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THE ARMY INDUSTRIAL COLLEGE
Washington, D C

Course 1936-1937

MATERIAL PROCUREMENT PLANNING, NAVY DEPARTMENT

by

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MATERIAL PROCUREMENT PLANNING, NAVY DEPARTMENT

"BRITISH STRATEGY"

(study of the Application of the Principles of War)

Major General Sir F Maurice, K C M G , C B

"Napoleon gave as his recipe for victory the big battalions He obtained his results mainly by shock power delivered at the right time and place. Power in modern war takes the form of fire-power, using the term to comprise every form of projectile projected from sea, land or air To enable that form of power to be sustained, big factories will be as essential as were big battalions to Napoleon If machines of the right kind and in the necessary numbers are to be produced quickly, and if those machines are to be provided with the immense amount of missiles which they are capable of discharging, then enormous demands will be made upon manufacture It follows, then, that in any future war those countries which have a highly developed industrial system and control over raw materials convertible into military machines and munitions will be at a great advantage, and further, that of those countries, the one which has given at least as much thought to the mobilization of its industries as it has to the mobilization of its armies will be at the greatest advantage "

"MUST WE FIGHT IN ASIA?"

Nathaniel Peffer

"Military prowess today is not a matter of martial spirit, courage or the will to war. It is a product of technological capacity and industrial organization means of communication, mass production, possession or command of raw materials A highly evolved industrial system is an indispensable condition "

The above quotations, supported by constant newspaper articles emanating from leaders in every large country in the world, indicate clearly the increased appreciation of the value of industrial support of the military forces

That such a trend would eventually develop was fully appreciated by the Army at the close of the Great War and led to

the inclusion in the National Defense Act of Section 5 (a), which was inserted in 1920 This placed the authority for the development of industrial mobilization on The Assistant Secretary of War and this officer, supported by a large detail of Army officers, has worked constantly since that time on what should prove to be a very successful mobilization plan.

It was early appreciated that the participation of the Navy was necessary in order for this plan to be effective and in 1922 the Joint Army and Navy Munitions Board was organized by administrative action For many years this Board was ineffective but in 1931 it was reorganized and has taken an active part in the coordination of procurement plans between the two services since that time

In 1933 the first edition of the Industrial Mobilization Plan was issued and was approved by the Secretaries of both departments but some of its provisions were not entirely satisfactory to some of the Bureaus of the Navy Department. In 1935 a revision of the first edition was undertaken in which the Navy took an active part and the revised edition of 1936, approved on 9 September by the Secretary of the Navy and on 14 September by the Acting Secretary of War has eliminated the principal objections to the previous edition Printed copies of this plan are available at the cost of fifteen cents from the Superintendent of Documents, Washington, D C.

Chart No 1, appended hereto, outlines the administrative and operating organization of the Navy Department, showing particularly the position of the Chief of Naval Operations

Chart No 2 Army Officers apparently have difficulty understanding the difference between this organization and their own General Staff system but the best comparison seems to be that in general the Navy Department organization corresponds more nearly to the control system of the British Government, whereas the Army organization is patterned after the German General Staff

Current procurement in the Navy Department is largely handled by the Bureau of Supplies and Accounts This Bureau is officered by the Navy Supply Corps, which in its years of operation has established for itself a reputation for integrity and business ability of the highest order. The Bureau aims to maintain an organization which will be able, in the event of a

national emergency, to expand to the extent necessary to handle the increased business without changing its methods of operation This they did very successfully in the last war.

Chart No. 3 outlines the present organization of the Fleet Maintenance Division of the Office of the Chief of Naval Operations This division is a purely staff division for the purpose of advising the Chief of Naval Operations as to the place, character, and time of construction, repairs and alterations that should be undertaken on vessels of the Fleet. It is the coordinating office of the Navy Department for insuring the upkeep of the Fleet in the best possible material condition. Most of its sections are concerned with current work but Op-23M, the Material War Procurement Planning Section, is charged with the coordination of the Material Contributory War Plans in the Navy Department and the coordination of war time procurement plans with the War Department

The War Procurement Planning Section, Chart No 4, has the following duties assigned to it

WAR PLANNING SECTION

(q) This section shall under the direction of the Director, Fleet Maintenance Division -
  (1) Prepare War Plans for the Fleet Maintenance Division
  (2) Coordinate the Material Contributory War Plans prepared by the Bureau and Naval Districts and all other procurement and production agencies
  (3) Coordinate the procurement of material in preparation for war in order to insure adequate logistic support of all naval operations
  (4) Coordinate the material procurement War Plans of the Army and Navy and assist in the formulation and keeping up to date of such pertinent plans and policies as in the opinion of the two Departments should be adopted by the Federal Government for coordinating national industrial effort in an emergency
  (5) Assist in the coordination of current Navy Department Specifications.
  (6) Maintain continuous Navy Department liaison with the National Munitions Control Board in connection with the control of the export of tin-plate scrap

(r) In order to properly carry out the provisions of (q)(4) the Director and the Chief of the War Planning Section of this Division are ordered by the Secretary

of the Navy as members of the Executive Committee of the Army and Navy Munitions Board in accordance with the provisions of Section IV, Chapter VIII, Joint Action of the Army and Navy, revised, 1935, and the Chief of Section is, in accordance with General Order No. 82, ordered as a member of the Joint Planning Committee of the Army and Navy Joint Board as procurement planning advisor One officer from this Division is designated as a member of the Secretariat of the Army and Navy Munitions Board in accordance with the provisions of paragraph 3c, Section B, Part I of the Industrial Mobilization Plan 1936
The Supply Corps Officer assigned to this section is designated as the liaison officer with the National Munitions Control Board in connection with the current conservation of tin-plate scrap

The Chief of the War Planning Section, assisted by the War Plans Officers of the Bureau as indicated and by the War Plans Officers of the various Naval Districts, has brought about the compilation in the War Plans Section of the Bureau of Supplies and Accounts of a summary of the total requirements of the Navy for its maximum effort In addition, there has been developed in this same office, a set of "Normal Use Data Tables" for use in computing the probable requirements of standard items for the different types of ships during any given period This places this Bureau in the position at the present time to satisfactorily compute the exact volume of any one of the 40,000 items of material required to operate the Navy for the first year of a war This represents the first step in material planning, the determination of the Navy's material requirements

The next step is to find out where these items are to be procured In summarizing the material estimates, the Bureau of Supplies and Accounts has been furnished by the Bureaus concerned with a list of recommended firms from which the items may be obtained In addition, for purposes of peace time procurement, the Bureau of Supplies and Accounts maintains a mailing list of about 18,000 firms available to bid on all articles required by the Navy This is somewhat similar to the Department of Commerce publication "Willing to Certify List" containing names of firms willing to furnish material which conforms to Federal Specifications In addition, the Bureau maintains a "Navy Department Acceptable List of Approved Materials " This is a list of firms whose products have been tested in Navy or Government laboratories and found to fulfill so satisfactorily our specifications that their products can be purchased without further test This list contains about 600 items and lists about 1000 firms.

If, in time of emergency, the Navy could go into the country's markets alone, the procurement problem would be simple but it is necessary to take into account the fact that the Army, Federal Government, and the civilian population must each have due consideration in any proper solution of the procurement problem An actual investigation of the probable conflict of the two military services in the markets indicates that in about 50% of their purchases the Army and Navy expect to use the same firms

Material required by the two services in war seems to be divided into three classes

(1) Items of which there is an adequate supply for the maximum effort of both services, such as food.
Items under this class do not require allocation

(2) Items for which there is an adequate supply for a maximum Naval effort plus a reduced Army effort, such as blankets
These items must in many cases be allocated

(3) Items inadequate for the combined requirements of the services under any conditions, such as airplanes. These items not only require allocation, but, in addition, the application of a priority decision even for peace time planning Such a decision has recently been rendered by the Joint Board and is available for the assistance of allocating committees in completing procurement plans

These allocation committees are organized under the Army and Navy Munitions Board which, as noted above, is the material procurement coordinating agency Two members of the Executive Committee of the Army and Navy Munitions Board are at the present time assigned to the Joint Planning Committee of the Joint Board to advise the latter in problems connected with industrial mobilization This brings about a complete tie in between the command and supply elements in both services

The greatest single contribution to material procurement by the military services in the last war was the very extensive survey of industry conducted by Mr Howard E. Coffin as a member of the Naval Consulting Board This covered about 25,000 firms No such survey exists at the present time but for the past fifteen years the office of The Assistant Secretary of War has conducted surveys for the Army of such facilities as

they needed and to the extent necessary to fulfill their own requirements Until about a year ago the Navy was forbidden to contact industry in connection with material for war purposes. In 1935 this prohibition was removed and the Navy began to make its own surveys using its regularly organized Inspection Service Without such surveys satisfactory adjustment of the output of any facilities between the two services is impossible

Eventually it will be necessary to examine all items of material used by either service to insure that the supply is adequate and to divide them into the three classes noted above. Up to the present time, however, only those items which have been indicated by previous study to be limited in their supply have been considered As rapidly as such bottle neck items can be determined, adjustment of the output of various facilities between the two services is being carried out.

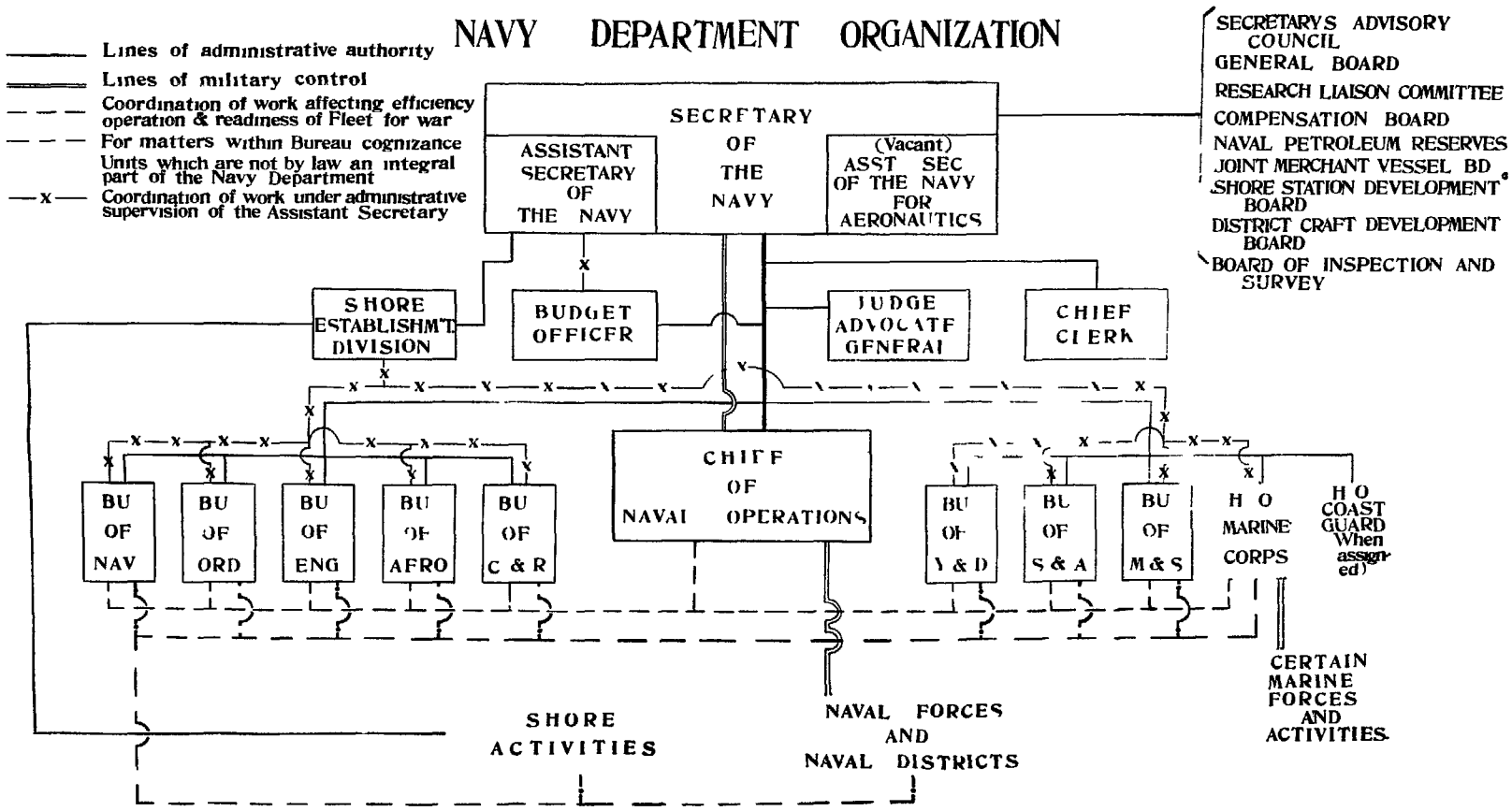
Certain commodities required by both services involve the use of raw materials not produced in this country These have been classified as strategic raw materials and it is considered necessary to make constant studies of the products involving these materials so as to insure an adequate production in time of war These studies have previously been carried out by committees under the direction of the office of The Assistant Secretary of War with Navy members concurring. This year seventeen of these commodities have been assigned to Army and Navy Munitions Board Committees so that the Navy might have a more active part in the proper determination of our raw material requirements

Not only are Allocation Committees and Commodity Committees necessary, but, in addition, in order for all the material procurement problems to be properly coordinated, studies under the direction of the Army and Navy Munitions Board must be undertaken to cover the following subjects

(a) War reserves
(b) Strategic materials
(c) Stock piles
(d) Critical materials
(e) Annexes to the Industrial Mobilization Plan as follows
  (1) Labor
  (2) Transportation
  (3) Power and Fuel
(f) Standardization and the use of Federal specifications.
(g) The adjustment of terminal facilities

Eventually it is to be hoped that industry itself will voluntarily participate in a further revision of the Industrial Mobilization Plan in order to insure a more comprehensive participation in the support of the armed forces in a national emergency, but of this we can be certain that the work now being done involving participation of officers of both services in an effort to solve the many problems of industrial mobilization in time of peace is teaching them to think along similar lines, so that it will be much easier for them to cooperate in a satisfactory solution of the many intricate problems of supply that are bound to be presented in the event of war.

NAVY DEPARTMENT ORGANIZATION



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DEPARTMENT OF THE NAVY

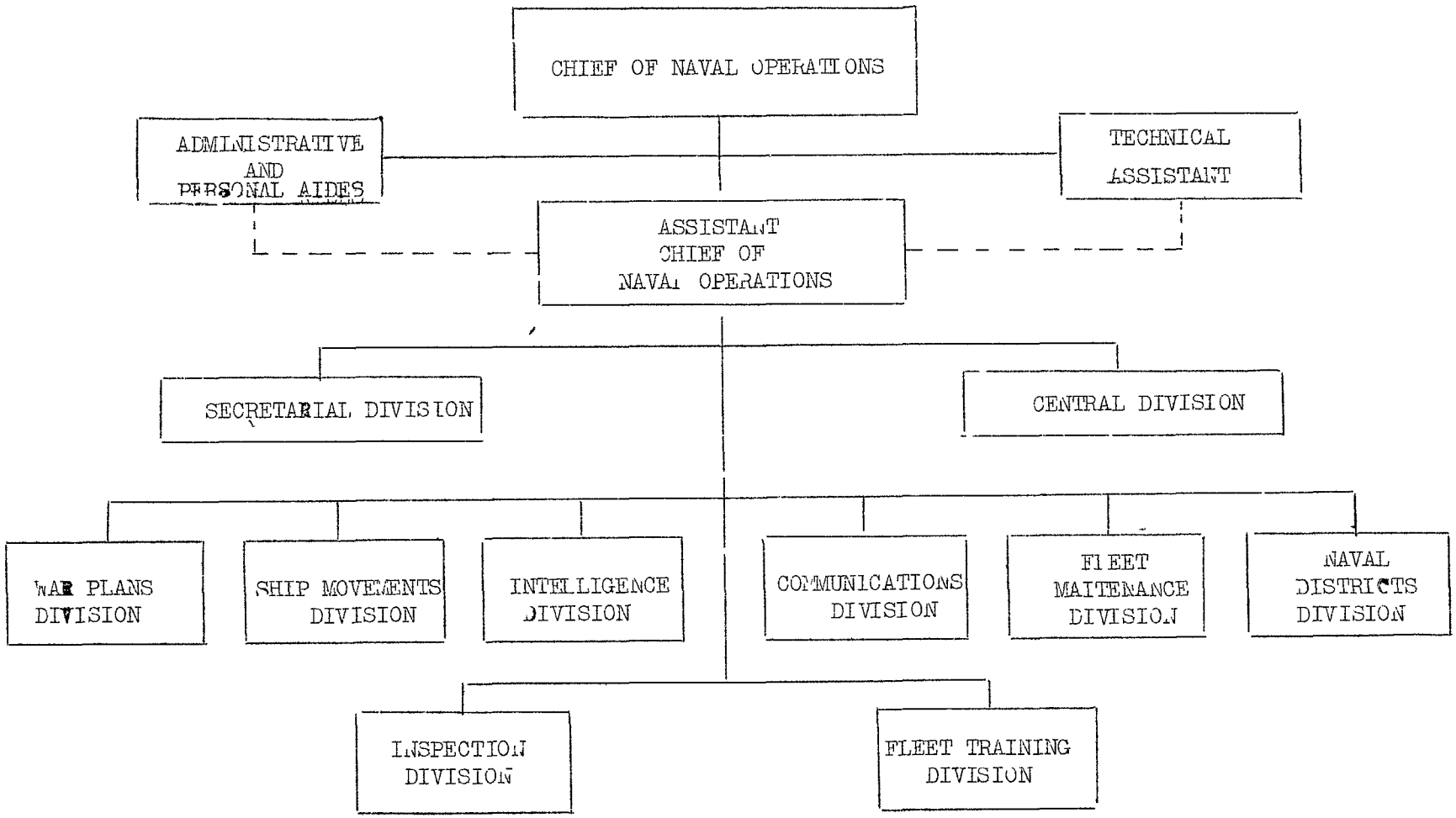

CHART NO 2

FLEET MAINTENANCE DIVISION

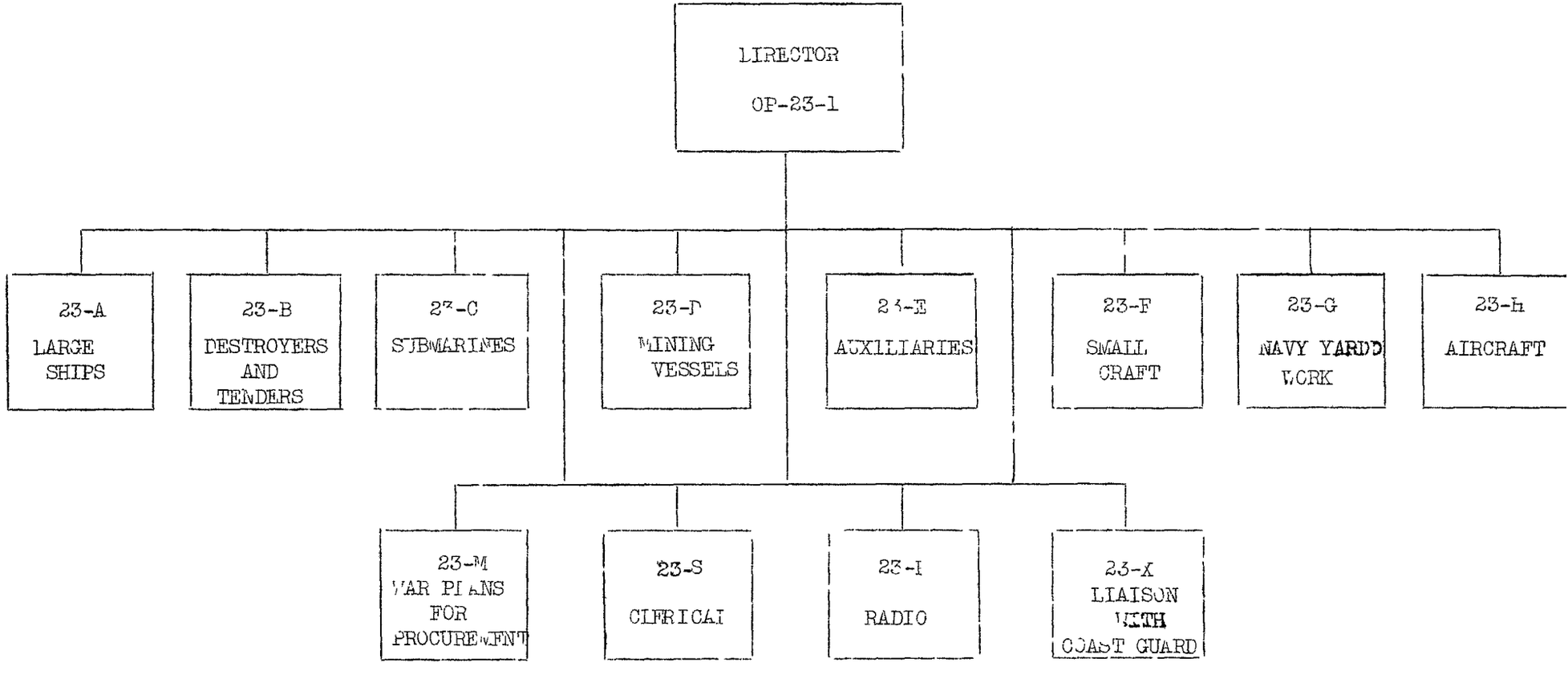

CHART NO. 3

WAR PROCUREMENT PLANNING SECTION

23-

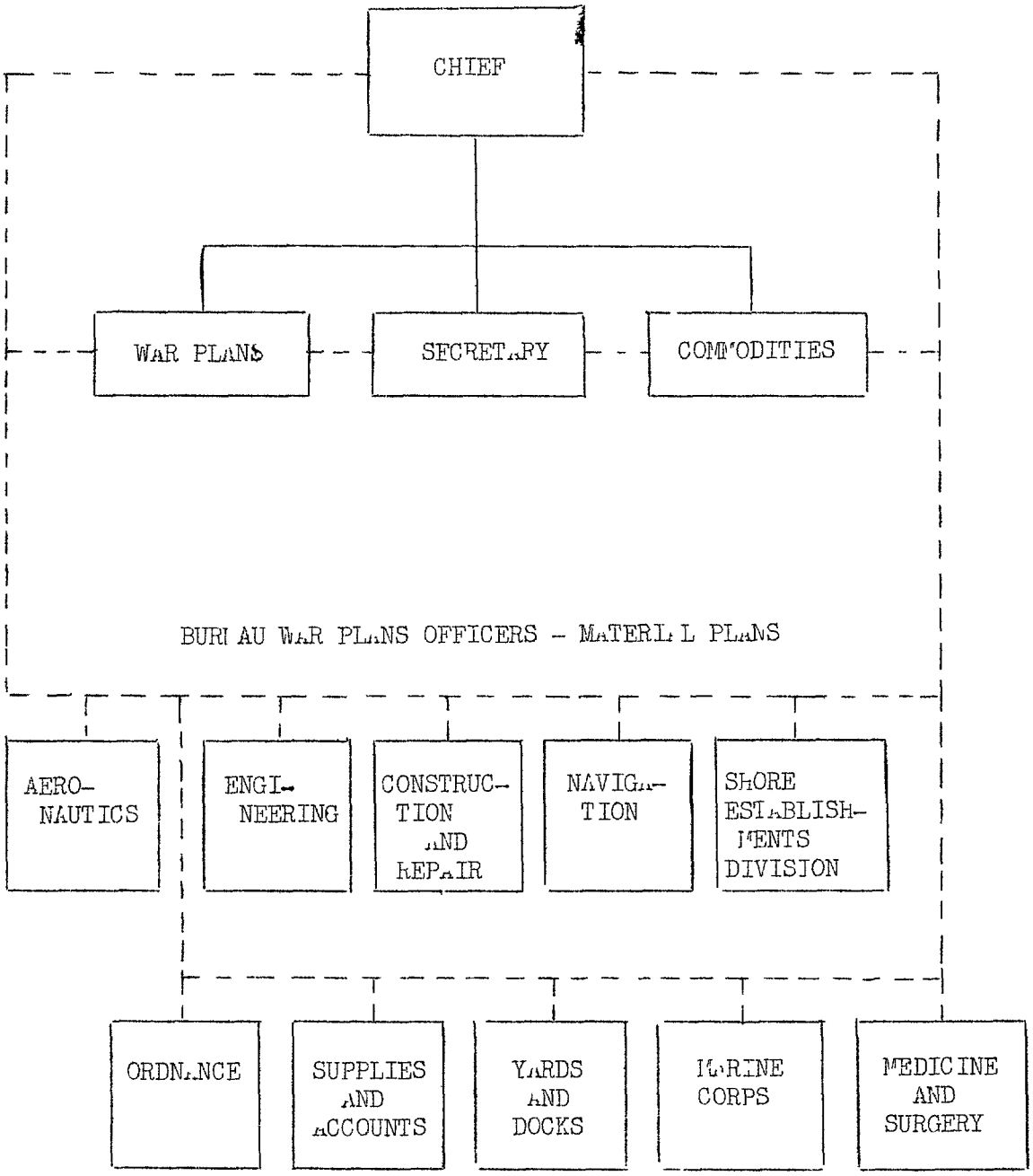

CHART NO 4

DISCUSSION FOLLOWING LECTURE
"THE ORGANIZATION AND FUNCTIONING
OF THE WAR PLANNING SECTION, FLEET MAINTENANCE DIVISION"
by
CAPTAIN ARCHER M. R. ALLEN, U.S.N., DIRECTOR

The Army Industrial College
December 18, 1936

Q. Captain Allen, as you know, the Army system contemplates procurement for war on a decentralized basis. We do not try to take care of all the procurement activities in Washington. If one man tries to do the buying he does not have time to even see the people who ought to be seen about bids. I just wondered to what extent the Navy contemplates decentralization of procurement out of Washington to districts, or to other similar organizations, during a war?

A. As far as I know, the problem of buying material is such and the character of the material is such that a large percentage of our buying will be done right here in Washington. They did that during the war, as far as I know. The Bureau expanded very extensively and did most of the buying right from the central agency. A great deal of our material is contracted for that is of more or less standard types. We are in a little better position to do that. There is no question but what in the early stages of a war paymasters and supply officers in the various districts will go into the open market for comparatively small quantities of

necessary items, but that is all the decentralization I can see at the present time. Can you give us any help on that, Commander Walters?

Commander Walters: Supply Departments of Navy Yards are now authorized to purchase items of standard stock material, or a group of similar items, not in excess of $50.00 without reference to the Bureau of Supplies and Accounts. The total expenditures, however, are controlled by money allotments; under cognizance of the Bureau of Supplies and Accounts. During an emergency, however, the Bureau of Supplies and Accounts has the necessary authority to delegate purchases to field activities to meet emergency demands. There are now three methods of purchase: (1) By newspaper advertising (2) Advertising by means of posting circulars and bulletins in public places. (3) Without advertising or competition in a manner common among business men. The method of purchase is governed by the degree of the emergency, as determined by the Commanding Officer.

Captain Allen: The Commanding Officer determines the urgency of the need, does he not?

Commander Walters: Yes sir. The Administrative Branch, or the Commanding Officer of the station, determines the degree of the emergency, which in turn guides the Supply Officer in the method of purchase adopted. For example, one time when I was in a Navy Yard an emergency purchase had to be made and authority was obtained over the telephone to handle a purchase involving several hundred thousand dollars.

Q. Captain Allen, isn't it possible that one reason why the Navy centralization of purchase was held so completely during the war in Washington was because the major naval effort was along the Atlantic Coast? It seems to me that there might be need of different procedure if the major effort was on the Pacific Coast?

A. I doubt if there would be a great deal of change, because the only logical place to put that centralization would be San Francisco. Unless we moved the whole Navy Department out there I don't think there would be any change in the situation because the distance of San Francisco from the markets themselves is so much greater than the distance from Washington to the principal manufacturing areas. They might try to ship some of it out, from Pittsburgh or Chicago and get it actually into the field, but I doubt if they would make any move on account of the fact that the central gravity of the industrial area of the country is so much nearer Washington than it is the West Coast.

Q. Captain Allen, I would like to get a picture in my mind of the connections in allocation and procurement, take 23-H and aircraft - how do they tie up with 23-M? Then, coming on around to you as Chief of Section, you are the procurement man now on the working committee of the Joint Board. The Aeronautical Joint Board also has authority for procurement and allocation of facilities. How in the world does that tie across with the Army-Navy Munitions Board, which today looks to me like nothing but the old War Industries Board? Would you explain that?

A. Well, in the first place we have to eliminate all of this diagram down to here (indicating position on chart). In other words, there is no particular cooperation between the aircraft people and 23-H and 23-M. These people (indicating) are entirely involved in current repairs and current maintenance of aircraft. All the rest of this section belongs to the current operating element in the Fleet Maintenance Division. This (indicating) is the only part of the section devoted to war planning, procurement planning, and this officer and this officer (indicating) are members of the Army-Navy Munitions Board. The hookup of the Aeronautical Board with Procurement Planning and the Army-Navy Munitions Board is via the Aeronautics War Planning Offices in the Bureau of Aeronautics. We have a list of offices in the various bureaus that are war planning offices. This officer in Aeronautics also sits on the Joint Aeronautical Board. The whole thing is pretty difficult to get squared away at first. I know it took me almost as long to figure that out as it did to figure out where the Aeronautical Board stopped and The Assistant Secretary of War's Office began. I do not believe that I have them completely segregated yet.

Q. Let's take a hypothetical case of a question between the Army and Navy on the allocation of airplane production facilities. The Aeronautical Board, as I see it, should settle it, but say they could not settle it, then the next fellow that gets in on it is apparently the Army-Navy Munitions Board. It would seem to me that the question should be settled on the recommendation of the Joint

Planning Committee of the Joint Planning Board.

A. As a matter of fact, what actually happened the way it worked, the Army-Navy Munitions Board apparently fell down. They did not organize any sub-committees as they should have done, or, if they did, they did not work out satisfactorily. Then they organized the Aeronautical Board, with the hope that it would settle the problem difficulties between the two services. It did not operate and they failed to reach an agreement. Finally, the matter was taken over about a year ago last summer by the Joint Board itself and given to the Joint Planning Committee, and Commander Carroll, now on duty in the Navy Department, and Colonel Spalding of the Army, both members of the Joint Planning Committee - not in any way connected with the Army-Navy Munitions Board or with the Aeronautical Board - were assigned the work of coordinating the procurement planning, or the purchase of aircraft for the two services in the time of national emergency. They worked six months on the thing to get squared away, and finally, on the basis of development of an orange plan, they succeeded in coming to a reasonable agreement as to the principal facilities - that is, the actual aircraft manufacturing concerns. That was submitted to the Joint Board, was approved by the Joint Board, and was referred to the Army-Navy Munitions Board. Since that time, I think the orders have been changed so that any questions of procurement brought up by the Aeronautical Board will be referred to the Army-Navy Munitions Board. The process, however, is still in a state of confusion because it was at a time before they had made any effort to completely

allocate supporting facilities - that is, engine manufacturers, instrument manufacturers, and all the contributing elements in aircraft production. The representatives on the Aeronautical Board and in the two Aeronautical Sections of the Air Force in the Army in the Bureau of Aeronautics were given one year to study the problem, and we expect at the end of that time to have a complete report, for the Navy to then have an opportunity to survey its field completely, and the Army, of course, to continue previous surveys, and at the end of that time they should be in a position to come to a definite agreement, which will then be approved by the Army-Navy Munitions Board, unless it involves a question of war plans, in which case it would be referred to the Joint Board for final decision. You know, it has only been in existence about six months - that is, the procurement members have only been in existence since last August. That is an interesting development, and it looks to me as though they are not quite over the growing pains in spite of all the time since the war.

Q. It looks to me as though the Army-Navy Munitions Board is so big that it is about the size of two.

A. Do you mean large in size or strength?

Q. Large in size and strength.

A. I do not consider the Army-Navy Munitions Board as very large. Its executive committee is down to a limited number; The Assistant Secretary of War's Office is in the picture.

Q. As a strict matter of organization, it would seem clear

to me that the Army-Navy Munitions Board should operate with the Joint Planning Committee and the Joint Board as the top coordinating body of the two services

A. We may get into an argument with my friend, Colonel Harris. I would like to take this opportunity to pay a tribute that is well deserved to Colonel Harris, because a large percentage of the clearing up and the coordination between the two services of the problem that you see before you, and which has been brought up so clearly in this argument about the status of these boards, has been due to the effective work that he has done in the past two years. My predecessor was largely responsible for the strong Navy start on this thing but Colonel Harris, I think, by the careful and considerate manner in which he has gone after this problem has done more than any one individual to bring the procurement planning problem up to its present state of development.

Colonel Jordan: Colonel Harris, may we hear something from you on the Joint Board and the Army-Navy Munitions Board - their relative importance - and the Army-Navy Munitions Board not being under the Joint Board?

Colonel Harris: I am not used to hearing nice things said about myself. It is rather embarrassing - rather cramps my style. We have had a lot of very interesting work to try to clarify this situation, and to my mind the most important single step forward has been the thing that Captain Allen has been talking about the last few minutes. The merging of the Army and Navy interests

into one problem was the biggest step forward that we have made in the fourteen or fifteen years we have been on this job. The understanding of the two services has been remarkable. I say that advisedly. They say nice things about me - I would like to turn them right back on the Navy. They had a much more difficult job because they had to educate elements within the Navy to bring them in line to work in a team when they preferred to work otherwise, and I consider that the present relationship, and particularly the Army-Navy Munitions Board, is certainly a strong step forward. The Army-Navy Munitions Board is not large, perhaps, in numbers, but it is an effective approach between the two services.

With reference to the Aeronautical Board and the Army-Navy Munitions Board, I have one or two things I want to say, and I do not want to enter into anything that verges on argument because I feel very fine this morning. The Joint Board, we all admit, is a determining strategical war plans military board, but it is primarily concerned with the development of the strategical and military plan. The Army-Navy Munitions Board was created at the suggestion of the Joint Board because the Joint Board realized that it was not so constituted as to take care of that phase of the work. Therefore, it was on the recommendation of the Joint Board that the Army-Navy Munitions Board was created. Then the Army-Navy Munitions Board ran into a period of distress and for six or seven years did not function at all. When the air problem came along - it was a new and important arm in both services - and the Aeronautical Board was created. Here is where I somewhat differ

with Captain Allen and the speaker from the floor: The Aeronautical Board considers strictly aeronautical problems. In the two services it is a balance against each other, and, according to my interpretation, they make recommendations as to division of facilities. Recommendations are finally authenticated and approved by the Army-Navy Munitions Board. The Army-Navy Munitions Board is the board that makes effective the recommendations of the Aeronautical Board. To show that this is true, I can cite just one instance: The Aeronautical Board recommended that certain allocations be made jointly, the Army-Navy Munitions Board turned that around and allocated fifty fifty - they wanted a definite allocation so they would know definitely what the dividing line was. The Army-Navy Munitions Board has the power of approval and it does authenticate.

With reference to the Joint Board and the Army-Navy Munitions Board, there is a conflict in the joint actions at the present time because the joint actions were written by the Joint Board and up to six months ago they wrote them without the industrial side having any voice in the matter, without them even knowing they were being written. So, some of them are conflicting. For example, it says under the Aeronautical Board of Joint Actions that the Joint Board makes the allocation of facilities. In another place it says the Army-Navy Munitions Board allocates facilities and no approval of their action is required. Now that Captain Allen and myself are on this Planning Committee, we are gradually bringing to a focus these illogical and contradictory things in the joint actions and are getting them corrected. One has just recently been corrected. A conflict in one place said that all joint boards are

advisory only and that action has to be approved by the two sections to make it effective. Well, the Army-Navy Munitions Board is on record as an administrative board. It is not advisory - it is an action board, so we had to get that changed.

I think if we get hold of, mature, and develop this subject that finally the Army-Navy Munitions Board may reach the complementary stage where it is nothing but the War Industries Board. That is a compliment to the Army-Navy Munitions Board. I feel very keenly about all these things because we have been struggling with them for years. I can remember three years ago, when in this school people said the Army-Navy Munitions Board would never be effective, would never be able to accomplish anything because it had no one single head. Well, I do not agree with that and I never have. I think that the spirit of the last two or three years proves that that is not so. It is a two-headed organization but we have reached agreements on every problem that has been put before us. Not once have we had to refer a problem beyond our Board for adjudication. We have to ask priority decisions because priority decisions are properly a function of the Joint Board, but even though it is a two-headed organization we have not yet failed to be able to reach an agreement satisfactory to both services. Of course, that type of organization moves slowly, and that is a disadvantage. We have to move slowly.

I am awfully glad to see Captain Allen on the platform. I am glad to see the Navy and Army intermingled in this important work. The Navy people who have worked with me have been most cooperative, and

if we had not been good friends perhaps we would not have been able to reach agreements. I really feel very (I am giving my swan song again) hopeful about the situation. If two or three or four years can go on with tolerance, understanding, and good judgment we will get this thing so in business that it will not be in danger again of falling down as it did in 1924.

Colonel Jordan: What Colonel Harris has said (I think the Faculty will back me up in saying this) we in the Army Industrial College thoroughly believe in and approve of.

Q. I realize the goodwill that is in existence. I remember, in studying this last problem, where it said that the Navy was proud of the success and that all coordination in the war was at the expense of the Navy. I am wondering if there is anything in the relations to prevent the Navy going out, say six months or something like that, ahead of actual war, and tying up these various products that the boards will later have to deal with?

A. I do not know how far ahead we can go on that. We cannot go into the market a great distance ahead of a war without telling every country in the world that we are going to war. I am battling in the Navy Department trying to knock out that particular idea. There is no way to go into the markets, either in the Army or Navy, without practically making a declaration of war. No work will be done without definite indication from the President that there is a national emergency, or at least that a national emergency is brewing. I do not anticipate any difficulty. There is no question that both the Army and the Navy will

go into the markets of the country for materials to the maximum that they can under the present laws, and we will have a lot of different contests to settle between the two services with regard to the procurement plans and the enlistment plans at the opening of any national emergency, but the way will be so well paved by the work that has already been done that when these things come up we will know how to handle them. That is what this work is largely doing - teaching us how to handle those problems when they come up. We cannot settle them ahead of time. We do not know what the emergency is going to be or what the conditions leading up to it will be. However, there is no question in my mind as to the possibility of either service going into the markets of the country or enlisting a large number of men in a critical international situation without that move being taken as practically a declaration of war.

Colonel Jordan: Major Lyon, would you please say something to the Class about this Aeronautical Board? You have just been working in connection with that and submitted a study to the Chief of Air Corps, and I know the Class would like to hear what you have done.

Major Lyon: Our work is directed more to the problem of standardization. It is recognized that the Army and Navy require different types of aircraft, that the Navy is limited as to fundamental designs, and that they have a problem of ship storage which does not exist in the Army. There are a great many component parts of the aircraft, the instruments and basic principles of designs, which are the basis for standardization, and it is an actual fact that in every manufacturing establishment throughout the country they maintain three staffs: one to

design airplanes according to the Navy method; another for the Army method, and still another for the Department of Commerce method. This committee is to try to find a positive means for getting the Army and Navy together and then through advisory control get the Department of Commerce in line on the processes and the secrets that are common to all types of aircraft. With the cooperation of The Assistant Secretary of War's Office we have a plan worked up which provides for Army and Navy standardization directly under the Aeronautical Board, and although there is a question of two heads again, such as on the Munitions Board, the Chief of the Bureau of Aeronautics and the Chief of Air Corps can agree on one hand and with their other hand turn to the services, and especially the technical services, and say what will be done. It is our experience that a great many instances have arisen where standardization could be effected if we could get the information out into the light so people in administrative positions could make a decision, but in so many cases the standardization has been blocked down in the technical echelons of the two services. The plan which we expect to operate on is to designate a working committee directly under the Aeronautical Board, charged with the supervision of not more than five principal technical committees with representation from the technical organizations of the Army and Navy. The Aeronautical Board will coordinate directly with the Munitions Board, or the Standards Committee of the Munitions Board. In other words, before a final agreement is reached on aeronautical standardization it is referred to the Standards Committee, and in that

way there is a direct channel for referring the current procurement problems directly into the war planning problems.

Colonel Jordan. I think at this time, after having heard Captain Allen pay Colonel Harris such a delicate compliment and Colonel Harris returning the compliment to Captain Allen, that it is up to the Army Industrial College to come forth and claim some of this credit. I think the attendance of Naval officers at this College, and Marine officers, and the interchange of opinions here on the floor of this College where we have Army officers meeting Navy officers, discussing things with them in committees where they get right down to bedrock and tell each other what they think about the situation - they do not mince words and they come to an agreement - is responsible for the understanding that exists today. Two Admirals of the Navy have told me that they have traced the understanding that has come about between the Army and Navy down to graduates of this College, and I think that is one of the things we of the College can feel that we are entitled to a lot of credit for. I hope that Colonel Harris and Captain Allen agree with me.

I want to say one further word about Captain Allen. I do hope you men have seen what the Army Industrial College can do. Here he is - we are taking credit for it. He talked to you this morning. Captain Allen came over here, and criticized, I know without compunction, our setup. We had some hot arguments during the course of the year, but I do not know of a better friend the Army Industrial College has nor one that is more enthusiastic in connection with our work than Captain

Allen. As for the Army Industrial College, I am ready to stand or fall by the record that he is establishing over there in the Navy Department, which record is based on what he got here at the College.