that the whole or even the greater part of the cost involved in creating an efficient system of colonial defence should be borne by the Imperial Exchequer. Nor does it appear that the colonists generally desire that they should be wholly relieved from the burden of maintaining their local defences. At the same time that the Indian Government were constructing the *Magdala* and *Abyssinia* for the defence of Bombay the Government of Victoria were having a sister ship, the *Cerberus*, built for the defence of Melbourne. Mr. Brassey informs us that at Adelaide, the principal port of South Australia, a turret-ship is spoken of, and that Melbourne has a small navy. He is in error in supposing that Sydney has a turret-ship, but it is possible that, like Melbourne and Adelaide, the port of New South Wales may determine to possess itself of an independent means of defence. But whatever has yet been done in this direction by our antipodean cousins is only a nucleus about which to range future results. Judging by Mr. Brassey's figures these naval developments are not far off. He tells us that it has been decided by the Governments of Victoria and New South Wales to expend each a sum of £350,000, besides an annual outlay of £73,000, in providing a force of ships, guns and torpedoes. This looks like business, and when viewed in connection with the Artillery

Torpedo Corps and Naval Brigade organised at Sydney, the Militia in New Zealand, and the Volunteers in Tasmania, it shows us that the colonists are determined to be, in some measure at least, independent of the mother country so far as local defence is concerned.

Such a spirit of independence is much to be commended; but it is not sufficient to be influenced by a proper spirit in devising an efficient defensive scheme. Sir Julius Vogel—the Agent-General for New Zealand in this country—says "the colonies are sensible of the weakness of isolated action." This, too, is fortunate for it is necessary to recognize a weakness before attempting to remedy it. For each colony to defend itself upon an independent system would be a two-fold mistake. It would render it the more difficult for the mother country to contribute her quota of aid, and at the same time it would interfere with securing an effective combination, besides adding to the collective cost of maintenance. A properly organised system of colonial defence must, so far as our Australasian colonies are concerned, be a collective one. It is much to be regretted that it should be left until this day for such an important question to be considered and decided upon. It is, however, satisfactory to learn, upon so high an authority as Sir J. Vogel, that the colonists know it to be impossible to obtain a formidable combination under any other supremacy than that of the mother country. But under any circumstances it will be a difficult question to decide upon the relative share of cost to be borne by the different members of the British Confederation. Mr. Barnaby, C.B., the Director of Naval Construction at the Admiralty, proposes that each member of the confederation should contribute towards the national fleet in proportion to the volume of their exports. Whether or not this proposal would prove equitable we are unable to say, but we fully agree with Mr. Brassey in believing that the whole subject must soon be taken into earnest consideration and settled. That the colonists have taken the initiative in the question will materially assist towards its speedy solution—for by so doing they have shown that they realise the dangers of the present situation.

### Conversion of Smooth Bore Guns.

Since our last issue a contract has, we believe, been entered into by the Government with Messrs. Gilbert & Sons, Canadian Engine Works, Montreal, for the manufacture of two 7 inch breech-loading rifle guns, on the system invented by Sir William Palliser, and for the conversion of ten 32 pr. smooth bore guns to 64 pr. rifles, also on the Palliser system. The latter guns are to be increased in length by allowing the wrought iron tube to project 13 inches beyond the original muzzle—a suggestion of Lt.-Col. Strange, R.A., Inspector of Artillery. It will be found to be an important improvement on those converted in England. It was shown by the proof last year that a converted gun would admit of a great increase in the quantity of powder laid down at present as the service charge. The lengthening of the bore will admit of the entire ignition of the increased charge, which will, in turn, impart a much higher muzzle velocity to the projectile and overcome, to a great extent, a disadvantage in rifled guns when firing case shot or shrapnel shell. The increased velocity will also secure increased penetration and greater accuracy of fire.

The contract for the conversion of 10 of the smooth bore guns in possession of the Government is a step in the right direction, which we trust will be followed up until all the guns are converted into rifles. It will be a valuable addition to our means of defence, and will also create an esprit in our garrison artillery force, which is now languishing for want of encouragement.

We learn from the Montreal journals that His Excellency the Governor-General devoted a portion of his short stay in Montreal en route from Halifax to the capital, to paying a visit to the foundry of the Messrs. Gilbert, which is to us a strong proof of the interest taken by His Excellency in matters connected with the defence of the country.