

NOTES ON INDUSTRIAL MOBILIZATION

No. 7

ORGANIZATION OF THE WAR INDUSTRIES BOARD

Address by

Colonel Frank A. Scott

before the

Army Industrial College

January 15, 1925.

WAR DEPARTMENT

OFFICE OF THE ASSISTANT SECRETARY

PREVIOUSLY ISSUED.

- No. 1, June 28, 1923, Outline of Industrial Mobilization.
- No. 2, January 2, 1924, Allocation of Facilities.
- No. 3, January 15, 1924, Changes in Specification During Production.
- No. 4, March 25, 1924, Army Industrial College.
- No. 5, October 29, 1924, The Procurement of Non-Commercial Material in War.
- No. 6, November 6, 1924, The Procurement of Commercial and Semi-Commercial War Material - Peace Time Planning.

ADDRESS OF COLONEL FRANK A. SCOTT.

January 15th, 1925.

INTRODUCTION - Colonel H.B. Ferguson, Director of Procurement.

Gentlemen, we were addressed yesterday by Mr. Crowell who had a very large share in the work of the War Department. This morning at the Army War College we heard the talk and discussion of Mr. Baruch who was one of the chiefs of the War Industries Board which was organized with authority of the President, March, 1918. But in the meantime, as we gather from our studies and memory, there were many things that happened. The question of a war of the magnitude of the last had not been thought out by any one in authority. Many men did know, however, that the Army wore shoes and clothing, required food, shelter, etc., so that the whole body of the Army and its officers were not entirely devoid of all knowledge of war and war requirements. General Crozier spent a large part of his life talking about it.

So we entered the war. The question as to how to coordinate the various purchasing activities and expedite the procurement of munitions was uppermost in everyone's mind. As a matter of fact, the neck of the bottle was transportation by ocean; therefore we did not have the necessity for the rapid stride in producing munitions we might have in the next war. The above gives us some picture of the trouble we were in.

A gentleman was called to town to look into the situation and make an attempt to work out some answer. You can see the task. Mr. Scott came to Washington for that task. A great majority of the munitions and supplies actually used in France were started and came through due to the efforts of Mr. Scott. He, in conjunction with the Army and Navy, was charged with that work.

I take great pleasure in introducing to you a man that we might say was a friend of Industry, a friend of Preparedness, and a friend of your Country - Mr. Frank A. Scott.

COLONEL FERGUSON and GENTLEMEN:

It is a great pleasure to be with you men, and a special pleasure, in view of the conditions that I saw here in 1917, to realize that our Government has taken the step, by the passage of the National Defense Act of 1920 (which in my opinion is only second to the passage of the Selective Service Act) to place our country in a position so that, militarily, it can have that standing in the family of nations which its situation, its resources, its people and its attitude toward civilization justify.

I congratulate you gentlemen beyond words on the fact that you are charged, as you necessarily have been through this College, with the task of working out the opportunities of this law. I can at the same time assure you that while you have the opportunity, if you do not improve it, if you fail to meet the responsibilities which that Act places upon the supply departments of the Army and Navy, you can expect in another war to be superseded by a civilian organization as you might easily have been in the last war; as were the supply departments in England. There was a steam roller going here in 1917 and if the Army and Navy Departments had not been able to meet the requirements of the situation, they would have been disposed of, as in England.

I had the choice of making a general preparedness talk this afternoon, or of addressing you somewhat as a college professor might when dealing with certain ideas before a class. I think, if it is agreeable to Colonel Ferguson, I will follow the latter course, laying myself open to certain questions, perhaps inviting criticisms on certain others, and thereby inciting curiosity as to some of the things which I will recall.

In regard to 1917, I will probably tell you much that you know, although I have encountered officers who did not know that which seemed clear to men who were here. There are some officers here now who were here then, but most of the men who are here were either too young or serving too far from Washington to have a clear view of what was going on in Washington. Very few people seem to have retained an impression of the inadequacy of the machine with which we entered the war. I should tell you, in the beginning, that I have the greatest affection for the Army and have always had, and therefore anything I say that seems critical is so only of the conditions, and not of the service. I know that it is the country itself that is usually at fault and not those that receive the blame in most instances. If trouble begins, however, the Congress by those two great Acts I mentioned, the Act of May, 1917, and June, 1920, has now put the military services of the country in a situation which they have

never occupied before, and has distinctly passed it directly up to you to work out your salvation and the salvation of your country. If you do the task well, it becomes not purely a military work but becomes the greatest of all constructive acts for peace.

Potentially we are the greatest nation on earth because of our natural resources and of our advancing population. While our natural resources and area are not as vast as Russia's, the ingenious character of our people, our lines of transportation and communication, etc., make our resources so much more available than theirs that we can place ourselves ahead of them. Therefore, we can say that with three million square miles of territory, with one hundred and ten millions of people, and with the aptitude of these people for the arts and sciences and for fighting; with our own natural ability to act quickly in a crisis, if we put ourselves in the position where we can make our resources available, there is no nation or group of nations that is going to attack us. Let us assume that it is so. We are going to attack no one else. Only once in our history have we acted in an aggressive way toward a neighbor.

Therefore that would put us, with our altruistic attitude toward the rest of mankind, in a position to have the most potent voice for peace in the world. Military preparedness, as you gentlemen see it and as I see it, is the most remote thing from waging war. We are not asking our country to sustain a great navy or a great army; we are asking only that the army and navy necessary for peace-time purposes be so reinforced by laws and plans and reserves that, in the event of a necessity for making a military preparation, we can do so with sufficient rapidity to overcome any one who might wish to attack us. In the last war this was not true. We had the attitude common at all times - we mistook military resources for military strength. Now, as a matter of fact, they may be only a weakness to us, as they are whenever they delude us into a feeling of security.

You gentlemen have a fine system. I have seen something of it through the help of Colonel Ferguson and the various conferences I have had with the Assistant Secretary of War. The system will do a great deal, and then it will fail because no system is worth much without real men in the operation of it. The greatest thing that can happen to you gentleman passing through this College is that in your course you learn this system and, primarily, that you learn the fundamentals of the military problem so that you will not drop into a military rut which in the event of a real need leaves you without initiative; without opportunity to act other than as your instructors have thought to provide for you. Of course I know you are developing that. The purpose of the College is that you should develop it. One of the things I would want to emphasize often, and it is the last thing the

military man should have emphasized from a civilian, is that the only thing that really counts in war is time. If you lose time you are helping to lose the war.

We find most often, in military history, that the time lost in every war, either in the supply department or on the field, has frequently been the turning point. To illustrate, during the Civil War, on the first day of the Wilderness, General Burnside was expected about five in the morning, and he did not appear until about ten, and when he did appear so much had happened that, had he been there three or four hours earlier, it would have made a different story of that first day.

Now, as in military preparation so, also, in naval preparation; to illustrate, the Monitor appeared in its run down here the day after the Merrimac had attacked the Federal fleet. It was twenty-four hours too late to be a complete success, but just in time to prevent destruction of the fleet. Had there been a delay of twenty-four hours when the Monitor was being constructed, the Naval history of the Civil War might have been different from what it was.

War is sustained no less by the physical than by the moral resources of the people; and whatever is done, therefore, to break down the morale of the population, whether it is waste of life in the field, waste of money at home, or mistakes in extending new facilities in the supply departments, which makes it clear to civilians that time is being lost, breaks down the morale of the country and helps to lose the war. In the case of the last war, some of the British War Department groups were so slow in recognizing conditions that when confusion arose they were promptly superseded.

In England, perhaps the chief subject that came in for criticism was supply of artillery and ammunition. You gentlemen, in your studies, have no doubt developed the change which Lloyd George, a civilian, made in the first twenty-four hours after he took charge. Mr. Layton, a member of the British Mission, told us the first act of Lloyd George, who had no knowledge whatever of war so far as I know, was to call in the artillery contracts, multiply the figures by five, and hand them back to the contractors. That, I take it, is a thing which you gentlemen must not permit to occur if you are in a position of responsibility when we go into the next war.

You know, of course, that there were good and justifiable reasons in the minds of the President and the Cabinet of the United States for not authorizing military preparation prior to March, 1917, so it is useless to discuss now why we found ourselves in the situation in which we were at that date. From all points of view our leaders felt justified in maintaining a certain status.

At a risk of seeming to talk about myself, I will say that in March, 1917, I received a notice from the Ordnance Department to report here to become, as I understood, Number 1 Reserve Officer. In the same mail there came a letter from the Secretary of War asking me to come to Washington. When I arrived I showed my secretarial letter to General Babbitt, and he took me to the Secretary's office. The Secretary said they had in mind what they were going to call a Munitions Standards Board, their thought being standardization of the needs of the Army and the Navy. They were proposing as members of that Board, Mr. Vauclain of Philadelphia, a great manufacturer; Mr. Otterson, vice president of the Winchester Repeating Arms Company; Colonel Deeds of Dayton, who had been quite a leading figure in fuse manufacture for the Allies up to that time; Mr. Pratt, vice president of the General Electric Company; Mr. Van Dervoort of Moline, Illinois (who has since died), one of the few successful large shell manufacturers for the Allies; and myself.

It was a little late in the day to begin standardizing the munitions for the Army and Navy. We all agreed after a short study that in our opinion standardization did not mean much. We got down instantly to the preparation of subjects that would be of more immediate importance. Mr. Otterson took charge of a study, in conjunction with the Chief of Ordnance, of the small arms situation in all factories available in the United States for that purpose; Mr. Vauclain, with Mr. Crowell, who was then acting as Secretary of the Artillery Committee, undertook a similar study for artillery production; Mr. Van Dervoort for artillery ammunition plants; Mr. Pratt for gauges, jigs and fixtures and more especially the study of gauge production. Very important decisions were arrived at as to where the master gauges should be kept, whether the gauges would be made at the scene of production or whether there would be a central gauge plant, etc. To Colonel Deeds was assigned the subject of fuse production. Those reports had scarcely arrived here when war was declared.

In the meantime, as Chairman of the Board, I had been studying the position of the supply branches here, and the opportunities for developing the contact of these branches with civilian industry in order immediately to increase their effectiveness. It must be remembered that in 1917, our laws relating to the military arms of our Government were enacted primarily to cover peace-time conditions. The Navy is naturally always in a more self-contained situation than the Army, but the Army was very greatly limited by statutes, proper enough for its peace-time control but which limited it greatly when the necessity for expansion was thrust upon it by a declaration of war, as none of these statutes were automatically repealed by the declaration. It was a penal offense, for instance, for a contracting officer to sign a contract for certain articles for which an appropriation had not previously been made. No department had the right to increase its office space within the District of

Columbia, and there were many other regulations, proper enough no doubt for the conduct of affairs in time of peace, but impossible in time of war.

Each supply department was governed, as well, by separate statutes applying only to the individual department, as by general statutes of uniform application to all. Thus, for example, the Quartermaster was authorized to obtain those things required for shelter, clothing, and feeding the soldier; the Ordnance Department similarly authorized, to supply his personal equipment, arms, ammunitions, etc.; the Medical Department his medical care, hospitalization, etc; the Corps of Engineers; the Signal Corps, and so on throughout the Army. The Navy differed, in that the Bureau of Supplies and Accounts had a somewhat wider scope than any Army Department. It was perfectly evident to anyone studying this problem, that those departments, acting separately, would destroy themselves, and create an impossible economic situation the moment they entered the competitive field to secure their requirements. Uncle Sam was paying the entire bill and yet, you see, he was about to go into competition with himself and with his Allies. It was an unthinkable thing that the Quartermaster, for example, should run up the prices to the point where it would be impossible for the Medical Department to secure cotton duck for stretchers, or the Ordnance Department to secure cotton duck for kit carriers, haversacks, etc. You can multiply that example by numberless other articles. Remember, also, that the same competition developed between the Army Departments would immediately become effective as against the bureaus of the Navy; the Army and the Navy together would then be competing with the Allies, and the entire group would be competing with civilian industries. There was no existing method for controlling selfish manufacturers, except to commandeer their plants, which was a useless resort. Contemplating this, you should get a very good picture of the chaotic possibilities of the situation.

The General Staff of the Army undoubtedly had it in its power to coordinate some of the things that might be done by those departments, but not completely so. I believe at that time you would have found laws which were quite specific as to what the Quartermaster might do himself, what the Chief of Ordnance might do, etc., and if they found that their service was in particular danger, they would not permit the General Staff or anybody else to dictate what they should do. Coordination could not come by order.

Gentlemen, in your life, your training makes it essential that you obey orders. You are accustomed to accept orders more readily than civilians do, and you often, no doubt, have a feeling that a certain situation should be governed by order and some one should make that order. But you also know that back of those orders is a due sense of responsibility on the part of the issuing party. And so, if the Secretary of War had issued direct

orders on certain things, the law is such that order might have come under question. The Chief of a supply branch might have questioned it; the Judge Advocate might have questioned whether the Chief could be relieved of his responsibility under the law by such an order from the Secretary. I am emphasizing this to try to get the situation before your minds, and in order that you may see the possibilities of confusion that existed at that time.

If an endeavor had been made to correct this situation by new statutes, it would have required too much time to determine the form of such statutes and secure their enactment. Therefore, as it seemed impossible to correct the conditions either by direct orders or by statute, the only method, and the one accepted by all, was cooperation between the departments for their mutual support, and for the welfare of the Government and the progress of the war. This cooperation took practical form in the organization subsequently known as the General Munitions Board, and eventually developed into the War Industries Board. The Chief of each department and bureau delegated to an officer so much of his power as might be essential to enable that man to agree with representatives of other departments, similarly authorized, in connection with essential things. Among the most essential of these things were priority; the allocation of the new facilities needed throughout the country; agreement between the departments on prices as to how high each was willing to go, for at this time there had been no price fixing and perhaps no thought of it.

To recapitulate then: on March 31st there was formed the General Munitions Board, consisting of a representative of each department of the Army and each bureau of the Navy; one representative from each of the advisory departments of the Council of National Defense, of which there were four; one representative of the General Staff and two men representing each of the two secretaries. This, as you see, made a rather cumbersome body. I was asked to not take the examination of the Ordnance Department for a commission, at the first meeting with the Secretary of War, but to remain out of uniform and take up the work which he suggested, the explanation being that were I to accept my commission I could not act as Chairman of this Board. As a matter of fact, before we got through we had on the Munitions Board five admirals, Capps, Fletcher, Rousseau, Zane and Rixey. We had several generals, colonels, majors, etc. The army officers agreed that their interests and the interests of their departments would be best represented by one officer, General Pierce; the Navy the same, by Commander Hancock, later succeeded by Admiral Fletcher. This shows you where cooperation will sometimes go further than the law.

The first authority for the Munitions Board was the Council of National Defense;

"RESOLVED, That the Secretary of War, as Chairman of the Council of National Defense, and under authority of the Act of August 29, 1916, "for the coordination of industry and resources for the national security and welfare", and under the specific authority in the Act which provides for the appointment of "subordinate bodies", shall appoint a purchasing board, Council of National Defense, to be composed of army and navy department heads or officers appointed by them, and representatives appointed by the Advisory Commission, the purpose being to coordinate the buying of the several departments; the establishing of precedence of orders, etc; including the ordinary commercial and industrial needs and the military requirements of the nation. Such committee shall have no authority at this time to issue purchase orders, make contracts or bind the Government in its purchases; all these things to be done, as at present, by the respective departments. The Chairman of the Committee, however, shall have authority to require, when necessary, that certain (conflicting) purchases be ^{not} made until the same, with a full statement of the facts, have been submitted to the Secretary of War or Navy".

The day after that resolution was adopted by the Council of National Defense, and sent to the Secretary's office, the Board requested that the phrasing "purchasing board" be changed, and that the Board be called the "General Munitions Board". There seemed to be a suggestion in the name (purchasing board) that we were trying to break down the very things we were anxious to sustain, the right of the departments to manage their own affairs.

Then the Board, on the day of its first meeting, analyzed its powers, which were very considerable, notwithstanding the seeming looseness of its organization, because of the designated responsibilities of the chiefs. The following is a plan of procedure as adopted by the Board, April 4, 1917:

"Plans of Procedure of Munitions Board
of Council of National Defense
Approved and Adopted
April 4, 1917.

The Munitions Board of the Council of National Defense in committee assembled deems it pertinent at this time to recognize and enumerate the following:

a. That questions of actual purchase of material are not to be handled by the "Munitions Board". Its duties on the contrary will be confined, insofar as practicable, to facilitating the work of purchase and supply agencies now existing in the War and Navy Departments' organizations.

b. That the mission and purpose of the country is as set forth in the Message of the President.

c. That this committee strongly affirms its intent to maintain insofar as may be practicable the existing order of things in the industrial condition of the country; the order of delivery, of military and naval material, both domestic and foreign, as provided under existing contracts, will not be disturbed unless absolutely necessary to meet requirements which may develop in the future.

d. That in the execution of present and in placing future contracts for military and naval material, careful consideration will be given to industrial requirements so far as practicable.

e. That order of priority of delivery of various kinds of material required by the War and Navy Departments will be determined so far as possible by cooperation between the various Bureaus and Offices of these Departments directly concerned and that full consideration will be given to the importance of early and prompt delivery of materials under contract, or subsequently ordered, for shipment abroad to belligerents friendly to the United States.

f. That it is the opinion of this committee that immediate action should be taken by appropriate authority to insure the integrity and maintenance of the industrial organization of the country in relation to preparation of military and naval material and to emphasize the very high military importance of such industrial work.

g. The Board recognizes the importance of supervising future commitments of United States manufacturers for delivery of material to foreign purchasers and that all such prospective foreign commitments should be subject to approval by competent authority in order to prevent interference with prompt delivery of more urgently needed military and naval material".

132

We were trying to protect the right of the departments to conduct their own business. The departments were proceeding immediately into a situation which required them to obtain an unlimited supply of practically everything they needed in a limited market.

You will find that in the future, as in the case of the last war, major wars will not be fought by single nations. If there is another great war, several nations will be involved on each side before the war ends. That means a great demand on our country's capacity for the supply of materiel; that also means that as the entire resources of the nation are now necessary in the event of war, there will be an unlimited demand on a limited supply. It immediately requires control of two factors, priority in acquiring and in the transportation of available supplies, and the control of prices.

In the world's history, so far as I know, there has never been successful control of prices by law. It has been attempted many times but does not work. The only way to control prices is with the cooperation of people who are willing to be controlled. However, behind your back at all times there must be a big stick to be applied to selfish individuals who are unwilling or unpatriotic and will not cooperate. The big stick which you will always have is priority. Fortunately, I think I say that very early in the war, and so there was gradually developed here the control of prices through industry that was absolutely effective on everything which we tried it upon. We did not try it on cotton for the reason, so far as I was concerned, that I did not think it would succeed, and might have re-acted harmfully on the other things we were carrying out.

Mr. Baruch secured an arbitrary price, in February, 1917, on a certain limited quantity of copper. The first thing after the war began was steel. That was picked first because in that industry there was a forty-five percent control of the industry in tonnage and much more than that in the influence of the industry within one group. I felt perfectly satisfied we could get the Steel Corporation to take a favorable view of price control. A certain number of large producers such as Bethlehem, Midvale, and some of the western companies would follow the Steel Corporation and then we would have only the small plants to consider and it would not take long to bring them into line. As a matter of fact, there was no club necessary. The steel industry marched along with the Government's desires and did a tremendous and patriotic work. As you know, one of the things which you heard nothing about during the war was shortage of steel. The example of that industry was promptly followed by other great industries. I will remind you gentlemen that one of the quickest and best ways of getting in touch with or securing control of an industry is through the national organizations that exist. If we should have

another similar situation, some of you men may be in a position where price control is one of the essential factors, and your quick way of getting to a national industry would be through its national association.

There is a disposition in the Army, probably in the Navy too, but less so, to expect more than it will be able to obtain from its contractors. The reason the Navy does not do so as much as the Army is because the Navy is using its material all the time and has a very much better opportunity to try a thing in the field than the Army.

In the room where we of the Army dictate specifications, or in the brain of the designer, we often commit our worst offenses. We specify things that from a laboratory point of view are reasonable and adaptable; from the field point of view, unnecessary, and from the standpoint of cost, a crime. I would like to emphasize this particular point as heavily as possible. About the only effect of over-emphasis in either drawings or specifications is to give opportunity to dishonest contractors and to drive away the conscientious producer. The reason for this should be obvious and probably is. The man who is not going to live up to these specifications takes his chance that your Inspection Department is not so good as the department that dictated the specifications, and that is true as you all know; whereas your conscientious contractor is going to expect to do what you ask him to do, see that the article is what you say you want - with the result that your dishonest contractor makes a high price on the basis of your great demand and then furnishes less than you demanded and your honest contractor stays out of it or makes a price that puts him out. The responsibility, therefore, will be in your own Procurement Department.

That particular tendency is due to peace time laboratory methods. However, almost everything in the Army must be done by laboratory methods. The army has no appropriations permitting large scale manufacture except for small arms requirements and some chemical requirements. We can have no appropriations which enable us to do certain things by those manufacturing processes which will be required in time of war. If you look up the number of guns produced in our arsenals in 1915 and try to picture to yourselves "manufacturing" that number of guns, you will agree with me immediately. There was one battery of 3" guns produced in that year and there may have been two fourteen or sixteen-inch guns, with a few of each size between.

Most laboratory processes mislead you when it comes to specifications, because the only thing the laboratory can do is to give a high standard of quality. This will suggest to you that thing against which I am warning you. My own theory, and I expressed it to Colonel Ferguson three years ago, is that the supply depart-

ments should maintain always two sets of specifications, one of development specifications and the other representing what you are perfectly willing to have served out to the army in the event we started war tomorrow. The first, the laboratory specifications, should always be kept out of your procurement branches. Once let the procurement officer know there is something that might be changed and you make him timid in placing orders. You produce the element "loss of time", which means expense.

On the subject of expense, I said to the Congressional Committee examining me after the war, and I followed this absolutely, my own theory was that the most expensive thing we could do was to lose time. If you go into a war at all you go for one purpose - that is to win. If you have made up your mind to win, do the essential things for success. The American people will back you up in that. I have told you previously, you must not waste money, but when you have made up your mind that a certain expenditure is essential to secure military results, spend the money and get the results. The American people are never going to be patient with you if they discover you have sacrificed men to save money. Whatever the expense may be, they will not care to forgive you if they discover that had you been able to spend or willing to do so, you would have saved lives.

Assume your schedules as you are preparing them are correct. Are they timed correctly? Since you know that you want certain things in certain quantities, have you them worked out so you will get your quantities within the period in which they are essential? Seasonal requirements, canned subsistence items for example, should be anticipated in advance. There are a great many things that are not controlled by economic factors. On some things you can rely. Some people are liable to reach a conclusion of their own that pork is needed in the army, then farmers will keep more pigs; that flour is needed, and they will put in more wheat.

It is a part of your job to decide what needs to be stimulated; what things cannot be controlled. Your time factor will not work out correctly unless you solve it that way. What needs will be supplied from our country in any emergency? Some essential things will not be supplied and in some essential things we must receive our importations from other countries. Many contractors could give us a list right away. Are we preparing in any way to meet that need beyond the little supply that we have always in hand? Are we looking forward to a war reserve of those articles? Is a war reserve justified? Are we in contact with the Navy Department so that they will protect our trade routes? Perhaps the Navy Department will appreciate the need but will have no ships on hand for our interests. If you have to have a war reserve, that will be one of the things in which you will have to educate Congress.

Every business house carries a reserve as a part of its inventory. Take nitrates for instance; if we have to have a reserve of nitrates it does not become valueless the minute we store it. We can turn it over and we do not throw our money away when investing

in it, but can count it as part of the capital of the country.

Can we develop substitutes in time of peace that will be available early enough in time of war? For many things, yes. The Germans used belts made of paper as a substitute during the last war, and they were very serviceable.

Whatever you do, and however well you do it, my judgment is that as soon as we have a war you will have to have a super-control of your operations in their relation to the Navy and, in turn, their relations to the Allies we are likely to have, and in your joint relations to the civilian industry of the country. Now that supercontrol, according to my conception of it, would rest on the war powers of the President. My judgment is that it would be better not to define it in time of peace. One of the best things about our form of Government is that in war our President not only becomes the Commander-in-Chief of the Army and Navy, but also becomes a dictator. There is a great, undefined reservoir of power on which the President has been at liberty to draw in war time and from which he has drawn the supply of agencies he had to set up in time of war. In the Civil War we saw that war power exercised in setting aside certain rights, such as the writ of Habeas Corpus. But in the Civil War we also saw President Lincoln refraining from discussing with Congress what he was going to do with the States in case they surrendered when Congress was not in session, because he believed that his powers were sufficient to accomplish certain results necessary.

Therefore, I think we will have super-control. It will be by civilians and you might as well make up your minds to that. Our nation would prefer that super-control be exercised by civilians rather than by men in uniform. I think there is no doubt but that the expansion of the departments in the last war was too slow to satisfy the demands of the public. It was true that the Council of National Defense and the Munitions Board, which I have mentioned to you, made it possible to build up a great body of work, and conduct that work in a manner, while at the same time the military supply departments were building up their personnel to meet the situation.

When I came here in March, 1917, there were sixteen officers in the Ordnance Department. They had to be expanded in a year so that they could acquire the things necessary - millions of personal equipment for the soldiers; guns; small arms; billions of rounds of ammunition; control of the writing of contracts for those things; control of the checking of the contracts. They were going to handle within a period of a year and a half, four times the amount of money the entire Government had been spending in a year. The Ordnance Department, with sixteen officers in Washington and under limitations which meant they could not expand to the extent of one room, were about to be authorized to spend four billion dollars. The first days I was here I used a leaf on the desk of General Williams.

After I had been appointed as Chairman of the General Munitions Board of the United States, already in war with the greatest military power on earth, I wrote telegrams on the top of my hat in the corridors of the Munsey Building.

There are three things which no nation can be at the same time - rich, weak and safe. If you are rich and weak, you are an invitation to attack. If you gentlemen carry out what you are now authorized to do by law, you can put our nation in a position where, because its arm is strong for war, its voice is potent for peace. You may have the feeling that through this mere paper work which you are now doing, and which may seem drab and monotonous at times, you are doing quite as much towards the eventual maintenance of world peace as if you were in Geneva with the League of Nations. That is my own justification for the time and energy I give to preparedness work. I hope that we will be so prepared to go to war that when we advise other people to keep the peace, they will be rather inclined to accept the advice.