1919.

NEW ZEALAND.

NAVAL MISSION TO THE DOMINION OF NEW ZEALAND.

REPORT OF ADMIRAL OF THE FLEET VISCOUNT JELLICOE OF SCAPA, G.C.B., O.M., G.C.V.O.
AUGUST-OCTOBER, 1919.

Presented to both Houses of the General Assembly by Command of His Excellency.

CONTENTS.

CORRIGENDA.

VOLUME I.

Page 4, para. 9: "Chapter IX" *should read* "Chapter IV."

Page 10, para. 34: "Volume III, Chapter III," *should read* "Volume II, Chapter VII."

Page 14, Table I, heading of column 2: "1917" *should read* "1913."

Page 16, para. 23: Line 6—*for* "£19,704,700" *read* "£19,637,700"; lines 8, 9, and 10—contributions *should read*—

United Kingdom	75 per cent.	= £14,728,275
Australia	20 per cent.	= £3,927,540
New Zealand	5 per cent.	= £981,885

Page 17, second table: Columns 3 and 5 *should be deleted and the following substituted*:—

Col. 3. £	Col. 5. £
14,728,275	+661,475
3,927,540	− 97,060
981,885	+ 57,285
	+621,700

Page 24, table at foot of page: Figures opposite Japan *should be amended to read as follows*:—

Japan	8	4	1 plus 3 powerful cruisers, &c.

Page 27: Under the heading "Chief Staff Officer" *delete the words* "Manning* of the Fleet and"; *commence sentence with word* "Training." *Delete* note at foot of page.

Page 29: *Add* "Duties of Naval Assistant":—

"Commander (Executive), who should assist the Minister of Defence in dealing with naval questions; to act also as Director of Recruiting (*vide* para. 37 of Chapter III of this volume)."

Page 30: *Add* a note to Table A, opposite page 30:—

"An executive officer of Commander's rank should be attached to the Minister of Defence as 'Naval Assistant.' He should also act as Director of Recruiting."

Page 36, para. 34 (*a*), line 5: *For* "paragraph 30 (*b*)" *read* "paragraph 32 (*b*)."

Page 37: Para. 37 (*b*) *should read*, "The duties of Director of Naval Recruiting to be carried out by the Naval Assistant to the Minister of Defence."

Page 39: Para. 3 (*g*) *should read*, "Ratings qualifying for Chief Ordnance Artificer, 2nd Class."

Page 40: Para. 5, line 5, *for* "copiers" *read* "copies."

Delete † after "(D) Mine-sweeping Training," also note † at foot of page.

Page 49, para. 17, line 2: *For* "regard must be paid" *read* "care must be taken."

Page 54, Essay C, line 4: *For* "teansmitted" *read* "transmitted."

No. P—187.

H.M.S. "New Zealand," at Auckland,
3rd October, 1919.

My Lord,—

In accordance with instructions received from the Lords Commissioners of the Admiralty, issued as the result of a request from the Government of New Zealand, I arrived at Wellington in H.M.S. "New Zealand" on the 20th August, 1919.

The object of my visit is defined in my terms of reference as follows:—

> "To advise the Dominion Authorities whether, in the light of the "experience of the war, the scheme of naval organization which has been "adopted, or may be in contemplation, requires reconsideration; either "from the point of view of the efficiency of that organization for "meeting local needs, or from that of ensuring the greatest possible "homogeneity and co-operation between all the naval forces of the "Empire; and, should the Dominion Authorities desire to consider how "far it is possible for the Dominion to take a more effective share in "the naval defence of the Empire, to give assistance from the naval "point of view in drawing up a scheme for consideration."

2. I have the honour to present the accompanying report and appendices, and in doing so I beg to inform Your Excellency that during my stay I have visited the following towns and ports in New Zealand:—Wellington, Lyttelton, Timaru, Oamaru, Dunedin, Port Chalmers, Picton, Napier, Gisborne, and Auckland; whilst members of my staff have also visited Akaroa, Greymouth, Westport, Nelson, Wanganui, and New Plymouth.

3. The question of naval defence in New Zealand was brought into prominence in the early part of 1909, when the growing strength of the German Navy led to important statements in the British House of Commons by the Prime Minister and the First Lord of the Admiralty. As a result of those statements the New Zealand Government, of which Sir Joseph Ward was Prime Minister, offered to the British Admiralty, as a gift, a capital ship, with a second to follow if required. The Battle-cruiser "New Zealand" was constructed in England and paid for by New Zealand as the result of this offer.

4. A Conference was held in London in the summer of 1909 for the purpose of discussing the relations of the Dominions to the United Kingdom on the question of naval defence. New Zealand was represented at the Conference.

5. In the Admiralty memorandum prepared at this Conference it was stated that—

> "If the problem of Imperial naval defence were considered merely as "a problem of naval strategy it would be found that the greatest output "of strength for a given expenditure is obtained by the maintenance of "a single Navy with the concomitant unity of training and unity of "command. In furtherance, then, of the simple strategical idea the "maximum of power would be gained if all parts of the Empire contri-"buted, according to their needs and resources, to the maintenance of "the British Navy."

6. The memorandum proceeded to state that it was recognized that other considerations than those of strategy alone must be taken into account, such, for example, as individual national sentiment. It was mentioned that a simple contribution of money or material might be the most acceptable form of assistance to one Dominion, whilst others might desire to lay the foundation of a future navy of their own; and it was stated that the main duty of the Conference would be to determine the form in which the various Dominion Governments could best participate in the burden of Imperial defence with due regard to political and geographical considerations.

7. The composition of the navy to be created by any Dominion desirous of adopting this policy was also suggested, and the necessity for the construction of the works required for its maintenance was mentioned. Emphasis was laid on the necessity for a common standard of design of ship, armament, training and discipline.

8. The necessity for the creation of a strong fleet in the Pacific was recognized by the Imperial Conference of 1909, and in the Prime Minister's statement in the British House of Commons in August of that year he mentioned the fact that the remodelling of the squadrons in Far Eastern waters was considered on the basis of establishing a Pacific Fleet.

9. The menace of the rapidly increasing German Fleet, however, led to the arrangements agreed upon in the 1909 Conference being considerably modified, with a consequent weakening of the Pacific Fleet. In 1902 there were 160 British war-vessels on the overseas stations, as against 76 in 1912. The underlying causes of this weakening of our fleets abroad were financial. The burden of naval armaments was pressing hard on the British taxpayer, and naval building programmes suffered as the result.

The financial burden imposed on the Empire by the late war, and the large share of this burden which falls upon the Mother Country, will inevitably have a similar result; and although the German naval menace has now disappeared, it will be seen by a perusal of the table at the end of Chapter I in this volume, and in Chapter IX, Volume II, that very considerable naval efforts are required in the future by the people of the British Empire if we are still to maintain that supremacy at sea which is and has always been held to be vital to the existence of the Empire, and which recent events have once again emphasized so unmistakably.

Experience in the late war has certainly strengthened the views expressed in 1909.

Although, in the case of an enemy near the British Islands, the general defence of the sea communications of the Empire will always be given by the main fleets operating in the decisive theatre near that enemy, war experience has shown the necessity, among other things, of the Empire possessing much greater naval strength abroad than has been the case during the present century.

10. The arrangement entered into with New Zealand in 1909 was that the battle-cruiser "New Zealand" should form the flagship of the fleet unit on the China Station, and that two second-class cruisers, three destroyers, and two submarines would be detached from that unit in peace time to work normally in

New Zealand waters. This arrangement, owing to the great and growing menace of German naval strength in Home waters, was not carried out.

11. In 1913 Colonel Allen (now Sir James Allen), Minister of Defence, visited London to confer with the Admiralty and the Committee of Imperial Defence on naval matters as affecting the Dominion of New Zealand.

As a result of this visit, arrangements were prepared for the organization and training of a New Zealand Naval Force, the officers and men of which were to be available for service in any ship maintained in the future by the New Zealand Government, or in any ships of the Royal Navy in New Zealand waters or the Pacific, or belonging to the China or East Indies Squadrons. It was understood that the manning of ships in New Zealand waters was the primary object of the New Zealand Naval Force.

An officer of Post Captain's rank was lent to the New Zealand Government to act as Naval Adviser and Senior Officer of the Naval Forces.

The New Zealand Naval Defence Act of 1913, for the proper government of the Naval Forces, was drawn up and passed through the New Zealand Parliament in December of that year. An important provision under this Act was that the New Zealand Naval Forces and all vessels belonging thereto would automatically "pass and remain under the control and be at the disposition "of the Government of Great Britain" during hostilities between Great Britain and any other country or countries. The further provision exists in the Act for the Governor-General placing the New Zealand Naval Forces under the control of the Government of Great Britain "whenever war between Great "Britain and any other country or countries is imminent, or when in the interests "of Great Britain it is expedient to do so, or upon the request of the Government "of Great Britain."

12. The outbreak of war occurred before any action had been taken in the matter of recruiting and training officers and men of the New Zealand Naval Forces.

13. In 1917 the question of naval defence was again considered in London, representatives of the Admiralty and of all the Dominions except Australia being present. The principal subjects for discussion were the necessity for working out a definite scheme of naval defence for the Empire (as to which a resolution was passed), and the question of the great future importance to the Dominion of New Zealand of naval affairs in the Pacific Ocean.

14. The proposals formulated by the Admiralty as the result of the resolution referred to in paragraph 13 were discussed by the representatives of the Dominions (except Australia) in 1918, but were not considered practicable, although it was recognized that construction, armament, methods and principles of training, administration and organization should be on the same lines in all the Naval Forces of the Empire.

The ideal stated in paragraph 5 not being obtainable, for reasons which are very fully recognized, the question of the organization which will give both the strongest navy numerically, and the most efficient organization of that navy becomes the point for consideration. *Experience has shown abundantly that responsibilities in the matter of naval defence are far more clearly recognized and far more cheerfully*

shouldered if the result of the effort made is apparent to those making it—in other words, if the ships provided are seen by the people who pay for them, and are manned as far as possible by their own kith and kin.

With the adoption of such a policy there is still no reason why the vessels should not be part and parcel of the Royal Navy, the ships of the same type, the personnel actuated by the same motives, trained on the same lines, imbued with the same traditions, governed by a practically common discipline, and aiming at the same high standard of efficiency. The proposals which I lay before the Government of New Zealand are drawn up with this object in view.

15. The general principle on which the proposals are based is that New Zealand should co-operate in the naval defence of the Empire, and assist the Mother Country financially by paying for the manning and maintenance of a certain proportion of the Far Eastern Fleet and of all the vessels required for harbour defence in New Zealand, as well as by providing such portions of the personnel of the ships as is practicable.

If the proposals are accepted the ships thus maintained by New Zealand will be in all essentials a portion of the Royal Navy. They will fly the White Ensign (with perhaps the New Zealand Flag flown as a Jack in harbour); officers and men will wear the uniform of the Royal Navy, and will be subject to the Naval Discipline Act. Officers will be entered and trained under the same regulations as are in force in the Royal Navy. Officers' names will be placed on the ordinary list of the Royal Navy, and they will be promoted from this list in the same manner as British officers. They will be liable for service in any ship of the Royal Navy, but will serve a major proportion of their earlier career in the ships maintained by New Zealand. It may not, of course, be possible to continue this procedure in the higher ranks if the proportion of New Zealand officers promoted to such ranks exceeds the number of appointments open to officers of the ranks in question. The advancement of the petty officers and men will take place in the ships maintained by New Zealand, or in other ships in which they are serving, as vacancies occur. These petty officers and men will be liable for service in all ships of the Far Eastern Fleet as well as in the ships maintained by New Zealand, service in other vessels being counted as foreign service.

It is suggested that the vessels which are maintained by the people of New Zealand should be termed the "New Zealand Division of the Royal Navy." It is not recommended that any steps should be taken in the direction of making any arrangements for building war vessels in New Zealand, or that any naval dockyard should for the present be contemplated. Repairs and refits should be carried out either in private yards in New Zealand or in the Australian Government establishments. It has been ascertained that repairs are not beyond the capacity of commercial yards in New Zealand, although they would be carried out under some disadvantages.

It is proposed that the administration of the Division should be carried out by a Board consisting of the Minister of Defence and a naval officer holding the rank of Commodore. The provisions in the Naval Defence Act of 1913 for the Division being placed under the control of the Admiralty during war or when hostilities are imminent should continue.

16. The dependence of the Dominion for its security upon the power of the British Navy is very fully recognized in New Zealand, and it is the recognition of this fact that has led the statesmen of the Dominion in the past to press for the maintenance of an adequate naval force in the Pacific.

17. It has never been possible in any war for the British Navy to obtain such complete command of the sea as to exclude an opponent from all access to it, and modern conditions of naval warfare greatly increase the difficulty of preventing the escape of isolated raiders from a blockaded area. It therefore becomes increasingly necessary to keep sufficient naval force in various parts of the world to protect trade and to ensure the early capture or destruction of such enemy vessels as may escape the main blockade with the object of interrupting our overseas communications by gunfire, torpedoes, mines, or aircraft.

18. The exigencies of the military situation during the late war necessitated the use of a large number of our men-of-war abroad for the work of convoying transports from the various Dominions and India to the European theatre of war; and this fact, combined with the policy of reducing our oversea squadrons, resulted, when war came, in our being compelled to rely to a considerable extent upon the assistance of some of our Allies for the safety of our sea communications abroad. Thus, in the Mediterranean and in the West Atlantic we relied upon help from the French; whilst in Far Eastern waters and, in the latter half of the war, in the South Atlantic, we were to a considerable extent dependent upon Japanese co-operation.

19. The naval assistance, in the shape of cruisers, destroyers and other small vessels, rendered during the last eighteen months of the war by the United States was of great help in the institution of the system of protecting trade by convoy. Without this help we should have been unable to use convoys to a sufficient extent to meet the submarine menace without abandoning some of our oversea expeditions.

20. The Admiralty, in a memorandum on sea-power in 1902, informed the Dominions that—

> "It would be necessary that we should have sufficient power "available to carry on a vigorous offensive against hostile outlying "squadrons without unduly weakening the force concentrated for the "decisive battle, whether in Europe or elsewhere."

The reduction in our own outlying squadrons, already mentioned, prevented the institution of this necessary vigorous offensive in the late war.

21. War experience has also shown that submarines can operate successfully at immense distances from their bases, and this fact necessitates the provision of defence against this type of attack in all parts of the Empire.

22. The growing development of aircraft is yet another type of attack which must be met locally to some extent, even when the hostile nation is at some considerable distance. From the naval point of view the danger of aerial attack in the case of New Zealand is but slight under present conditions.

23. In dealing with the problems before me I considered it necessary to review the whole naval question in its relation to Far Eastern waters from the

Indian Ocean to Canada. The waters between Africa to the west and America to the east must be taken as a whole. All portions of the British Empire situated in these waters are equally interested in their security as regards sea communications, and the inevitable conclusion is that the defence of these communications should be entrusted to one fleet composed of units from those parts of the Empire which are directly interested.

24. The strength of the fleet which I suggest as necessary in Far Eastern waters is dealt with in Volume III. The proposed contribution of New Zealand to the fleet is indicated in paragraph 24 of Chapter I of this volume; while details referring to the entry and training of officers and men, general naval organization, and other matters are treated in other parts of the report.

25. The question of the control of the Far Eastern Fleet in war is of the highest importance, and after much consideration, and with the experience of the late war before me, I have formed the conclusion given in Chapter I—viz., that the fleet should be directed by a Flag Officer of high rank located at Singapore, and assisted by a strong staff. My reasons for this conclusion are fully stated in that chapter.

26. Whilst definite proposals on the naval question have been put forward, it is recognized that the decisions reached may be affected by the formation of the League of Nations. This report can only deal with facts as they exist at present, and it is in that light that it has been prepared.

A considerable amount of work is necessary in Far Eastern waters in the immediate future in such matters as the provision of docks and naval bases suited to the needs of a modern fleet; the organization of an administration for the constituent parts of the fleet; the necessary arrangements for providing reserve stocks of fuel; and the provision of proper measures for the defence of important commercial ports and naval bases.

Some of these questions are Imperial commitments; some affect the Commonwealth of Australia and have been dealt with in my report to the Government of the Commonwealth; whilst others apply to New Zealand and are mentioned in this report.

27. Various other matters are dealt with in the report, to some of which it is desired to draw special attention in this covering letter. The fact that the New Zealand Division, if my proposals are adopted, will form in effect an integral portion of the Royal Navy naturally minimizes the points to which attention is necessary. There are, however, some matters of importance.

28. It is more difficult to attain and maintain a high pitch of efficiency in a small naval force than in a large fleet. The important element of competition is largely absent; there are far fewer brains at work on improvements and innovations; and the officers, particularly those in the higher ranks, have insufficient experience in fleet work. These difficulties will be largely overcome by the fact of the officers in particular as well as some of the men of the New Zealand Division spending a proportion of their time in other ships; and as the Far Eastern Fleet develops into an organization such as that suggested in Volume III there will be much less difficulty in giving officers fleet experience, and in maintaining high efficiency. Frequent meetings of units, squadrons, and

divisions; and fleet exercises carried out annually on a large scale, would give opportunities for acquiring experience, would produce interchange of ideas, and would promote competition. Officers and men in each unit, squadron, or division would see for themselves how they compare in efficiency with the remainder.

29. One fact must ever be borne in mind, however—viz., that first-class efficiency in the Naval Service can only be produced by hard work and continuous training, whether it be connected with the handling of ships and fleets, gunnery, torpedo, mining and engineering work, seamanship, or signalling; and that a fighting service on which so much depends can never be satisfied with anything less than the highest efficiency.

30. A chapter has been devoted to the important subject of discipline, as it is felt that this is a matter to which special attention is necessary at the present time in view of the general unrest which has resulted from the strain of prolonged war.

Throughout all ages it has been accepted as an axiom that no armed force can exist without discipline. The only real difference of opinion that can exist is as to the method by which discipline is first acquired and then maintained. Many of those who cry out most vociferously against discipline are themselves inclined to enforce it by the most drastic methods to gain their ends.

31 Accepting, then, that discipline is essential to armed forces, the only question that arises is the method of instilling discipline into the personnel of the New Zealand Division of the Royal Navy, and of maintaining it. Unquestionably this should not be done by undue severity, but by other and better methods which almost unconsciously breed the sense of duty and the spirit of discipline, especially in the young. For this reason officers and men should be entered at an early age. Discipline is instilled with comparative ease by those who understand the temperament of the young, and it is therefore essential to select with great care those who will have the upbringing of the future generations of naval officers and men belonging to the Dominion. Once, however, these trainers of youth are selected it is essential that so long as their action is correct they should be supported by authority, as nothing can be more fatal to discipline than action tending to bring into disrepute the head of any training establishment on a disciplinary question.

I will conclude my remarks on this subject by quoting the words of Field-Marshal Sir Douglas Haig on the subject of discipline in his final despatch:—

> "Discipline has never had such a vindication in any war as in the "present one, and it is their discipline which most distinguishes our new "armies from all similarly created armies of the past. At the outset the "lack of deep-seated and instinctive discipline placed our new troops at "a disadvantage compared with the methodically trained enemy. This "disadvantage, however, was overcome, and during the last two years the "discipline of all ranks of our new armies, from whatever part of the "Empire they have come, was excellent. Born from a widespread and "intelligent appreciation of the magnitude of the issues at stake, and the "firm belief in the justice of our cause, it drew strength and permanence "from a common-sense recognition of what discipline really means—

" from a general realization that true discipline demands as much from " officers as from men, and that without mutual trust, understanding, and " confidence on the part of all ranks the highest form of discipline is " impossible."

32. There are certain directions in which improvement is necessary in the daily lives of the personnel of the Navy. Matters of this nature are constantly under consideration by the Admiralty; and possible reforms, when carried out, will remove some of the just causes of complaint of the lower ranks of the Navy at the present time; but it is inevitable that life at sea can never compare in comfort with life on shore; and if the manhood of a nation is not prepared to put up with the inherent discomforts of sea life, and to submit to discipline, that nation cannot hope to become a Sea Power.

33. The subject of aircraft to work in conjunction with the Naval Forces is treated in Chapter II of Volume II.

The questions of Intelligence and communications are dealt with in Volume II, Chapter VIII. The war has shown the exceeding value of a first-rate Naval Intelligence organization.

It is understood that the Admiralty are sending out a Marine Officer with special experience of Intelligence work, and it is recommended that every possible encouragement should be given to the development of a good organization which should work in close collaboration with the Intelligence Division of the War Staff of the Royal Australian Navy, and with the Commander-in-Chief, China Station.

The proposals made in Volume II, Chapter IX, on the subject of wireless organization and wireless communication, are far-reaching and of considerable importance. They are the outcome of experience gained during the war, in which wireless work in the Navy played such an important part. Rapid developments are in progress in this branch, and these need constant watching.

34. It is very desirable that New Zealand should become independent of outside assistance in the work of mine-sweeping. The simplest and by far the cheapest method of obtaining in war the services of efficient mine-sweeping vessels is by the encouragement of a Trawler Fishery Service during peace. This matter is dealt with in Volume III, Chapter III, and is of such importance, on economic grounds, that I beg to draw special attention to it.

35. An important question (which is dealt with in Volume II, Chapter III), and which demands early attention, is that of the future fuel-supply of the Royal Navy in Far Eastern waters.

The larger ships of the Royal Australian Navy are at present all fitted to burn coal, with oil used as an auxiliary, and it is only necessary to point to the fact that for many weeks coal-burning ships in the Pacific have been unable to obtain suitable coal to emphasize the dangerous position that would have existed had it been necessary to move ships for active service during this interval. The danger of the situation has been pointed out to the Government of the Commonwealth, but, as war vessels in the Pacific are entirely dependent on coal from Westport, it is obvious that the matter is one in which the help of New Zealand is necessary, and it is suggested that the whole matter should be dealt with between the Governments of New Zealand and Australia.

A considerable reserve of coal is a vital necessity for a Far Eastern Fleet, which will comprise coal-burning vessels for, at any rate, the next fifteen years.

Attention is directed to the Imperial importance of the Westport Coal Company's mines at Westport and Granity.

At present the only coal in New Zealand and Australia suitable for the Far Eastern Fleet is that provided by mixing the output of these two mines.

It is important that adequate defensive measures should be made to ensure that this source of fuel is kept open for the use of the Far Eastern Fleet in war-time.

Whilst the coal question is in a highly dangerous state, the supply of oil fuel to ships on the large scale that would be necessary in the event of active service is equally unsatisfactory. Here, again, a reserve supply is essential; particularly as the whole of the oil fuel has to be imported.

These important matters are dealt with in Chapters III and VII of Volume II.

36. Finally, I wish to tender my very grateful thanks to Your Excellency, to the Prime Minister and the Minister of Defence, the New Zealand Government, and the Naval Adviser, for the assistance which has at all times been so freely afforded to my staff and myself during our visit. The ready help we have received on all sides has much furthered the work of the Mission.

I am also much indebted to the Engineer-in-Chief of Public Works, the Inspecting Engineer for Mines, the Marine Department, and to the various local authorities and Harbour Boards for the assistance rendered on all occasions, and I shall be obliged if my deep appreciation of the great courtesy we have received throughout the Dominion may be conveyed to all.

I have the honour to be,
My Lord,
Your Excellency's most Obedient Servant,

JELLICOE,
Admiral of the Fleet.

His Excellency,
Right Hon. the Earl of Liverpool, P.C., G.C.M.G., G.B.E., M.V.O.,
Governor-General and Commander-in-Chief, Dominion of New Zealand.

P.S.—Since the report was completed I received a telegram from the Lords Commissioners of the Admiralty informing me that, as steps are being taken to reduce the fleet to a post-war standard, certain vessels are now available for the Dominions, if required.

I have inquired of Their Lordships as to the types of each class of vessel that can be supplied, the terms on which supply will be made, and the dates by which it would be necessary for the Dominions to take possession.

On receipt of the reply I will submit a further report to Your Excellency.

It may be that the desirability of acquiring vessels now and the consequent necessity for incurring early expense for maintenance will render a modification of the proposals in Table VI, Chapter I, of Volume I, necessary.

CHAPTER I.

Naval Requirements in the Far East, with Estimates.

The late war has shown once again that the British Empire depends for its existence on the safety of its sea communications. Sea power has saved the Empire as on many occasions before, but in this case it has also saved the cause of the Allies and of civilization.

It may be assumed that the recognition of this fact will lead to the determination that the maintenance of British sea supremacy will be the guiding principle of our statesmen in the future.

2. The war has imposed a crushing financial burden on the Empire, and especially on the Mother Country; and, although many countries are suffering under the same heavy burden, and the naval menace of our late enemies has ceased to exist, a navy of very considerable proportions will still be required if the British Empire is to maintain its sea supremacy.

3. War experience has shown very clearly the immense capabilities given by modern weapons for the destruction of, or interference with, sea communications. Our late enemies used many of these weapons illegitimately, but even if measures are found in the future to prevent such illegitimate means of naval warfare it is still possible to cause great havoc to trade without infringing the tenets of international law.

4. The trade of New Zealand is dependent on the security of her sea communications. Her distance from neighbouring countries is a very great safeguard against invasion, but it cannot be said that invasion is impossible. The greatest immunity in this respect and the only protection to sea-borne trade is given by the naval forces of the Empire.

5. Whilst the final decision of war must depend on the result in the main theatre, wherever that may be, the presence of strong naval forces in Far Eastern waters is necessary to ensure the safety of the sea communications from the outset, and to act as a deterrent to other forms of attack, should the conditions render them possible, as might be the case. The inevitable numerical weakness of the military forces due to the small population increases the importance of naval defence.

6. It is not possible to consider the naval requirements of New Zealand without taking account also of the naval requirements of the Pacific and Indian Oceans as a whole. The question is one of co-operation between the naval forces of the Empire stationed in Far Eastern waters. Sea communications in Indian and Chinese waters, as well as in the remainder of the Pacific, are matters of concern to the people of New Zealand and Australia; and, conversely, the safety of sea communications in the South Pacific and in China are of interest to the people of India. Similarly the safety of the bases at Colombo and Singapore is vital to New Zealand and Australia; and the safety of Sydney and other naval bases in the South Pacific, and of Singapore and Colombo, is of the greatest importance to India. Even the prosperity of South Africa is associated, though in a lesser degree, with this question, whilst Canada is greatly concerned in the matter.

7. It will be seen, therefore, that the Far Eastern naval problem is one which concerns the Empire as a whole.

8. Only one conclusion can be drawn—viz., that the Far Eastern Fleet should be provided by those constituent parts of the Empire, including Great Britain, for which it is of vital necessity, and that there should be the closest co-operation, with unity of direction in war, between the various squadrons composing that Fleet.

9. The question of the necessary strength of the Far Eastern Fleet is discussed in Volume III. Beyond remarking that the growing naval strength of nations outside European waters, and the disappearance of the German and Austrian Navies, suggest a reconsideration of the strategical distribution of British naval forces, it is sufficient in this chapter to give the figures that are arrived at, and to discuss the method of providing the fleet.

10. In this connection the effect of the formation of the League of Nations, and its influence on the question of limitation of armaments, cannot be ignored; but as no decisions on the subject of such limitations have yet been announced, it is only possible in this report to deal with matters as they exist at the moment or can be forecasted for the near future.

11. It is considered, then, that the naval interests of the Empire may require within the next few years a seagoing Far Eastern Fleet comprising vessels of every class, and for the purpose of this chapter it is assumed that this fleet will be composed of the vessels mentioned in paragraph 10 of Volume III.

12. This fleet, comprising ships of the Royal Navy, the East Indies Squadron, the Royal Australian Navy, and any vessels stationed in Far Eastern waters furnished or maintained by New Zealand, Canada, and the Malay States, should, together with the vessels required for the direct protection of trade by convoy, be organized to act under one single direction in war, and for the general safety of British Far Eastern possessions and sea communications.

13. The fleet is additional to all ships required for the defence of harbours.

It is suggested that, whilst the general defence afforded by *seagoing fleets and convoy vessels* is shared by the different parts of the Empire, each Dominion and India, as well as the Mother Country, should bear the cost of the vessels specially allocated to its own harbour defences.

War experience has shown that trade is best protected against attack by means of a convoy system. This experience only confirms that gained in earlier wars; but it was impossible to put a convoy system into force in the late war until the middle of the year 1917, because there was an insufficient number of cruisers for the ocean work and of destroyers for the anti-submarine screening work required in the vicinity of ports. It is assumed that the people of the Empire will not be satisfied with such a condition of affairs in the future.

The number of vessels required for a complete convoy system in Far Eastern waters is given in Volume II, Chapter X. This requirement may increase in the future, and the increase can be met by making use for convoy work of light cruisers which, though no longer fit for fleet work and replaced for this service, could still be used for convoy duty.

14. Plans for harbour defence are dealt with further in Volume II, and recommendations made as to the exact allocation of the local Forces in New Zealand waters. Recommendations on this subject for the other Dominions will also be put forward.

15. It will be seen by reference to Volume III that the total naval forces required for the Far East are on a very considerable scale, but no reasonable measure of defence can be given by a smaller force. The Home and Far Eastern theatres are so far apart that in these days of rapid movement and quick decisions correct strategy demands adequate strength in both quarters.

16. The financial provision necessary for the construction and maintenance of the Far Eastern Fleet and the local forces is the next question.

There are two considerations which seem to govern the proportion of the cost which might fairly be borne by the constituent parts of the Empire, bearing in mind the fact that the Mother Country is probably no longer able to shoulder to the same degree as in the past the financial burden that will be imposed. These are—

(i.) The population of the Mother Country and of each Dominion.
(ii.) The value of their respective oversea trade.

Tables I and II which follow show these figures, and the percentage value for each member of the Empire, based on (i) population, and (ii) oversea trade.

TABLE I.

PERCENTAGE CONTRIBUTION TO NAVAL ESTIMATES BASED ON POPULATION.

Country or Dominion.	Population in 1917.	Percentage of British Empire Population (omitting India).
United Kingdom	46,089,000*	74·33
Commonwealth of Australia	4,898,000	7·90
Dominion of New Zealand	1,159,000	1·87
Dominion of Canada	8,361,000	13·48
Union of South Africa (white population)	1,500,000	2·42
Total	62,007,000	100·00

* 1914. Latest figures available.

India (omitted), about 319,000,000, mostly native.

The figures in column 2 are taken from page 1 of "Statistical Abstract for the British Empire in each Year from 1899 to 1913."

TABLE II.

PERCENTAGE CONTRIBUTION TO NAVAL ESTIMATES BASED ON VALUE OF OVERSEA TRADE.

Country or Dominion.	Value of Oversea Trade. Exports and Imports for the Year 1913.	Percentage of Empire's Total Oversea Trade Exports and Imports for Year 1913 (omitting India).
	£	
United Kingdom	1,540,000,000	73·90
Commonwealth of Australia	158,000,000	7·58
Dominion of New Zealand	45,000,000	2·16
Dominion of Canada	232,000,000	11·13
Union of South Africa	109,000,000	5·23
Total	£2,084,000,000	100·00
India (omitted)	£316,000,000	..

The figures given in column 2 are taken from pages 55 and 61 of "Statistical Abstract for the Several British Self-governing Colonies, Possessions, and Protectorates, in each Year from 1899 to 1913"; except those for the United Kingdom, which are taken from pages 36, 38, and 100 of "Statistical Abstract for the British Empire in each Year from 1899 to 1913."

17. India is treated separately. It is necessary to bear in mind that the population there is largely native. India also pays wholly for its military defence, which, in future, will impose a burden of some £30,000,000 annually on that Empire, which is not a self-governing Dominion, but is held by force of arms, necessitating the presence of a large military force.

18. A consideration of Tables I and II shows that the percentages arrived at by considering (1st) population, and (2nd) oversea trade for the different Dominions and for the Mother Country correspond with fair accuracy. If a mean is taken, the percentages become—

TABLE III.

United Kingdom	74·12 per cent.
Commonwealth of Australia	7·74 ,,
Dominion of New Zealand	2·02 ,,
Dominion of Canada	12·30 ,,
Union of South Africa	3·82 ,,
	100·00

19. It is suggested that Table III affords one method of arriving at the proportions of the total Navy estimates which each constituent member of the British Empire might bear. In the remarks which follow this method has not, however, been quite adhered to, since it is impossible at present to determine the future total strength of the Empire Navy, whilst, on the other hand, the strength required in the Far East is not so uncertain.

It may also be held that portions of the Empire would prefer to bear a larger proportion of the cost of naval defence in quarters in which they are more directly interested, and not to share in the cost of the remaining naval forces.

20. The necessary provision for harbour defence has been omitted, as proposed in paragraph 13. Each Dominion and the Mother Country should provide what is considered necessary for itself in this connection.

21. In considering means for the provision of the ships to form the Far Eastern Fleet mentioned in paragraph 11, and for the necessary convoy work, it appears to be logical to put forward the following suggestions :—

(*a.*) That Canada's share might be that necessary to provide and maintain a small force of light cruisers on her western seaboard for the protection of her trade in those waters, as well as a naval force on her eastern seaboard.

(*b.*) That South Africa's share might be that necessary to provide and maintain a squadron stationed at the Cape of Good Hope, and having the primary duty of keeping open the trade route round the Cape and protecting the trade on the west coast of Africa, leaving the trade to the eastward to the protection of the Far Eastern Fleet.

(*c.*) That India might provide a certain fixed sum annually in relief of the estimates—such a sum, for instance, as would provide for the defence of her harbours, and would pay for the upkeep of the East Indies Squadron of five light cruisers, six submarines, and one aircraft-carrier, without, perhaps, paying the first cost of the ships, or for their replacement, for the reasons given in paragraph 17. The sum required would be approximately £2,200,000 annually.

Since New Zealand and Australia would bear no part of the expenses of naval defence in the Atlantic, it is suggested that their share in the Pacific should be more than is shown in Table III. The suggested proportion of the cost of provision and maintenance of the Far Eastern Fleet is, then, approximately—

TABLE IV.

Great Britain	75 per cent.
Australia	20 ,,
New Zealand	5 ,,

22. If these suggestions are accepted, it remains to formulate proposals for the best method of using the total sum to be spent annually on the Far Eastern Fleet by the United Kingdom, New Zealand, and Australia. The method suggested is to ascertain the annual cost of maintenance of the Far Eastern Fleet when it reaches the strength mentioned in paragraph 11, and the annual sum that should be set apart for the depreciation due to the necessity for replacement of the ships after a certain period; and then, having obtained these figures, to divide the cost in the proportion given in Table IV.

The initial cost and effective life of the various types of ship, for the work required of them in the fighting line of a striking force, is taken as—

Class of Vessel.	Initial Cost. £	Effective Life.
Battleships	3,000,000	15 years.
Battle-cruisers	4,000,000	15 ,,
Light Cruisers	500,000	15 ,,
Flotilla Leaders	200,000	12 ,,
Destroyers	160,000	12 ,,
Submarines	150,000	15 ,,
Depot Ships	200,000	25 ,,
Repair Ships	200,000	25 ,,
Submarine Parent Ship (large)	200,000	25 ,,
,, (small)	132,000	25 ,,
Mine-sweepers	70,000	20 ,,
Minelayer	150,000	25 ,,
Aircraft-carrier	200,000	25 ,,
,, (small)	150,000	25 ,,

NOTE.—As the various types of vessel become ineffective for front rank work they may still be of use for subsidiary purposes. Thus light cruisers could be used for trade protection until at least twenty years old, and destroyers and submarines for harbour defence for the same or a longer period.

23. Owing to the ever-changing conditions in the cost of labour and material, and to the alterations in the pay of officers and men, and in the designs of ships, it is almost impossible to arrive at an accurate estimate of the pay, pensions, &c., and of the sum required for the maintenance and depreciation of the fleet. The best figures available are made use of, and indicate a total annual cost of £19,704,700.

Taking the percentages mentioned above the contributions would be—

United Kingdom	75 per cent. =	£14,778,525
Australia	20 ,, =	£3,940,940
New Zealand	5 ,, =	£985,235

24. The question as to the different classes of ship that each country should maintain is mentioned in Volume III. The considerations therein stated suggest the contributions to the Far Eastern Fleet shown in Volume III, of which New Zealand's share is :—

NEW ZEALAND.

Ships, &c.	Annual Cost of Maintenance and Depreciation (each), (see Table V, page 21).	Total.
	£	£
3 light cruisers..	211,300	633,900
6 submarines	33,200	199,200
1 submarine parent (small)	58,500	58,500
Naval Air School*	33,000	33,000
Total	..	£924,600

* *Vide* Chapter II, Volume II.

Tabulating the figures from Volume III the financial results are :—

Country.	Share.	Annual Total based on Far Eastern Fleet in Full Commission.	Actual Annual Expenditure allotted.	Balance or Deficit.
	Per Cent.	£	£	£
United Kingdom	75	14,778,525	14,066,800	+711,725
Australia	20	3,940,940	4,024,600	— 83,660
New Zealand	5	985,235	924,600	— 6,365
			19,016,000	+ 621,700
			621,700	
			£19,637,700	

The actual expenditures shown in column 4 correspond to the following percentages :—

United Kingdom ..	74·0	Of the *actual* annual expenditure.
Australia	21·2	
New Zealand.. ..	4·8	
	100·0	

NOTE.—It will be seen that the percentages thus work out in fair agreement with those given in Table IV ; but as the figures for depreciation can only be approximate, depending, as they do, on the cost of new ships, it is impossible to obtain accurate results.

25. It must be recognized that the political and strategic situation may at any time necessitate alteration in the composition of the Far Eastern Fleet. Any considerable alteration might completely alter the basis on which the contributions of the various Dominions and of the United Kingdom have been assessed. There is, however, no way out of this difficulty other than that of reviewing the question at intervals of, say, five years. Unless some basis is assumed it is impossible for the Dominions to find any system on which to work.

26. The provision of the necessary vessels for harbour defence purposes in New Zealand will now be considered.

The requirements are,—

——	Full Commission.	Reserve Commission.	Special Reserve.
8 old destroyers or "P" boats	4	..	4
18 mine-sweepers of the trawler type ..	2 (For instructional purposes.)	(Remainder assumed to be fishing-trawlers.)	
4 boom defence vessels	..	..	4

It is recommended that the old destroyers or "P" boats should be acquired by 1923. It seems probable that Great Britain could supply these vessels from those available at home.

The provision of mine-sweepers is largely dependent on the institution of a trawler fishery service, which, it is strongly urged, should be taken up at an early moment. This matter is dealt with in Volume II, Chapter VII, Section 2.

27. It may be that in the years to come New Zealand may desire to add to the assistance given to the fleet of the Empire. The most satisfactory method of adding to naval strength is undoubtedly to work on a certain defined line. New Zealand's purposes would best be served by vessels of the types of light cruisers, destroyers, and submarines, with a small force of aircraft; and it is recommended that the New Zealand Division of the Royal Navy should, at any rate in the near future, be confined to vessels of these classes.

28. An unit under these conditions should be considered to be—

1 light cruiser.
2 destroyers.
2 submarines.

The first necessity, as has been mentioned, is the provision of—

3 light cruisers.
6 submarines.
1 submarine parent ship.

To complete three units the next provision should therefore be six destroyers; and subsequently any further increase should take the form of an unit.

For every three units—

1 submarine parent ship (small)

is necessary, and the provision of an aircraft-carrier should be considered as the next requirement after completion of three units.

The "units" are fit for service in the *striking force*, or alternatively they can be used for *direct defence of trade*.

29. A suggested programme for each financial year from 1920–21 is shown in Table VI. The programme aims at attaining the force suggested in paragraph 24 by the year 1926.

The cost of upkeep of the necessary harbour defence vessels mentioned in paragraph 26, and the other measures needed for carrying out the proposals put forward, together with such requirements as administration, training ships, reserves, &c., are also included. The figures are necessarily only approximate.

30. The *details* of the approximate estimates for harbour defence are shown in Table A of Chapter VII, Volume II. The estimates for providing and maintaining the Naval Air School for New Zealand are included in the Naval Estimates in Table VI of this chapter.

31. The programme for the maintenance of ships has been kept at a low figure for the years 1920–21 and 1921–22, as some expense will be involved in providing the Naval Air School and mine and boom defences for the principal harbours; and it is suggested that this expense should be spread over these two years, and a start also made with the provision of the reserves of oil and coal which are so urgently needed.

32. An attempt is made in Table VI to indicate the cost, year by year, of the whole of New Zealand's naval commitments under my proposals. These include provision of reserves of oil fuel, upkeep and maintenance of the Division as it expands, cost of administration and training, cost of reserves, &c. Some of the figures given are only very approximate, since it is impossible for me to obtain them accurately at present. The figures for maintenance are based on rates of pay, &c., in the United Kingdom, which have recently been very considerably increased.

33. It is suggested that the ships and personnel for the New Zealand Division should be lent by the United Kingdom to the New Zealand Government, commencing in the year 1920 with a coal-burning light cruiser carrying a 6 in. gun armament, other vessels being gradually added until the Division has reached its complete strength by about the middle of 1926. As vessels become obsolete they should be replaced at the cost of the New Zealand Government. Meanwhile New Zealand should start to train officers and men for service in the Division.

It is suggested that the first light cruiser for the New Zealand Division should be coal-burning, as the price of oil fuel is very high at present, and no storage facilities exist in the Dominion. She should be replaced by an oil-burning vessel as soon as circumstances admit.

The Division (except the harbour defence portion) should be commanded by the senior Captain of the light cruisers, and when it reaches full strength this officer should be granted the rank of Commodore, being known as the "Commodore, New Zealand Division."

An officer with the rank of Commodore, senior to the "Commodore, New Zealand Division," should be lent for service ashore in New Zealand, to administer the whole of the naval forces in New Zealand waters, including the naval harbour defences, patrols, wireless communications, coastguard, training establishments, &c. This officer should be known as "the Chief of Naval Staff of the New Zealand Naval Board," and it is recommended that he be appointed as soon as the first light cruiser is detailed.

The New Zealand Division of the Royal Navy should, under certain conditions, pass under the orders of the Admiralty as already established by the New Zealand Naval Defence Act of 1913.

34. In war it is necessary that the whole Fleet of the Empire should be placed under the single control of the British Admiralty. It is highly desirable that the same procedure should be followed when danger of war exists. It is also necessary that the units comprising the Far Eastern Fleet should pass under one command if they are to be employed in Far Eastern waters.

35. Obviously the main strategical situation should govern the employment of such a fleet. If the main theatre of war were situated in European or Atlantic waters, some portion of the fleet might be required in those waters.

36. The question of direction and control of the operations of the Far Eastern Fleet is of great importance. Whatever improvement takes place in the methods of communication between the British Admiralty and the Far East it is inevitable that the great distance must result in difficulty and delay. A point of still greater importance is the lack of such intimate knowledge by the Admiralty of Far Eastern questions—political, naval, and military—as will be possessed by those on the spot.

37. It was very clearly exemplified during the late war that it was difficult to visualize and realize, at a distance of even some three thousand miles, the conditions existing in the theatre of war. It will be far more difficult to realize these conditions if the theatre of war were (say) ten thousand miles distant. For this reason I am convinced that the British Admiralty would find it necessary to decentralize the direction of the operations of the Far Eastern Fleet to a very considerable extent, and the question arises as to the authority to whom the direction should be given.

In my view an Admiral afloat should not be the central authority. He cannot take the same broad view of the whole situation as an officer on shore, who is kept in constant touch by land wire and wireless telegraphy with the situation in all parts of the theatre of war. Incidents arise which do not directly concern the Commander-in-Chief afloat, or of which he may not be in a position to realize the importance. The Commander-in-Chief afloat, again, can never have the same facilities for sifting the value of information received.

38. I am therefore of opinion that the general direction of the operations of the Far Eastern Fleet would be best carried out by a Flag Officer of high rank residing on shore at Singapore, and assisted by a strong staff. The Commander-in-Chief afloat and the Flag Officers commanding the units of the Far Eastern Fleet should all come under him in war, although, except when placed under his command for the purpose of fleet exercises, the Dominion navies would not come under him in peace. The Admiral in chief command at Singapore should visit such places in the Pacific and Indian Oceans as are of importance for naval purposes in war, in order that he may have a very intimate knowledge of the general situation. It would also be most desirable that he should visit the Dominions so that he may become familiar with the problems which confront them. He should be assisted in his duties by information furnished to him by the Naval Boards of New Zealand and Australia and the Naval Authorities in other Dominions; and he should, of course, be in constant touch with the Admiralty and the officers commanding the British Squadrons in China and the East Indies.

TABLE V.

(NOTE.—Tables I to IV are included in the chapter.)

ANNUAL COST OF POST-WAR MAINTENANCE OF THE NEW ZEALAND DIVISION.

Ship.	Type.	Complement.	Pay.	Separation Allowance.	Victualling.	Repairs, Fuel, Stores, &c.*	Liability for Pensions.	Depreciation.	Total per Ship.
			£	£	£	£	£	£	£
Light cruiser	"Cassandra"	344	40,500	8,000	37,500	78,000	14,000	33,300	211,300
Submarines	"L" class	39	8,200	1,500	2,500	10,000	1,000	10,000	33,200
Submarine parent	"Platypus"	143	21,800	4,200	10,600	13,300	3,300	5,300	58,500
Naval Air School†	..	40	10,500	1,500	2,500	1,000	1,000	16,500	33,000

* This includes repairs, sea-stores, coal and oil fuel, lubricants, and naval ordnance stores.

† *Vide* Chapter II, Volume II.

TABLE VI.

NEW ZEALAND NAVAL ESTIMATES.

Item.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	1925–26.	Remarks.
	£	£	£	£	£	£	
Maintenance of New Zealand Division. ..	211,300 (1 light cruiser)	303,000 (1 submarine and 1 submarine parent ship added)	369,400 (2 more submarines added)	680,700 (1 more light cruiser added)	780,300 (3 more submarines added)	891,600 (Unit complete) (1 more light cruiser added)	It is assumed that the whole New Zealand Division and its reserve of ammunition and stores are initially a gift.
Administration	5,800	5,800	6,800	7,800	8,800	8,800	
Training and reserves (including maintenance of training ship and naval depôt)	40,000	50,000	55,000	57,200	59,200	61,200	
Provision and storage of fuel reserves ..	..	50,000	50,000	20,000	10,000	10,000	Then £10,000 annually until 1927–28, by which time fuel reserve will be complete. (*Vide* Sec. IV, Chap. III, Vol. II.)
Naval wireless expenses, harbour defence, first cost and maintenance (including upkeep of harbour-defence auxiliary craft)	..	55,000	67,300	68,100	69,000	49,000	For details, see Table A, at end of Chap. VII of Vol. II.
Upkeep of anti-submarine flotillas ("P" boats or old destroyers)	..	56,250	112,500	112,500	112,500	112,500	A gift of eight "P" boats or old T.B.D.s in 1921–23 is assumed. (See preamble to Table A at the end of Chap. VII, Vol. II.)
Establishing and maintaining naval air school	100,000	70,000	33,000	33,000	33,000	33,000	For details, see Chap. II of Vol. II.
Totals	357,100	590,050	694,000	979,300	1,072,800	1,166,100	

NOTE.—(i.) No account has been taken in Table VI of any payments in connection with the gift of the battle-cruiser "New Zealand," for which liability still remains, as shown in Table VII.

(ii.) The sum for the maintenance of the New Zealand Division can be reduced by about £100,000 a year for each of the light cruisers placed in reserve instead of in full commission. This course could be adopted.

(iii.) No provision has been made in Table VI for Naval works.

TABLE VII.

APPROXIMATE ANNUAL PAYMENTS INTO SINKING FUND AND AS INTEREST ON INSTALMENTS FOR LIQUIDATING THE LOAN-MONEYS RAISED FOR THE GIFT OF THE BATTLE-CRUISER "NEW ZEALAND."

Year.	Amount of Sinking Fund payable.	Approximate Interest on Instalments.	Total Yearly Accretions.	Year.	Amount of Sinking Fund payable.	Approximare Interest on Instalments.	Total Yearly Accretions.
	£	£	£		£	£	£
1920–21	71,807	32,400	104,207	1925–26	71,807	54,900	126,707
1921–22	71,807	36,900	108,707	1926–27	71,807	59,400	131,207
1922–23	71,807	41,400	113,207	1927–28	71,807	63,900	135,707
1923–24	71,807	45,900	117,707	1928–29	71,807	68,400	140,207
1924–25	71,807	50,400	122,207				

The sinking fund will equal capital sum owing approximately in the year 1928–29.

THE VALUE OF THE CAPITAL SHIP IN MODERN WARFARE.

The introduction of a large number of scientific devices and the rapid advances in efficiency made by so many weapons during the recent war renders it particularly desirable to investigate carefully the present value of the Capital Ship, and to consider what the probabilities are of its value being maintained in the future.

The evolution in the past fifty years of the Capital or Line-of-Battle Ship of the present day is the result of the struggle which has been in progress between—

(*a.*) The gun and the ship ;
(*b.*) The torpedo and the ship ;
(*c.*) The mine and the ship ; and, more recently,
(*d.*) Aircraft and the ship.

The advent of explosive shell and the increasing power of guns led to the introduction of steel ships with armour and armoured decks.

The advent of the torpedo led to the successive introduction of—

(1.) Torpedo-nets.
(2.) Greater internal watertight subdivision.
(3.) Internal torpedo bulkheads.
(4.) External bulges.

The advent of the mine led to the introduction of paravanes.

The advent of aircraft has recently formed an additional reason for the thickening of armoured decks, the carrying of protecting aircraft by ships, and the fitting of high-angle guns in ships.

In each case enthusiastic supporters of the new devices have pronounced the speedy disappearance of the Line-of-Battle Ship ; but instead, the Line-of-Battle Ship has in each case been altered, and means found to counter the latest danger to its existence.

It is natural to ask—"Why has such trouble been taken to preserve the existence of the costly Line-of-Battle Ship ?" The answer is not far to seek.

Millions of tons of cargo, and, in time of war, of men and stores also, are carried in ships, and until some other means of carrying these millions of tons over or under the ocean *have actually materialized* it is imperative for the British Empire to retain the command of the surface of the sea.

The Capital Ship is the strongest form of engine of war which exists for operating on the seas.

Its external bulges, which were invented during the late war, render it immune to torpedo-attack until hit (in the case of the newest type now building) by a large number of torpedoes, thus minimizing the effect of the hits obtained by torpedoes fired by surface craft, submarines, or torpedo-carrying aircraft.

The Capital Ship is also usually protected against torpedo attack by escorting destroyers, and in future will be assisted by various scientific devices, recently invented, which will enable it to carry out defensive or offensive tactical manœuvres against submarines.

Paravanes, which were invented during the late war, form an efficient protection against moored mines of the present type.

Thick armoured decks protect the vitals of the Capital Ship from bombs *dropped* by aircraft, which, when dropped from the low heights necessary to give much probability of hitting, have but low striking velocities and therefore only small penetrative effect.

High-angle guns help to keep attacking aircraft at heights from which hitting by dropped bombs is improbable.

The aircraft carried on board, or in an attendant vessel, serve to protect the Capital Ship against enemy airships and aeroplanes.

The secondary anti-torpedo-craft guns can establish "barrages" of bursting high-explosive shell to protect the ship against attack by small fast surface craft loaded with explosives and controlled from an independent position.

Armour and armoured decks protect the ship against attack by enemy's gunfire.

High speed and great gun power enable the Capital Ship to bring vessels of less speed, power, or protection successfully to action.

The country whose fast capital ships and their complementary units are not contained or held by similar enemy's ships can, with these vessels, sweep the enemy's vessels and sea-borne trade off the seas.

The flying and the submarine enthusiasts of to-day are following in the footsteps of the explosive shell, the torpedo, and the mine enthusiasts who preceded them; whilst those who recognize the necessity for the Capital Ship are devising, successfully, means to counter each fresh menace to its existence.

It behoves us, therefore, to be cautious in accepting the opinion of specialists in any particular arm in this matter, which is so vitally important to the Empire.

In view of the above-quoted brief history of the gradual evolution of the great Capital Ship of the present day in warding off the perils which successively threatened its existence, and in view of the tremendous role played by the Capital Ship, the wise course to pursue is to continue to build capital ships until, *if ever*, it is shown that some other weapon has been found which permanently renders them inefficient.

The effective life of a capital ship is, perhaps, fifteen years, and the time to build about two years. There is at present no apparent prospect of the submarine or the aircraft defeating the Capital Ship in the next seventeen years. It is therefore sound and imperative to continue to build capital ships while such a condition of affairs exists.

The General Situation as regards capital ships—August, 1919.

On the completion of H.M.S. "Hood" this year Great Britain will have no capital ships building. It is understood that America, on the other hand, is proposing to proceed with the building of the sixteen capital ships authorized in August, 1916.

Since 1916 the "Hood" will be the only British capital ship built.

Since that year Japan has laid down the four battleships of the "Kaga" class.

The position of affairs is shown in the comparative table below.

As the effective life of a capital ship is limited, unless some special steps are taken by Great Britain, India, and the Dominions, the situation as regards such ships will be unsatisfactory in a few years' time, when the older "Dreadnoughts" are obsolete, or nearly so.

COMPARATIVE TABLE OF THE CAPITAL SHIPS OF THE GREAT POWERS—BUILT AND BUILDING.

Country.	Super-Dreadnoughts,* over 30,000 Tons.	Super-Dreadnoughts,* under 30,000 Tons.	Dreadnoughts.
Great Britain	1	28	10 plus 4† second-class battle-cruisers.
United States of America	23	4	8.
Japan	8	0	5 plus 3 powerful cruisers of less strength than the 4 British second-class battle-cruisers.
France	0	12	4.
Italy	4	0	5.

* Capital ships carrying turret guns of larger calibre than 12 in. are referred to as "Super-Dreadnoughts."

† H.M.S. "New Zealand" and H.M.A.S. "Australia" included.

CHAPTER II.

Administration of the New Zealand Division of the Royal Navy.

It is recommended that the New Zealand Division of the Royal Navy should be administered by a Naval Board, consisting of the Minister of Defence and the Chief of the Naval Staff, the latter being a Commodore.

Working under the Board, but not members of it, there should be a Secretary and other officers.

The organization of the New Zealand Naval Administration which I propose is shown graphically in Table A; the constitution of the Naval Board is enumerated below:—

THE NAVAL BOARD OF NEW ZEALAND.

The Minister.—General direction of all business; questions of policy; finance.

The Chief of the Naval Staff.—The fighting and seagoing efficiency of the New Zealand Division; operations of war and all staff business; personnel, *matériel* and finance.

2. It will be seen that the administration proposed places the New Zealand Division of the Royal Navy, like the remainder of that service, under the control of Civil Authority.

As the Minister is responsible to Parliament, it is possible for him to accept or reject any of the proposals made to him by the Chief of the Naval Staff, who is his sole colleague on the Board.

A wise interpretation by the Minister of his powers and functions and the degree to which he shall fall in with the views of his expert colleague on technical questions is necessary for the success of the system.

3. At the British Admiralty at Home difficulty has occasionally arisen when the Minister is at variance with the views of his expert colleagues. It is inevitable that differences of opinion should arise, and no legislation can prevent this.

If the matter is considered by the Sea Lords of the Admiralty to be one of vital importance, and their views are disregarded, their only course is resignation. This course has never as yet been actually adopted by the Sea Lords as a whole, although, on occasions, Sea Lords have intimated that they will find it necessary to resign if a certain course is persisted in. The resignation of the Sea Lords would be so serious a matter and might involve such grave consequences, particularly in war-time, that naval officers have been very loth to take such action. It must be borne in mind that *it is only because the British nation, impressed with the exceeding importance of the Navy to its existence*, watches with great interest matters connected with that service, that the resignation of the Sea Lords is a matter that would carry weight with Parliament and with the public.

4. In the case of New Zealand, where a new naval organization is about to be started, it appears desirable to suggest arrangements by which the Prime Minister can be made acquainted with the point of view of the Naval Member of the Board should the latter be in disagreement with the action about to be taken by the Minister on a technical question of vital importance to naval efficiency.

I recommend, therefore, that in this event the Chief of the Naval Staff should be empowered to present to the Prime Minister a statement of the case as seen by him.

5. The services of a naval officer of the Military Branch should be obtained as Liaison Officer at the Admiralty. He should deal on all naval matters direct with the Naval Board, thus obviating delay. It is suggested that one officer could act both for the New Zealand and Australian Naval Boards. It is essential, however, that he should visit the Dominions before taking up the work.

DISTRIBUTION OF BUSINESS.

The Minister.—

General direction and supervision of all business relating to the New Zealand Division of the Royal Navy.
Political and Board questions.
Scheme of Navy Office organization and distribution of work.
Recommendations to the Admiralty for appointment of Commodores.
Entry of Naval Chaplains and Instructors and other officers of the Civil branches.
Civil appointments and promotions (higher posts).
Recommendations to His Excellency the Governor-General for Naval Cadetships and Paymaster Cadetships.

The Chief of the Naval Staff (C.N.S.).—

All large questions of naval policy and maritime warfare. Organization, distribution, fighting and seagoing efficiency of all the Division, and its readiness for war.
Detailed organization and general direction of the work of the Naval Staff.
General direction of operations of war under the Admiralty.
Consideration of strategic policy and plans relating to such operations.
Advice as to appointment of Commodore in command of the New Zealand Division.
Recommendations to the Admiralty for appointment of all officers, including those in command.
Recommendations to the Admiralty for promotion and removal from the Service of naval officers.
Recommendations for honours and rewards.
The principles guiding the educational and technical training of the officers and men of the Fleet.
Questions as to dates of refits and repairs to ships when these may effect contemplated major operations and movements.
Air questions which affect naval warfare.
Transport and trade questions, only as affecting major operations and movements. There should be a complete list kept by the War Staff of merchant shipping of all classes in New Zealand waters which could be of use in war.
Convoying and escorting of merchant vessels; shipping movements as affecting convoy arrangements.
Questions of policy affecting defensive arming of merchant ships.
Routes for merchant vessels.
Mine-sweeping.
Operations and movements of Auxiliary Patrol (and aircraft for working therewith), and all vessels employed in convoy and escort work.
Questions relating to foreign stations and overseas operations. Letters of proceedings received from the Commodore Commanding, and other officers of the New Zealand Division of the Royal Navy.
Questions affecting shore defences and co-operation with Military and Air Services.

Naval intelligence—its collection and utilization for naval operations. Superintendence of Naval Intelligence Division.
Discipline.
Full pay and half pay; allowances and compensations, including table-money; prize questions; pilotage and surveying pay, and all extra payments; debts of officers and men; naval pensions; widows' pensions; character, conduct, and badge questions.
Medals. Uniform regulations.
Naval detention quarters, and naval prisons. Deserters.
Collisions between ships of the New Zealand Division of the Royal Navy and private vessels, &c.
Fleet communications, wireless telegraphy policy, cyphers and codes.
Training in combatant and staff duties.
The Chief of the Naval Staff, working under the British Admiralty, is responsible to the Minister for the issue of orders to the fleet affecting war operations and the movements of ships, which orders may be issued in his own name in his capacity of Chief of the Naval Staff.
In the absence of the Chief of the Naval Staff the responsibility for operations falls automatically on the Chief Staff Officer.

As the Minister is ultimately responsible to Parliament, it is necessary that he should be kept advised of important operational matters by the Chief of the Naval Staff, or any other officer acting for the latter in his absence.

Board Business.—

The following matters should be considered as Board Business:—
Estimates.
Alterations in the General Regulations, and all important orders of legislative character.
All naval officers; proposed recommendations for dismissals or discharges; retirement when unfit for, or unworthy of, further employment; resignations; restoration and refusal of restoration; questions of non-employment; alterations in dates of birth.
Questions having an important bearing upon fleet numbers; the numbers of recruits to be raised in a given time, or the general conditions in regard to pay or service of the personnel of the Navy.
Important proposals for the provision of new material, and questions having an important bearing upon the progress of work on material for the naval service, including repair work.
Questions having an important bearing upon the supply or storage of the necessary quantities of ordnance, coal, oil, and other essential stores.

Chief Staff Officer.—

The work to be delegated to the Chief Staff Officer by the Board should include—
Manning* of the Fleet and training of the Fleet in accordance with principles approved by the Board; administrative arrangements connected with training and educational establishments.
Defensively armed merchant ships; training of personnel.
Complements.
Mobilization and other regulations for the personnel.
Reserve forces.
Wireless telegraphy.
Hydrographic questions.

* "Manning" means recruiting the numbers authorized by Parliament.

All matters connected with gunnery, torpedo, and mining; and the general system of gunnery, torpedo, and mining exercises of the fleet; and all military questions connected therewith.
Local naval defences.

NOTE.—He should keep in close touch with the Chief of the Naval Staff in order that he may be able to take his place at any time if required.

General Staff Officer (N.).—

Intelligence.
Communications.
Signal-books.
Cyphers and codes.
Issue of signal orders, &c.
Transports.
Trade, and its arming and protection in war.
Routeing, &c., of convoys.
Fishing protection.
To control the movements of colliers in New Zealand waters, to meet the variable conditions at such embarking ports as are connected to the collieries by rail.

Superintendent of Training.—

All questions relating to training, except engineering.

Superintendent of Naval Engineering and Construction.—

Advice as to the management of machinery of warships, boats, and auxiliary craft.
Advice on important matters connected with engine-room personnel; and in respect of fuel and stores, and examination of fuel returns, and engine-room registers.
Maintenance of stocks of spare parts of machinery.
The engineering training of officers and men.
To advise the Chief of the Naval Staff with regard to appointments of Engineer Officers.
Alterations, &c., of ships.
Inspection of, and quality of workmanship and materials required in, and built into, fighting-ships.
Repairs of all kinds, and also the work of effecting approved alterations and additions to all war vessels, and auxiliary vessels on commercial duties.
Survey of damage caused by collision between ships of the New Zealand Division and private vessels.
Advising as to purchase of electrical plant and apparatus, and inspection of such plant after erection.

NOTE.—With the growth of the New Zealand Division it may be found necessary later on to divide this department into two separate departments, for Engineering and Naval Construction respectively.

Superintendent of Stores, Victualling and Accounts, and Contracts.—

The provision and supply of all—
Naval stores.
Fleet fuelling stores.
Stationery and printed matter.
Victualling stores and canteens.
Clothing.
All naval contracts.
All questions of naval pay and pensions, accounts, claims, and charges.

Medical Officer.—

All medical questions.

The Secretary.—

General office organization.
Discipline of the clerical staff of the various Navy Office departments.
Navy Office procedure.
Recommendations for appointments and promotions of the Civil staff in the Navy Office.
Correspondence.

NOTE.—Routine papers, as defined below, will be disposed of by the Secretary:—

(*a.*) Such papers as require intermediate action or reference to render them sufficiently complete for decision by the Board.
(*b.*) Such as do not include some new principle, establish a precedent, or occasion expense not provided for under existing regulations.
(*c.*) Such as do not involve any point of discipline, or affect the movements or orders to a ship.

CHAPTER III.

Personnel and Recruiting.

PRELIMINARY REMARKS.

The personnel required for the New Zealand Division comes under two headings:—

(*a.*) Officers and men of the *Regular Naval Forces*, who will be required to man the vessels of the Division, *both in peace and war*. Included also under this heading are officers on the Emergency and Retired Lists, together with time-expired men.

The Force should be known as the New Zealand Division of the Royal Navy.

(*b.*) Officers and men of the *Reserve Naval Forces*, who will be required *in war* to augment the Regular Naval Forces, and to provide the necessary naval additions to the complement of armed merchant escort ships, patrol vessels, mine-sweepers, defensively armed merchant ships, &c. Included also under this heading is the personnel required in war for manning the signal and reporting stations round the coast, and the personnel for the shore wireless telegraph stations which pass under the control of the Navy in war.

This Force should be known as the New Zealand Division of the Royal Naval Reserve.

REGULAR NAVAL FORCES.

NEW ZEALAND DIVISION OF THE ROYAL NAVY.

2. In accordance with the general scheme under which it is proposed that the Dominion should provide and maintain the New Zealand Division of the Royal Navy, the vessels comprising the Division should be manned wholly, or in part, according to the numbers available, by New-Zealanders, the balance of complement being provided by the Mother Country. Until such time has elapsed as will permit of the entry and training of New-Zealanders the officers and men must be supplied entirely by the Mother Country, their places being taken by New-Zealanders as they become available.

3. The officers of the New Zealand Division should be considered available for service in H.M. ships in all parts of the world. The men should be considered available for service in any ship that may in the future be maintained by the New Zealand Government, or in ships of the Royal Navy employed in the Far Eastern Fleet, which includes the China and East Indies Squadron.

The manning of the ships of the New Zealand Division should be regarded as the primary object of the personnel of the unit.

Service on the East Indies and China Stations should be considered as foreign service.

4. Facilities should be provided for men belonging to the New Zealand Division to transfer to the Royal Navy at any stage during their term of service. They should be eligible for transfer in the rating which they hold at the time, and after transfer should receive Royal Naval rates of pay, and should be liable for service anywhere in the same way as other ratings of the Royal Navy, and, subject to agreement as to the contribution towards liability for pensions to be made by the New Zealand Government, their services in the New Zealand Division should be allowed to count towards pension.

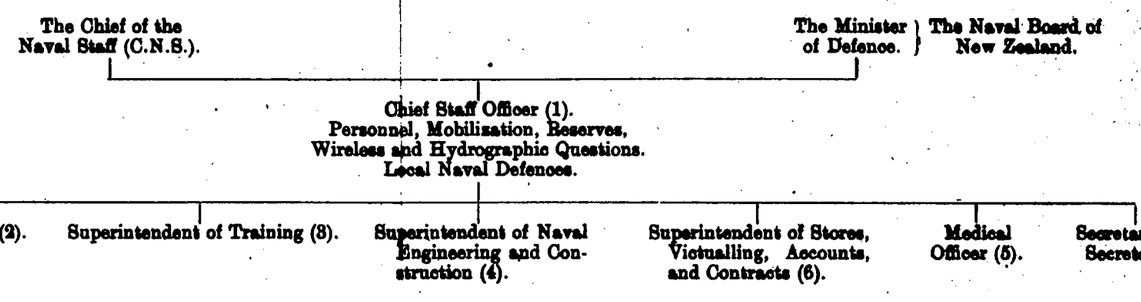
Officers and Men of the Royal Navy lent to New Zealand.

5. It is recommended that the Admiralty should provide the officers and men necessary to complete the complements of the vessels of the New Zealand Division, lending them "for service under the New Zealand Government."

PROPOSED NEW ZEALAND NAVAL ADMINISTRATION.

TABLE A.

(*Vide* Chapter II, paragraph 1.)



NOTE.—In the absence of the C.N.S. the C.S.O. will act for him.

(1) and (3). To be Commanders (Executive).
(3.) *For the present* to be the Commanding Officer of the training ship.
(2.) To be a Naval or Marine officer.

(4.) A Naval Engineer Officer, who will also be Engineer Officer of the training ship.
(5.) A Naval Medical Officer, who will also be Medical Officer of the training ship

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6. It is not proposed that officers and men should be lent for any fixed periods, but they should be drafted by the Admiralty for the period of the commission. Subsequent changes due to promotion or advancement being arranged between the Admiralty and the New Zealand Navy Board. Owing to the expense entailed in providing passages to and from New Zealand, it is desirable that as few changes as possible should be made during the commission.

7. Officers and men lent for service under the New Zealand Government should be paid at the rates prescribed for the New Zealand Division. They should also be subject to the regulations under the New Zealand Naval Defence Act, which Act, it is recommended, should include the application of the King's Regulations and Admiralty Instructions and the Naval Discipline Act, *in their entirety*.

If the New Zealand Government desire to amend the Naval Defence Act at any time in such a manner as to conflict with the regulations laid down in the King's Regulations and Admiralty Instructions or the Naval Discipline Act, it is advised that such amendment should form the subject of communication between the New Zealand Government and the Admiralty before being put into effect, as it is obviously undesirable to have naval ratings serving under varying conditions of service in regard to discipline, &c.

Entry, Training, &c., of New Zealand Officers.

8. *Military Branch.*—Officers of the New Zealand Division should be entered on the General List of the Royal Navy, becoming officers of the Royal Navy in every respect, being subject to exactly the same regulations regarding entry, training, promotion, and retirement as other officers. They should be appointed to ships serving in all parts of the world, a larger proportion of their service being spent in New Zealand waters than elsewhere, if this can be arranged. The advantages gained by placing officers on the General List are that—

(*a.*) It ensures a uniformly high level of knowledge, ability, and efficiency.

(*b.*) It gives equal chances of advancement, provides a future for the New Zealand officers, and ensures that the most able officers produced by the *Empire* have equal access to the most important posts.

(*c.*) It facilitates the question of promotion in the higher ranks.

The appointment of all officers should be made by the Admiralty, due consideration being paid to recommendations in this respect put forward by the Navy Board.

Officers would be promoted on the General List to the ranks of Commander and Captain by selection by the Board of Admiralty, as is the rule in the Royal Navy, recommendations being forwarded to the Admiralty by the Commodore, New Zealand Navy Board, in respect of officers serving in the New Zealand unit, and by the respective Commanders-in-Chief under whom New Zealand officers are serving at the time.

For the success of this system two things are essential, viz. :—

(*a.*) There should be no ground for suspicion that New Zealand officers do not receive perfectly fair and just treatment at the hands of the Admiralty.

(*b.*) That officers of the Royal Navy serving in ships of the New Zealand Division should receive equal consideration to those serving in Home or other waters.

9. *Entry of Cadets.*—In order to provide for the entry of New-Zealanders as officers of the Royal Navy, as set out in paragraph 8 above, the following mode of entry is recommended :—

Subject to the New Zealand Government making the necessary arrangements with the Admiralty and the Australian Government, the alternative channels of entry and training should be through Osborne and Dartmouth, or through the Royal Australian Naval College. It is suggested that parents should be given the option as to the channel of entry.

The total number of Cadets to be entered annually depends on the number of officers likely to be required in the future for the New Zealand Division, with the additional numbers required to allow of New-Zealanders serving in H.M. ships in all parts of the world, thus affording them that opportunity for gaining experience in their profession which only such service can give. This number must be reconsidered from time to time, but for the present the number of officers of the Military Branch in the Division, plus 30 per cent. additional, is recommended as a basis on which to work. It is recommended that for the present the total number to be entered annually should not exceed eight. This number, if continued for several years, will produce more officers than will be required for the New Zealand Division, and therefore should be reduced when sufficient numbers have been entered to form a working basis. In addition to the above the ordinary mode of entry to the Royal Navy through the Naval Colleges at Osborne and Dartmouth, or by the special-entry scheme, if this should be retained, is always open for entry into the Royal Navy. Officers entered in this manner would be eligible with, but after, other New-Zealanders for service in ships of the New Zealand Division.

The courses of instruction for the rank of Lieutenant, and all specialist courses, should be taken in the naval training establishments in England.

10. *Engineer Officers.*—The course recommended in regard to the entry of Engineer Officers is that which has been adopted in the Royal Navy after many years' deliberation—namely, the common entry to the Naval Colleges at Osborne and Dartmouth, and specialization at certain periods of service.

11. *Promotion to the Rank of Mate.*—The procedure recommended in regard to promotion from the lower deck is that which is in force in the Royal Navy—*i.e.*, candidates for the rank of Mate being selected from amongst warrant and petty officers.

12. *Accountant Officers; Medical Officers.*—It is recommended that Accountant and Medical Officers should be entered on the General Lists of Accountant and Medical Officers respectively of the Royal Navy, the former taking their entrance examination in New Zealand and the latter in England or New Zealand as desired.

13. *Chaplains and Naval Instructors.*—Chaplains and Naval Instructors should be entered for temporary service under similar conditions to those appertaining to the Royal Navy as regards temporary service.

14. *Royal Marines.*—It is not recommended that a corps of Royal Marines should be established in New Zealand, as the numbers required do not warrant the formation of a corps of such small dimensions.

It is recommended, however, that for the present Royal Marines should form part of the complement of all vessels of the New Zealand Division, and that they should be lent by the Admiralty together with other naval ratings required.

15. *Pay and Emoluments of Officers.*—Owing to the fact that the scale of pay and allowances of officers of the Royal Navy has been recently largely increased, but that details of this increase have not yet been received, it is not proposed to remark on this subject further than to recommend that the scale of pay, allowances, and pensions of the New Zealand Division should be based on those of the Royal Navy, due regard being paid to the relative cost of living in New Zealand and the Mother Country. It should be understood that the New Zealand Government is liable only for the pay, &c., of all officers serving in ships of the New Zealand Division, and the Mother Country for that of New Zealand Division officers serving in other parts of the Fleet, and those undergoing courses. The scale of pay prescribed for officers of the New Zealand Division is only to be paid to officers actually serving in ships of the New Zealand Division. Officers serving elsewhere should be paid at the rates obtaining in the Royal Navy, as all officers are on one General List.

16. *Uniform.*—It is recommended that the Uniform Regulations of the Royal Navy should apply to the New Zealand Division.

Petty Officers and Men.

17. *Seamen Ratings: Entry and Training.*—It is recommended that the mode of entry to the Seamen Branch of the New Zealand Division should be as follows:—

Entry as boys between the ages of fifteen and sixteen and a half in the training ship "Philomel" (or other vessel substituted for her). The regulations regarding entry and the course of training to be generally similar to that of the Boys' Training Establishment at Shotley, Essex.

The engagement entered into should be to serve up to the age of eighteen, and for a term of twelve years continuous service thereafter. It should also include liability to serve in any ship of the Royal Navy belonging to the Far Eastern Fleet.

18. Long service is considered essential in order to obtain sufficient numbers of experienced men for the higher ratings of the Service, and in order to make it worth while for men to undergo courses to qualify them for the higher ratings and generally to put training and discipline on a sound footing. Owing to the fact that men qualifying for the higher ratings would have to be sent either to England or Australia for training, the expense incurred and the time taken would not be commensurate with the results to be gained were men free to leave at the end of seven years' service.

19. The regulations governing the training, advancement, re-engagement, &c., of men of the Seamen Branch, including signal and telegraphist ratings, should be identical with those of the Royal Navy.

20. Every effort must be made to obtain and maintain a high standard of efficiency amongst the petty officers. Sufficient inducement should be offered in the way of special accommodation and extra privileges. Much can be accomplished to the same end by tact, consideration, and support on the part of the officers. No trouble should be spared in the careful training and supervision of petty officers. Unless they are efficient and well-disciplined the Service as a whole will suffer, and no effort on the part of the officers can compensate for a deficiency in this respect.

In this connection it is recommended that courses of instruction for young petty officers should be instituted at the Naval Depot, where, amongst other subjects, lectures on the duties of petty officers, control of men, and the meaning and value of discipline should be given. Courses of instruction for young non-commissioned officers have been for some time instituted in the Army and Royal Marines in England with excellent results.

It is recommended that all petty officers, both Seamen and Stoker Branches, should go through the course suggested on first being rated. By this means it is believed that prestige and distinction would be added to the rating of petty officer, and the general standard of efficiency of the Service raised to a high level.

21. *Stoker Ratings.*—Stokers should be entered between the ages of sixteen and eighteen for twelve years' continuous service. It is very desirable to get the men into the Service as young as the nature of their work renders possible, in order to accustom them from an early age to life at sea. With this object in view it is recommended that the age of entry should be reduced to between fifteen and seventeen years, when none but oil-burning vessels are included in the New Zealand Division.

Stokers should be trained in H.M.S. "Philomel" prior to being drafted to seagoing ships.

The regulations governing the training, advancement, re-engagement, &c., of men of the Engine-Room Branch should be identical with those of the Royal Navy.

22. *Artificers.*—Candidates for the ratings of Engine-Room Artificer, Ordnance Artificer, Electrical Artificer, and Whitehead Artificer should be entered as boys for long service under similar regulations to those in force in the Royal Navy. It will not, however, be possible to enter any of these ratings until the Mechanical Training Establishment in Australia is built and ready for use.

23. *Artisans.*—Shipwrights, blacksmiths, plumbers, joiners, painters and coopers, should be entered by the system of direct entry, after having completed their apprenticeship on shore, the engagement being for long service, and the qualifications being as laid down in the King's Regulations and Admiralty Instructions.

24. *Schoolmasters, Accountant Branch, Ship's Cook Ratings, Officers' Stewards, and Officers' Cooks* should be entered under similar conditions to those of corresponding branches of the Royal Navy.

25. If it is found after a few years' experience that insufficient numbers of entries on a long-service system are forthcoming for the seamen or stoker class, the alternative must be considered of instituting a mixed long- and short-service system.

In this event it would be desirable that the long-service entry should remain at twelve years, the petty-officer class and ratings highly trained in gunnery or torpedo work being obtained from those entering for this period, and the short-service period should be fixed at five or seven years.

26. *Pay and Emoluments of Petty Officers and Men.*—The rates of pay, allowances, and pension of petty officers and men of the New Zealand Division should be based on those of the Royal Navy, due regard being paid to the relative cost of living and the level of wages in New Zealand and the Mother Country.

It should be noted that pensions are recommended in preference to deferred pay.

New Zealand should be responsible for the pay of all ratings of the New Zealand Division, wherever serving, and of Royal Naval ratings lent for service under the New Zealand Government.

New Zealand ratings serving in H.M. ships other than ships of the New Zealand Division should receive the Royal Navy rates of pay while on board, the balance between such rates and the New Zealand rates either being allowed to accumulate until their return home, or, if they wish, allotted to their families: this should be arranged prior to drafting if possible.

Extracted copies of the Ledger Account should be rendered quarterly to the Navy Office, Wellington, by any ships bearing New Zealand ratings.

Any sums due to ratings on account of special New Zealand rates of pay should be adjusted at the Navy Office.

Sums of money paid on account of New Zealand ratings serving in H.M. ships should be adjusted as decided upon between the Admiralty and Navy Office, at the close of each financial year.

27. *Numbers to be entered:—*

(*a.*) *Seamen Ratings, including Signal and Telegraphist Ratings:* The number required to man the Division as proposed in Chapter I amounts approximately to 1,000. To this total it is proposed to add 30 per cent., or, roughly, 300, in order to allow for ratings undergoing courses in training establishments outside the Dominion, and for men serving in ships of the Royal Navy of the Far Eastern Fleet. The total number may therefore be taken as approximately 1,300.

The annual entry as boys is recommended, as a commencement, to be 100. It will thus take about fifteen years, allowing for wastage, to complete the establishment. As this period corresponds roughly with the time taken for men to become Chief Petty Officers, it is considered to be a satisfactory basis on which to work.

(*b.*) *Stoker Ratings:* The number required is about 500, plus 30 per cent., a total of 650. The annual entry as stokers is recommended, as a commencement, to be 50. It will thus take about fifteen years to complete the stoker establishment.

(*c.*) It is not proposed to give figures for the entry of other ratings, as the numbers required are not great, and can be better arranged at a later period. The question of the training facilities must also largely influence any decision made.

28. *Naval Depôt:* A small shore establishment, capable of accommodating eventually 20 officers and 180 men, should be instituted at or near Wellington. It should if possible be outside or on the outskirts of the town, with facilities for training and recreation. It may be possible to utilize a portion of Trentham Camp for this purpose.

RESERVE NAVAL FORCES.

New Zealand Division of the Royal Naval Reserve.

29. It is recommended that the personnel of the Reserve Naval Forces should be enlisted under similar conditions to those of the Royal Naval Reserve in the Mother Country, and that the officers and men should be provided in great part by the Mercantile Marine community of the Dominion, including men employed under the Marine Department and Harbour Boards, the Postmaster-General's Department, and from the civil community.

30. The duties which will fall to the Royal Naval Reserve (N.Z.) in time of war come under two headings:—

(*a.*) Seagoing duties.
(*b.*) Shore duties.

31. Under the heading of seagoing duties are included the provision of personnel to—

(*a.*) Provide the necessary naval additions to the complements of armed merchant escort ships and other vessels used on convoy duties, these requirements including specialist ratings such as gunlayers, seaman gunners, range-takers, Ordnance artificers, signalmen, and telegraphists:
(*b.*) Provide important numbers of guns' crews, signalmen, and telegraphists for auxiliary patrol vessels and mine-sweepers:
(*c.*) Provide important numbers of guns' crews for defensively armed merchant ships:
(*d.*) Provide the personnel of the mine-sweeping service.

32. To provide the necessary personnel, the following procedure is recommended:—

Officers.—To be entered from the Mercantile Marine of New Zealand under similar conditions to officers of the Royal Naval Reserve.

Men.—

(*a.*) To be entered from the Mercantile Marine, including the fishing industry, under similar conditions to men of the Royal Naval Reserve.
(*b.*) To be entered direct from the shore. It should be arranged that volunteers for this service should be exempted from service in the New Zealand Military Forces from the age of eighteen. Prior to that age they should undergo the customary Cadet training. Subsequent to enlistment in the Naval Reserve they should undergo periods of naval training on the same scale as that laid down for military training. If sufficient volunteers are not forthcoming it is recommended that the necessary number of men should be allocated for this service under a clause of the Compulsory Training Act.

(*c.*) To be entered on being discharged from the New Zealand mercantile training-ship "Amokura." It is recommended that the terms of agreement under which boys join the "Amokura" should be amended as necessary to allow for twelve years' service in the Naval Reserve from the age of eighteen years.

33. *Shore Duties.*—Under the heading of shore duties are included the provision of personnel to—

(*a.*) Provide signal and lookout men to man the war signal-stations, signal and reporting stations.

(*b.*) Provide telegraphists for the shore wireless telegraph stations.

34. To provide this personnel the following procedure is recommended :—

(*a.*) *War Signal Stations, Signal Stations, and Reporting Stations.*—The personnel for these stations should be mainly composed of the existing personnel of the signal-stations controlled by the Marine Department and Harbour Boards respectively, together with the personnel of the Lighthouse Service under the Marine Department, additional numbers being met by men entered as suggested in paragraph 30 (*b*). It is recommended that the Marine Department be invited to consider this proposal, and, if agreed to, a clause should be added to the conditions governing the admission of candidates to the Lighthouse Service, &c., to the effect that they are liable for shore service in the Royal Naval Reserve (N.Z.).

Special training regulations will be required for this service.

(*b.*) *Shore Wireless Telegraph Stations.*—The personnel for these stations should be mainly composed of the existing personnel employed in the Postmaster-General's Department.

It is recommended that the Postmaster-General be invited to consider this proposal, and, if agreed to, a clause should be added to the agreement under which candidates enter the wireless service to the effect that they are liable for enrolment in the Naval Reserve for shore service.

Special training regulations will also be required for this service. Additional numbers for manning the extra stations required in war should be met by entering men as suggested in paragraph 32 (*b*).

Regulations for the Royal Naval Reserve (New Zealand Division).

It is recommended that the regulations for the Royal Naval Reserve of the Mother Country should be taken as a guide in framing the regulations for the Royal Naval Reserve (New Zealand Division).

The engagement of men on enrolment or re-enrolment, except in the case of boys of the "Amokura," which should be for twelve years, is for a period of five years, counting from the date noted in the man's certificate-book. The total period of any man's service on the Active List of the Reserve should not exceed four terms of five years—*i.e.*, twenty years in all.

35. *Training.*—The preliminary drill laid down for the Naval Reserve should be arranged to take place in H.M.S. "Philomel" or in the Naval Depot. The seagoing training should take place in the seagoing ships of the New Zealand Division, and every effort should be made to make the training attractive. It should be clearly laid down that the men are afloat for training purposes, and they should be employed in training classes only. A regular return of their employment during their period of training afloat should be rendered to the Chief of the Naval Staff, Navy Office, on disembarkation.

For training of the Wireless Telegraphy Branch see Volume II, Chapter 9.

Establishment of the Royal Naval Reserve (New Zealand Division).

36. The establishment of the Royal Naval Reserve (New Zealand Division) should be based on war requirements (*vide* paras. 31 and 33). The numbers to be entered annually must depend on the facilities available for training, and the question of the expense entailed in maintenance.

It may be found necessary for the present to organize this force on a skeleton basis, which is capable of wide expansion in time of war.

The list of vessels for which personnel of the Naval Reserve would be required is as follows :—

Seagoing personnel—
- 8 "P" boats or old T.B.D.s.
- 7 armed merchant escort ships.
- 28 defensively armed merchant ships.
- 18 mine-sweepers.
- 4 boom defence vessels.

Shore personnel—
- War signal stations.
- Signal and reporting stations.
- Wireless telegraph stations, including portable set stations.
- Intercepting stations.
- Directional stations.

RECRUITING.

37. To place naval recruiting on a sound footing, whereby the numbers required annually may be obtained from amongst the widely spread population of New Zealand, a well organized recruiting service is essential, in order to educate the people to the necessity of providing men, as well as money, for the naval defence of the Dominion and the Empire. The following suggestions are made, therefore, with a view to assisting in the formation of a Recruiting Service :—

(*a.*) New Zealand to be divided up into four recruiting districts, with headquarters at Auckland, Wellington, Christchurch, and Dunedin respectively, the limits of the districts being clearly defined.

(*b.*) The duties of Inspector of Naval Recruiting to be carried out by the Officer in Charge of Mobilization at the Navy Office.

(*c.*) Each recruiting district to be in charge of a Recruiting Officer, who should, in due course, be a retired officer of the New Zealand Division.

Until such officers are available it is recommended that volunteers be called for to perform the duties from amongst the retired naval or military officers resident in New Zealand.

A small honorarium should be paid to them, together with expenses.

(*d.*) Government officials should be instructed to assist as far as possible by providing facilities for the delivery of lectures, issuing coloured pamphlets and handbills, forwarding names of candidates, giving facilities for medical examination, &c.

The assistance of the Navy League should also be invited.

(*e.*) A pamphlet entitled "How to join the New Zealand Division of the Royal Navy" should be published, compiled on the lines of "How to join the Royal Navy."

(*f.*) Recruiting instructions should be compiled.

(*g.*) The principal towns should be visited regularly by the Recruiting Officers, lectures should be given, recruiting propaganda issued, and every means taken to obtain the numbers required. It should be the aim, if possible, to procure a waiting-list, so that entries may be selected, thus ensuring a high standard amongst the men of the New Zealand Division.

CHAPTER IV.

Training.

Containing Section (A) General—The Training Service.
,, (B) Gunnery Training.
,, (C) Torpedo Training.
,, (D) Mine-sweeping Training.
,, (E) Mining Training.
,, (F) Submarine Training.
,, (G) Anti-submarine Training.
,, (H) Signal and Wireless Telegraphy Training.
,, (I) Engineering Training.
,, (J) War Training of the Merchant Service.
,, (K) Training of the Auxiliary Patrol Service in War.
,, (L) Air Training.
,, (M) Organization of Scientific Research.

(A) General—The Training Service.

Preliminary Remarks.

The question of training is one which requires constant attention and revision if the highest standard of efficiency is to be maintained. The Royal Navy, owing to its size, has great facilities for gaining experience. The training regulations are based on the experience thus gained, and it is strongly recommended that the New Zealand Division of the Royal Navy should adopt the procedure and regulations issued from time to time by the Admiralty for use in the Royal Navy. The advantage of having the whole Navy trained on similar lines must be apparent.

Boys' Training Service.

In order to provide accommodation for the training of boys and stokers on entry, it is recommended that H.M.S. "Philomel" should be fitted out as a stationary Training Establishment, accommodation being provided for the following, in addition to the instructional and ship's staff—viz., 100 to 120 boys, 50 stokers.

For purposes of training, the "Philomel" should be provided with an armament comprising one 6 in. B.L. gun Mark VII or later, one 4 in. Q.F. gun Mark IV or V, two 12-pr. Q.F. guns. Two of the guns to be fitted with laying teachers, and a 6 in., a 4 in., and a 12-pr. loader to be provided. One modern-type searchlight also to be installed.

Wellington is recommended as being the most suitable and central port at which the "Philomel" should be stationed whilst the officers are employed on duties at the Navy Office. At a later period it may be desirable to move her to Queen Charlotte Sound or Pelorus Sound, where the climate and surroundings are more suitable. Whilst the ship is at Wellington she should be moored in a position which would keep the boys under training clear of the city, whilst affording opportunities for recreation. A ground should be obtained near the ship. It may be possible to find a suitable place in Evans Bay or off Petone.

The Commanding Officer of the Training Establishment should be an officer of the rank of Commander.

The officers and instructional staff should be very carefully selected, and it is desirable for this reason that special emoluments should attach to the post of Instructor.

It is recommended that the Admiralty should be requested to lend for this purpose officers and petty officers of both Deck and Engine-room Branches, who have experience as officers and instructors respectively in the Training Establishments in England.

The syllabus of boys' training should be similar to that of the Boys' Training Establishment at Shotley.

On completion of their training, boys and stokers should be drafted direct to seagoing ships. As the full number of vessels comprising the New Zealand Division will not be available until 1926, the disposal of boys and stokers over and above those who can be accommodated in the New Zealand Division at the time must be arranged for by drafting them to H.M. ships on the China or East Indies Stations, as agreed between the New Zealand Government and the Admiralty.

(B) Gunnery Training.

Every effort must be made to attain the highest possible standard of efficiency in gunnery. This entails not only a great deal of hard work, but at the same time it is most essential that the best systems of firing, controlling fire, &c., should be introduced.

2. The Royal Navy has vast experience of gunnery, including that of the recent war, and also possesses a large number of gunnery officers constantly collaborating in the study of the numerous gunnery problems.

The New Zealand Division should follow to the smallest detail the gunnery methods of the Royal Navy, and no departure whatever from those methods should be sanctioned.

3. To help in the achievement of this—

(*a.*) Lieutenants qualifying for Gunnery Lieutenant,
(*b.*) Sub-Lieutenants qualifying for Lieutenant,
(*c.*) Acting Mates qualifying for Mate,
(*d.*) Ratings qualifying for Gunner's Mate,
(*e.*) Ratings qualifying for Light Director Layer,
(*f.*) Ratings qualifying for Range-taker, 1st Class,
(*g.*) Ratings qualifying for Chief Ordnance Artificer and 2nd Class Ordnance Artificer,

should be sent to England to qualify, the necessary arrangements being made with the Admiralty.

It is recommended that by arrangement with the Admiralty and the Government of Australia the gunnery training of officers and ratings, other than those mentioned above and those trained in the seagoing vessels of the New Zealand Division of the Royal Navy, should be carried out in the Training Establishments in England or Australia, thus avoiding the heavy burden of setting up duplicate establishments for the comparatively small numbers belonging to the New Zealand Division of the Royal Navy who will require training.

4. The arrangements for gunnery training and firings made in January, 1919, by the Gunnery and Torpedo Division of the Naval Staff at the Admiralty were promulgated in Confidential Monthly Order No. 167/19. It is recommended that the New Zealand Division should be trained on similar lines.

A calibrating range should be established. The Frith of Thames appears to be a suitable locality.

5. In order to make sure that the New Zealand Navy Board is kept fully informed of the progress made in gunnery, torpedo, and mining in the Royal Navy, the Admiralty should be asked to forward the required number of all gunnery and torpedo publications, all gunnery and torpedo information issued to ships of the Royal Navy, and copiers of such reports of firings as are considered to be of interest.

The New Zealand Division should be considered in every respect a portion of the Royal Navy in the same way as squadrons abroad.

A free interchange of views on gunnery and torpedo matters with the Commanders-in-Chief in China and the East Indies, and the Navy Board of the Royal Australian Navy is recommended.

(C) Torpedo Training.

The New Zealand Division of the Royal Navy should follow to the smallest detail the torpedo and mining methods of the Royal Navy, and no departure whatever from those methods should be sanctioned.

To help in the achievement of this—

(*a.*) Lieutenants qualifying for Torpedo Lieutenant,
(*b.*) Sub-Lieutenants qualifying for Lieutenant,
(*c.*) Acting Mates qualifying for Mate,
(*d.*) Ratings qualifying for Torpedo Gunner's Mate,
(*e.*) Ratings qualifying for Electrical Artificer,*
(*f.*) Electrical and Whitehead Artificers qualifying for Chief Electrical and Chief Whitehead Artificer, 2nd Class,*

should be sent to England to qualify, the necessary arrangements being made with the Admiralty.

2. It is recommended that by arrangement with the Admiralty and the Government of Australia the torpedo training of the officers and ratings, other than those mentioned above and those trained in the seagoing vessels of the New Zealand Division of the Royal Navy, should be carried out in the Training Establishments in England or Australia, thus avoiding the heavy burden of setting up duplicate establishments for the comparatively small numbers belonging to the New Zealand Division who will require training.

3. The arrangements for torpedo training made in January, 1919, by the Gunnery and Torpedo Division of the Naval Staff were promulgated in C.M.O. 166/19.

4. Proposals for ensuring that the latest technical information shall be constantly sent out to New Zealand are embodied in the remarks on gunnery training above.

(D) Mine-sweeping Training.†

It is recommended that two mine-sweeping trawlers should be based at Wellington, and that the seagoing instruction of mine-sweeping personnel should be carried out in these vessels.

The vessels should be maintained equipped with the latest mine-sweeping material of every kind, the responsibility that the instruction and appliances are kept up to date resting with the Superintendent of Training and Reserves.

(E) Mining Training.

In England all mining work, except certain work connected with controlled mines, is carried out by the Torpedo personnel, assisted in the unskilled work by other ratings.

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* If recommendations of Armament Personnel Committee are adopted.
† This subject is a branch of torpedo training.

For controlled mine-fields, the same conditions apply as regards the preparation, laying, and upkeep of the fields; but a special branch of the Royal Marines entitled "The Royal Marine Submarine Miners" has been responsible for the manning of firing and observation stations.

2. It is recommended that the same arrangement should apply in New Zealand as in England, except that the branch for manning the firing and observation stations should be specially qualified Naval ratings, who would carry out their training locally.

Training in the preparation, laying, and maintenance of all types of mines should remain, as in England, an integral part of the instructional syllabus of Torpedo officers and ratings.

(F) Submarine Training.

It is recommended that the system of obtaining officers and ratings for service in submarines by calling for volunteers, and the same standards of physical fitness, character, &c., as are in force in the Royal Navy should be followed.

2. It is recommended that the training of the personnel, both officers and men, for the submarines of the New Zealand Division of the Royal Navy be carried out in England, or in the Submarine Depot and School of the Royal Australian Navy. The numbers to be trained do not justify the cost of the creation of a separate establishment in New Zealand.

3. A small submarine parent ship has been included amongst the ships of the New Zealand Division of the Royal Navy.

(G) Anti-submarine Training.

It will not be necessary to make arrangements in New Zealand for an Anti-submarine training school for training the personnel of the anti-submarine craft.

2. In my recent report to the Government of Australia the formation of an Anti-submarine School for the training of the petty officers and men required for anti-submarine duties in the Royal Australian Navy was recommended. It was pointed out that it will not be practicable to give officers of the R.A.N. a qualifying course in anti-submarine work in Australia, at any rate for some time; but that a certain number of promising junior officers in the R.A.N. should be sent to England to go through the same courses of instruction as R.N. officers. At the same time suitable officers should be lent from the Royal Navy to staff and command the school in the first instance.

3. It is recommended that by arrangement with the Admiralty and the Government of Australia the anti-submarine personnel of the New Zealand Division shall be similarly trained—the officers being sent to England for training, and the petty officers and men to the Anti-submarine School of the Royal Australian Navy.

4. The present proposals with regard to the training of Lieutenants for anti-submarine duties are that these officers should not only be thorough experts in all submarine-detection apparatus, and able to supervise the training of personnel, but should also study the question of hunting and destroying submarines in all its aspects, and be able to suggest developments of apparatus from the seagoing point of view. When qualified as Lieutenants A/S, after a course lasting about six months, the officers would be on the same footing as regards allowances as other

specialists, and would be appointed for staff or instructional duties, or, if eligible in other respects, to the command of "P" boats or other craft intended for anti-submarine work.

5. The officers' course includes a general study of anti-submarine warfare and thorough theoretical and practical instruction in the apparatus and weapons used for detecting and attacking submarines.

6. A proportion of the ratings required for anti-submarine duties should have a fairly high standard of theoretical knowledge of high-tension electricity. The majority of operators, however, do not require a high standard of technical knowledge, but must have intelligence and good hearing, whilst a knowledge of signalling is desirable in view of possible future developments. The technical standard required varies from a very considerable knowledge of electrical testing and small repair work to an elementary knowledge of the theory of sound and electricity.

7. The courses for petty officers and men qualifying include instruction in the use of all submarine-detection appliances with a view to enabling them to use and look after the gear and make minor repairs. It is not at present the intention to train them in the use of anti-submarine weapons, such as torpedoes, paravanes, depth charges, guns, howitzers, &c., for which torpedo and gunnery ratings are borne in the anti-submarine craft.

8. For the purpose of experiment and research, in the future it will be desirable, when funds are available, to form a scientific body to deal primarily with anti-submarine and other problems, and secondarily with general naval questions of a scientific nature, particularly with reference to the Pacific. (*Vide* Section M of this chapter.)

(H) Signal and W/T Training.

The regulations on the subject of the training of Signal and W/T ratings issued from time to time in the Royal Navy should be followed by ships and establishments of the New Zealand Division of the Royal Navy.

2. The courses of instruction for candidates for the rating of Yeoman of Signals and higher signal ratings, and those of Petty Officer Telegraphist and higher telegraphist ratings, should take place at the Signal School of the Royal Australian Navy by arrangement with the Australian Government.

A small Signal School should be instituted in H.M.S. "Philomel" for giving instruction in signals and W/T to boys and junior ratings.

(I) Engineering Training.

Officers.

The entry of future Engineer officers has been commented upon in Chapter III. The course recommended for adoption is that of the common entry to the Naval College at Jervis Bay, or Osborne and Dartmouth, with subsequent specialization in engineering at the rank of Sub-Lieutenant and Lieutenant.

The latest regulations regarding the specialization of officers of the Royal Navy in engineering will be found in Admiralty Weekly Orders 4047/18 and 1051/19. Regulations regarding the training of officers in engineering, including that of Acting Mates (E.), will be found in the King's Regulations and Admiralty Instructions, Volume II, Appendix X.

At present there is no Naval establishment in Australia capable of affording the requisite engineering training. It is essential, therefore, that officers specializing in engineering and Acting Mates (E.) should be sent to England to undergo their training at the Naval Colleges at Greenwich and Keyham.

Engine-room Ratings.

It is strongly recommended that the courses of instruction and the qualifications for advancement of the various engine-room ratings should be arranged on similar lines to those in force in the Royal Navy.

Until a Mechanical Training Establishment capable of giving the courses of training required by the regulations exists in Australia, it is not recommended that entry should be permitted to the respective Artificer Branches.

Stokers on entry should be trained in H.M.S. "Philomel," and drafted subsequently in the same manner as boys, as set out in Section A of the chapter.

(J) War Training of the Merchant Service.

The organization for the war training of the Merchant Service should be very carefully elaborated in conjunction with the Admiralty.

The arming, training, and organization of the Merchant Service for war had reached a high state of efficiency by the time of the signing of the Armistice in November, 1918.

2. It is obvious that if full use is made of the great experience in this matter acquired during the late war, the Merchant Service in future wars will start in a prepared state, and much shipping will thereby be saved.

3. The practice of arming merchant ships in self-defence was revived by the British Government *shortly before the war* as a measure of protection to British shipping against commerce-destroyers.

With the introduction of submarine warfare against merchant shipping by Germany, the defensive arming of merchant vessels was greatly extended.

4. *Even if submarines are abolished, the matter will still be of importance, as it may be necessary to arm merchant ships for resisting attack by surface craft or from the air.*

5. The following brief notes* on the training arrangements made during the recent war are of interest:—

An excellent "Confidential Book of War Instructions" was issued to the masters of British merchant vessels (provided the masters were British subjects born of British parents). Addenda bringing this book up to date were issued from time to time.

A pamphlet containing notes on gunnery was also issued to defensively armed merchant ships; also "Instructions for Guidance in the Use, Care, and Maintenance of the Armament"; also "Instructions *re* the Arrangements for getting Guns mounted, Supply of Ammunition and Stores, Guns' Crews, &c."

Officers were specially stationed at important ports for defensive armament duties.

Courses of instruction were given as follows:—

To masters and officers—On the submarine menace and how best to deal with it.

To masters and officers—On otter mine protection.

To engineers—Course of instruction in the repair of guns mounted in D.A.M.S.

* The war training of the officers and crews of the vessels of the Auxiliary Patrol are dealt with separately under section K.

To cadets and apprentices—Practical gunnery course to enable them to form part of the guns' crews of D.A.M.S.

To gunlayers and second hands for 4 in. to 6 in. guns (selected from gunlayers, 3–15 pr.)—Sixteen days' course in the Gunnery Schools.*

To gunlayers and second hands for 3–15 pr. guns—Thirty-five days' course in the Gunnery Schools.*

To gunlayers, 4 in. to 6 in. and 3–15 pr., requalifying—Eight days' course in the Gunnery Schools.*

To Instructors for D.A.M.S. ratings—Nineteen days' course in the Gunnery Schools.*

For men of the Mercantile Marine—A gunnery course of gun drill, ammunition, and sight-setting, lasting nine days, at a gunnery establishment instituted at the Crystal Palace, London.

The Officer Instructors stationed at various important ports of the United Kingdom and abroad visited merchant vessels in their district and gave advice and information to masters, officers, and ratings. They also gave lectures on the submarine menace and gunnery.

Signal instruction for masters, officers, and ratings was also given at a number of important ports in the United Kingdom and abroad.

Some idea of the numbers instructed is given in the enclosure to this section, which covers a period of sixteen months, and is dated 24th June, 1918.

Enclosure to Chapter IV, Section J, War Training of the Merchant Service.

TABLE A.

Report dated 24th June, 1918, of the number of masters, officers, and men of the Mercantile Marine who had received instruction since 27th February, 1917 :—

Masters: Total number who have been through the course on the submarine menace at Chatham, Portsmouth, Cardiff, Greenock, and Devonport	3,038
Officers: Total number who have been through a similar course at Chatham, Portsmouth, Cardiff, Greenock, and Devonport	3,469
Apprentices: Total number who have been through a gunnery course at Chatham, Portsmouth, and Devonport	998
Merchant ratings: Total number who have been through a gunnery course at the Crystal Palace	6,236
Ships visited by Officer Instructors	13,993
Officers interviewed by Officer Instructors	11,697
Masters interviewed by Officer Instructors	2,891
Officers and men who have attended instruction in signals	28,013

(K) Training of the Auxiliary Patrol Service in War.

Preliminary Remarks.

The Auxiliary Patrol Service in Great Britain during the late war consisted of steam-yachts, trawlers, drifters, and motor-boats manned by officers and men of the Royal Naval Reserve and Royal Naval Volunteer Reserve, the various patrol bases being in charge of officers of the Royal Navy on the Active or Retired Lists. At the Admiralty the Auxiliary Patrol came under the control of the Fourth Sea Lord, a Captain being appointed, as his assistant, to administer the service.

Training.

2. From time to time, as experience was gained, publications were issued bearing on the subject of the training and employment of Auxiliary Patrol vessels, the most important being—

C.B. 482.—Instructions for Auxiliary Patrol, 1917.
C.B. 356.—W/T Instructions for Auxiliary Patrol Vessels.
C.B. 707.—Auxiliary Vessels Signal-book.
Naval Staff (G. & T. Div.).—Instructions for Gunnery Training in the Auxiliary Patrol, 1918.

Also various publications coming under the heading of anti-submarine training.

* Including firing in the Gunnery School tenders.

3. The publications referred to above cover the whole training and duties of Auxiliary Patrol vessels in time of war, and it is strongly recommended that the Navy Board should obtain sufficient copies to have on hand ready for issue in case of necessity, and for use as a guide in training the Auxiliary Patrol Section of the New Zealand Division of the Royal Naval Reserve in their duties in peace time.

4. The following notes on the organization of the Trawler Patrol, at one of the principal Auxiliary Patrol bases in England during the war, will also be found useful as a guide.

Notes on Organization of Trawler Patrol.

5. The trawlers are divided into units of six. Amongst the six are two fitted with W/T. The unit is commanded by a Lieutenant, R.N.R., called the Divisional Officer (D.O.). It is divided into sections of three, and the second section of three is commanded by a Sub-Lieutenant, R.N.R. As skippers become educated and capable of performing the duties of a Sub-Lieutenant, R.N.R., they are promoted to Group Skippers and take command of the second section. When Group Skippers become further educated they are promoted to Chief Skippers and take command of an unit of trawlers in place of a Lieutenant, R.N.R.

6. The complement of a trawler depends on her armament. The best armament from experience is the 7·5 in. howitzer, placed amidships before the bridge, and a 6-pr. H.A. gun mounted on the forecastle; two trays mounted on either quarter for depth charges, and as many depth charges as the vessel can conveniently carry.

7. It is advisable to leave the gallows, fitted in the ships for fishing, on board the vessels, as when not employed on patrol duties they can be employed fishing, and when on patrol duties, if necessary to convert them into mine-sweepers, it can be done expeditiously and at small expense.

8. With seventy-two trawlers, or twelve units, at a base, it is possible to keep five units continually at sea day and night. The five units which are in harbour coal, provision, and obtain their stores and water during the period of rest.

Two units are placed in the basin to undergo periodical refit or for change of boiler-water.

9. Dry-docking takes place once in six months. Bottoms are repainted, underwater fittings, rudder-pintles, and gudgeons examined, and the stern-tubes tested as to their truth in the bearings.

10. Thus it will be seen that of the patrol in question, five units—that is, thirty trawlers—were at sea day and night for four days, five units were in harbour, and two units were in dock, dry-docking, undergoing periodical refit, or changing boiler-water.

11. The five units in harbour were made into four units, in order to make sure that there were always at least six ready for sea as the "Duty Unit." They took turns in the four days as follows:—

First unit was duty unit.
Second unit was employed provisioning.
Third unit was employed coaling
Fourth unit stood off and attended gunnery and signalling instructions.

When coaling and provisioning was completed in the afternoon, as it always was in the summer months, the coaling and provisioning unit attended gunnery and signal instructions in the afternoon.

Dangerous Areas.

12. When a vessel had been mined, or a moored mine was reported on the surface or swept up in a certain position, a dangerous area was declared with a radius of 1½ miles round that position. During the war it was never found necessary to increase this radius of 1½ miles.

13. When a dangerous area was declared a wireless signal was sent to the destroyers on patrol, and to each of the W/T vessels at the adjacent control points, giving the new route which merchant vessels were ordered to take, which was designated the route in force. It then became the duty of the Lieutenant in command of each of the control points to prevent any merchant ship passing until she had received the route in force.

Boiler-cleaning, changing Water in Boilers, and Docking.

14. Boiler-cleaning was performed every thirteen weeks, with the aid of a squad of boiler boys, during which time the vessel was in the basin. The defects which had occurred in the interval between last boiler-cleaning were made good, and the boiler-cleaning and repairs were completed in eight to ten days. During this period half the crew was sent on eight days' leave.

15. Changing water: Water in the boilers was completely changed once in six weeks, or before if necessary, depending on the specific gravity of the water, a standard of which was fixed by the Engineer-Captain, Auxiliary Patrol. This change of water necessitated the trawler being in the basin for forty-eight hours.

General Utility.

16. The trawlers on patrol, when fitted with depth charges, 7·5 in. howitzers, and 6-pr. high-angle gun, were most efficient protection for the merchant ships passing inshore to them or crossing the channel. When the armament was complete no merchant vessel near the trawlers on patrol was ever attacked. It was very evident that the depth charges and howitzers were the weapons which the submarine feared, for when trawlers were only armed with 3-prs. several attacks were made. In addition to the general protection of merchant shipping, the trawlers were always sent to investigate and destroy any British drifting mines sighted by men-of-war or merchant vessels in the patrol.

17. When a buoy broke adrift, or a derelict or floating wreckage dangerous to navigation was sighted, the trawlers were always sent to investigate, destroy, salve, or, if necessary, blow them up by means of guncotton.

18. For destruction of masts and wreckage, &c., the trawlers used tins of guncotton, 1,000 yards of cable, and a dynamite-exploder.

19. The trawlers on patrol were provided with charts showing the fishing-limits, and it was their duty to see that no trawlers or fishing-boats were outside these limits. If they were, their permits were collected and the vessels were sent to their respective home ports.

Salvage.

20. When vessels were mined or collisions occurred trawlers went to their assistance, and if there was any possibility of salving every effort was made to do so. They were particularly clever in getting lines on board merchant vessels in heavy weather, and through their exertions a large number of vessels which had not been sufficiently injured to sink at once were brought safely into port.

Recommendations.

21. The patrol trawler should be fitted with W/T gear, and it is recommended that the Marconi half-kilowatt set be fitted on the upper deck near the wheel-house, so as not to interfere with the fish-hold. In some of the trawlers the fish-hold was used for the W/T cabinet and as accommodation for the W/T operator.

22. It is recommended that the door of the wheel-house should be removed, as in the event of the vessel being mined the door may become jammed and prevent the exit of those inside, as actually happened in several cases.

(L) Air Training.*

In considering this problem it must be remembered that this young service has not the years of experience behind it that the two older services have, and therefore proposals for training cannot be laid down with the same certainty and assurance as in the case of the other two. The standards and past experience from which proposals can be made were obtained during the war. These aimed, *inter alia*, at the production of a large personnel, quality being sacrificed in some cases for quantity.

2. Valuable as this experience has been, however, the whole system adopted in England needs very careful review and revision to meet the conditions arising under peace regime. No doubt very large alterations in the methods of training have been and will be carried out.

3. The training of personnel in air work for the Navy can best be obtained by making such arrangements as will keep New Zealand fully in touch with the developments there. The methods in use can then be adapted to meet local requirements.

4. In the following remarks no attempt will be made to lay down the syllabus of training, which can be obtained from home, but attention will be drawn to various broad principles.

Command.

5. Owing to the short life of many pilots, and the exigencies of war, a large number of air officers during the late war were pilots only, and not officers in the true sense of the word.

Their knowledge of discipline, administration, &c., was very small. This can, and should be, remedied in peace-time. In future a large proportion of pilots' training must tend towards making them efficient officers, though care is necessary to see that in doing so their professional and technical duties do not suffer.

6. An idea, prevalent at times, that a pilot's work is more or less finished after flying must be checked. The majority of his time must be spent in practices to make himself more efficient in gunnery, signals, &c., supervision and care for the welfare of his men, and care and upkeep of machines, as well as the subjects mentioned above.

Staff Courses.

7. Opportunities of sending flying officers to the Naval War Staff course in England, and to the Air Staff College if one is started, should be taken.

Physical Fitness.

8. Every encouragement must be given to pilots to keep themselves physically fit. It must be remembered that air-stations are often a long way from any town or place where amusement can be found, and consequently officers and men are thrown on their own resources for recreation. Recreation-grounds for the men are considered essential, and recreation should be regarded as part of the training of Air Force personnel.

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* NOTE.—This section is drawn up to meet the case of New Zealand establishing a separate Air Force. If New Zealand air personnel becomes a portion of the Royal Air Force, as is recommended, the Royal Air Force Syllabus of Training as issued from time to time should be followed.

Drill.

9. Physical exercise generally, and drill, for instilling discipline, must form part of the routine of all units.

Flying.

10. During the latter part of the war pilots were generally specialized on one type of machine—*e.g.*, flying-boats, ship-aeroplanes, light day bombers, artillery reconnaissance, &c.

How far this policy will be continued in peace-time is not yet known, but with the small air personnel available it is recommended that as far as possible all pilots should have a wide air experience of different types of machines in use.

Preliminary instruction to all pilots can well be carried out on aeroplanes—specialization on different types taking place after this instruction.

Interchange of Ideas.

11. It is very desirable that pilots for naval work should be acquainted with ship routine, and should be able to appreciate some of the problems, from the naval officer's point of view, in which they will have to take their part in the air. Conversely, much greater efficiency would result if Naval officers appreciated fully the difficulties and problems with which aircraft have to deal from the flying-man's point of view. Interchange of experience and ideas on these subjects is most necessary.

Training Afloat.

12. All pilots should spend a proportion of their time afloat. Two months a year is suggested tentatively, but the exact time must be determined after practical experience. During this time instruction can be carried out in the following subjects: boatwork; naval flags and signals; flashing; semaphore; knowledge of system and difficulties of fire-control and torpedo-control; torpedo running and preparation; navigation and pilotage; officer of the watch; appreciation of formations and manœuvres; functions of cruiser screens, &c.

13. Instruction must be systematic to be of value, and the ship's officers must realize that the success or otherwise of the scheme will depend largely on their efforts. Junior officers should assist with a division, and obtain experience in handling men in this way.

14. Another subject on which instruction is required is a knowledge of confidential books. This subject has been much neglected in the past, but it is essential that pilots should know what intelligence and information is available on board, and how such is obtained. Methods of coding and decoding should also be taught, as this has to be done in the case of W/T signals in the air.

Instruction Ashore and in the Air.

15. Gunnery exercises, torpedo preparation and running from aircraft, rigging sheers and derricks*, splicing*, bends and hitches*, recognition of ships both naval and merchant*, aerial navigation, meteorology, first aid, photography, intelligence systems, and methods of anti-submarine defence should be taught.

Knowledge of engines and rigging is of course a fundamental part of a pilot's training, and this must be carried out most carefully.

It must be remembered that to keep pilots and observers efficient the majority of their time will have to be spent ashore at air-stations where regular flying practice can be obtained.

Men.

16. Men with skilled trades, such as fitters, turners, &c., require very little extra training to make them skilled engine hands (say three months). Similarly, good carpenters take very little time to become skilled riggers and to learn repairs. These facts make the training of any desired reserve a comparatively simple matter.

* These subjects may be taught either afloat or ashore.

17. A certain amount of disciplinary training is necessary, but in the case of the skilled tradesman regard must be paid that his trade is not unduly interfered with. The position of skilled tradesmen is very analogous to that of Ordnance Artificers on board ship.

Organization of Training.

18. During the time of peace it is probable that training can be centralized in one place, but on the outbreak of hostilities an expansion of personnel will occur. The small number of units in existence in peace time must be thoroughly efficient, both as regards personnel and *matériel*, since on the outbreak of hostilities nearly all must be prepared to take up ranks or ratings at least one higher than that which they held in peace time. The size of the Air Services grew many thousand per cent. during the late war, and similar increments may occur in future wars.

The keynote, then, of training and organization must be ability for rapid expansion in all directions at very short notice.

19. It is almost certain that no squadron or other unit will act as one after the first few months of war; personnel will gradually be withdrawn to form a leavening or nucleus of new units mobilizing, their personnel being replaced by others who have not had the same continuous training.

20. This shows the necessity for the following preparations for war:—

(*a.*) Extra training-depots must be ready for establishment at very short notice, as it will be impossible to retain all the training at one centralized place, even if it were desirable.

(*b.*) Syllabuses of instruction for all different ranks and ratings must be prepared and revised as necessary, so that courses can be started with the minimum delay.

(M) Organization of Scientific Research.

It is very necessary that the fullest use should be made by naval officers of the advances of science.

A copy of an Admiralty Memorandum of 31st December, 1918, on "Organization of Scientific Research and Experiment," is appended.

2. It is recommended that the Admiralty should be asked to keep the New Zealand Naval Board advised as to the progress made by the Scientific Research and Experiment Department. It is also recommended that an organization on similar lines should be provided in New Zealand when practicable.

From the existing New Zealand Institute, which has technological sections and which can undertake investigation in general physical and chemical problems, a nucleus of a Naval Scientific and Research Department could be formed.

A number of the best scientists should be selected to form the Department, under the Presidency of the C.N.S., New Zealand Naval Board. A scientist of wide experience should be appointed as Vice-President.

3. A Department so constituted should be supplied by the Admiralty with confidential publications and information, and should keep in touch with the Scientific Research and Experiment Department of the Admiralty, otherwise overlapping will occur.

4. In the first instance the work of the scientists of the proposed Scientific Research and Experiment Department of the New Zealand Division of the Royal Navy might be carried out at Victoria University College, Wellington.

5. Until the proposed Department comes into being the C.N.S., New Zealand Naval Board, should personally keep in constant touch with the Admiralty (Scientific Research and Experiment Department), bringing forward for investigation problems demanding attention.

[*Enclosure to Chapter IV, Section M.*]

ORGANIZATION OF SCIENTIFIC RESEARCH AND EXPERIMENT.

1. The following have been approved as the general lines on which scientific research and experiment for naval purposes will be organized after the war.

2. The Board of Invention and Research, with its Central Committee and Panel, will be dissolved as from the 1st January next, as, in view of the termination of hostilities, the Admiralty no longer feel justified in availing themselves regularly of the services of the distinguished scientists belonging to the Board.

3. The present Director of Experiments and Research, and the Deputy Director of Experiments and Research, will be released from Admiralty service as from the 1st January next, the circumstances in which they consented to give their valuable services having now ceased to exist.

4. The Department of Experiments and Research will thereafter be known as the Scientific Research and Experiment Department (short title "S.R.E. Department"), and will include as part of its organization the Admiralty Central Research Institution (when the scheme for that institution is proceeded with), and the Shandon Experimental Station.

5. Professor J. C. McLennan, F.R.S., will act as the head of this department, with the title of Scientific Adviser to the Admiralty (short title "S.C.A."), and he will combine with this office the directorship of the Admiralty Central Research Institution.

6. In view of the great importance of ensuring that naval policy and scientific research do not proceed under divergent lines, the Scientific Research and Experiment Department will be placed under the superintendence of the C.N.S., and will work in close association with the Plans Division of the Naval Staff.

7. On the experimental side, however, its work will necessarily in the main come within the sphere of the Controller as Chief of the Naval Matériel, and the Scientific Adviser will accordingly be responsible to the Controller for—

(*a.*) Advising as to the programme of experimental work to be undertaken, and as to proposals for experimental work generally;

(*b.*) Allocation of all funds provided for experimental work under the Scientific Adviser's direction;

(*c.*) The efficiency of the organization for research and experimental purposes of the Central Research Institution and Experimental Stations;

(*d.*) The progress of experimental work generally;

(*e.*) Recommendations for appointment of civilian scientific staff at all Admiralty establishments where experimental work is undertaken.

8. Selected naval officers will be included on the staff of the Scientific Research and Experiment Department, the Central Research Institution, and the Experimental Stations, and the policy adopted throughout the last year of securing the close association of the Naval Officer and the Scientist in research and experimental work will continue to be followed.

9. Correspondence with outside inventors in regard to inventions will be dealt with by a small Naval and Secretarial Staff attached to the Scientific Research and Experiment Department, in the same manner as hitherto by the B.I.R.

10. The temporary Experimental Stations at Parkeston Quay, Dartmouth, Portland, Wemyss Bay, Stratford, and Malta will be closed down as soon as the necessary arrangements can be made, and Shandon will become the main Experimental Station, Hawkcraig being also retained for dealing with special problems as may be decided by S.C.A.

11. A further notification will be made as to the personnel of the Scientific Research and Experiment Department.

31st December, 1918.

CHAPTER V.

Discipline.

The question of discipline has already been commented on in the covering-letter. The subject is of such importance that it was considered that it would be of interest to obtain independent views of experienced officers of different ranks on the subject. These were called for, and the essays marked A, B, C, D, and E are attached. They were written (not in the order given) by a Rear-Admiral, a Captain, two Commanders, and a Chaplain R.N. The four first-named have all had experience as Executive Officers and in command, and the last-named is devoting his life to the furtherance of the well-being of the men of the Navy, and of the community at large.

I am in general agreement with the remarks in these essays, and in order to enable them to be readily put into effect the following recommendations are made:—

(*a.*) *Lectures on discipline and its value* should be given to—

(i.) Petty officers in the depôt.

(ii.) Boys in the training ship.

(iii.) Stokers in the training ship.

(*b.*) Officers, and particularly the officers of divisions, must be taught that their first duty is the well-being of those under them. To this end they must take a great interest in the men's work and recreations, and get to *know* those under their orders. Kindness and courtesy should always be shown without familiarity or loss of respect being engendered. Men should be able to feel that the officer of their division is one to whom they can always appeal when in difficulty.

(*c.*) Officers must thoroughly realize that the more efficient they are at their work the easier it is to command their men.

They should not spare themselves, and it should be a proved fact that they never call on a man to perform any duty which they cannot do themselves. (This cannot in many cases apply to technical craftsmen.)

(*d.*) The attention of officers should be called to the necessity of not flaunting their advantages over the men. As an example in this direction, it is sometimes thoughtless for large numbers of officers to go on shore as soon as a ship anchors and long before any liberty men can land. Judgment should be exercised in these matters.

(*e.*) Senior officers should not, as a rule, correct individual men for mistakes made, but should call the attention of the officer or petty officer in charge of the work to the mistake, in order that the latter may have it corrected.

(*f.*) Officers and petty officers should be taught to give words of command smartly. Slovenly methods of giving orders will never produce good results and smartness.

(*g.*) Officers should be most carefully instructed in the best methods of investigating the cases of men brought up before them charged with various offences.

They must thoroughly understand that the "accused" is not an offender unless the charge is proved against him.

They must exercise patience and restraint in dealing with all cases brought before them, constantly bearing in mind the fact that it must be clear to every one that they are certain of obtaining justice.

The old service custom by which accused men take off their caps during the investigation of their cases is out of date, being now generally considered to be a humiliation to which a man who is under trial should not be subjected. I have recommended to the Admiralty that it should be discontinued.

(*h.*) All officers must set an example to their men by showing the greatest courtesy and respect towards their superior officers and consideration towards their juniors.

Disparaging remarks made in a mess concerning those in authority, whether officers or petty officers, are most subversive to discipline, and soon become known all over a ship.

(*i.*) Having deputed an officer or man to carry out a task, he should, if circumstances admit, be given the opportunity of completing the work, as the act of taking it out of his hands is a humiliation which will give pain, particularly if undeserved.

Here, again, judgment must be exercised, as many cases arise in which for efficiency's sake it is best to interfere. The above remarks must, however, be constantly borne in mind. Self-restraint will often need to be exercised in carrying them into effect.

(*j.*) Men should be taught correct deportment by drill.

Rifle exercises have an excellent result in this direction when properly carried out. These consist of—

(i.) Disciplinary rifle exercises.

(ii.) Rifle exercises having a direct military purpose.

The distinction between these and the reason for each should be carefully explained to the men.

Men must be taught that when called to "Attention" they must rigidly maintain this attitude, and failure to do so should be regarded as an offence.

They should, however, never be kept at "Attention" for longer periods than are necessary, as it then becomes impossible to maintain the correct attitude.

Officers in charge of instruction should drill their men before turning this duty over to an instructor. The officer should aim at being able to demonstrate that he can drill them better than the instructor.

(*k.*) Life on board ship brings people into very close contact, if not into collision, and every one must bear in mind the necessity for exercising tolerance towards others and endeavouring to "pull together" for the good of the ship and the Service.

At the same time, smartness and efficiency must be the essentials for which every one is working.

(*l.*) The promotion of a strong sense of *esprit de corps* in a body of officers and men, whether belonging to a ship or any other unit, will prove to be of great assistance in the maintenance of discipline; consequently this should be aimed at.

Whilst endeavouring to instil a high sense of duty and good discipline in its best form into the personnel, everything possible should be done that will add to the comfort of the ships' companies. Great attention should be paid to the diet, both as regards its composition and the method of its preparation.

(*m.*) *Men's living-quarters should also be made as comfortable as possible,* and good facilities provided for reading and writing, amusements, playing games, washing, stowage of kits, &c.

Married men should, whenever possible, be given facilities for seeing their families.

A.—Remarks on Discipline.

1. In a consideration of the question of discipline one is, in these days, at once brought face to face with the difficulty presented by the prevailing spirit of the times. This spirit is usually roughly described as "Democracy"; but to a large extent it means a disinclination to accept any form of restraint, and a desire for unrestricted freedom of life and action.

From the point of view of the State this attitude of mind is regrettable and may be dangerous. In the Naval service such an attitude of indiscipline is quite incompatible either with efficiency in general or with the happiness and well-being of any particular unit.

(*a.*) *That lack of discipline is incompatible with efficiency in war* needs no demonstration; or, if demonstration be required, it can easily be supplied by those who have had experience in handling bodies of men on active service.

(*b.*) *That lack of discipline is dangerous even in times of peace* is almost equally obvious. If officers and men are allowed to fall into indolence, if discipline is insensibly relaxed, even the best ships' companies will quickly be reduced to a condition both inefficient and contemptible. And it may be

added that unless in peace-time wise and vigorous measures are adopted to maintain discipline, and to prevent men from sinking into indifference and slackness, when war breaks out it will then be too late to remedy the evil—indeed, any attempt to do so would probably cause serious trouble at a moment when it could least be tolerated.

(c.) *Furthermore, lack of discipline on board ship leads to unhappiness and discomfort.* In a human society so complex and so crowded together as that of a ship-of-war, friction and misunderstanding are bound to arise where there is any doubt as to who is to command and who obey, or where there is any hesitation or doubt as to the force of orders or their binding nature. Thus it is generally agreed by all ranks that an undisciplined ship is nearly always a discontented and unhappy one.

2. Discipline, then, being essential both in war and peace, both for efficiency and for the general well-being, the question which next presents itself is, *How is discipline to be taught and maintained?*

In approaching this matter it should be remembered that man has not only a body but also a spirit; and that therefore mere bodily or mechanical discipline—the discipline secured by precision of drill and the performance of evolutions—is far from being wholly sufficient. The discipline of the German Forces in the late war was largely of that type, and in their Navy at least it failed to stand the final test. What is needed is something perhaps less obvious and tangible, but more real and more deeply ingrained—not only the practice of discipline, but still more the habit and spirit of discipline. The question therefore presents itself in this form: *How is the spirit of discipline to be infused and maintained?*

(a.) *The infusing of the spirit of discipline* certainly presents a difficult and complicated problem, though perhaps in reality it is not so difficult as would at first sight appear.

(i.) *It is rendered easier by entering boys into the Naval service as young as possible.* The habit and spirit of discipline, and of obedience to orders, is more readily acquired in the early years of life than later on when the character is more fixed and moulded.

(ii.) *In the case of older men it ought to be possible to get them to realize the importance and nobility of duty,* and to make them see that their first duty is discipline. If they can be brought to regard discipline from this point of view, it may well be that they will come to look upon it not as an irksome infliction, but as a necessary part of their profession.

(iii.) *The spirit of discipline can further be infused by leading men to take a real pride in the service* to which they belong, and conversely a pride in themselves as belonging to that service. Indeed, pride of service is essential to the true spirit of discipline. These are days when men reason and think for themselves, and it is necessary that they should realize the nobility of their profession and the importance of all that makes for its efficiency.

The spirit of discipline once infused, it is no less important to pay careful attention to its maintenance.

(b.) *Discipline will be maintained—*

(i.) *By being administered with inflexible firmness, tempered with reason.* A discipline which is sometimes firm and sometimes lax is useless, dangerous, and unfair. If men cannot be induced to be fond of discipline they can at least be brought to respect it as a sacred principle which must not be violated, and a breach of which cannot be tolerated.

(ii.) *By strict regard to discipline in minor matters.* Since discipline is a fixed principle underlying all service life, it follows that nothing is too minute for its notice—more especially as negligence in small matters inevitably leads to indifference in matters of greater importance, and too often prepares the way to a complete destruction of discipline.

(iii.) *By a spirit of mutual confidence between officers and men.* If this confidence be lacking it will be found that the whole edifice of discipline is built on a foundation of sand.

3. It only remains to point out in general terms the *moral value of the spirit of discipline.* That moral value amounts to this—that discipline rightly directed and understood tends not to dwarf, but to strengthen and elevate the character.

(a.) *It engenders a spirit of calmness in emergency.* The same spirit which keeps a disciplined man at his post when all his comrades have fallen will keep a man brave and cool in the midst of emergency, panic, and disaster. In other words, discipline renders a man more capable of facing the changes and chances of human existence.

(b.) *It produces a certain determination and firmness of character.* A disciplined man who has been given a difficult task to accomplish is more likely to carry it through to a successful conclusion than the undisciplined man, who may be turned aside at the first obstacle. The man of discipline has learnt to resist, bear up, hold on, in spite of all difficulties.

(c.) *It teaches sentiments of confidence and self-respect*—for, having learnt to obey, he has gone a long way towards learning to command.

In a word, the object and the result of true discipline is to inspire men with bravery, firmness, patience, and with sentiments of honour. A service so disciplined is less expensive to the State, and at the same time it is providing the State with citizens who, on their return to civil life, will be a real strength to the community.

B.—To Young Men about to enter a Profession.

I will give a watchword to you men who are on the threshold of your career—the watchword of that almost unexampled military genius and hero whose life and character you can study with the greatest advantage—the American General, Stonewall Jackson: the watchword—"*Press forward.*"

You have all most likely read the stories of Mr. Rudyard Kipling, and some of you may remember his story of the soldier of some years' standing who, after going through years of what had seemed to him tiresome work on barrack parade-ground and peace exercises, and finding himself for the first time in action with bullets flying and men falling, confessed that what it had taught him was that he was to go forward and not back.

Think of John Nicholson, that matchless hero, with honour, courage, integrity of purpose, unsullied by any worldly consideration—think of his words when lying mortally wounded in that narrow street that was leading to the capture of Delhi and the safety to England of the Indian Empire: "*Forward, men, forward.*" And when for one dreadful moment it seemed as if even his dauntless spirit was insufficient to inspire those under him with that exalted ideal, he ordered, "*Officers to the front!*"

Press forward—not to the hindrance of your neighbour, but to the attainment of the highest object of your profession. Do *your* best for the general good. Don't think that your influence with others is so slight that it can have no effect, but do your best whatever it is you do and it will be for the general good. Press forward—not to obtain the prize, but to overcome the obstacle. You may not quite understand that distinction for the moment, but if you consider it you soon will; so I repeat and emphasize it—*Press forward, press forward,* not to obtain the prize, but to overcome the obstacle.

C.—Discipline.

"Considering, therefore, the power of the State against which we are marching, and the greatness of the reputation which, according to the event, we shall win or lose for our ancestors and ourselves, remember, as you follow where you may be led, to regard discipline and vigilance as of the first importance, and to obey with alacrity the orders teansmitted to you, as nothing contributes so much to the credit and safety of an army as the union of large bodies by a single discipline."—(*Thucydides,* "Peloponnesian War"—Book II, chapter VI.)

1. The Englishman is, on an average, naturally disciplined. He inherits this characteristic, and accustoms himself to it from his earliest days.

Those unaccustomed to control and discipline do not, as a rule, see the necessity for it. To be accustomed to control is, however, necessary in order to obtain discipline. The difficulty of maintaining discipline is increased where those to be subjected to discipline are discontented, or, in other words, think they have cause for complaint.

Life on board ship is and must be subject to strict discipline, and this can be achieved more easily if, in addition to a natural realization of the value of discipline, the conditions of life under which men are made to live are made as smooth and free from cause for just complaint as circumstances permit.

2. It is considered that the following are some of the causes of complaint which may arise against life on board a man-of-war:—

(i.) Living-quarters not very comfortable.
(ii.) General discomfort.
(iii.) Separation of men from their homes.
(iv.) Lack of opportunity for advancement.

Contributing casues to discontent are also,—

(v.) Labour unrest.
(vi.) Trades-unions and politics.
(vii.) Reaction after the war.
(viii.) High wages on shore.

3. *General Remarks.* Some of the causes given above are inherent in ship life, and cannot be altogether eliminated, but it should be possible by arrangement to make them less arduous.

For instance, living-quarters could be made more comfortable, and better facilities provided for washing, stowing kits, reading, playing games, amusements, canteens, barbers' shops, &c. (the U.S. Navy has superior accommodation in some of these respects to that of our modern ships). Married men might be given facilities for having their wives and families quartered in the neighbourhood of their ship's base. Better water-transport arrangements could be provided at the various home ports. The pay should be such as will compensate men, in comparison with their neighbours on shore, for the disadvantages of ship life.

Other causes, such as labour unrest, political interference, &c., can be neutralized in time by a strengthened sense of discipline.

In regard to *promotion* from the lower deck the position is more difficult. It is obvious that the number of officers is strictly limited by the requirements. All officers' service is long service, therefore the wastage is small, and the entry correspondingly so. It must be realized, therefore, that all men cannot enter the Navy with the promise of becoming officers; a percentage only may reach this rank, although all start with equal chances, in the same way that only a percentage of the boys entering as Cadets can hope to reach the higher ranks.

In order to build up discipline on a sure foundation it is necessary to foster the spirit of self-respect and self-control in each individual, to stimulate interest, and to produce mutual trust and confidence between officers, petty officers, and men.

From the date of their first entry, officers and men should be taught to think first of their ship and afterwards of themselves; *esprit de corps* is absolutely essential. Self-control and general control are also necessary attributes. These qualities can, however, only be developed under conditions of ship life which are as favourable as possible.

Discipline by control, as opposed to discipline by restraint, is that aimed at as being suited to the times, the national temperament, and the advancement in education.

4. *Remarks on "Control."*—Discipline in H.M. ships is chiefly dependent on the quality of the officers, and mostly that of the Captain and Executive Officer. The standard of discipline in any ship varies as a rule with the qualities of these two officers.

This should not be so to the extent to which it is at present. The junior officers and petty officers usually take their cue from the Executive Officer, instead of having a standard of their own *taught from their first entry into the service.* If the Executive Officer disregards an obvious breach of discipline or slackness, those junior to him do the like. If, as is sometimes the case, he corrects the man himself, the man is prone to think his own immediate superior is a nonentity. In most cases it would have been better for the Executive Officer to have corrected the officer or petty officer in charge. The officer or petty officer should be supported in his lawful duty; he should always be corrected if he commits himself, but never, if it can be avoided, publicly before his subordinates.

Discipline, which is control, should start from the bottom, receiving *constant support* from above.

For a senior officer to correct a man for a trivial offence is to lower himself in the eyes of that man; not so, however, for the officer or petty officer in immediate charge—it is his business to do so.

Nothing irritates officers or petty officers more than a senior officer reprimanding or interfering with men working under their immediate command; it takes the control out of their hands which it is essential for them to have. The excuse which most officers would give for doing this is that it is generally quicker (which it is, but nevertheless wrong), or that the officers or petty officers do not know how to do it themselves: it is the duty of the Executive Officer to teach them if they do not know what to do under such circumstances, otherwise he is living on the capital of the service.

It should always be remembered that the best officers are those who possess powers of observation, and, having those powers, *know how to use them.* It is the smart, quick, and, if possible, cheery voice that gets the work well done. Nothing is too trifling to take notice of; for although a small thing may signify but little in itself, it is the accumulation of such, when left unchecked, that goes so quickly to show the want of supervision which spells a slack ship.

D.—Notes on Discipline.

Discipline is a subject on which idealists and theorists are fond of writing. It is a subject which throughout all time has presented the greatest difficulties.

At first sight it would appear obvious that the opinions on the subject which should be given most consideration should be those of men who have been able to obtain a high standard of discipline amongst those serving under them. This view is perfectly correct *if due allowance is made for the personalities* of the different successful disciplinarians whose views are quoted. It is the difference in their personalities which explains the difference in the methods by which they have each obtained good discipline amongst men of similar temperament and characteristics.

History and literature furnish many instances of men who have made their mark in virtue of a striking personality—whose reputation rests not on any visible tokens, not on kingdoms conquered, institutions founded, books written, or inventions perfected, or anything else that they did, but mainly on what they were. Their merely having passed along a course on earth, and lived and talked and acted with others, has left lasting effects on mankind.

Discipline is defined in the dictionary as being—Education, development of the faculties by instruction and exercise. Training, whether physical, mental, or moral. Training to act in accordance with established rules; accustoming to systematic and regular action; drill. "The most perfect, who have their passions in the best discipline, are yet obliged to be constantly on their guard" (*Rogers*). "The subject-matter of instruction; a course of study; a branch of knowledge" (*Bishop Wilkins*).

Amongst many of those who have not closely examined the question there is a disposition to look on discipline as the definition of a treatment of one's subordinates in a manner combining severity with unkindness; in fact, they consider that a disciplinarian is another name for a bully. Many such people, in preaching a doctrine against discipline, proclaim that all men are equal, and that it is contrary to the dignity of a man to belong to a disciplined force.

This teaching does a great deal of harm amongst the uninformed even in ordinary times, and during the present period of very natural reaction since the signing of the Armistice is very materially preventing the peoples of the world from recovering a condition of mental and moral stability.

The great fact which they lose sight of is that in a well-disciplined force the officers as well as the men are disciplined—that is to say, *each officer and man has conquered himself*, and is therefore in a fit condition to subordinate his own wishes and desires in carrying out the orders given to him, which, as he knows, are meant to forward the cause for which they stand.

The brutal and unchristian methods of the Prussians, which they were pleased to describe under the heading of *discipline*, are known in England under the names *bullying, unkindness, brutality.*

In this connection the notes on discipline in the attached enclosure should be read.

The most efficient ships, in which a *high standard of discipline* (associated with kindness, courtesy, and sympathy) is maintained, are always *the happiest*. Men-of-war which are *really efficient* in gunnery and torpedo work, coaling and steaming, boat-pulling and games (proficiency in each of which can only be obtained after much hard work) are probably correct in all essentials, including the mental and moral well-being of officers and men. Without good discipline the above achievements are not within reach.

There is an old saying, "Without work no happiness." This is entirely borne out in the Navy, as men serving in a smart and *well-ordered* ship are invariably happier than the same men would be if serving in a slack or slovenly ship. In the former case they take pride in their ship, and in themselves, and their discipline. In the latter case they are quite conscious of not fulfilling their mission.

Very briefly, the following are the most essential rules for teaching and maintaining discipline :—

(1.) All officers must be thoroughly disciplined, and must be as efficient as possible, so as to win the respect of their men.
(2.) *Justice* must always be given—infinite pains being taken in hearing defaulters.
(3.) *Unkindness* (including sarcasm, *i.e.*, unkind words) must never be allowed.
(4.) Courtesy must always be practised.
(5.) *Reproof must always be impersonal*, for it is administered because the offender has not acted up to the high standard of the Navy.
(6.) Kindness from a superior must never be mistaken for weakness.
(7.) Discipline must be maintained. Nothing is more injurious to discipline than to give way to insubordinate demands or refusals to carry out legitimate orders.

The administration of discipline is perhaps best described in the attached copy of a letter from the famous Admiral Lord St. Vincent to a young Commander (Fane); and, as one of the many proofs that Lord St. Vincent practised what he preached, the following copy of a letter from General the Duke of Richmond to Admiral Lord St. Vincent is attached.

Amongst the thousands of examples of the splendid results of discipline, one of the most famous is that shown in Sir Edward Poynter's painting "Faithful unto Death." This well-known picture represents a Roman guard on duty in one of the palaces during the destruction of Herculanæum, who, although he might perhaps have made his escape, prefers to remain at his post, faithful unto death.

In expansion of the above brief Notes on Discipline, the following quotations may be of use to those who are anxious to study the deportment which they should adopt towards others, so as best to practise and maintain discipline :—

Character.—It is character that our modern life waits for, to redeem and transform it, and conduct as the fruitage of character.

Character and Service.—Never should we forget the close connection between character and service, between inward nobleness and outward philanthropy. We are not here to dream, or even to build up in grace and beauty our individual life; we are responsible, each in our own little way, for trying to leave this sad world happier, this evil world better than we found it. In this way slackness is infamy, and power to the last particle means duty.

What men want is not talent, it is purpose; not the power to achieve, but the will to labour.

Order is Man's Greatest Need.—What comfort, what strength, what economy there is in order—material order, intellectual order, moral order. To know where one is going and what one wishes—this is order; to keep one's word and one's engagements—again order; to have everthing ready under one's hand, to be able to dispose of all one's forces, and to have all one's means of whatever kind under command—still order; to discipline one's habits, one's efforts, one's wishes; to organize one's life, to distribute one's time; to take the measure of one's duties and make one's rights respected; to employ one's capital and resources, one's talent and one's chances profitably—all this belongs to and is included in the word "order." Order means light and peace, inward liberty and free command over oneself; order is power. Æsthetic and moral beauty consist, the first in a true conception of order, and the second in submission to it, and in the realization of it, by, in, and around oneself. Order is man's greatest need and his true well-being.

Sacredness of Work.—All true work is sacred; in all true work, were it but true hand-labour, there is something of divineness.

Some of the commonest faults of thought and work are those which come from thinking too poorly of our own lives, and of that which must rightly be demanded of us. A high standard of accuracy, a chivalrous loyalty to exact truth, generosity to fellow-workers, indifference to results, distrust of all that is showy, self-discipline and undiscouraged patience through all difficulties—these are among the first and greatest conditions of good work; and they ought never to seem too hard for us if we remember what we owe to the best work of bygone days.

Judging.—How often we judge unjustly when we judge harshly. The fret and temper we despise may have its rise in agony of some great unsuspected self-sacrifice, or in the endurance of unavowed, almost intolerable, pain. Whoso judges harshly is sure to judge amiss.

We are all inclined to judge of others as we find them. Our estimate of a character always depends much on the manner in which the character affects our own interests and passions. We find it difficult to think well of those by whom we are thwarted or depressed, and we are ready to admit every excuse for the vices of those who are useful or agreeable to us.

To judge is to see clearly, to care for what is just, and therefore to be impartial—more exactly, to be disinterested—more exactly still, to be impersonal.

Perhaps it were better for most of us to complain less of being misunderstood, and to take more care that we do not misunderstand other people. It ought to give us pause at a time to remember that each one has a stock of cut-and-dry judgments on his neighbours, and that the chances are that most of them are quite erroneous. What our neighbour really is we may never know, but we may be

pretty certain that he is not what we have imagined, and that many things we have thought of him are quite beside the mark. What he does we have seen, but we have no idea what may have been his thoughts and intentions. The mere surface of his character may be exposed, but of the complexity within we have not the faintest idea. People crammed with self-consciousness and self-conceit are often praised as humble, while shy and reserved people are judged to be proud. Some whose whole life is one subtle studied selfishness get the name of self-sacrifice, and other silent heroic souls are condemned for want of humanity.

Admit Errors made.—A man should never be ashamed to say he has been in the wrong, which is but saying, in other words, that he is wiser to-day than he was yesterday.

Copy of a Letter from Admiral Lord St. Vincent to Commander Fane.

DEAR FRANCIS,— Admiralty, 21st May, 1802.

I had not an opportunity to give you a few hints touching your conduct as a Commander, before you left town, which induces me to address them to you in a short letter.

Complacency to your officers is the best principle you can act upon respecting them, taking especial care neither to be familiar with them, nor allowing familiarity on their part towards you; the best means of avoiding these evils is, to observe a certain degree of ceremony upon all occasions, which may be done without imposing restraint on them. To the inferior officers and men your humanity and good sense will naturally induce you to show all manner of kindness consistent with the preservation of good order and due execution of the service. Upon complaint being made of any irregularity, investigate it with temper, and never delegate these investigations to a Lieutenant, much less the infliction of punishment, which never ought to take place but when absolutely necessary, and the strictest decorum observed in the conduct of it; and, whatever your feelings are, nothing like passion ought to appear.

An expensive way of living having crept into the service during the late war, I cannot avoid stating my decided opinion that it has done more injury to the Navy than can be described in a letter. I therefore recommend strongly to you to limit your table to what is decent and proper, equally avoiding profusion and variety, and never to sit long after dinner. It is almost universally the custom for the Captain to dine with the Lieutenants once a week. I never approved of it; but perhaps it will be difficult for you to decline such an invitation without subjecting yourself to a charge of singularity; and probably the lesser evil will be in complying with the usual practice, taking care not to be drawn into long sittings or familiar discussions. I am sure you will take this sermon in good part, though it has far exceeded the bounds of my intention; and heartily wishing you all manner of prosperity, be assured I am, &c.,

ST. VINCENT.

Copy of a Letter from General the Duke of Richmond to Admiral Lord St. Vincent.

MY DEAR SIR,— Ramner Camp, near Dorking, 6th August, 1780.

As it is by no means a matter of indifference to me whether my nephew receives the best education possible at sea, or the common one, which is very bad, I must rejoice at his being with you, where he will be made both a seaman and a gentleman. Good sense in education is rarely met with, and unreasonable severity and total neglect are the extremities which are oftener fallen into than that *just medium* observed on board the "Foudroyant"; for *even attention without judgment is of little avail.* From the little I have seen, and the much I have heard, I am convinced that Lord Gerald is a very lucky young man to have been received by you. I am, &c.,

RICHMOND.

[*Enclosure to Section D.*]

EXTRACTS FROM SOME NOTES ON THE GOOD SIDE OF "MILITARISM."

By an officer who, after serving for six years in pre-war days as an officer in the Royal Artillery, then retired and went to Oxford in order to study theology with the object of eventually taking holy orders. He enlisted in August, 1914, obtained his commission, and was killed in October, 1916.

I had a letter the other day from an Oxford friend. It was in this phrase: "I loathe militarism in all its forms." Somehow it took me back quite suddenly to the days before the war, to ideas that I had almost completely forgotten. I suppose that in those days the great feature of those of us who tried to be "in the forefront of modern thought" was their righteous egotism, their anarchial insistence on the claims of the individual at the expense even of law, order, society, and convention. "Self-realization" we considered the primary duty of every man and woman.

And then I thought of what I had seen only a few days before. First, of battalions of men marching in the darkness, steadily and in step, towards the roar of the guns, destined in the next twelve hours to charge as one man, without hesitation or doubt, through barrages of cruel shell and storms of murderous bullets. Then, the following afternoon, of a handful of men, all that was left of about three battalions after ten hours of fighting, a handful of men exhausted, parched, strained, holding on with grim determination to the last bit of German trench, until they should receive the order to retire. And, lastly, on the days and nights following, of the constant streams of wounded and dead being carried down the trench; of the unceasing search that for three or four days was never fruitless.

Self-realization! How far we have travelled from the ideals of these pre-war days. And as I thought things over I wondered at how faint a response that phrase, "I loathe militarism in all its forms," found in my own mind.

Before the war I too hated "militarism." I despised soldiers as men who had sold their birthright for a mess of pottage. The sight of the guards drilling in Wellington Barracks, moving as one man to the command of their drill instructor, stirred me to bitter mirth. They were not men but manikins. When I first enlisted, and for many months afterwards, the "mummeries of military discipline," the saluting, the meticulous uniformity, the rigid suppression of individual exuberance, chafed and infuriated me. I compared it to a ritualistic religion, a religion of authority only, which depended not on individual assent, but on tradition, for all its sanctions. I loathed "militarism" in all its forms. Now—well, I am inclined to reconsider my judgment. Seeing the end of military discipline has shown me something of its ethical meaning—more than that, of its spiritual meaning.

For, though the part of the "great push" that it fell to my lot to see was not a successful part, it was none the less a triumph—a spiritual triumph. From the accounts of the ordinary war correspondent I think one hardly realizes how great a spiritual triumph it was. For the war correspondent only sees the outside, and can only describe the outside of things. We who are in the Army, who know the men as individuals, who have talked with them, joked with them, censored their letters, worked with them, lived with them, we see below the surface.

The war correspondent sees the faces of the men as they march towards the Valley of the Shadow, sees the steadiness of the eye and mouth, hears the cheery jest. He sees them advance into the Valley without flinching. He sees some of them return, tired, dirty, strained, but still with a quip for the passer-by. He gives us a picture of men without nerves, without sensitiveness, without imagination, schooled to face death as they would face rain or any trivial incident of everyday life. The "Tommy" of the war correspondent is not a human being, but a lay figure with a gift for repartee, little more than the manikin that we thought him in those far-off days before the war, when we watched him drilling on the barrack-square. We soldiers know better. We know that each one of those men is an individual full of human affections, many of them writing tender letters home every week, each one longing with all his soul for the end of this hateful business of war which divides him from all that he loves best in life. We know that every one of these men has a healthy individual's repugnance to being maimed, and a human shrinking from hurt and from the Valley of the Shadow of Death.

The knowledge of all this does not do away with the even tread of the troops as they pass, the steady eye and mouth, the cheery jest; but it makes these a hundred times more significant. For we know that what these things signify is not a lack of human affection, or weakness, or want of imagination, but something superimposed on these, to which they are wholly subordinated. Over and above the individuality of each man, his personal desires and fears and hopes, there is the corporate personality of the soldier which knows no fear and only one ambition—to defeat the enemy, and so to further the righteous cause for which he is fighting. In each of these men there is that dual personality: the ordinary human ego that hates danger and shrinks from hurt and death, that longs for home, and would welcome the end of war on any terms; and also the stronger personality of the soldier who can tolerate but one end to this war, cost what that may—the victory of liberty and justice, and the utter abasement of brute force.

And when one looks back over the months of training that the soldier has had one recognizes how every feature of it, though at the time it often seems trivial and senseless and irritating, was in reality directed to this end. For from the moment a man becomes a soldier his dual personality begins. Henceforth he is both a man and a soldier. Before his training is complete the order must be reversed, and he must be a soldier and a man. In his conduct he no longer only has to consider his reputation as a man, but still more his honour as a soldier. In all the conditions of his life, his dress, appearance, food, drink, accommodation, and work, his individual preferences count for nothing, his efficiency as a soldier counts for everything. At first he "hates this," and "cannot see the point of that." But by the time his training is complete he has realized that whether he hates a thing or not, sees the point of a thing or not, is a matter of the uttermost unimportance. If he is wise, he keeps his likes and dislikes to himself.

All through his training he is learning the unimportance of his individuality, realizing that in a national, a world crisis, it counts for nothing. On the other hand, he is equally learning that as a unit in a fighting force his every action is of the utmost importance. The humility which the Army inculcates is not an abject self-depreciation that leads to loss of self-respect and effort. Substituted for the old individualism is a new self-consciousness. The man has become humble, but in proportion the soldier has become exceedingly proud. The old personal whims and ambitions give place to a corporate ambition and purpose, and this unity of will is symbolized in action by the simultaneous exactitude of drill, and in dress by the rigid identity of uniform. Anything which calls attention to the individual, whether in drill or dress, is a crime, because it is essential that the soldier's individuality should be wholly subordinated to the corporate personality of the regiment.

As I said before, the personal humility of the soldier has nothing in it of abject self-depreciation or slackness. On the contrary, every detail of his appearance and every most trivial feature of his duty assumes an immense significance. Slackness in his dress and negligence in his work are military crimes. In a good regiment the soldier is striving after perfection all the time.

And it is when he comes to the supreme test of battle that the fruits of his training appear. The good soldier has learnt the hardest lesson of all—the lesson of self-subordination to a higher and bigger personality. He has learnt to sacrifice everything which belongs to him individually to a cause that is far greater than any personal ambitions of his own can ever be. He has learnt to do this so thoroughly that he knows no fear—for fear is personal.

It is a far cry from the old days when one talked of self-realization, is it not? I make no claim to be a good soldier, but I think perhaps that I may be beginning to be one, for if I am asked now whether I "loathe militarism in all its forms" I will think that "the answer is in the negative." I will go even further and say that I hope that some of the discipline and self-subordination that have availed to send men calmly to their death in war will survive in the days of peace, and make of those who are left better citizens, better workmen, better servants of the State, better Churchmen.

E.—Teaching and Maintenance of Discipline.

The reasons for discipline in every walk of life are well known. From childhood all are, or should be, disciplined, and it is not believed that any rational person disputes the necessity for discipline, the only difference of opinion being the standard of discipline that it is necessary to produce in any particular profession, &c.

In the fighting services of a civilized country it has almost invariably been the practice to try and produce the highest standard of discipline. This is essential, as discipline instils obedience and *vice versa*, and it will be found that under the most trying conditions of discomfort, danger, &c., the human machine will not fail.

Discipline in the past has probably mostly been obtained by fear of punishment. Nowadays, owing to improvements in education, discipline can be obtained and maintained much more readily by the personal character of those in authority than by the exercise of punishment.

It is essential that those in authority should be possessed of imagination and sense of humour, more particularly the more senior officers, and they must always be ready to set an example by never sparing themselves for the good of the service.

Power of command is usually learnt by experience, but it is recommended that junior officers should be instructed in this all-important matter more than is the case at present.

There must be a good reason for every order that is given, and the reason should be explained to the men where this is possible. Good seed can frequently be sown in this direction by explanation to petty officers and others; it soon gets round.

Petty officers, leading rates, and others must be taught to lead and direct others and to combine firmness with tact.

Parades and many other forms of close-order discipline must never be neglected.

By Authority: Marcus F. Marks, Government Printer, Wellington.—1919.