

ARMY INDUSTRIAL COLLEGE
Washington, D. C

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Full copy

INDUSTRIAL MOBILIZATION

Presented by Colonel Frank A. Scott,
Ord-Res., at Convention of Quarter-
masters, U.S. Army, under the aus-
pices of The Quartermaster General.

OFFICE OF THE ASSISTANT
SECRETARY OF WAR
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PLANNING BRANCH
PROCUREMENT DIVISION

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INDUSTRIAL MOBILIZATION

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General Cheatham and Members of the Quartermaster Association

Of course you will understand my gratification at being invited by Major General Cheatham to address you this morning after I remind you that I am only an Ordnance officer. When General Cheatham wrote to me asking if I would come, I felt I was in exactly the situation of that Democrat from Indiana who was suddenly summoned in the convention to respond to the call of Indiana, and who got up and said "Gentlemen, I am too much frightened to accept, and too much flattered to decline".

Your Vice President, Colonel Starrett, was one of those devoted men very intimately associated with me in the days referred to by General Cheatham, but until I heard Colonel Ferguson yesterday, I never knew the explanation of certain peculiar and interesting things about Starrett. During the war, Colonel Starrett was Chairman of the Emergency Construction Committee, and yesterday Colonel Ferguson told us that General George Washington was the first Chairman of the First Emergency Construction Committee in the history of our country, so all this time I have been admiring the halo which surrounds Starrett's head, believing it was his own, I see now it is but the reflected glory of the Father of his Country.

I want to talk to you about your Corps, but, in passing, I must refer to the address just made by The Adjutant General of the Army. We are fed up on stories of the efficiency of the industrial organizations. Let your minds go back to what the Adjutant General has just told us about the way his office handled the Compensation Act. It was so efficient it reminds me of the gentleman in London who, having dined much too well, hailed a taxi and told the driver where he wanted to go, the driver opened the door, and the gentleman belted into the cab, and, as the opposite door was open, he instantly appeared on the pavement, on the other side. He got up, took a look at the taxi and, being a little hazy, said "Good Lord, that's quick service, how much do I owe you?"

Now, to return to the Quartermaster Corps it is commonly accepted that in the World War the American Army was the best clothed, the best fed, the best shod, and the best housed army that participated in the conflict. If that be so, it is a great tribute to the Corps to which you gentlemen belong, but there are many similar examples in the long history of this Corps that must stimulate your pride in this great organization.

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If you have not already read it, I want to commend to your reading the story of the service of the Quartermaster Corps with the Army of the Potomac in the Peninsula, in May 1862. The vast trains of that Army, retreating from White House on the Pamunkey to Harrison's Landing on the James, marched for five days and five nights to the sound of the guns of troops that were fighting on almost every side of them, you will be interested to observe from the record that there was practically no loss of transport. It is a classic.

I should like very much to say more about your Corps, but I am afraid of disqualifying myself for the serious subject that I am going to discuss, as the gentleman did when he proposed to a young lady. The lady, telling her girl friend of the proposal, related that her lover had told her she was the loveliest and most interesting girl in the world, whereupon the friend exclaimed "And do you propose to trust your life to a man who begins by lying to you like that?"

Before the World War, we were regarded militarily as a weak nation, and in one year we changed the world's opinion and our own with respect to that. After we have worked out the full meaning of every phase of industrial mobilization, we will have become not alone potentially but actually the strongest nation in the world. There is no reason why we should not successfully work out the meaning of that phrase. We know our country well enough to understand that it holds within itself no menace for any other nation. We are happy in the sisterhood of nations, we are contented, and God knows we should be. We hope we are helpful to other nations. We want to be helpful, and, therefore, any development of our strength is only for the purpose of sustaining the weak, and not of becoming a menace to any one. We know that our citizens believe this.

At this time we are, potentially, the strongest nation on earth. We have a population of 120,000,000, and 3,000,000 square miles of territory. We have 54% of the world's production of steel, about 50% of the world's machine tool equipment, and, roughly speaking, 50% of the world's railroads, telegraphs and telephones. From these facts it is obvious that if we can work out first our requirements and then our methods of production, we can produce the necessities of war in quantities which the other countries of the world can not equal. There is nothing standing between us and that ideal accomplishment except either inability or unwillingness on the part of the several branches of our military service or the several branches of our industry to use brains and patience. Naturally, the country must look to its military services to determine requirements. When those requirements are determined, and, in the event of a major war they can be determined,

in the last analysis, only after we know whom we are to fight, where we are to fight, and how we are to fight - then priority and coordination based on the nature of the war and the strategical conception of the campaign must be provided.

These two elements, coordination and priority, can not be established by the military branches alone, we must, therefore, accept in our peace-time planning the assumption that there will be a super-agency, representing our entire nation, functioning in these two fields. In the last war that agency was the War Industries Board. Whether in another war it will be the War Industries Board or some other form of organization, we perhaps should wisely leave for definite determination until we draw closer to the period. One of the most dangerous things, of course, is to try to apply to a future emergency those plans and facilities which served our purpose in some past emergency. They are always worthy of examination, attention, and study, and sometimes of being copied, but too often they do not fit the new situation. Therefore, with respect to that kind of thing, I have no disposition to be dogmatic, although I do believe the organization that was set up in the last war was the best one then possible of being devised to serve our purpose.

We have made a great advance since 1917. There is no resemblance whatever between the War Department Procurement Divisions of 1917 and 1927 except the names, and the spirit of service and devotion evinced by the gentlemen who occupy the positions. Otherwise we are living in a new world. I wish you could have seen the War Department as I saw it in February, 1917, when Secretary Baker first asked me to come down here. We had in the War Department the service represented by the officer who has just spoken (The Adjutant General) and the other branches that are not Procurement divisions, together with the Quartermaster Corps, the Ordnance Corps, the Signal Corps, the Corps of Engineers, and the Medical Corps. Over in the Navy Department we had the Bureau of Steam Engineering, the Bureau of Construction and Repairs, the Bureau of Supplies and Accounts, and the Bureau of Yards and Docks. Each of these Departments and Bureaus operated under individual appropriations. A number of them, operating under authority of general law, much of it ancient law, had the right in peace or war to go into the markets of the country or into the markets of the world, and purchase such material as they required, regardless of the needs of the other branches of the service.

I shall have occasion a little later to refer again to the difference between acquiring a limited amount of supplies from an unlimited source, and endeavoring to acquire an unlimited amount from a limited source. When we entered the

World War, by reason of the presence of the purchasing representatives of our Allies in our markets and at our sources of production, we were endeavoring to do the latter thing. We were about to ask our country to supply more of certain things, steel for example, than could possibly be produced, and we had five departments of the Army, at least four bureaus of the Navy, and all of the Allies not only prepared to go, but actually going into our markets competing with one another and with civilian industry, thereby raising the price of the articles and the price of labor, altho Uncle Sam was to foot the bill for everybody. Moreover, by disregarding priority, it was possible to obtain for one department, in May, something that perhaps it would not need until the following February, and thus deny to men whose lives depended upon it, in June, the article which the other department had a perfect right to put into the storehouse and allow to remain there for eight or nine months, even if such action did cause the death of those other men. This is not an exaggeration. The situation was so terrible it is impossible to exaggerate it.

As I saw it in March, 1917, there could be only one outcome of such a situation in a same country, namely, a disposition quickly to copy whatever some other nation had done, that would answer the purpose, and apply that to our situation. My judgment was, and it turned out to be the correct guess that the thing our people would think about would be the Munitions Department set up by England as it operated under Lloyd George - which would result in our great departments of the Army and bureaus of the Navy being sunk into subordinate positions, while a civilian organization was built up over them. After the war, the civilian answer of the country on that subject would be, "When war came, those departments failed to serve the country, and we had to step in and do the work in order to save the nation". It was plain, therefore, that it was necessary to coordinate immediately the work of those departments, and secure the cooperation of the men involved, if the departments were to be saved and sustained. Fortunately for the country, the Secretary of War and the Secretary of the Navy, as well as the Department Chiefs, were generous enough to cooperate instantly in the effort that was made to coordinate the work and to establish priority - and we must remember that some of those men were surrendering a great deal when they did that. The Quartermaster General and the Chief of Ordnance, to mention only two, had at that time legal authority which they and their predecessors had exercised in those respective offices since the days of the Continental Congress, mentioned yesterday by Colonel Ferguson.

The Secretary of War and the Secretary of the Navy, in March 1917, issued orders to their respective departments that each department of the Army and bureau of the Navy should delegate at least one officer who would be empowered to represent his branch on a so-called General Munitions Board. In addition to these representatives of the military and naval branches, the members of the Advisory Commission of the Council of National Defense, all of whom were in Washington working at that time, were given representation on the Board. Those members of the Advisory Commission, as you probably remember, were Coffin, representing manufacturing industries other than textiles, Rosenwald, representing textiles and related materials, Baruch, representing raw materials, Willard, representing transportation and communication, Martin, representing medicine and surgery, Godfrey, representing personnel, and Gompers, representing labor, with Walter S. Gifford as Director. The three men involved in materials - Rosenwald, Coffin and Baruch - appointed representatives who served from that time to the end of the war, first with the Munitions Board and then with the War Industries Board. To this General Munitions Board the President delegated the power to coordinate the buying of the several agencies - not to do the buying but to coordinate the buying, to clear the buying as between the departments - to determine prices, to establish priority, to locate new sources of supply, and, in fact, to perform, in general, the functions of a department of munitions such as England had established, the difference being, of course, that in our case we were doing it by and through the military branches, and in England they had done it by superimposing a civilian organization upon the military organization.

The results were that confusion was minimized, the departments were protected while they were building up their personnel to take care of the terrific load which had been thrust upon them, knowledge of the laws of economics was introduced, as well as commercial methods and industrial practices which the average business man is familiar with, but which are not a part of the life of a soldier. The eventual effect was that the departments and bureaus were saved, and we all know how successfully they performed their tasks during the War. Now, we may rejoice that through the National Defense Act of 1920 they are established on a permanent basis. We needed them during the war, for in them resided a vast store of technical knowledge, so essential to success, which we could not hope to obtain from a purely civilian personnel, today they are even more invaluable because of the tremendous experience through which they passed. I had the impression before, and during that time it developed into an absolute belief, that in all the world there is no more intelligent, loyal, honorable, and efficient group of men than the officers

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of the Regular Army of the United States. If it had chanced that I had not survived the war, my eight months service with those men would have been the high spot in my personal experience. It is the one thing, General Cheatham, aside from my family, which it always warms my heart to recall.

Now, contrasting our present situation with that in 1917, we find we have made definite advances. We have the National Defense Act of 1920, which gives vast powers and responsibilities to the Assistant Secretary of War. We have the War College, working on its program for relating the Army to industrial development for war purposes. We have the Army Industrial College, educating Army officers and Reserve officers in the details of the needs and problems which will arise in any actual emergency. In the last war, for example, there was considerable loss of time by reason of lack of knowledge as to what form of contract might suffice in this instance or that instance. Now, however, the machinery has been set up, each of these agencies has its definite functions, responsibilities, and place in the program.

In addition to those plans, in my opinion it will be well for our country if we can persuade the Army to give more consideration to the problems of procurement, and more strength to the Procurement departments. Our peace time organization is still badly out of balance. Too much emphasis is laid on the man power problems and on the training of combatant troops, and too little attention devoted to procurement problems, such as the acquisition, development, and distribution of materiel. If there was one thing which the nations learned in the last war, it was that their previous conception of the length of time required to train the combatant troops had been an error. We required much less time than had previously been assumed necessary. On the other hand, the constant developments of complications unknown and unthought of prior to the World War made the expansion of materiel more difficult than ever, and the problem will not grow less difficult.

We know perfectly well that our man power is not only helpless but actually a sacrifice if we train it and offer it without sustaining it with the proper kind and sufficient amount of materiel. Therefore, so long as I have a voice, I am going to continue to emphasize the wisdom of strengthening the procurement functions of the Army and placing them more in balance with the combatant branches. If you gentlemen are interested in this point, compare the number of officers working on man power problems with those working on materiel problems. That is a more powerful argument than anything else which I might bring to your attention. We can not function in either sphere without trained officers, therefore, no one can yield the thesis that it is any less important to train officers in the more complicated branches than to train them in those less complicated. Many months must elapse from the time you dig up

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ore, or from the time you assemble chemicals, until you produce a big gun and are prepared to fire it, and, with all due respect to all my Artillery officer friends, in the preparation of the gun you will need much more in the way of trained brains than is required to fire that gun and land the projectile where you want it. Pardon me, Mr. Chairman, if I get too earnest on that subject. It has its humorous side, I know, and perhaps I am well exemplifying that side by being so earnest about it.

The General Staff, we know, can plan, but performance is going to rest on you and the other Procurement branches. Let me illustrate this with a reference to the cantonment problem in the last war. We declared war on the 6th of April, but the Selective Service Act did not pass until May, therefore, the Staff did not know until that Act passed by what method the men would be raised. As the method employed by recruitment determined the way in which the men would be housed, and the points at which it would be necessary to care for the largest number of men, the cantonment sites could not be selected until the passage of the Act. Immediately thereafter, officers in the various parts of the country selected the sites. Thirty-two sites, sixteen for the National Guard and sixteen for the National Army, were selected for camps for the training of 27,000 men each, which number, as you know, eventually became 40,000 each. Those sites were located on land which had to be cleared, which had to be provided with drainage systems, sewerage systems, water systems, lighting systems, with railroads, additional side tracks, storehouses, houses to care for the men, administration buildings, hospitals, refrigeration systems - all of the things that go to make up any efficient and healthy community. If we could not get those sites by September 1917, we could not make available the first contingent of the draft by September. The country would not have stood for calling young civilians into the field while we had no way to care for them. If we had not called that contingent in September, 1917, I think any officer who was in France in 1918 will agree that we would have lost the war.

Therefore, whatever the Staff planned, the outcome depended upon the ability of the Quartermaster Corps to produce those cantonments. What provision had been made for that? All the provision that the Quartermaster General had was authority from the President, the Secretary of War, or Congress, and they were limiting by the attitude of the people of the United States. They had the so-called Construction Division of the Quartermaster Corps, in May 1917, which was about to be called upon to perform, according to General Goethal's statement, "a greater task than the building of the Panama Canal". In four

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months they were to spend as much money as the Panama Canal organization had spent in four years. They had four officers General Isaac W. Littell, Captain Marshall, Captain Dempsey, and Captain Curay. Colonel Starrett was here as an Engineer Reserve Officer. He was transferred to the Quartermaster Corps, became Chairman of the Emergency Construction Committee of the Council of National Defense, and cooperated with the Construction Division of the Quartermaster Corps. The contract forms were prepared by this Committee, lists of available contractors were prepared, and allocated to the several sections. The personnel that could be drafted into the Quartermaster Corps to serve as officers was listed, and turned over to the Corps. The personnel that began the work (the four officers mentioned) grew, in one year, to 263 officers and 1,100 civilians in Washington, 16,000 civilians at the camp sites and 200,000 workers. The camps were ready in September 1917, for two-thirds of the total personnel for which they were authorized, this two-thirds was called, and you all know the final outcome.

Of course there was criticism. The country takes little interest in this kind of problem. It is in the nature of things that it should take but little interest in advance - and then, when the problem is confronted in war, expect performance with the same degree of efficiency as might have been attained if we had been giving constant attention to the problem in peace time. The best way to overcome the difficulty is to keep the Procurement departments close to the industry of the country, and, thank God, wise efforts are now being made to accomplish this. We have this new institution, the Army Industrial College, well established and working most effectively, we are sending Procurement officers to the Harvard School of Business Administration, we are conducting meetings of groups of officers with men skilled in civilian production, and thereby strengthening the Army's grasp on the problems involved in civilian production - Colonel Ferguson mentioned yesterday the Munitions Battalion which is to be organized from year to year in the institutions of higher education in our country. Eventually that will not only give us a body of trained young men, but will also promote in industry and among the working population of our country a thorough understanding of the spirit of the Army, and of the reason for doing many things that now are sometimes misunderstood. It will assure the cooperation and support of our civilian population, which are absolutely essential in any major effort.

The Army Procurement Departments which, in peace time, are devoting themselves to acquiring supplies for an army of less than 150,000 men are bound to develop methods of acquiring such supplies which will be dangerous if applied in war time. It is no criticism of the departments to say that,

because it is a fact that whether we are soldiers or civilians the peace time experience will have the same effect upon us. The chief menace which resides in our peace time methods is the lack of appreciation of the value of time. The chief element that is needed to bring out the best in our methods is competition in some form, something beyond mere ambition, to stimulate progress and teach us new and better methods. Nobody, of course, would want to argue that a regular army anywhere, whether it speaks the English language or some other language, becomes by training a more and more flexible institution. In peace time, the tendency is all the other way. Industry, by the mercantile of its life, has to be resourceful and flexible all the time, and by contact with it, those elements will be injected into our military branches and will operate with accentuated speed in war time. I must say that, in the other war, the Army adapted itself with astounding rapidity to the new demands.

May I repeat what I stated in the beginning, that if we will but apply intelligent and rational thinking to our procurement problems, our leadership will be unassailable. We have one-half of the world's machine tool equipment, which alone ought to give us supremacy, but, in addition to possessing this, we have it concentrated for mass production, in every line, in a manner not yet copied in any other country, and not yet fully understood in any other country. Coupling this advantage with the facts that we have more than one-half of the world's annual steel production, and a working population trained to utilize both the machines and the metal, can you picture any other single ~~xxxxx~~ advantage so great? The one problem, therefore, for our military branches is to learn how to use this tremendous civilian industry and apply it quickly to war needs.

Many examples of the effect of civilian methods when so applied were furnished during the last war. I will use as my first illustration, the rifle. In 1907 we adopted the Springfield rifle, and from 1907 until 1917, when we entered the war, we had manufactured in the arsenals of the United States 670,000 Springfield rifles. From April 1917 until June 1918, we manufactured by high-pressure mass production a million and a half rifles of the Springfield and Enfield types. You see the effect of the introduction of civilian methods into the manufacture of a thing with which the Army was perfectly familiar, and with which it was doing very well in peace time.

Now, just one more example, for we have not time for many. (You know, of course, that to this subject of industrial mobilization it would be possible to give the entire two days of the Convention). My second example is artillery.

In the year before we entered the World War, the Army obtained, in various calibres, 55 guns from 3" up. Of course that had to be by laboratory methods that could mean nothing when quantity production was required. From April 1917 to the date of the armistice we had produced in the United States 4,000 guns of calibers from 3#inch up, and in two plants located in the northwest, far removed from any dangerous frontier, we were producing the guns for a battery a day each of 3" and 4.7. It is true that of these 4,000 guns very few found their way to France, and so they became in time the subject of criticism on the part of people unfamiliar with military maxims. Unfortunately there are many of our people who do not know that success and victory in war depend upon the moral as well as upon the physical resources of a people. Whatever is done to break down the morale of the enemy may be as important as anything which is done to break down his materiel. The Germans knew how many guns we were getting ready to send against them, and they knew that in the war went on there would be not only the 4,000 guns I have mentioned, but other 4,000 guns as well that would be made in the next year.

Their situation was precisely that of a colored burglar with whom I once came in contact in the golden-wreathed days of my youth. This poor soul, having adopted the life of a burglar, invaded our community and possessed himself of various articles wrongfully. One night, being unlawfully in the house of a citizen, he was shot. (And, by the way, he furnished an example of the fact that the way of the transgressor is hard, for it transpired that he had in his pocket a watch which he had stolen the night before, and the .32 calibre bullet hit the watch and carried it into his abdomen. Here is proof that the way of the transgressor is hard, because if he had not stolen the watch, he would only have been hit by the bullet). It chanced that I was a magistrate of my little village at that time, and acting in that capacity and contemplating that this poor fellow would be sent to prison, I went to call on him the next morning while he was in jail, and said "I'm sorry for what you got last night". He replied, "Boss, it ain't what ah got that's troublin' me, it's what ah'm goin' to get".

That was the German state of mind with respect to our artillery preparation. It is the same thing that troubles any intelligent high command what they know as to the force opposing them does not disturb them so much as these elements that may be in the situation with which they are not sure they are familiar.

This, then, brings us back to the moral effect of a real program of industrial mobilization within the United States. We have the natural resources, the manufacturing facilities, the means of transportation and communication, the skilled population and the organizing brains. We need only to exercise the industry and patience to work out the problem and array its elements in orderly fashion. If we will do this, we will become, automatically, the strongest nation on earth, and our voice, when raised in behalf of peace, will be listened to with respect. We need to accept, however, the perfectly evident hypothesis that if our voices is to be potent for peace, our arm must be strong for war.