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## Essay

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## ESSAY.<sup>1</sup>

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ON AN OUTBREAK OF WAR, WHAT IS THE ORGANIZATION FOR DISTRIBUTING THE PEOPLES OF THE NAVY AND OF THE RESERVES AMONG THE AVAILABLE WAR VESSELS, AND AMONG A PORTION OF MERCHANT VESSELS, AS AN AUXILIARY TO THE NAVY?

By Captain H. CLEVELAND, R.N.

*"Si velis pacem, semper parate bellum."*

THE subject of this Essay is one of the most important of naval questions which press upon the naval administration; it is one great official advantage, inasmuch as its solution does not involve increased estimates, nor does it depend upon the good-will of the Treasury! It is simply one of departmental organization—distribution of means to an end—and, together with the machinery to put it rapidly and economically into motion, should be considered with the time, patience, and resource which peace is at our disposal.

This subject will, as indeed everything affecting our administration should, be considered entirely from a national point of view. It is much too apt to blindly imitate our Continental neighbour's systems of organization, and to measure our naval efficiency by a comparison of the respective numbers of special ships, regarding our own national peculiarities, insular position, and exceptional circumstances. The circumstances of this Empire differ from those of any other in the world, and it consequently requires a very different organization for its naval and military affairs.

The rapidity with which warlike operations are now developing, the valuable property on the shores of our extensive Empire, the number of British vessels with their valuable cargoes—at 150,000,000*l.* sterling—constantly threading their way across the ocean to all parts of the world, and the vast quantity of 17,000,000 quarters of wheat (out of an annual consumption

<sup>1</sup> Honourably mentioned; the others were by Commander Kingscote and J. H. Harris, R.N.

mercantile marine, and the patriotism of its owners, well organized, enable us to effect this with certainty.

The political necessities of this extensive and extended, combined with the police duties of the sea, which an enormous force has imposed upon us, require the maintenance abroad of large squadrons, composed for the most part of vessels adapted to this purpose, but which would become a source of great expense and anxiety on a sudden outbreak of war. It is this disproportion of naval resources, matériel and personnel, which renders this essay somewhat difficult to solve; but in the organization of the force for the discharge of these peace duties, the necessary expansion without derangement in the event of an outbreak must constantly be borne in mind.

To meet the multifarious duties which an ubiquitous force poses upon us, the commercial world has been divided into as many units of naval administration, although steam commerce has confined the traffic to narrow zones—well called “com routes”—and considerably affected the conditions on which stations were originally organized; still, the system has many advantages, and, on war being imminent, can be adapted to the additional duty of patrolling these high seas. This essay will therefore be discussed with reference to this condition, but an essential condition of its efficiency depends upon the establishment of a *depôt*, conveniently situated and adequately provided with stores of coal and dock accommodation, and, further, to facilitate the expansion of the naval forces, ships in good repair and a station should be laid up in reserve at each of these *depôts*.

In reviewing a question affecting the defences of the Colonies, one cannot avoid being struck with the insignificant part which the numerous and wealthy Colonies take in it—some literally nothing; and though Canada and the Australian Government have recently organized a marine defence, it is in every instance isolated, whereas, to be efficient and economical, it should be connected with the Imperial system. All our Colonies—taken as representative—should be invited to take a part in the defence of their respective commercial ports, and for this purpose to have adequate matériel and personnel acting in concert with the Commander-in-Chief of the station.

It is entirely beyond the scope of this essay to offer a solution to whether the matériel and personnel of the Navy are sufficient; it will simply be confined to discussing the question of the distribution for distributing the *existing* personnel amongst the matériel; it will consider all men voted annually by Parliament, the “active force” of the Navy, those for whom provisions are made, and those for whom no provision is made, to supplement this force on war being imminent being the “reserve force;” and the most logical method of dealing with the subject is, first, to inquire what work the personnel of

ductory matter tabulated, with commentary sufficient to elucidate. Matter which is outside the scope of the essay, and indirectly connected with it, will be enclosed in brackets.

I. What ships for war purposes are there available for at once?

II. How many men are required to man them?

III. How many men are enrolled in the active and reserve, and how many of these are at once available for service?

IV. How should these men be distributed amongst the vessels?

V. *The subject of the Essay.*—What is the best organization for carrying out this distribution?

I. What ships for war purposes are there available for at once?

Table A answers this concisely. In it every ship on the list is classified, and each class has its representative type and tactical functions assigned it, upon which the *number* and *class* for manning it are based. (Some difference of opinion exists as to this method of classification, but it is the one which most admirals adapt to our present vessels; it fulfils all the requirements of our position as a great commercial nation, and it is the one accepted by most writers on naval subjects.)

The *battle-ships* are classed into "masted" and "unmasted" for the purpose of determining the class of men most desirable for them.

The vessels for *coast service* are divided into two classes for service abroad, for the protection of our arsenals, de-coaling stations, supplemented by torpedo-boats (1st class), primarily for the defence of harbours and coasts at home, and that object is secured, in attacking the enemy's positions and the rafts and mortar-boats. The two Indian turret-ships "Cerberus" are here included, as also the "Royal Sovereign" and "Erebus," which, it may be said, are obsolescent if not obsolete.

The *gunboats* are for home defence and river defence, the gunboats being included.

The *torpedo defences* of the Empire are, by Treaty, entrusted to the Royal Engineers, who are to receive every man in men and boats from the Royal Navy. It is assumed, in determining the number of men required for this service, that these defences are confined to arsenals, depôts, and commercial ports, isolated upon undefended places being outside the range of modern attack.

The *cruisers* are divided into three classes: their special function is to patrol the commercial highways, and to Class I is all the section liable to be attacked by an enemy's heavy cruiser. Class II is assigned the more distant routes or the pursuit of "Alabama," and to Class III the patrolling of the remaining routes and affording such protection, in the way of convoying, as

TABLE A.

*The Matériel of the Navy (illustrating its demands upon the Personnel).*

Classification.			Number.		
Class of ship.	Representative types.	Strategical function.	Built and building.	Available at once.	Men required to man them.
Battle-ships. (Armoured.)	Masted .. ..	Alexandra Audacious Minotaur	20	17	9,670
	Unmasted .. ..	Colossus Dreadnought Camperdown	14	6	2,330
	Armoured ships ..	Conqueror Rupert	7	7	1,560
	Torpedo-ships .. (1st Class.)	..	2	20	200
Coast service	Armoured ships ..	Illicite, Cerberus Waterwitch	15	10	1,460
	Gunboats .. ..	Mistletoe, Tny Comet	93	63	2,200
	Torpedo defences ..	..	..	..	5,850
		(a) Defence of ports and coasts (b) Covering rafts and mortar boats in the attack on forts.			

Classification.				Number.		
Class of ship.	Representative types.		Strategical function.	Built and building.	Available at once.	Men re- to man
Cruisers .. ..	1st Class (Protected) ..	Impérieuse Warrior Northampton	Protection of commercial routes flanked by enemy's naval ports	10	5	9,
		Inconstant Arethusa Volage	Patrolling distant routes	15	6	
		Calliope Opal Modeste	Patrolling and conveying	35	18	
Sloops .. ..	.. ..	Vestal Rapid Albatross	Police duties and co-operating with cruisers	41	21	2,7
Gun-vessels, ..	.. ..	Racer Falcon Fly	Police duties and attendance on squadrons	52	28	2,5
Torpedo-ships .. ..	.. ..	Polyphemus	Attached to battle-ships for counter-attack	4	2	1

These are the main types.

Classification.			Number.		
Class of ship.	Representative types.	Strategical function.	Built and building.	Available at once.	Men re- to man
Chartered ships	Torpedo store and factory-ship ..	One to, each squadron of battle-ships	250 on Admiralty List	100 probable number required	10,8
	Coal-vessels .. ..	Two ditto and depôt			
	Store-vessels .. ..	One ditto and depôt			
	Hospital-ships .. ..	One ditto			
	Despatch-vessels .. ..	Two ditto			
	Transports .. ..	Transporting troops			
	Cruizers .. ..	Patrolling commercial highways			
Royal Naval Reserve drill-ships .. ..	Brilliant, &c.	Drilling the Reserve Force	..	9	2
Training-ships .. ..	Excellent Britannia St. Vincent	Drilling the Active Force	..	9 (and 8 cruizers)	1,5
Yachts .. ..	Victoria and Albert Enchantress Helicon	..	..	12	7
Receiving-ships and miscellaneous .. ..	Duke of Wellington Indus Victor Emanuel	Distribution	..	14	2,0

merchant vessels, which would be placed on the Admiralty built, should, when designed and building, have fittings for bulkheads, armament, bunkers round engines and boilers, a recess for armour-belt provided, ready for conversion, on an imminent, but during peace in no way affecting their construction as merchant ships.)

The *sloops* and *gun-vessels* require no comment; they form a supplement to the cruisers on distant routes.

The *torpedo-ship* is a new class, represented as yet by the *phœnix* only. The "*Vesuvius*" is included in the table, although she is not suited to keep the sea. (The torpedo-ship has a conspicuous rôle in supporting battle-ships in future fleet movements, and doubtless their number will be considerably increased by the submarine working of the Whitehead torpedo has been fully established.)

*Troop and store-ships* need no comment. The "*Valo*" is included in the table. (If men were required to be landed for bombardment, or for any temporary purpose, troops—marine or otherwise—would probably accompany the fleet in these ships, the design of the modern man-of-war not being adapted to land a large force.)

*Chartered ships* would form a large addition to our naval resources. The duties it is proposed to assign them are stated in the table. Of the 280 merchant ships on the Admiralty list, 40 have a speed of 14 knots, and at the same time have a large coal supply. A *factory ship* is an innovation rendered necessary by the more complicated machinery on board of our larger vessels. The *store-ship*, now represented solely by the "*Hecla*," could, in addition to carrying the gun-cotton mines for the fleet and second class boats (to supplement those in each ship), be fitted up for this purpose.

The *drill-ships* for the reserve, and the *training-ships* for the gentlemen, boys, gunnery and torpedo, would be kept in fit condition during war.

## II. How many men are required to man the above ships?

This information is given in Table A, and is based upon the complements of ships. The number assigned to *torpedo ships* is somewhat speculative, there being at present no data for a correct estimate. (When the defences of the Empire are thoroughly organized, it will probably be found most advantageous to place the torpedo branch entirely in the hands of the Navy.)

The number of the cruisers would doubtless be increased by the addition of chartered ships; but as this, under existing arrangements, cannot be effected at once, no greater number of men has been assigned than is required for the available war-ships.

The numbers for the drill and training-ships are for purposes of instruction and ships' duties. They do not include the men actually under training.

The numbers for the marine barracks comprise the staff and recruits.

III. How many men are enrolled in the active and reserve and how many are at once available for duty?

Table B furnishes this information. The figures quoted are only approximate, are sufficiently reliable for all practical purposes. Taking the active force first, to give a clear idea as to the force which can be relied upon for expansion, an analysis of its present distribution is appended. It will thus be seen that one-third of the whole is always abroad, and another third (approximately) disperse at home. When our seamen at home are concentrated in the barracks, a large portion of this latter third will be available for service afloat. The number of Officers enrolled is 4,621, the number annually voted is only 4,000 (2,598 commissioned and 1,402 warrant), which accounts for the apparent discrepancy.

TABLE B.

*The Personnel of the Navy.—Number of Men in Active and Reserve Forces.*

Active force.	Enrolled.	Available at once.	Present distribution of active force.
Officers (excluding 70 in O.G.).	4,550	4,550	Number annually voted (A) 4,000 Service on shore (A)... 1,402 Service afloat (B) ..... 2,598
Seamen { Petty officers .	3,600	3,600	Analysis of A.
{ Leading S. and A.B's.	10,000	10,000	Coast Guard, 4,000; Boys' Brigade, 3,200; Marines—staff, 3,000; ready to enter, 3,000.
{ Ordinaries....	6,300	6,300	Analysis of B.
{ Coast Guard (on shore).	4,000	4,000	(a) Abroad..... 1,402
{ Boys .....	5,200	2,000	(b) At home ..... 2,598
Engine-room staff .....	4,800	4,800	(a) Mediterranean, 5,000; N. America, 2,800; E. India, 1,900; Pacific, 1,600; Australia, 1,000; Cape of Good Hope, 500; survey, 500; Imperial troops, 500; particular service, 500; troopers, 1,000.
Artificers.....	2,300	2,300	(b) Channel squadron, 3,300; home squadron, 3,700; home ships ordered home for training, &c., 1,000.
Non-combatants .....	4,500	4,500	
Marines { Artillery .....	2,300	1,900	
{ Infantry .....	10,100	8,500	
Total active force ..	57,650	52,450	

Officers.....	380	
Royal Naval Volunteers... { 1st class <sup>1</sup> .....	11,000	
{ 2nd „ <sup>1</sup> .....	6,000	
{ 3rd „.....	110	
Royal Naval Artillery Volunteers.....	1,600	
Seamen and Marine Pensioner Reserve.....	1,750	
Pensioners (of all ages and conditions) { Seamen.....	15,129	(at and
{ Marines.....	7,181	
Total Reserve Force.....	43,150	
<hr/>		
Enrolled under Colonial authority.....	{ Canadian Marine Militia..	?
	{ Victoria.....	4,000
	{ New South Wales.....	?
	{ Queensland.....	?
	{ Tasmania.....	?
	{ New Zealand.....	?
	{ South Australia.....	?
	{ Western Australia.....	?
Grand Total in both forces (excluding Colonial)..	100,800	?

crepancy in the table. The seamen engage to serve for ten years, the age of 18, and about 70 per cent. re-engage for a further five and ten years, which entitles them to a pension. Petty officers and coastguard men are encouraged to serve still longer. The men in the coast guard are here considered not in the reserve as forming a part, and a very important part, of the active force. The boys, after two years in a training-ship, are rated 1st class as sent afloat, attaining to man's rating (ordinary seaman) at the age of 18. Of the 5,200 enrolled, 3,200 are under training as sent afloat.

The engine-room staff includes engine-room artificers and but not Officers.

The artificers include shipwrights, blacksmiths, armourers, &c. The non-combatants comprise police, domestics, &c. Of the 12,400, about one-half are always afloat, the other half in barracks, consisting of the staff, estimated at 2,000, and men ready to embark, 3,300.

The reserve force is composed of several classes, men of various habits, and employed in various industries. Those formerly of the Royal Naval Reserve, which confused them with the general reserve, are now styled Royal Naval Volunteers; they are divided into three classes, but Class III, being so very insignificant, will only here be considered as merged with Class I. By regulation, the Royal Naval Volunteers are to consist of 20,000

<sup>1</sup> To be 10,000 in each.

age on entering.

Class II to comprise men who have led a seafaring life of which as ordinary seamen, and are between 19 and 30 on entry.

The number available at once of both these classes speculative, but *all* who are away in foreign-going recorded in the ships' agreements, are known at the reg immediately they leave the country. The whereabouts are only known every six months, unless they appear for quarterly retaining fee.

The Royal Naval Artillery Volunteers are at enrolled in three brigades, for the protection of the port Bristol, and Liverpool; any person physically fit an age of 17 may be enrolled in this corps.

The Seamen and Marines Pensioner Reserve number they are composed of men from the pensioner's list, consideration of getting the Greenwich "age" pension age, instead of 55, and pay and allowances of an £ (3s. a day), during fourteen days a year, undertake to time on war being imminent.

The remaining pensioners number about 15,000 and seamen, and 7,000 marines, but of these a great number is not accurately known, are above 55, the limit liability to serve, and also incapacitated from sickness estimated that 4,000 of these are under 50, and able to s

The number enrolled under Colonial authority is no sufficient accuracy to warrant recording. All the Austrments have organized a force for marine defence, and enrolled 4,000 men. Canada has also a marine mil number available is not known.

IV. How should these men (those available at once and reserve forces) be distributed amongst the available

Having taken a survey of the matériel and perso disposal, we are now better prepared to consider the distributing the latter amongst the former, and Table C proposed distribution; it is based, as nearly as possible existing proportions in the manning of the fleet, the being slightly increased, and the men are assigned to services considered most suitable to their previous habits employment. In the preparation of this table arrangement made to call out a proportion of *every* branch of the reserve war being imminent; this is considered as highly important impress the men with a reality of their liability to serve to which they are receiving a pecuniary consideration, but confusion if a further expansion of the naval force should For instance, the coast guard duties are assigned to the being at first the most suitable re-introduction of the

TABLE C. — *Proposed Distribution of Active and Reserve Forces amongst Available Ships on the Outbreak of War*

Class of ship.	Number of men required. (Table A.)	Officers.		Active force.										Reserve force.			
		On active list.	Royal Naval Reserve.	Combatants.						Engine-room staff.	Artificers.	Non-combatants.	Royal Naval Volunteers.	Royal Naval Artillery Volunteers.	"Seamen" Reserve.	Pensioners, Others liable to service.	
				Petty officers, L.S. and A.B.	Coast Guard men.	Ordnance and light troops.	Marines.										
							Artillery.	Infantry.									
Battle-ships { Masted (17) .....	9,670	800	...	2,000	700	2,700	...	1,000	1,080	510	880	...	...	...	...		
{ Unmasted (6) .....	2,330	180	...	200	600	...	700	...	320	120	210	...	...	...	...		
{ 1 { Armoured ships (7) .....	1,560	170	...	230	300	...	350	...	280	90	140	...	...	...	...		
{ 1st Class Torpedo-boats (20) ..	200	20	...	120	...	...	...	...	60	...	...	...	...	...	...		
{ 2 { Armoured ships (16) .....	1,460	170	...	80	200	...	300	...	200	60	100	...	...	...	...		
{ 11 { Gunboats (63) .....	2,900	220	...	300	...	400	...	350?	450	180	190	...	...	...	...		
{ 2 { Torpedo Defences .....	5,850	50	150	500?	...	...	...	...	150	...	...	...	4,000	1,100	...		
Cruisers (22) .....	9,310	950	...	2,000	...	3,000	...	500	1,040	490	920	...	...	...	...		
Sloops (21) .....	2,700	270	...	460	...	1,650	...	210	300	140	270	...	...	...	...		
Gun-vessels (28) .....	2,520	250	...	400	...	1,600	...	230	280	130	230	...	...	...	...		
Torpedo-runs (2) .....	170	17	...	80	...	...	...	20	30	10	13	...	...	...	...		
Troop and store-ships (13) .....	2,100	200	...	1,400	...	...	...	200	280	130	250	...	...	...	...		
Chartered ships (100) .....	10,800	100	...	...	...	...	...	3,000	...	...	...	7,000	...	...	...		
Reserve drill-ships (9) .....	270	36	...	130	...	...	...	...	...	27	27	...	...	50	...		
Training-ships (9) for active force .....	1,500	200	...	350	...	...	...	200	30	150	170	...	...	400	...		
Yachts (12) .....	740	70	...	340	...	...	...	100	100	50	80	...	...	...	...		
Receiving ships (14) and Miscellaneous .....	2,000	250	...	250	...	...	...	...	30	100	270	...	...	850	...		
Coast Guard duties .....	4,000	70 Divisions 250 Stations 50 Cruisers	...	1,630	...	...	...	...	...	...	...	...	...	...	2,000		

required the other half of the coast guard men would afloat and their places filled by a corresponding number of pensioners and if still further expansion was needed, the pensioners first would be drafted afloat, and so on without any re-arranging duties being necessary.

This method of distribution also admits of a proportion of active and reserve forces being available for drill in preparatory to embarkation. This is shown in the columns in Table C, being the difference between the number and the number available.

The *Officers* are distributed in the table in the same proportion as the men as at present. Seven executive Officers are allotted to chartered ships, who should belong to the reserve forces; each ship is commanded by an Officer of the Royal Naval Reserve, a combatant Officer on the active list (a marine Officer if being on board every ship to superintend the working of the ship &c.

*Petty officers* or A.B.'s have been allotted in small proportions to every class of ship to maintain the routine and discipline of the ship; the A.B.'s are classed with the petty officers, and distributed with the young ordinaries, on the assumption that they can, if necessary, perform petty officers' duties. In the masted battle-ships work is heavy, their numbers are proportionally large; if a further expansion were required these men would be withdrawn from the shore, and receiving ships, and their places taken by volunteers (reserve) and pensioners.

The *coast guard men* are distributed amongst the younger half going afloat, the other half remaining at the shore to instruct the pensioners.

The *ordinaries* and *first class boys* have been distributed in every class of ship where their training and development would be most likely to receive attention.

The *marine forces* are the backbone of our Service, and the scheme of distribution has been largely utilized. The *Artillery*, being a strong, highly intelligent, and well disciplined body of men, are allotted to the turret-ships in sufficient numbers to man the heavy guns, and the light infantry to the chartered ships; to each, to assist in working the guns and forming an efficient arm party, they are also distributed in the present proportion in the ships.

The *engine-room staff* is distributed in much the same proportion as at present, and the numbers enrolled are about equal to the demand.

The number of non-combatants (servants, police, &c.) is somewhat reduced, as it is considered many occasions are assigned to them—such as schoolmaster (in seagoing ships), yeomen of stores, cooks' mates, barber, butcher, tailor—

The *Royal Naval Volunteers* have been distributed in a manner suited to their previous mode of life, and it has been considered expedient not to mix them with the men of the active force. With this object in view, the volunteers of the first class have been attached to the chartered ships, and those of the second class to the defences, where, if selected, as is hereafter proposed, from the trade, fishing industry, and boatmen, their local knowledge and aptitude for boat work will be found most valuable.

The *Royal Naval Artillery Volunteers* are allotted to the defence of their own ports, which would be under the command of an Officer on the active list. (It is proposed to merge these into the second class *Royal Naval Volunteers*.)

The *Seamen and Marine Pensioner Reserve* is distributed among training and receiving ships for ship work, leaving the petty officers &c., of the former free for instruction, and releasing the crew of the latter for more active service afloat. (It is also hereafter proposed to abolish this distinction from the other pensioners.)

The other pensioners liable to be called out to serve are assigned to coast guard duties, releasing the coast guard men for service. (These men would also be distributed amongst the training and receiving ships if the pensioners reserve was abolished.)

To the force enrolled under Colonial authority is assigned the duty of manning their own war vessels, and defending their own ports.

V. *The subject of the Essay*.—What is the best organization for carrying out the above distribution?

If the proposed scheme of distribution elaborated in Table A is right, there is little difficulty in devising an organization to carry it out; it is in fact simply putting the machine into motion. It is wise to adhere, as far as one can, to existing systems. (Being of themselves objectionable, the following suggestions therefore follow the lines of our present organization, but making it more effective by infusing a reality into the reserve which they do not at present possess, simplifying some of the details connected with both forces, to facilitate expansion, and ensuring the rapidity of mobilization which, in the present day, is the key to all organizations.)

It is very evident, on examining Tables B and C, that the number of the personnel (if all were mobilized) are in excess of immediate requirements. It will be seen from Table A that 60,000 men, exclusive of sick and other casualties, will be required on the first outbreak of war, and it has been shown on Table B that 52,000 are alone available from the active force, 8,000 men from the reserve force are therefore required, and Table C details their composition and distribution. Moreover, one is struck with the numerous classes which comprise the reserve forces. Men of different habits and interests, whose distribution in a manner suitable to their antecedents, involves some difficulties.

liability of all pensioners under 50 (now 55) years of age. If the State is fully recognized and enforced, it would consider the organization for distribution, if the "Royal Naval Artillery" were abolished, the "Seamen Pensioner Reserve" as a distinct class from "the Pensioners," and the "Reserve" confined solely to "Pensioners" and "Royal Naval Artillery." That on the issue of the proclamation calling a portion of the forces into active service, the first class of the Volunteer class to coast defence, and the pensioners first to coast and subsequently, when necessary, to service afloat, retaining their pensions.

It has been proposed in the introductory remarks to suitable ships should be laid up in reserve at the station where they were adopted crews should be sent out in fast steamers when war was imminent, and thus the naval forces in any or every world could be expanded with considerable rapidity.

I. *The Active Force.*—So long as we are without seamen and the men are dispersed in the home ports as disbandees, there is little room for any improvement in the system of drafting them. The rosters of these ships, both at home and abroad, require to be more rigidly administered in case of petty officers and leading seamen, home and abroad (which latter in peace time, with the present facilities of communication to all parts of the world, might well be reduced to two years) should be alternate, with the option of exchange; due notice should be given when drafts are made; men should be selected from those longest on the roster of the port or length of their service, and in no case (if it happens) should men be sent to a foreign station without warning. Ordinaries and boys should be drafted into the fleet immediately they leave the training ships, as supernumeraries in the Channel Fleet till there is an opportunity of disposing of them. The number of able-bodied men in the complements of the fleet should not be reduced for the purpose of absorbing the complements of all ships require revision to meet the recent developments of torpedoes and machine-guns, and so that every man in the fleet should be accounted for at home or abroad, that disturbing factor "supernumerary" should be abolished.

It would much facilitate distribution if, instead of specific and numerous ratings of the executive petty officers were simply designated and drafted as chief, first or second class, according to their qualifications for these ratings, in addition to charging upon their efficiency as marksmen at great guns, or special aptitude in torpedo manipulation; the present system of rating men arrived when every seaman in the active force should be a "gunner" or "trained man" in the active force should tend to convey a contrary impression, the ratings "gunner" and "trained man" should be abolished; but to

every seaman-gunner to go through a torpedo course is, admitted with deference, a grave mistake, as, apart from its inmateriality with the service of men in seagoing ships (who they can practically apply their knowledge and improve their training), they can learn little about torpedoes in the time. The knowledge required for a good torpedo man takes a long time to attain, and constant practice to keep up; a smattering of manipulation is fraught with greater danger to friend than to foe. It is therefore submitted that a special torpedo corps should be organized for the torpedo duties of the fleet; it should consist of men specially selected by their personal qualifications, be well trained, and be by no means large, and, it need scarcely be said, well paid. The allowances now given to seamen gunners and marksmen should be transferred to marksmen and torpedo men.

The engine-room staff, though a very important element, is the weakest in the naval force; there is no "reserve," and the number is only just sufficient for the first mobilization; it is suggested that the complements of engine-room artificers and leading stokers on all ships during peace should be in excess of the number required for the work of each ship, and this excess transferred to other vessels—on foreign stations to the ships in reserve at home—when war was imminent; and, further, it is suggested that at each tropical station depôt a certain number of natives—British seamen—should be organized for service in the stoke-hold, a proportion of them to be employed during peace in the ships on the station. In tropical climates seamen and marines should be encouraged to work in the stoke-hold as in other parts of the ship. A proportion of the crew of ships in tropical countries should also be composed of natives.

Non-combatants, especially domestics, would be entered from the shore, as at present, when required; but, as has been previously mentioned, their number might be advantageously reduced by a corresponding number of combatants embarked.

If the proposed distribution of Marines be adopted, as soon as they are embarked, a proportional number of recruits must be enlisted to support them; it is suggested, on the score of economy, that the Portsmouth divisions be amalgamated at Eastney, and the full force increased in proportion to the saving effected by the reduction of staff, &c.

Officers should be appointed as at present, but the Captains and heads of departments should join the ship at least a month before it is commissioned; should there not be sufficient commissioned officers in the higher grades, those in the lower should be appointed "acting," becoming absorbed by vacancies or (on supercession or cessation of service) reverting to their original rank. Where there are not sufficient subordinate Officers for quarter-deck and board warrant officers and petty officers are to be selected to take their place. For duties connected with coast defences, retired officers under fifty years of age should be called upon to serve if necessary.

II. *Reserve Force*.—As is shown in Tables B and C, the present consists of the Volunteers (three classes, 1st, 2nd, and 3rd), the Artillery Volunteers, Pensioners (two classes, 1st and 2nd), Pensioner Reserve, and the "Pensioners" under fifty age, and an indefinite though highly important adjunct under Colonial authority." There is no doubt that in the present we have a valuable class of man, and if called out they would be found few defaulters. The present system of enrolling men into the rendezvous through the agency of the registrar cannot well be improved upon; they know the men, their names, in most cases, their whereabouts; they appear to take part in the work, and the only question is whether they are remunerated for the trouble which the numerous Returns are necessary for the efficiency of the force) entail. It is that the chief factor in the value of any force is an accurate knowledge, at any moment, of its available strength; the present seem to be deficient by limiting this knowledge to an interval of months—they require a Volunteer going abroad for "12 months" to obtain leave. He may wander over the Union or in a ship trading between the limits of the Elbe and the Baltic trade"), or be incapacitated for active service by serious illness for six months, and nothing be known of him if he did not pay a quarterly retaining fee. In the first case—when he obtains leave—the fact is otherwise known to the registrar by the "agreement" of a foreign trading vessel, wherein the particulars relative to the Volunteer are recorded, being lodged in the registry immediately the ship leaves the port, as well as on her return in addition to the man appearing personally before the registrar after 12 months, nor do the crew appear before a registrar to remedy this defect, it is proposed to enroll the first class entirely from foreign-going ships (the class of ship in which they are proposed to distribute them), and the second class from home traders, fishing industry, and boatmen; the first class to report to the registrar when they are incapacitated for *any cause*, and the second class to notify when they are incapacitated and when they return to the port of registration, whether for a short and successive, or otherwise. The present system is available for the first class man so long as he engages only on a foreign-going vessel, the power given to the registrar by the proclamation to withhold leave being sufficient (if the interval of "12 months" were expunged), and if an emergency required the retention of men at home (but the issue of the proclamation was for political reasons) those so retained should be allowed subsistence money, viz., 1s. 8d. a day. The regulations relating to power to naval Officers abroad to take Volunteers on ships, should, it is submitted, be modified; it would diminish and should therefore only be exercised to man a

policy to take any step that would alienate the shipowner, for goodwill and co-operation the State promises to derive much. To facilitate the distribution of the Volunteers called out, a rendezvous should be established as a certain districts; it is suggested that Dundee, Greenock, London, and Southampton should be the centres to which trans of the ports within their circle should forward their issue of a proclamation. The third class Volunteers to be as a special class, and be merged into the first class.

It would much simplify organization if the Royal Naval Volunteers were merged into the second class of the Naval Volunteers; the duties (as proposed) would be considering the class of society from which these men are could hardly be expected (though their patriotism evinced by and self-sacrifice with which they have striven to qualify them is highly commendable) they would be able to give their continuously and for an indefinite period. The force, as composed, is small—1,600—only a fraction of what would be in a great war.

The pensioners should form the most reliable and reserve of any force, owing to their past training and discipline. It is not sufficiently understood in the Service men under 55 years of age receiving a naval pension are liable called out by proclamation to serve the State; it is true they this on leaving the active service, but few, if any, believe reality; moreover the recent creation of the Seamen and Pensioner Reserve as a special class has done much to create impression. It is proposed to abolish this distinction at once, inducements for the men to enrol themselves in it being, guineas for a fortnight's drill each year, which can be practical use to men whose whole life has been one of drill, and secondly, the prospect of an age pension five years viz., at fifty instead of fifty-five. It is proposed to make this of all pensioners to serve more of a reality by dispensing with distinctions, by giving the age pension to *all* pensioners of fifty of age who have been called out by proclamation, by reducing age of liability from fifty-five to fifty, by dividing them into classes dependent upon age—Class I to comprise all pensioners between thirty-eight and forty-five, and Class II all between fifty and fifty-five—by bringing them into more intimate connection with the Officer of their district, rendering it imperative upon the Officer to report to him any cause which may render them incapable of any change of, or absence from, their usual place of residence, by fixing a rendezvous—which it is proposed should be the chief of the coast guard district—to which each pensioner is to repair (or be forwarded) within twenty-four hours of the issue of the proclamation calling his class out for service, and by securing to them their pension, and, if employed afloat, the reversion to their last rating.

mercial ports, and, what is most important from an economic as defensive point of view, to bring it into efficient contact with the Imperial system, which would embrace all the colonies: without interfering with the internal economy of the Colonies. Commanders-in-Chief of all stations should be directly in contact with the respective Colonial Governors, who are already instructed, and the gunnery and torpedo Officers should assist in its organization and development.

### *To Recapitulate.*

I. The distribution to be so arranged as to include both the active and reserve forces, and to be in harmony with previous habits and industries of the men.

II. *The Active Force.*—The continuance of the present system of drafting men in the active force, with the following modifications to facilitate it:—

(a.) The revision of complements, with reference to the increase of armaments, and the reduction in the number of combatants.

(b.) The appointment of heads of departments soon after commissioning a ship, and, to avoid permanent increase of Officers, to appoint acting Officers when more of a grade than are available on the peace establishment.

(c.) The present special ratings of seaman gunner and artificer to be abolished. High remuneration given to superior heavy gunners.

(d.) The formation of a small and highly-trained reserve force for the torpedo duties of the Fleet, and an abandonment of the present system of posing attempt to make every seaman gunner a trained torpedo gunner.

(e.) Executive petty Officers to be designated only "first," and "second" class, their qualifications being sufficient for the duties of men and torpedoists.

(f.) The maintenance afloat during peace of a larger staff—artificers and leading stokers—to facilitate expansion when war is imminent.

(g.) The enrolment at every tropical station depot of a reserve force of artificers and artificers (British subjects).

(h.) The amalgamation of the two Portsmouth divisions at Eastney, and the increase of the force in proportion to the effect thereby.

III. To facilitate rapid expansion, the laying up in reserve of vessels at all station depôts which are adequately provided with dock accommodation, sending out men when war is imminent.

IV. *The Reserve Force.*—(a.) The calling out by proportion of every branch of this force whenever war was in prospect.

(b.) The simplification of the organization of this force, by the Third Class Royal Naval Volunteers, the

Class Volunteers," and "the Pensioners."

A.—The Royal Naval Volunteers.

(a.) The maintenance of the present system of enrolling with following qualifications.

(b.) The merging the third class into the first.

(c.) The first class to be enrolled only from foreign-going; the second class only from coasting vessels, fishing and boatmen.

(d.) The imperative necessity of every man reporting his duty to serve from any cause, his change of district, and, in the proposed enrolment of the second class, these men to re-absence from and return to their district on every occasion, present, limited to an absence of six months.

(e.) These men not to be removed from their ships abroad to man a chartered ship.

(f.) If leave to absent himself from district is withheld, salary and lodging money to be granted.

B. *The Pensioners*.—(a.) The making the present liability of men to serve in case of war a *reality*.

(1.) By abolishing the Seamen and Marine Pensioners Reserve distinctive class.

(2.) By reducing the age of liability to serve from 55 to 50.

(3.) To extend the Greenwich Age Pension to *all* pensioners attaining the age of 50 who have, as such, served the State.

(b.) Dividing them into two classes dependent upon age 38 to 45; Class II, 45 to 50.

(c.) Making it imperative upon them to report to the Station of their district—

(1.) Incapacity to serve from any cause.

(2.) Change of, or absence from, their usual residence.

(d.) A fixed rendezvous, to which each pensioner is to attend on the issue of the proclamation, to be pre-arranged; the chief of the coast guard districts is suggested.

V. The "force enrolled under Colonial authority."

(a.) The organization of a marine defence in *every* Colony.

(b.) The co-operation of the naval Commanders-in-Chief in every Governor within his station for its development and effect.

The discussion of this essay is now exhausted; it has in rapid survey of our naval resources, both matériel and personnel, which a clear comprehension of the subject rendered necessary. The tables furnish the data upon which the arguments have been based and although the figures quoted in them do not lay claim to accuracy (which it is impossible to obtain without access to documents), they may be relied upon for all practical purposes. There is not much room for improvement in our existing organization. A great stride has been made in late years to place the personnel on efficient footing, and the result is highly encouraging and satisfactory.

material, and giving more reality to the reserve forces, with rapid mobilization than our present system provides. The effort has been made to avoid irrelevancy, it has been futile to disconnect the distribution of the forces, and for giving it effect, from a reference to their source, composition and internal economy. The result is submitted for consideration, fair and candid criticism being the surest way to arrive at the truth. The writer will consider himself amply repaid for the labour entailed in the compilation of this essay if the ideas promulgated contribute, even in a small degree, to the improvement of the personnel of the Service upon which the safety and of this Empire so much depends.