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REVENUE TO DEFRAY WAR EXPENSES

HEARINGS

BEFORE THE

COMMITTEE ON FINANCE
" **UNITED STATES** ^{Congress} **SENATE**

SIXTY-FIFTH CONGRESS

FIRST SESSION

ON

H. R. 4280

AN ACT TO PROVIDE REVENUE TO DEFRAY WAR EXPENSES
AND FOR OTHER PURPOSES

PART 4

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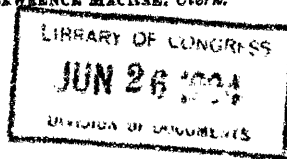
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REVENUE TO DEFRAY WAR EXPENSES.

JULY 27, 1917.

UNITED STATES SENATE,
COMMITTEE ON FINANCE,
Washington, D. C.

The Finance Committee met this day at 11.30 o'clock a. m.
Present: Senators Simmons (chairman), Stone, Williams, Gerry, Penrose, Lodge, McCumber, Smoot, La Follette, and Townsend.

STATEMENT OF MR. JOHN C. SCOFIELD, ASSISTANT SECRETARY OF WAR AND CHIEF CLERK, WASHINGTON, D. C.

The CHAIRMAN. Mr. Scofield is here now. Mr. Scofield, the Secretary of the Treasury has sent us that estimates of amounts that he will ask the Appropriations Committee to appropriate. What we particularly would like to have you do it, first, probably to explain to us the larger items especially there, and give us your estimate of how much of those several amounts will be actually, or which it is estimated will be actually, expended during the fiscal year 1918.

Mr. SCOFIELD. I am not prepared to explain in detail these items. The Secretary asked me to come down, but I do not think he knew that you had this information.

The CHAIRMAN. I told him I had it.

Mr. SCOFIELD. I can tell you the amount it is estimated will be withdrawn, but I will have to have officers from the Quartermaster's Department and the Ordnance Department come down and explain in detail these various items.

Senator SMOOT. Just the same as you do before the Appropriations Committee?

Mr. SCOFIELD. Yes.

Senator LODGE. We are not going into that. What we want to get at is simply how much will be actually needed to be spent this year of these estimates?

The CHAIRMAN. The Appropriations Committee's business is to make such appropriations as they see proper, based upon estimates. Our business is to furnish the money not only to meet those appropriations but that part of those appropriations that will be expended during the fiscal year, and that is what we want to get at.

Mr. SCOFIELD. The maximum amounts expected to be withdrawn from the Treasury and expended during the fiscal year 1918 total up about seven billions—nearly eight billions—including all the appropriations that have been made by the War Department.

The CHAIRMAN. That includes the appropriations which will be made?

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Mr. SCOFIELD. The appropriations which will be made. We have \$17,000,000 pending now.

The CHAIRMAN. That will confuse our business very much, because, upon the appropriations that have already been made, Mr. Scofield, the Treasury Department advises us that they estimated that five billion six hundred and some millions would be expended during the fiscal year, and that is covered in our present bill.

Mr. SCOFIELD. I see.

The CHAIRMAN. We do not want to confuse that with this.

Senator WILLIAMS. He says that the total to be expended—

The CHAIRMAN (interposing). That will be all right.

Senator LODGE. His statement roughly covers what we have already appropriated for the War Department and five billion more.

Senator WILLIAMS. And all that we have to do is to deduct the five billion more from this total and that will be all there is to it.

Senator SMOOT. What the committee would like to know is how much of these amounts asked for will be used for the fiscal year ended June 30, 1918. We will take the first item, and I want to know whether you can give that information now or not. Under the "Office of the Chief of Staff" contingencies, military-information section, General Staff Corps, \$489,000. How much of that will you actually require?

Mr. SCOFIELD. I can not tell you exactly that.

Mr. LODGE. There is an estimate here from the Chief of Staff.

Senator SMOOT. I know the note says what it is.

Senator LODGE. It will all be spent according to that note.

Senator SMOOT. Do you know anything more than what the note under that heading indicates?

Mr. SCOFIELD. No.

Senator SMOOT. You say every appropriation asked for has an explanation of it in this pamphlet, and if Mr. Scofield can not give us that information, whether it will all be required, or what portion of it—

Senator LODGE (interposing). The note says it will all be required.

Senator SMOOT. Perhaps in this case it would.

Mr. SCOFIELD. I sent word to find out how much they were going to spend, and there are only two in which we will not spend it all. The militia will not spend all that is estimated for it. The Ordnance say that they expect to spend it all.

Senator SMOOT. By June 30, 1918?

Mr. SCOFIELD. That is what they say.

Senator SMOOT. How can they do it?

Mr. SCOFIELD. I do not know how they can do it.

Senator SMOOT. It does not seem possible to do it.

Senator STONE. They can not make the guns in that length of time.

Mr. SCOFIELD. That is why I suggest that the officers of the Ordnance Department are the ones who should give you this information.

The CHAIRMAN. I asked the Secretary to send somebody who could.

Senator LODGE. There is a detail that explains this, the armament of fortifications—"For purchase, manufacture, and test of mountain,

field, and siege cannon, including their carriages, sights, implements, equipments, and the machinery necessary for their manufacture. \$899,000,000. For purchase, manufacture, and test of ammunition for mountain, field, and siege cannon, including the necessary experiments in connection therewith, and the machinery necessary for its manufacture, and the necessary storage facilities, \$1,363,000. For alterations and maintenance of the mobile artillery, including the purchase and manufacture of machinery, tools, materials necessary for the work, and the expenses of the mechanics engaged thereon, \$206,000,000."

There is the whole thing, and there is not a single one for fortifications. It is all guns and ammunition. They can get the ammunition and most of those guns within the year.

Senator SMOOR. Do you think it possible to spend that amount of money in making the cannon and the guns that are required?

Senator LODGE. I think to set every factory to work in this country making ammunition, they can do it. There are field and siege guns, as they are called, of all types and prices, and if they set not only Watertown to work, but as they will undoubtedly, every manufacturer in this country, I do not see why they could not spend it all. What I think that was for was for the construction of fortifications, but there is not a syllable about the construction of fortifications of any kind. It has reference altogether to guns and ammunition.

Mr. SCOFIELD. It is armament and ammunition.

Senator LODGE. They think that they can get that within the year, and if they can so much the better. The appropriation is \$2,468,000, and that is the most necessary thing for us to get at.

Mr. SCOFIELD. Gen. Crozier thinks that conditions which have arisen since the submission of the regular estimates make it imperatively necessary to appropriate the amount above stated, and that is speaking of the armament of fortifications. That is a big item. It is over half of the appropriation.

The CHAIRMAN. There is already appropriated for that \$760,000,000.

Senator STONE. For guns?

The CHAIRMAN. For that very purpose.

Senator STONE. How much will it cost, Mr. Scofield; have you any idea, to construct the fortifications?

Mr. SCOFIELD. Senator, I have no information whatever as to these items. All I know is that the different bureaus submitted them, and they were passed upon by the Chief of Staff and recommended after very serious consideration, and we submitted them to the Secretary of War. By his direction I have asked all of these bureaus to report how much of these amounts they expected they would actually expend, not merely obligate, but actually spend. They have reported, as I have stated before in substance, that they would spend it all, except the Militia Bureau reports that it will not spend by June 30, 1918, the full amount, and the Signal Corps also.

Senator STONE. How much is that; do you recall?

Mr. SCOFIELD. I have not got the militia here. It is included in this ordinance, I think. I can give you figures on that later.

Senator PENROSE. What is the militia item; do you remember?

Mr. SCOFIELD. I do not remember. The total?

Senator PENROSE. What is the total?

Mr. SCOFIELD. The total is \$14,500,000; something like that.

Senator STONE. What is the other item you referred to?

Mr. SCOFIELD. The Signal Corps item.

Senator STONE. You mean the aviation?

Mr. SCOFIELD. No; it is not that.

Senator LODGE. You mean \$3,000,000 for the signal service?

Mr. SCOFIELD. Yes; I think it is.

Senator SMOOT. And then there is a supplemental estimate?

Senator LODGE. That is for aviation.

Senator PENROSE. In other words, there is only a portion of the \$17,000,000 that will not be needed at once for this fiscal year?

Mr. SCOFIELD. Yes, sir.

Senator STONE. Is it estimated over there at your department, do you know, whether the six hundred and odd million dollars for aviation will be expended this year?

Mr. SCOFIELD. My understanding is that they estimate that they will expend it all.

Senator LODGE. That is what we were told in both Houses when we passed the bill.

Senator WILLIAMS. Let me see if I am catching it right. The total amount we will need will be fourteen billion, and the total amount we will spend this year is about seven and one-half billion, counting what we have already appropriated for?

Mr. SCOFIELD. They expect to spend \$7,249,000.

Senator WILLIAMS. Seven and three-quarters instead of seven and one-half, as I stated it. That is the estimate of the amount which can be expended this year, counting what we have already appropriated for and what you expect to get Congress to appropriate?

Mr. SCOFIELD. That is it.

Senator WILLIAMS. And the balance of it to be expended later?

Mr. SCOFIELD. Yes, sir.

The CHAIRMAN. The total amount that is estimated will be spent during this year for all purposes is about \$10,000,000,000?

Senator PENROSE. And, practically, we will have to have all of that for this fiscal year.

Senator WILLIAMS. You are counting the loan to the allies.

The CHAIRMAN. No; I am not. It was estimated before these later estimates came in that we would spend five billions, and now it says that five billions of this they are now asking for will be spent.

Senator STONE. When you say "all," do you mean everything?

The CHAIRMAN. Everything.

Mr. SCOFIELD. Everything.

Senator STONE. You do not mean rivers and harbors?

The CHAIRMAN. Well, the total expenditures of the Government will be ten billion.

Senator GERRY. What was that total amount?

The CHAIRMAN. Something over ten billions.

Senator LODGE. It will be nearer twelve.

Senator SMOOT. It would be \$12,000,000,000; that is what it would be.

Senator TOWNSEND. And the allies five billion more?

Senator SMOOT. Yes.

Senator WILLIAMS. \$7,800,000,000 is needed for the Army this year?

Mr. SCOFIELD. A little more than that. That is the amount they will withdraw from the Treasury and spend up to June 30, 1918. In addition to that there will be \$15,000,000 for rivers and harbors, if that bill passes. I just call attention to that.

Senator SMOOT. It is going to pass.

The CHAIRMAN. Have you considered whether, if you are ready to spend this money, the industries of the country can provide you with the necessary equipment and materials?

Mr. SCOFIELD. Mr. Chairman. I can not answer that question. I presume that they have, because the estimates were very carefully considered by the bureaus in the first instance, and then were examined very carefully in the office of the Chief of Staff and recommended for approval by the Acting Chief of Staff, and I presume the cause of that that they have gone into that question. That and the further fact that I have sent around asking them how much of this amount they expected actually to spend, and how much to obligate in addition to that, and I got the reply that they expected to spend it all, substantially.

Senator PENROSE. I think the chairman's question is very important. I remember in the naval appropriation—and of course Senator Lodge recalls it—we had to cut the amount for submarines in half because the productive power of the country was not sufficient.

Mr. SCOFIELD. I would not like to express a personal opinion. I have a strong personal opinion.

Senator LODGE. These estimates were made on the basis that they could spend all the money and get the material that they asked for.

Mr. SCOFIELD. That was the theory, and they have inferentially stated that. I can get a specific reply to that inquiry.

Senator PENROSE. Whom ought we to have down here to answer those questions?

Mr. SCOFIELD. You ought to have Gen. Crozier, and you ought to have Gen. Sharpe. Those are the two main items.

Senator PENROSE. I suggest that we try to have them this afternoon.

Mr. SCOFIELD. That was the Secretary's idea, that you have them.

Senator SMOOT. And bring the men with them that made up these estimates in detail, just the same as they would bring them before the Appropriations Committee.

Mr. SCOFIELD. They will answer all of these detailed questions that you ask.

Senator PENROSE. Anyone else besides Gen. Sharpe and Gen. Crozier whom you think we ought to have?

Mr. SCOFIELD. Of course, there is the medical department, who ask for a hundred million, and the Engineers ask for a hundred million, and the Signal Corps ask for three million. The reason why I suggested the Ordnance Department and the Quartermaster General was because the two together constitute the bulk of the items.

Senator PENROSE. I suggest that we have those four before us.

The CHAIRMAN. We will probably adjourn until 3 o'clock, and we would like to have them here.

Senator LODGE. Say half past 2.

Senator WILLIAMS. Let us have the man at the head of the Engineers.

Mr. SCOFIELD. You will want the ordnance men at 2.30, and say at 3 o'clock the Quartermaster General, and then you want the Chief of Engineers at 3.30, we will say, so that they will be down here.

Senator SMOOR. And at 4 o'clock the medical man.

Mr. SCOFIELD. All right. I will have them down here, and the Signal Corps man. It might be a good plan to have the Signal Corps man down.

Senator PENROSE. We have got to defend this bill on the floor, and we might want to know something about it.

Senator LODGE. The main thing is whether or not they expect to spend this money or not.

The CHAIRMAN. The question is, can they do it?

Senator PENROSE. That is what I want some information on.

(The committee thereupon took a recess until 2.30 o'clock p. m.)

AFTER RECESS.

The committee reassembled at 2.30 o'clock p. m., at the expiration of the recess.

The CHAIRMAN. We will first hear from Gen. Crozier.

**STATEMENT OF BRIG. GEN. WILLIAM CROZIER, CHIEF OF
ORDNANCE.**

The CHAIRMAN. General, we want to get you to tell us, if you can, about this supplemental estimate that has just come in of five billions and upward. The committee especially wants to know if you feel certain about it, how much of it will be spent during this fiscal year?

Gen. CROZIER. Senator, I have indicated that I thought that the whole amount that is asked for in these estimates and that which has already been appropriated or authorized, that something over three billion will be required during the current fiscal year.

Senator SMOOR. That is for the Ordnance Department?

Gen. CROZIER. For the Ordnance Department; that is, in the neighborhood of a billion would be required in the first half of the year—that is, to the end of December. Now, I can give you what I suppose you would like to have; that is to say, the principal items in support of those figures.

Senator LODGE. What we want to get at is whether this money asked for in the supplemental estimates can be spent in the present year?

Gen. CROZIER. I think a large part of it can, Senator. I can say in general terms that a large amount of it is needed for artillery and artillery ammunition. The amount which is needed for artillery—that means guns, gun carriages, limbers and caissons, and the appliances which would make those effective, like sights and things of that sort, and accessories. But exclusive of ammunition, which, I think, can be expended before the end of this fiscal year, will be about \$780,000,000. Of course, that is a very large sum, and I will try to indicate here how I arrived at that, how I think that that can be expended—that is, how the country can produce material that can be used.

Senator LODGE. That is for artillery alone.

Gen. CROZIER. That is for artillery alone.

Senator PENROSE. You say that the country can produce that amount?

Gen. CROZIER. It is a great deal of an estimate. The country is not able to produce it now. The plants are not in operation in the country that can do that now.

Senator STONE. Where can we get the artillery made?

Gen. CROZIER. This artillery includes principally cannon and the carriages for them, and limbers and caissons. The production of cannon is divided into two main parts, the production of the forgings for them and the machinery of those appliances. The forgings can now be produced in any quantity only at two places—the Bethlehem Steel Co. and the Midvale Steel Co.—and they have not the capacity now to produce anything like the number of forgings which can be bought for this amount of money, and we will have to establish plants at other places.

The program is to use the organizations at existing allied plants, plants making steel now, and give them such assistance and such special information that can be given to them so as to enable them to make this particular kind of forging for making cannon, which is a very high-class forging, and we shall probably have to have plants and buildings erected at three or four or five different places where they do not now exist, but where allied plants exist for the production of these forgings.

Senator PENROSE. Such as where, General?

Gen. CROZIER. Such as the Erie Forge Co., at Erie, Pa. They have got a fair start already. They can make average good forgings, and they can make some gun forgings, but we will have to increase their capacity. There is a company known as the Myrene Co. There is a company known as the Standard Co., the Buckeye Steel Co., the Hepinstal Co. There are four that we shall probably give Government aid to in putting up their plants. That brings me to a class of expenditures which is sufficiently new and sufficiently special for me to stop at it for a minute in order to tell you what we have in contemplation. The expenditures for plants to meet the Government's program in several directions are so great that the private manufacturers can not finance them. They must have Government aid. We can not follow the method that we have followed before and that we follow in ordinary times, of giving an order for material and paying for it on delivery.

They can not finance the erection of the plants and the production of the material clear through to the time it is delivered and paid for, so that we have to commence by financing the erection of the plants and the Government will in each one of these cases authorize these establishments to erect plants up to a limited value, the plants consisting of temporary buildings, and of machinery, and the Government will pay for those temporary buildings and for the machinery in the process of their procurement—the process of the erection of the buildings and the process of the procurement of the machinery. So we have, acting under the law which does not permit us to advance money before there is something to show for it, the plant has to put off payment for material until they have brick on the ground, and things of that sort, and then pay for it, and when they get a building erected, to pay for it, and as soon as they get machinery to

pay for it, or, if necessary, as soon as they get the material on hand or in process of manufacture, to pay for it. In that way we keep within the law, and we reduce to a minimum the amount of financing which the private people have to carry for themselves. The amount of that, for the purposes of this artillery program alone, will be something between \$10,000,000 and \$15,000,000.

Senator McCUMBER. Will that be in the shape of a loan to the companies, or will the Government own—

Gen. CROZIER (interposing). What it pays for. The Government will own the building and own the machinery. The Government will own these plants at the completion of the contract, and the people will use their organizations simply to operate them. If necessary, the Government will lease land for the purpose of erecting these plants. If the parties already have the land, the buildings will be erected on that land.

Senator PENROSE. How long will it take to make these guns? That is, if the plant were already up, how long would the process take.

Gen. CROZIER. These guns are not of a large size. The largest size we have in contemplation is the 9½-inch howitzer. The smallest size is a 3-inch field gun. I will say that the 3-inch field gun, if it had the right of way right straight through, from the time they commenced to make steel forgings until the gun is finished, could be turned out in about four months. It is also the case that a good many of them can be carried along at the same time. That is the most numerous gun—the 3-inch field gun, corresponding to the French 75 millimeter.

Senator STONE. For my information, these guns will be used in post fortifications?

Gen. CROZIER. No, sir; for the fieldwork.

Senator STONE. For the field operations?

Gen. CROZIER. Yes, sir; and if I may guess at what inspires your question, the heading under which these estimates are made is misleading. Estimates are required to be made under that heading, but it is a heading "Armament of fortifications"; but none of this is intended to be armament of fortifications. It is the long custom of Congress, which we have to follow. The appropriations for field artillery and for field artillery ammunition other than those for the militia of the States have been made in the fortification act, handled by the Committee on Appropriations of the two Houses under the heading of "Armament of fortifications." Therefore all estimates which are submitted are under the heading of "Armament of fortifications," although they have nothing to do with fortifications.

Senator WILLIAMS. Are these machine guns?

Gen. CROZIER. None of these are machine guns. I have large estimates for machine guns.

Senator LODGE. What kind of field guns, the same general class?

Gen. CROZIER. The item of the appropriation is mountain, field, and siege guns.

Senator SMOOT. Take the largest gun—9½ inch—what length of time would it take, if you had your plant ready for operation, to begin the production—the first unit, we will say?

Gen. CROZIER. From the time of commencing to manufacture the gun, if it had the right of way, right through the plant, turning out the finished gun, I should say would be something like eight or nine months, would it not, Col. Hoffer?

Col. HOFFER. To produce the forging?

Gen. CROZIER. If the single one had the right of way.

Col. HOFFER. I should say that estimate would be very close.

Senator SMOOT. Eight or nine months?

Gen. CROZIER. Yes. Of course, as they go through in large numbers, no particular one has the right of way.

Senator SMOOT. I wanted to know whether it is possible to erect these plants and get them into operation to produce very many guns before June 30, 1918. You say nine months now. That would be 10 months or 11 months from now to June 30, 1918, and you would only have two months to produce guns, even if you had the factory right in operation to-day?

Gen. CROZIER. That kind of guns; that is right.

Senator SMOOT. And those are the very expensive ones, of course, and I was wondering whether your estimate here was based upon the number that you will require of that kind of gun. If so, of course, it would be impossible to spend the money during this fiscal year.

Gen. CROZIER. It is based on the number that we will require, and that we think there is a possibility of getting by that time. It is quite possible that we will not be able to do that, but if the country can do it, we are obligated to try.

Senator SMOOT. We ought to do it if the country can do it.

Senator WILLIAMS. Have you in contemplation under that heading any of these very large guns that the British are using in tearing down the trenches and all of that?

Gen. CROZIER. There are none of them in these estimates which are now before you. There are none of that class. We have offered to our allies on the other side to supply some very large guns and some very large mortars, up to 12 inches in caliber, with projectiles up to a thousand pounds, but the method of doing that would be by taking them from our seacoast fortifications and putting them on suitable mounts and sending them over.

Senator STONE. I would like to ask you one question. In making guns for the armament of fortifications, don't you require a larger gun than any you have named—9½-inch?

Gen. CROZIER. For the armament of fortifications we will require larger guns than that, and we have guns under construction larger than that for our own purposes. We are not pushing them very hard, because we do not think that our coasts are very much threatened, but for use in the field, for use in this war, we are not now estimating for or contemplating the manufacture of anything larger than the 9½-inch howitzer.

Senator STONE. And that is all for field use?

Gen. CROZIER. Yes, sir.

Senator STONE. But you put it under this heading of fortifications?

Gen. CROZIER. Because it is required by one of the rules of Congress.

Senator PENROSE. Then this \$2,468,000,000 for fortifications is not required right away? You say our coasts are not in any immediate danger?

Gen. CROZIER. But not one dollar of it is for fortifications at all.

Senator PENROSE. What is it for?

Gen. CROZIER. Field artillery.

Senator PENROSE. I thought that it included coast-defense guns.

Gen. CROZIER. No, sir. Coast-defense guns would come under that heading, however.

Senator PENROSE. How was it that these special recommendations came in so late? Were not they given to the department six weeks ago?

Gen. CROZIER. Six weeks ago, yes, Senator, and one reason why they have come in so late is because of the time necessary to coordinate all of the estimates of all of the different branches of the War Department and get them under a general estimate, which would include everything. I can explain in general terms a little more about the reason for this large estimate coming in just after we have had an appropriation on June 15 upon estimates made a few months before. The appropriations that have been thus far made did contemplate, when the estimates were made, supplying the Army, which would include all the troops that have now been called into the service, including the 500,000 men that would be called by September 1.

Senator SMOOR. The first draft?

Gen. CROZIER. The first draft—including the first draft. Since artillery takes so long to manufacture, especially under circumstances like ours, when the plants have themselves to be erected, a program which would provide for only those troops and which would look no longer ahead than the provision for troops which we expect to have by the 1st of September would be no program at all. We are obliged to look ahead for the supply of artillery for troops that are going to be raised later—are expected to be raised later—otherwise it would be impossible for the manufacture to be carried on. We must get ready for it. Therefore the estimates cover the artillery which will be needed for all the troops which it is proposed may be called into the service and be ready for their guns by next summer—by a year from now. They include the second million men.

Senator LODGE. How many guns, roughly, will be made?

Gen. CROZIER. For the first million men the number of all calibers from the 3-inch up to the 9½-inch for field purposes will be about 1,840 batteries of four guns each.

Senator LODGE. That is for the first million?

Gen. CROZIER. Yes, sir; and for the second million as many more.

Senator LODGE. That would be in round numbers 8,000 guns?

Gen. CROZIER. Four guns to a battery—16,000 for the two million.

The CHAIRMAN. For the first million?

Gen. CROZIER. No; for the two million.

Senator PENROSE. I just ask for information. These guns that they are bombarding these trenches with in France; what caliber are they?

Gen. CROZIER. The guns that they hammer the trenches with are usually about 6-inch caliber. That is a useful gun for that purpose. The guns that they use for what is called the curtain of fire, or the barrage of fire, many of them are about 3-inch caliber.

Senator LODGE. That is the French 75?

Gen. CROZIER. Yes; that is the French 75 gun. The 6-inch is the French 165.

Senator McCUMBER. Don't they use much heavier guns than that in trench warfare?

Gen. CROZIER. Yes; they are using guns up to 20 inches in caliber. There are not very many, and they have sometimes been alluded to as the guns talked about in the newspapers; but, as a matter of fact, there have been guns of that caliber, and these heaviest ones are used against certain very strongly sheltered places that they build along the line: certain very strong, sheltered places with fortresses of reinforced concrete, covering places of refuge, the method of using them being that, during the artillery preparation for an attack, there will be men, infantrymen among others, but generally men who constitute the machine-gun corps, and when the artillery fire comes and the advancing troops get nearer these people go out with their machine guns and stop the attack, or endeavor to do so. The heaviest guns are used for the purpose of breaking up those places, and ordinarily they are used for the attack of places that way a long way off, which are important depots of supplies, for instance, or important railway centers, important stations at railway centers, which can be reached from behind the lines.

Senator WILLIAMS. They are probably the guns which the Germans used when they were trying to make an attack on Dunkirk?

Gen. CROZIER. These heaviest ones I spoke of are the kind of guns the Germans used in that attack on Dunkirk.

Senator STONE. Are those the guns which I read about in the newspapers, which, I think, are called the "Big Berthas"?

Gen. CROZIER. Yes, sir; the "Big Bertha" is the name which the allies gave, and probably the Germans also, to the large German howitzers at Maubeuge.

Senator STONE. What is the caliber of such a gun as that?

Gen. CROZIER. Sixteen inches.

Senator STONE. What does it range?

Gen. CROZIER. Those particular ones, I think, were howitzers and did not have a very long range; I think something like 14,000 yards would be the limit.

Senator STONE. Those were the guns used at Liege?

Gen. CROZIER. I do not think those guns were used at Liege. I think the largest size used at Liege was about 12 inches in caliber.

Senator PENROSE. What is the largest of these guns you contemplate constructing? What is the number of shots you can fire out of them?

Gen. CROZIER. The 3-inch guns, the smallest size, are said to be good for something from seven to twelve thousand rounds, and it is something which has to be currently provided for—that they shall wear out and they shall be relined.

Senator LODGE. Has not the French 75, equivalent to our 3-inch, proven that it has been very effective?

Gen. CROZIER. Yes; they are very effective guns, the excellence of the guns consisting in the carriage. The gun does not have any particular claim of merit as compared with other guns of approximately the same size, but they have a very excellent carriage on which it is mounted, which permits the gun to be fired very rapidly, and which does not break down.

Senator LODGE. Have we a carriage like that?

Gen. CROZIER. We have a carriage which is intended to accomplish the same purpose, and we think it is a very good one, but not having had it subjected to anything like the test the French carriage has gone through, we hesitate to assume it.

Senator GERRY. You could not fire that number of rounds out of a gun without relining?

Gen. CROZIER. The number I gave is the number that is expected to be fired without relining.

Senator LA FOLLETTE. For guns of that caliber?

Gen. CROZIER. For guns of that caliber.

Senator LA FOLLETTE. How about a gun of 6-inch size?

Gen. CROZIER. It goes down.

Senator LA FOLLETTE. Can you state that?

Gen. CROZIER. They vary a good deal in gun and gun, and different people's experience varies; but I should say that for a 6-inch gun they ought to be good for three or four thousand rounds. Is that your memory, Col. Hoffer?

Col. HOFFER. At least 3,000.

Senator PENROSE. Is this relining an expensive process, General?

Gen. CROZIER. For the small-sized field guns, as it has been practiced abroad, they replace the inner cylinder. The guns are built up, as you know, of cylinders shrunk on top of another. They do not bore them up and put a lining in them, but they take out a cylinder and put another in; and I should say that could be done easily for perhaps from 30 to 50 per cent of the cost of the original gun.

Senator PENROSE. That is what I wanted to get at.

Senator McCUMBER. Referring to the character of the French 75, we do not claim that we have produced anything that is superior to it, do we?

Gen. CROZIER. No, sir. But that needs a little modification, too. The carriage that we have in our service now we do not claim superiority for, but the carriage of our latest models which we have now under construction we think is in some respects superior.

Senator McCUMBER. Is there any objection or any reason why we can not use any model that is being used over there that has been tested out and found to be excellent?

Gen. CROZIER. No, sir. There is no reason why we should not. This French carriage is of the type that everybody uses now. The particular feature about it is that it affords a very long recoil with the gun on the carriage. The gun of our Civil War, and for a number of years afterwards, had no recoil at all. When the gun was fired it simply kicked the carriage to the rear 10 or 12 feet, and it had to be run up and straightened out again. This gun carriage, of which the model is something like 15 years old, permits a recoil of between 3 and 4 feet, with the gun on the carriage. It recoils that distance, slides back and forward, and that so softens the action of the gun on the carriage that it does not displace the carriage at all, and it will keep on firing there without having to move the carriage, with a man sitting on the trail of the carriage. The rate of fire is increased by that advantage from about 1 round a minute to about 15 or 20 rounds a minute. The principal difference between the French carriages and other peoples' carriages, including our own, as they are built and are now in service, is that the return of the gun to the battery, pushing it back into the battery after the recoil, is accom-

plished with the French carriages by compressed air, and with the rest of us it is done by a steel spring; and whereas some few years ago, when the compressed air was not so well handled, the steel-spring method was considered to be the more reliable, the French claimed, and say that their claim is now substantiated, that with their construction compressed air now is better. Let me say this—this will complete my answer to your question. Senator—the French claim that the mechanical processes of moving that hydraulic system, as they call it, with a compressed-air spring for returning the gun to the carriage is so delicate and so difficult, and requires such perseverance and skill, and such practice that there is not anybody that can do it but themselves. That is their claim, and that would be the limitation on anybody's making this thing which you asked about.

Senator McCUMBER. Then I want to ask whether or not these very large caliber guns of 16 to 20 inches have proven their merit to such an extent that our armies propose to use them and ship them over to France?

Gen. CROZIER. They have not proven their merit to such an extent as to induce us to go into the manufacture in this war of any of the largest size—16 inches caliber, for instance. We will manufacture up to 9½ inches, and if they are wanted we will supply from our coast defenses guns up to 12 inches.

Senator LODGE. Have we any 16-inch guns on our coast defenses?

Gen. CROZIER. We have got one, but we have some in course of construction.

Senator McCUMBER. Is it not the purpose to supply our coast defenses with 16-inch guns?

Gen. CROZIER. Yes, sir.

Senator STONE. Getting back to the main question here of expense, and as that is related to our business, this committee's business of raising the money to meet the expense, I wish to ask you this: I understand from what has been said that it will require approximately 4,000 guns for a million men?

Senator LODGE. Eight thousand.

Senator STONE. Yes; 8,000 guns for a million men, ranging from what caliber to what caliber?

Gen. CROZIER. From 3 inches to 9½ inches.

Senator STONE. What would be the cost—I will put it this way—if you can state it—if you have it in mind to state it now—about how many of the 9½-inch guns and the other lesser calibers would you make to total the 8,000, and what would be the cost, respectively, of the different calibered guns?

Gen. CROZIER. Of the 8,000, about something like 250 or 260 of the largest size—the 9½ inch—and the total cost of them would be something over \$7,000,000. Coming clear down to the smallest size, the 3-inch, the total number of those would be about 3,200—something over that. At a cost of the total of the 3,200 of about \$91,000,000. So you will see, of the greater number, the smaller size, like we have, a much larger expenditure is necessary than for the largest size.

Senator STONE. The total cost of the guns would be what?

Gen. CROZIER. That would be about \$525,000,000. I will have to correct that. I gave you the price of the 9½-inch howitzer am-

munition train, and not the gun itself. I will correct that. The 9½-inch howitzer will be about in the neighborhood of 800 guns instead of 260, and the total cost will be \$110,000,000, and the total cost, as I gave you before, of the 3 inch will be \$91,000,000. So that the two are not so very far apart, but the 9½ inch will cost a little more, notwithstanding the lesser number, 800 as compared with about 3,200.

Senator STONE. The eight hundred 9½-inch guns and three thousand two hundred 3-inch guns makes approximately one-half of the total of 8,000 guns?

Gen. CROZIER. Yes, sir.

Senator STONE. What is the caliber of the other of the 8,000, generally speaking?

Gen. CROZIER. There are three classes of pieces in between—a 4.7-inch gun, a 6-inch howitzer, and a 6-inch gun. The howitzer is a shorter piece than the gun.

Senator STONE. And they make up the balance?

Gen. CROZIER. They make up the balance. They make up the half of that 8,000. There is a class that I have not mentioned separately so far, but which are quite numerous, although less expensive. Those are trench mortars. There are two classes of trench mortars called for, light and heavy. There will be about a thousand of the light trench mortars required for a million men and about 50 of the heavy trench mortars.

Senator STONE. Let me ask you to repeat what you said the total cost of the 8,000 guns is estimated at. I think you said \$700,000,000.

Gen. CROZIER. \$525,000,000.

Senator STONE. For the 8,000?

Gen. CROZIER. Yes, sir. Understand, Senator, that includes the guns and the carriages and the ammunition vehicles and everything that goes with these batteries. It is more than the guns themselves.

Senator STONE. Do you think you could have made a larger number of guns than that during this fiscal year?

Gen. CROZIER. I think we can have made more than that, Senator; yes, sir. Whether we can have made the whole number for the 2,000,000 men, I do not know. We will do the best we can at it.

Senator GERRY. Is there any chance of our allies making any of those guns and helping us out?

Gen. CROZIER. Yes. There is not any chance of the allies helping us out with any of the steel to make the guns out of. We have got to furnish that all ourselves, and furnish them some besides, if we can; but as to the manufacture of the guns themselves, our allies can help us out somewhat.

Senator STONE. That is as far as I care to inquire as to the questions. That is as to the ammunition.

Senator LODGE. That is ten hundred and fifty millions, in round numbers?

Senator STONE. For 2,000,000 men?

Senator LODGE. Yes.

Senator STONE. How do you estimate the munitions necessary for use in operating the guns—by the gun, or how do you go about it?

Gen. CROZIER. It is estimated by the gun. For purposes of supply, for the purposes of getting it and moving it, we estimate it by the gun. There are other ways of estimating it which have to be made when you are thinking of something else than the supply, for

instance. There is an estimate of the amount of ammunition that will be expended per mile of front in a certain defensive; but in the question of supply, where we are going to build the guns and the ammunition for them, nobody knows the purpose for which they will be used.

Senator WILLIAMS. The truth is you can not have too much ammunition.

Gen. CROZIER. Of course not.

Senator STONE. What I want to get at is to ascertain about the cost per gun of ammunition.

Gen. CROZIER. Yes, sir.

Senator STONE. According to your estimate?

Gen. CROZIER. Yes.

Senator STONE. Now, you have 8,000 guns for the first million men. How do you estimate the ammunition cost per gun?

Gen. CROZIER. There is estimated that there should always be on hand for that gun from the time that it goes into the theater of war, a certain initial supply, which I can tell you, but I had rather not. I will tell you in confidence.

Senator STONE. I do not care for the details, but speaking of the money cost.

Gen. CROZIER. That amount of ammunition is supposed to be on hand at all times. It is supposed to be ready for the use of the gun in the theater of war, and necessary to fire as rapidly as you can for a serious effort. There is in addition an average rate of expenditure of ammunition for all the guns that are along the fighting front in the theater of war, or where they are likely to be called on to fight. It has been the result of experience in this war, and the program for the supply should be such that that average rate would be provided for far enough ahead so there will be time enough to get it to where the gun is to be used. For instance, we will say that from the time a round of ammunition for the 3-inch field gun will leave the shop here in the United States, up at the Bethlehem Steel Co., it will be three months before it can be expected to get on the field of battle in Europe. Then we want to prepare now for the ammunition which the gun there will be firing away on the 1st of June, 1918. That ammunition should be produced in this country by the last of March, 1918, and the manufacture should go along at the rate corresponding to this use for the number of guns that are expected to be in the field of war.

Senator STONE. I agree absolutely to all of that, but the point I am after is this: To ascertain how much money we will have to raise to supply the ammunition necessary to operate 8,000 guns. It is the money question I am after, not the details of its manufacture or the necessity for having it on hand, and all that.

Gen. CROZIER. The ammunition for the initial supply for the 8,000 guns required for the million men, the cost would be \$353,000,000. The ammunition for the initial supply would be that much. Taking this second object that I spoke of, namely, the supply of ammunition for the current expenditure of continuous expenditure at an average rate, and the amount necessary for the ammunition for the 8,000 guns for our first million men, which may be expected or they

may possibly be able to expend between now and September, a year from now, would be \$1,400,000,000. That includes the initial supply.

Senator STONE. For ammunition alone?

Gen. CROZIER. Yes, sir. That includes the \$353,000,000 that I just gave you. That is for the initial supply, and the expenditure up to the 1st of September, 1918.

Senator STONE. That is for the first million men?

Gen. CROZIER. For the first million men; yes, sir.

Senator STONE. You will have to add to that eight hundred and odd millions the cost of the guns.

Gen. CROZIER. This is in addition to the cost of the guns.

Senator STONE. So then to the fifteen hundred and odd millions and fourteen hundred and odd millions, then, you have got to add one thousand nine hundred millions?

Gen. CROZIER. Yes, sir.

Senator STONE. For the first million men?

Gen. CROZIER. Yes, sir; and to carry them through the war up to September, 1918.

Senator STONE. Up to September, 1918?

Gen. CROZIER. Yes, sir.

Senator STONE. If we had 2,000,000 men, that would be doubled.

Gen. CROZIER. Yes, sir. If you had 2,000,000 men right from the start, that would be doubled. You do not have 2,000,000 men right from the start, but the second million men will not be able to get into the war in time to expend a very great amount of ammunition before the 1st of September of next year. So that is the current supply that is estimated for.

Senator WILLIAMS. General, somebody made the statement in my presence the other day—and I do not know whether it was true—to the effect that our guns or rifles do not use the same ammunition as the French and English guns, or either one of them. Is that true?

Gen. CROZIER. Does your question relate to the small arms—the infantryman's rifle?

Senator WILLIAMS. Yes.

Gen. CROZIER. Yes, sir; it is true that our guns do not use the same ammunition as either the French or the English, and that they do not use the same as one another.

Senator WILLIAMS. We would be dependent then absolutely upon our own ammunition? If the French and English had plenty and we happened to be short, we could not use theirs?

Gen. CROZIER. We are dependent entirely on our own ammunition.

Senator WILLIAMS. Would it not be just as easy to use a gun that could use their ammunition?

Gen. CROZIER. No, sir; it would be much more difficult. In the first place, that would compel us to refrain from using something over 600,000 of our own guns, which we already have on hand, and something over 200,000,000 rounds of ammunition. If we were to try to use a rifle using the ammunition of either one of those other countries, we could not use our own.

Senator WILLIAMS. I had understood we have adopted to Enfield rifle for our troops in France.

Senator SMOOT. We have, but we shall be compelled to bore them out eventually to fit our ammunition.

Gen. CROZIER. For all the troops that go over there for some time to come, we will have rifles enough of our own. We have them, and we know that we can supplement them.

Senator LODGE. That is the Springfield new model?

Gen. CROZIER. Yes; the model of 1902, the standard rifle which we feel has not a superior in the world. Beyond that, if we raise these troops as fast as we can raise them, we can furnish Springfield rifles fast enough to arm them all, or we can get ready to manufacture Springfield rifles fast enough to arm them all. Therefore, we take advantage of the situation in which there are rifle manufacturing companies in this country which can manufacture the Enfield rifle, taking the British ammunition, not like ours, and we have them manufacture the Springfield rifle for us, and they are doing it now: but instead of finishing them, chambering them and boring them and rifling them to take the British ammunition, we will finish them to take our ammunition, which will require a comparatively slight change. That change will not be made in the finished guns, but the guns will be made now for the other ammunition.

Senator WILLIAMS. Is not that a horrible mistake, just to manufacture a gun and then to change it so as to fit your ammunition, instead of being able to use the English or French ammunition? Because, if you go over there and get short by reason of the submarines having sunk a whole lot on the way, your troops are helpless, and you can not one of you help the other out on the ammunition question. It struck me that if that were true—I did not believe it when it was stated—that it was an act of supererogation to be changing our rifles so they would not do just what you want them to do, to wit, to use the allies' ammunition.

Gen. CROZIER. It is always desirable for troops on the same side in a war to have common material, to have one model right straight through. That would be very desirable with reference to rifles and ammunition. If we have to start to manufacture our rifles and ammunition from the beginning, we would undoubtedly make them just like either the French or the English.

Senator WILLIAMS. I am not talking about that now. I am talking about those you are going to manufacture hereafter, and with which you are going to arm this new draft when it goes abroad. Why perpetuate that lack of identity of arms and ammunition any further than the guns you have already got and the ammunition you already have on hand? Why not permit the new units, which you are going to send as fast as possible, to be armed with the same gun and to use the same ammunition which the allies use? I do not say to throw away the rifles and the ammunition you already have on hand, but it does seem to me to be rather peculiar to be making more for the same disadvantage.

Gen. CROZIER. Suppose we should start in accordance with that plan and send our first troops over there, several hundred thousand of them, using our own rifle, and, then, in order not to perpetuate this difference in ammunition, should send the remaining ones using the English rifle and ammunition, then we would have right in our own forces two rifles and two kinds of ammunition, which would be much more disadvantageous.

Senator WILLIAMS. You would, of course, but over half of your troops would have exactly the same ammunition as the allies, in-

stead of all your troops having a different gun and a different ammunition.

Senator LODGE. What is the present accumulation of ammunition?

Gen. CROZIER. We have something between two and three hundred million rounds now, worth about \$50 per 100 rounds.

Senator WILLIAMS. You have rifles for some of the men now?

Gen. CROZIER. We have over 600,000, and we can make them at the rate of something like 300,000 a year.

Senator WILLIAMS. And our calculation is that we shall have to have 2,000,000 men in the field?

Gen. CROZIER. But they do not all carry rifles. Out of 2,000,000 men there would be not more than 1,500,000 to carry rifles.

Senator SMOOT. Could you take this statement now, General, on page 3 of the estimate, and, beginning under the head of Ordnance Department, start with "Ordnance Service" and state approximately whether all the items will be used by June 30, 1918, or not, and then we can find out whether there is any elimination we can make or which should be made?

Senator LODGE. In other words, we want to find out what we have to get ready.

Senator SMOOT. Under your heading of "Ordnance Department," you ask for \$2,809,821,300. Beginning with "Ordnance Service," you ask for \$1,825,000. Will you have to have all that? Then go ahead under each heading and answer that same question, so we can put it down and ascertain just exactly what you absolutely will need.

Gen. CROZIER. I can give you those figures. I can give the details during the whole fiscal year.

Senator LODGE. We want to get at the proposition whether you expect to spend that all within the year.

Senator SMOOT. If you have them detailed, you can do it now by merely presenting your statement, and not taking the time of the committee.

Gen. CROZIER. I have them totaled by months. For instance, in the month of July, the current month, I estimate I need \$49,000,000.

Senator SMOOT. That does not give us any idea where you may be able to cut out.

Gen. CROZIER. It does not separate it into different items; no.

The CHAIRMAN. Let him state how much of this money he expects to expend each month.

Senator SMOOT. Then, if there is anything he can cut out in the detail, let him do it.

Senator LODGE. He expects to spend between now and the 30th day of June, 1918, \$3,154,000,000.

Senator SMOOT. What I am trying to get at is if he wants to take it by the month, let him say that in July he expects to spend \$49,000,000. Do you have to spend all of that in July, or can you cut anything out of that? Then we will know what you really have got to have up to June 30, 1918.

Gen. CROZIER. That is the estimate we have made of what we need in these months.

Senator SMOOT. You can not cut anything out at all?

Gen. CROZIER. I think not anything, Senator.

Senator SMOOT. Mr. Chairman, from what Gen. Crozier says, he needs it all, so there is no need of going into it at all.

Senator STONE. General, I want to ask one additional question, which perhaps you will not want to answer, and if so, do not do it. In making these guns and ammunition for our own forces, this vast amount of guns and ammunition, will we not be compelled to have the entire manufacturing and creative force of this Government? In other words, can this Government make what you want and need, and yet make guns or ammunition for other governments? You need not answer that if you think it best not to, but I am curious about that.

Gen. CROZIER. I think we can meet this program I have given you, frankly.

Senator STONE. That is all we want to know.

The CHAIRMAN. That is with reference to the ordnance, if I understand you?

Gen. CROZIER. Yes, sir.

The CHAIRMAN. You think we need all of that?

Gen. CROZIER. Yes, sir.

Senator LODGE. That is what his monthly figures show. He expects to be able to spend it all.

Gen. CROZIER. You will understand, Senator, that my monthly figures add up for the fiscal year \$3,154,000,000, and that includes funds which have already been appropriated.

The CHAIRMAN. That is about \$345,000,000 you have asked here?

Gen. CROZIER. Yes.

The CHAIRMAN. That is the amount already appropriated?

Gen. CROZIER. Yes.

The CHAIRMAN. So the amount you have here is \$2,809,821,900, and we have already appropriated \$345,157,251, so that makes this amount exactly.

Gen. CROZIER. Yes, sir.

Senator PENROSE. Do I understand part of these amounts for the Ordnance Bureau have already been appropriated?

Senator SMOOT. No. The General says the total amount includes this and what has been appropriated. This amount here is \$2,809,821,900, and we have already appropriated for these groups \$345,000,000, which, added to this amount, makes the exact figures which he presents here.

The CHAIRMAN. General, after close investigation you think if you can get the money the materials will be available?

Gen. CROZIER. I think so, Senator; yes.

Senator PENROSE. You think you need all the money for this fiscal year, do you? You have practically stated that.

Gen. CROZIER. Yes, Senator.

Mr. Chairman, I can give you each figure that I think may be of some use to you. The funds which I wish to be authorized to create out of the situation includes both obligations that I have been heretofore authorized to create in the last act, and those which I would wish to be authorized to create in the act following this estimate which need to be appropriated in cash, and which added together would make \$353,000,000; so if you take the last appropriation act and find the amount of authorization but not appropriation, and subtract that from \$353,000,000 you will have left the amount which might be authorized for obligations, but not appropriated for in cash in this bill which you are now considering.

Senator SMOOT. If I remember, it does not amount to very much. We authorized a little more than was actually appropriated for the Government, but it does not amount to very much.

Gen. CROZIER. It will come out about like this: Above the sum which I am now asking for I would need, up to June 30 of next year, all but about \$300,000,000.

Senator SMOOT. You could get along with \$300,000,000 less?

Gen. CROZIER. Yes.

Senator SMOOT. Suppose we take up the Quartermaster Department next.

Gen. CROZIER. I said I could get along with an appropriation which would be \$300,000,000 less than the estimate now before you amounts to, the remainder being authority to enter into obligations. To that can be added \$400,000,000. I was speaking of artillery, and not of ammunition. \$400,000,000 worth of ammunition I will not need to pay for before the 1st of next June, so you will not need to raise the money covered by my estimate which is now before you by about \$700,000,000.

Senator SMOOT. In other words, you can take the \$700,000,000 off of the \$3,154,000,000?

Gen. CROZIER. Oh, no, sir; not off of that \$3,154,000,000.

Senator SMOOT. I will figure it up, then, for myself. That is the amount that is authorized and not appropriated for?

Gen. CROZIER. The amount that was appropriated last year plus the cash that I will need for these items will together add up the \$3,000,000,000. That is the amount that ought to be raised, and you will find that that amount is not as large as the sum total contained in last year's bill added to this.

Senator SMOOT. Of course, you have put down here in this amount appropriated for the current fiscal year ending June 30, 1917, the actual appropriations and not the appropriations which were authorized?

Gen. CROZIER. Yes.

The CHAIRMAN. General, could you leave with the committee a copy of that monthly statement to which you have referred?

Gen. CROZIER. Yes, sir.

Senator PENROSE. General, in this letter of the Secretary of the Treasury, on page 2, the list of expenditures is under a title reading "Statement of deficiency and supplemental estimates required by the War Department for the service of the fiscal year ending June 30, 1918." It just developed that \$700,000,000 will not be needed during this fiscal year.

Gen. CROZIER. That is because of a very common and, I think, a necessary method, Senator. These questions of appropriations, even in normal times, coming under the head of armor and fortifications, do not have a time limit, and it is merely that they should submit the obligations which must be entered into in this fiscal year. It does not mean all the money will have to be expended in the fiscal year.

Senator LODGE. They have to be authorized but not necessarily appropriated?

Gen. CROZIER. Yes, sir.

The CHAIRMAN. Authorized so you can go on and make contracts?

Gen. CROZIER. Yes, sir; it means that we want in the fiscal year to contract the obligations.

Senator PENROSE. But for our purposes of framing a revenue bill, it is quite important to know what will be necessary in this fiscal year.

Gen. CROZIER. Yes, sir; and for that reason there is a statement in the schedule of the amount needed to be appropriated in cash and the amount which may be authorized to incur obligations for.

Senator SMOOT. That amount is \$3,154,000,000.

Gen. CROZIER. That is the amount we will need in cash, but that includes the amount already appropriated in cash by the previous bill.

STATEMENT OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, UNITED STATES ARMY.

The CHAIRMAN. Gen. Sharpe, we would like to have a statement from you, first, as to the year in which these several amounts in the Quartermaster's Department are to be used, the necessity for them during the fiscal year, and if it will be necessary for you to expend the whole amount. The first item is "Pay, etc., of the Army, \$715,828,440.98."

Gen. SHARPE. That pay of the Army, Mr. Chairman, is based on the difference in the strength of the Army, what we now have over what we put in the bill when the present appropriation bill passed. We estimated 1,077,000 men. There are now about 2,033,000 men in the Army.

The CHAIRMAN. When are those second million of men expected to be called for?

Gen. SHARPE. That I can not tell, sir. There will be called to the national arms 687,000, and there will be very nearly 2,000,000 men in the Army.

The CHAIRMAN. When will that occur?

Gen. SHARPE. When the call is made in September.

Senator LODGE. Under the second call?

Gen. SHARPE. There will be very nearly 2,000,000 men in the Army when that call is made, sir, in September.

Senator LODGE. Do you mean the first call?

Gen. SHARPE. The first call; yes, sir.

Senator LODGE. Two million men?

Gen. SHARPE. Very nearly; yes, sir.

The CHAIRMAN. I wish you would explain that to us.

Gen. SHARPE. The Secretary of War directed provision to be made for 2,033,345 enlisted men, divided as follows:

National Army. 16 Infantry divisions, 320,000 men. Six army corps, 97,800 men. Line of communications troops, 32 divisions, 238,556 men. This makes a total of 656,360 men for the National Army.

For the Regular Army, 10 Infantry divisions, 200,000 men; 3 army corps, 48,500 men; line of communications troops, 74,550 men; miscellaneous troops, including over-sea garrisons, 146,838 men, making a total for the Regular Army of 470,185 men.

For the National Guard, 16 Infantry divisions, 320,000 men; 6 army corps, 97,800 men; miscellaneous, 39,000 men, making a total of 456,800.

Replacement troops for all forces, 450,000 men. This makes a grand total of 2,033,345 men.

The CHAIRMAN. This draft already made covers this?

Gen. SHARPE. No, sir; it does not. The first draft is covered in the 656,000, but in addition to that we have a great many organizations known as technical troops, which are going abroad. We will have in the Quartermaster's Department alone about 200,000 men. The Medical Department will have 200,000 and the Ordnance Department about 20,000. I do not know what the Signal Corps will have. I have not their figures, but I think it is slightly over 100,000.

Senator PENROSE. What becomes of this second draft? Why is that needed? I thought there was some talk of a second draft.

Gen. SHARPE. I do not know about that, Senator.

Senator LODGE. I thought we were going to have a second draft.

Gen. SHARPE. We have got to get these technical men, you understand.

Senator LODGE. The first draft does not include those at all?

Gen. SHARPE. We have to get those technical men, of course.

Senator LODGE. They have to fill up all of those in the Regular Army, the National Army, the replacement troops, etc., and I suppose those are coming from the second draft.

Gen. SHARPE. The replacement men will come from the second draft.

Senator STONE. Gen. Sharpe, this first draft which has been made calls for something over 500,000 men.

Gen. SHARPE. Six hundred and eighty-seven thousand men, Senator.

Senator STONE. That is the first draft?

Gen. SHARPE. Yes, sir.

Senator STONE. Without reference to any subsequent draft adding to the 687,000 men, the National Guard and the Regular Army and the technical troops, etc., will make a total of over 2,000,000 men?

Gen. SHARPE. Yes, sir.

Senator STONE. If there should be a second draft, that is to be added?

Senator STONE. Yes, sir.

Senator STONE. Whatever it may be?

Gen. SHARPE. Yes, sir.

Senator STONE. When are those 2,000,000 men to be mobilized?

Gen. SHARPE. As I understand it, as soon as they can be.

Senator STONE. That is in process of being done now, is it not?

Gen. SHARPE. They are called. The National Guard is called on August 5. They are to be federalized on that date.

Senator STONE. When this first draft of 687,000 men in the National Army, etc., already provided for, are mobilized, then you will have over 2,000,000 men?

Gen. SHARPE. When we get the replacement troops. We have not yet got those. I think those should come out of that second draft you are speaking of. There are 450,000 troops in that. The National Army contains 656,360.

Senator PENROSE. That is evidently represented by the replacement troops.

Gen. SHARPE. Yes, sir.

Senator LODGE. It is represented in part by that, but the National Guard means the National Guard, of course.

Gen. SHARPE. The Regular Army—I see this by the paper, and that is all I know about it—is about 22,000 short, and I understand it is proposed to take some of the men from the draft to fill out the Regular Army.

Senator LODGE. And that is where the second draft is going?

Gen. SHARPE. Yes, sir.

Senator STONE. There must be a second draft coming, then?

Senator LODGE. To make up the replacement troops alone, there must be a second draft.

Senator STONE. I know my chauffeur was drawn, and he made inquiry from some official source and has been informed that he will not have to report until the second draft. I am just stating that, but I do not know whether he is accurately informed or not.

Senator LODGE. We gave authority of law to fill the Regular Army and the National Guard up to their war strength by draft, if they had not been filled by volunteering. That draft has to come out of the drafted men of course. I take it these replacement troops will all come from the second draft, so the 2,000,000 men will include the second draft.

Senator PENROSE. The Army has got to be paid, of course.

Gen. SHARPE. Yes, sir. The only thing we have not included in this is pay of Army and subsistence, in which we want to cover what was not given in the appropriation as made. The appropriation as made for the 1,077,000 men, only provided both pay and subsistence up to January 1; so that we are providing pay and subsistence for that million of men for the balance of the year, and practically for another million of men for a year.

The CHAIRMAN. This is to include that pay and subsistence up to what time?

Gen. SHARPE. January 1, with the idea that Congress would be in session in December in time to make another appropriation.

The CHAIRMAN. This is to cover their pay and subsistence from January to the end of the fiscal year, and also pay and subsistence for these additional 1,000,000 men?

Gen. SHARPE. Yes, sir.

Senator PENROSE. When will this 1,000,000 men get on the pay roll?

Gen. SHARPE. Just as soon as they are called.

Senator LODGE. The National Army will go on in September?

Gen. SHARPE. Yes, sir.

Senator PENROSE. The replacement men will come along in the fall of the year probably?

Gen. SHARPE. Oh, yes, sir; long before that. They will come right off. All our estimates are made for that. With those men we must have that money to pay them. You asked if we can make a reduction. It is the same way with all the items in the estimates for appropriation.

The CHAIRMAN. What do you mean by "regular supplies"?

Gen. SHARPE. Such things as food and fodder for the horses, axes, buckets, etc.

The CHAIRMAN. That is also for the present army?

Gen. SHARPE. For the 1,000,000 men; yes, sir.

The CHAIRMAN. And for the additional 1,000,000 men after them?

Gen. SHARPE. Yes, sir.

Senator SMOOT. We made appropriation for \$8,000,000 instead of \$6,000,000; that is, for the Army as it was. We took two-thirds of the year for the Army in the deficiency appropriation of \$3,200,000,000.

Gen. SHARPE. That appropriation was based on a year. It was made some time last April, but it did not actually pass and was not available until almost the 1st of July.

Senator SMOOT. It was not available until the beginning of the fiscal year; no.

Gen. SHARPE. That was an emergency deficiency bill. It would have been available right from the passage of it, but you will remember the bill did not pass until very nearly the 1st of July—June 15. I think it was—so that instead of making the year run from the 1st of May, when we submitted the estimate, it runs practically from the 1st of July.

Senator SMOOT. Don't you remember we just took two-thirds of the amount which was asked for for the year?

Gen. SHARPE. I think they gave us the full amount.

Senator SMOOT. No; we gave you two-thirds of every amount that was estimated for. If you figured on these other extra men for the Army until June 30, that is different.

Gen. SHARPE. These figures cover for a year from the 1st of May.

Senator PENROSE. I do not quite understand this. These appropriations for pay and subsistence are for what period of time? Are they for the fiscal year?

Gen. SHARPE. For the fiscal year; yes, sir; commencing with the 1st of July and running until the 30th of next June.

Senator McCUMBER. That is true of all of these?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. This provision is for the Army up until January 1, and we have to make provision for that part of the Army after that time. Then there is another provision for subsistence and pay of the million additional men.

The next item, General, is "Transportation of the Army and its supplies." Does that mean transportation in this country?

Gen. SHARPE. Transportation wherever we have to move them—in this country, abroad, water transportation, and everything of that sort—chartering of transports and everything.

Senator PENROSE. Does that transportation item cover food?

Gen. SHARPE. No, sir; that is in subsistence.

Senator PENROSE. What do you mean by "transportation expense"? Are they carried on Government transports?

Gen. SHARPE. That includes payment of railroad fare on steamships, wagons, motor trucks, and the chartering of vessels—anything used in transportation.

Senator PENROSE. You have an item covering transportation of supplies?

Gen. SHARPE. Yes, sir.

Senator PENROSE. Is that a separate item?

Gen. SHARPE. No, sir.

Senator PENROSE. How much of that would be railroad fare; have you any idea?

Gen. SHARPE. Yes, sir; we show it.

Senator PENROSE. Could you itemize that transportation item?

Gen. SHARPE. Yes, sir; I have it here. This item of transportation of the Army and its supplies includes an item for the transportation of recruits when moved either by land or water and of their baggage, \$31,865,475.50. It includes also an item for the transportation of recruits and recruiting parties, of applicants for enlistment between recruiting stations and recruiting depots, \$1,600,000. It includes also an item for the transportation of necessary agents and other employees, and authorized allowance of baggage, \$22,800. It includes also an item for the reimbursement of actual traveling expense for civilian employees not to exceed the maximum amount fixed by law, \$30,000.

There is also an item for the transportation of clothing and other quartermaster supplies, engineer stores, medical stores, signal stores, and other property of the Army from Army posts and depots, from places of purchase or delivery to the several posts and Army depots, and from these posts and depots to troops in the field, amounting to \$5,259,890.

Then there is an item for the transportation of horse equipment, of ordnance and ordnance stores, and small arms from the foundries and armories and places of purchase, to the arsenals, fortifications, military posts, and Army depots. This item amounts to \$1,082,370. There is also an item for the transportation of animals for the Army from places of purchase to remount depots, and from depots to the troops at military posts and stations and in the field, etc., amounting to \$1,022,530.

Then there is an item for the transportation of funds for the Army, \$25,787; another item for the payment of wharfage, tools, and ferrriage, including the purchase of street car tickets and commutation railroad tickets for the transportation of recruits and recruiting parties, amounting to \$45,838. Also an item for drayage and cartage at the several depots and at posts and stations where Government transportation is not sufficient for the purpose, amounting to \$88,412. The next item is for packing and crating baggage and company property, amounting to \$151,038.

There is an item, then, for the purchase and hire of draft and pack animals. This item calls for \$41,754,460.

Senator PENROSE. That is for the purchase of draft and pack animals?

Gen. SHARPE. Yes, sir; horses and mules.

The next item is for the transportation and repair of harness and pack equipment for the use of the Army, including purchase and issue of repair parts for the same and materials for making such repairs, amounting to \$6,231,841.

Following that is an item for the purchase of wagons, carts, drays, and such animal-drawn passenger-carrying vehicles, including parts and materials for the repair and maintenance of same, etc., amounting to \$4,281,809.

Next we have an item for the purchase of motor-propelled trucks and motor-propelled passenger-carrying vehicles, such as are required for the transportation of troops and supplies, and for official, military, and garrison purposes, including the purchase and issuance of supplies, parts, and equipment required for the maintenance, operation, and repair of the same. This item amounts to \$127,091,482.

Then follows an item for the purchase and repair of boats necessary for the harbor boat service of the Army for the transportation of

troops and supplies and for official military and garrison purposes, amounting to \$1,927,500.

Then follows an item for the Coast Artillery service and for official military and garrison purposes, including the purchase, construction, and repair of mine planters and cable boats and ships and for the supplies and equipment necessary for the maintenance and operation of such vessels, amounting to \$627,500.

We have for the next item the purchase and charter of transports for the movement of troops, amounting to \$163,266,000. Then an item for additional employees for harbor-boat service and Coast Artillery, amounting to \$115,570. Also an item for six months' reserve stock wagons, harness, motor trucks, and supplies amounting to \$64,000,000.

These items make a total of \$450,490,305.

Senator PENROSE. I shall not urge it if there is any impropriety in it, but is there any objection to having these items appear in the stenographer's notes?

Gen. SHARPE. No, sir; they are items which will be in the bill and will be shown in detail there.

The CHAIRMAN. General, I do not now recall the amount which you said you require for transportation of the troops abroad.

Gen. SHARPE. That item was \$163,266,000.

Senator PENROSE. Referring to these \$40,000,000 worth of horses and mules and other animals, are they taken over to the other side to be there used?

Gen. SHARPE. Those that go with the organizations themselves; yes, sir.

Senator PENROSE. There is another item for Cavalry of \$50,000,000. Is that item for draft animals to be used in France?

Gen. SHARPE. Yes, sir; and in this country for those organizations that remain here.

Senator PENROSE. Do you believe these estimates for draft animals and for the Cavalry animals are reasonably accurate and approximately what you really need?

Gen. SHARPE. Yes, sir; as nearly as we can get at it.

Senator PENROSE. The reason I ask that is that in the last Army appropriation bill there is an estimate of \$75,000,000 for Cavalry, and Senator Weeks moved to cut it down to \$25,000,000, and no one seemed to show any feeling over the matter or any desire to have it kept at the original amount—\$50,000,000 at one swoop was stricken out of the bill with no word from the chairman of the Military Committee or any Senator.

Gen. SHARPE. I think that was acquiesced in because we knew there would be no amount of troops to be taken over to the other side at that time.

Senator PENROSE. Here you are estimating \$50,000,000 for Cavalry. That would imply there are other troops.

Gen. SHARPE. That will be for troops in this country. The theory is that the Artillery will require some of these.

Senator STOSE. Gen. Sharpe, haven't you invented any plan yet for pulling a gun around with motor power instead of horse power?

Gen. SHARPE. I understand not, Senator, except for the very large caliber guns, which are practically more or less permanent in their location. These are for field guns, where we have the estimate for the animals.

Senator PENROSE. That item for "water and sewers" is a pretty large item.

Senator SMOOT. That is true all the way through the estimate.

Senator PENROSE. That item calls for \$34,327,500. You could build a plant for Boston or Philadelphia for that amount of money.

Gen. SHARPE. You see, Senator, we have 32 or more cities building, in which we have to put these water plants.

The CHAIRMAN. Does that cover all the military posts and also these camps and cantonments, too?

Gen. SHARPE. Yes, sir; it includes everything—no; not the military posts. The military posts were taken care of in the appropriation for this year.

The CHAIRMAN. This says "and military posts."

Gen. SHARPE. That is the title of the appropriation. That is the Treasury title.

The CHAIRMAN. This is not for military posts already in existence?

Gen. SHARPE. No, sir.

Senator PENROSE. This estimate would seem to indicate that it will cost more than a million dollars each to supply these camps with water and sewer.

Gen. SHARPE. There are 32 of these camps and a great number of hospitals and points of embarkation. These are all included in this—sewer system, water system, sewage disposal, and everything that is used in connection with that.

Senator PENROSE. How many men will there be in each camp?

Gen. SHARPE. The largest camp is 45,000 and from that down to 35,000.

Senator GERRY. This does not include any camp that may be created abroad?

Gen. SHARPE. No, sir.

Senator SMOOT. Is not that item "construction and repair of hospitals, \$33,960,000," a very large amount?

Gen. SHARPE. The Surgeon General furnishes the information about that, Senator. We have to do with the construction, and he furnishes the data for it.

Senator SMOOT. I think you said you would need all this money this year?

Gen. SHARPE. Yes, sir.

Senator PENROSE. I do not see how \$17,000,000 can be spent for roads and walks. I confess it is not our province to inquire into it, but you can build all the roads in North Carolina with \$17,000,000.

The CHAIRMAN. Oh, no; I think not.

Senator PENROSE. Why is that item so large for the construction of roads and walks?

Gen. SHARPE. As itemized it provides for roads, walks, wharves, and drainage, \$6,000,000; roads, walks, drainage, railroad facilities, and wharves at three ports of embarkation camps, \$4,950,000; roads, walks, etc., at quartermaster corps' training camp, \$350,000; and for roads in the camps of the troops in France, \$700,000. It also provides for the construction of roads in 16 cantonments of the National Army, \$1,400,000; for roads, drainage, and clearing camps for National Guard troops, \$1,600,000; for the construction and installation of railroad sidings at National Guard camps, \$1,200,000; for the construction of roads, walks, etc., at National Guard Coast Artillery

camps, \$120,000. Then there is an item for changing the National Guard camps to cantonments, which calls for roads, drainage, and clearing, itemized as follows: Roads, \$3,680,000; drainage, \$800,000; and clearing, \$480,000. The estimate also covers depots at Governors Island, including an extension to the wharf, amounting to \$140,000; electric railroad, \$20,000; and standard-gauge track, \$30,000.

The total of all these items is \$17,270,000.

The CHAIRMAN. That seems to be all, General. Thank you.

STATEMENT OF SURG. GEN. BLUE.

The CHAIRMAN. Will you enlighten us about that item, Gen. Blue?

Gen. BLUE. It is to meet the expenses of the Army that we expect up to the first of next July.

Senator PENROSE. That includes surgical instruments and things of that kind?

Gen. BLUE. That includes all supplies of that kind.

Senator SMOOT. Construction and repair of hospitals, \$33,960,000, under the Quartermaster's Department, and then under the Medical Department you have "Medical and Hospital Department," \$100,000,000. Where are you going to construct the hospitals for which \$33,000,000 is appropriated?

Gen. BLUE. The bulk of that expense will be in the various training camps of the United States. For instance, the 16 large concentrating camps that have about 40,000 men a piece, you will have to prepare hospital accommodations for at least 5,000.

Senator SMOOT. There are not so many of those who are going to remain here in these cantonments. They are going abroad, to France.

Gen. BLUE. I presume, as soon as the cantonment is moved, another levy will be made, and they will be kept full—in preparation for the Army.

Senator SMOOT. Are we going to have more than one draft—more than 2,000,000 men?

Senator PENROSE. It depends on how long the war lasts.

Gen. BLUE. We will have to keep at work so long as it lasts—that is my idea—until the war is over, we will have to keep it up.

Senator SMOOT. \$33,000,000 is a lot of money, it seems to me, besides all we have given you already; we have appropriated for hospitals here, I forget what it was, \$10,000,000 or something of that sort.

Gen. BLUE. I do not know what it was.

Senator SMOOT. But we gave you all you asked for, and now here is \$134,000,000 more. That may be necessary, but I do not know.

Senator LA FOLLETTE. You are adding about 1,700,000 men to the Army.

Senator STONE. Are these hospitals to be temporary in character?

Gen. BLUE. They are just like the camps themselves—frame buildings. I would call them temporary. They would not be of the character of a hospital at a permanent post.

Senator STONE. Wooden buildings?

Gen. BLUE. Yes, sir.

Senator PENROSE. Does the Government own these camps or lease them?

Gen. BLUE. Principally renting them, I think, for short periods.

The CHAIRMAN. The rent in all cases is normal, is it?

Gen. BLUE. In a good many I would not have any accurate information on that. In my own department people are extremely liberal in giving us grounds and so on.

The CHAIRMAN. Are these leases for just a few years or during the continuance of the war?

Gen. BLUE. Our hospital, for instance, goes right on the camp grounds. We have nothing to do with the leasing of the ground, and we would not know as to that.

Senator PENROSE. I would suppose for the war, although we would have to have some of the camps, if we keep up this preparedness program, after the war. We will always have to have them, I suppose.

Senator SMOOT. All of the buildings put up at the present time—none of them will be permanent; they are all temporary?

Gen. BLUE. Yes; all temporary.

Senator McCUMBER. How many would there be of hospitals here in the United States? Suppose we kept about a million men in training, what proportion of them would be serving or be in the hospitals?

Gen. BLUE. A fair estimate would be about 20 out of every thousand men, and of those men about half would be in hospitals—about 10,000.

Senator LODGE. That would be about how many?

Gen. BLUE. About 40,000.

Senator LODGE. Ten in a hospital would be 400 beds or more.

Senator McCUMBER. I mean for a million men.

Gen. BLUE. In just the sickness we would have in camps?

Senator McCUMBER. Yes.

Gen. BLUE. That would be about 10,000 for a million men.

Senator McCUMBER. \$34,000,000 for the construction and repair of hospitals for 10,000 men. It seems to me just for these temporary matters it is unreasonably high.

Senator STONE. How much would that be for hospitals?

Gen. BLUE. We are asking at the rate of about 30 per 1,000. I am just informed by one of my assistants that it would be 30 per 1,000 at each of these training camps.

Senator PENROSE. You mean you expect 30,000 men to be in hospitals?

Senator McCUMBER. You do not mean, as I understand, with a million men that there would be an average of 30,000 in the hospitals?

Gen. BLUE. No; there would not be an average, but each camp—the average will run between 20 and 25 on the sick force. Of course, frequently it would go up much higher than that. Probably in each camp there would not be over 10 or 12 per 1,000 in the hospitals, but there are great variations, due to climatic conditions and things of that kind. When it comes to actual warfare it is a great deal higher than that.

Senator McCUMBER. I had reference to training in our own country. That is what this \$34,000,000 is for.

Gen. BLUE. Yes, sir. We estimate it will be 30 per thousand, but I do not think it will be anything like that.

Senator PENROSE. The \$30,000,000 covers the hospitals?

Senator LODGE. That is in the Quartermaster's report.

Gen. BLUE. If the Quartermaster's report does not give it in detail, I can give it, just how that estimate is arrived at for hospital constructions.

Senator SMOOR. Gen. Sharpe said that he knew nothing about it in detail, but that you could give it to us.

Gen. BLUE. It came from my office.

Senator McCUMBER. That would be over a thousand dollars a man per year.

Gen. BLUE. For bed per year.

Senator McCUMBER. I do not mean for the bed. For the construction of the hospital it would be over a thousand dollars per man, and that is just to build up board shanties.

Gen. BLUE. I am familiar with the cost per bed for an ordinary permanent hospital. It will run about \$2,400 or \$2,500 per bed. That will include construction.

Senator SMOOR. Was there anything else you want to ask?

Senator LODGE. Gen. Squier is here, the Chief of the Signal Corps.

STATEMENT OF BRIG. GEN. GEORGE O. SQUIER, CHIEF SIGNAL OFFICER, UNITED STATES ARMY.

The CHAIRMAN. General, will you please give us a statement about the amount required in your department, and whether you will need it all during the fiscal year?

Senator SMOOR. \$3,000,000.

Gen. SQUIER. The department estimated \$3,000,000 for the Signal Service, as distinguished from aviation, and the aviation bill carries with it \$640,000,000. In regard to the \$3,000,000 for Signal Service, that is due to a number of things, particularly the emergency of the war.

Senator LODGE. The aviation is not in here.

The CHAIRMAN. No.

Senator SMOOR. It is on the next page, \$639,000,000.

Senator LODGE. That is all appropriated for.

Gen. SQUIER. Yes, sir. We will need \$3,000,000 and possibly more; in December I may have to come to you gentlemen for more. Nobody knows.

The CHAIRMAN. You failed to make this estimate originally, because you did not anticipate it?

Gen. SQUIER. No, sir. No one could know. I had no notion we would be asking for an \$800,000 or \$900,000 bill for telegraphing in France. No one could possibly imagine that.

The CHAIRMAN. You certainly need all of this during the fiscal year?

Gen. SQUIER. Yes, sir. I may have to come in December and ask for more. Nobody knows.

Senator SMOOR. Of course, you will.

The CHAIRMAN. I do not suppose we need ask anything further about that.

Senator LODGE. Oh, no; \$3,000,000.

(Whereupon, at 5 o'clock p. m., the committee adjourned.)