







THE QUARTERMASTER CORPS

THE
QUARTERMASTER CORPS

IN THE YEAR 1917
IN THE WORLD WAR

BY

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MAJOR GENERAL, U. S. ARMY
(FORMERLY QUARTERMASTER GENERAL)



NEW YORK
THE CENTURY CO.
1921

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SEP - 1 1921

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2001

THIS BOOK IS DEDICATED TO THE MEMBERS OF THE
QUARTERMASTER CORPS
AND ITS CIVILIAN PERSONNEL
WHOSE LOYAL, UNTIRING AND DEVOTED SERVICES
MADE POSSIBLE THE ACCOMPLISHMENT OF
THE WORK HEREIN OUTLINED

ACKNOWLEDGMENTS

I am under deep obligation for the assistance rendered me in preparing this book by the following: Lieutenant Colonel John H. Adams, Brigadier General D. L. Brainard, Colonel F. A. Coleman, Colonel William H. Clopton, Brigadier General John M. Carson, Lieutenant Colonel Ezra Davis, Lieutenant Colonel L. L. Deitrick, Brigadier General Charles B. Drake, Colonel Charles P. Daly, Colonel John S. Fair, Colonel William R. Grove, Major George Hahn, Colonel Harry J. Hirsch, Colonel Letcher Hardeman, Mr. Emmet Hamilton, Major Henry R. Lemly, Mr. W. H. Lewis, Jr., Lieutenant Colonel Marcel S. Keene, Brigadier General A. D. Kinskern, Brigadier General Herbert M. Lord, Colonel Fred S. Munson, Lieutenant Colonel Robert E. Shannon, Mr. O. D. Street, Colonel Thomas H. Slavens, Major Amos Tyree, Lieutenant Colonel Frank Van Vleck, Colonel R. H. Williams, Colonel Winthrop S. Wood, Colonel M. Gray Zalinski, and also to Mr. Edward Hungerford and Miss Elsie Seeligmann for suggestions and assistance in the copying of the manuscript, and to Mr. Edward Frank Allen for the careful editing of the same and for many helpful suggestions concerning the arrangement of the contents.

The assistance given by the officers above named was

tendered under great strain of official duties, and the extra work it entailed required the sacrifice of time available for rest or diversion, and my appreciation of their assistance is therefore deep and sincere.

H. G. S.

FOREWORD

It was a gigantic task that was thrust upon the Corps of which General Sharpe was the head when we entered the war. Our Allies were being sorely pressed and needed our aid at the earliest possible moment and their representatives in this country did not fail to press upon Washington the necessity for haste.

After the Armistice, Lord Reading in an address at the University Club, described the situation of the opposing Armies in March, 1918, when the enemy was only about thirty miles from Paris, told of his visit to the President, adding that when he left it was with a lighter heart and a quicker step than for many months before as he hastened to cable Lloyd George that the American troops then in France would go immediately into the battle line (though without that thorough training theretofore regarded as necessary) and that troops would be taken from the cantonments and sent over to take immediate part in the fighting as fast as bottoms and convoys could be ready.

The impossible was attempted on our part from the very beginning, and in the effort to attain it, we actually accomplished that which was never before even attempted by any nation. The Corps of which General Sharpe was the chief employed herculean efforts to obtain sup-

plies on time, troops being sent abroad each month beginning with September.

This book indicates that the Quartermaster Corps of the Army included a number of capable, energetic and efficient men, who by their foresight and devotion to duty were able, as the author states, to provide the foundations upon which the superstructure was erected. It also indicates the duty of preparation in time of peace, for while as a people we desire to conserve peace, the manliness and independence of our citizens make us deplore the necessity that others were obliged to defend the gates to ensure us the time to organize our resources and strength so as to fight for the liberty of the world.

The author's poise is admirable and he has produced a book that will be very helpful to the future historian and will prove exceedingly attractive to those who read it now.

Alton B. Parker

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THE QUARTERMASTER CORPS

The Quartermaster Corps in the Year 1917 in the World War

I

INTRODUCTION

AN eminent writer stated that:

“Men, arms, money and provisions are the sinews of war.”

If he had included *transportation* in this classification, the means by which the sinews receive their nourishment, vigor and repair would have been indicated, and the statement would be as apt today as when it was made several hundred years ago.

All armies have certain organizations which provide the supplies necessary to maintain their efficiency. Improvement in the general conditions of life and advancement in science necessarily increased the number and the varieties of the supplies required; and, as a consequence, separate organizations have been formed to provide such supplies as are considered technical or scientific. In this country all these organizations in the Army are generally designated as the *Supply Departments*.

It is the purpose to discuss only the organization known as the *Quartermaster Corps*, and to indicate briefly the work accomplished by it in the year 1917 in the World War.

In order that a fair comprehension and full appreciation of this matter may be obtained, it is necessary to recall some important facts.

Several of the Supply Departments in the Army were among the first of the organizations established by the Continental Congress, and others have been created at various times since as necessity arose.

As a sequence of the Civil War, and because of the development in business methods, efforts were made at various times to effect a combination of several of the Supply Departments, but these efforts failed.

The Commission to Investigate the Conduct of the War Department in the War with Spain, appointed by the President in 1898, reported, among other things, as follows:

“Finally, In the opinion of this Commission, there should be a division of the labor now devolving upon the Quartermaster’s Department. . . .”

“Whether there should be one great department of supply, covering the Quartermaster’s Department except transportation, the Subsistence Department and the Pay Department, and another covering the important problem of transportation, including the movement of armies by land and by sea and the supply of animals, wagons, ambulances and harness, is a subject for the serious consideration of a board of officers whose experience in peace and war, at home and in an enemy’s

country, would render them most competent to make an exhaustive investigation and to present a complete report upon this important subject."

In 1901, Mr. Elihu Root, then Secretary of War, appointed a Board of Officers, comprising, among others, the Chiefs of the Quartermaster, Pay and Subsistence Departments, to consider this subject. This Board of Officers submitted two reports to the Secretary of War, both favoring the suggestion but differing as to the manner of its application.

A bill was later submitted to Congress by Secretary Root, and was opposed by all the Bureau Chiefs who were on the Board of Officers. As the bill provided for a *consolidation* of the three Departments into the Quartermaster Department, such opposition could have been based on the following analogy: The hand, one of the most important and useful members of the body, is a union of the thumb and fingers; a *consolidation* of these might result in an enlarged thumb, but the combination forms the palm, and the flexibility and usefulness of the hand is thus largely increased. The bill failed of passage. It is greatly to be regretted that the bill submitted did not endeavor to establish a Supply Corps proper, for under the able administration of Secretary Root such a corps would have been wisely organized and its duties clearly defined.

In 1911 a bill was submitted by the Chairman of the Committee on Military Affairs of the House of Representatives which created a *Supply Corps* by combining

the Quartermaster, Pay and Subsistence Departments. It was not perfect, but it was a step in the right direction and was favored by the Chiefs of the Bureaus concerned; and while many of the officers of the Departments affected did not favor the bill, their loyalty to the Chiefs of their Bureaus restrained them from endeavoring to make their own views known.

The bill provided the rank of Major General for the Chief of the Supply Corps, whereas the rank of the Chiefs of all the other Bureaus of the War Department was that of Brigadier General, except the Adjutant General, which was that of Major General during the continuance in office of its then incumbent. This seems a trivial matter to note, but the rank accorded the Chiefs of the Supply Corps had a very material effect upon the subsequent development of a real *Supply Corps*, as will be later shown.

An officer of one of the Departments affected, who had announced to both Committees of Congress that he was not an aspirant or an applicant for the promotion, was asked what should be the rank of the Chief of the Supply Corps. He replied that it should be determined by the financial responsibilities of such chiefs, as salaries were always made commensurate with such responsibilities, and that it should be the highest rank then given in the Army, that of Major General. The Chiefs of the new Corps would be responsible in times of peace for the disbursement of one hundred and twenty-five millions of dollars annually and accountable for the property it represented; and in time of war this

responsibility might represent several billions of dollars annually. And in reply to a further question if other Chiefs of Bureaus should receive the same rank, he replied that that was a question for Congress to determine, but that the compensation should be established by the financial responsibility of each; and called attention to the fact that all Railroad Presidents did not receive the same salary, but that the salary of each one was fixed in the manner suggested.

The bill passed each House of Congress, and then was sent to Conference, and upon request of an officer belonging to one of the Departments affected, the name of the new organization was changed from Supply Corps to *Quartermaster Corps*. This apparently trivial matter prevented the possibility of creating a real *Supply Corps*, as the establishment of an *enlarged Quartermaster Corps* was assumed to be for the purpose of securing the rank of Major General for its Chief. Thereafter all the other Supply Departments held tenaciously to the right to provide all the supplies for their Departments, even if such supplies were in common use in two or three Departments.

The viciousness of this system was clearly indicated in 1917 when several of the Supply Departments were in the market for practically the same item of supply, resulting in competition in the War Department itself. This condition could not be changed under the then existing law; but was effected later under authority of what is now known as the Overman Law, which gave to the President the authority during the continuance

of the War, to transfer duties or funds from one Department to another. The policy of Congress had been in the past to assign to a Department the sole duty of executing certain work or providing certain supplies required by the Army, and no other Department was authorized to function along these lines. For instance, the Medical Department was charged with the duty of providing medical attendance, supplies and hospital treatment; the Ordnance of providing ordnance matériel; the Signal Corps of providing means of communication; the Engineers Corps of the construction of fortifications and river and harbor works. This is merely a brief and incomplete enumeration of the duties assigned by law to each Department, but is sufficient to indicate the point referred to.

For some unknown reason when the Law providing for Deficiency in Appropriations was passed just after war was declared, Congress departed from this well established principle and authorized several of the Departments to undertake certain duties which had before that time been assigned to the Quartermaster Corps. The Signal Corps was authorized to pay, subsist, clothe and quarter the men belonging to the Aviation Section; and this Corps and several of the others named were also authorized to provide storage. Organizations were created in these Departments to undertake these new duties. Decentralization was thus established in lieu of the policy of centralization which had previously been followed and the various Departments of the War Department were thus brought into competition with

each other. The confusion occasioned by this change in Congressional policy will be referred to again. It was remedied later under the authority of the Overman law. It is, therefore, manifest that the Quartermaster Corps was not responsible for the confusion caused by change of a policy of centralization to one of decentralization during a time of war, especially as it had received no information of the intended change, and learned of it some time after the law effecting such change was enacted and when the competition developed.

For many years there has existed a tendency on the part of the line of the Army to criticise the Supply Departments, and there has also arisen a feeling of jealousy against them. At times this tendency has occasioned wide comment in the public press, as for instance in the controversies which have arisen in the past between the Commanding General of the Army and the Secretary of War based upon the effort of the former to exercise authority over the Supply Departments and control of the Army appropriations made by Congress.

Those who supported this contention seem to have forgotten the purpose for which our Revolutionary War was fought, and also that a considerable portion of the English people at that time maintained similar views to those advanced in this country, and in fact so expressed themselves in Parliament. The contest in both countries was against an arbitrary and despotic form of government, such as is instituted when the doctrine of the divine right of kings to rule is maintained. The doctrine of the divine right of kings to rule neces-

sarily carries with it the control of the *purse* and the *sword*. As a result the form of government adopted in this country necessarily separated the power of the purse and the sword. The Secretary of War, who has almost without exception been a civilian, was charged with the custody and disbursement of the moneys appropriated by Congress for the support of the Army and for the property pertaining to the same. To assist the Secretary of War in the performance of these duties and financial and property responsibilities, the Congress established the Supply Departments, the Chiefs of which are each made by law responsible to the Secretary of War for the moneys appropriated for his separate department, and the property held by it.

A Secretary of War could not under his oath of office transfer these duties to the Commanding General; and furthermore such transfer would be in violation of the fundamental principle adopted in the formation of our government, of separating the power of the purse and the sword from the control of one man. This point was shown with remarkable clearness and lucidity by Mr. Root, when, as Secretary of War, he advocated the formation of a General Staff and a Chief of Staff to have supervision and coördination over the Supply Departments. This did not give the right to administer those Departments, but was intended to remove the complaint at times made by the Commanding General of the Army that when recommendations were made to the Secretary of War by him the Chief of a Bureau concerned would go to the Secretary and urge the dis-

approval of the recommendation; while the actual facts were that the Secretary upon the receipt of a recommendation involving a disbursement of money, desiring to inform himself if funds were available to carry it out, and if the funds could be used legally for the purpose recommended, therefore called upon the Chief of Bureau for report.

The supervision and control of the Supply Departments given to the Chief of Staff made it possible for him to adopt such steps as would enable him to be heard before decision was reached. But this did not contemplate denying a Chief of Bureau the right to perform his duty to the Secretary of War to protect him in the matter of the disbursement of money or accountability of property for which he, the Secretary of War, was, by law, solely responsible. Exception was taken by a Chief of Staff to a Bureau Chief bringing to the personal attention of the Secretary of War the fact that fraudulent vouchers were being forwarded to his office for administrative action and suggesting steps necessary to correct such practice.

The Quartermaster Corps was created by the Army reorganization law passed in August, 1912. This act also provided a limitation upon the number of General Staff Officers who could be stationed on duty in Washington; and the Congress, evidently convinced that the General Staff was exercising control and direction over the Supply Departments to an extent not intended in the law of 1903 creating the General Staff and defining its duties, placed in the act of 1912 legislation pro-

hibiting the General Staff from doing so in the future. The law also provided that the Chiefs of the Supply Departments could be appointed from the Army at large; but this legislation was, according to the terms of the law, not to apply in the case of the appointment of the Chief of the Quartermaster Corps until after January 1, 1917. Because of this exception, as to the Chief of the Quartermaster Corps, many members of the General Staff attributed the inspiration of the legislation affecting the General Staff to the Quartermaster Corps, but such inference was entirely unfounded. The fact is, however, that some General Staff officers in 1917 felt resentment against the Quartermaster Corps.

According to Army Regulations the Quartermaster Corps is charged with the duty of providing means of transportation of every character, either under contract or in kind, which may be needed in the movement of troops and material of war. It furnishes all public animals employed in the service of the Army, the forage consumed by them, wagons and all articles necessary for their use, and the horse equipments for the Quartermaster Corps. It furnishes clothing, camp and garrison equipage, barracks, storehouses, and other buildings; constructs and repairs roads, railways, bridges; builds and charters ships, boats, docks, and wharves needed for military purposes; supplies subsistence for enlisted men and others entitled thereto; supplies articles for authorized sales and issues; furnishes lists of articles authorized to be kept for sale; gives instruc-

tions for procuring, distributing, issuing, selling, and accounting for all quartermaster and subsistence supplies; has charge of the supply and distribution of and accounting for funds for the payment of the Army, and such other financial duties as are specially assigned to it; and attends to all matters connected with military operations which are not expressly assigned to some other bureau of the War Department. It had charge of all the National Cemeteries in the country, and under a law enacted in 1885, upon the Quartermaster Department was imposed the duty of providing for the freight shipments made by all of the Executive Departments of the Government.

To carry out the duties imposed upon the Quartermaster Corps, the Office of the Quartermaster General was organized, as follows, and similar organizations were established at Depots and in the offices of the Chief Quartermasters of Departments.

On January 1, 1917, just a few months before the declaration of war, the Office of the Quartermaster General was organized into five divisions, each of them subdivided into branches:

- (a) Administrative Division
 - Administrative Branch
 - Personnel Branch
 - Estimates, Reserve Depots and National Defense Act Branch
 - Contracts Branch
 - Claims Branch
 - Cemeterial Branch
 - Mail and Records Branch
 - Miscellaneous Branch

- (b) Finance and Accounting Division
 - Deposits and Allotments Branch
 - Money Accounts Branch
 - Subsistence Returns Branch
 - Property Accounts Branch
 - Financial Branch
 - Apportionments Branch
- (c) Supplies Division
 - Supplies Branch
 - Clothing and Equipage Branch
- (d) Construction and Repair Division
 - Construction Branch
 - Mechanical Branch
 - Reservation Branch
 - Drafting Branch
 - Miscellaneous Branch
- (e) Transportation Division
 - Land Transportation Branch
 - Water Transportation Branch
 - Remount Branch
 - Miscellaneous Branch

Expansion of and Changes in the Office of the Quartermaster General Due to War Conditions in the Year 1917

The above organization remained intact until April 2, 1917.

On May 16, 1917, by direction of the Secretary of War, a division to be known as the Cantonment Division was established in the Office of the Quartermaster General. This division was charged with the construction of all the buildings at the National Guard and National Army Camps, and under the orders of the Chief of the Division was to report direct to the Secretary of War and the Chief of Staff on all matters relating to construction, the Quartermaster General being charged

with only the duty of preparing the estimates of funds required for submission to Congress. This change took from the Office of the Quartermaster General all the officers, engineers, architects and clerks trained in the matter of construction and repair.

Because of the competition resulting from the various Supply Departments undertaking construction of buildings under the authority of law contained in the Deficiency Bill, which law was at variance with the Law of 1912, placing upon the Quartermaster Corps the duty of undertaking all construction for the Army, and creating decentralization instead of centralization in time of war, the Secretary of War on October 5, 1917, directed that all buildings and construction rendered necessary in the United States by the emergency should be undertaken by the Cantonment Division above mentioned. This Division, as stated, functioned direct with the Secretary of War and Chief of Staff on such matters. The one officer and few clerks remaining in the Construction and Repair Division were transferred to the Cantonment Division; and the Construction and Repair Division of the Office of the Quartermaster General was abolished.

On August 15, 1917, under the provisions of Office Orders No. 76, there was established a branch of the Supplies Division to be known as the Storage Branch.

The Remount Branch of the Transportation Division was abolished on October 3, 1917, by Office Orders No. 100, and a separate Division to be known as the Remount Division was established. This Division was

charged with all the duties and functions pertaining to the Remount Branch and with the administration and supervision of the Remount Service created by General Orders, War Department, September 25, 1917.

A branch of the Supplies Division to be known as the Conservation Branch was established on October 5, 1917, per Office Orders No. 102. To this branch was assigned all matters relating to the conservation of food and other products at posts, camps, cantonments and other stations.

The Personnel Branch of the Administrative Division was made a separate Division to consist of the Commissioned Personnel, Enlisted Personnel and Civilian Personnel Branches, by Office Orders No. 104, October 9, 1917.

Followed by the above change, a Division was created in the Office of the Quartermaster General, to be known as the "Warehousing Division." The duties performed by the Storage Branch and the Cable Service and Overseas Shipment Branch were transferred to the Warehousing Division. Office Order No. 109, October 29, 1917, gives in detail the functions of the Warehousing Division. The Conservation Branch of the Supplies Division was made an independent division of the office on November 8, 1917, by Office Orders No. 114 to meet the increase in work. On December 14, 1917, a branch was established in the Supplies Division to be known as the Fuel and Forage Branch by Office Orders No. 126.

II

PERSONNEL

Civilian personnel—Commissioned personnel—Enlisted men—
Cemeterial branch.

The Civilian Personnel of the Office of the Quartermaster General During the Period of the World War Up to December 31, 1917.—Some months before the actual declaration of war, which was on April 6, 1917, a careful study was made of the status of the civilian force as it existed in the Quartermaster General's Office, and as to what its probable requirements for the future would be.

The aim and plan were to have it continue an efficient and homogeneous force—one that would do the maximum amount of work with the minimum number of employees. It was the intention not to swell the number at any time beyond the current and actual needs, but only increase it as the volume of the work increased.

In the first instance, the amount of floor space at the disposal of the office was limited, being only sufficient for the requirements of the 323 employees then in the service, so that all the available space was occupied when war was declared. Some of the Branches even at that time occupied rooms on the second, third, fourth

and fifth floors of the State, War and Navy Building, and one division in the Lemon Building, and because of this separation could not even then work to the best advantage.

Having this condition in view, and casting ahead to the probable developments of the future, a plan had been devised by which it was feasible to work three shifts of about seven and three-quarter hours each for every day in the week, including holidays and Sundays, allowing only about twenty minutes for the change of shifts and cleaning the rooms.

When war was declared, a call was made at once for something over 200 clerks and messengers. This extra force when secured was crowded into the existing space, and overtime work was required and cheerfully performed, nearly all throughout the office.

From time to time additional employees were requested. Much difficulty was experienced in obtaining them through the Civil Service Commission, which was swamped with calls for civilian personnel. In the meantime, the work was increasing heavily from day to day, necessitating, as stated, universal overtime and the hardest work by the office force, while the supervisory and executive force were especially hard hit. Each call for more help was carefully considered, as had been earlier determined upon, so that only the number actually required would be provided, and which could be taken care of and employed to the best advantage.

The second shift was before long put on. The work

and the number of employees continued to increase, with the result that in the rush and confusion it became harder and harder to keep up, or take care of the work, and especially as the clerical force which had been so swollen was composed of new and untrained people who had to be instructed and looked after closely. But clerks of any description were hard to obtain at that time. Many of them had barely passed the Civil Service Examination, for it was the policy to employ only those who had a Civil Service status—much as this policy added to the difficulty.

It was not long before the experienced and able clerks who were in charge sought and were given commissions in the Army. Under the ruling of the Department, made about that time, these experienced men—now officers—were forbidden to remain in the bureaus or offices where they had served as civilians. This was a severe blow and greatly crippled the office, as trained clerks to instruct the new appointees were needed, and furthermore those taken from the office were among its most qualified men—men whose long years of training and thorough knowledge of the work of the office were invaluable and could not be replaced as they were familiar with the laws, decisions and precedents and were therefore qualified to prepare the tables of requirements and draw up the estimates for Congress. Reference will be made later to the embarrassment to the service caused by the assignment of these men to duty in other stations.

Some idea may be had of the volume of mail when—on an exceptional day—there were over 111,000 pieces

of mail, consisting of letters, indorsements, reports, statements, returns, accounts, etc.

It had become necessary, owing to the lack of space and to meet exigencies, to put on another or the third shift in various divisions of the office. Any of the trained and experienced clerks who had remained were nearly broken down—and some did break down—because of arduous exertion and long hours.

The force by December 31, 1917, had grown to nearly six times what it was when war was declared, or close to 1,800 employees. It had, therefore, become necessary to secure office space in outside buildings. While this arrangement was absolutely necessary, it had its drawbacks, for time was lost and delays and disadvantages occasioned because of the wide separation of the force—even kindred divisions which were interlocked and worked together could not now because of their size be kept near each other. In this time of great stress and difficulty, when cramped for space, working under pressure for long hours, and without sanitary surroundings, the civilian force labored willingly and faithfully—for all of which they deserve the greatest credit.

Reserve Supply of Blank Forms and Books for the Quartermaster General's Office.—Early in March, 1917, the outlook was very threatening, and danger of war was imminent. In view of this and after mature consideration, it was deemed advisable to provide against all eventualities with regard to the necessary reserve supply of blank forms and books for use of troops in

case of war and quick mobilization of the military forces.

In view of the above conditions and to expedite the work and printing as much as possible, consultation was had with the officials of the Government Printing Office who agreed, after explanation showing the importance and urgency of the work, to give such work of the Quartermaster General's Office the right of way. And in pursuance of such understanding, there was ordered printed at the Government Printing Office, Washington, D. C., on March 13, 1917, 31,538,000 blank forms and books at a cost of \$235,606.36 as a reserve stock for the transportation, subsistence, clothing and pay of seventy divisions—2,000,000 men—in addition to the immense regular stock on hand for the maintenance of the Army.

By the end of April, 1917, the reserve stock of forms and books were delivered by the Government Printing Office and stored ready for issuance when called for. For the storage of this large reserve stock of blank forms and books, 20,000 square feet of floor space was acquired adjoining the Baltimore and Ohio Railroad Yards, 1514 Eckington Place, so shipments could be handled without delay.

When orders were issued to mobilize, each detachment, company, regiment and division was equipped with the necessary forms and books at the camps and mobilization points to transport, feed, clothe and pay the troops as fast as they entered the service. This office also sent a supply overseas to take care of the

troops upon arrival. No complaint or criticism as to delay in supplying the troops with the necessary forms and books was received. It must be remembered that this immense number of blank forms were purchased when no funds were available to pay for them. The officials of the Government Printing Office undertook the work with full knowledge of the conditions and with the understanding that estimates would be submitted for the funds. If they had been lacking in courage or had failed to cooperate with the Quartermaster General's Office serious delays and difficulties would have resulted. Acknowledgments are due to those officials for their assistance.

It is thought that the work performed by the Quartermaster Corps in the year 1917 can best be described by giving an account of that performed by each Division of the Office. It must be understood, however, that the Divisions are coordinated and that work assigned to one Division required cooperation and assistance from other Divisions.

PERSONNEL DIVISION

Commissioned Personnel

By a War Department Order published about 1912 the number of officers authorized to be detailed for duty in the various Bureaus of the War Department was established. Congress passed an appropriation in August, 1914, for the relief of Americans abroad who because of war conditions were unable to obtain money

to pay for their passage home. The Assistant Secretary of War was sent abroad on a battleship accompanied by a number of officers to provide the relief afforded by the Congress to American citizens. An officer on duty in the Office of the Quartermaster General had a few years before graduated from the *École de l'Intendance* in Paris, and was detailed to accompany the Assistant Secretary of War. Such officer remained abroad on this duty until this country declared war on April 6, 1917, being carried as on "temporary duty abroad" and still being included among the number of officers limited for duty in the Office of the Quartermaster General.

After the declaration of war the enormous increase of work necessitated the detail of another officer in the Office of the Quartermaster General and request for such an assignment was made, whereupon the attention of the Quartermaster General was called to the order above referred to limiting the number of officers on duty in his office and directing that a statement be submitted showing whether the assignment requested would increase the number of officers authorized for duty in his office. Explanation was made that an officer of the Department had been abroad since August, 1914, reported as on "temporary duty," whose station was Washington, D. C., and duty in the Office of the Quartermaster General; that another officer was needed to assume his duties in the office, due to the enormous increase in work, and that at the time the request was made for the assignment to duty in the office, the officer then abroad was performing duty under General

Pershing's directions. After the delay resulting from all this correspondence, the detail requested was finally made, but of course it added unnecessarily to the work of the office: and such action does not evidence the hearty spirit of coöperation and assistance which might properly be expected at a time when everyone was endeavoring to assist in preparing the country for war.

The Quartermaster General, by an office order, constituted a Board of Officers, from the officers on duty in his office, to consider matters affecting the Quartermaster Corps. This Board gave consideration to our experiences on the Mexican border in 1916, and also made a thorough study of the various reports of the Military attachés and others regarding the war then being waged in Europe, and submitted a very thorough and comprehensive study for the proper organization of the Quartermaster Corps. The Board recommended the formation of Quartermaster organizations then not in existence or heard of in our Army, but every one of which were brought into existence before the termination of the war. This report was submitted to the General Staff for approval in December, 1916, but although frequent efforts were made, no action was ever obtained upon it. This failure caused considerable delay, as the creation of a new organization had to await a call for it from General Pershing, which call was based, of course, on a study of the English and French organizations; a study already made by the Board, not with so complete data as was available abroad. The practical correctness of this study was

demonstrated after our entrance in the war when the Quartermaster General received the assignment for duty in his office of two officers belonging to the Department of the Quartermaster General for the Forces of the British Army, of an officer of the Corps de l'Intendance, and also an officer of Engineers of the French Army. All of these officers had served in the field during the war and their selection would indicate that their own governments reposed confidence in their ability and felt that their practical experience for nearly three years of war, not considering their other long years of service, would enable them to be of great assistance to us in our preparations; which they were. But unfortunately approval of the establishment of new organizations had to await the call for them and therefore they were not ready to be dispatched when called for. The further fact that the shipping of troops abroad commenced about nine months before the original programme contemplated doing so, indicates the advantages which would have been received by the early approval of the report of the Board submitted in December, 1916.

Organizations of the Reserve Officers were effected at various places throughout the country and officers and non-commissioned officers of the Quartermaster Department instructed them in their duties by courses of lectures and practical instruction in the business methods of the Department. The English and French officers on duty in the office of the Quartermaster General ably assisted by delivering lectures, based upon their experi-

ence, before the Reserve Officers in Washington, and also delivered lectures to the students in the Quartermaster Training School at Camp Joseph E. Johnstone, near Jacksonville, Florida.

Business men in various cities arranged with officers and non-commissioned officers for courses of instruction in the business methods of the Department to prepare themselves to take the examination for Commission in the Quartermaster Corps.

When the United States entered the World War, the National Defence Act of June 3, 1916, had only partially gone into effect. That Act increased the existing number of officers in the Quartermaster Corps, numbering 113 by 183, making a total allowance for the Corps of 296, exclusive of the 67 second lieutenants commissioned as such from the former pay clerks of the Army.

The law provided that the 183 additional officers be added in five increments; one increment each year beginning with 1916, or an annual increase of 36 officers. Due to the threatening situation, the proviso of the National Defense Act authorizing the addition of all five increments in case of an emergency, had been made operative by Executive Order, so that on April 6th, the day the country entered the War, the Corps consisted of 205 officers, 91 short of its total number. This 205 was composed of two groups of officers, 55 belonging to the permanent Quartermaster Corps and 150 to the line, the latter detailed for duty under the Army Reorganization Act of 1901 for a period of four years.

It is necessary at this point to refer to the detail system in certain of the Staff Departments instituted by the Army Reorganization Act of 1901. Prior to that time, for a number of years and following the Civil War, the officers of the Staff Departments had been permanently appointed. The method of their selection was vicious and largely due to influence; but this was eliminated in some Departments and could very readily be extended to all so as to make it possible to secure capable, energetic and progressive officers, trained and expert in their several specialties. Their appointment was also for life and with promotion by seniority the attainment of rank was assured before retirement. It was a vicious system and should have been corrected. Unfortunately during the Spanish War a large number of permanent Staff officers secured commissions in the Volunteers with high rank. Every officer, except one, in a certain Staff Department, received a volunteer commission in the line. Thus they secured advancement and rank to which line officers were fairly entitled. Our so-called Military policy had been to create a larger staff than required in time of peace, so that when the Army was expanded in time of war trained staff officers would be available. To appoint such trained officers in the line disregards their value to the service, as also the right of line officers to such advanced rank. Such appointments naturally caused resentment in the line of the Army and the detail system was proposed as a corrective. If the law had limited the detail to the lower grades, and then provided for a competitive ex-

amination for permanent appointment in the Corps, and made such permanent appointees ineligible for appointment in the line of the Army, the many evils existing would have been eradicated and the Staff Departments would not have been crippled as they were during the largest and most serious war in which the country has ever been engaged, by withdrawing from them at a critical time the detail men and assigning them to the line with higher rank.

The Quartermaster General called the attention of the Chief of Staff to this detachment of the detailed officers in his Department, and to the billions of dollars then appropriated for the use of the Quartermaster Corps and the very small number of trained officers remaining to do the work and protect the government funds and property. An officer of the British General Staff, on learning of the detail system, expressed surprise and amazement to the Quartermaster General, saying that Americans were noted as being practical men and inquired if they did not realize that the war was one of experts and specialists.

In the former Subsistence Department a course of training was adopted for the officers when appointed therein, consisting of a course at the Bureau of Chemistry, Department of Agriculture in qualitative analysis of food products, the study of butter and fats, the use of the microscope and the saccharometer, followed by a course in packing of meat food products, next a detail at one of the large purchasing stations, followed by a course at the School for Bakers and Cooks. This

required about four years. The detailed officers could not be given this full course because of the time required, but were sent to take the course at the School for Bakers and Cooks, and were thus enabled upon the termination of their detail to return to the line better qualified to supervise the messing arrangements of their companies.

In addition to the officers of the permanent establishment, the National Defense Act also established the Officers' Reserve Corps. The Reserve Corps was intended to supplement the Regular Army during periods of emergency expansion, and was designed so that officers could be selected, commissioned and available for call to active duty when the exigencies of the service demanded. The examination and selection of candidates had progressed leisurely and methodically until we entered the War, when, under the impetus of possible service, applications poured in from all over the country and the various parts of the world. The regulations controlling the procedure for admission to the Reserve Corps were not suitable to emergency conditions, yet had to be followed in the absence of any suitable substitute therefor or any abbreviated system which could be followed. This created a deplorable congestion of paper work, causing long delays before an actual commission could be issued a candidate and make him legally available for active duty. The work of examining candidates; preparing the necessary papers; and routing the reports through the numerous channels only added to the labors, already heavy, imposed on the

regular officers in the Corps. The earliest boards appointed to make selections of Reserve Corps Officers were convened in September, 1916, and up to April 12, 1917, had succeeded in passing upon 436 successful cases, with the major part of these rushed through by local boards at the last moment, and requiring review by different agencies in the War Department.

The volume of applications grew so large that it was necessary to close the list to all received after April 11th and, on checking up those received before the list closed, there were on April 12, 1917, 4,930 cases of record requiring action. Applications subsequently received were returned to writers advising them that the list was closed and no more requests would be entertained.

On July 1, 1917, the status of the Reserve Corps showed 1,700 officers actually commissioned and available for call to active duty; 400 cases completed and awaiting the issuance of commissions by the Adjutant General's Office, with 3,266 cases yet to be heard from or requiring revision or correction of some part of the examining board's record.

On July 15th the Reserve Officers available for call to active duty were being ordered to stations, camps, depots, ports of embarkation, France, and other duties at an average rate of twenty to thirty per day, so that by August 1st the available list was nearly exhausted and the supply through the examination routine could not meet the demand. Because of the enormous amount of work placed upon the officers of the Corps in conducting the examinations for commissions in the Officers

Reserve Corps, and in examining and passing upon the various reports of the Examining Boards, the Quartermaster General, about June 1st requested two hundred men from each of the Officers Training Camps who failed to qualify for line commissions be assigned to the Quartermaster Corps. At the same time it was purposed to establish a Quartermaster training camp and to send the men from the Officers Training Camps to qualify them by a course of instruction for the various duties devolved upon the Quartermaster Corps. This school was also to be used to train the enlisted men of the Quartermaster Corps in some of their duties.

At the time the request for the men from the Officers Training Camps was made, it was contemplated to receive authority to establish the training camp, have the location selected and the camp constructed by the time the Officers Training Camps completed the course of instruction, some time about the close of August. The men would then go at once to the Quartermaster Training Camp, and after the course there would be available for assignment to duty. The following letter was prepared and forwarded on the date indicated:

WAR DEPARTMENT

Office of the Quartermaster General of the Army,

No. 354.I.P.

Washington, June 8, 1917.

From: Quartermaster General.

To: The Adjutant General of the Army.

Subject: Mobilization and Training Camp, Quartermaster Corps Personnel.

1. In the future the Quartermaster Corps will be confronted with the problem of supplying various organizations and individuals of the Quartermaster Corps to divisions and other formations ordered for duty abroad or to be established abroad, such as division supply and ammunition trains, remount depots, supply depots, transport workers, battalions, bakery companies, wagon companies, pack companies, repair shops for clothing, shoes, harness, wood and metal articles of equipment, laundry and cleaning establishments, supply companies Quartermaster Corps, labor and salvage companies, and possibly various other units.

2. Authority has been obtained to enlist approximately 16,000 enlisted men Quartermaster Enlisted Reserve Corps, and additional authority was requested on May 26 to increase this number to 45,000 enlisted men. It is anticipated that this last number will have to be doubled within eight months.

3. In order to have these men undergo training and to have a definite place of mobilization, keeping in mind the desirability of a mild climate and nearness to the eastern seaboard, it is believed a Quartermaster Corps training and mobilization camp should be established on a large scale in the southern part of the Eastern Department, preferably in the vicinity of Richmond or Newport News, Va., where various Quartermaster Corps organizations could be mobilized as rapidly as enlisted and given such preliminary training as possible before their services are needed at division camps in this country, or with formations sent or created abroad.

4. It is understood that camps similar to the above have been authorized for the Medical Department, the Signal Corps and the Engineer Corps.

5. Such a camp should be in addition to the division

camps and should be large enough to accommodate an average daily strength passing through the camp, varying from 10,000 to 20,000 enlisted men and approximately 300 officers in charge of the camp and in command of the reserve organizations therein.

6. It is believed one such Quartermaster mobilization and training camp will be more economical, more efficient for the purpose in view and in every other way more desirable than Quartermaster camps as separate adjuncts to the sixteen division area training camps. Only such personnel and equipment as would be required to handle the routine affairs of the latter camps and enable the divisions passing through them to be trained as a complete unit would probably be furnished such camps.

7. The prompt establishment of such camp is considered necessary now in order to organize properly a system of replacements and of furnishing in the first instance trained Quartermaster Corps units to the various divisions, as the latter are made ready and ordered for duty abroad, as well as to furnish numerous special and technical units for the service of the rear abroad.

8. It is estimated the acreage required for such camp would be approximately 2,000 acres and practically the same conditions as were laid down for the cantonment camps for the sixteen training divisions should govern the location of this camp in respect to transportation facilities, water and nature of soil. It is estimated the cost would be about \$4,000,000, and it would be desirable to lease the site for at least three years with an option to purchase same at any time before the expiration of the lease, should later events show complete ownership to be desirable. No tentage is available.

9. Authority is therefore requested for this office

to submit a special estimate for the necessary funds to cover the lease, the camp site and to erect the necessary buildings, roads and structures thereon to carry out the above plan.

10. In compliance with (W.C.D. 6,277-166) instructions from the Adjutant General's Office, dated June 3, 1917, the above plan has been considered after informal conference by an officer of this office with Major Kingman, War College Division of the General Staff.

HENRY G. SHARPE,
Quartermaster General.

Nearly a month elapsed before this request was approved. Upon receiving notice of the approval, request was immediately made for the location of the camp at Manassas, Va. The matter was held in abeyance for some time, as the General Staff officer to whom it had been referred was inclined to reconsider the question as to the desirability of authorizing the establishment of the camp. His attention was drawn to the fact of the approval by the Secretary of War of the project, after full consideration. On July 20, 1917, a Board of Officers was appointed to select the location of the camp and the Cantonment Division was prepared to undertake the construction. By direction of the Secretary of War, an officer was sent on August 1st to inspect a camp site at Jacksonville, Florida. The selection of the Jacksonville camp site was approved on August 9, 1917. A long delay next ensued in awarding the contract for the construction of the camp due to the fact that an effort was made to have the contract awarded to

a local firm instead of the firm selected by the War Department. The result was that the construction of the camp was not started until about the 1st of September. When request for authority to establish the camp was made, it was fully and reasonably expected that it would be ready for occupancy about September 1st, and the men coming from the Officers Training Camps could be ordered there for necessary instruction. This was not the case, due to the delay above cited, and the camp was not completed until some time in November, 1917. This is an important fact to remember, for when the Quartermaster General made application for authority to appoint some technical officers, the application would be returned for information why the officers were not selected from the 3,045 men who graduated from the Schools. As a class, these were a fine lot of men, and many excellent officers were later developed from among the number.

If a suitable steel for rifle barrels is supplied, is it fair and reasonable to assume that the finished barrels, with the accurate rifling, can be produced without the necessary machinery?

On page 41 of his book entitled "America's Race to Victory," Lieut. Colonel Réquin asks: "Was it necessary to wait three months before opening an artillery school in the United States?" and adds: "Evidently not." He continues: "We shall conclude by saying: 'That if it was justifiable to await General Pershing's recommendations and to follow them scrupulously in everything concerning general plans of organization,

training and transportation, it would have been preferable to take day by day and *without delay* such measures as must in any case aid in the execution of these plans, relieve the crushing burden of the Commander in Chief of the Expeditionary Forces, and lastly, save precious time.' ”

The National Defense Act of June 3, 1916, created a Reserve Officers Corps. Many of the most efficient and valuable clerks in the Office of the Quartermaster General, men who for years had satisfactorily filled the important positions of principal clerks of Divisions and Branches, took the examinations and qualified for commissions in the Quartermaster's Officers Reserve Corps. It was the intention of the Quartermaster General to call these men into service and assign them for duty in his office in charge of the Divisions and Branches with the work of which they were entirely familiar, being informed concerning the various laws, decisions and precedents relating to same. This plan would have provided the trained officers for the several shifts of clerks which were necessary to transact the rapidly increasing business.

It is necessary to explain that with the exception of the Insular, Militia and Coast Artillery Bureaus all Bureau Chiefs having any correspondence with the Secretary of War or Chief of Staff must address the correspondence to the Adjutant General, and that officer presents it for consideration. The Bureau Chief can, of course, see either of these officials *personally* about a matter pertaining to his own specific duties. Would it

be considered good administration for the President or General Manager of a railroad to require his Chief Engineer, General Superintendent, General Freight Manager, General Traffic Manager, Superintendent of Motive Power or Treasurer to address all matters pertaining to their several departments to the Secretary of the railroad and have the latter present them for consideration? Effort has been made in the past without avail to have this unbusinesslike method changed. The adoption of this form of procedure necessarily throws an immense amount of work on the Adjutant General's Office and is persisted in under the claim that his is an office of record. It is, for the matters which under the law it is charged with, but the Office of the Quartermaster General is the office of record for everything, except personnel, pertaining to the Quartermaster Corps. An officer desiring a certificate of non-indebtedness obtains same from the Quartermaster General, which official also passes upon his financial and property responsibility and keeps accounts of all the funds appropriated by Congress for the Corps, and makes certificates to the courts as to the records shown by his office in any case before the courts. To effect the call of these Reserve Officers to active duty and receive their assignment for duty in his office the Quartermaster General made application to the Adjutant General some time in May. The application was returned disapproved, and after seeing the Secretary of War the request for assignment was returned asking for a reconsideration; it was again returned from General Bliss, the

Acting Chief of Staff, disapproved; and with the consent of the Secretary was submitted again for reconsideration and was returned disapproved, the Acting Chief of Staff taking the position that to approve would create criticism of the War Department, as of two Civil Service men living in adjoining houses in Washington one would be given a Commission and the other not. It was shown that both could obtain them if they passed the examination and their assignment to a station would depend upon their ability to perform the duties of same. The submission of this application through the Adjutant General was proper because it related to a personnel matter and that department is an office of record for such matters. The Adjutant General, in submitting the application for the consideration of the Chief of Staff, forwarded to him a memorandum on the subject, which stated in effect that to approve the application would be the cause of dissatisfaction among those clerks in his (the Adjutant General's) office who were superannuated and physically disqualified for commissions and recommended that the men when commissioned be assigned to other stations and men at those stations ordered to the office of the Quartermaster General. This was shown by a memorandum from the Adjutant General to the Chief of Staff, a copy of which had, probably, inadvertently been left at the Mail and Record Room of the Office of the Quartermaster General. It is understood that the clerks in the Adjutant General's Office were not allowed to be given commissions in the Officers' Reserve Corps of that Department.

A number of the highly qualified clerks in the Adjutant General's office had passed the examinations and been given commissions as Reserve Officers of the Quartermaster's Corps, but there was never any thought or intention of requesting their assignment to duty in the Office of the Quartermaster General. They were all ordered to other stations and later one or more of them was returned to Washington for duty in the Adjutant General's Department. The Secretary of War agreed as to the impropriety of the memorandum of the Adjutant General as it affected the office administration and responsibility of another Bureau Chief and was a matter which concerned only that Bureau Chief and the Secretary of War. But, as stated, the request for reconsideration was returned by General Bliss, the Acting Chief of Staff adhering to the previous action of disapproval.

A decision was then made that any Civil Service Employees or enlisted men, when given commissions as Reserve Officers and called to active duty, must be sent to some other station than the one they were at when called into service. This decision necessitated the assignment of all these valuable and highly efficient officers to other stations and deprived the office of their assistance at a most critical time. In passing, it need only be noted that in January, 1918, nearly all of them were, upon the request of the then Acting Quartermaster General, assigned to duty in his office.

About August 15th, the first officers training camps, fourteen in number, concluded their work, and from

these camps 3,045 second lieutenants were commissioned in the Quartermaster Corps.

The list of Reserve Corps Officers and the 3,045 second lieutenants commissioned at the training camps contained many able business men, experienced in their own lines of business; but there were very few who possessed any knowledge whatsoever of the Army, its needs, requirements, etc. This lack of knowledge made it necessary to place at least 90 per cent. of the civilian officers called to duty in subordinate positions where they might learn how best to apply their individual ability to the numerous duties and functions of the Corps and subsequently rise to executive positions. The other 10 per cent. of so-called civilian officers came from the former Quartermaster Sergeants and clerks of the Quartermaster Corps. These men had the army technique but in a large number of cases lacked the executive perspective necessary for the period of expansion and ever increasing responsibilities. To leaven this group of officers, nearly 7,000, a small coterie of regular officers, amounting at no time to more than 180 to 190, were available and these were scattered from the Philippines to France, with the majority of the line officers detailed to the Corps impatient to get back to duty with troops.

With the creation of the first sixteen National Army divisions August, 1917, 66 officers of the Regular Army then with the Corps (22 per cent.) were removed from the Corps and assigned to duty with combatant troops, leaving overnight the duties they were engaged upon,

in the hands of inexperienced or subordinate officers—in some cases to non-commissioned officers. Many of the officers so transferred to line troops were performing duties of great importance, and their departure created delay and confusion which impeded the transaction of urgent public business to the detriment of the service until successors could gather together the loose ends and readjust matters.

Foreseeing the natural desire of line officers to return to the line, many efforts were made to have the situation of the Corps appreciated and to secure authority for a normally expanding organization, balanced both as regards the number of officers as well as to an equitable adjustment of rank. It was fully recognized by the Quartermaster General that in order to hold the line officers they must be assured of equal opportunities of advancement in rank with their contemporaries, and also that, in justice to civilian officers, their opportunities for advanced rank should not be less than that accorded officers going to line regiments and duties.

With this in view, a board of officers was convened in June, 1917, in the Office of the Quartermaster General to consider the matter, and on August 8th a memorandum was sent to the Chief of Staff, recommending that an elastic and automatic allowance of officers be authorized for the Quartermaster Corps, both as a necessity for the good of the service and as a matter of expediency to overcome delays incident to separate and formal requests when new activities demanded additional officers. It had been found that needless delay

was invariably experienced by submitting each situation separately for consideration and approval by the General Staff, which was then greatly over-worked. The recommendation submitted was based on an estimated requirements of six officers—for each 1,000 enlisted men in the service. The recommendation is recorded as having been received at the War College Division of the General Staff on August 10th.

On September 5th a Board of Officers was convened in the office of the Quartermaster General to consider the subject of expansion of commissioned personnel in the Quartermaster Corps. That board was convened in compliance with a memorandum issued by the Secretary of War, dated September 3, 1917, which directed that a memorandum be submitted for such additional legislation as might be considered necessary to properly strengthen the Quartermaster Corps and for the efficient operation of the War Department during the War. The Board having cognizance of the recommendations submitted August 8, 1917, made a formal recommendation September 10, 1917, that the Quartermaster Corps consist of the following number of officers: 235 Colonels, 235 Lieutenant Colonels, 705 Majors, 3,525 Captains, 3,760 First Lieutenants, 3,525 Second Lieutenants, a total of 11,985.

At the same time the Board prepared and submitted a draft of a bill which would provide an elastic authority for progressive expansion of the Quartermaster Corps capable of meeting any condition likely to arise during the war. The estimate submitted, shown above,

was based on the supposition that an Army of two million men would be organized.

No definite results were accomplished by the foregoing, and the first real authorization for an expanded personnel was on December 27, 1917, when a memorandum was issued in the Office of the Chief of Staff authorizing the Quartermaster Corps to expand to 6,651 officers. This was the net result of all efforts made to secure a properly balanced program whereby logical expansion could be conducted without discouraging delays or by submitting each requirement as it developed to the General Staff for consideration.

Had the recommendations of either August 8th or September 10, 1917, been approved, the Quartermaster Corps would have expanded normally and rationally to approximately 12,000 officers for an Army of two million men. In the light of our full experience, this number would have been about the normal had all the pre-war functions of the Quartermaster General remained within that Department and not been transferred or converted into separate organizations. The soundness of those two recommendations above is supported by the fact that on November 11, 1918, the date of the Armistice, there were 13,949 officers on duty in the Quartermaster Corps in spite of the fact that many of its pre-war functions had been taken away from it and absorbed in other Departments. (See Report of Quartermaster General, 1919, page 171.)

Had the Quartermaster Corps retained all of its functions it seems reasonable to assume that they would

have found it necessary to have had approximately 24,000 officers at the time the Armistice was signed, or the equivalent of the estimate made on August 8, 1917.

The total authorized strength for the Quartermaster Corps on November 11, 1918, was 19,949 (see Report of Quartermaster General, page 172), but this was the result of a long, tedious up-hill climb, authority coming piecemeal and with each advance dragging the work along, awaiting official sanction.

In addition to the efforts made to secure a reasonably balanced organization, special efforts were made to secure advancement for the second lieutenants of the Quartermaster Corps. These officers were formerly pay clerks and had been appointed second lieutenants in 1916, the grade of second lieutenant being the highest grade they could attain under the laws governing the regular establishment.

On July 23, 1917, the Quartermaster General recommended the appointment of all pay clerks, second lieutenants, Quartermaster Corps, to the grade of Captain. These officers were the best experts in the Army on Finance Accounting. Due to the rapidly increasing responsibility in that branch of the Quartermaster Corps these officers were disbursing large sums of money and giving their undivided attention to their work without commensurate rank. The recommendation was returned stating that the Quartermaster General could nominate 32 of the second lieutenants for the grade of captain and that these upon advancement would have to serve in the sixteen National Army Divisions as

assistants to the Division Quartermasters; the Tables of Organization for the Division authorizing five officers from the Quartermaster Corps. In the opinion of the Quartermaster General, the assignment of the pay clerks to the grade of captain as assistants to Division Quartermasters appeared to be an uneconomical assignment of those officers whereby the Army would lose the specific advantages of the knowledge and experience possessed by them and accordingly declined to make the recommendations.

On August 31, 1917, the Quartermaster General again renewed his recommendation that the sixty-four pay clerks, second lieutenants, be promoted to captains, but no action was taken thereon at that time.

Under date of July 16, 1917, the Secretary of War ruled that it was undesirable to assign War Department clerks, who were officers in the Reserve Corps, to duty in the War Department. A large number of the clerks in the War Department had successfully passed the examination for commission in the officers' Reserve Corps and were very able and competent men. Their services as officers in the expanding period of War Department activities would have been of exceptional value in administrative capacities and greatly assisted in the details of developing the several branches of the Quartermaster Corps to meet the demands made on it, but the memorandum mentioned operated adversely in two directions. First, it removed from the Quartermaster General's Office many men whose services could not properly be spared at that time, leaving large gaps in

the office force; and, second, it required dispatching those same men as officers to activities where the Government was not receiving the full measure of their ability.

As an insufficient number of officers for the several shifts of clerks were available, the officers then on duty were compelled to remain on duty many additional hours each day with the result that several of them suffered serious physical breakdowns.

The work of the Remount Branch of the Transportation Division increased rapidly, and efforts were made to have it expanded so as to form a separate Division. An Administrative Personnel for it was recommended on August 26th, which was approved by a Committee of the General Staff, but on the recommendation of General Bliss, the Acting Chief of Staff, was disapproved by the Secretary of War "until experience showed the necessity for the appointment of these officers." After repeated and urgent requests by the Office of the Quartermaster General and the Committee of the Council of National Defense the necessary personnel was appointed on October 12th. The Quartermaster General understood that the Chairman of the Committee informed the Chief of Staff (recently promoted) that unless the personnel was authorized he would resign from the Committee, as he was unwilling to risk his personal reputation by association with an organization so inadequately provided with administrative officers.

An expert leather man had been given a commission

in the Officers' Reserve Corps and was assigned to duty at the Jeffersonville Depot in charge of the inspection of leather goods received under contract. Such officer reported that the civilian inspectors, obtained through the Civil Service Commission, had passed for acceptance "traces" which were not up to specification, consequently the following memorandum was prepared and forwarded:

WAR DEPARTMENT

Office of the Quartermaster General,

November 19, 1917.

MEMORANDUM FOR THE CHIEF OF STAFF:

1. In view of the fact that this office will be required to inspect 289,285 sets of harness during the remainder of the fiscal year 1918, and an estimated quantity of 738,350 sets of harness, also a large number of halters, bridles and saddles during the fiscal year 1919, the necessity of commissioning a number of experts for the inspection of leather equipment in the present emergency has proved imperative. Repeated experiments with civilian inspectors and officers already commissioned in the Quartermaster Corps in the last five months have been a failure, and have demonstrated the impossibility of properly safeguarding the interests of the Government by the use of such inspecting personnel. The men procurable at the authorized salary of \$1,500.00 a year for civilian inspectors are generally inefficient and lacking in character and experience and of the officers already commissioned in the Quartermaster Corps who were considered qualified for this

work according to the records only 5, of over 50 who have been tried, are capable of performing this work.

2. The depot quartermaster at Jeffersonville, Ind., has asked, therefore, that certain leather equipment inspectors, who are willing to serve the Government from patriotic motives, be commissioned for this purpose, and it is recommended that authority be granted to commission in the Quartermaster Corps, National Army, 17 captains, 17 first lieutenants and 17 second lieutenants without examination, except as to physical fitness, for the performance of this work.

3. Before recommending them for commission, the qualifications for those who volunteer for this duty will be fully established by competent officers of this Corps.

4. More than 50 leather equipment experts of high business standing and experience, with established reputations for integrity, have offered their services to the Government.

5. It is considered necessary that those commissioned be called to active duty without delay and assigned to the depot Quartermaster, Jeffersonville, Indiana, as his assistants.

Very respectfully,
HENRY G. SHARPE,
Quartermaster General.

A few days later this was returned by the Acting Chief of Staff, General Biddle, disapproved. The Quartermaster General then saw him personally and explained the necessity and the impossibility of having the inspection done by civilians and asked for a reconsideration; but was asked why use had not been made of the 3,045 men commissioned from the camps. It was ex-

plained that some fifty of them had been tried as shown by the memorandum and that practically none of the 3,045 were qualified for any duty because the school for their training had only just opened (as has been previously explained). A Congressman later visited the depot at Jeffersonville and, hearing of the condition of affairs from the officer in charge of the inspections, upon return to Washington reported the facts in person to the Secretary of War. The matter was then, about January 1, 1918, referred by the Secretary of War to the War Council, which body promptly recommended that the officers requested be appointed. The difference in action taken and time required to obtain a decision on a similar request is illustrated by the following letter of an officer, who it is understood insisted before assuming the duty, that his recommendations must be approved. The letter is as follows:

WAR DEPARTMENT

Office of the Quartermaster General

Washington, January 23, 1918.

MEMORANDUM:

O. Q. M. G. to the Chief of Staff:

1. The office of the depot Quartermaster, Jeffersonville, Ind., will be required to inspect approximately 120,000 escort wagons, 20,000 ration carts, 20,000 water carts, 5,000 medical carts, 25,000 limbered combat wagons and the necessary parts for these vehicles. Repeated experiences with civilian inspectors and officers already commissioned in the Quartermaster

Corps have been unsuccessful and have demonstrated the impossibility of properly safeguarding the interests of the Government by the inspecting personnel now available.

2. The depot Quartermaster at Jeffersonville, Ind., has asked, therefore, that certain vehicle experts, who are willing to serve the Government from patriotic motives, be commissioned for this purpose, and it is recommended that the necessary authority be granted to commission in the Quartermaster Corps, National Army, 1 major, 10 captains, 10 first lieutenants and 10 second lieutenants without examination except as to physical fitness for the performance of this work.

3. Before recommending them for commission, the qualifications of those who volunteer for this duty will be fully established by competent officers of this Corps.

4. It is considered necessary that those commissioned be called to active duty without delay and assigned to the depot quartermaster, Jeffersonville, Ind., as his assistants.

GEO. W. GOETHALS,

Acting Quartermaster General.

January 26, 1918

APPROVED

By Order of the Secretary of War:—

Wm. S. Graves,
Colonel, General Staff,
Assistant to Acting Chief of Staff.

It must be noted that there was no greater urgency or an increase of business at the time the latter letter was forwarded, which explains or justifies the different action taken; in fact there was greater urgency and sound business reasons why the former communication should have received as prompt approval as the latter.

ENLISTED MEN, QUARTERMASTER CORPS

Prior to the World War the enlisted strength of the Quartermaster Corps, and the number in each grade, was limited and fixed from time to time by the President, in accordance with the needs of the Army, as provided for in Section Nine, Act of June 3, 1916, reading as follows:

“The total enlisted strength of the Quartermaster Corps and the number in each grade shall be limited and fixed from time to time by the President in accordance with the needs of the Army, and shall consist of quartermaster sergeants senior grade, quartermaster sergeants, sergeants first class, sergeants, corporals, cooks, privates first class, and privates. The number in the various grades shall not exceed the following percentages of the total enlisted strength of the Quartermaster Corps, namely: Quartermaster sergeants senior grade, five-tenths of one per centum; quartermaster sergeants six per centum; sergeants first class two and five-tenths per centum; sergeants twenty-five per centum; corporals ten per centum; privates first class, forty-five per centum; privates, nine per centum; cooks, two per centum; Provided, That the master electricians now authorized by law for the Quartermaster Corps shall hereafter be known as quartermaster sergeants, senior grade, and shall be included in the number of quartermaster sergeants, senior grade, herein authorized.”

Under the above authority the number fixed by the President, on recommendation of the Secretary of War, was 7,000 enlisted men for duty with the Regular Army, and an additional number of 15,993 was authorized under the provisions of Section 55, Act of June 3, 1916 (National Defense Act), for enlistment in the Quartermaster Enlisted Reserve Corps in all departments. Request for this number was made by the Quartermaster General under date of February 25, 1917,

and authorized March 3, 1917. Recruiting under this organization was proceeding most satisfactorily.

Realizing that this country was about to declare war, and that many calls would be made upon the Quartermaster Corps for enlisted men, request was made in a memorandum for the Chief of Staff, that authority be granted to recruit the Quartermaster Section, Enlisted Reserve Corps, to 45,000 men. No action having been taken, request was renewed under date of May 26, 1917, because of the urgency of continuing the recruiting that had been successfully launched and because in the meantime war was declared on April 6th, and immediately the calls made upon the Quartermaster Corps were more than could be supplied under the limited number of men then authorized. Ample authority was contained in the National Defense Act for this purpose, and was especially provided for under the provisions of Par. 1 (b) Regulations for the Enlisted Reserve Corps.

An extended conference was held at the War College on this matter, at which conference the Corps and Staff Departments were represented, they claiming at the time this was necessary in order to have as a Reserve a body of men who could be placed in responsible positions when the need arose by merely calling them to duty, and not having to wait until the Supply Depot or Staff organization was created and then calling on local commanding officers for the detail of suitable men. The Adjutant General's Office at that time was making an earnest attempt to recruit approximately 65,000 men to complete the Regular Army, and maintained that to

authorize enlistments in the Reserve Corps for the various Supply Departments would interfere with the enlistments for the Regular Army, as those Departments were offering to clerks and others possessing abilities along given lines required by those Departments, warrants as non-commissioned officers practically the date they enlisted; whereas, the General Recruiting Service had to enlist the applicant as a private. In addition to the several recruiting committees which were operating throughout the country, a considerable number of prominent colleges undertook the work of training the clerks, storekeepers, checkers, et cetera, needed by the Quartermaster Corps, as the authorities of those institutions appreciated the importance and necessity of making a large number of such trained men available. To stop recruiting for the Quartermaster Enlisted Reserve Corps, paralyzed all machinery then in motion to obtain men for the Corps and indicated bad faith with the numerous civil recruiting committees and colleges, which at considerable expense to themselves had, for patriotic motives, undertaken the work. This was so stated in letter of June 21, 1917, to the Adjutant General. The views maintained by the Supply Departments did not prevail with the General Staff. The result was that when the National Army cantonments commenced to receive recruits all of the Supply Agencies were handicapped by lack of suitable men to attend to the urgent needs as the recruits reported. The request was disapproved under date of June 16, 1917 (2606798-A.G.O.), which also directed that no further

enlistments be made in the Quartermaster or Enlisted Reserve Corps except to the extent of the authority already granted to be called into active service (15,993).

This action caused a well launched and successful recruiting campaign that was in force throughout the United States by volunteer organizations, the entire expense of which was maintained by those organizations, to be stopped. These organizations realized the necessity for the Quartermaster Corps to obtain their best possible material in which to form the nucleus for Motor Truck Companies, Wagon Companies, Pack Companies and Miscellaneous Personnel, and urgently requested that they be permitted to continue with the machinery then in motion for this purpose. The Quartermaster General was thus placed in a most embarrassing position because of the fact that he realized the necessity for the additional men, and further appreciated the work of a civilian organization in helping him to obtain that result. He was forced, therefore, to advise these organizations through the Department Quartermasters of the various departments that enlistments must cease when the allotment then authorized was completed.

Under dates of June 21 and June 23, 1917, which as following the disapproval on June 16, 1917, of any further enlistments in the Quartermaster Corps, the matter was again laid before the Chief of Staff in a memorandum. It was urged that the organizations of 45,000 men originally requested be granted, in order

that the recruiting campaigns then under way throughout the United States might continue, and, therefore, the much needed personnel be obtained. No action was taken upon these requests, but finally under date of July 2, 1917, the Adjutant General of the Army informed the Quartermaster General that in lieu of the authority for a total of 45,000 men there should be submitted, whenever conditions indicated the necessity for other organizations of the Quartermaster Corps, a request showing such necessities and the strength of organizations required, in order that they might be authorized under Section 2 of the Act approved May 18, 1917. This action of necessity, on account of no further authority for recruitment under the Quartermaster Enlisted Reserve Corps, resulted in all recruiting throughout the United States being brought to a standstill. On several occasions, the Quartermaster General interviewed General Bliss, the Acting Chief of Staff, urging the prompt approval of the requests. The Acting Chief of Staff expressed the opinion that too many men were being requested for the Quartermaster Corps. The Quartermaster General called the attention of the Acting Chief of Staff to the fact that the Department of the Quartermaster General for the Forces in the British Army had many fewer activities than those placed upon our Quartermaster Corps; and stated that before the war began, one branch of the British organization, the Army Service Corps, had 435 officers, and from 10,000 to 12,000 men, but that there were at the time he was speaking 10,000 officers and from 200,000 to 300,000

men in the Army Service Corps of the British Army. The Acting Chief of Staff inquired how many more men there were in the British Army than in ours; and was informed that that had little bearing on the subject, as our Quartermaster Corps had many more activities than the British, and when the time arrived that the number of officers and men in our entire Corps equaled those of one Branch (the Army Service Corps) of the Department of the Quartermaster General for the Forces in the British Army, that it might be assumed we were getting enough officers and men.

The Quartermaster General having met with opposition in carrying out plans for bringing the enlisted force of the Quartermaster Corps to a strength that would meet the calls then being made upon it was left no alternative other than to submit a statement for organizations under the direction given by the Adjutant General of the Army on July 2, 1917, referred to above. Had the enlistment for the Quartermaster Section Enlisted Reserve Corps been permitted to continue the men could have been obtained and later formed into organizations as the necessities of the service demanded. Finally, under date of August 17, 1917, after much delay in ascertaining the requirements for Quartermaster organizations from the General Staff, authority was requested to organize the following Quartermaster Corps organizations: 434 Motor Truck Companies, 78 Headquarters Motor Supply Trains, 34 Wagon Companies, 17 Headquarters Wagon Supply Trains, 24

Pack Train Companies, and 2,682 Miscellaneous Personnel.

The number then authorized in the Quartermaster Section, Enlisted Reserve Corps (15,993), was to be absorbed therein. It was stated at that time that the authority of 34 Division Supply Trains covered by Tables of Organizations were in addition to the organizations above authorized. The Quartermaster General realized the insufficiency of the authorization for Motor Supply Trains, Motor Truck Companies (exclusive of divisions), and under date of September 18, 1917, again requested authority to organize 81 Motor Supply Trains and 52 Motor Truck Companies. No action was had upon this request, and a very short time thereafter a cablegram (Par. 11, cablegram 166) was received from the Commanding General, American Expeditionary Forces, stating that 1,000 men for Motor Transports must be sent with the least practicable delay, and that 500 each sent monthly thereafter until further notice. A memorandum was again made to the Chief of Staff urging the authorization repeatedly requested. In spite of the cablegram received from the Commanding General, American Expeditionary Forces, and numerous memoranda above referred to requesting additional personnel, authorization was not granted until November 19, 1917, when the following was authorized: 23 Motor Supply Trains, 58 Motor Truck Companies (separate), 8 Motor Car Companies, 23 Motorcycle Companies, 4 Wagon Companies, 23 Pack Train Companies.

On November 19, 1917, a cablegram was received at the War Department from General Bliss, the Chief of Staff, who was then in France. Paragraph 3 of that cablegram was in part as follows:

“Ascertain from Quartermaster General what Quartermaster Corps personnel of all kinds has recently left port of embarkation and what can be expected to be sent within the next 60 days. Transportation problem in France at the present time is serious.”

Upon receipt of this cablegram in the Office, a memorandum was prepared for the signature of the Quartermaster General which criticized quite severely the fact that after having been repeatedly refused authority to organize units which were required in France, the Quartermaster Corps was then blamed for failure to forward those units. The Quartermaster General declined to sign the memorandum, and directed that a memorandum be prepared simply reciting dates of request for authority to organize the units and the dates of the disapprovals, omitting all criticism, as he was unwilling during a war to originate a controversy in the War Department.

It would seem that, when the matters referred to in the cablegram cited were brought to the attention of the Chief of Staff then in France, a full explanation and a frank statement would have clarified the situation. For instance, the Chief of Staff might have explained that about August 1, 1917, the Embarkation Service was established in his own office and under his own direction, and that that service was charged with the duty

of forwarding personnel, animals and property to France; that none of the Supply Departments could forward either personnel or property to the Ports of Embarkation until they had received a "release" from the Chief of the Embarkation Service, and that no information was sent the Departments whether the personnel or property had been shipped or when it would be shipped. The whole matter was regarded as confidential. Then again, a frank statement that he, the Chief of Staff, had, when Acting Chief of Staff, disapproved the requests of the Quartermaster General for authority to enlist men for the Quartermaster Corps would have explained why the organizations needed were not in France.

While on the subject of this same cablegram: in Par. 3, the Chief of Staff inquired: "Have the 40 limousine cars asked for by General Pershing on July 31st for his headquarters been shipped?" To which reply was made that *no* copy of the request of General Pershing of July 31st for the 40 limousine cars had been received in the Office of the Quartermaster General until November 20, 1917, when a copy was personally obtained from the Office of the Chief of Staff.

Too much stress cannot be laid upon the failure to grant an authorization for enlistment of men for the Quartermaster Section, Enlisted Reserve Corps (May, 1917). It is considered that it was well nigh a calamity to have to abandon a well organized recruiting campaign that was under way with the assistance of local committees in the principal cities and towns throughout

the United States. Due to the lack of authorization only 222 Regular Army and 309 National Army recruits were on hand at all recruit depots on November 23, 1917. This, of course, made it necessary, at that late date, to select men from the draft to supply the greater portion of enlisted men required for the Quartermaster Corps, whereas, had the machinery authorized by the National Defense Act been permitted to function, the major portion of the first quota of men required for the Corps could have been had without difficulty.

Effort to obtain men from the draft for service overseas was very unsatisfactory. In one instance the Commanding General, American Expeditionary Forces, requested that 75 stenographers and 300 clerk typists, also 50 stenographers and 150 clerk typists be furnished per month for a period of two months. The men requested not being available, a request was submitted to select that number from the draft under date of October 9, 1917. This request was disapproved over a month later (November 23, 1917), and it was stated that it was believed the men requested could be secured by voluntary enlistment if vigorous efforts were made. This statement was made in spite of the fact that the original request made it clear the men were not available and that they were required for immediate service overseas.

Another instance was in providing the necessary enlisted men for Quartermaster Mechanical Repair Shops Nos. 301, 302 and 303. A request was made under date of October 11, 1917, that 2,858 men be selected

from the draft. No action was taken until October 31, 1917, when authority was granted to select *only* 1,000 of the number requested, and it was stated that "The Quartermaster General will report later and renew request if unable to make progress in organizing the units referred to." After much delay the 1,000 men authorized from the draft were furnished from cantonments, only to be found that they were unsuitable for the purpose, following which numerous requests were made to the Adjutant General of the Army for replacements of the unsuitable men without satisfactory results. Finally on November 23, 1917, the balance required for these units (1,858) was authorized.

Still another instance is cited in which it was found impossible in October, 1917, to obtain by voluntary enlistment the required enlisted men (1,350) for Machine Shop Truck Units. Request was made on October 10, 1917, for this number for the formation of 54 units, ten of which were required for immediate service overseas, only to be returned under date of October 23, 1917, disapproved. Request was again renewed on October 23, 1917, and after a delay of nearly thirty days (November 15, 1917) was approved for only 1,100 men.

The above cited instances are only a few in which delays for obtaining the necessary authority to select men in the draft resulted in delay of formation of units for overseas that were urgently needed, and had been requested in cablegrams from the Commanding General, American Expeditionary Forces.

It will be seen from the foregoing statement that the Quartermaster Corps made every effort to obtain authority for organizations and men in advance of the need for them. Lack of authorization prevented the building up of a suitable reserve, which would have been available to supply demands that were anticipated, and resulted in lack of preparedness and great difficulty in supplying men at a later date. The resort to the draft at that stage of bringing men into it was not satisfactory, due to the fact that the machinery was not in suitable working order to supply men on short notice, all of which would have been easily obviated by proper authorizations in the beginning, and the utilization of the recruiting campaign then under way in the principal cities and towns throughout the United States.

The most serious delay, however, was that caused by lack of the necessary information giving organizations of units for oversea forces, which prevented progress in the organization of those units. This is notable in the following cases.

1. General Pershing's project of July 11, 1917; a copy of which was never received in the Office of the Quartermaster General.
2. General Pershing's project of September 18, 1917; copy of which was only obtained informally about October 25, 1917.
3. General Pershing's Priority Schedule; copy of which was obtained November 28, 1917.

Cables were received, but lack of information concerning matter called for in items on Service of the Rear,

which project had not been received in the office of the Quartermaster General, delayed action. For example: October 11—General Pershing called for items in his Service of the Rear. This project, as shown above, was not supplied the Office of the Quartermaster General until October 25, 1917; when the Quartermaster General personally applied for it after seeing the reference in cables. After receipt in the office it was necessary to study same and then proceed with the organization of units required. It will be shown later on that considerable delay and embarrassment were occasioned by the failure to apprise the Quartermaster Corps in 1917 of the number of men to be in service in 1919, and that there was uncertainty and indecision in this matter.

The table furnished by the General Staff giving the personnel, commissioned and enlisted of the First Division to accompany General Pershing to France, included only two officers of the Quartermaster Corps and an inadequate number of the enlisted personnel. There were no officers included for the Depots to be established on the Line of Communication Service to be organized in France or for the Disembarkation Service. Effort was made to send the enlisted personnel of a Motor Car Company, the members of which were to drive and keep in repair the automobiles required for General Pershing and his staff. This was disapproved, as a Motor Car Company was not authorized, the recommendation of the Quartermaster General which was submitted in December, 1916, not having been acted on. The chauffeurs and repair men necessary were

sent over in the guise of Quartermaster Corps Miscellaneous Personnel and the officer assigned as Chief Quartermaster on General Pershing's staff so informed.

During the year 1917 the Quartermaster Corps formed about twenty-eight different kinds of organizations to enable the work it was charged with to be properly and efficiently performed. Many of them first came into existence in this war being necessitated by its character and the immense numbers engaged. As previously stated, the Table submitted by the Quartermaster General in 1916, contained most of these organizations, as that Table was based upon our experiences on the Mexican Border that year and also upon a study of the war in France.

The following is a list of the special and technical organizations of the Quartermaster Corps:

Advance animal transport depots,	Mechanical repair shops,
Auxiliary remount depots,	Motor car companies,
Bakery companies,	Motorcycle companies,
Base animal transport depots,	Motor truck companies,
Butchery companies,	Organization park,
Clothing units,	Pack train companies,
Conservation and reclamation companies,	Remount squadrons,
Fire, truck and hose companies,	Sales commissary units, Salvage units,
Graves registration sections,	Ship repair shops,
Guard and fire companies,	Stevedore regiments,
Ice plant companies,	Standard Military truck production section,
Labor battalions,	Supply companies,
Labor companies,	Supply trains,
Machine shop truck units,	Water-tank trains,
	Wagon companies.

A Stevedore and Labor Branch was constituted in the

Administrative Division for the purpose of recruiting stevedore and labor troops for use in this country and in France. Colonel William G. Austin, N. A., was placed in charge of this Branch to organize the several regiments; after organizing the first three regiments he was ordered abroad and was succeeded by Colonel Carey E. Goodwyn, N. A.

The following are the organizations which were created by this Branch:

	White		Colored	Total
	Officers	Enlisted Men	Enlisted Men	
301st Stevedore Regiment, overseas	127	858	6,121	7,106
302nd Stevedore Regiment, overseas	127	858	6,121	7,106
303rd Stevedore Regiment, overseas	127	858	6,121	7,106
304th Training Regiment, Newport News	59	286	2,124	2,469
305th Reserve Stevedore Regiment	76	3,556	....	3,632
50 overseas labor battalions.....	750	2,400	60,853	64,003
50 domestic labor battalions.....	750	2,400	48,050	51,200
Domestic labor companies.....	24	2,000	....	2,024
Total	2,040	13,216	129,390	144,646

CIVILIAN EMPLOYEES QUARTERMASTER CORPS AT LARGE

The number of civilian employees at large, that is at depots in this country and the insular possessions of the Quartermaster Corps, increased during the year 1917-1918 from 20,500 to 89,788. Great difficulty in obtaining the employees resulted through the operation of the selective-service law, and also from the fact that the more experienced clerks and field clerks had in many cases been commissioned and assigned to duty as officers.

CEMETERIAL BRANCH (ADMINISTRATIVE DIVISION)

This branch had supervision over the 83 National Cemeteries which by law are under the control of the Quartermaster Corps, and also had supervision over the cemeteries at military posts.

Graves Registration Service.—In obedience to General Orders No. 104, War Department, August 7, 1917, there was organized, equipped and supplied four units of the Graves Registration Service, which after preparatory training at the Casualty Camp on Governor's Island, New York Harbor, and Camp Merritt (Tenafly), New Jersey, were dispatched overseas under the command of Major Charles C. Pierce, U. S. A., Retired. Each of these units was commanded by a Captain, aided by a second lieutenant and comprised an enlisted strength of fifty men, with the organization, more or less, of an infantry company of schedule 1906. In each unit there were three expert embalmers with rank of Quartermaster Sergeants, Senior Grade, and seven embalmers' apprentices; also four sergeants, two of them designed to be clerks and five corporals, who, in addition to their military duties, were intended to act as foremen of working parties.

Subsequently the Commanding General of the American Expeditionary Forces in France cabled for eleven additional units of the Graves Registration Service, which units were organized at the Training Camp of the Quartermaster Corps at Camp Joseph E. Johnston, Florida, and dispatched overseas. When the first four

units were ready for shipment abroad, the Quartermaster Corps was informed that they would not be required there. A letter stating the necessity for such organizations in order to keep accurate record of the deaths and the location of the interments was prepared by Majors H. R. Lemly and Charles C. Pierce, and permission to send the units was urged. It is believed that without those units it would have been difficult to prepare and maintain the accurate records kept in France. That the value of the units was appreciated is demonstrated by the later request for eleven additional units. To the two officers named is due the credit for the organization of the units and also for the presentation of the urgent request to forward the first four units to France.

III

FINANCE AND ACCOUNTING DIVISION

Financial problems and accounting—Difficulties and embarrassments.

THE following financial problems faced the Quartermaster Corps at the date of declaration of war, April 6, 1917:

(a) *Lack of Funds.*—When war was declared the Quartermaster Corps was without funds. Congress had adjourned March 4th without enacting the Deficiency Bill made necessary by the mobilization of the National Guard along the Mexican boarder and the Pershing Expedition into Mexico. Congress also failed to enact into law the Army Appropriation Bill, fiscal year 1918. The Deficiency Bill finally became a law in April, 1917, while the appropriations in the Army Bill, which became law May 12, 1917, were not available until July 1st of that year. Because of the retention of a large portion of the National Guard in the Federal Service after December 31, 1916, the current appropriations, which included no funds to meet National Guard obligations, were almost exhausted. Funds had been provided to cover the services of the National Guard to December 31, 1916, and the cost of maintenance of

Militia organizations retained in service after that date was necessarily met from the current appropriations. Supplies can be obligated and procured without funds in possession, but the current activities of the Army call for cash payments. The situation demanded decisive measures, which were taken. Disbursing quartermasters were notified by wire to pay only for certain specific supplies and services so that the Army's necessary activities should not be crippled. Quartermasters were required by wire to turn their balances into the Treasury, and the funds thus accumulated were issued under such careful supervision that officers, enlisted men and civilian employees received their pay when due. Not a teamster, carpenter, or other employee was discharged, all payments that were essential to the actual operation of the Army were made at the expense of obligations of a character that could best bear delay in settlement. To accomplish this result borrows were made from whatever appropriations held balances, this being done under a somewhat liberal construction of the 35 Stat. at Large 37, which provides for the temporary use of money from one appropriation for the purposes of another appropriation.

The Army's most urgent demands were thus provided for until the passage of the Deficiency Bill which became law April 17, 1917. This Deficiency Bill, under the demand created by war preparations, scarcely stemmed the tide for a day, and then a borrow of \$30,000,000 was negotiated from the appropriation of \$100,000,000 "National Security and Defense," carried in

the Act of April 17, 1917. The Quartermaster Corps had expended \$27,000,000 of this borrow when Congress came to the rescue with the Urgent Deficiency Act, approved June 15, 1917, which enabled the Quartermaster Corps to pay its borrow of \$30,000,000, settle its outstanding obligations, and proceed to do business in a business-like way.

Financing the United States Army in time of war without funds is something of a proposition and is no child's play. From March 4th until June 15th the Quartermaster Corps was practically without funds, yet none of the necessary activities of the Army were curtailed and the Army as a whole pursued its usual routine unconscious of the fact that it was on the verge of bankruptcy. The Army only knows that it received its pay and that there was no interruption of its usual activities, but it does not know that the Quartermaster Corps stood between it and disaster.

(b) *Financing Contractors.*—To assist harassed contractors, who were placed in an embarrassing position through failure of Congress to appropriate the necessary funds to pay for supplies delivered, quartermasters were instructed to issue to creditors of the Government a statement or form of voucher to show the Government's indebtedness to the contractor, with a view to assisting him in raising funds to tide over the delay in settlement. The law precludes, and rightly so, the assignment of vouchers or due bills against the Government, but a form of voucher was prepared in the Office of the Quartermaster General, with the approval

of the Comptroller of the Treasury, which afforded timely relief to worthy contractors of small means who were pushed to the verge of bankruptcy by the failure of the Government to meet its obligations.

Through this procedure and in no other way could the contractors for clothing and other necessary munitions required by the Quartermaster Corps procure the raw material necessary to enable them to produce the completed articles so absolutely essential for the equipment of troops. The amounts involved were so extraordinarily large that even contractors and corporations of the highest standing and the strongest financial backing were helpless in the face of the emergency, and without some measure of this sort the production of war supplies would have been practically stopped. In this procedure the Quartermaster Corps had the cordial and powerful backing of the Federal Reserve Bank through its member banks, which contributed materially to the success of this somewhat revolutionary departure from usual Government methods.

(c) *Simplification of Accounting.*—For some years the Quartermaster Corps had been operating under a system of apportionment of funds which, while it accomplished certain desirable results, was responsible for a great deal of paper work on the part of quartermasters at posts and in the field. This system, which was something of a burden in time of peace, was impossible in time of war, when quartermasters were occupied with duties of too important a character to be hampered in any degree by detail paper work that

could in any way be eliminated. This apportionment system, consequently, was eliminated and a simple up-to-date workable system of direct supply of funds, on call, substituted therefor. One result of this simplification of accounting was that the number of office accountants for detailed record of expenditures was reduced from 192 to 80.

(d) *Simplification of Property Accounting.*—A top-heavy and intricate method of accounting for thousands of articles and millions of dollars' worth of Quartermaster property was supplanted by a system that greatly simplified accounting and reduced the number of accountable officers, being more adapted in every way to war conditions than the old system.

(e) *The Wool Supply.*—To guarantee a supply of suitable clothing for the Army the necessary steps were taken to establish and maintain a reserve supply of wool, a wool purchasing agency being established in Boston which, by a constant study of the market and judicious purchases at various times, steadied the market and enabled the Quartermaster General to furnish contractors at cost with the necessary material for the manufacture of uniforms, blankets and other munitions in which wool entered as a constituent part. This wool purchasing activity, which at the date of the signing of the Armistice had reached an expenditure of approximately one-half billion of dollars, was a somewhat revolutionary venture on the part of the Quartermaster Corps and was carried on with the assistance and cooperation of the Council of National Defense, the

American Wool Growers' Association and the Boston Wool Trade. This wool purchasing activity, which began in 1917 in such a modest way, developed into one of the most important as well as one of the most gigantic war enterprises of the Government.

(f) *Reduction of Finance Work in Supply Depots.*—The provision of supplies for an Army running into millions threw upon the Supply Depots an enormous amount of work. To reduce the paper work in these over-burdened centers of Quartermaster activity the settlement of all transportation accounts was transferred to Washington, where a new system of settlement gave greater accuracy, prompter payment and a great reduction in paper work. Incidentally it relieved the great Supply Depots of a burden of detail work that seriously interfered with their legitimate function, the furnishing of war supplies, so vitally important in war times.

(g) *Allotments of Pay.*—The Army had for many years a system of allotments of pay which enabled the enlisted men, when ordered to duty outside the limits of this country, to have a certain portion of their pay delivered directly to their dependents. Under the law as it originally was drawn, however, a full month must intervene between date soldier's pay became due and date that it could be paid the allottee, while no provision whatever was made for the allotment of pay of officers. Legislation was, however, secured from Congress by representatives of the Quartermaster General which permitted payments to allottees on the day the

pay of the soldier is due, thus eliminating the intervening month required under the old law. Authority was also secured so that officers could allot pay to their dependents. This legislation also liberalized the allotment provisions in other important particulars, making them applicable to war conditions.

(h) *Bonding of Reserve, National Guard and National Army Officers.*—A decision of the Comptroller of the Treasury required that before Government funds could be placed to the credit of Reserve Officers, National Guard Officers and National Army Officers they must be bonded. To meet the urgent cases that necessarily arose where it was necessary to bond officers on short notice a so-called "Interim Bond" was prepared in the Office of the Quartermaster General which was approved by the Comptroller of the Treasury. This form of bond enabled the Office of the Quartermaster General to bond an officer on telegraphic request and place funds to his credit immediately, without waiting for the receipt of the officer's signed application. This temporary bond remained in force until the officer submitted a proper and permanent bond. Resort to this temporary bond cleared up a number of perplexing situations and enabled the Quartermaster General to place funds where delay would have proved disastrous.

(i) *Disbursing from One Appropriation.*—To simplify the task of disbursing quartermasters in France and other places outside the limits of this country, a plan of procedure was worked out in the Office of the Quartermaster General that enabled disbursing officers

to make all disbursements from one appropriation. This method eliminated the trouble and confusion occasioned by the necessity of calling for funds under various appropriations and the duplication of much trouble and confusion in cabling back credits under these various and multitudinous appropriations. Disbursing quartermasters, under the method in use, simply called for money, the amount called for being cabled back without reference to appropriations. The necessary adjustments were made in the Office of the Quartermaster General and in the Office of the Auditor for the War Department.

(j) *Funds for Independent Units Going Abroad.*—In order that in case of unforeseen eventualities no detachments of United States Army personnel should be left without funds the Quartermaster General insisted that the disbursing quartermasters of every independent unit going abroad be provided with funds, United States Treasury credit and Treasury checks. This precaution was justified in many striking instances, and prevented many embarrassing situations where American contingents were located for indefinite periods at points where the funds supplied were needed for their maintenance pending their location at points within the lines of regular supply.

(k) *Financing Disbursing Quartermasters in France.*—One of the most serious finance problems to be solved was the method to be followed in France for providing and disbursing cash, the varying rates of exchange adding a confusing factor to the situation. The

Quartermaster General's Office presented the matter with a recommendation to the Treasury, and as a result the branches in France of certain reputable American fiscal institutions functioned as Government depositaries; and the Secretary of the Treasury on the initiative of the Office of the Quartermaster General announced monthly a fixed rate of exchange for one full month, both for purposes of expenditure and receipt. This system which was finally applied to the disbursing officers of all bureaus of the War Department enabled quartermasters in France to convert their United States Treasury checks into francs at the announced rate, giving the Government credit for all gains by exchange and charging against the Government all losses thereby. This procedure, on the initiative of the Office of the Quartermaster General, received the sanction of law in the Act of October 6, 1917, which authorized the Secretary of the Treasury to fix the rate of foreign exchange for the purpose of disbursing and receiving Government funds. Following is the law:

"For payment of exchange by acting quartermasters serving in foreign countries and when specially authorized by the Secretary of War by officers disbursing funds pertaining to the Quartermaster Corps when serving in Alaska, and all foreign money received shall be charged to and paid out by the disbursing officers of the Quartermaster Corps at the legal valuation fixed by the Secretary of the Treasury."

(1) *Agent Officers*.—Realizing that with millions of troops in the field it would be impossible to furnish bonded disbursing officers in sufficient number to make the necessary payments, legislation was secured in the

Act of May 12, 1917, which created the so-called "Agent Officer" who acting as the representative of accountable disbursing officer made the actual payments. This legislation, which was secured for the disbursing quartermasters, was afterwards secured for all disbursing officers of the War Department. Following is the law:

"Hereafter, under such regulations as may be prescribed by the Secretary of War, officers of the Quartermaster Corps accountable for public moneys may intrust such moneys to other officers for the purpose of having them make disbursements as their agents, and the officers to whom the moneys are intrusted, as well as the officers who intrust it to them, shall be held pecuniarily responsible therefor to the United States."

(m) *Appropriations.*—Following is a statement of Quartermaster appropriations made available for the fiscal year 1918:

QUARTERMASTER APPROPRIATIONS MADE AVAILABLE
FOR THE FISCAL YEAR 1918

Appropriation	Amount Appropriated under Act	Total
Pay, etc., of the Army		
Act May 12, 1917.....	\$87,130,147.40	
* " June 15, 1917.....	350,105,839.90	
" Oct. 6, 1917.....	405,403,131.00	\$ 842,639,118.30
Mileage to Officers and Con- tract Surgeons		
Act May 12, 1917.....	740,000.00	
* " June 15, 1917.....	510,000.00	
" Oct. 6, 1917.....	750,000.00	2,000,000.00
Supplies, Services and Trans- portation, Q.M.C.		
Act May 12, 1917.....	80,610,100.00	
* " June 15, 1917.....	706,848,577.29	
" Oct. 6, 1917.....	1,132,886,500.00	1,920,345,177.29

* The amounts made available in the Deficiency Act of June 15, 1917, were for deficiencies in the fiscal year 1917 and for the requirements of the fiscal year 1918.

Horses for Cav. Arty., Engrs., etc.			
Act May 12, 1917.....	400,000.00		
* " June 15, 1917.....	25,000,000.00		
" Oct. 6, 1917.....	40,000,000.00	65,400,000.00	
Barracks and Quarters			
Act May 12, 1917.....	3,000,000.00		
* " June 15, 1917.....	47,603,314.20		
" Oct. 6, 1917.....	49,155,000.00	99,758,314.20	
Construction and Repair of Hospitals			
Act May 12, 1917.....	750,000.00		
" Oct. 6, 1917.....	35,000,000.00		
* " June 15, 1917.....	2,115,267.00	37,865,267.00	
Quarters for Hospital Stew- ards			
Act May 12, 1917.....		25,000.00	
Shooting Galleries and Ranges			
Act May 12, 1917.....	45,000.00		
" Oct. 6, 1917.....	6,014,540.00	6,059,540.00	
Rent of Buildings, Q. M. Corps			
Act May 12, 1917.....	41,225.10.		
" Oct. 6, 1917.....	37,875.00	79,100.10	
Maintenance Army War Col- lege			
Act May 12, 1917.....		10,700.00	
Vocational Training of Sol- diers			
Act May 12, 1917.....		250,000.00	
Filing Equipment of the Army			
Act May 12, 1917 (1917- 1918) ,.....		45,000.00	
Buildings Jeffersonville Depot, Indiana			
Act May 12, 1917.....		9,500.00	
Purchase of land, Military Reservations, Fort Sam Houston, Texas			
Act May 12, 1917.....		330,000.00	
Barracks and Quarters Phil- ippine Islands			
Act May 12, 1917.....		500,000.00	
Military Post Exchanges			
Act May 12, 1917.....	50,000.00		
* " June 15, 1917.....	500,000.00		
" Oct. 6, 1917.....	250,000.00	800,000.00	

Roads, Walks, Wharves and Drainage		
Act May 12, 1917.....	600,000.00	
* " June 15, 1917.....	5,539,965.00	
" Oct. 6, 1917.....	12,700,000.00	18,839,965.00
Construction and Maintenance of Military and Post Roads Bridges and Trails, Alaska		
Act May 12, 1917 (1918-1919).....		500,000.00
Military Post, Schofield Barracks, Hawaii,		
Act June 12, 1917.....		1,077,000.00
Purchase of Land, Military Post Schofield Bar- racks, Hawaii		
Act Oct. 6, 1917.....		10,300.00
Quartermaster's Depot, St. Louis, Mo.		
Act Oct. 6, 1917.....		300,000.00
Sewerage System, Fort Monroe, Va.		
Act June 12, 1917.....		9,359.99
Seacoast Defenses, P. I. and Hawaii		
Act June 12, 1917.....		93,000.00
Barracks and Quarters, Seacoast Defenses		
Act Oct. 6, 1917.....		3,462,000.00
Repairs to Buildings, etc., at Gulf Ports		
Act Oct. 6, 1917.....		89,962.60
Bridge Across Republican River, Fort Riley, Kans.		
Act Oct. 6, 1917.....		15,000.00
National Cemeteries		
Act June 12, 1917.....		120,000.00
Disposition of Remains of Officers, Soldiers and Civil Employees		
Act Oct. 6, 1917.....		560,000.00
Pay of Superintendents, National Cemeteries		
Act July 12, 1917.....		63,120.00
Headstones for Graves of Soldiers		
Act June 12, 1917.....		50,000.00
Burial of Indigent Soldiers		
Act June 12, 1917.....		2,000.00
Burial of Indigent Patients, Army and Navy Hospital, Hot Springs, Ark.		
Act June 12, 1917.....		200.00
Repairing Roads to National Cemeteries		
Act June 12, 1917.....		12,000.00
Antietam Battlefield: Preservation,		
Act June 12, 1917.....		4,500.00
Confederate Mound, Oakwood Cemetery, Chi- cago, Ill.		
Act June 12, 1917.....		500.00

Confederate Stockade Cemetery, Johnston's Island in Sandusky Bay, Ohio Act June 12, 1917.....	250.00
Care of Confederate Burial Plots Act June 12, 1917.....	1,250.00
Monuments or Tablets in Cuba and China Act June 12, 1917.....	1,000.00
	<hr/>
	\$3,001,328,124.48

As stated above, Congress adjourned March 4, 1917, without enacting the General Deficiency Bill. This Bill contained an item of \$34,000.00 for the Quartermaster Corps for deficiencies made necessary by the mobilization of the National Guard along the Mexican border and the Pershing expedition into Mexico. The supplies represented by this \$34,000.00 had been secured from dealers the previous fall with the expectation that funds would be made available early in December, 1916, in the Urgent Deficiency bill which would enable the obligations to be met. Estimates covering this Deficiency were prepared and submitted by the Quartermaster Corps, and through no fault of that Corps failed to be included in the Urgent Deficiency Bill. The only recourse was to secure this amount in the General Deficiency Bill usually passed just before the adjournment of Congress. The failure to receive the funds and liquidate the obligations caused great distress and hardship to the public creditors, many of whom were unable to meet their financial obligations, which they had assumed in order to provide the supplies needed by the Government in an emergency. Because of this distress, and because the appropriations to

provide supplies were exhausted, the Quartermaster General, in an interview, explained the situation to the Secretary of War and stated that the appropriation for the Pay of the Army contained ample funds, all of which would not be needed for the purposes for which appropriated prior to the passage of the General Deficiency Bill; stating that the law absolutely prohibited the use of funds to pay for supplies obtained under another appropriation which had been exhausted; in fact, imposed a fine and imprisonment for such a procedure. The Quartermaster General stated that with the approval of the Secretary the transfer of funds would be made and the distress of the contractors relieved by paying them the sums owed them, and that later on the passage of the General Deficiency Bill making available an appropriation to satisfy the Government obligations, the Pay of the Army would be reimbursed by the funds thus withdrawn from it in violation of law. The Quartermaster General submitted later two separate memoranda, reciting the facts and the law, and received many millions of dollars with which the most urgent cases were met and several of the contractors saved from bankruptcy.

Upon the failure of the General Deficiency Bill, the Quartermaster General explained the situation to the Secretary and stated the intention to destroy the memoranda approved by the Secretary, as the Quartermaster General did not intend that the Secretary should be blamed for the transaction. The Secretary replied that he fully understood the situation, appreciated the viola-

tion of law, but that he had approved the suggestion in the memoranda and was therefore responsible for the transaction, and intended to assume the responsibility and directed the Quartermaster General not to destroy the memoranda. That day, upon meeting the Secretary by appointment in the President's room at the Capitol, it was ascertained that several of the members of the Cabinet and many Senators had been informed of the matter and expressed approval of the action taken.

Later, other methods, not in violation of law, to obtain a portion of the money required were adopted as referred to above and refundment of the amounts withdrawn from the Pay of the Army was effected. In addition a prominent banking house in New York advanced \$1,000,000 to such public creditors who needed financial assistance and an individual banker in San Francisco advanced \$500,000 for similar purposes. In neither case were any of the public creditors charged interest for the moneys so advanced them. The General Deficiency Bill was passed the latter part of April, 1917, and all of the old obligations of the Quartermaster Corps were met.

The difficulties and embarrassments imposed upon the Finance Division by this lack of funds must be apparent, particularly when it occurred at the very beginning of the greatest war this country has ever engaged in. These conditions increased upon our entry into the War, as new obligations had to be made, one of them of over thirty million dollars for the construction of the Training Camps for Officers, undertaken in

direct and positive violation of law as no funds were available or had even been estimated for; the securing of money to provide the many individuals and organizations forwarded abroad when there were no funds available in the proper appropriations, and the appropriations made by Congress could not be secured until after the first of July. Preparing for war during a period of over three months with no funds available was the task imposed upon the Quartermaster Corps and particularly upon the Finance Division. That the situation was fully met was due entirely to the ability, resourcefulness and courage of the officers attached to that Division. Contemplate for one moment the situation presented by shipping troops abroad to engage in war with no actual money available in the various appropriations needed and the problem which then was presented may in a measure be visualized.

When presenting on January 15, 1917, in the Hearings before the House Committee on Military Affairs the estimates submitted for the support of the Army for the fiscal year 1918 an earnest effort was made to consolidate eleven of the Quartermaster appropriations into three. The purpose was to simplify the paper work of the Army, provide really a budget so that the amount required for each item would be shown and the appropriation made for the same purpose the preceding year stated. The reasons for this were fully set forth in the Hearings and in the data submitted at the time and are given at length in the Hearings. The members of the Committee were favorably inclined towards

the proposed change, but it was abandoned at the last moment because so little time was available for the consideration of the bill, and for the additional reason that being a change in the form and verbiage from the former appropriation bills it would be subject to a point of order and the passage of the bill thus endangered. If the suggested change had been adopted it would have effected great simplification in time of war, and a corresponding relief during a time of great pressure, and furthermore would have tended to greater accuracy in the accounting. It moreover would have been in line with the new Budget System now proposed for Congress.

In regard to the Methods of Money and Property Accountability adopted by the Quartermaster Corps, it is desired to call attention to the fact that the War Department is the only Department of the Government in which, since its first establishment, the policy and personnel have been practically continuous; not subject to change as to either policy or personnel every few years due to change in administration, as in the other departments of the Government. The result being that the Methods of Money and Property Accountability are based upon the experience and familiarity of the subject of all the men who have had any part in the affairs of the Department for over one hundred and forty years. The characterization of such methods as "red tape" is generally made either by the hasty, careless, indolent, thoughtless, ignorant or evil disposed person; for surely the Government is entitled to as ac-

curate an accountability of its Financial and Property responsibility as any business man or corporation. It is understood that the Financial System of Accountability of the State of Illinois was modeled on that of the Quartermaster Corps, the forms for same being taken from the Quartermaster's Manual and adapted to the purpose intended; and that the proposer was given a handsome monetary consideration by the State of Illinois. One of the most successful railroad business men, a graduate of the United States Military Academy, once stated that the forms he adopted were modeled on forms in use in the Army.

The work of preparing an estimate for Congress is a stupendous undertaking and if the basis for this estimate is continually changed such work is increased many fold. The basis for an estimate is the number of men to be in the Army during the time for which an appropriation for the support of the Army is sought.

An approved memorandum of the War College Division of the General Staff, dated September 11, 1917, stated that there would be thirty divisions in the Army in 1918; sixty divisions in 1919; thus making a basis for the estimates of about three millions of men.

Estimates for the Quartermaster Corps were therefore prepared on a basis of 3,000,000 men and were completed about the first of October, 1917. Learning that an additional call of men was contemplated the Quartermaster General on October 9, 1917, addressed a memorandum to the Chief of Staff as follows:

"It is understood that a second, third and fourth call for selective draft men, for 456,000-500,000 and 500,000 men is contemplated."

"In order that this office may have reliable data on which to base estimates of the quantities of supplies needed by months, information is requested as to the approximate date these calls will be made."

HENRY G. SHARPE,
Quartermaster General.

To which the Chief of Staff replied under date of October 23, 1917, as follows:

"The question as to whether or not subsequent calls for selective draft men will be made, and, if so, the numbers to be called, has not been determined and the information asked for on the attached memorandum (the Q.M.C.) can, therefore, not be furnished."

TASKER H. BLISS,
General, Chief of Staff.

As stated above, the estimates, based on the approved memorandum of the War College Division of September 11, 1917, were submitted about October 1st.

On October 19, 1920, a memorandum was received from the Chief of Staff as follows:

"The Secretary of War desires that you submit a modified estimate, based on the assumption of 1,500,000 men to be maintained in the Military Establishment during the fiscal year 1918-1919."

TASKER H. BLISS,
General, Chief of Staff.

At once estimates were started on this new basis and on October 22, 1917, another memorandum was received from the Chief of Staff as follows:

“Referring to the memorandum dated October 19th, the number of men called for by the program of the Aviation Section, Signal Corps, in France, is 11,941 officers and 112,245 men. These should be in addition to the 1,500,000 men referred to in memorandum of October 19.”

TASKER H. BLISS,
General, Chief of Staff.

Before again commencing work on the estimates the Chief of Staff was seen and it was explained that the estimates for the fiscal year 1918, which were then before Congress provided for 2,033,345 men and that the approved memorandum of the War College Division of September 11th gave 60 Divisions, or about 3,000,000 men for 1919; and if that number of men would be in service in 1919 arrangements to secure the funds to pay for the supplies for such number of men should be made. It was also stated that under authority of the Secretary of War of July 11, 1917, purchases were being made for two millions of men, and that with the approval of the Secretary of War under date of September 15, 1917, in order to secure more prompt deliveries and keep the factories in operation upon Government orders, contracts were being entered into which did not terminate until December 31, 1918; and the difficulty of securing supplies unless funds for pay-

ment of same were available was indicated. Authority was then given to estimate for funds for such supplies as required more than three months to produce on the basis of 3,000,000 men and the estimates were prepared accordingly.

The matter contained in the memorandum of September 11, 1917, of the War College Division of the General Staff was of such vital importance in the plan for the Conduct of the War that it must have been considered by the Secretary of War. The decidedly contrary action of the Chief of Staff in his memoranda of October 19th and 22nd, and his reply regarding subsequent calls of selective draft men of October 23rd seem to indicate lack of coördination between his office and the Divisions of same.

As stated previously, General Pershing's project of July 11, 1917, was never received in the Office of the Quartermaster General, and no information as to its contents was furnished that office. Lieutenant Colonel Réquin in his book "America's Race to Victory" states, on page 49, that: "The plan submitted by General Pershing to his Government contemplated the employment of a million men in France for the offensive campaign of 1918, to be disembarked before July of that year,—without consideration of the forces that it might be necessary to send to the front later on, nor the total numerical strength of the future American Army, which he estimated at 3,000,000 men (a numerical strength to be reached within two years)."

It would appear that the Memorandum of the War

College Division of September 11, 1917, was based on General Pershing's project of July 11, referred to by Lieutenant Colonel Réquin, and that the Chief of Staff by his instructions of October 19th and 22nd, disregarded the recommendations of General Pershing.

The difficulty, and it may be danger, of endeavoring to provide supplies and pay for an Army in time of war when no funds are available for months has been before alluded to. The danger would be the possibility of forcing into bankruptcy firms from whom supplies had been secured, because funds to satisfy the Government's obligations were not available, and it surely is not fair to expect merchants to provide supplies needed during war and have no funds available to pay for them, simply because the estimates for funds submitted to Congress failed to provide for the number of men who would be in service according to the plan approved.

IV

SUPPLIES

Supplies division—Subsistence branch—Clothing and equipage branch—Fuel and forage—Conservation division.

SUBSISTENCE

ON account of the perishable nature of the supplies furnished, the Subsistence work of the Office of the Quartermaster General was entirely decentralized. Credit for the initial supply of the Army as it expanded must therefore be largely given to the Depot Quartermasters, under whose supervision the camps and posts were supplied. These Depot Quartermasters were, as a rule, the very best type of officers in the Corps, but it was necessary in order to meet the demand for trained officers to send many of the most experienced officers to France. These officers had for many years made a close study of food products and the methods of preparing them, had made constant experiments with rations and containers, cooking and baking appliances, and made practical application of the knowledge thus gained. In their specialization of the study of food supply, the subject had been considered from every possible angle and from different viewpoints; but it is no discredit to state that none of them had had the prevision to

foresee that this country would ever be called upon to supply an army of millions of men in a campaign across the Atlantic, and at a time when the food supplies of this country would be drawn upon for the civilian populations and the armies of the different countries with whom we entered the war as co-belligerents.

Due to the preliminary study of the permanent officers, aided by a number of detailed officers who had been trained in the work, and assisted by many non-commissioned officers, when the war came there were on hand some thoroughly attested appliances for field cooking and baking, and it was only necessary to very largely augment the number of these appliances in order to equip the army. The task of securing these appliances was made difficult and the time necessary to obtain them increased, due to the fact that the steel and other material from which they were manufactured was likewise needed by our allies for various purposes.

Of great assistance in the critical period of expansion were the post quartermaster sergeants and field clerks, who had been commissioned in the Corps as Reserve Officers. The better class of these men, those who could partly visualize the enormous scope of the problem presented, were invaluable as assistants to the Depot Quartermasters and as instructors to the officers coming into the service from civil life in Washington as well as in the depots and camps. Many a pitfall was avoided and many an error checked by the patient and conscientious work of these men. They were a complement

to the business experience, ability, mental and physical force displayed by some of the temporary officers, and whose loyal and efficient work in the Quartermaster Corps has not received the acknowledgment to which it is entitled.

The number of permanent officers of the Quartermaster Corps was so limited that no one was immediately available for the exclusive work of Subsistence in the Quartermaster General's Office, and that work had to be carried on by a most efficient Reserve Officer, a former post quartermaster sergeant, assisted by one or two other Reserve officers. It was not until October, 1917, that it was possible to receive the assignment of a permanent officer to duty in the Office to undertake this work.

The specifications of the Army were very clear upon the points of quality and wholesomeness of the food products, and were prepared after many conferences with the Chief of the Bureau of Animal Industry, the Chief of the Bureau of Chemistry, and the Chief of the Bureau of Experiment Stations of the Department of Agriculture, and the Chief of Fishery Department of Commerce. Experts were stationed at most of the plants, especially where meats were packed, and these made constant inspection during all the stages of cutting, curing and packing; certain vegetables were inspected and selected before being put through the canning processes; and every effort made to insure the certainty of obtaining proper and nutritious food supplies for the Army.

Supplies were purchased in the usual manner after public advertisement for proposals, but about August 13th was discontinued, as it became evident that such discontinuance was necessary to prevent inflated prices and also to keep from the enemy knowledge of factories where supplies were being prepared for the Government.

It became evident during the summer that certain food commodities would be short, and that it would be necessary to adopt some plan of providing the requirements of the Army and Navy without unduly influencing the price paid by civilians. To accomplish this the Council of National Defense undertook to make allotments of certain products such as beans and sugar, canned tomatoes, peas and corn.

In my book entitled "The Art of Subsisting Armies in War," published in 1893, the necessity was urged of creating a Department of the Government to mobilize the resources of the country in time of war. No attention had been paid to this important matter in the intervening years, though its necessity was frequently urged. The introduction of the Council of National Defense in this matter was a feeble step in the direction indicated. The fact that the country must provide supplies for the allied and neutral nations of Europe indicated the necessity of taking legislative action and the ideas suggested in the book above referred to were adopted in drafting the necessary legislation, which resulted in the establishment of a Food Administration, to which power of control over the export and imports of food and food products was likewise given.

The work undertaken by the Council of National Defense was later taken over by the Food Administration and the bulk of the requirements of such articles for the fiscal year were obtained in that manner. The articles purchased under this allotment plan were in many cases purchased under a tentative price subject to revision, and later when the crops matured, a revised price was made and published to the trade and all supplies purchased were settled on that basis. The prices were fixed at first by the Federal Trade Commission and later by a conference committee consisting of members of the Food Administration, and one representative each from the Federal Trade Commission, the Army, the Navy and the industry concerned. The prices were in the main accepted by the trade as fair and reasonable. They were based on the cost price of the article, plus what was considered as a "fair and just" profit.

It was necessary in a few cases to commandeer supplies, especially in the case of canned tomatoes and peas, as the price continued to rise in the commercial market even after the price set by the committee was published to the trade. In cases where commandeering was necessary, the dealer had declined to deliver the goods to the Army even though he had before entered into an agreement with the Food Administration to deliver a certain percentage of his pack to the Government at the price determined as "fair and just." His object was, of course, to sell the supplies in the open market at a higher price.

In order to be fair to the dealers, allotments were

made by the Food Administration on the percentage basis, that is, every dealer turned over to the Army or Navy a certain percentage of his pack. In the case of corn this was 12 per cent., and of tomatoes 18 per cent. of the pack.

The market was not closed to competition, and if anyone had anything to offer cheaper than the fixed price, he received proper consideration. Such instances were, however, rare.

In connection with allotments of food and fixing prices, a Food Purchase Board was appointed, consisting of a representative of the Food Administration, the Quartermaster General of the Army, or his representative, the Paymaster General of the Navy, or his representative, and a representative of the Federal Trade Commission to decide upon what food products should be furnished under the allotment plan and to fix a minimum price which should be paid for any of the articles so allotted.

The following articles were purchased under the allotment plan:

Tomatoes	Corn	Peas
Sugar	Beans, issue	Canned salmon
Beans, stringless	Beans, baked	Evaporated apples
Canned apples	Apricots	Evaporated peaches
Canned cherries	Pineapple	Canned peaches
Prunes	Flour	Canned pears
Ketchup	Strawberry pre-	Evaporated milk
Jams, assorted	serves	;

In October, 1917, it was finally possible to secure one of the permanent officers of the Corps who was an

expert in Subsistence matters for assignment to the Subsistence Branch. The work of this Branch increased enormously, and orders for the expansion into a Division were issued.

To prevent depot quartermasters in the various districts from competing among themselves for the same article, and in consequence causing a rise in price, it became necessary to assume control in Washington over the purchase of thirty-three principal items. Bids for the supply of these items were opened simultaneously in each large city or camp where a Quartermaster was stationed, the Quartermaster wiring to Washington the bid he recommended for acceptance. This gave Washington an opportunity to exercise control without actually doing the purchasing, as in each case some depot quartermaster was instructed to buy, unless all bids were considered too high, in which case the Washington office would advise where a lower price could be obtained. This was centralized control with decentralized purchase, and the list of controlled items was gradually extended until at the time of the armistice practically all items were included. To keep advised as to prices throughout the country, a section was set up to gather from every known source market statistics on the principal food supplies. This gave a means for quickly checking the quotations received from the various cities. For the first time in our history, the purchases grew to such volume that the division was able to secure practically every article from the manufacturer or packer and eliminate the broker. The viciousness

of a system by which the Government is compelled to have transactions with brokers or middlemen will be again pointed out later.

As an illustration, some years ago the agent of a manufacturing house called upon a purchasing officer, to ascertain the prices quoted on supplies manufactured by his firm. Being told that as he was not a bidder and had declined to submit proposals the information requested could not be furnished, he replied that it was a public office and demanded the information in order to ascertain if certain dealers had violated their contract with his firm, a contract agreeing not to sell below a stated figure. He was informed it was a public office but not an office for the public or such of them as were in agreement in restraint of trade.

Toward the end of 1917 the problem of getting the supplies overseas began to require close attention by officers already overburdened. The size of the Army that was finally to be enrolled had not yet been decided upon, and this uncertainty as to the number to provide for was one of the serious difficulties of that period. Certain food supplies like flour, which is milled throughout the year, do not need to be provided for very long in advance, but others such as canned vegetables and fruits, are seasonal and if not secured at time of packing are apt to become scattered among the small jobbers and with the retail trade, so cannot later be secured in large quantities. In fact it was even considered necessary to stimulate production of some commodities so that Army needs could be supplied, and

with this in view representatives of the Quartermaster Corps frequently attended the meetings and conventions of the various trade organizations concerned. No definite plan for the size of the Army was at that time available, as has previously been demonstrated, and it was necessary to make liberal estimates of the quantities required and purchase accordingly. This indecision forced the officers of the Department to assume a great responsibility in order to assure sufficient supplies for the Army. It must be remembered that those supplies had to be planted, cultivated, harvested and manufactured. If the courage to assume the responsibility, notwithstanding the indecision and uncertainty as to the numbers of men to be in service in 1918 and 1919, and to take the necessary steps to provide the Subsistence supplies needed in those years were lacking, serious results might have followed, as it would have been too late to do so. And the officers who assumed that responsibility are entitled to credit for their action in that matter.

In 1907, the then Commissary General of Subsistence requested authority of the Secretary of War to visit Europe to make an inspection of the methods of supply and the systems adopted in the English, French and German Armies to effect these vital matters during a time of war. The then Chief of Staff having stated that there were no funds available for this purpose the Commissary General of Subsistence offered to go at his own expense, as he stated that no previous report on this subject had ever been made to our War De-

partment, and it was considered of the highest importance that the data should be obtained. Permission to go was granted under the condition that he had stated. This is mentioned for the fact that the following results were obtained from that inspection, all of which were of great importance in the late war, and as such were a contribution to the war.

1. Permission was secured to send officers of the Quartermaster Corps to the École de l'Intendance in Paris. A number of officers took the course before the outbreak of the war. One of these officers was in Paris when General Pershing arrived there, and it is felt that his knowledge of the French Military organization and the methods of administration combined with his acquaintance with the several officers in the French Army was of assistance in those early days.

2. The simplified methods adopted in the British Army for Accountability in the Field were studied, and were the basis of the methods later adopted in our Army, which saved an enormous amount of paper work in the field and made the problem of supply easier to solve.

3. At that time it had been possible for the first time in our Army to secure authorization for a Field Bakery. That Bakery was, following the practice of all the Continental Armies, to be attached to the fighting trains of the Army. In Paris it was ascertained that the French had decided that the Field Bakery had no proper place with the fighting trains, but was an element of the line of communications and as such should be assigned to that service. As a result, after much

opposition, the Field Bakeries became an element of our Service of the Line of Communications, or as it is now termed Service of Supply. This enabled the abandonment of the rolling type of field oven and the development of a knock-down type of continuous baking oven, which is thought to be superior to any in use in other armies.

4. Observation was made of the work being undertaken in France and Germany in regard to rolling kitchens, and the data secured materially assisted in the development of a rolling kitchen suitable for use in our Army.

5. A suggestion for the establishment of a Supply Corps was submitted as a result of the study of the organizations abroad, and while it was not adopted it is believed that it was helpful when the matter was considered four years later.

The ration in use during the Spanish War proved unsatisfactory due to its lack of flexibility and variety, caused by the fact that the components were established by law. After securing the necessary legislation in 1901 a change was made, and in 1908, after a profound study of the matter a new ration was adopted. The subject had been studied exhaustively by many officers of the Medical Department of the Army and several of them had published books treating on the subject which had been recognized as authorities. All these officers and their publications were consulted when the change in the ration was under consideration, and the views obtained or writings consulted of the following recog-

nized authorities: Professor Langworthy, Bureau of Experimental Stations, Department of Agriculture; Doctors Wiley and Alsberg, Bureau of Chemistry, Department of Agriculture; and Professors Atwater and Chittenden and others. The purpose was to establish a well-balanced ration with proper nutritive value and affording the necessary variety. It is felt that by the assistance of the authorities above cited the purpose was attained, and therefore at a joint meeting of committees of the Food Administration, it was somewhat of a surprise to hear a temporary officer in the Medical Department assert that the Army needed a balanced ration; and to recommend the reduction of the ration in order to save supplies. The Quartermaster General called the attention of the meeting to the facts as above stated, referring the temporary officer to many standard publications by members of the Medical Department, with which works such temporary officer was not familiar. It was also shown that in the matter of flour, lard and sugar the Field Bakeries and the Messes throughout the service were, and had been for some time, making greater savings than those recommended by the Food Administration. This and other matters of food conservation will be more fully treated when describing the work done by the Schools for Bakers and Cooks.

The Quartermaster General also objected to the reduction of the meat component of the ration and the substitution of oatmeal instead. This objection was based on the fact that a large number of the selective draft men would be drawn from cities where they had

been engaged in indoor occupations and consequently did not possess the bodily vigor and physical activity which they would require in an active outdoor life, to enable them to undergo the severe strain of active service and endure the exposure, suffering and privation which such service exacted. Furthermore as many of the selective draft men would be called to the colors to replace the valetudinarians who were rejected and to make it possible for them to acquire the bodily vigor to endure the severe physical training necessary to enable them to go "over the top," it was a duty of the Government to see that proper and adequate nourishment was supplied them.

It was also suggested that any savings of food supplies other than those already being effected in the training camps, should be made by the civilian population, for whose protection the selective draft men were being trained and made physically fit to encounter the perils, hardships and horrors of a war the like of which had never before been heard or dreamed of in this world.

At this meeting the Surgeon General stated that the commissioned personnel of his Department had been more largely increased than any other Department of the Army, that many of the ablest and best known men of the medical profession had volunteered to the call of duty, and that a large proportion of his time and that of his permanent officers was consumed in explaining why certain things proposed by some of the temporary officers could not be adopted.

At the close of the conference some of the eminent

authorities cited by the Quartermaster General expressed their appreciation for his having explained the care taken to insure the adoption of a well-balanced ration. Fortunately, nothing was done to effect the reduction of the ration suggested, and the country has the consolation of feeling that everything possible was done to enable the selective draft men to go "over the top" in such perfect physical condition and training that they at least were not too weak to endure the strain, and that when they made the supreme sacrifice it was not because their bodies were so enfeebled as to make them inferior to their opponents. In fact, the bodily vigor and training of our men was proven to be equal if not superior to those of their opponents, and this to the surprise and astonishment of certain military authorities who had doubted whether the selective draft men from the large cities could, because of their indoor occupations, be made fit to endure the hardships, exposure, sufferings and privations of an active campaign. But the results proved the fallacy of their doubts, as has been clearly set forth in some of the Regimental Histories of organizations composed of selective draft men secured from such sources.

The ration adopted in 1908 contained the novel provision of authorizing the commander of the field forces to prescribe the field rations. This was urged by the then Commissary General of Subsistence to enable the field commander to take the necessary steps to put his command in physical condition to perform the duty assigned to them. This was objected to by members of

the General Staff on account of the possible expense it might entail; but it was maintained that as all war was waste, the best way to stop the waste was to stop the war by giving to the Field Commander the power to conserve life and thus afford him an adequate force to attain his objective. This provision was very largely taken advantage of during the war in France, thereby adding greatly to the comfort and well-being of the troops and unquestionably maintaining their morale and discipline.

The recommendation made by the Quartermaster General in June, 1917, for authority to issue cigarettes, tobacco and matches to the troops in France was not approved; but later on was granted at the request of General Pershing. How thoroughly this was appreciated the records of the several Welfare associations which made similar distributions to the troops will attest.

In the spring and summer of the years 1915, 1916, 1917, a camp was maintained at Washington, D. C., under the auspices of the Navy League, to train young women along such lines as they would be capable of rendering service in time of war. The ration issued at those camps was the Army ration, and was prepared by cooks who were graduated from the School for Bakers and Cooks at Washington Barracks, using the Army field cooking equipment; and the bread was baked in an Army field oven by an instructor at the Washington Barracks School. The universal satisfaction given by the camp mess is surely an evidence of the adapt-

ability of the Army ration, and was a further proof, if any were needed, that it was a well-balanced ration affording the necessary variety in diet.

EMERGENCY RATION

In 1901, an emergency ration was adopted for troops on active campaign or in the field. It was composed of dried ground wheat and dessicated beef, with salt and pepper added, and also three cakes of sweet chocolate. When it was first adopted the law authorized the issue of only one ration a day, and, consequently, when the emergency ration was used the garrison ration could not be drawn; forced issues of the emergency ration therefore created a prejudice against it. About the year 1906 a law was secured authorizing the issue of the emergency ration, in addition to the regular ration to troops on active campaign or in the field for purposes of instruction. Only one firm manufactured this ration, and in order to keep the machinery installed and ready for operation in time of war, it was necessary to purchase about 100,000 rations a year costing over \$30,000 annually. Orders were issued directing the use of the emergency rations three days a year, and this would have consumed the number necessary to keep the machinery installed and in operation. The orders were disregarded; and later an emergency ration, consisting of cholocate, nucleo casein, dessicated eggs and sugar was devised with the coöperation of the Bureau of Chemistry, Department of Agriculture. This ration

met with favor among the troops and stringent instructions against its use except under orders had to be issued. The chocolate ration could be manufactured in any quantity desired when needed, and therefore the carrying of a large stock on hand was not necessary. After a test for over four years in the Philippine Islands to determine its keeping qualities, chemical and bacteriological tests being conducted every six months, the ration finally received the approval of the Surgeon General and was adopted. Shortly after its adoption, Doctor Langworthy of the Bureau of Experimental Tests, Department of Agriculture, stated his readiness to undertake the tests of the emergency rations which had been requested some years before, but could not then be undertaken as some other tests were then being conducted. A number of the chocolate emergency rations were provided and they were subjected to the digestive test, as a result of which a report was submitted, and based upon this the approval of the ration by the Surgeon General was withdrawn. The Quartermaster Corps was directed to take up the question of the selection of a suitable ration with Doctor Langworthy. An excellent ration was produced, which it was hoped would be adopted by cracker manufacturers and manufactured for sale to the public. This expectation, unfortunately, was never realized and only one possible manufacturer of the ration was found, and the price was considered impossible of acceptance.

As it was impossible to secure enforcement of the order requiring the use of the emergency ration three

days a year, a ration which was in every way suitable had to be abandoned. The firm manufacturing it had dismantled and junked the machinery. At first this was not an embarrassment, as the authorities in France, in reply to a question, had stated that no emergency rations would be needed. Later when requisition for emergency rations was received from France, it was found difficult, due to the conditions existing at that time in the country because of the war, to construct the machinery required for manufacturing the rations. But notwithstanding such handicap the several millions of the 1901 emergency rations were supplied in an incredibly short time.

In the year 1905, upon the recommendation of the Commissary General of Subsistence, a School for Bakers and Cooks was established at Fort Riley, Kansas. This School opened under the direction of Captain M. S. Murray of the Subsistence Department, and justified its establishment from the very first. Captain Murray was succeeded by Captain (now Colonel) Lucius R. Holbrook, a Cavalry officer, and the excellent work of the School was continued and enlarged upon. The location of the School was fortunate, for it soon attracted a number of the Cavalry officers who were attending the other schools at that post, and, furthermore, it received considerable assistance by the interest taken in it by the commanding officer of the post, Brigadier General E. S. Godfrey.

Later other similar schools were opened at Washington Barracks and the Presidio of San Francisco, and

still later other schools were established at San Antonio, Texas, and at Honolulu and in the Philippine Islands.

It is not too much to say that these schools contributed very largely to the success of the training camps for officers which were established at Plattsburgh, New York, as the personnel of some of the schools were sent there to operate the Bakery and conduct the messes. The personnel of one of these schools also operated the Bakery at the Veterans' Reunion at Gettysburg.

As previously stated, the number of officers on duty in the Office of the Quartermaster General could not be increased without first securing authority. Authorization was given in the latter part of May, 1917, to assign an officer to duty in the Office of the Quartermaster General to have charge of the organization of the Bakery Companies needed in the new Army. Captain L. L. Deitrick, now Lieutenant Colonel, was selected for this detail, and assigned to the charge of the Bakery Branch, which was then connected with the Administrative Division of the Office. The subject is treated of here as it falls more logically in an account of the work of subsisting the Army.

Captain Deitrick had organized the School for Bakers and Cooks in the Southern Department, and had prepared, with the assistance of several other officers, who were authorities on the subjects, the new manuals for Bakers and Cooks which were issued in 1916. In order to facilitate the work of establishing Bakeries for the militia organization on the Mexican border, Captain Deitrick had secured the names of all graduate mess

sergeants and cooks as well as bakers from the army schools for Bakers and Cooks at Fort Riley, Kansas, Washington Barracks, D. C., the Presidio of San Francisco, California, and Fort Sam Houston, Texas, from the time of the organization of each of these schools. He also ascertained the names of the men who were still in the service, and in what organization they were located. A card index was prepared showing the military records of these men and the organization with the idea of keeping track of them for future emergencies.

Captain Deitrick reported June 14, 1917, and was given charge of all matters relating to the organization of the Schools for Bakers and Cooks to be opened in the cantonments and the organization of the new Bakery Companies for the new Army. While the personnel and control of the Bakery Companies was under the Quartermaster General, the control of the different schools for Bakers and Cooks and their personnel was, at the outbreak of the war, under the Adjutant General.

The Quartermaster General had been directed to organize and supervise a system of training for Bakers and Cooks for the new Army, and in order to coördinate the work of his office on June 14, 1917, recommended that the Schools for Bakers and Cooks in the territorial limits of the United States and their management and personnel be placed under him, as the cooks and bakers were so intimately connected with a supply department, and that suggestion was the only possible method

of handling the problem. The recommendation above was not approved.

As previously stated, the Schools for Bakers and Cooks were first established in 1905, upon the recommendation of the then Commissary General of Subsistence. The personnel remained for several years under his direction and control, and, notwithstanding the fact that very little encouragement and assistance was given by the General Staff, the Schools from the very first demonstrated their incalculable value to the Line of the Army. Upon the establishment of the Quartermaster Corps, the control and administration of the personnel of the Schools was vested in the Quartermaster General. Shortly after that time the personnel of those schools was transferred to the Adjutant General and a policy was adopted in regard to the rating of the non-commissioned instructors at the schools which resulted in many of them securing their discharge from the Service, and the efficiency of the schools was seriously threatened. Fortunately about the year 1914 Colonel S. G. Jones, a Cavalry Officer, was on duty with the General Staff. This officer had made a study of and was an expert on matters relating to Baking and Cooking and largely through his efforts the former rating of the instructors was restored and it was possible to secure the reënlistment of many who had received their discharge. If this had not been done it is a serious question whether it would have been possible to organize the schools for Bakers and Cooks needed for the new Army, and thus make it possible to subsist the men

as adequately and efficiently as they were during the war. Colonel Jones deserves credit for making it possible to properly organize the new schools.

After the transfer above referred to all matters relating to the course of instruction and other technical subjects were still referred to the Quartermaster General for recommendation, as there were no experts on those subjects in the Adjutant General's Department. For instance, when new manuals for Bakers and Cooks were to be issued, the Quartermaster General was directed to have them prepared. This was done in 1916. It must be remembered that the Quartermaster Corps provided the personnel for the Field Bakery Companies and the propriety of giving to the Quartermaster General the control and direction of the instructors at schools, which provided one class of the twenty-seven trades to be furnished from the personnel of that Corps is indicated. The Adjutant General being charged with the duty of providing special men for organization, including cooks, among such classification, had had inserted in the appropriation bill an item authorizing the enlistment of 1,200 competent cooks as Sergeants, First Class, Quartermaster Corps, for the duration of the war only.

On July 21, 1917, the Quartermaster General was directed to make preliminary messing arrangements for all organizations at their respective cantonments.

In May, 1917, a letter had been received at the War Department from Mrs. Thomas Robins, of New York, stating that she had enlisted the interest of Mr. L. M.

Boomer, the director of the Waldorf, McAlpin and Claridge hotels in New York, whose head chef was training at the School of Practical Arts at Columbia University sixteen experienced cooks in the use of the Army ration. Mr. Edouard Panchard, the head chef above referred to, also wrote to the Chief of Staff expressing his desire and that of other prominent chefs in New York to assist in training of cooks. Under the supervision of Colonel Coleman, who at that time was in charge of Bakery matters in the Central Department, with the coöperation of the faculty of Dunwoodie Institute in Minnesota about forty bakers were trained during the summer of 1917.

The training of Cooks and Bakers for an Army is an entirely different matter to qualifying men for such work in civil life. For in the field the cooks must prepare the meals out of doors in all conditions of the weather, and with very limited facilities as to ranges, sometimes in a pouring rain, and must learn to do so with the least possible consumption of fuel. The meals must be ready exactly on time, and furthermore the cooks must learn to conserve food, how to dispose of the refuse and to take all necessary sanitary precautions to protect the food while being prepared. The bakers must learn to set the sponge for bread in tents and at temperatures sometimes many degrees below freezing, and learn expedients whereby under such conditions a proper temperature for the growth of the yeast plant will be maintained. About 1910, under the command of General F. D. Grant, a camp of regular troops was

established on the Lake Front in Chicago. At this camp there was a field bakery to provide bread for the command, and all the Baking Trade Journals called attention to the excellent quality of the bread produced, and particularly to the fact that the sponge was set and developed, the dough moulded and proofed at temperatures on many occasions several degrees below freezing. It was noted as a wonderful accomplishment and is a tribute to the efficiency and practicability of the course of instruction given at the Schools for Bakers and Cooks.

The Quartermaster General, after the receipt of the instructions above noted stated in an interview with the Secretary of War that in order to remove any possible source of complaint when the newly drafted men arrived at the camps it should be possible to serve them with hot meals immediately upon arrival; that there was not a sufficient number of cooks in the Army to prepare those meals, and it was recommended authority be granted to hire the requisite number of civilian cooks for the necessary time and to retain such men until they could instruct men from the draft; that the Schools for Bakers and Cooks could not provide the men, as two months would be required to graduate them as trained cooks; and that hot meals immediately upon arrival at the cantonments were needed. In reply to a question the Quartermaster General stated that it would cost over one hundred thousand dollars, and in his estimation that any means to provide the hot meals under the emergency should be adopted and the emergency justi-

fied the expense. The Secretary of War at once authorized the expenditure and instructed that steps be taken to carry out the plan.

A meeting was, therefore, called in the office of the Quartermaster General, which was attended by Mr. Joseph Bifield of Chicago, Mr. Cecil D. Gregg of St. Louis, Mr. Edouard Panchard of New York and others. The Quartermaster General informed the meeting that 687,000 men would report at sixteen different cantonments about September 1st; that hot meals should be ready for the men on arrival; that ranges, cooking utensils, mess equipment and food supplies would be on hand, but the necessary cooks to prepare them were not available, and requested that the Hotel Keepers Associations, acting in coöperation with the Chefs Association would undertake the task of providing the cooks; that about 12,000 cooks were needed in order to provide three for each organization but, as in all probability that number could not be secured, at least 3,600, allowing one cook for each organization, must be provided. For surely the Hotel Keepers Association of America could not have it said that they were unwilling to undertake the biggest problem ever given to such associations before.

It was announced that Mr. Joseph Bifield would be appointed Chairman and Mr. Cecil D. Gregg, Vice Chairman, and that they should select a committee of sixteen, one for each cantonment; each of these sixteen committeemen to correspond with an officer to be desig-

nated who would give all information required concerning the cantonment for which he acted.

The following officers were assigned for the duty above referred to:

Lieut. Colonel Sherrard Coleman, Quartermaster Corps, on duty at Headquarters Central Department, who had charge of the organizing of six National Army Camps.

Major C. Emory Hathaway on duty at Headquarters Western Department, who had charge of three camps.

Major James C. Pegram, Quartermaster Corps, on duty at Headquarters Southern Department, in charge of six camps.

Major William H. Smith, Quartermaster Corps, on duty at Headquarters Southeastern Department, in charge of ten camps.

Major Alexander M. Milton, Quartermaster Corps, who relieved Major Dickey in the Southern Department.

Major Stewart C. Elting, Quartermaster Corps, who relieved Major Smith in the Southeastern Department.

Major Ralph Talbot who relieved Major Elting in the Southeastern Department.

The above regular officers are all Cavalry men who had taken the course in baking and cooking at Fort Riley, while on duty at the Mounted Service School.

The following were selected as the District Chairmen:

No. 1. Arthur L. Race, Brandon Hotel, Brookline, Mass.

No. 2. L. M. Boomer, Hotel McAlpin, New York City, N. Y.

No. 3. John McGlynn, Hotel Rensselaer, Troy, N. Y.

No. 4. J. M. Frazier, Bellevue-Stratford Hotel, Philadelphia, Pa.

No. 5. F. S. Hight, New Willard Hotel, Washington, D. C.

No. 6. J. B. Rector, Reed House, Chattanooga, Tenn.

No. 7. J. Lee Barnes, Majestic Hotel, Atlanta, Ga.

No. 8. J. Stacy Hill, Hotel Gibson, Cincinnati, Ohio.

No. 9. Otto Seelbach, Seelbach Hotel, Louisville, Ky.

No. 10. Ray Smith, Hotel Pfister, Milwaukee, Wis.

No. 11. Laurence Adams, Brevoort Hotel, Chicago, Ill.

No. 12. W. N. Trulock, Hotel Jefferson, Pine Bluff, Ark.

No. 13. Eugene Eppley, Hotel Martin, Sioux City, Iowa.

No. 14. Sam J. Whitmore, Muehlebach Hotel, Kansas City, Mo.

No. 15. Percy Tyrrell, Hotel Gunter, San Antonio, Texas.

No. 16. L. M. Davenport, Davenport Hotel, Spokane, Washington.

Instructions were given that the cooks must be at the camps by August 20th, that they would be transported to the camps and returned to their homes if their services had been honest and faithful; otherwise they would be discharged and return transportation

not furnished. Especial emphasis was laid upon the absolute cleanliness of the men.

Instructions were also given to supply each cantonment with ten thousand sets of mess equipment, which would be available for the men immediately on arrival; such equipment is in the field supplied by the Ordnance Department, but would not be available for the men on arrival.

The first problem was to provide Bakery Companies necessary to produce bread for an army of three million men; second, and even more difficult, to provide cooks and messing arrangements for this new army and to coördinate the work of numerous civilians and civilian organizations, who desired to train cooks and to provide food and messing facilities, as well as to start schools for training army cooks.

WITH REFERENCE TO THE FIRST PROBLEM

There were on hand in the United States nine Bakery Companies with a strength of four officers and approximately 450 enlisted men. These were all located in the Southern Department. The companies were fully equipped, and there was sufficient equipment in reserve on hand in the various depots to supply three more companies, or twelve in all. It was, therefore, necessary to order at once equipment for one hundred new Bakery Companies to take care of this new army, and to use every effort to expedite delivery of sufficient of this equipment within three months from the date the order was placed. This was done.

It was also necessary to provide for an expansion of these nine Bakery Companies with a personnel of 450 men into 88 Bakery Companies with a personnel of 8,880 enlisted men within a period of six months. This was also done, although in order to accomplish the task it was necessary to establish at once schools at which officers and enlisted men could be trained as bakers. These schools were established and by January 1, 1918, 170 officers and approximately 9,000 enlisted men had been trained and were serving as army bakers.

Prior to the War the authorized strength of a Bakery Company was one officer and sixty-one enlisted men. When it was learned that the size of a division in our army would be increased materially, it was necessary to draft new regulations increasing the strength of a Bakery Company to two officers and 101 enlisted men and increasing the equipment from twelve units to fifteen units or fifteen field ovens. The new regulations were prepared in June, and on July 16th the Quartermaster General secured authority to proceed with the organization of 88 new Bakery Companies at the increased strength.

On August 30th, or within six weeks, thirty of these new Bakery Companies had been organized, equipped and trained and were on hand to produce bread for the National Army and the National Guard when they were ordered into camp September 1st. On January 1st, 88 of the Companies with a trained personnel of approximately 8,880 enlisted men had been organized and the enlisted men trained in their duties as bakers.

WITH REFERENCE TO THE SECOND PROBLEM

The second problem was to provide cooks and messing arrangements, kitchen equipment and mess equipment for the new army, and to coördinate the work of numerous patriotic civilians who desired to assist in this work. This was more difficult than the preceding one.

Prior to July, 1917, there had been four army schools for bakers and cooks in the United States. These schools had an average capacity of about one hundred students. It was customary for the regular army organization to detach men and send them to these schools to be instructed as cooks or bakers.

Numerous patriotic civilians had volunteered their services to instruct cooks, and to organize schools to provide the necessary cooks. It was decided, however, that this would be impracticable, as it would be necessary to separate the students from their organizations and send them to various cities for instruction where there would be no supervision over them by the army authorities. As it required approximately 12,000 cooks for the first draft of the National Army alone, it is apparent that it would have been impracticable to have these men scattered broadcast throughout the country without proper means of disciplining them, training them or feeding them. It was decided that the only practicable method to solve this problem would be to train the cooks for the Army in their own kitchens and to establish schools at every large camp under the control of the division commanders in order to carry this

work out, and to train the bakers and cooks under military supervision and control where more satisfactory results could be obtained.

The most vital problem to be considered was the means of feeding the new National Army, which was about to be assembled in unorganized masses in the sixteen National Army camps. These camps were not organized or provided with officers, mess sergeants or cooks as the regular army and National Guard were. After more than a month's delay, and on July 23rd, authority was finally secured from the Chief of Staff to proceed with organizing of forces sufficient to look after the messing arrangements and cooking arrangements for this National Army.

Meanwhile, early in June plans had been formed to organize schools and Bakery Companies at each of the National Army cantonments. Five regular Army officers, all Cavalry, formerly trained in the School for Bakers and Cooks, Fort Riley, Kansas, were detailed on this work. These officers were assigned one each in the five territorial departments, and sixteen of the most competent non-commissioned officers, former graduates from the Army schools for Bakers and Cooks, who had been on duty at these schools as instructors, were sent to these officers to be trained in administrative work and in the proper methods of organizing these new schools. Application was made in June for authority to commission these sixteen non-commissioned officers as captains to take charge of new schools. They were commissioned as captains about August 10th and on August

15th one of these officers was on hand at each of the sixteen National Army Cantonments, prepared to proceed with the organization of the new schools for bakers and cooks.

Prior to the date that these officers reported for duty at the various cantonments, the following arrangements had been made to insure the success of the undertaking:

(a) By transfer of graduate cooks and mess sergeants from organizations of the Regular Army, and by the utilization of the enlisted personnel of the four regular army schools for Bakers and Cooks, an average of twelve competent graduate mess sergeants was secured for each National Army cantonment, or approximately one for each regiment of the new army. These men acted as assistants to the officers in charge of the schools.

(b) 192 officers, graduates of the first training camp, were ordered by the Adjutant General to report on August 15th, twelve at each National Army cantonment for duty as regimental mess officers, and were instructed in their new duties between August 15th and September 1st.

(c) Civilian cooks were hired at the rate of one to each proposed kitchen in each cantonment, and assembled on August 20th for instruction under the officer and non-commissioned officers of the regular army in a preliminary course of training in handling the army ration and in the system of accounting for the ration, and preparing bills of fare, etc.

(d) Extracts of the most essential parts of the

manual for Army cooks were prepared by June, printed in pamphlet form and distributed to each organization of the Regular Army, National Army and National Guard at the rate of one for each authorized cook.

(e) Bills of fare were prepared for periods of ten days showing the ingredients to be used and the amount of each ingredient to be used in the preparation of each article of the bill of fare. These were distributed to each cook of the Regular Army, National Army and National Guard.

(f) Requisitions were prepared for equipment for all kitchens and mess halls of the proposed National Army cantonments. The property was ordered the first week in July from the various Quartermaster Depots, and when not on hand, was purchased under emergency, and followed up by the Office of the Quartermaster General until it was delivered at the camps. By this means all of the camps were fully equipped on August 20th and reports received from the camps stating that the equipment was on hand, for file in the Office of the Quartermaster General.

(g) The table of foods and ration articles, necessary for organizations of various sizes from 50 to 250 men, was prepared and sent to the officer in charge of the school at each camp. This officer was directed to draw the supplies for each organization, which was scheduled to be organized at the camp, from the Camp Quartermaster, and if they were not on hand, to purchase them locally, and to place them in each kitchen with the equipment already provided, under charge of a

competent cook who was furnished with a copy of the bills of fare prepared for the first ten days.

(h) Plans for permanent bakeries together with a list of equipment necessary for them were turned over to the Cantonment Division. The bakeries were completed by September 1st and ready to operate. In order to provide the equipment, however, it was necessary to purchase ovens of various kinds from the manufacturers and send men to the camps to take charge of the installation of the ovens and equipment.

(i) Instructions were prepared by the Bakery Branch of the Quartermaster General's Office and sent to each officer in charge of one of the new schools. These instructions provided for every emergency that could be anticipated. The officers followed the instructions laid down and so successfully organized the schools according to the plans outlined that no detachment of the National Army arrived at any of the camps at any hour of the day or night without finding a hot meal ready to be served.

(j) Through the hearty coöperation and assistance of a Committee of hotel men formed throughout the country, who devoted their time and money to the task of hiring civilian cooks for temporary duty with the National Army, the 4,000 cooks necessary to assist in providing food for this Army when it was mobilized between the period of August 25th and September 15th were secured. This association was so organized that a prominent hotel man was appointed chairman of the committee and to take charge of each cantonment and

coöperate with the officer in charge of the school at the cantonment in providing cooks. The schools were able to dispense with the services of the civilian cooks as rapidly as mess sergeants and cooks for the National Army were trained, and by November 1st most of these cooks had been discharged.

On January 1, 1918, the schools mentioned above had trained cooks for the overseas forces, the regular army, National Guard, the National Army and various independent staff departments. It is estimated that 16,000 mess sergeants, 50,000 cooks and 1,200 instructors in cooking and 9,000 bakers had been trained in these schools by January 1, 1918. In addition 180 officers had been trained as bakers and in administrative and technical work of handling Bakery Companies, and approximately 260 officers had been trained in duties of an officer in charge of the schools for bakers and cooks.

The Bakery Branch had also carried on a campaign in conservation of food and sanitation from the beginning through the agency of these schools. A correspondence course was inaugurated in the Bakery Branch, and through the coöperation of the various Division Commanders of the National Army and National Guard camps, great improvements were made in conservation of food and in sanitation.

This work was successful from the beginning and was the cause of many favorable comments from the various Division Commanders as well as from various prominent civilians who were interested in the welfare of the troops and who visited and inspected these camps.

There was a sufficient number of graduates from the School for Bakers and Cooks at the Presidio of San Francisco to more than provide the initial number of cooks needed at Camp Lewis. These men were called back into service and the excess number distributed among other camps; thus amply justifying the wisdom of establishing the School.

It is of interest to note the statements made concerning the subsistence of the Army in the year 1917 in the World War:

At a hearing before the Committee on Military Affairs of the House of Representatives on January 7, 1918, explanation of the arrangements made to provide hot meals for the selective draft men on arrival at the cantonments was made; and Mr. Tilson, a member of the Committee, said: "By way of corroborating what General Sharpe has said, I saw that system in operation at one of the camps where I watched the first forty per cent of the men come in and the order was that there should be a hot meal ready for every man within an hour after he reached the camp, and I believe there was only one case in which the company cook failed to have the meal ready when the men arrived. There was only one case that I saw and that company commander received quite a blowing up, as I remember."

Senator Wadsworth of New York, a member of the Committee on Military Affairs, addressing the United States Senate in January, 1918, said: "Another thing that we should remember at this time is that the American Army is being fed as well, if not better, than any

other army on the face of the earth during this period, and the credit for that great task, the training of soldier cooks in the Quartermaster Cooking Schools and in putting them to work in the cantonments in time to serve a hot meal, the first meal, to the soldiers as they arrive in the cantonments; the credit for that ought not to be denied. It is one of the things in which foresight and organizing ability were shown, and we ought to be grateful for it, and I am glad to pay tribute to the officers and men who accomplished that great feat."

Other commendatory statements were made by Senator Wadsworth and other Senators and members of the House of Representatives on subsequent occasions.

STATEMENT MADE BY SECRETARY BAKER MONDAY, JANUARY 28, 1918, AT A HEARING BEFORE THE SENATE COMMITTEE ON MILITARY AFFAIRS

"I want to make but one further observation on this general subject of the Quartermaster and Supply Department. I think it is not unfair for me to say that in the matter of provision of food, no Army ever assembled anywhere was fed as regularly, as well, as nutritiously, as appetizingly as this Army. I think you gentlemen of the committee, and surely the men in the War Department, will agree that while there have been complaints about other things, that the almost universal testimony so far as I know, and the unanimous testimony of the Army is that its food has been of the highest quality; that there has been no suggestion of defective quality or insufficient quantity; that its prep-

aration has been of the highest character; and, generally, that the very great problem of food supply of this vast and hastily organized group of men has been carried out with most extraordinary success."

In an address delivered August 8, 1918, the Secretary of War said:

"We have summoned into being in the United States Army now pretty nearly, if not quite, two and a half million men, including those overseas and those on this side, and although I stand at the center of complaint and criticism, and everybody, it seems, in the country—most of them helpful I am glad to say—sends me criticisms and comments which they have heard and stories which they think I ought to know. I get all the complaints, some of them unfounded, some of them founded; but from the very first mobilization of the Army until now I have not had a single complaint as to the food of this vast Army. I do not mean that there have not been complaints as to the food which has been stored, but I mean that in no camps in this country visited by fathers or friends attended by persons in every ordinary walk of life, from no camp have I had a criticism that the food was insufficient, that it was unwholesome in its character, that it was not well cooked, or did not arrive on time. And today, I had a letter from General Pershing in which he was commenting upon the perfection of supplies on the other side, and said that not since the Army had been in France has a single man in that Army had to wait a minute for a meal that was due."

In April, 1918, after we had been in the war a year, the Washington correspondent of a great New York

daily wrote to the Acting Quartermaster General:

"Greatly pleased with the record which your Department has made in feeding the rapidly expanding American Army and avoiding all scandal and discontent on that score, Mr. ———, Managing Editor of The ———, wishes to publish a comprehensive story, showing how this has been accomplished. Here are some of the questions asked by Mr. ———:

"Who is the man who provides grub for all the camps? He appears to be about the only one against whom no kicks have been made.

"Who is responsible for the efficiency at the several camps and for the very excellent preparation for feeding the Army which must have been made long before the men were sent to camps?

"Nobody with whom I have talked, including Army officers who have highly commended him, knows the name of the man or men who are entitled to immediate credit. Who is he or who are they?"

What, if any, reply was made to that letter is not known, but surely the names of the following should be mentioned in reply, viz: Colonel W. R. Grove, Colonel Leonard L. Deitrick, Lieutenant Colonel John H. Adams, Lieutenant Colonel J. N. McIntosh, Mr. Joseph Bifield, Mr. Cecil D. Gregg, and also the following officers in charge of the Supply Depots which furnished the supplies required, viz: Brigadier General John M. Carson, Colonel Thomas H. Slavens, Colonel Hugh J. Gallagher, Brigadier General Albert D. Kniskern, Lieutenant Colonel William F. Clark, Colonel George McK. Williamson and Major General Carroll A. Devol.

V

SUPPLIES DIVISION

Clothing and equipage—Board of Control of Labor Conditions—Time when troops could be equipped—Calling troops in advance of time so designated—Shipping troops to France complicated conditions as to supply—Additional troops—Investigation by Committee on Military Affairs of the Senate—Shortages at camps—Number of men in service of United States on December 31, 1917, who were equipped—Number of men in France December 31, 1917—Reserve shipment of supplies to France—Over 40,000 men equipped in excess of number which was stated could be equipped by December 31, 1917—Problem of supply—Distribution of supplies in this country—Fuel and forage branch—Conservation and reclamation division.

CLOTHING AND EQUIPAGE

At the time of the outbreak of the war, the purchase of clothing and equipage was handled under the supervision of the Clothing and Equipage Branch of the Supplies Division, Office of the Quartermaster General.

The large depot at Philadelphia being the main clothing Depot, practically all supplies of this character were received through that Depot. Prior to 1916, advertisements for supplies were made and proposals received at the depots in Philadelphia, Boston, New York, Chicago, St. Louis and San Francisco. The abstract together with the proposals were forwarded

to Washington, there consolidated, and afterwards the several depots authorized to make awards and enter into contracts for the supplies to be delivered to their respective depots. In some cases the contracts were made at Philadelphia and then forwarded to other depots for execution when the contractors stipulated in their proposals for delivery at other places than in Philadelphia. The depots at New York, Philadelphia, Chicago, St. Louis, San Francisco and San Antonio were designated as reserve depots for Clothing and Equipage and troops in their vicinity were to be supplied from them, but all of these depots had not been furnished with adequate supplies, as funds for their procurement had not been provided.

When the Militia was called into service in 1916, complaint was made because of the delay in furnishing supplies due to the centralized system then in vogue; consequently late in the fall of 1916 orders were issued establishing these depots for reserve and authorizing each to purchase such of the supplies as could be procured in their immediate territory; those which could not be so procured were to be obtained from the Philadelphia Depot. This system was not put into effect during the war because the total lack of supplies and the enormous quantity required necessitated a centralized control of purchase and manufacture. It is noted here, however, as that Zone System of Supply was later put into effect when ample reserves had been secured and the purchase and manufacture had been coördinated and sufficient

funds were available. In 1909 a policy was adopted by the War Department of establishing four or five depots, to be known as Reserve Depots, in which were to be placed the supplies required to bring the organizations in the territories supplied by each depot respectively to a war strength; adequate funds, however, had been appropriated for the Reserve Depot at Philadelphia only.

When the National Guard was mustered into the Federal Service, under call of the President of June 18, 1916, it was found that paragraph 455a, Army Regulations, 1913, had not been generally complied with, in that many States were deficient in equipment. The regulation referred to is as follows:

Governors of States and Territories and the commanding general of the District of Columbia Militia are required at all times to keep on hand either at the various company armories or in suitable storehouses, a sufficient supply of arms, uniforms, and equipment to completely equip for the field the minimum number of men prescribed by the President for each organization, so that on being called into the service any organization will be completely equipped from the stores on hand in the State, Territory, or the District of Columbia without calling on the War Department for assistance.

The muster in of these organizations developed shortages in equipment amounting to \$4,192,054.46 based on peace strength, and \$6,940,447.36 for equipment to bring them to war strength, or a total deficit of \$11,132,511.82 in peace and war strength requirements combined.

There was in stock at the Philadelphia depot, as a

reserve, in addition to the stock at that and other depots, for current requirements, clothing and equipage amounting to \$5,258,547.23, and materials for the manufacture of clothing and tentage amounting to \$1,016,725, a total of \$6,275,272.23, or \$4,857,239.59 less than required to equip the organizations called into the Federal service at war strength.

The records of the Office of the Quartermaster General show that the department endeavored to secure funds from time to time sufficient to acquire a reasonable reserve of cloth and materials for the manufacture of clothing, but appropriations were not made in accordance with the estimates as originally submitted. The following summary shows the efforts of the Quartermaster General to secure funds for the accumulation of a suitable reserve and the amounts finally appropriated:

Total funds for procurement of reserve clothing estimated for by Quartermaster General's Office, 1909 to 1916, inclusive, eight fiscal years	\$12,656,159.50
Total approved by the War Department.....	6,330,295.66
Reduction made by the War Department.....	6,325,863.84
Appropriated by Congress.....	4,121,534.61
Reduction made by Congress of estimates as submitted by War Department.....	2,208,761.05
Total reduction	8,534,624.89

In addition to the foregoing, reductions to the extent of \$1,066,023.99 were made by the War Department in the estimates for current requirements, clothing and equipage. Congress further reduced this item to the extent of \$117,000, making a total reduction of \$1,-

183,023.99 under current requirements, and \$8,534,624.89 for reserve, a grand total of \$9,717,648.88, representing equipment of clothing and equipage for field service of approximately 138,000 men, or one outfit for approximately 200,000 men. (Annual Report of the Quartermaster General—1917.)

It will be noted from this that the War Department reduced the Quartermaster's estimates by fifty per centum, and that Congress appropriated only one-third of the original estimates. The reduction by the War Department of the estimates for current requirements and the further reduction of this estimate by Congress had a most serious result, as it practically reduced by that amount the appropriation for the reserve; as the current requirements of the men actually in the service must be provided for.

As the question of preparedness had not been brought before the people of the country until 1916, it may fairly be assumed that Congress was justified in not making large appropriations for that purpose. But the appropriations were not large, and should have been made, particularly for the greatly reduced amounts which the War Department approved. Furthermore, the reduction made by the War Department was not in consequence of a change in policy regarding the establishment of Reserve Depots. That policy was still maintained, but the Quartermaster Corps did not receive approval of its efforts to secure the necessary funds to carry it into execution.

The result was that at the beginning of the war the

depots of the Quartermaster Corps were almost completely exhausted; and, furthermore, liabilities were contracted for the supplies required for the troops on the Mexican border, as the troops were retained in service beyond the time for which funds for their support had been obtained from Congress, as in accordance with the instructions given to the Quartermaster General in the Fall of 1916 the estimates were prepared under most of the appropriations for the Corps to cover the time to about October 31, 1916. As the militia were held in service long after that time, a deficiency of about \$34,000,000 resulted, and as the General Deficiency Bill failed to pass Congress on its adjournment March 4, 1917, the great embarrassment of having to prepare for war with no funds available and with a large indebtedness outstanding was placed upon the Corps.

In the early part of 1917 it became apparent that the United States would shortly be drawn into the world conflict. In anticipation of this it was decided that all possible preliminary steps should be taken to prepare for the prompt purchase of clothing and equipage in large quantities, and tables were prepared giving the supplies necessary for 500,000 men.

Letters were then prepared to be promptly dispatched to the several depot quartermasters to authorize them to invite proposals for the quantities specified, the Department reserving the right to increase or decrease the amounts at the time the award was made.

It was the intention to publish this advertisement for supplies immediately after the passage of the

bill making appropriation for the support of the Army for the fiscal year 1918 by Congress.

In a conference with the Secretary of War, the Quartermaster General explained the arrangements made as above outlined, and was authorized to issue at once the advertisement calling for proposals for the needs of the Army for the fiscal year 1918, based on estimates which had been submitted to Congress, the appropriation for which, however, had not yet been made.

The advertisement was issued under date of February 5th, inviting proposals for supplies to be opened on March 5, 1917.

The Chief of the Supplies Division, under direction of the Quartermaster General, visited the depots where proposals were to be received, and effected an arrangement to obtain the widest possible competition, utilizing the suggestions and services of Chambers of Commerce and other allied organizations. Under date of February 4, 1917, the Quartermaster General suggested to the Secretary of War the desirability of securing the coöperation of the National Chamber of Commerce to effect the appointment of a committee of competent business men to act at each depot in an advisory capacity to the officers on duty at such depots, such board or committee of business men to represent the interests of the business community in seeing that fairness was shown in the consideration of all proposals for supplies. It was emphasized that the men selected should be thoroughly trained business men in no way connected with any firm or line of business which would

be likely to submit proposals. This suggestion was approved under date of February 4, 1917, and amended under date of March 7, 1917, so as to emphasize the fact that these men were to act in an advisory capacity only, and were not to participate in making the award, as that duty under the law devolved entirely upon the officers of the Corps designated for such possible duty.

The result of this was in general the appointment of a number of well qualified and competent business men who by their advice and experience assisted materially the officers on duty at the depots.

By the plan above adopted, and through the coöperation of the business men on the several depot committees, when bids were opened on March 5, 1917, it developed that competition was far greater than at any previous opening for clothing and equipage supplies, and contracts were awarded for the articles called for in the advertisement, with the stipulation that payment for same would be made when the funds were appropriated by Congress. This stipulation was necessary due to the fact that Congress had adjourned on March 4th without enacting the bill for the support of the Army in the fiscal year 1918.

The Revised Statutes provide that deficiencies may be created for certain supplies, including clothing, for such number of men in the Army as may be authorized by law; and based upon this law the contracts were entered upon, the deliveries to be made at the earliest possible date. The contracts were for the supplies re-

quired for 160,000 men, the authorized strength of the Army for the fiscal year 1918.

On March 13, 1917 (S. 473) in reply to a memorandum from the Chief of Staff, the Quartermaster General stated that the clothing and equipment, except canvas for tentage, for a million men could be procured within ten months, that is, by December 31, 1917. Nothing further was heard of this, but on March 21, 1917 (S. 474) the Quartermaster General in reply to a communication from the Adjutant General stated that if authorized that day it was thought possible to place orders for the manufacture of clothing and equipage under the opening of March 5th and give additional orders for sufficient clothing and equipage to take care of 500,000 men (the number specified in the letter of the Adjutant General) including the Regular Army and National Guard, within sixty days. On March 26, 1917, the Quartermaster General was directed to take action in accordance with his recommendation of March 21st, and the orders for the supplies were placed as promptly as possible. It was found, however, that a number of the bidders, under the opening of March 5th, who had not received awards under that opening, had cancelled their option for new materials, and consequently could not take orders then at the prices they had quoted, and it became necessary to secure other proposals in an informal way.

On March 24th, instructions were issued calling a number of National Guard organizations into the Federal Service, the estimated strength being 68,000 men.

On April 2nd these men were promptly equipped, although the number which was brought into the service was 89,000 instead of 68,000. This increased number of men called into service was undoubtedly necessary to provide guards for railways, bridges and water supplies of cities and towns, though the addition added seriously to the work of supply (S. 471-H632).

The Quartermaster General on April 3, 1917, seeing that a call for 500,000 men would evidently be made if the selective service bill became a law, submitted a memorandum requesting authority to procure the supplies required for an additional 500,000 men (S. 476). This was approved by the Secretary of War on the same date, and instructions were issued to the depot quartermasters to purchase the supplies and exact the earliest possible deliveries. The supplies required under the authorizations above cited of March 5th, March 21st and April 3rd, 1917, were purchased in conformity for the law which requires advertising of proposals and entering into formal written contract, or when time did not permit of advertising proposals were received informally and written contracts made.

The law also requires that the purchases should be made where cheapest, the quality, cost of transportation and the interests of the Government considered; and while there is authority under the acts of April 10, 1878, and March 3, 1883 (20 Stat., 36; 22 Stat. 487) to prescribe rules and regulations to be observed in the preparation, submission and opening of bids for contracts under the War Department, such regulations

must conform to statutory requirements and cannot preclude persons who are able and willing to furnish the required supplies in the time specified. In other words, there is no statute applicable to the War Department similar to Section 3,722, Revised Statutes, which, with reference to contracts with the Navy Department, provides *inter alia*: "No person shall be viewed as a contractor who is not a manufacturer of or regular dealer in the articles which he offers to supply."

The result was that in time of peace persons who were neither manufacturers nor regular dealers would attend the opening of the proposals for Army supplies and there hear read off the lowest prices for which certain articles were offered. At a subsequent opening of proposals, they could then submit proposals, based upon the prices for which contracts had been previously made, even for articles produced under definite specifications carefully defining the quality and minutely describing the processes of manufacture. Ascertaining that the proposal submitted was the lowest such person would then make an agreement with a manufacturer to supply him with the quantity of the article desired in the time specified and made strictly in accordance with the specifications. Having made this agreement, it was an easy matter to secure the bond required for the faithful fulfilment of the contract by paying the comparatively small fee charged by a bonding company. When called upon by the Contracting Officer, such person would furnish the name of the manufacturer and bonding company, and if his proposal was the lowest

the contract had to be awarded to him, provided it was in conformity with the terms of the advertisement and the instructions to bidders issued in connection therewith. This practice led to the establishment in business circles of individuals or firms termed middlemen or agents.

In time of peace in case of failure to make delivery at the times specified in the contract, or for other default under same, it was possible to obtain the supplies from manufacturers charging against the bonding company the excess cost of the supplies, if any.

Until the outbreak of the war, the clothing for the men was provided in accordance with an estimated money value of the clothing required by a man during his term of enlistment. It was thought to encourage care in the use of the clothing, as, upon discharge from the service, the man was paid the amount of money remaining of his clothing allowance, representing the articles of clothing which had not been drawn due to the care and economy displayed by each individual. Such a method of clothing issue required three separate accounts to be kept; an impossibility with a large army because of the immense amount of clerical work it required. Furthermore, it is the duty of the Government to provide necessary clothing for the men in time of war to replace any which may be worn or destroyed on active service. Upon our entry into the war effort was made by the Quartermaster General to effect a change in the matter of the clothing allowance, and the paper having been referred to the Judge Advocate

General, that officer stated that the clothing allowance was never intended as a compensation to the enlisted men, and that it lay within the President's authority, under law, to prescribe the amount of clothing adequate for the service in which an enlisted man was engaged. In conformity with these views G. O. No. 89, W. D. was published on July 11, 1917, reading as follows:

The President of the United States directs that during the period of the existing emergency a soldier's allowance for clothing will be the quantity of clothing necessary and adequate for the service upon which he is engaged.

Organization commanders will be held responsible for rigid economy in issues and for the proper equipment of enlisted men of their commands with the allowances prescribed as Equipment "C" in table for quartermaster supplies.

Articles lost or destroyed through neglect will be charged on the pay roll against the man responsible therefor.

Articles which have been damaged or rendered unserviceable will be repaired if practicable or replaced by others.

The clothing allowance of retired enlisted men, as established by law, is given in paragraph 137, Army Regulations, and is not changed by this order.

This order will be effective on and after July 15, 1917.

The style of uniform adopted for the Army is one that fits closely to the figure and has a tight standing collar on the coat. The unsuitability of such a garment for field service, during which a man would be called upon to engage in active conflict to defend his own life and destroy his adversary is apparent; its military appearance is of little consideration when a death struggle is to be engaged in. The garments worn by athletes in their competitions are not provided with tight standing collars. As the uniform was to fit closely,

a large number of sizes of same had to be provided in the tariff of sizes: there were eighteen different sizes of coats and thirty-two sizes of breeches. For these reasons a change in the style of uniform was recommended which provided a turn-down collar loose about the neck and the coat to fit loosely and comfortably; the breeches also were to be changed. If these changes had been adopted not more than six or eight different sizes would have been required and a greater number of men could have been properly fitted from the same number of uniforms than would be possible with the close fitting style of uniform. Moreover, it is believed they would have presented as satisfactory an appearance.

These recommendations failed after several attempts to secure the necessary approval, and the attention of the Quartermaster General was called to the order which stated that nothing which did not serve to help in winning the war would be undertaken. Surely the proper clothing of the men would materially so assist. The failure to approve this change resulted later in inability to fit the men at the several camps when often there was a large number of garments on hand. Effort was made at the same time to change the officers' uniform so as to have a turned down rolling collar, and it was pointed out that as nearly thirty thousand new officers would be graduated shortly from the training camps the time was opportune. Such a change would have made it possible for many excellent civilian tailors to cut and make the officers' uniforms.

This recommendation was also disapproved and later when several thousand medical officers were appointed for service in France the Quartermaster Corps was ordered to sell to such officers the uniforms they required, as such uniforms could not be produced by the military tailors in the time required. This resulted in depleting the stock of the Quartermaster Corps and made it impossible to supply some of the drafted men in the camps as promptly as they would otherwise have been supplied.

It is understood that before the field service uniform was adopted it was shown to President Roosevelt and that he objected to the tight standing collar, thinking the turned down collar was more suitable and appropriate and that he was informed the tight standing collar was more "military." Our lady and canine friends wear tight standing (military) collars as an adornment; the former through choice but never when engaged in a death struggle, as witness the uniforms of the Battalions of Death; and the latter under compulsion and to that collar a leash is often attached for the purpose of restraining freedom of action.

The participants in athletic contests are provided with uniforms which in no way interfere, but on the contrary, in every possible way, assist them to exert their full muscular powers to win the contest. A comparison with the uniform of those engaged in a contest for life is not necessary, but surely no benefit is derived for such contestants by wearing a "military" collar.

In time of peace our Army is raised and kept re-

plenished by volunteer enlistments. The number of men authorized by law being a very small percentage of the total population, in normal times there are a great many more applicants for enlistment than there are vacancies. As a consequence certain physical requirements have been established by the War Department, which prescribe a minimum and a maximum, as to height, weight and chest measurements; and any applicant for enlistment who was not included in the limits established was rejected, notwithstanding the fact that he might have been in good healthy physical condition. The Regular Army in time of peace was a very carefully selected body of men, as is shown by the great number of rejections of men applying to enter the service. It might fairly be said that the men were a normal physical type.

To provide the clothing and equipment it was found after years of experience that certain sizes each of prescribed measurement were necessary, and it was also found, based upon the experience of years, that a certain number of each size would be required in outfitting a certain number of men. Tables were therefore prepared and had been in use for a considerable period giving the number of each size that would be required to equip each 1,000 or ten thousand men. These tables were known as Tariff of Sizes for each garment. A Quartermaster preparing a Requisition for Clothing for his command would base it upon the total number of each size called for by the several organizations in the command. This would afford the Depot Quarter-

masters an opportunity to ascertain if the established Tariff of Sizes were correct and report would be called for from them at frequent periods to determine whether any modification was necessary. When new organizations were to be outfitted and the sizes required for the men composing same was not known, experience had proved that if twenty-five per cent. in addition to the number required for the organization were shipped, assorted according to the Tariff of Sizes, that it was possible to outfit the organization perfectly. Any excess number of the various sizes would be returned to the Quartermaster, who would be enabled from such excess to provide for the wants of another organization. Consequently in ordering the manufacture of new clothing the contract would be based upon the Tariff of Sizes, and this method was followed in preparing the clothing for the new army.

When the Selective Service Act was put into operation and the men first drafted reported to the camps, the careful physical selection that had been heretofore made was entirely disregarded, and if a man was physically sound he was certified to the service regardless of his height, weight or chest measurement. And it was then found that the Tariff of Sizes did not apply to such drafted men as it had to the men heretofore enlisted in the Regular Army. As an illustration, the men coming from Michigan and several western States were found, as a general rule, to be much taller and larger, and the men coming from certain

eastern cities proved to be shorter and much smaller, than those who had been previously enlisted.

General Order No. 26, War Department, dated August 16, 1912, prescribed a method of measuring the soldiers' feet and fitting the shoes. It stated:

1. With a view to increasing the marching capacity of troops, Company commanders will personally measure the feet and fit the shoes of the men of their commands and will be held responsible that the instructions herein contained are strictly followed. (Then was given in precise detail the method to be adopted.)

By the same order it was enjoined that light woolen or heavy woolen socks would habitually be worn for marching, but orders issued in France required the men to wear two pairs of heavy woolen socks in the trenches in the winter time. Consequently it is evident that the men would require a larger size shoe to enable this to be done. This, of course, was not foreseen when the Tariff of Sizes of shoes was prepared. An elaborate test was made with the fitting of the men's shoes on the Mexican border in the fall of 1916, and the Quartermaster General endeavored several times to secure a copy of it but without success. On November 14, 1917, a Board of Officers, consisting of two officers of the Quartermaster Corps, an officer of the Medical Department and Mr. E. J. Bliss, President of the Regal Shoe Company, met to discuss the subject of the fitting of shoes for the men. At this meeting, it was the unanimous opinion that if General Orders 26, War Department 1912, was complied with there would be no question but that the proper fit could be secured.

The Tariff of Sizes for Shoes gave six different widths and fifteen sizes. Learning of the large sizes of the men drafted, the table was modified by omitting the smallest size and width, and increasing the number of sizes by two. Later when men of small stature were drafted from the cities, the small sizes had to be again adopted.

In time of peace the Army with its very limited appropriation was compelled to secure the sizes which would be needed by the troops and therefore adopted its own Tariff of Sizes. If a civilian tariff had been adopted and then it was discovered that the men could not be fitted from the sizes on hand, and there were no further funds with which to secure the proper sizes, it is thought that the authorities might properly be censured for not following their own tariff sizes. Realizing that the Army Tariff of Sizes had always proved correct in the past it was quite natural that they should be followed for the new Army, until demonstrated to require modification.

It must be remembered that upon the passage of the Selective Service Law there was a reservoir of ten millions of men and all that was needed was to pick out 500,000 of them, and say that on a designated day they must report at specified camps, and this might result in the very large men being assembled at one camp; and, furthermore, it must be understood that no advance notice had been or could possibly have been given of the sizes of garments required for these men. Someone had to use his best judgment and discretion

before the time of assembling; and of course that could not be as accurate as a criticism based on a passed event.

After an exhaustive study by a Board of Officers, a type of shoe last, known as the Munson last, from the name of the officer on the Board who devised it, was adopted for use in the Army. The upper was made of a light weight calfskin of tan color, lined with canvas, the soles welted and of a number nine gauge leather. The shoe produced was very comfortable and its shape and structure eliminated any possible source of injury to the feet. It was light in weight and for that reason was objected to by the officers of the Quartermaster Corps as being unsuitable and unserviceable for field use. This objection was met by the assertion that as a people we were accustomed to wearing light weight shoes, and further that it would be impossible to have the army equipped with the strong heavy shoes worn in Continental armies. However, in the spring of 1916, when the Punitive Expedition crossed into Mexico, it was soon demonstrated that the light weight shoe provided the men would be worn out in a week's campaign and rendered unserviceable and the men likely to be injured. Consequently, in the fall of 1916 samples of the field shoes worn by the British, French and Belgian Armies were secured and with the assistance of a number of qualified shoe experts a type of field shoes, made of heavy leather, with strong double soles, covered with hob-nails and having a steel heel plate was devised. About two hundred pairs of these shoes were sent to

the Mexican border for trial and report. Early in the spring of 1917, as no report had been received, the Quartermaster General directed the purchase of about sixty thousand pairs of these field shoes. These were also sent to the Mexican border, and ascertaining that they had not been used there instructions to ship them to France were given when the first Division was ordered to sail from this country. Soon after the arrival of the troops in France, request was received from the authorities there to ship only the field shoes for use of the troops. In the meantime the manufacture of the field shoes had been undertaken on a large scale, and the light weight garrison shoes reserved for use in the camps. The troops were all being equipped with two pairs of field shoes when prepared for embarkation.

As previously shown authority had been obtained to purchase the clothing and equipage for the Regular Army and National Guard, both raised to war strength, and also for 500,000 men to be secured by the operation of the Selective Service Law when it was enacted by Congress; a total of about one million men. By instructions from the Acting Chief of Staff the estimates were prepared for an authorized strength of 1,078,000 men and submitted to Congress soon after the opening of the session on April 2, 1917.

By the National Defense Act of 1916 a Council of National Defense was created which was composed of the Secretary of War, the Secretary of the Navy, the Secretary of Agriculture, the Secretary of Commerce and the Secretary of Labor. It also authorized an Ad-

visory Commission under the Council of National Defense to make special investigation of any subject deemed desirable, and authorized the Council of National Defense to organize subordinate bodies, either experts or committees, for the prosecution of these special investigations. A body known as the Advisory Commission of the Council of National Defense was organized in December of 1916. It was divided into seven different sections of activities, as follows: transportation and communications; munitions manufacture, including standardization and industrial relations; supplies, including food and clothing; raw materials, minerals and metals; engineering and education; medicine and surgery, including general sanitation; labor, including the preservation of health and welfare of workers; and later the commercial economy board was formed, the purpose of which was to eliminate waste and the production of all unnecessary articles. Still later a committee on coal production was formed, but its duties and functions were taken over upon the passage of the law creating the Fuel Administration.

After the formation of these committees to advise on industries and raw material, it was found that there was no real point of contact with those departments of the Army and of the Navy which were purchasing supplies and that a system for coördinating their needs and bringing them to public notice was required. The General Munitions Board, consisting of seven members, was then formed for this purpose. That organization func-

tioned for several months and was finally changed into the War Industries Board.

This Board authorized a Clearance Committee. It also had a raw material division, with experts on different kinds of raw material; supplies division, called the committee on supplies; a finished products division and a priorities committee.

On April 8, 1917, a conference was held in the office of the Secretary of War, which was attended by the members of the Council of National Defense, the Advisory Commission of the Council, the General Munitions Board and the members of the several committees created by this Board, and the Chiefs of the various Departments of the War Department. This conference was called to discuss the manner in which the purchase of supplies required for the Army should be made. It was pointed out that the quantity of supplies required was enormous and in some cases in excess of the possible production of the country; that, furthermore, the purchases by the allies had to a great extent depleted the market. The prices had largely advanced and with the increased demands from abroad, both from the allied and neutral nations, still greater advances in prices were anticipated. The necessity to protect the interests of the people by preventing any unwarranted advance in prices was emphasized, and also the necessity of stimulating production to meet the requirements. It was maintained that to advertise publicly for proposals for the supplies needed would afford an opportunity to corner the market and greatly increase the cost of the

supplies and possibly tend to check the installation of new sources of supply, and it was urged that under the conditions then existing there was an emergency necessitating the immediate procurement of the supplies required. This discussion was participated in by a number of the members of the Conference. It was also urged that under the existing conditions the purchases should be made by "merchandising" with the various manufacturers and producers directly. This contention was advanced by several members of the Committee on Supplies who were recognized in the commercial world as being thoroughly competent and eminently successful men of affairs, some of them being the heads of the largest business organizations in the country which provided all classes of supply. As a result of this conference, the following order was made by the Secretary of War and published under date of April 12, 1917:

WAR DEPARTMENT

Washington, D. C., April 12, 1917.

ORDERS:

1. It is hereby declared that an emergency exists within the meaning of Section 3,709, Revised Statutes, and other Statutes which except cases of emergency from the requirement that contracts for and on behalf of the Government shall only be made after advertising, and as to all contracts under the War Department for the supply of the War Department and the supply and

equipment of the Army and for fortifications and other works of defense; and until further ordered such contracts will be made without resort to advertising for bids in the letting of the same.

2. Where time will permit information will be given to the Munitions Board constituted by the National Council of Defense, through the Supply Bureau's representative, of orders to be made for supplies, with the view of assistance from the Board in placing the orders and in order that the supplies of the War Department may be coördinated with those for the Navy and other executive departments and secured at prices not in excess of those paid for other departments.

3. It is to be understood, however, that the responsibility of the several supply bureaus for promptly supplying the needs of the Army must be recognized; and where time will not admit of the delay in consulting the Munitions Board, the supply bureaus will retain their present initiative in contracting without reference to the board.

(Signed) NEWTON D. BAKER,
Secretary of War.

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Later at a conference with the Secretary of War, the chairman and sub-chairman of the Committee on Supplies and the Quartermaster General, it was arranged that for clothing and equipage supplies the Quartermaster General was to deal direct with the chairman or sub-chairman of that Committee, thus to expedite action. It was further arranged that an officer of the Quartermaster Corps should sit with that Committee when it was arriving at agreement as to prices with the various manufacturers and the allocation as to or-

ders for supplying the various articles. Such officer to be the representative of the Quartermaster Corps in such matters. It was further arranged that all woolen, cotton and leather supplies, a list of at first about nineteen articles, should be procured through the assistance of the Committee on Supplies and Colonel H. J. Hirsch, of the Quartermaster Corps, then stationed at the Philadelphia Depot, should be the representative on that Committee.

The method of procedure was for the Quartermaster General to inform the Supply Committee that certain quantities of supplies were required at a specified time, and to request information with whom the contract for same could be entered into and the prices for such articles. The names of the individuals, the prices, etc., were to be furnished the Philadelphia Depot and the contract would then be prepared by Colonel Hirsch and signed by him as representing the Government. He thus being the Contracting officer and signing the affidavits on the contract as he was a party to the agreement as to prices. Later on the list of articles to be procured through the Committee on Supplies was extended to include all articles relating to clothing and equipage. Instructions were given by the Quartermaster General that in all cases where commissioned officers of the Quartermaster Corps were acting in conjunction with any Committee of the Council of National Defense in the matter of placing orders for materials and supplies for the Quartermaster Corps and the fixing of prices at which the orders should be placed,

if any instance occurred where they (the officers) disagreed with the opinion of the Committee of the Council, it was their duty to bring the matter to the attention of the Office of the Quartermaster General so that the matter could be presented to the Secretary of War; and such officers were informed that they were associated with the Committee of the Council because they had been selected as having particular knowledge of the various matters to be handled, and as representatives of the Quartermaster Corps they were so to act as to protect the interests of the Government.

The latter part of October, 1917, Colonel Hirsch was ordered to Washington to organize and assume charge of the Quartermaster Purchasing and Manufacturing Office. This office was charged with the responsibility of making all awards and contracts for clothing and camp and garrison equipage for the Army.

On April 18, 1917, a statement was furnished the Committee on Supplies, Council of National Defense, showing the articles purchased for one million men to that date, the amounts delivered, and the date of the final completion of the contracts. In forwarding this statement, the Secretary of War requested that steps be taken under Section 120 of the National Defense Act, approved June 3, 1916, to expedite the delivery of designated articles. This section, in time of war, authorizes the Government to take over a plant or to place an order with same and requires in this case that precedence shall be given to the Government order; it further stipulates that the price can be fixed by the Gov-

ernment but that it must be fair and just. Fine and imprisonment may be imposed for failure to comply with the Government's orders. No action was taken under that section.

The Committee on Supplies was from time to time furnished with the list of supplies required for one million men in addition to those for whom purchases had already been effected; and requested to inform the Depot Quartermaster, Philadelphia, where the supplies could be obtained, the price at which they could be purchased and the rates of delivery.

After the passage of the Selective Service Law on May 19, 1917, it was learned that it was contemplated to call an additional 500,000 men into the service, and a memorandum was submitted to the Secretary of War on May 29, 1917.

"To date orders have been or are being placed for the initial equipment of clothing, equipage and materials for 1,000,000 men, and the upkeep for the first, second and third quarters. No steps have yet been taken to place orders for the fourth quarter for the first million men.

"In view of the fact that it was understood that a total of 1,500,000 men will soon be in the Federal service, for which the Quartermaster Corps will be required to furnish equipment, it is recommended that authority be granted to place orders immediately for the equipment required for the remaining 500,000 men.

"If it is approved, a deficiency of about \$110,000,000 will be created."

HENRY G. SHARPE,
Quartermaster General.

"I concur, unless our Government decides to provide for no more than the Regular Army, war strength; National Guard, war strength; and the first 500,000 men."

TASKER H. BLISS,
Acting Chief of Staff.

"Approved.

"The memo. of General Bliss is based upon a thought of a second increment of 500,000 men, but the memo. of General Sharpe deals only with men now in sight for training."

BAKER,

(S. 489)

Secretary of War.

At that time, May 29th, it had already been decided to make the first call of the Draft for 500,000 men, which, with the Regular Army and National Guard both at war strength, would make a total of about 1,500,000 men.

On July 11, 1917, the Committee on Supplies was informed that it had then been furnished with the requirements for the fourth three months for a million men and for the initial equipment and a year's upkeep for 500,000 men and the Council was requested to state with whom the contracts were to be placed and the prices at which the goods should be purchased; and was informed that it was urgent that arrangements should be made for obtaining the stores at the earliest practicable date.

On July 11, 1917, a memorandum was submitted by the Quartermaster General to the Secretary of War, as follows:

"Orders have been placed, or will be placed shortly,

for clothing and equipage supplies for the year's requirements for 1,500,000 men. It is understood that approximately 2,000,000 men are to be mobilized. It is therefore requested that authority be granted this office to take steps to place additional orders for an additional 500,000 men for clothing and equipage.

"We have estimated for the necessary funds in the deficiency estimates which have just been submitted."

Approval of this request was given by the Secretary of War on the same date, and on July 31, 1917 (S. 508), the Committee on Supplies was requested to advise the Depot Quartermaster Philadelphia where the articles could be obtained, the prices at which they could be purchased and the rates of delivery.

The deficiency bill passed on October 6, 1917, and provided for 2,033,345 men for the year ending June 30, 1918. Just shortly after the date of its passage, by instructions from General Bliss the then Chief of Staff, the estimates for the fiscal year 1919 were to be prepared for 1,612,245 men as previously shown. On September 15, 1917, request was made upon the Secretary of War (S. 505) for authority to place orders for clothing and other supplies so as to obtain the capacity of the mills up to December 31, 1918, thus insuring prompt deliveries. This request was approved by the Secretary of War on the same date. Contracts were thereafter made for the supplies for two million men, providing for deliveries up to December 31, 1918, when it was to the advantage of the Government. The contracts thus assuring the deliveries all through the cal-

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endar year 1918 made it possible to promptly clothe and equip the large number of Selective Service men drafted in that year to provide the reinforcement of the allied battle lines needed after the German drive of March, 1918. Possibly this might have been effected if the supplies had not thus been assured, but it is thought this action substantially assisted in the successful solution of the problem. Contracts were made for clothing and equipage supplies, incurring the following obligations of indebtedness:

From March 5, 1917, to June 30, inclusive.....	\$240,729,264.36
July and August.....	188,327,858.27
October	148,899,509.03
September, November, December, estimated.....	188,327,858.27
	\$766,284,489.93

The correct figures for the months of September, November and December are not available, but it is assumed that the purchases made those three months equal those made in July and August. While one contract alone made in September involved material to the value of \$56,298,750, to be conservative the estimate for those three months is assumed as the amount of the purchases made in July and August.

Contracts for the purchase of shoes were made on proposals submitted in response to telegraphic notice to shoe manufacturers. These proposals were considered by the officer assigned to act with the Committee on Supplies, Colonel Hirsch, assisted by the members of the Sub-Committee composed of the most expert shoe

manufacturers in the country and contracts made in accordance with the awards.

Cloth and other articles for clothing and equipment were handled by the method of "merchandising." This necessitated a personal interview by the manufacturer or producer with the Committee on Supplies, at which Colonel Hirsch was present and sometimes several interviews were necessary before a satisfactory agreement was reached.

As previously stated, the members of the Committee on Supplies were competent and successful business men who had achieved great success in the commercial world in building up great corporations by skilful merchandising; they maintained that the "merchandising" method should be adopted in procuring the supplies for the Army in order to prevent an unwarranted advance in prices. It was also asserted that as Army officers had been trained to make purchases by the public solicitation of proposals, few of them were familiar with the merchandising methods.

In "merchandising" the price to be paid is naturally of first consideration, for one expert in that method of purchase endeavors to effect it at the very lowest price. In fact it may be stated as a fundamental law of that method that of the two parties to the transaction the first endeavors to buy at the lowest and the second to sell at the highest obtainable price. If there is a difference as to price, as is natural under this law, time is necessary to compose the situation, as each party maintains the justness of his proposition. This may necessi-

tate many interviews and consume much time. Further, such negotiations must naturally be confidential, for if the argument and prices finally agreed upon are known to others, the one endeavoring to purchase would be handicapped when entering upon negotiations with other sellers, and the seller also handicapped when effecting a sale with other buyers. Consequently, it is mutually agreed that the concessions are for the individual only. In every transaction there are certain elements to be considered, and therefore there must be a meeting of minds to agree what conditions should be considered and allowed to govern in each transaction; as the cost of raw material, labor, overhead charges, financial capacity, and state of equipment will vary with each individual. The necessity of considering anything confidential in a transaction of this kind for the public service suggests the idea of secrecy, always abhorrent in such service.

Then again, merchandising for such an enormous amount of supplies as the Army required limited the consideration only of the propositions submitted by manufacturers or producers. To have extended its application to dealers or others would have given opportunity to them to effect a corner in the market. And to have admitted them would, even if there were no attempt to corner the market, have necessitated the payment of an amount in excess of the actual value of the articles in order to provide them their commissions, which it was their business to secure. So it may be assumed that only manufacturers or producers could be

considered, for from them only could the lowest possible price figures be secured.

For these reasons the Committee on Supplies adopted the rule of dealing with no middlemen or agents. By so doing, the Committee eliminated a number of the individuals or firms who, because in times of peace purchases were made by issuing public notice soliciting proposals, having offered at the lowest prices, had formerly transacted business with the Quartermaster Corps. Many of these middlemen or agents visited Washington and interviewed the Committee, and were disappointed to learn that they could transact no business with it. Exception was made as to being excluded from the business and some complaints were made regarding the manner of their reception by the Committee. Several of the complainants being men of influence and standing in their communities, called later upon the Committee accompanied by their Senators or Representatives, or bearing letters of introduction from them, and received the same information. Both parties leaving the interview entertaining similar views as to the position taken regarding the rule of exclusion and the manner of their reception. The officials probably felt that their dignity had been affected in the presence of their constituents. This undoubtedly created a feeling of resentment among members of Congress against the Committee on Supplies, and is accountable for the opinion formed there of the Committee, which was evident later when the Senate Investigation was undertaken.

The manufacturers and producers, being unable to ascertain the prices paid for the supplies purchased by the Government, finally resorted to the means of securing them by inspecting the contracts in the Returns Office, Department of the Interior, where by law all contracts made by the War Department must be placed on file. They are open to inspection of anyone desiring to see them and copies can be secured by the payment of a small fee. Anyone who is familiar with the investigations made by Congress at the close of the Civil War into the matter of Army and Navy contracts must recognize the wisdom of such a law. Information as to prices thus secured by the manufacturers or producers interfered, however, with the system of merchandising adopted and the Secretary of War, on request of the Committee on Supplies, directed that the contracts should be held some time before being forwarded to the Returns Office Department of the Interior. The result was a protest against such action but no change was effected. All contracts were, after a delay, forwarded for file, but then the information secured from them as to prices was not sufficiently up to date to be of much service.

Unquestionably the supplies procured by the assistance of the Committee on Supplies were obtained at the lowest possible prices, and as a merchandising system was an entire success and tended to prevent an abnormal advance in prices for the public and also for the allies. But in practically ignoring the element of time, which was so vital when supplies were needed at

once to equip the Army, the system failed. For if price, and not time of delivery is the dominating element in a transaction, the merchandising system may result in late deliveries of supplies, just because of more favorable prices for same, that is, lower prices. This is noticeable in several instances:

In March, 1917, contract was made with the American Woolen Company for a considerable quantity of cloth, and for blankets. The contract expired July 31, 1917, and prior to that time the Committee on Supplies was urged to arrange terms with the company for a new contract. Shirting flannel and blankets were especially needed to meet the requirements for the men going to the camps in August and September. To have the shirts available at that time, the shirting flannel should be delivered early in July to permit the making of the shirts and shipment to the camps. The American Woolen Company had its machinery all arranged and the force available to produce the greatest possible number of yards of shirting flannel a day. Many interviews were held by the Committee on Supplies with the representatives of this Company, but agreement as to prices was not reached until a short time prior to September 22, 1917, when contract was made involving material to the value of \$56,298,750.00. The deliveries of some of the supplies were not to be completed until late in the spring of 1918. On this contract an advance of nearly \$19,000,000.00 was made to the American Woolen Company under the provisions of the Act of Congress of October 6, 1917, which permitted

advances of funds to contractors to the extent of one-third of the amount of the contract. Purchase of 600,000 blankets had to be made in August, 1917, to meet the situation and these, of course, were not of the quality or color prescribed for use in service (S. 498). In September the purchase of about a million shirts had to be made to supply the camps (S. 508).

On August 31, 1917, a letter was sent to the Committee on Supplies, stating that owing to a change of plans over which the Quartermaster Corps had no control, the demands for woolen outer clothing and woolen underwear would be very great. The change of plans referred to was the decision to ship troops abroad each month; the plan was adopted without consulting the Quartermaster General as to the supplies available for the troops, and information was communicated to him by a casual inquiry as to whether supplies were on hand. The letter referred to stated the necessity for the purchase of nearly 1,500,000 suits of underwear. On October 15, 1917, the Committee on Supplies inquired if the quantities referred to in the letter were in addition to the quantities previously stated, and on October 16th was informed in reply that they were in addition. Meanwhile as the underwear was not forthcoming through the Committee on Supplies, early in September the depot quartermasters were directed to buy it in open market for immediate delivery and to make shipments to the camps. This action was taken under paragraph 3 of the order of the Secretary of War, dated April 12, 1917, directing that the assistance of the Com-

mittee on Supplies should be sought in placing orders for supplies. The paragraph reads, as follows:

3. It is understood, however, that the responsibility of the several supply bureaus for promptly supplying the needs of the Army must be recognized; and where time will not admit the delay involved in consulting the Munitions Board, the supply bureaus will retain their present initiative in contracting without reference to the board.

This action directing the purchase through the depots caused a protest from the Committee on Supplies, and a conference was called in the office of General Bliss, Acting Chief of Staff on September 9th, and upon the insistence by the representative of the Committee that the Committee and the Depot Quartermasters should not both be in the market at the same time, and upon his statement that he could have sufficient underwear secured and on the way to the camps within forty-eight hours, instructions were wired the depot quartermasters to make no purchases. However, it was not until the latter part of October that sufficient woolen underwear for two suits per man was on hand, and then the reserve was very small. Early in October a sufficient number of blankets was not on hand, and under paragraph 3 of the order referred to the Depot Quartermasters were instructed to purchase comforters in such numbers that each man in the camps would be provided with three blankets or two blankets and a comforter. This also caused a protest but the purchases were made and the men provided, the protest, however, resulting in a practical rescinding of the paragraph of the order

as far as future purchases by the Depot Quartermasters was concerned.

The Committee on Supplies, shortly after commencing to operate, requested to be informed of the number of men in service, and later, after the dispatch of troops abroad, requested the number of troops in France. The Quartermaster General informed the Committee that orders prohibited the furnishing of information as to the number of troops in camps; and that the number in France was guarded with such perfect secrecy that the Quartermaster General was not informed. Later, the Committee received the information from some source, but not through the Office of the Quartermaster General. This information was evidently desired by the Committee to enable it to decide whether the supplies called for were needed immediately or whether, in the opinion of the Committee, the need was not urgent and delay in procuring them would be of advantage in merchandising.

Whenever report was made to the Committee on shortages, request would be made by it to be informed what had been done with all that had already been bought. The Committee failed to realize the wear and tear on a soldier's uniform with the consequent necessity for quick replacement. Furthermore, the Committee would express opinions, to those requesting them, as to whether the condition of supplies warranted action regarding the calling of troops at a designated time. Such opinion would be adopted by those desiring an opinion favorable to the plan proposed, in preference to the state-

ments from the office of the Quartermaster General which was responsible in the matter, and would be so held even if action were taken contrary to those statements. An instance of this is as follows: On May 22, 1917, orders were issued calling the first 500,000 men of the National Army to the colors. On July 18, 1917, effort was made by the Quartermaster Corps to show that this could not be done and the General Staff conferred with the Committee on Supplies and received from it figures as to the condition of supplies and an opinion as to the possibility of providing for the call, which were at variance with those from the Office of the Quartermaster General. The views of the Committee on Supplies prevailed and the men were called under date of August 24, 1917. (S. 500-1.) The Committee's figures and opinion were given subsequent to a letter forwarded it on August 4, 1917, which quoted a letter from the Depot Quartermaster at Jeffersonville, Ind., stating that the supply of shirting flannel was exhausted at the Depot. The letter continued: "It may be well to state in this connection, that from reports coming to this office, it would seem that the Committee on Supplies have been misinformed as to the amount of clothing and equipment on hand for issue to the Army. And it should also be stated that any shortage of clothing is not due to the failure of the Quartermaster Corps to conserve the supply or have the material made into garments as rapidly as delivered, but is due to two causes, namely: 1. Deliveries under

contract not being sufficiently early to meet the demands; 2. Delinquencies under existing contracts.”

It should be noted that in time of peace when delinquencies occurred under a contract, the Quartermaster Corps purchased in open market, charging any excess cost against the contractor or those who had guaranteed security under his bond. When operating by the assistance of the Committee on Supplies this was not possible, as the Committee maintained it would disturb market prices, and furthermore that it had practically all the mills operating to fill the orders. On August 17, 1917, the Chairman of the Committee on Supplies at a hearing before the Committee on Appropriations of the House of Representatives, stated:

“Aside from uniforms I would say that there should be no question but what the needs of 500,000 men could be supplied on the 1st of September.”

Being asked “How about uniforms?” he replied:

“A large part of them will; possibly not in sufficient quantity to be able to fit every man, because this must be taken into consideration, that it requires many times as many uniforms as there are men in order to be able to fit the men; the surplus stock required is very considerable.”

As uniforms were the essential necessity at the camps in case of the calling of the men, and the Chairman of the Committee on Supplies indicating by his reply that there would be a shortage, thus agreeing with the state-

ments from the Office of the Quartermaster General, it is regretted that his views were not accepted by the General Staff in preference to those of other members of the Committee on Supplies.

The conditions which existed as far as supplies were concerned at the beginning of the war were very similar to those in England, and it is believed that it was necessary to adopt some plan to effect the large purchases required with as little disturbance as possible to the market. There the plan adopted was to form a civilian body, headed by the Surveyor General of Supplies, who purchased all the materials. Associated with him was an Advisory Board composed of officers from the several Supply Departments. The Quartermaster General for the Forces, the Master General of Ordnance and other supply officers formed a board in the War Office. This latter board prepared the requirements and forwarded them to the Surveyor General of Supplies with instructions to buy the quantity desired *at the time designated*; and it was the duty of the Surveyor General of Supplies to see that the deliveries were made in the quantity desired and *at the time specified*.

Every possible credit should be given the Committee on Supplies for the zeal, industry and intelligence constantly displayed in all of its transactions and also for the enterprise shown in inducing new plants to undertake the manufacture of blankets, ducks and the several cloths required for the uniforms. The manner in which plants were transformed and arranged so as to make possible the production of fabrics which before

that time would be considered an impossibility for such plants was truly astounding.

A country which adopts a policy of neglecting, in time of peace, to prepare for war insists upon the utmost economy as regards money matters and adopts a most improvident and wasteful extravagance of time; time which should have been utilized in making preparations, that is, providing its National insurance.

When such a country is later forced into war, it necessarily is compelled to reverse its action and, in order to provide for the troops in the short time available, must exercise economy as to time and be extravagant as regards money.

The adoption of the merchandising method of procuring the supplies in time of war means a continuation of the erroneous policy adopted in peace time, for to succeed in such a method the vital element of time must be wastefully squandered in order to effect the purchases at the lowest possible prices; consequently it is not a method of procurement of supplies which can be wisely adopted in time of war.

Later in the year after the purchase of a quantity of wool in Australia and the opening of a Wool Purchasing Depot in Boston, the Committee on Supplies changed its method of arranging for contracts for material, by determining the price it would pay per yard and then allocating the yardage to the various mills. Even under this plan certain concessions were allowed, or demanded, because of the character of the machinery or the overhead charges.

There were expert officers, secured from civil life, who were stationed at such mills as had Government contracts. The law requiring the inspection of Government supplies on delivery, the officers at those mills inspected the cloth when manufactured. They then furnished a certificate to the depot and shipped the cloth at once to clothing manufacturers. The depots paid for the cloth upon the receipt of certificate of inspection; at the Boston Depot the payments were made thirty-six hours after the delivery of the cloth as just described.

There were in the country a large number of clothing manufacturers, and as authority had been received at the outbreak of the war to make contracts without advertising, when it was known the date cloth would be available contracts were at once made so that the factory would be prepared to commence work immediately upon the delivery of the cloth. Once commencing operations it was necessary to keep that factory supplied with cloth, otherwise it would be obliged to lay off some of the employees; if this once happened, some time would elapse before the employees would again be assembled and therefore delay in the production of the completed garments would result. Orders were issued, however, to depots not to hold cloth in reserve, nor allow a contractor to have more in his possession than to provide for a few days' operation, and if there was any unnecessary delay in a contractor's delivery of garments whatever cloth was in his possession was to be withdrawn and given to some other contractor to expedite the delivery of the garments.

The difficulty at all times was to secure the cloth in sufficient quantities and with early deliveries so as to allow time to cut, make and trim the uniforms. The contracts for manufacturing the garments were, until some time in October, made by the Depot Quartermaster at Philadelphia. After October, the contracts were made by Colonel Hirsch, who was in charge of the office of the Purchasing and Manufacturing Quartermaster in Washington.

On April 3, 1917, the Boston Wool Trade Association forwarded to the Secretary of War a resolution, passed unanimously by the Association, in which it was resolved that the members of the wool trade of Boston would neither sell nor buy any wool in this country nor in transit thereto until further notice from the Committee appointed by the Association, and they further resolved to offer the entire stock of wool tops and noils to the United States Government at values current on April 2nd, as handsome and patriotic an offer, it is believed, as any of the many handsome things done during the war. This resolution was acknowledged by the Assistant Secretary of War on April 5th, and the same day the Secretary of War sent the following telegram to the Boston Wool Trade Association :

“We wish to express sincere appreciation of your patriotic action looking to assist the Government in supplying its needs for wool. I have referred the matter to the Munitions Board of the Council of National Defense, and you will undoubtedly hear from them shortly.”

Copies of the correspondence were furnished the Of-

office of the Quartermaster General, but no report or recommendation was called for. The telegram from the Secretary of War stated that the resolutions were referred to the Munitions Board of the Council of National Defense, and also stated that the Munitions Board would reply.

At that time the appropriations of the Quartermaster Corps were completely exhausted. There was a deficiency incurred in 1916 of \$34,000,000 and obligations greatly in excess of \$100,000,000 had been made for the supplies contracted for to clothe and equip the army. The purchase of wool would require "spot" cash and there were no funds available. In addition, wool, as such, had never been bought out of the appropriation and it was a question if it could be as Sec. 3678 of the Revised Statutes states that the sums appropriated shall be applied solely to the objects for which they are respectively made and for no others. It was, furthermore, the impression that the resolutions were referred to the Munitions Board because it was composed of business men who would suggest the proper action to be taken. As far as the Quartermaster Corps was concerned it had never made speculative purchases and none of its officers was trained in that character of business. The reply was made to these resolutions by the Chief of the Raw Materials, Minerals and Metals Section of the Munitions Board but no information as to the action was ever furnished the Office of the Quartermaster General. In the light of future events, it is a pity that some arrangements were not made whereby

this handsome offer could have been accepted as it was so advantageous to the Government. While copper was largely used by the Signal Corps and the Ordnance Departments, neither of those bureaus had to buy up all the supply. It is also pertinent to recall that the Secretary of War endeavored to secure the first war appropriation of about \$3,000,000,000 as a lump sum and Congress declined to make the appropriation in that form but made it in the usual form of specifying the items. The fair conclusion to be drawn from that action was that Congress intended the provisions of Section 3678 should be observed.

Some time in June it was represented by the Committee on Supplies that in order to obtain the supply of clothing required for the Army it would be necessary to control the wool supply. Two of the officers on duty in the Office of the Quartermaster General were directed to consult with the accounting officials of the Treasury Department to ascertain whether under the terms and verbiage of the law it was possible to buy wool. On June 6th these officers reported that the officials consulted held that that purchase could be made. There were still no funds on hand as the appropriation bill did not pass until June 15th and the funds included in the bill did not become available until after July 1st.

On July 11, 1917, the Quartermaster General requested authority to buy supplies for an additional 500,000 men, making 2,000,000 in all. The estimates submitted in August were for 2,033,345 men for the fiscal year 1918. The Secretary of War in approving

the request stated "The policy of purchasing a certain amount of wool will first be put into effect." The sum of \$10,000,000 was made available for this purchase and conference held with the Committee on Supplies to arrange the manner and methods of purchase. A Quartermaster wool-buying office was established on August 1, 1917, in Boston, Mass. For the purpose of obtaining and maintaining a supply of wool available at all times while the war should last so that manufacturers contracting for supplies for the Quartermaster Corps might be protected in their bids in the event that they did not own the wool themselves, the following Committee, denominated "The Committee on Wool Supply of the Council of National Defense" was appointed by the Committee on Supplies of the Council of National Defense and the appointments confirmed by the Secretary of War: Mr. Jacob F. Brown, Chairman; Mr. Stephen C. Metcalf, Mr. Frederick S. Clark, with Mr. Robert H. Stevenson, Jr., as Secretary; Captain W. B. Gracie, Quartermaster Corps, was detailed to take charge of the wool office in Boston.

It was the intention of the War Department to maintain a reserve supply of wool approximating, but not exceeding, \$25,000,000, and to endeavor to keep this quantity as a working stock ahead of orders. Based on this the Committee was to proceed to purchase \$10,000,000 to \$12,000,000 worth of wool, a portion of which should be suitable for the 8½-ounce flannel, 16-

ounce suiting, 30-ounce overcoating and blankets, with possibly some finer wool adapted for underwear.

It was easy to speak of the desirability of the purchase of wool for the Government, but it was not a simple matter to arrange the method of purchase and this fact was fully appreciated by the gentlemen composing the Committee. As they were all engaged in the wool business, the plan adopted had to consider the possible criticism of their action based on that fact; then the method of payment for the purchases, the inspection of the wool on delivery, the storage of the wool carried as reserve, the payment of charges for storage and drayage, and the insurance of the wool in storage; also the method of making sales of the wool to the Government contractors and the manner in which payments would be effected. These were all matters of the most vital importance, for if the fullest consideration had not been given to these subjects, the opportunity of criticism might have arisen and the possibility of casting unjust reflection upon the members of the Committee. In addition, forms for accounting for the wool purchased, vouchers for the payment of same and receipts for the sale of the wool had to be devised and their approval secured by the accounting officials of the Treasury Department.

The ability and thorough knowledge of the wool business and of all of its ramifications, possessed by the members of the Wool Committee, enabled it to devise the plan of its operations, and their standing in the busi-

ness community secured the assistance and coöperation of the Wool Trade in Boston.

Arrangements were perfected through the State Department to effect a purchase of about 78,000,000 pounds of wool in Australia, and through the Shipping Board to secure its transportation to this country. The Committee on Wool Purchase prepared instruction prescribing the manner in which the Australian wool should be inspected and delivered and the method of payment.

Plans for the organization of a wool purchasing office having been effected, in order to more completely control the wool situation and particularly that portion derived from re-worked wools, the Committee on Supplies emphasized the necessity of the control of clippings from Government cloths and also the rags from wornout and condemned blankets and uniforms. The Committee on Supplies recommended that contracts be entered into for this purpose with the Base Sorting Plant in New York, and stated that the prices named in the contracts were established by the Committee's own experts and were considered fair and just. As the Quartermaster Corps had never undertaken the work of sorting rags there were no officers in the Corps who were trained in the work or who possessed knowledge of the business. The members of the Committee on Supplies were expert business men assigned by the Secretary of War to assist the Quartermaster Corps in the work imposed upon it by the War, the fair assumption being that the Committee would be of especial

assistance in any new line of work, particularly such in which it claimed to have experts. The Committee on Supplies having stated that it had experts on this line of work and that the prices were fair and just, instructions were given to enter upon the contracts. Later it developed, after an investigation ordered by the Quartermaster General, that the prices charged in the contracts were excessive, and they were terminated by authority of the Secretary of War upon the recommendation of the Quartermaster General, and over the protest of some of the members of the Committee on Supplies.

The supervision of the operations of the Base Sorting Plant for the four months of the existence of the contracts was entrusted to the Depot Quartermaster, New York, who also made the investigation. That officer and his assistants thus became familiar with the work and learned where the necessary experts could be secured. Upon the termination of the contracts the work was continued by the Depot Quartermaster under the supervision of the Conservation Division of the Office of the Quartermaster General.

COMMITTEE ON SUPPLIES

(Later the Supplies Section of the Finished Products Division of the War Industries Board.)

Julius Rosenwald, Chairman	Rufus W. Scott
Charles Eisenman, Vice-Chairman	F. R. Eddington
Albert L. Scott	C. B. Stevens
Harry L. Baily	S. M. Kaplan
Millor Wilson	S. F. Strook
D. D. Martin	Jacob F. Brown
	Stephen O. Metcalf

Arthur Lawrence
J. F. McElwain
Lincoln Cromwell
F. E. Haight

Frederic S. Clark
Maj. H. S. Wonson
Capt. B. B. Burgunder

BOARD OF CONTROL OF LABOR CONDITIONS

The contracts for making articles of uniform contained clauses requiring the enforcement of the Eight Hour Law and the Child Labor Law, and also a clause prohibiting the sub-letting of the contract, this to prevent the possibility of the work of the making of uniforms being done in sweatshops. Before awarding a contract, the shops in which the work was to be done were inspected by the contracting officer to determine if the equipment was sufficient to insure compliance with the terms of the contract. In June, 1917, reports reached the Mayor of New York that the uniforms for the Army were being made on the sweatshop system and the report of the Committee appointed by him was forwarded to the Secretary of War, who directed an investigation of the matter. The report submitted in pursuance of this order indicated that in some instances uniforms had been sent from the contractor's shops in order to be hand-finished as required by the contracts. The Quartermaster General issued instructions prohibiting the sending of the uniforms from the contractor's shops, and to effectively remove the possibility of such action, the specifications for making the garments were changed so as to eliminate all handwork upon them, and requiring all work to be done by machine.

On August 24, 1917, the Secretary of War estab-

lished the Board of Control of Labor Standards for Army Clothing, which was composed of two civilians and an officer detailed from the Quartermaster Corps. The Board was to operate under the direction of the Quartermaster General. Offices were secured for the Board in New York City and the necessary personnel provided, consisting of clerks and stenographers, inspectors of labor conditions, a fire hazard inspector, and later an officer was assigned from the office of the Depot Quartermaster in New York, to act as inspector of wage conditions.

All contracts for making uniform clothing were made by the Depot Quartermaster, Philadelphia, and that officer was directed before entering upon a contract to communicate with the Board of Control and secure a certificate that the labor conditions of any firm's plant were satisfactory, and that its normal capacity was sufficient to enable the contract to be executed in accordance with its terms. That officer was also directed to inform the Quartermaster General in case there was any delay in receiving the above required certificate. The Board's final report shows that after October 1st the time of one inspector was fully spent in following up clues as to the existence of home finishing of uniforms made under Government contract, and that only one verified instance was found. The Board was called to report upon 129 firms and many of these had additional shops in which they carried on their work. The Board approved or disapproved of each shop on its own merits, and a copy of its report to the Depot Quarter-

master was furnished each firm. The disapproval of a shop was not final, as upon making the specified changes, the disapproval would be removed.

Two firms were disapproved by the Board for reasons other than shop conditions in regard to safety and sanitation. One of these was on account of labor troubles and the other on account of a pending prosecution against the firm by the New York City Fire Department. The latter firm made the changes required by the Fire Department. Inspections were made by the Board in New England, New York City, New Jersey, Philadelphia, Maryland, Georgia, Alabama, New Orleans and St. Louis, and arrangements were being perfected to district the country and to have, in addition to the New York force, inspection headquarters in Boston, Philadelphia and Chicago. These arrangements, however, were not effected by December 31, 1917. The Board of Control of Labor Standards for Army Clothing consisted of Mr. Louis C. Kirstein, Chairman; Mrs. Florence Kelley, Secretary, and Captain Walter E. Konesi, Q. M. O. R. member.

Time when troops could be equipped; Calling troops in advance of the time designated; Shipping troops to France complicated the conditions as to supply.—In reply to an inquiry by the Chief of Staff, the Quartermaster General on March 13, 1917, stated: (S. 473):

“1. Clothing and equipment necessary for one million men can, under existing conditions, be procured within ten months with the understanding that it might be necessary to purchase some blankets which do not

conform to existing specifications, but which would closely approximate standard quality and color."

(It will be noted that the ten months specified would end December 31, 1917.)

The Adjutant General on March 21, 1917, by direction of the Secretary of War directed that the following information be furnished:

"7. If large numbers of men have to be trained before they can be equipped with regulation uniforms, etc., is the Quartermaster General prepared to at once recommend some kind of comfortable civilian clothing, from hat to shoes, which can be purchased commercially in quantities sufficient for, say, 500,000 men?"

To which reply was made the same date, as follows:

"7. If authorized today to place orders for the manufacture of clothing and equipage, it is believed this office can open communication with the bidders under the opening of March 5th and place additional orders for sufficient clothing and equipage (taking into consideration the obsolete clothing now on hand and which has been held for possible emergency use) to take care of 500,000 men, including the Regular Army and the National Guard, within sixty days, or as rapidly as the recruits can be enrolled." (S. 474-5.)

It will be noted that reference in the above inquiry of the Adjutant General is made to supplying the men if called early for training with civilian clothing.

The Secretary of War on January 10, 1918, stated as follows before the Senate Committee on Military Affairs:

“At the outset there was a question to be decided as to which of two policies ought to be pursued, whether we ought to assemble a large force and begin its training before it could be fully clothed in soldier clothes and equipped, and let the equipment and clothing come along as it could, or whether we ought to postpone the assembling of large forces and delay their training until full equipment was actually in hand. Speaking of my own part in it, I was earnestly urged by men of great weight to call out large forces at once, and men of distinguished military experience and reputation said to me that it was unimportant whether they drilled in their own clothes, or whether, at the outset, they had rifles; that the elements of military training were such that men could drill in their own clothes without arms for a while.”

On January 28, 1918, the Secretary of War stated before the Senate Committee on Military Affairs that a very competent General officer had called at his office—“I have forgotten when, but it was early—and suggested to me the advisability of instantly calling out a large army. I said, ‘But, General, we have not the clothes and we have not the weapons for them.’ He said, ‘I know that, Mr. Secretary, and they need many things before they need the rifles. They need to live together, get used to camp conditions; they need the elemental discipline of camp life; they need to be taught to keep step; they need to know the subordinations of the Army and it will take some time to give them that preliminary instruction.’ He pointed out to me that in England, the so-called Kitchener army drilled for

months, as he said, in their civilian clothes, with top hats and using a stick for arms. I said to him, 'General, I agree with you that it is important to have our Army equipped rapidly so that a prolonged period of training may be given to them; but we will call out first the Regular Army and then we will call out the National Guard, build it up to war strength.' But with the draft army they would have an additional period of training in the field by reason of the fact that the Army cannot be shipped abroad in bulk suddenly. It was necessary to attempt to forecast the amount of time needed for training, and it was deemed wise to put the men in the camps in order that they might learn this matter of camp discipline, camp sanitation, the elements and essentials of the soldier's life a little in advance of their being fully tried with arms." (S. 1944.)

At the same hearing the Secretary of War stated:

"I have already said to you that at the outset we had the problem as to whether we should wait until we had an adequate supply of clothing or whether we should not."

"I did not then know nor do I know now, nor can I know, how rapidly it may be necessary for us to send men to France. I know how rapidly we have sent them. I know how many are there. I know what our present plan is to send them, but I do not know but tomorrow—this has not happened—but I do not know but that tomorrow it might turn out that it would be wise to double the rate at which we are sending troops." (S. 1,759-8.)

In Réquin's book "America's Race to Victory" on page 43 we read as follows:

"Without following day by day the development of this organization, we may note in the following pages its principal stages.

"Nothing comparable with it had been done since the formation of the British Armies in 1915-1916. Besides, the problem faced by the United States offered conditions of peculiar difficulty, since, aside from men and money, everything had either to be created or transformed. It was possible to shorten the period of preparation; unfortunately it was not possible to dispense with it."

"It was the delays of the Young British Armies in preparing to take the offensive that permitted the German General Staff to wage a local combat with the French Army at Verdun from February 21 to July 1, 1916."

Réquin was on duty at the War College all through the war and the views of that most capable and experienced officer undoubtedly were given great weight.

On April 2, 1917, a memorandum was submitted to the Chief of Staff by the Quartermaster General which stated:

"5. It will require four months to complete the equipment of the Regular Army and National Guard, both at war strength (approximately 500,000 men) with regulation articles except tentage.

"6. To equip another 500,000 men will require five months in addition to the preceding four months, provided that all the orders for the second 500,000 men

could be placed at the same time as the orders for the equipment of the first 500,000 men."

Foreseeing that it was the intention to call an additional 500,000 men, the Quartermaster General on April 3, 1917, received authority to effect the purchases for that number, but no instructions to obtain this authority were given to him.

On April 16, 1917, in a memorandum by the Quartermaster General for the Chief of Staff it was stated:

"It is understood that the 'other plan' referred to is for this Department to be prepared to equip 500,000 men by the end of July and 500,000 more by the 31st of December, with proper uniforms and equipage, or to clothe and equip the first 500,000 by the middle of June with *articles closely approximating standard articles* and the second 500,000 *similarly by November 1st*. It will not, in the opinion of this office, be practicable to *properly clothe* and equip this or any other number of men more than was provided for in the original plan." (S. 477).

The original plan was the one of March 13, 1917, for 1,000,000 men, and the statement above made that it was not practicable to provide for more than that number was added because in March 89,000 men of the National Guard had been called to the colors when the Quartermaster Corps had been notified that only 63,000 men would be called. This additional 26,000 men were provided for, however, but it is quite manifest that these additional calls could not be continued without seriously interfering with the original plan.

On April 18, 1917, in reply to a further inquiry a memorandum by the Quartermaster General for the Chief of Staff stated:

"1. Attention is invited to the remarks contained in memorandum from the Quartermaster General, under date of April 16, having reference to equipping National Guard Coast Artillery.

"2. As stated in the memorandum referred to, it will not be practicable to properly clothe and equip within the time previously allotted this or any other number of men more than that which was provided for in the original plan." (S. 478.)

The Adjutant General, by direction of the Secretary of War, addressed the following letter to the Quartermaster General on April 18, 1917:—

"It is desired that you furnish this office at the earliest practicable date the following information:

"(a) Is the Quartermaster Corps able to clothe, supply and maintain all organizations of the Regular Army and National Guard now in the service of the United States at minimum strength?

"(b) How many men in addition can it clothe, equip and maintain from the following dates?

"April 20, 1917; May 20, 1917; June 20, 1917; July 20, 1917; Aug. 20, 1917; Sept. 20, 1917; Nov. 20, 1917; Dec. 20, 1917."

To which the following reply was made on April 19, 1917; by the Quartermaster General:

"1. With reference to paragraph (a) the question can be answered in the affirmative.

"2. With reference to paragraph (b) the question would depend on where the men are to be mobilized for which the supplies are required.

"3. During the month of March orders were placed for the delivery of clothing and equipage up to July 31st, in sufficient quantities, except tentage, to equip an army of 500,000 men, including the National Guard and Regulars now in the service. These supplies are coming in daily and the Regular Army and National Guard so far called have been taken care of and are provided for, and sufficient supplies will be coming in to take care of 25,000 additional men in April, 50,000 in May, 75,000 in June and 100,000 in July, but it must be borne in mind that these supplies are being received from various factories scattered from the Atlantic to the Pacific coast, the bulk coming from the Eastern States.

"4. Early in April, orders were placed for clothing and equipage for an additional 500,000 men for delivery up to December 31st, and assuming that the first 500,000 men are equipped by the end of July, the Department will be able to clothe and equip 100,000 men monthly thereafter, with the exception of tentage.

"5. Much time will be consumed, even after the supplies are delivered in transporting them to the places where the troops will require them; especially is this true if they are mobilized at points distant from the factories. Attention is invited to the fact that to take care of a great number of troops at once, the demands on depots should be divided among the various supply depots which are now being stocked up to take care of certain territorial limits."

At the time the above report was made no decision had been arrived at as to the location of the mobiliza-

tion points; the decision to put the men in cantonments was not reached until some time in May, 1917, and then the sites had to be selected. Information as to their location was to be furnished on June 10th, but at that date several had not yet been determined. The location of the cantonments had to be decided before arrangements to organize the depots to supply them could be arranged.

The information as to the number of men which could be clothed and equipped by the Quartermaster Corps and the time required to accomplish it was furnished upon memorandum from the Chief of Staff and to the Adjutant General. This is mentioned to indicate that all the sources from which orders might possibly be originated had been fully appraised concerning these matters. It was generally understood early in May, 1917, that decision to make an early call of the drafted men had been made in order to begin their training. On May 19, 1917, the Cantonment Division of the Office of the Quartermaster General was established by direction of the Secretary of War in order to insure the completion of the cantonments by September 1st. The information called for by the Adjutant General, by direction of the Secretary of War, on April 18, 1917, above referred to, was communicated on April 18, 1917, confidentially to the Western Department, thus showing that the capability of the Quartermaster Corps to meet the situation was fully recognized. In view of all these facts, the Adjutant General on May 22, 1917, sent the fol-

lowing communication to all Department commanders in the United States:

“Subject: Program for organizing the Regular Army, National Guard and National Army.

“1. There is enclosed herewith for your information a copy of an approved program for organizing the Regular Army, National Guard and National Army.

“2. The Chief of each Supply Bureau will be instructed to take prompt steps to meet the demands upon his Department in carrying out this program so that there will be no chance of failure in providing the absolute essentials, namely, food, water, clothing, shelter, blankets and bedding of some sort (regulation if practicable) and a rifle for each man; other equipment and supplies to be furnished as rapidly as the resources for the Nation permit.

“3. The Quartermaster General will be directed to issue at once to recruits at depots all available shoes of obsolete pattern and khaki uniforms, the latter at one-third of cost prices.”

(Note.—The *khaki* uniform referred to was the old uniform which was abandoned several years before when the new uniform of olive drab color, generally known as the “O. D.” was adopted. A large stock of this *khaki* uniform was on hand when the new uniform was adopted in its place. Effort was made, unsuccessfully, to utilize it in various ways and quantities of it had been sold at public auction; the latter action having been severely criticized in Congress and the War Department characterized as extravagant in its many changes in uniform and equipment which rendered the old patterns obsolete. This was possibly one

of the cogent reasons which influenced Congress in declining to make appropriations to provide for a reserve stock of cloth and uniforms. It is necessary to mention this as commonly the term *khaki* was applied to the new olive drab uniforms ("O. D."). The term *khaki* in the order refers to the obsolete and abandoned uniforms.)

Continuing the communication of May 22nd read:

"4. Non-essentials should not be permitted to delay the prime necessity of putting a large army into training while the weather is suitable for outdoor work, drills and target practice. Even the lack of uniforms for a week or two should not delay organization. After organization of the forces has been completed, discipline established and physical training assured, technical training will go forward rapidly as the necessary equipment is supplied.

By Order of the Secretary of War."

No further instructions about the steps to be taken to meet the demands upon the Quartermaster Corps were received. From paragraph 4 of this communication the idea of drilling the men in their civilian clothes, as has previously been shown had been the English practice, is evident; but this purpose was practically made impossible by the instructions sent to the draft men, from the Provost Marshal General's Office, to take only a very limited supply of civilian clothes to the camps; as it was stated the men would be obliged to send such clothes to their homes upon joining the camps. The Quartermaster General's Office was not informed of these instructions, and they were not known of until

months later when a copy of an order to drafted men was seen in a small local paper.

On January 28, 1918, the Secretary of War before the Committee on Military Affairs of the Senate replied to the question:

“Was there, Mr. Secretary, an order or a warning, or suggestion sent out to troops coming to camp that they should bring but little clothing with them?”

To which the Secretary replied:

“I think there was, Senator, a suggestion sent out that they bring very little clothing, and when they got there they were directed to go into uniform and send their private clothing home.” (S. 1,959.)

In October, anticipating a temporary shortage of winter underwear because of the failure to obtain the supply through the Committee on Supplies as previously shown, request was made upon the Provost Marshal General that instructions be sent the drafted men to take sufficient clothing, and at least two suits of winter underclothing to the camps. No information as to the action taken on this request was received at the Office of the Quartermaster General.

The enclosure referred to in the above communication of May 22, 1917, was in part, as follows:

“Subject: Policy of the War Department relative to increasing the Regular Army, calling the National Guard into Federal Service, and calling out 500,000 men for the National Army.

"1. *Regular Army.* The Regular Army will be increased by the addition of four remaining increments and raised to maximum (war) strength during the months of May and June.

"July 15: Draft in Federal Service one-third of the National Guard not already in service;

"July 25: Draft into Federal Service the second one-third of the National Guard;

"August 5: Draft into Federal Service the remaining one-third of the National Guard."

"National Guard organizations will be assembled in three groups and sent to Departments as indicated below, on the dates given:

August 1, 1917

August 15, 1917

September 1, 1917

"All units of the National Guard not now in the Federal Service and all that are in the Federal Service will be recruited to maximum strength at once, and the needed arms, equipment and clothing for full strength will be issued as soon as practicable."

"All coast artillery organizations of the National Guard will be drafted into the service on the earliest date, namely, about July 15th with the first group."

It will be observed that the foregoing instructions concerning the National Guard Coast Artillery entirely disregard the information given by the Quartermaster General's Office as to the possibility of clothing and equipping those troops and are at variance with the

statement made by the Adjutant General to the Commanding General, Western Department in letter of April 27, 1917, which stated: "I am directed by the Secretary of War to inform you *confidentially* that these National Guard troops cannot be called out at the present time unless immediate requirements make it necessary, in view of the following conditions as reported by the Quartermaster General." Then follow the statement of conditions made on April 19, 1917. It will be noted that no report as to the amelioration of those conditions had been made by the Quartermaster General in the time intervening between April 19th and May 22, 1917, the date on which this order was made. Consequently the order was made in disregard of the conditions as reported.

The enclosure to the communication of the Adjutant General of May 22, 1917, continues as follows:

"3. *The National Army.* The first 500,000 men of the National forces will be called to the colors September 1, 1917, and put under training at once in their division cantonments. This force will be supplied with woolen uniforms, which will be available in sufficient quantities."

A table entitled "Program for Organizing the Regular Army, National Guard and National Army" accompanying the foregoing shows as follows:

1. That the regular Army was to be raised during May and June at designated Army posts and provided with cotton uniforms (including all available stock of

khaki) and woolen uniforms were to be supplied by Nov. 1, 1917.

2. The National Guard was to be raised July 15th to August 5th and after 15 days to go to division cantonments in the South; they were to be supplied with cotton uniforms and with woolen uniforms by November 1, 1917.

3. The National Army was to be raised September 1, 1917, at its divisional cantonments and were to be equipped with Enfield and Krag rifles (Krag rifles to be used only until they can be replaced), blanket rolls and haversacks (to be replaced by 1910 equipment as soon as practicable), horse equipment and artillery material after equipping Regular Army and National Guard, woolen uniforms, commercial articles will be substituted where necessary for such regulation articles as cannot be procured.

At the end of this table was the following:

“Note.—The officers’ training camps will end August 15, 1917. Officers of each division then proceed to division cantonments, where the enrolled men report September 1, 1917. Each man to be equipped at once with uniform and rifle. Other equipment to be supplied.

“Execution of third program would be delayed by the diversion of equipment or supplies to meet any unforeseen demands.”

The foregoing sentence was not in italics in the original.

The order calling the National Army to the colors

by September 1st disregarded the information, as to the time when the men could be clothed and equipped, given by the Quartermaster General on March 13, March 21, April 2, April 16, April 18 and April 19, all of which have been previously quoted; and in them it was constantly stated that the men could not be clothed and equipped before December 31st with proper uniforms and equipment and that one hundred thousand men could be provided for each month after July, thus completing the 500,000 *by December 31st*, or by November 1st at the *earliest* by using articles closely approximating standard articles.

It will be observed, however, that the order of May 22, 1917, states that "even the lack of uniforms for a week or two should not delay organization." And the note quoted above would seem to indicate that the period might be prolonged and that the prime necessity was to drill the men, as is fully explained in the Secretary of War's statement before the Committee on Military Affairs of the Senate, above quoted.

ADDITIONAL TROOPS

Sections 2 and 3 of the Act of Congress approved May 18, 1917, authorized the organization of special and technical units in the Army during the war. On January 28, 1918, the Secretary of War made the following statement to the Committee on Military Affairs of the Senate: (S. 1,980.)

"Early in this war when Joffre was here and when

Balfour was here, they said to us, 'It may take you some time to get over to us a great fighting army, but you are a great industrial country. Our man power is fully engaged in our industries and in our military enterprises; send over artisans, special engineering regiments and troops of a technical character,' and, although it was not contemplated at the outset, and only a phrase in the emergency military legislation shows that the thing was thought of as a possibility, yet in a very short time we had organized engineering regiments of railroad men and sent them over there and were rebuilding behind the lines of the British and French the railroads which were being carried forward with their advance, reconstructing their broken engines and cars, building new railroads, both back of the French and British lines and those regiments were of such quality that at the Cambrai assault carried on by General Byng, when the Germans made their counter attack, our engineer regiments threw down their picks and spades and carried their rifles into the battle and distinguished themselves by gallant action in the war itself.

"Very early in this war Great Britain, through Balfour and his assistants, and France, through Joffre, said to us, 'Send us nurses and doctors.' Why, before we were scarcely in the war American units, organized in advance and anticipation by the Red Cross, which was taken over into the service of the United States through the Surgeon General's office, were on the battlefield, and there are tens of thousands of men in England and France now who bless the mission of mercy upon which the first Americans appeared in France. . . . But that was not enough. It was suggested that further groups of mechanics might be needed."

These men, as stated above, were not considered when the plan for the organization of the Army was made and the Quartermaster General was asked when the Army could be supplied. They were in addition and the clothing and equipment of the men naturally affected the problem of supply; as did likewise the establishment of the officers training camps, the students at which had to be provided with uniforms and clothing; also the calling to the colors of 26,000 additional National Guardsmen in April in excess of the number which the Corps stated could be provided; and also the calling in June of the National Guard from thirteen states in addition to the number which had been stated could be provided. At a conference with the Secretary of War and General Bliss the Acting Chief of Staff, the Quartermaster General indicated the difficulty this imposed upon the Corps and how it affected the possibility of providing the supplies required for the National Army by September 1st. The Acting Chief of Staff stated his inability to see how that problem was affected by calling to the colors the additional men.

After the above conference the following memorandum was sent to the Chief of the Supplies Division Office Quartermaster General:

July 15, 1917.

"In view of the large number of technical troops which have been called into the service, also the large number of medical officers who have bought clothing and the number of students at the camps which we have supplied, and in view of the fact that the National

Guard is to be mustered into the service on the 5th of August, will there be sufficient supplies on hand on September 1st to equip the National Army?"

To which reply was made on July 18th, enclosing a "Statement showing the Status of the Principal Articles of Clothing" and closing with the following sentence:

"If the National Army is called out September 1st, a portion of the force will have to remain in citizens' clothes. It is therefore recommended that the assembling of the National Army be postponed until October 1st."

This was approved by the Quartermaster General and forwarded to the Acting Chief of Staff on July 19, 1917. On July 20th the Acting Chief of Staff directed the Quartermaster General to report the designation and number of enlisted men comprised in any special units that had been raised and uniformed for the Army and that were not counted by him at the time that he estimated that clothing would be on hand for the first 500,000 drafted men by September 1, 1917.

It will be noted from estimates furnished by the Quartermaster General and given above verbatim that that officer had never stated that clothing would be on hand for the first 500,000 drafted men by September 1, 1917. The time stated by the Quartermaster General was always December 31, 1917; and further it will be noted from the Secretary of War's statement that these special or technical troops had not been considered. The Quartermaster General on July 21, 1917, sent the following memorandum in reply:

"1. Referring to memorandum dated July 20th, there is submitted the following list showing the enlisted men comprising the special units that have been raised and uniformed that were not originally estimated for: i. e.—

Training camps	40,000
Nine railway regiments, engineers.....	10,000
One forestry regiment, engineers.....	1,167
Six months' reserve for 10 engineer regiments.....	11,670
Aviation schools	1,460
Five telegraph battalions, E. R. C.....	1,045
Thirteen base hospitals.....	1,796
Ambulance corps	4,000
Field hospitals and ambulance companies (64 each about 60% complete)	11,700
Ordnance, E. R. C.....	333
Quartermaster E. R. C.....	2,500
Six months' reserve for first and second convoys.....	25,000
Six months' reserve for marines.....	3,800
Total	114,471

"2. In addition to the foregoing it has been necessary to provide a considerable quantity of clothing for the equipment of reserve officers, especially those ordered for duty with troops abroad.

"3. Attention in this connection is invited to statement made verbally in an interview with General Bliss, General Smith and the undersigned on April 2, 1917, wherein it was stated that: 'Considering the stock on hand and orders so far placed, the equipment of the first 500,000 men (Regular Army and National Guard) could be completed by July 31, and that if orders were placed at once for supplies for an additional 500,000 men, they could be equipped within five months from that date.'

"4. On April 16, 1917, in a memorandum of the General Staff it was stated:

'It will not be practicable to properly clothe and equip

within the time previously allotted, this or any other number of men more than that provided for in the original plan.'

"5. In an indorsement of the Adjutant General, dated April 19, 1917, the following statement was made:

'Early in April, orders were placed for clothing and equipage for an additional 500,000 men for delivery up to December 31, and assuming that the first 500,000 men are equipped by the end of July, the Department will be able to clothe and equip 100,000 men monthly thereafter, with the exception of tentage.'

HENRY G. SHARPE,
Quartermaster General.

It should be added that 26,000 students were equipped in the second training camps, so that the total of the additional men was 140,471.

The statements made in paragraphs 3, 4 and 5 of the above memorandum were to correct the erroneous impression of the Acting Chief of Staff as to the date which the Quartermaster General stated the troops could be clothed.

The Quartermaster Corps was informed that the men would be called in September as already provided for in the orders, and the call would not be postponed until October 1st as recommended by the Quartermaster General on July 19, 1917.

Information was received to the effect that the first call for drafted men would be made for 687,000 men instead of 500,000 stated by the Adjutant General in the orders of May 22, 1917, issued by direction of the Secretary of War. The original order calling the men having stated that they would be drilled for a week or

two in civilian clothes, and the note to that order stating in effect that that time might be prolonged; and the Quartermaster General on July 19th, having stated that if called by September 1st a portion of the force would have to remain in civilian clothing, and as this was in accord with the statement of the Secretary of War of the necessity of putting the men in camp so as to train them, it is clear that such was the understanding.

It had been stated that the 687,000 men would all be called in September and effort was made to have the call divided, so that the men would not all arrive at the cantonments at the same time, because of the impossibility of supplying such a large number of new men at one time. At a conference with the Acting Chief of Staff and a member of the Equipment Committee of the War College Division of the General Staff, the suggestion to call 187,000 men September 1st; 100,000 September 15th; 175,000 on October 15th; and 225,000 on November 15th was concurred in by the Quartermaster General for the above reasons.

It was found, however, that the movements as above suggested would conflict with those of the National Guard to their cantonments, and also with the movements of troops to the Ports of Embarkation. This was stated to the Acting Chief of Staff, and the representative in the Quartermaster General's Office of the American Railway Association entertaining the same views, a conference was arranged with a Committee of the General Staff, a representative of the War College, one from the American Railway Association and one from

the Transportation Division Office Quartermaster General. The following proposition was submitted in order to coördinate the movements and was approved: Five per cent. of the National Army to move, beginning September 5th, and moving one per cent. each day for 5 days; forty per cent. of the National Army to move, beginning September 19th, and to be completed as rapidly as possible; forty per cent. of the National Army to move, beginning October 3rd, and to be completed as rapidly as possible; fifteen per cent. of the National Army remainder, beginning October 17th and to be completed as rapidly as possible. This plan was later modified so that the men were moved as follows: September 5th, 32,564; September 19th, 274,181; October 3rd, 172,094; October 27th, 24,594; November 2nd, 24,389; November 19th, 12,641; December 5th, 2,405; and the remainder 144,132 were not moved until February 15th, 1918, due to shortages of uniform clothing caused by sending troops to France, and by ordering the men to the camps in advance of the time, December 31, 1917, by which it had repeatedly been stated that they could be supplied. A delay of over two months and a half was necessary in order to accumulate the clothing to equip the balance of the draft; thus indicating the correctness of the recommendations of the Quartermaster General to delay the calling of the drafted men.

By December 5, 1917, there were 542,868 men in the camps, and the original plan was to provide for 500,000 men by December 31, 1917. As most positive orders prohibited the giving of information regard-

ing the number of men in the camps, these figures could not be stated at the investigation conducted by the Committee on Military Affairs of the Senate.

When the plan for raising the Army was under discussion in April, 1917 there was no intention of sending troops to France until early in 1918. It was generally understood that the first part this country was to play in the war was to provide money and supplies for the allies, and there was deep mortification that so humiliating a rôle had been assigned the country as its part in the world's drama. The year 1917 was to be devoted to organizing, equipping and training the troops and the memorandum of the War College Division of the General Staff, approved September 11, 1917, previously referred, provided for thirty divisions in France in 1918 and sixty divisions in 1919, indicating that our supreme effort was to be made in that year.

Shortly after the arrival in this country of Marshal Joffre in May, 1917, decision was made to send a division of the Regular Army to France for the inspiration and encouragement its presence there would impart to the allied peoples and their armies; and soon the stirring notes and the encouraging words that "The Boys are Coming" were resounding "everywhere."

A division of Regular troops was organized and dispatched and arrived in France on June 26, 1917. The orders for the shipment of troops to France required that each man should have in his possession two complete suits of woolen uniforms, one overcoat, three suits of woolen underwear, five pairs heavy wool socks, and

two pairs of shoes; it was also provided that a six months' reserve of clothing and equipment should be forwarded with the troops. Shortly after the dispatch of the first division, information was given of the intention to dispatch a second division composed of Regular Army and Marine Corps troops. This division was similarly supplied with clothing and its six months' reserve also forwarded. That division arrived in France in August, 1917. Shipments of the woolen uniforms abroad reduced the number which were expected to be available later for issue to troops called to the colors in this country, and the Acting Chief of Staff gave instructions on August 1, 1917, that cotton uniforms would be worn so far as possible until November 1st by troops in the United States.

The Chief of Staff returned from the Mission to Russia about the middle of August, 1917. Some few days thereafter the Assistant Chief of Staff came to the office of the Quartermaster General and inquired concerning the supply of uniform clothing, to ascertain if it was adequate to meet the schedule for shipping troops abroad. The Quartermaster General inquired if a schedule had been adopted and, upon being informed that one had been adopted, remarked that it would seem proper to first ascertain if the Supply Departments were able to provide the necessary supplies to meet it. As a result of this information, the following memorandum was sent to the Chief of Staff on August 31, 1917:

"1. It is requested that this office be informed whether or not it is desired that sufficient quantity of

woolen uniforms and underwear be reserved each month to equip a certain number of troops for overseas duty, or whether these articles should be issued as required to the National Army and other troops located in the northern posts.

"2. An early decision is requested as the issue of woolen clothing to the National Army is being held up pending a decision."

HENRY G. SHARPE,
Quartermaster General. (S. 503.)

Information was given that the shipment of troops abroad would be continued and supplied in the same manner as the first two divisions had been. Troops sent abroad should undoubtedly be given precedence in matters of supply, for when necessary the call for troops in this country could easily be deferred. Upon insistence that information of any contemplated movement of troops abroad should be communicated to the Quartermaster General at the earliest possible moment, it was finally agreed that the information would be communicated to him personally and verbally by a designated officer of the General Staff. Captain J. P. Aleshire on duty in the office was designated to receive the information as to the dispatch of troops abroad and to communicate it to such Chiefs of Divisions and Branches of the Office as would have to be informed in order to arrange for the supplies.

The orders requiring that the men sent abroad should be equipped with two suits of woolen uniforms and the other clothing and equipment before mentioned, frequent applications were received by the Quartermasters

to obtain the necessary supplies for various organizations and, in consequence, the following memorandum was sent to the Chief of Staff on September 11, 1917: (S. 505.)

“It is recommended that a Board be appointed for the purpose of determining priority in the equipment of troops for overseas duty. The Assistant Chief of Staff recently furnished this office confidential information as to the number of troops that would have to be equipped each month for the next three months. Already for the month of September a larger number of troops have been fitted out than we understood were to go. Notwithstanding this fact there is scarcely a day that requisition or request has not come in for the outfitting of some organization or technical troops for overseas duty not previously contemplated.”

HENRY G. SHARPE,
Quartermaster General.

Knowing the necessity of technical troops in France, in order to assist in the preparations for all the arrangements to be made there, it was quite natural that the Bureau Chiefs charged with the execution of these plans should exert themselves to secure the prompt expedition of such troops, but if more troops were equipped than could be shipped to France at a given time, as happened, it caused a still further reduction of the available supply of woolen uniforms and clothing.

Requisitions were received from France in the early part of September, evidently based on General Pershing's project of July 11, 1917, information concern-

ing which had never been received at the Office of the Quartermaster General. These requisitions called for very large quantities of supplies, and the matter was referred to the Chief of Staff in a memorandum dated September 8, 1917, as follows:

“1. Transmitted herewith are extracts of cablegrams from General Pershing calling for initial and monthly shipments of clothing for each 25,000 men. A table prepared in this office (omitted here) is also submitted herewith showing a comparison between the quantities called for by General Pershing and the quantities previously shipped as six months' reserve for the first expedition of approximately 25,000 men. An examination of this table shows that enormous quantities are being called for, which, in the opinion of this office, will be required, due to the nature of the service the troops will perform.

“2. Attention is invited to the next to the last sentence of sub-paragraph 2 (omitted) wherein General Pershing asks that the clothing listed in paragraph 2,752, Quartermaster Corps Manual, be shipped monthly for each 25,000 men. The paragraph quoted shows what is a proper four months' allowance for approximately 25,000 men. This table is based on actual issues on the Mexican border. General Pershing's call for this same quantity each month is practically four times as large. If the supplies called for are furnished, it will seriously interfere with the supply of wool clothing to troops in this country, who also need this clothing.

“3. The estimates for the present year, when submitted, were thought to be made on a very liberal basis and would have provided a reserve of clothing for nearly

nine months, with the upkeep figured in accordance with our past experience; but from this cablegram of General Pershing's it is very evident that the estimate will have to be very largely increased over the amount which was thought necessary at the time the estimates were submitted.

"4. Instructions of the Chief of Staff are requested as to whether these supplies shall be furnished in the quantities called for."

HENRY G. SHARPE,
Quartermaster General. (S. 503.)

Under date of September 18, 1917, the following reply was received from the Adjutant General:

"To the Quartermaster General:

"With the information that

"1. The Secretary of War approves the request for clothing contained in cablegram from the Commanding General of the Expeditionary Forces in France, No. 136 (W. C. D. 9,265-36), paragraph 8, sub-paragraphs 2 and 3, and directs that shipment be made in accordance therewith as soon as this can be done without depriving troops in this country of necessary clothing.

"2. Until that time six months' reserve of clothing will be shipped with each expedition as in the past, in accordance with the enclosed table (omitted) prepared in your office.

"3. The subject of monthly replacements to France has been taken up with the Commanding General of the Expeditionary Forces in France by cablegram (copy enclosed for your information). (Omitted.)

"4. You will arrange at once to procure the additional clothing on the basis requested by the Commanding General of the Expeditionary Forces in France.

“The attached table, prepared by the War College Division of the General Staff, is self-explanatory. Column 8 represents the approximate total requirements—initial issue (column 5) not included—based on present projects for one year.

“5. A copy of this indorsement and enclosures has been furnished the Council of National Defense.

“By order of the Secretary of War:

Adjutant General.”

The depletion of the stock of woolen clothing caused by the continued shipment of the troops and supplies abroad, a memorandum was sent to the Chief of Staff on October 9th, 1917, as follows:

“Attention is invited to the accompanying table (omitted) prepared by the Supplies Division, showing the supplies available on the first day of each month after deducting the upkeep and stores shipped abroad.

“In this connection, it is desired to state that this Department in April was given instructions to prepare for 1,078,000 men. The Department stated that it would be able to equip the men sufficiently to drill them by the 30th of September, but the camps were opened on the 1st of September.

“At that time there was no intention of shipping troops abroad this year. Schedules for shipment of troops have been prepared and this department has not been consulted as to whether the supplies are on hand to meet that schedule.

“The accompanying statement indicates that one of two things must be done; first, that shipment of troops abroad must be discontinued; or, second, that the calling of the remainder of the draft will have to be deferred for at least six weeks.

“This Department has shipped with all the troops going abroad six months’ reserve supply of clothing. A recent cablegram from General Pershing indicated that they have practically no supplies on hand. This is undoubtedly due to the increased requirements owing to the arduous training the men are receiving. General Pershing’s call for stores are in quantities which in the ordinary basis of our calculations would amount to a four years’ supply in one, and, furthermore, the character of the clothing is all wool.

“It is requested that this office be informed as to what is done about the discontinuance of shipping of troops abroad or the postponement of the calling of the drafted men.”

HENRY G. SHARPE,
Quartermaster General. (S. 509.)

Receiving no reply to the above request for decision in a most important matter, a memorandum was sent to the Chief of Staff on October 13, 1917, as follows:

“Referring to my memorandum of October 9th, transmitting a table prepared by the Supplies Division showing the supplies available on the first of each month after deducting the upkeep and the stores shipped abroad, I am attaching hereto an additional table showing the available balances of clothing on December 1st.

“Prompt decision on my previous memorandum is urged.”

HENRY G. SHARPE,
Quartermaster General. (S. 509-10.)

“P. S.—Copy of memorandum of October 9 attached for ready reference.”

A cablegram was received from General Pershing

giving the clothing on hand on October 1st, and stating that the clothing situation was critical; this undoubtedly due to the inability of filling his requisitions of September, above referred to; memorandum was sent to the Chief of Staff on October 18, 1917, stating in part as follows:

"1. . . . Attention is invited to memorandum of this office of August 25, 1917 (Q. M. G. O. 111.03-C.E. Genl. 1918), in which it was shown that the shortage of clothing was due to three causes, as follows:

"First: That arrangements were made to call the National Army before the date this Department stated they could equip them.

"Second: That shipment of troops abroad was made a year before it was the intention to begin such shipments, when the problem of supplying the troops was given to this Department.

"Third: That various special units not included in the number originally estimated for were shipped abroad.

"These are the facts and no doubt the military situation demanded this, but according to the above cablegram from General Pershing, the clothing situation is becoming critical on the other side, and the inability to provide clothing in case any further troops are called into the service in this country still further complicates the problem.

"2. On October 12th, a confidential letter was addressed to this office by the Adjutant General, giving the priority of the supply of woolen clothing to the various units to be shipped abroad and indicating the order in which these troops were to be equipped, and it was presumed that they were to be sent abroad in the

same order. This provides, first, for a large number of aero squadrons and then for another division of troops, and reference is made to this letter in this connection because if additional troops are sent abroad, with the reserve which must be given them, it will further complicate the clothing situation here, on account of making greater shortages.

"In repeated cablegrams General Pershing has urged the necessity of sending labor troops over in order to enable him to make proper provision for handling the supply of troops which he already has there. In the letter of October 12th, above referred to, so far as the Quartermaster's Department is concerned, many of these labor troops are to be shipped last.

"3. If it is not deemed advisable to discontinue the shipment of troops abroad, the necessity of providing adequate clothing for the upkeep of the troops already abroad is imperative, and authority to make shipments for that purpose in preference to any other demands is requested."

HENRY G. SHARPE,
Quartermaster General. (S. 514.)

The above paper was returned by first endorsement from Adjutant General's Office under date of October 23, 1917, as follows:

"To the Quartermaster General:

"With the information that the decision of the President to begin sending troops abroad at an earlier date than had been anticipated by him and to call the increments of the National Army at an earlier date than he had recommended, has called upon his department to put forth very strenuous efforts, which efforts, however,

have so far fairly well met the needs from day to day, and the Secretary is convinced that this same energy will meet all further calls made upon his Department; that while the supply situation is so critical, supplies will continue to be distributed in such manner that no one will suffer, that troops designated for overseas service must be first equipped according to approved schedule of priority in equipment board; that General Pershing's needs must be taken care of, but a large reserve will not be created in France at the expense of the men we now have under arms and who must be made comfortable; that as soon as the supply situation will allow the following priority list will govern—General Pershing's needs ahead of all others, with troops soon to join him, second; National Army divisions in northern cantonments, third; other troops in northern places, fourth; National Army troops at southern camps, fifth; and other troops in southern camps last; that the supply situation will be kept in mind, when further increments of the draft are under consideration."

By order of the Secretary of War,
Adjutant General. (S. 515.)

As a result of the three memoranda above, the calls for the draft were delayed to some extent but not discontinued entirely for at least six weeks, as had been recommended by the Quartermaster General. By December 5th, there were 542,868 men in the National Army cantonments, or about 80 per cent. of the draft of 687,000 men as made. It must be remembered, however, that according to the order of the Adjutant General, dated May 22, 1917, 500,000 men were to be drafted but that the draft actually was for 687,000

men; an excess over the original figure of 187,000 men. Consequently, on December 5th there were 42,868 more men in the camps than the number stated by the Quartermaster General which could be supplied by December 31, 1917. That number, 42,868, does not include the special and technical troops sent abroad or the men in the officers training camps.

The following memorandum was sent to the Chief of Staff on December 6, 1917:

“Orders have been issued to depots to complete equipment for every National Army cantonment after the first increment to the draft has been received to provide 1 hat, 1 overcoat, 1 blouse (olive drab), 1 pair of trousers (olive drab), 2 flannel shirts; 2 suits of underwear, 3 pairs woolen socks, 2 pairs of shoes and 1 pair of leggins. Shipment of these articles were completed by the depots on December 5th, except 157,000 blouses (olive drab), which it is estimated will be completed between the 15th and 20th of December. It is contemplated that these articles will reach the cantonments within two weeks from the date of shipments. There would be sufficient olive drab cotton blouses at every cantonment to make up the deficiency of the woolen garments until the latter arrives.”

HENRY G. SHARPE,
Quartermaster General. (S. 511.)

And the following memorandum was sent the Chief of Staff on December 13, 1917:

“In accordance with instructions of the 11th instant, the following is submitted in connection with cablegram No. 360, dated December 11, 1917, paragraph 2, subparagraph B (copy attached) in which it is reported

that due to 'the failure of the Quartermaster Department to land supplies of winter clothing there has been produced a serious situation.'

"The orders directing the shipment of troops abroad require that each man should be supplied with two complete suits of woolen uniforms, one overcoat, three suits of woolen underwear, five pairs of heavy woolen socks, two flannel shirts, two pairs of field shoes, slicker, and three blankets, in addition to one hat, one pair of leggins and one pair of gloves.

"Attached hereto is a statement showing all of the shipments which have been made to France up to and including December 12th."

The statement is omitted here but will be referred to later. It has been previously shown that the Embarkation Service was by G. O. 102, War Department July 30, 1917, created in the office of the Chief of Staff, for the period of the war, to take charge of the embarkation of troops and supplies for transatlantic transportation and to exercise under the Secretary of War, the direct control incident to that service. Paragraph 2 of the order prescribes as follows:

"2. The function of this section is to coördinate all shipments of munitions and supplies of every kind and all troop movements whose ultimate destination is Europe and to advise and assist the Chief of Staff in reference thereto. It will have direct supervision under the Chief of Staff of all movements of supplies from points of origin to ports of embarkation; will supervise the operations of the latter and will control the employment of all Army transports engaged in the transatlantic service and such commercial shipping as may be

used to supplement that service. It will arrange with the Navy for convoy service."

The effect of this order was to take from the Quartermaster Corps all control of such matters, a condition which evidently was not appreciated in France, as was shown by frequent cablegrams asking that the Quartermaster General's attention be called to the improper loading of ships, or the failure to forward supplies. As these matters were entirely removed from his control, frequent requests were made that the authorities in France be so informed, in order that the Quartermaster Corps should not be blamed for matters over which it then had no control or supervision. The repetition of these complaints indicated that the requests of the Quartermaster General were not complied with. The Quartermaster Corps, as well as all other Supply Departments, had to procure from the Chief of the Embarkation Service a "release" before either men or supplies could be forwarded to the ports of embarkation; after they were so sent there were no means of ascertaining whether they had been placed aboard the Transports. In order to secure this information the Quartermaster General sent a number of officers, with a force of clerks, to the Embarkation Ports to keep a check on such matters, and to enable the Quartermaster Corps to duplicate a shipment in case of the loss of a transport, but such men were not allowed to function as it was claimed that the matter was confidential and under the immediate control and supervision of the Chief of Staff. The lack of fairness in permitting the

Quartermaster Corps to be blamed for matters the control and supervision of which had been taken from it and assumed by others is manifest.

The memorandum of December 13, 1917, continues, as follows:

“In addition thereto, this office, through the aid of Colonel Puckle, of the Army Service Corps of the British Army, now on duty in this office, has secured the consent of the British Government for the sale of 200,000 uniforms (100,000 made up and the other 100,000 to be made from cloth to be manufactured). General Pershing was notified of this and was informed to purchase same, if he approved, which purchase has since been undertaken, as has also the purchase of 200,000 blankets from Spain, made on General Pershing’s request.”

(Note: The regulation buttons and ornaments for the uniforms already made were sent over, and “cutters” provided with our standard patterns for uniforms were sent to London to cut the 100,000 uniforms from the cloth when manufactured.)

The memorandum still continues:

“In this connection attention is invited to the fact that the troops in this country are only supplied with one suit of clothes, three suits of underwear, three pairs of woolen stockings, two pairs of shoes, one pair of leggins, a hat, a pair of gloves, one coat, one overcoat, and two flannel shirts. The troops are not all supplied with slickers, and the remainder of the draft has not yet been supplied with woolen coats. This is only one suit to be worn all the time at severe drills and at parades, which has been required to last them from the

time they went into woolen clothes up to the present time. In a cablegram from General Pershing, dated October 1, a report was made on the clothing situation. This office submitted a memorandum under date of October 18 to the Chief of Staff and stated the exact condition as to clothing and recommended that 'if it is not deemed advisable to discontinue the shipment of troops abroad, the necessity of providing adequate clothing for the upkeep of troops already abroad is imperative, and authority to make shipments for that purpose in preference to any other demands, is requested.' The memorandum was returned by a first indorsement from the Adjutant General's Office under date of October 23 (given above). The distribution of the available clothing has been made by this department in accordance with the foregoing instructions.

"It is quite evident that the situation in this country is not appreciated abroad nor the efforts which are being made to meet the calls for France. It is, therefore, recommended that a copy of office memorandum of October 18, with the first indorsement of the Adjutant General's Office of October 23, together with a copy of this memorandum and the accompanying statement, be transmitted to General Pershing. Two copies of each paper referred to are attached."

HENRY G. SHARPE,

Quartermaster General. (S. 513-4.)

INVESTIGATION BY COMMITTEE ON MILITARY AFFAIRS OF
THE SENATE

Explanation was made during the course of the Investigation that an order had been made by the War Department at the beginning of the War that nothing would be undertaken, and no changes made in any arti-

cles, which did not assist in the winning of the war. This order was quoted as the reason for disapproving the changes in the uniform, as recommended by the Quartermaster General, notwithstanding the fact that it was clearly shown that such changes would facilitate very greatly in enabling the men to be expeditiously equipped because of the great reduction in the number of the various sizes of garments which would have to be produced. In other words, more men could be fitted from a tariff of sizes prepared to conform to the changes recommended than could be from the tariff of sizes made on the old pattern. Instructions were further given that only such changes would be considered as were recommended by the proper authorities with our troops in France. Consequently, report as to the suitability and adaptability of the uniform in every particular was called for, and paragraph 6, cable No. 38, from General Pershing gave the character of winter clothing necessary.

This cablegram stated that the present woolen underwear, stockings, flannel shirts, coats, breeches, and field shoes were satisfactory; and recommended hip rubber boots and moccasins for use of men in the trenches. It stated that the present woolen gloves were satisfactory if the wristlets were made longer; that the overcoats and slickers should be shortened to the knee; that leggins were not satisfactory on account of mud and that they should be replaced by spiral puttees; and strongly recommended the issue of jerkins. Steps were at once taken to provide for the changes recommended.

As the coats and breeches were reported to be satisfactory, and because of the order referred to, there could be no effort made to increase the weight of the cloth.

During the Senate Investigation the Quartermaster General was asked if there had not been a recommendation from the chairman of the Wool Manufacturers' Committee of the Committee on Supplies, that the weight of the cloth should be increased. To which the Quartermaster General stated that no such recommendation had been made either verbally or in writing to the Quartermaster Corps. It was urged, however, with considerable insistence that such a recommendation had been made, and that it was presented by Colonel John P. Wood one of the best wool experts in the country.

Colonel Wood was called by the Senate Committee and on January 7, 1918, testified that he was President of the National Association of Wool Manufacturers for a number of years; that he had served as chairman of a committee requested by the board of directors of the American Association, another trade organization, which was to represent the industry at large in any relations it would have with the Government.

Colonel Wood was asked the following questions: (S. 1457.)

"But you were on this committee on woolens which practically created the standard of uniforms for soldiers here?"

Colonel Wood: "No; we only made certain recommendations as to change in the content, not as to the weight. The weight had already been long established,

and no question had been raised as far as I know, except informally and in conversation with individuals not in the Government, individuals who knew about the heavier weights of cloth used abroad, as to whether it might not be found necessary to use heavier cloth if our soldiers wanted it over there."

Question: "Was that considered by your committee?"

Colonel Wood: "Yes, sir."

Question: "Did you make any recommendations with regard to it?"

Colonel Wood: "None; because nothing had been called for on that subject, and because I think the conviction of the committee generally was that a heavier weight was not desirable, and perhaps I can answer, having some voice with the committee now, the judgment today is that the 16-ounce uniform is quite heavy enough."

Colonel Wood was also called before the Committee on Military Affairs of the House of Representatives and on January 15, 1918, testified as follows: (H. 715.)

Colonel Wood: "A great deal of the discussion occurred in the Senate Committee hearing as to the sufficiency of the weight of the uniform cloth which is now sixteen ounces to the yard, and it has been referred to by some of the members of the Committee as being entirely inadequate.

"I make the statement now that I did before that Committee, that until some American experience in European service determines the necessity for greater

weight, I think it would be a very serious mistake to increase the weight, and for this reason: the troops in the Expeditionary Force are to wear this uniform the year round. The sixteen ounce weight is heavier than the average weight of civilian winter clothing in this country, which is fourteen ounces."

The question of the use of reworked wools, sometimes called shoddy, in the manufacture of clothes, in order to conserve the wool supply of the country also came before the Committee on Military Affairs of the Senate, and quotation from the testimony of Colonel John P. Wood at his hearing on January 15, 1918 before the Committee on Military Affairs of the House of Representatives is herewith made. (H. 710.)

Chairman: "As I understand you, from your experience as a manufacturer and your actual experience in the field, you think the articles supplied, so far as keeping the soldiers warm is concerned, are as good as are supplied to the soldiers of any country in the world?"

Colonel Wood: "Yes, sir. The uniform—the coat and the breeches—has thus far been made of all wool, with the exception of some small and emergency purchases, which were an infinitesimal part of the whole quantity. The charge that the uniforms are being regularly made otherwise than of all new wool is a mistake.

"There is probably one other thing that I ought to state in order to make the whole subject clear.

"There has been a great deal of discussion by the

manufacturers and the economy board and others about the shortage of wool, and opposed to that, other statements have been made by some persons that there is no shortage of wool.

“Both are right, but because of the difference of the statements it probably needs a little clearing up of the situation.

“We have in this country at the present time probably as much wool as we ordinarily have. But there are two very important qualifications: Of the approximately 280,000,000 pounds grown in America in a year, which is about one-third of what we are now using, only about 35 per cent. of that is of the grades such as are necessary for military clothing, and the rest of it is much finer fibered wool and while it could be used it would be much more costly and not make so sturdy a cloth.

“We rely for the rest of our wool upon importations from Australia, New Zealand, South America and South Africa. Australia, New Zealand, and South Africa are under the control of Great Britain entirely, and owing to the shortage of ships it has been almost impossible to bring any from those colonies to this country for nearly a year. A certain amount has been brought from South America, but Great Britain’s anxiety, both for herself and her allies, to create a supply against a still more serious shortage of shipping and competition in South America for the wool of the only open or free market, has made it impossible for us to ac-

cumulate supplies for the future. The whole question is involved in the problem of shipping.

"There is a lot of wool in Australia and New Zealand, but most of that is also of the fine sort. Great Britain has taken almost all of the coarser wools for military purposes. The necessity for conservation at the moment is because of the very great difficulty, if not impossibility, of bringing wools in any large quantity to this country, and while we have enough probably to see us through for this year, if the amount brought to the country continues to be as little as during the last nine months, we will have a famine in wool in 1919, while with the shortage of shipping increased by reason of destruction or by reason of diversion of still more vessels to carrying supplies to our troops in Europe, the wool situation will become acute even sooner.

"That is the reason for anticipating and conserving the wool now while we have it, rather than waiting until the supply is exhausted. It is not a question of whether we want to use the cloth in the proportion of 65 to 35, but it is whether, by adopting that at the beginning of the war we can continue using that for a considerable period of time, or whether we should go on using 100 per cent. in all of these articles for 1917, and then probably have to use a much greater proportion than 35 per cent. of reworked wool. That is why this step was taken."

The above are the reasons so ably and concisely expressed by an acknowledged expert which influenced the Quartermaster General to adopt the use of reworked

wool in the manufacture of cloth for overcoats and in the blankets, making use of the clips, the same method of conservation as that of using the remainder of a Christmas turkey the following day.

It is interesting to ascertain the practice of the English as regards the use of reworked wool in manufacturing cloth. Howard Preistman of Bradford, England, an authority on wool manufacture in the United Kingdom, in a paper published in the "Bulletin of the National Association of Woolen and Worsted Manufacturers" for July, 1918, writes as follows:

"It is probable that the use of shoddy has been an even greater cause of controversy in America than it has been in England, for in England we have never shut our eyes to the fact that we imported 100,000,000 pounds of rags per year before the war; that we added all our own waste cloth to these, and ground the whole down to fiber again. Then, by mixing this short fiber with a very large quantity of brain and with very little else, the manufacturers of the heavy woolen district turned out an immense amount of serviceable cloth at an absurdly low price.

"Probably this was the reason why the authorities did not waste much time in establishing a center of their own for dealing with the incredible quantity of old socks, underclothing, uniforms, and overcoats that so early in the war began to pour in from France. At any rate, such a warehouse is in existence in Dewsbury, and through its efficient management millions of pounds

that otherwise would have been wasted are turned from old garments into new."

SHORTAGES AT CAMPS

At the hearing before the Committee on Military Affairs of the Senate on December 21, 1917, the matter of the shortage of clothing at the camps was brought up. Explanation was made that the Quartermaster Corps stated that a definite number of men could be clothed by December 31, 1917; that the men were called to the camps in advance of the time at which it was stated they could be provided for; that an additional number of troops were called that were not included in the original plans; and that the shipment of troops to France was commenced many months in advance of the time originally planned, and that such shipments necessitated furnishing the men with additional uniforms and sending to France large reserves, thus depleting the stock available to clothe the men called to the camps. And further that orders to rush the shipments of the clothing to supply the existing shortages had been given, and that by the end of two weeks all would be provided. The Committee on Military Affairs of the Senate called upon the Secretary of War for a report regarding the shortages of woolen clothing, this report is given in the following communication:

WAR DEPARTMENT

Washington, January 4, 1918.

“Hon. Geo. E. Chamberlain,
“Chairman Committee on Military Affairs, United
States Senate.

“My dear Senator: Replying to the communication from your committee of December 26, regarding shortage of woolen clothing, the following is submitted for your information:

“Telegrams were sent to all camp commanders for reports as to shortage, and replies were received. From these replies there is found to exist a shortage, and the lists below show such camps and the efforts made to correct same:

“Camp Wheeler: Overcoats, number sufficient. Blouses, woolen, short 1,141, due to lack of proper sizes. Instructions sent to depot quartermaster to employ necessary labor and alter those on hand.

“Camp Shelby: Overcoats, number sufficient. Blouses, woolen, short 5,100. Ordered from New York.

“Camp Kearney: Overcoats, number sufficient. Blouses, woolen, short 13,809. Climate mild; shortage due to sending blouses to colder camps first.

“Camp Dix: Overcoats, short 19; en route to camp 2,500. Blouses, woolen short 1,440; en route to camp 6,000.

“Camp Jackson: Overcoats, number sufficient. Blouses, woolen, number sufficient.

“Camp Grant: Overcoats, number sufficient. Blouses, woolen, short 3,821. Ordered from Chicago depot.

“Camp Custer: Overcoats, short 530. December 26, 600 were shipped by express from Philadelphia. Blouses, woolen, short 4,530, due to lack of proper

sizes. Instructions sent to depot quartermaster to employ necessary labor and alter those on hand.

"Camp Beauregard: Overcoats, short 10,863. Shipped by express December 22, 22,300. Blouses, woolen, short 3,094; 2,784 blouses on hand have been ordered altered.

"Camp Bowie: Overcoats, number sufficient. Blouses, woolen, short 3,725; 2,750 sent to Fort Sam Houston for exchange. Balance ordered shipped by express.

"Camp Dodge: Overcoats, short 50. Blouses, woolen, short 300. Both due to lack of proper sizes. Depot quartermaster directed to employ labor and alter same to fit.

"Camp Doniphan: Overcoats, short 2. Blouses, woolen, number sufficient.

"Camp Funston: Overcoats, number sufficient. Blouses, woolen, short 9,600; now en route by express 10,000.

"Camp Wadsworth: Overcoats, short 45. Depot quartermaster authorized to hire labor to alter those on hand. Blouses, woolen, short 3,367. Shipped by express December 23, 2,000.

"Camp Sheridan: Overcoats, number sufficient. Blouses, woolen, short 3,996, due to lack of proper sizes. Instructions sent to depot quartermaster to employ necessary labor and alter those on hand.

"Camp Pike: Overcoats, short 46. Blouses, woolen, short 1,260. Overcoats and blouses, woolen, ordered shipped from St. Louis depot.

"Camp Greene: Overcoats, number sufficient. Blouses, woolen, number sufficient.

"Instructions have been sent to all depot quartermasters to obtain immediately, locally, any uniform garment which is short in order to give to each man one woolen uniform; when wrong sizes are on hand, to

exchange with other camps, if practicable, and to employ garment makers to alter garments so as to fit those who are without necessary uniforms.

“In addition to the shortages of overcoats and woolen blouses mentioned above, the reports also showed shortages of breeches in some camps, and in five or six there were small shortages of woolen underwear and some men did not have the prescribed allowance of three complete suits of underwear. These were also directed to be supplied from local markets.

“Blouses are very difficult to obtain and the shortage on this account is quite general. However, provided each man has woolen underwear, and a flannel shirt, and an overcoat, the temporary shortage would not materially cause great inconvenience. As fast as woolen blouses are received from contractors they are being forwarded by express to the different camps and cantonments where shortage exists.

“The delay in overcoats and other garments received was due partially to supply and largely to railroad delays, far longer than customary. All the camp commanders have been directed to report daily as to equipment.

“In all cases there was found to be sufficient bedding in the hands of the troops.”

Cordially yours,

NEWTON D. BAKER,

Secretary of War. (S. 1,351.)

It will be noted that the above letter cites the steps taken to cover the shortages. The totals of the shortages above reported amount to 11,555 overcoats, and 55,183 blouses.

The Secretary of War, on January 28, 1918, testified

before the Committee on Military Affairs of the Senate, as follows:

“Now, instead of having 50,000 or 100,000 men in France, in 1917, we have many more men than that in France, and instead of half a million men whom we could ship to France if we could find any way to do it in 1918, we will have more than one-half million men in France early in 1918; and we have available to ship to France, if the transportation facilities are available to us—and the prospects are not unpromising—we will have one and one-half million who in 1918 can be shipped to France.”

The Chairman: “Why have you not felt it proper to let the public into your confidence with reference to these things that you are telling now?”

Secretary Baker: “Senator, I confess I have hesitated and I still hesitate. I have here a statement from Field Marshal Von Hindenburg, in which he is quoted as saying in a German newspaper, in contemptuous fashion of us, that we have advertised our preparations for this war in an unworthy manner.”

The Chairman: “Do you think for a moment, Secretary Baker, that there has been any time within the last year that the German Secret Service has not been fully advised as to everything we have done?”

Secretary Baker: “Yes, Senator, I know. If I may rely upon confidential information which we get from confidential sources, the German Government is

still mystified as to the number of men we have in France, or have had there at any time." (S. 1978.)

The above statement was made at a public session of the Committee, and at the session held on February 6, 1918, effort was made to secure information for the basis of the statement, and the Secretary of War was questioned as to the ship tonnage which would be available for transporting the troops to France. The latter session was also public, and for that reason Senator Beckham made the following remarks: (S. 2.080.)

"Let me make the suggestion: I believe all of the members of the Committee recognize the wisdom of the War Department in not disclosing the exact number of troops we now have in France. Yet, at the same time, the effect of these questions, if answered, in determining how many tons of shipping you have, how much has been used, how much we will have at some time in the future would be, by a simple process of arithmetic, to bring out exactly how many troops we have taken over there, because we can all well understand that troops have been shipped over there as rapidly as tonnage could be found.

"The direction of these questions is to that effect, to disclose in a public hearing how many troops we have in France."

As stated previously, the orders positively prohibited the giving of information as to the number of men in the camps and the number of troops which had been shipped to France. The above extracts clearly indicate the fact and the propriety of such orders. Because of

such orders it was not possible for the Quartermaster General to give a statement of the amount of clothing shipped to France as a reserve, as these figures would indicate the number of men there.

The following is a statement of clothing and equipage shipped overseas by depots from date of first convoy to Jan. 15, 1918 (H. 736).

CLOTHING

Belts, waist	122,268	Laces:	
Blankets	520,253	Breeches	359,413
Boots, rubber:		Leggins	1,561
Hip	152,224	Shoe	267,632
Knee	9,556	Leggins:	
Breeches, wool	227,359	Canvas	79,907
Caps:		Leather	1,000
Denim	11,872	Spiral, puttee	234,752
Winter	222,212	Moccasins	201,161
Chevrons, wool	74,109	Overcoats	140,574
Coats:		Overshoes, arctic	355,868
Blue, dress	1,824	Shirts, flannel	215,957
Wool	132,047	Shoes, field	898,821
Denim	70,350	Slickers	84,839
Drawers, wool	856,361	Stretchers, shoe	335
Gauntlets, winter	184,437	Toques	135,673
Gloves:		Trousers:	
Riding	91,583	Denim	100,456
Wool	279,919	Blue, dress	3,024
Horsehide, fleece		Undershirts, wool	681,224
lined	2,902	Stockings, wool heavy	
Yellow, horsehide ...	30,902	weight	941,512
Hats, service	158,698		
Jerkins	201,155		

Note: The orders directing the shipment of troops abroad required that each man shall be supplied with 2 complete suits of woolen uniforms, 1 overcoat, 3 suits of woolen underwear, 5 pairs of heavy woolen socks, 2 flannel shirts, 2 pairs field shoes, 1 slicker, 3 blankets, 1 hat, 1 pair spiral puttees, 1 pair gloves.

It will be observed from the above table there had been shipped 227,359 breeches, wool; 132,047 coats, wool; 856,361 drawers, wool; 140,574 overcoats; 215,957 shirts, flannel; 681,224 undershirts, wool. These figures compared with the total shortages given in the letter of the Secretary of War of January 4, 1918, above quoted indicate that those shortages of 11,555 overcoats; 55,183 blouses, and some breeches and underwear would not have existed on December 31, 1917, the date stated at which the troops would be equipped, had not the necessity of shipping the supplies to France arisen. Furthermore, it will be noted that each man sent to France was provided with an extra suit of uniform, and it will be shown that the remainder of the draft, 144,132 could have been supplied from the extra uniforms so taken over by the men.

According to official figures there were on December 31, 1917,

In United States Service	}	Men
Exclusive of 5,493 Philippine Scouts		1,324,573

and of this number there were in France 178,591 men on the same date.

As the shortages noted in the Secretary of War's letter of Jan. 4, 1918, had been provided for, it will be seen that the Quartermaster Corps had equipped and clothed the following men by December 31, 1917:

	Men
In the United States Service exclusive of Philippine Scouts	1,324,573
Marines	3,850
Signal Corps Cadets	7,000

1st Training Camp.....	42,000
2nd Training Camp.....	26,000
A. E. F. (extra uniforms).....	178,591
Total	<u>1,582,014</u>

And it is thought to be a fair statement to add that in so doing the Quartermaster Corps fully carried out the plan given to it, and accomplished the task in the time prescribed, and by the date which had been frequently specified.

PROBLEM OF SUPPLY

In order to work out a plan by which supplies should always be available when needed, both in this country and abroad, it was necessary to consider carefully the amount of time required for transportation of supplies from manufacturers to depots, from depots to camps, or from depots to troops abroad.

An even more important problem was that of determining the time required to obtain supplies after orders had been placed with factories, and oftentimes difficulties necessarily resulted because of an underestimation of this time or because of delinquencies in factories themselves.

At the beginning of the war it was peculiarly true that factories took contracts for much more than they could actually produce, and that factories in certain parts of the country were given contracts for much more than could actually be produced in their territories. The proper allocation of contracts, the determination in advance of the allocation of contracts as to

whether raw materials were available for the actual manufacture, were matters which had to be worked out in great detail. For example, the problem with respect to woolen clothing was not merely the problem of purchase of a supply already existing. It was a problem of determining: first, how many suits were needed and when and where needed; second, of making sure that the wool was available for the manufacturing of such suits—and this constituted one of the most serious problems; third, the placing of contracts for the obtaining of such uniforms; and fourth, the delivery of the uniforms to the places where they were actually needed. The problem of obtaining, manufacturing and supplying quartermaster supplies for the Army at home and abroad was therefore tied up with the whole system of national industry and of inland and ocean transportation.

DISTRIBUTION OF SUPPLIES IN THIS COUNTRY

The Quartermaster Corps machinery for distribution and for control of distribution has been generally referred to above. It is desirable, however, to refer to the relationship between the Office of the Quartermaster General in distribution and the several camps, posts, and military stations throughout the country.

When the war first began all supervision over the supply of posts, camps, etc., was in the hands of the six territorial Army departments and was supervised by the department commanders and under the depart-

ment commanders by the department quartermasters. By General Orders, No. 96, W.D. 1917 (July 20, 1917), organized tactical divisions of the National Guard and the National Army after arrival at their divisional camps (the new training camps constituted as a result of the war) were exempted from the control of the department commanders in all that pertained to administration, instruction, training, and discipline. Department commanders, however, were expressly given supervision over the supply of these camps, and were required to take steps to establish a camp supply depot at each camp. These camp supply depots were to be filled from the general depots of the supply bureaus, or directly from contractors as designated under the direction of the bureau chiefs. The camp supply depots were by this order under the direction of division commanders.

General Orders No. 137, W.D. 1917 (Oct. 30, 1917), rescinded General Orders No. 96 and exempted from the control of the department commanders the supply of organized tactical divisions of the National Guard and National Army after arrival at divisional camps. By General Orders No. 137 "The camp representatives of each supply department will report direct to and be under the supervision of commanding officers of such supply depots as may be directed by the respective bureau chiefs, who will be held responsible that adequate supplies are on hand at all times." Camp supply depots remained under the direction of division or camp commanders for discipline, protection, and coördination

of supply within their divisions or camps, but ceased to be under the control of the division or camp commanders with respect to the general handling of supplies themselves.

A *Fuel and Forage Branch* was established in the Supplies Division very early in the war, and Colonel W. H. Horton assigned to the charge of same, and to act as the representative of the Quartermaster Corps with the Fuel Administration when the latter was created.

Previous to the establishment of the United States Fuel Administration, the coal and other fuel required by the army were procured by contract, after due advertisement as required by law. These advertisements were issued from the various department headquarters, under the decentralized method of administration then in operation. It was found that satisfactory contracts could not be made, as the coal producers and dealers were unwilling under the conditions then existing to enter into contract for any extended period of time. After the establishment of the Fuel Administration it was necessary to centralize in the Office of the Quartermaster General the supply of coal for the army and compilations were made covering the requirements of all posts, camps and stations. Allocations for them were received from the Fuel Administration.

Many difficulties were encountered in the winter of 1917-18 in keeping the camps supplied with the necessary fuel, due to the severity of the weather, the shortage in production of coal, delays in transportation,

caused by snow and by the congestion of transportation; but by constant attention it was possible to maintain the supply in a satisfactory manner, with but few complaints of actual shortage.

The relationship and contact with the Fuel Administration was close and constant. Through circular letters outlining methods of procedure in procurement of coal and coke, decentralization was sought in order that time might be saved. The Fuel Administration had its representatives in nearly all the coal-producing districts of the country. After quartermasters were advised as to which district representative their requirements had been referred for allocation with the coal or coke-producing companies, or with which producing company estimate had been placed, these quartermasters were authorized to handle the matter direct with the representatives or the shipper.

Previous to the beginning of the war the forage and bedding required by the army had been handled in the same way as the fuel requirements, that is, by contract after advertisement. This was also found unsatisfactory, due to the great fluctuations in prices, and an office was established at Kansas City, Mo., under the direction of Colonel E. E. Dravo, charged with the duty of obtaining the necessary supplies.

CONSERVATION AND RECLAMATION

Very early after the declaration of war, the United States followed the British and French example of providing for the reclamation of materials and supplies.

The proper provisions for disinfecting, cleaning, repairing, and pressing of clothing, shoes, and equipage became the more necessary after the abolition (by General Orders, No. 89, War Department, 1917) of the individual clothing allowance for enlisted men. With the publication of this order, clothing issued to enlisted men became definitely Government property, and a guaranty was given that a soldier would be furnished the quantity of clothing necessary and adequate for the service upon which he was engaged. With respect to shoes, action in providing methods of repair was taken on June 28, 1917, when instructions were issued by The Adjutant General's Office to all department commanders in the United States authorizing them to submit requisitions for machinery for half-soling shoes, at the rate of one machine for each regiment called into the service of the United States.

In the Supplies Division of the Office of the Quartermaster General a Conservation Branch was created on October 5, 1917. This branch was erected into an independent division of the Office of the Quartermaster General by Office Order No. 114 (Nov. 8, 1917). By June 30, 1918, the Conservation and Reclamation Division had a total personnel of 108.

On December 1, 1917, every camp quartermaster and depot quartermaster was directed to assign an officer and an adequate personnel to conservation work in the respective camps and depots, and an allotment was made of 8 men for the operation of every shoe shop and 21 men to every clothing repair shop.

On January 29, 1918, General Orders No. 9 published to the Army regulations pertinent to reclamation of waste at the various depots, cantonments, camps, posts, forts, and other units of the Army, and charged the reclamation officer with the direct supervision of clothing, shoe, hat, and equipage repair shops of the Quartermaster Corps.

In December, 1917, the construction of a building to house the repairing of shoes and clothing was authorized at each of the National Army and National Guard camps. The space thus provided proved insufficient to meet the requirements of the camps and cantonments and had to be increased from time to time. Base plants were established at New York, Philadelphia, Atlanta, Fort Sam Houston, El Paso, Jeffersonville, and Chicago. These base plants provided a means of renovating clothing and equipage for the small stations, where the establishment of a repair shop was not warranted or advantageous contracts could not be made.

On June 17, 1918, Special Regulations No. 77 were published to the Army. These regulations enlarged the functions of the Conservation and Reclamation Division, placing all laundering, dry cleaning, and gardening and farming under its jurisdiction, in addition to the repairing of clothing, shoes, hats, and equipage, and the prevention of waste specified in General Orders, No. 9, 1918.

The personnel of the field organization in the various cantonments and camps grew from the original allotment of 8 men to every shoe shop and 21 men to every

clothing repair shop to a company of 580 officers and men. The enlisted personnel consisted of men disqualified for any reason for service overseas.

The repair shops authorized in December, 1917, were in many cases completed and equipped and in operation by April, 1918.

Camp laundries were established at Camps Custer, Dix, Funston, Lee, Meade, Merritt, Sherman, Stuart, Taylor, Travis, Upton, and at 15 Regular Army Posts.

VI

REMOUNT DIVISION AND REMOUNT SERVICE

Organization and operation—Method of purchasing remounts during the War with Germany—Training activities—Overseas units—Breeding.

ORGANIZATION AND OPERATION

At the outbreak of the War with Germany, the Remount Division was not yet in existence and there was no Remount Service worthy of that name. The purchase of army remounts and the supervision over the three permanent remount depots, and the two auxiliary remount depots then in existence, and remount matters generally, were entrusted to the Transportation Division of the Quartermaster General's Office. That Division, likewise, had jurisdiction over the procurement and distribution of all motor-propelled and animal-drawn vehicles, harness and miscellaneous animal and wagon equipment. Later the Remount Branch of the Transportation Division was organized, and in September, 1917, this Branch developed into a fully organized Division, with one officer in charge and four commissioned, and about sixteen civilian assistants. At that time the procurement and distribution of animal-drawn

vehicles, harness and miscellaneous animal and wagon equipment were also transferred from the Transportation Division to the newly organized Remount Division.

For the purpose of the procurement of remounts, the United States, shortly after the beginning of the War, was divided into four Remount Purchasing Zones, viz: the Eastern Zone with Headquarters at the Front Royal Remount Depot, Front Royal, Va.; the Southern Zone with Headquarters at Fort Reno Remount Depot, Fort Reno, Oklahoma; the Northern Zone with Headquarters at Fort Keogh Remount Depot, Fort Keogh, Montana; and the Central Zone with Headquarters at Kansas City, Missouri.

At the beginning of the War, there were as heretofore stated, three permanent remount depots and two auxiliary remount depots in existence, viz: the permanent remount depots at Front Royal, Virginia, Fort Reno, Oklahoma, and Fort Keogh, Montana, and the auxiliary remount depots at Fort Bliss, Texas, and Fort Sam Houston, Texas. There were on hand with organizations and at posts and stations in the United States and Insular Possessions, approximately 100,000 animals of all classes. These were distributed largely along the Mexican Border, and in the Southern Department, having been turned into the two auxiliary Remount Depots, named above, by organizations of the National Guard, when the latter were ordered to their home stations for muster out of the Federal Service. There was a surplus of approximately 40,000 animals of the total number of animals on hand, the least desir-

able of which were condemned and sold and the remaining surplus issued to organizations belonging to the first increment of the enlarged regular army, and to the National Guard organizations that were again called into the service to guard public utilities.

Prior to the outbreak of the war, many plans had been worked out for the procurement of remounts and of vehicles and harness, to be used in the event of hostilities, but when War was declared it was found that these plans were obsolete, due to the magnitude and extent of the military program. Consequently it was necessary to decide immediately upon, and to adopt a plan of purchasing animals, wagons, harness and other equipment that would meet the demands of the War Department, and safeguard the interests of the Government. The plan at the same time was to be based on the principle that no individual, firm or corporation should be permitted to make more than a reasonable profit in furnishing equipment and animals to the Government. The system of purchasing by contract from the lowest bidder was not suitable for war conditions as it lacked the necessary flexibility and required too much time to put it in operation.

METHOD OF PURCHASING REMOUNTS DURING THE WAR WITH GERMANY

In the summer of 1917, the contract method of buying having failed to produce the required number of animals, the Quartermaster General, in a memorandum

to the Secretary of War on the relative merit of open market purchases and purchase by contract after competitive bidding, expressed an opinion in favor of the former as being less costly and more flexible than the latter. "We shall require," the memorandum set forth, "approximately 180,000 horses and 80,000 mules for the National Guard and National Army. The purchases are to commence about August 1st. If we let contracts for supplying these animals, under the law, we cannot reduce or increase any contract more than twenty per cent. If the war should suddenly come to a close, the Government would be compelled to buy millions of dollars' worth of animals it would not need, or it would be compelled to annul contracts and pay contractors large amounts for damages. On the other hand, by purchasing in the open market without contract, the Government will be able to stop buying on short notice. If great losses of animals should occur in war (such as the sinking of a convoy of animal transports), it would necessitate quick buying of larger numbers than the contractors could furnish, and the Quartermaster Corps must either buy in the open market, or fail to meet the military needs of the Nation. It would take too long to advertise and let new contracts."

The method of open market purchases suggested by the Quartermaster General, was approved by the Secretary of War July 8, 1917, and shortly thereafter instructions were sent to the various Remount Zones to buy according to the new system. The Quartermaster General furnished the Purchasing Officer in each of the

permanent Remount Depots with the average price he was authorized by the Secretary of War to pay for each class of animal, which price he was not allowed to exceed. The Purchasing Officer was also allotted a certain number of animals of each class to be purchased in his Zone within a specified time. He was required to report to the Remount Division, Office of the Quartermaster General, each day by wire, the number of each class of animals shipped, names of contractors from whom purchased, and the organization of the Army and destination to which shipped during the preceding day in his Zone. No paid advertisement was authorized in connection with this method of purchase in the open market. A form of agreement with dealers and contractors was adopted which relieved the latter of certain onerous provisions of the old contracts. It required a bond of but five per cent. of the total amount of the contract where more than 100 animals were contracted for, and provided for retention of five per cent. of contract price for 100 animals or less until fulfillment of contract. The Government's interests were further protected by reserving the right to terminate inspection and purchase at any time, or on termination of hostilities, on ten days' notice to the contractor. These provisions removed some of the main objections raised against the old form of contract. The Government option to suspend purchases was twice exercised during the year 1918.

During the summer and fall of 1917, buying was conducted on a large scale in all Remount Zones under

the open market method, bids being accepted without advertisement from reliable contractors and dealers located at points convenient for inspection and delivery, at prices fixed by the Government. Under this system, enterprising dealers, having a certain market at known prices, were able to build up buying and collecting organizations which brought animals rapidly to inspection points and assured a steady flow of the desired types to camps and auxiliary remount depots. Delivery was required to be made within fixed periods, usually fifteen to forty-five days, the policy being to give comparatively small buying orders to be executed in short time, followed by new orders, so as to keep purchasing organizations, both of Government and dealers, steadily at work. Contracts were eagerly sought for, and most of the dealers were able to carry out their obligations in full.

The principal States in which animals were purchased were Oklahoma, Missouri, Illinois, Montana, the Dakotas, Ohio, Kentucky and Texas. Contracts were made with approximately 350 dealers and the heaviest buying was done in the Kansas City and Fort Reno Zones. The successful operation of the open market contract system enabled the Remount Division to keep pace with the demands of the rapidly extending military organization, so that in the spring of 1918 there was a surplus of animals on hand. Purchasing was then suspended and all contracts cancelled.

Inspection of animals in the field was made by Purchasing Boards constituted in accordance with regulations of the Quartermaster General, comprising a

commissioned purchasing officer, a commissioned veterinary officer, two civilian clerks, and a messenger for the paper work, shipping and branding. These boards reported daily by mail and telegraph to the headquarters of the Zone in which they operated, and were under constant supervision as to methods of inspection, sanitation and shipping. Some of them operated at several inspection points, others in a single locality. As a rule boards were able to handle the animals as rapidly as presented for inspection. The purchasing officer was held responsible for final acceptance of the animal, while the veterinarian was accountable for the animal's health and physical soundness. Prescribed specifications for army horses and mules governed in the selection of animals. They were shipped to camps in charge of an authorized civilian attendant.

At the beginning of the war it was realized that the fulfilment of the Army horse-drawn vehicle program would necessitate the mobilization of the entire wagon industry in the United States. A consultation was arranged with the National Wagon Workers' Association, the Committee of the Council of National Defense and representatives of the Quartermaster's Corps, at which certain manufacturers agreed to take over the manufacture and delivery of the required supply of Quartermaster vehicles and harness at prices mutually agreed upon. These prices were those furnished by the Depot Quartermaster, Jeffersonville, Indiana, at which depot those supplies had always been bought, and were the average prices paid to contractors for supplying

vehicles and harness under the competitive bidding system.

The wagon industry had always used air-dried lumber, which required a long period for seasoning and drying. The entire supply of such lumber was soon used up and it became necessary to arrange immediately for kiln-dried lumber. None of the wagon manufacturer's plants was equipped with kilns and the building and fitting up of sufficient kilns to dry the quantity of lumber required was a very serious proposition. It soon developed that a large part of the wood stock for this large number of vehicles was still in the trees of the forest. The manufacturers called on the lumbermen, and the Remount Division arranged a plan whereby the wood stock would be obtained and delivered to the manufacturers, the Government being obligated to take over such wood stock as might not be used in case the war came to an end and contracts were annuled.

The Government entered into agreements with the wagon manufacturers to defray half the cost of all kilns constructed, and to pay for such portion of the cost at the rate of \$10 per wagon produced, or \$10 on each \$185 worth of spare parts fabricated on Government order.

As an instance of the spare parts situation it might be mentioned that on the first order for 34,000 escort wagons, the spare parts required amounted to about fifty per cent of the total order for wagons.

During the war there was developed a number of new types of wagons, such as the drinking-water wagons

and carts, medical and ration carts, combat wagons, veterinary ambulances, sprinkler wagons, and other vehicles produced in smaller quantities.

In spite of the fact that the entire amount of kiln-dried lumber on hand was consumed in the first few months of the war and that ordinarily six months are required for proper kiln-drying before the log is ready for fabrication, vehicles and parts were supplied on time and in accordance with the plans outlined by the General Staff.

Purchases of all classes of horse-drawn vehicles from April 6, 1917, to July 1, 1919, approximate 190,000. No orders were placed after November 11, 1918, and all orders that could be terminated were canceled shortly after the signing of the armistice. Of the total number ordered approximately 117,000 were completed. The production of spare parts kept pace with the production of vehicles.

The total of spare parts ordered was equivalent to about sixty per cent. of the entire number of completed vehicles delivered.

For the purchase and supply of harness the same method was followed as for vehicles, except that no national association of harness makers assisted in distributing the work. However, the leather committee of the Council of National Defense gave much valuable assistance in numerous instances by recommending methods of inspection, advising as to the prices that should be paid for leather and for harness, and in securing reliable men for duty in inspecting harness.

The harness manufacturing business was hampered by labor troubles due to the fact that the original contracts did not contain the eight-hour clause. When it became necessary to add a supplementary clause to each contract providing for an eight-hour day and time and a half for overtime, there had to be an adjustment of prices, and several firms surrendered their contracts.

At the outbreak of the war the leather business, like all other industries, found itself on a high level of prices, due to the very large amount of leather and equipment which America had been called upon to furnish the European nations already at war. Hence, the first difficulty was to establish prices. In May, 1917, the chairman of the leather equipment committee of the Council of National Defense called together the tanners and agreed with them upon the prices for all grades of equipment leather which the Government expected to buy. The packers were next called together and maximum prices on hides suitable for Army leather were agreed upon and option taken on 750,000 hides then in their hands.

Generally speaking, no action was taken in regard to the hide or leather business without calling together the branch of the trade that was interested and coming to an agreement with them on the quality and price. This procedure was followed during the entire war. On the establishment of the War Industries Board and the price fixing committee, prices were regularly fixed after the examination of the books and accounts of

tanners and harness manufacturers by the Federal Trade Commission.

The prices of leather were thus established very successfully for harness leather which was then fixed at sixty-six cents, was advanced only four cents per pound during the eighteen months that we were at war, and russet leather fixed at \$1.03 never advanced above \$1.07 during the same period.

The system of open market purchase of public animals previously adverted to required a large number of experienced officers to be placed in charge of the Remount Purchasing Zones. A request was made to the War Department for the detail of fifty of the best known horsemen of the Regular Army for this particular duty, but only sixteen could be spared, and these sixteen officers were permitted to serve on this duty for only about forty-five days when their services were required elsewhere. While these officers were on this duty, thirty-two Reserve Corps Officers who had already been commissioned in the Quartermaster Reserve Corps were ordered to the different purchasing offices and placed under the instruction of the Regular Army Officers for a short period of time to study the type of animal required for military use and army methods generally. However, only a relatively small number of these officers proved to be entirely qualified to buy horses and mules.

Thereupon, the Secretary of War, on June 27, 1917, authorized the appointment from civil life of fifty of the most distinguished horsemen and gentlemen riders

in the country, as Captains in the Quartermaster Reserve corps for duty in connection with the inspection and purchase of public animals. That these officers performed the duties imposed upon them in a remarkably efficient manner, considering their entire lack of military experience and army methods generally, is shown by the large number of excellent animals which were purchased by them as heads of purchasing boards, and by the fact that when purchasing ceased, many of these officers were very successful as Commanding Officers of Auxiliary Remount Depots.

Experience on the Mexican Border and in the Southern Department in 1916 demonstrated the necessity for conditioning animals after purchase, before issue to troops. It was estimated that over ninety per cent. of all animals purchased contracted shipping fever and influenza at the stock yards and at stock pens where they were unloaded for feeding and watering, when being shipped from point of purchase to destination. When shipped direct to organizations, a considerable number died from influenza or other diseases such as pneumonia and purpura, resulting from the attack of influenza.

To provide, therefore, a flexible organization for supplying serviceable horses and mules for the army; to properly care for and condition animals prior to their issue to troops and to receive animals purchased and shipped by purchasing boards, it became necessary to organize and establish an Auxiliary Remount Depot at each division camp and cantonment of the National

Guard and National Army of the United States, as well as an Animal Embarkation Depot at Newport News, Va., and one at Charleston, South Carolina. These were to be used as Ports of Embarkation from which animals could be shipped overseas, and Field Remount Squadrons for duty on the lines of communication and in the theaters of operations.

Authority for and the establishment and organization of auxiliary remount depots having a capacity of 5,000 animals, was granted by the Secretary of War May 26, 1917, the authority being published in the Army in General Orders No. 105, War Department, August 13, 1917. These instructions were subsequently rescinded and General Orders No. 131, War Department, October 5, 1917, were substituted. Section 2 of this order established the Remount Service as a separate National Army Organization, provided for the organization of thirty-three auxiliary remount depots and an animal embarkation depot, and the necessary field remount depots, later called field remount squadrons, for duty on the lines of communication and in the theaters of operations. The location of the various Auxiliary Remount and Animal Embarkation Depots were as follows:

Camp Beauregard, Alexandria, La.	Camp Devens, Ayer, Mass.
Camp Bowie, Fort Worth, Texas.	Camp Dix, Wrightstown, N.J.
Camp Cody, Deming, N. Mex.	Camp Dodge, Des Moines, Iowa.
Camp Custer, Battle Creek, Mich.	Camp Doniphan, Fort Sill, Okla.

Camp Fremont, Palo Alto, Calif.	Camp Meade, Admiral, Md.
Camp Funston, Kansas.	Camp Pike, Little Rock, Ark.
Camp Gordon, Atlanta, Ga.	Camp Sevier, Greenville, S. C.
Camp Grant, Rockford, Ill.	Camp Shelby, Hattiesburg, Miss.
Camp Green, Charlotte, N. C.	Camp Sheridan, Montgomery, Ala.
Camp Hancock, Augusta, Ga.	Camp Sherman, Chillicothe, Ohio.
Camp Jackson, Columbia, S. C.	Camp Taylor, Louisville, Ky.
Camp Johnston, Jacksonville, Fla.	Camp Travis, Ft. Sam Hous- ton, Texas.
Camp Kearney, Linda Vista, Calif.	Camp Upton, Yaphank, L. I., N. Y.
Camp Lee, Petersburg, Va.	Camp Wadsworth, Spartan- burg, S. C.
Camp Lewis, American Lake, Washington.	Camp Wheeler, Centaur, Ga.
Camp Logan, Houston, Texas.	Newport News, Va.
Camp MacArthur, Waco, Texas.	Charleston, S. C.
Camp McClellan, Anniston, Ala.	

Regulations governing the organization, administration and equipment of auxiliary remount and animal embarkation depots and field remount depots were published for the information of all concerned, in Special Regulations No. 66, War Department, 1917.

The auxiliary remount depots and animal embarkation depots in the United States were placed under the authority of the Quartermaster General in all matters pertaining to their operation, with the exception that the Commanding General of each Camp, Cantonment, or Port of Embarkation exercised the same authority that a department commander exercises under Army Regulations over the posts in his department in matters pertaining to sanitation, discipline and general court-martial jurisdiction.

There were established at each auxiliary remount depot and animal embarkation depot schools for horse-shoers, teamsters, packers, saddlers, and stable sergeants. These schools were under the jurisdiction of the Commanding Officer and the course of instruction for horseshoers covered a period of four months and for packers and teamsters a period of two months. The enlisted students for these schools were detailed from the line or Quartermaster Corps, and upon graduation were furnished certificates of proficiency for that particular course of instruction.

As the war progressed, the commissioned, enlisted and civilian personnel of the Remount Division and the Remount Service, increased rapidly until at the time of the signing of the armistice, there were on duty in the Remount Division, seven officers, and thirty-eight civilian clerks, and in the Remount Service at large in the United States, approximately 400 officers and 19,000 enlisted men.

All domestic shipments of animals were made in strict compliance with the twenty-eight hour release for feed and water as required by law, and arrangements made with the Bureau of Animal Industry to place representatives at various feed and rest stations throughout the country to inspect and place all stock pens and yards where public animals would be fed and watered in a sanitary condition.

There was a total of 300,802 animals purchased in the United States from the beginning of the War; all of which had to be transported from point of purchase,

to a Remount Depot, and in most instances again shipped to ports of embarkation or to a Remount Depot near the Atlantic Coast so that they could be readily available for shipment overseas when called for. In many cases these animals were shipped over very long distances, i. e.,

2,073 miles Camp Lewis to Camp Dodge
1,940 miles Camp Kearny to Camp Pike
1,918 miles Camp Fremont to Camp Funston

Out of all shipments made in the United States, there was a total loss of horses and mules from all causes including wrecks and natural death of approximately 425 animals, or .0014 per cent. of the total number of animals shipped. This percentage would be still further reduced if it is considered that all animals were reshipped at least once.

TRAINING ACTIVITIES

Commissioned Personnel

As the war progressed it became increasingly difficult for the Remount Service to meet the demands made upon it for officers, due to the establishment of the Auxiliary Remount Depots and the Animal Embarkation Depots intended for the care and conditioning of public animals prior to their issue to troops or shipment overseas, each of which required five officers, and due also to the organization of a number of overseas

units. The available supply of expert horsemen of the country who had volunteered their services soon became exhausted and the demands of the other Bureaus of the War Department and arms of service rendered it more difficult to obtain suitable officers who might be willing to transfer to the Remount Service. Of course, by far the greatest number of officers of that service was obtained from the trained non-commissioned officers serving at our Remount Depots, so that when the armistice was proclaimed, between three and four hundred non-commissioned officers had been commissioned and were then serving either at the Auxiliary Remount Depots, and the Animal Embarkation Depots, or were on duty with overseas unit of the Remount Service in training in the United States or already in France.

It soon became apparent, however, that if the Remount Service should be able to function properly and to fill with reasonable promptness the numerous demands made upon it for Commissioned Personnel, some effective steps must be taken without delay to obtain such personnel from the country at large. To that end, special authority was obtained from the Secretary of War to organize Remount Service Officers Training Camps. Under this special authority, suitable candidates above the current draft ages, or men of draft ages who were disqualified for service with a combatant arm due to physical inability, were selected for a three months' course of training. They were actually enlisted for the period of training only, and were then com-

missioned if they passed through the Training Camp satisfactorily, or, if they failed to pass through satisfactorily, were discharged. Three such Training Camps were held during the War. The first camp at the Auxiliary Remount Depot, Camp Joseph E. Johnston, Jacksonville, Florida, beginning May 10, 1918, graduated forty-two men. The second Camp at the same Depot beginning September 2, 1918, graduated seventy-three men. Another Training Camp was also held at the Auxiliary Remount Depot, Camp Shelby, Hattiesburg, Mississippi, graduating thirty-two men.

OVERSEAS UNITS

The mobilization camp for the organization and training of the Field Remount Squadrons for overseas service was established at Camp Joseph E. Johnston, Florida, where the original intention was to organize these units in connection with the organization of all other miscellaneous Quartermaster Corps Organizations at that Camp.

The units to be organized and sent overseas were first designated as Field Remount Depots, which were organized under the Tables of Organization for such a unit, as prescribed in Special Regulations No. 66, which also provided for the organization of Auxiliary Remount Depots and Animal Embarkation Depots in the United States. It was found, however, that on account of the difference in the requirements of Remount Depots in France, that the organization, as contemplated, was not

sufficiently flexible. Accordingly, a smaller unit designated as the Field Remount Squadron, consisting of six officers and 157 enlisted men, was authorized so that there could be assembled at any depot as many units as were necessary, according to the number of animals to be cared for, on a basis of one Field Remount Squadron for every replacement of 400 animals.

The complete personnel of one Field Remount Squadron consisted of four Quartermaster Corps Officers, one Medical Officer, one Veterinary Officer, 150 Quartermaster Corps, four Medical Corps, and three Veterinary Corps enlisted men. Each squadron was completely equipped according to Table of Fundamental Allowances, and additional equipment specially authorized to provide for an independent mobile mounted remount unit.

The first four Remount Units organized at Camp Joseph E. Johnston were designated as Field Remount Depots, Nos. 301, to 304 inclusive, and were organized under Tables of Organization, provided for such a unit. These were later changed to Field Remount Squadrons Nos. 301 to 304 inclusive, and were kept in training for a period of three months before being sent overseas.

In order to shorten the necessary period of training and to provide a nucleus of trained men, the Remount Division directed the transfer of privates with qualifications for non-commissioned officers, from the various Auxiliary Remount Depots to Camp Joseph E. Johnston, for subsequent assignment to Field Remount Squadrons. These men were given a special course of

instruction for non-commissioned officers under experienced officers, and rapidly developed into excellent non-commissioned officers. Such as were found not qualified to perform these duties were eliminated.

In the beginning, officers were assigned to Field Remount Squadrons from the Office of the Division in Washington, but as more officers became available, they were ordered to Auxiliary Remount Depot No. 333, Camp Joseph E. Johnston, for assignment to squadrons by the Commanding Officer of the camp. These officers were also given a course of instruction under an experienced officer and were selected for assignment to squadrons as these were organized, in accordance with their progress and experience. Each squadron was thus provided with a well-balanced, properly instructed commissioned personnel.

This method of assignment and selection of officers and non-commissioned officers for squadrons was highly satisfactory. In case officers did not develop sufficiently to perform the duties which were to be required of them, orders for their transfer were requested and they were assigned duties which they were capable of performing. Fortunately, and to the credit of the Remount Service, such action was necessary in but few instances. The more backward and inexperienced officers, however, were held for a longer period of instruction, and the policy of selecting first, for squadrons to be sent overseas, officers most qualified, acted as a great stimulus in their training.

The men received on requisition from the draft, and

by transfer from Auxiliary Remount Depots, were, on the whole, of a very desirable type; many of them coming from agricultural sections and from the western States where they had been accustomed to handling stock.

During the training period the organization, training, and equipping of squadrons and other overseas units was under the direct supervision of a specially selected officer, and the general policy was to place every responsibility on the squadron commander for everything pertaining to his organization, at the same time affording him all necessary instruction and assistance. This resulted in developing the independence of each organization and the ability to meet all demands under all conditions.

In connection with the training of the squadrons in general, special provision was also made for the training of the enlisted specialists necessary for each unit. Horseshoers' classes were maintained from unassigned privates carried as a Casual Detachment pertaining to Auxiliary Remount Depot No. 333, Camp Joseph E. Johnston. Upon completion of their special training they were assigned as squadron horseshoers. An instructor from the school of bakers and cooks at the main camp was detailed for duty with the Remount Squadrons. He instructed cooks and mess sergeants in their duties and had general supervision over all the messes, under the officer in charge of the Field Remount Squadrons. Saddlers were given instructions

prior to the establishment of the Saddlers' School, farriers were trained under the supervision of Veterinary Officers at the Veterinary Hospital, and teamsters were given instructions at the Teamsters' School. A special class for squadron clerks was instituted and all officers and specially selected non-commissioned officers attended conferences every evening. Troops were instructed in everything applicable to their duties and in drill and other subjects, in order to attain discipline and maintain a standard equal to that of a line organization.

BREEDING

After the war started in 1914, large numbers of animals were purchased in this country and shipped to Europe for war purposes. When the United States entered the war, and proceeded to purchase animals for war work, it very soon became evident to the purchasing officers that animals suited for cavalry and riding purposes were none too plentiful and also that animals suitable for draft purposes could be obtained with little difficulty in sufficient numbers.

As time went on, it was noticed that the officers purchased fewer good type cavalry horses and accepted many narrow-chested, weak-loined, light-boned animals that showed very little quality and lacked the essential breeding and conformation so important in the cavalry horse. These conditions not only demonstrated the fact that suitable cavalry horses were scarce throughout

the country, but that future requirements could not be met unless prompt and efficient measures were adopted to encourage the breeding of the riding horse. In certain sections of the country where racing, hunting, and horse shows were kept up a better type of riding horse was found.

The Bureau of Animal Industry had encouraged the breeding of good riding horses by placing approved stallions at various parts of the country for the use of breeders, but this work had been conducted on such a small scale that only about 700 colts, the offspring of sires placed by the Bureau of Animal Industry, were offered for sale to the Government that year. After consultation with the representative of the Bureau of Animal Industry, the Remount Division obtained authority to establish at Fort Reno, Fort Keogh and Front Royal small breeding organizations where a few mares could be kept for breeding purposes with the object of producing a suitable type of cavalry horse. Authority was also obtained to accept such stallions as might be presented to the Government and to purchase others.

The prime object of the War Department and the Bureau of Animal Industry in this work was to produce the type of animal desired for cavalry work and to encourage and assist the farmer and breeder in producing this type in sufficient numbers to supply the needs of the Government.

The following table shows the list of the principal vehicles and harness items contracted for, total deliveries made, unit money value of each, and the total

money value of the items contracted for June 30, 1917, to June 30, 1918:

Items	Number contracted for	Number delivered	Unit money value of each	Total value of contracts
Combat wagons	15,500	7,000	\$525.00	\$8,137,500
Escort wagons	91,728	30,000	210.00	19,262,880
Water carts	13,500	13,000	275.00	3,712,500
Ration carts	12,000	7,000	125.00	1,500,000
Medical carts	2,500	2,500	150.00	375,000
Ambulances	3,500	3,500	350.00	1,225,000
Aparejos	40,250	3,000	80.00	3,220,000
Halters	1,500,000	1,300,000	3.00	4,500,000

The purchases are given to include June 30, 1918, for the reason that the contracts for same were made in 1917 as above stated.

PURCHASE OF HORSES AND MULES

Average Price Paid in the United States and France

	HORSES				MULES		
	Cavalry	Light Artillery	Heavy Artillery	Young	Wheel	Pack and Riding	Lead
In United States..	\$161.71	\$188.21	\$221.95	\$142.59	\$228.86	\$184.24	\$189.38
In France.....	267.54	295.71	377.38	....	309.33	254.35	308.33
In United States and France.....	178.23	207.07	339.48	....	230.15	207.00	189.38

The number of animals purchased is given in the accompanying table, to include June 30, 1918, as in order to secure transportation to carry the troops to France in the spring of 1918, the shipment of animals was discontinued in March, 1918, and orders to discontinue purchases then given.

REMOUNT DIVISION

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Losses from April 6, 1917, to June 30, 1918

	HORSES			MULES			Total
	Cavalry	Light	Heavy	Wheel	Lead	Pack	
		Artillery					
Condemned and sold	4,991	1,232	243	516	297	322	7,601
Destroyed	1,090	1,256	50	374	303	67	3,140
Died	4,795	10,919	908	1,342	1,156	188	19,308
Other causes	189	211	...	96	115	16	627
Lost in France..	...	4,625	...	...	349	...	4,974

Criticism has been made of the purchase of 1,300,000 halters for a total of about 270,000 animals. It must be remembered that the character of the war in France developed along such lines that cavalry was not used to the extent anticipated when the original plans were made, nor was it anticipated that the shipment of animals abroad would be entirely discontinued, or that war could possibly be terminated by November 11, 1918.

In October, 1917, it was ascertained that the prices paid for animals of the same type by the allies and ourselves were different. A conference was called in the Office of the Quartermaster General and was attended by the following: representing the British Army, General Gunning, Chief of Remounts, Colonel Bate and Captain Brydges; of the French Army, Colonel Cousté and Captain Reinach-Werth; the Italian Army, Colonel Hinoldi; Messrs. Gifford and Preston Davis of the Council of National Defense; Colonel John S. Fair, Chief of the Remount Division, Lieutenant Colonel R. H. Williams, Jr., and Major Hayden Channing of our Remount Service.

As a result of this meeting Colonel Bate, of the British Army, and Captain Reinach-Werth of the French Army, were attached to the Chief of Remounts as liaison officers. Both these officers were of great assistance as they had had considerable experience.

Colonel John S. Fair organized the Remount Division and the Remount Service and deserves credit for the excellent results obtained and the efficient organization created. He was ably assisted by Colonel Matt C. Bristol, Lieutenant Colonel R. H. Williams, Jr., Major Hayden Channing and to Majors W. W. West and A. A. Cederwald, Colonels Winterburn, Valentine and Munro had charge of the western purchasing zones, and handled the work there in an able and efficient manner. Great credit is due to the work performed at the school for the squadrons organized at Camp Joseph E. Johnston, Jacksonville, Florida, for the reports of the organizations sent to France from that school were most favorable.

It is regretted that records are not available to cite the work done by the other members of the Remount Service. The excellence of the work done by that Service was recognized, and the members of it have reason to feel a commendable pride in the accomplishments to which they so materially contributed.

VII

WAREHOUSING DIVISION

Duties assigned to Warehousing Division—Two classes of Quartermaster Depots—Storage Depot at Boston—Functions of the six branches of Warehousing Division.

ONE of the duties imposed by law upon the Quartermaster Corps was that of constructing or renting such buildings as were required for the Army. Early in the war the legislation then enacted allowed other Supply Departments to undertake construction or to lease such buildings as they required. Several of them established a constructing force in their own departments, and thus provided for their own requirements either by new construction or by leases.

So that, at the beginning of the war the policy of centralization which had previously been established for many years, as far as relates to construction was changed, and a policy of decentralization adopted instead. It is a fact that the Ordnance Department was allowed by law to undertake such construction as was authorized from time to time at the arsenals. But the general policy as regards construction had been that of centralizing such work in the Quartermaster Corps. The General Depots of the Quartermaster Corps were located at various places throughout the country, and

at the beginning of the war the officers in command of these Depots were authorized to provide such additional storage space as would be needed at their depots, either by having temporary structures erected or by leasing any available buildings. In some instances, it was necessary to lease buildings when the cost of construction exceeded the amount which the law placed as a limit.

On August 15, 1917, by Office Order No. 76, a Storage Branch was created in the Supplies Division of the Office of the Quartermaster General.

As the necessity arose of more fully coördinating the work of the depots and to exercise a greater supervision over them, by Office Order No. 116, dated October 16, 1917, the Warehousing Division was created, and the Storage Branch of the Supplies Division and also the Cable Service and Overseas Shipment Branch of the Administration Division were merged into it. By Office Order No. 116, of November 8, 1917, the duties assigned to the Warehousing Division were defined, as follows :

“1. To ascertain the storage needs of the Quartermaster Corps, and in coöperation with Depot Quartermasters, to provide and administer all storage and warehousing facilities and operations incident thereto.

“2. To standardize and supervise the physical layout and administrative organization of depots and to coördinate the services of the several depots.

“3. To maintain a statistics branch which shall receive, calculate and chart in accordance with scientific statistical methods, all significant data pertaining to

amount of supplies needed, contracted for, in process of delivery, on hand, issued, etc.

“4. To handle all cablegrams and requisitions received from the Commanding General, Expeditionary Forces in Europe.”

In order to accomplish the above designated functions, it was enjoined that:

The Warehousing Division will have authority in matters pertaining to the location, design and equipment of depots, the apportionment and distribution of supplies prior to their delivery to depots.

The Warehousing Division shall make a careful study of warehousing methods and organization, and of existing practices of Quartermaster Depots, with a view to a coördination and improvement of such depots, and shall install such statistical methods and devices as may be deemed necessary.

The Warehousing Division will prepare statements of amounts of supplies needed, giving the rate at which delivery should be required. It will maintain a statistical branch which shall obtain all data regarding the quantity of supplies ordered, delivered, issued and remaining on hand.

All statistical data pertaining to the above now being kept in other branches or divisions of this office will be transferred to the Warehousing Division together with the personnel used exclusively for tabulating such data, time for this transfer to be arranged between divisions concerned.

The Warehousing Division will furnish such ex-

tracts of data compiled as may be required by other divisions and branches of this office.

At the beginning of the war there were two classes of Quartermaster Depots:

1. The General Depots of the Corps, as those at New York, Philadelphia, etc. Such Depots carried a certain quantity of supplies, and received and shipped these to the various posts. The personnel was well trained in the work, and was fairly adequate to insure efficiency and dispatch in executing the work at the Depots. In the preceding month of March at the request of the Quartermaster General and with the approval of the Secretary of War, certain expert and experienced business men had been designated by the President of the National Chamber of Commerce, and the officials of the New York Merchants' Association, as members of a Committee to act in an advisory capacity to the Depot Quartermasters. Mr. E. D. Page was chairman of the Advisory Committee for the New York Depot. This Committee, on its own initiative and expense engaged the services of an expert business engineer and accountant to examine the methods of organization and administration of the Depot, the forms in use for transacting the business, and the general arrangement of the Depot to insure the efficient handling and prompt dispatch of the supplies.

The expert's report approved of the organization and methods of administration. Five years previously a firm of business engineers and accountants had for nearly one year been engaged to study the methods of

the Quartermaster Corps and suggest plans for improvements. It may be stated that the other General Depots of the Quartermaster Corps were organized and administered in the same manner as the New York Depot.

Boards of Officers and Committees of Experts on the business methods of the War Department had recommended and the instructions of Secretaries of War in the past had directed a reduction in the number of blank forms, so it was not possible to have the forms used at Depots printed and supplied by the War Department. Each Depot had authority to have the necessary forms printed. The forms used at each Depot were compared and effort made to standardize them as much as the local conditions made possible. For instance, a form used at the New York Depot which pertained to clothing made under contract was not suitable for use at the Jeffersonville Depot where the clothing was made by sewing women.

The regulations prescribing the organization and methods of administration of Depots are contained in the Quartermaster's Corps Manual. This is a compilation in two volumes, of the combined knowledge and experience of all the officers and men of the Army, who for nearly 150 years have contributed to and participated in the work of the Corps. It was prepared by a Board of Officers composed of Colonel Frank L. Armstrong, Lieutenant Colonel Thomas L. Smith and Major Ezra Davis; recognized by all who were brought in contact with them as eminently qualified and thoroughly com-

petent to perform the work. Several of the civilians who contributed so ably to assist in carrying on the work of the war, have handsomely expressed their appreciation of the assistance received by them from the individual members of that Board, stating that without that assistance they, those civilians, would probably not have been able to carry through the work.

That Board also prepared a Table of Allowances for the Army, which Table it is very doubtful that any one, or all, of the experts called into the service could have prepared, as they were lacking the background and the experience necessary in its preparation. These statements are made merely to indicate that the criticism made that there were no regulations prescribing the methods of administration of the Depots or stating that nothing had been prepared in the army showing the requirements was not justified by the facts, and did not indicate a familiarity with those two publications. The civilian who advised officers of the Quartermaster Corps to throw away their copies of the Quartermaster Corps Manual undoubtedly was aware of its existence, but surely was not familiar with its contents.

A statement had been made that freight cars were being held to store army supplies, and at once an investigation was made to ascertain if this referred to Quartermaster Corps property. The investigation revealed the fact that the cars containing such property were promptly unloaded upon receipt. In one case about thirty-three cars were held for three or four days, over Sunday, by the Depot Quartermaster at New York.

That was the only instance, and while, because of the urgency of other work, there might have been some justification, instructions were given to prevent a recurrence of such delay in the future. It must be noted that other Supply Departments as well as the Shipping Board were making shipments by freight and express, and also that the Embarkation Service controlled all shipments of troops and supplies moving to the Ports of Embarkation, and that the Quartermaster Corps had no control over the shipments or arrangements concerning storage for them, as a policy of decentralization in such matters had been adopted and its results were being demonstrated.

2. The other type of Quartermaster Depot was really only a purchasing station. At the beginning of the War the Depot in Boston was of such character. That Depot simply executed the contracts made by the Philadelphia Depot for such supplies as any contractor in the vicinity of Boston specified in his proposal for delivery in that city. There was practically no storage space at that Depot and no supplies were carried on hand. There were rooms available in which the supplies were received and after inspection these supplies would be at once shipped to a Storage Depot, such as New York or Philadelphia. There was quite a large force of clerks and inspectors assigned to the Boston Depot, and as at times contractors frequently elected to make deliveries under their contracts at the Philadelphia Depot, where there was an adequate force of inspectors to handle the ordinary amount of work at

that depot, it often resulted that there was not sufficient work at the Boston Depot to justify the retention of the men. Consequently, as a matter of expense, the Inspectors General had for four or five years prior to 1917 recommended the abolishment of that depot.

The men would be given the alternative of accepting a leave of absence without pay, or taking a temporary transfer to a Depot where their services were needed. These facts are recited to make clear the conditions which existed at such stations as Boston, Portland, Oregon, Kansas City, Mo., and others.

Almost over night the necessity arose of making the Boston Depot a large storage depot. The Commanding Officer was authorized to lease all the storage space required, and to employ the necessary clerical force and others needed to handle the depot. No competent chief clerk or storekeeper or others familiar with Depot work in the Civil Service force of the Corps were available at that time. The Depot Quartermaster did the best possible under the circumstances and the conditions then existing, and secured such storage space as was available, which of course was in separate buildings necessitating double handling of the supplies and a large number of men.

The urgency was great as Boston was to be the supply depot for Camp Devens, and it was necessary to get the supplies and have them ready for prompt shipment to the camp as soon as the building there could be constructed to accommodate them, and as stated it is

thought that the Depot Quartermaster acted wisely and did the best possible under the circumstances.

Later it was ascertained that the Ford Motor Company Assembling Plant at Cambridge would for the time being afford a possible solution of the problem. The Quartermaster General about August 1st, wired Mr. Henry Ford at Detroit, Michigan, stating the conditions and asking if consent to the Government's occupancy of the Plant by August 15th, would be given. A reply was received almost at once acceding to the request and handsomely turning over the property to the Quartermaster Corps by August 15th on such terms for its occupancy as the Government itself would make. This splendid offer was taken advantage of at the earliest possible date.

Some time antedating the occupancy of the Ford Plant, at the direction of the Depot Committee of the Council of National Defense an Expert was sent to inspect the Depot at Boston. The report submitted showed that the depot was scattered in separate buildings, that there was not an adequate trained force of skilled storage men, that the proper blank forms for transacting the business were not used, that the unloading and piling of the stores were done by hand with only such accessories as a few hand trucks, that there were no mechanical conveyors, piling machines or electric trucks on hand.

The time of the Officers in the Office of the Quartermaster General, as well as that of the Depot Quartermaster had to be devoted to giving consideration to that

report and making explanations of the conditions and the circumstances surrounding the particular case, which could have been ascertained by a proper investigation on the ground. This time was most vital and important at that instant.

It would be brutal and inhuman to criticize a man, who was known to be both totally blind and deaf for falling into a depression, when passing along an unfamiliar road; but, if it were known that a man possessing extraordinary powers of sight and hearing should in the clearest daylight deliberately walk into a depression even on an unfamiliar road, one might be surprised, even if not prone to be critical.

Realizing the conditions before related, and being most anxious to secure every possible assistance for the Corps, in the solution of the many and great problems which were presented to it, and also to secure assistance for the chief of the Warehousing Division in carrying out the work assigned to him, the Quartermaster General consulted the Chairman of the Depot Committee requesting the suggestion of some one who would be of assistance. Upon the suggestion of the Chairman a telegram was sent on October 19, 1917, to Mr. H. B. Thayer, then President of the Western Electric Company, now the President of the American Telephone and Telegraph Company, by the Quartermaster General as follows:

“Can you send a man to Washington, Monday or Tuesday of next week to help design and install record and stockkeeping system for Quartermaster Corps?”

In response to foregoing telegram Mr. Thayer, President of the Western Electric Company, sent Mr. O. D. Street, General Manager of Distribution, to Washington on October 22nd.

During the interview the Quartermaster General requested Mr. Street to remain in Washington to assist Major A. E. Williams in organizing the Warehousing Division. The request was referred to Mr. Thayer who replied that the Western Electric Company would be glad to lend Mr. Street's services to the Government, and also the services of several experts who were Mr. Street's assistants.

Inquiry was made concerning the reason for assigning the Requirements and Statistical branches to the Warehousing Division, and it was explained that while the Requirements branch was in existence it was thought, to need proper development, and that the Statistical Branch was a new suggestion. It was thought, however, that Mr. Street's experience would materially assist in its proper organization and development.

The subjects of statistics and graphical charts were entirely new to the War Department. Effort had been made back in 1892 to induce the War Department to recognize the importance of the study of statistics and the development of graphical charts. A supply map of the State of Oregon had been prepared in a crude form and forwarded as an illustration of the suggestion made. In 1893 the publication of a small book again sought to direct attention to this important matter, and again in 1905 another book referred to the matter and

pointed out the valuable works published by Levasseur, Cheysson, Bertillon and other eminent writers in France.

Our Army, however, had not taken up the subjects and it was realized that at that time it was possible to secure adequate funds for so necessary work, and as in Commercial business such methods had been in use for some years, it was thought that a man of Mr. Street's experience would enable the work to be successfully undertaken.

The plan finally adopted was to establish six branches in the Warehousing Division as follows:

1. Requirements Branch
2. Factory Scheduling Branch
3. Statistical Branch
4. Overseas Service Branch
5. Depot Supervision Branch
6. Administrative Branch

The functions assigned to each of the branches were as follows:

Function of Requirements Branch: To determine requirements of Quartermasters supplies adequate to supply the needs of an army of predetermined size; and determine the monthly rate at which these supplies will be needed.

To keep up to date the Quartermasters' Manual.

To compute, classify and tabulate all data having to do with tonnage, weight and cubical contents of Quartermasters' supplies which the other branches may from time to time require.

To equate specific requirements as may be requested by other branches.

Function of Factory Scheduling Branch: To distribute the supplies as turned out by the factories which are working on Government contracts based on knowledge as to where and when they are needed.

Function of Statistical Branch: To maintain card records of all contracts placed, and record thereon deliveries made under each contract.

To prepare charts showing graphically the status of contracts.

To maintain card records of stocks on hand at each depot.

Function of Overseas Service Branch: To see that all orders placed by oversea forces are shipped promptly and completely.

To maintain the records incident to these orders.

To handle all inquiries relative to these orders.

Function of Depot Supervision Branch: To provide sufficient and proper storage facilities at interior depots, at the oversea depots and at points of manufacture.

To determine the proper and most efficient form of organization for each depot.

To prescribe what forms shall be used and what methods of procedure shall be followed.

To see that these forms and methods are standardized and used at each depot.

To determine the manner in which the merchandise at the depots shall be stored and handled to the end that

this work may be done in an orderly and efficient manner.

To see that the depots are properly safeguarded against loss or damage by fire, loss by theft, or destruction by acts of the enemy.

Function of Administrative Branch: To supervise the employment of help.

To have supervision of the files.

To have supervision of the Mailing Department.

To prepare and standardize all printed forms and routines.

To prepare and issue for the Commanding Officer all Divisional instructions.

To have supervision of the central stenographic and typing division.

To maintain stocks of stationery and office equipment.

To have supervision of all messengers.

To determine the allotment of office space.

To supervise all office layouts.

To have supervision of the building—the care and upkeep thereof.

The organization above outlined was submitted to the Secretary of War and received his approval, and as it was demonstrated to be impossible, because of the urgency of having the Division in effective operation, to find sufficient number of civilians with proper experience beyond the draft age, permission was given to commission men of the draft age who had the necessary experience.

For the purpose of standardizing warehouse meth-

ods and practices at all depots inspections were made of the several depots. As a result of these inspections a complete set of warehouse and office forms was prepared, also a set of Stores Instructions giving information as to the method of preparing each form, when and by whom.

Stock maintenance cards were designed and routines covering the operation thereof prepared. Complete sets of receiving and shipping forms were also prepared, together with routines affecting them. Instructions were prepared showing in detail the method of handling questions of service, assembling, packing and marking same, handling of shipping papers, the property accounts, etc.

These forms were later adopted as standards for all Supply Departments of the Army, when, after the passage of the Overman law in the spring of 1918, the warehousing functions of all the Supply Departments were placed under one control, that of the Director of Purchasing, Storage and Traffic.

The Cablegram and Overseas Shipments Branch organized in the Office continued throughout to function in the manner originally prescribed. The following is a detail of its organization and methods of procedure:

A Branch in the office of the Quartermaster General of the Army known as the Cable Service & Overseas Shipments Branch was organized shortly after the United States entered the world war. This Branch was charged with the handling of all cable services of the Quartermaster Corps with the American Expedi-

tionary Forces in France and with the supervision of the shipment of all Quartermasters' supplies to the troops in France. M. S. Keene, then Captain, Quartermaster Corps, was ordered to Washington for duty in the office of the Quartermaster General and assigned to this Branch. At that time little or no thought or attention had been given to these matters and the office force consisted of two clerks. This force was increased in the course of two months to some fifty officers and seventy-five clerks.

In the handling of the cablegram service the system inaugurated in this Branch for service in the Quartermaster General's office was later standardized for all the bureaus of the War Department. Cablegrams were received decoded, and such parts thereof with which the various divisions of the Quartermaster General's office were concerned were referred to those interested therein. A follow-up on all cablegrams received and all those sent to France was maintained and no draft of a reply to the forces in France was authorized to be released until it had been viséed in this Branch to insure that all the requirements in the original cablegram had been fulfilled. In connection with this cable service, the Commanding General of the American Expeditionary Forces instead of frequently cabling for supplies, sent by cable during the war to the Quartermaster General's office many automatic requisitions for various supplies which were based upon the number of troops in France, the number scheduled to proceed thereto and the number that were actually en route. To determine definitely

the actual quantity of supplies that should be ordered and shipped, it was necessary that a very close liaison be maintained with the Division of the General Staff which was charged with troop movements.

At first troop movement information was not possible to be obtained, and no end of confusion resulted either in over or under shipments of supplies. Upon repeated complaints by the officer in charge of this Branch to the Adjutant General of the Army, necessary arrangements were finally made whereby this confidential information was made available to all of the Supply Departments. The Cable Service & Overseas Shipments Branch periodically informed the various Divisions in the office of the Quartermaster General of the Army relative to the time when supplies were required on automatic requisitions referred to above and when the supplies should be released for shipment. This Branch did not attempt to actually order specific quantities of any commodity, but after orders had been placed for supplies for the American Expeditionary Forces, they were invariably checked and if the appropriate quantity of supplies had not been ordered, necessary action would be taken looking toward effecting an increase. This service therefore provided a check and follow-up on all of the operating Divisions in the Quartermaster General's office.

No record of any character was maintained in connection with the first shipments of Quartermasters' supplies to France. Orders for supplies were placed and in view of the chaotic conditions no follow-up thereon

was maintained nor was the status thereof known until the receipt of a cable from France requesting information relative to the shipment of any specific commodity or commodities. Frequently the Quartermaster General was called upon by the members of Congress, the Secretary of War and various members of the General Staff relative to the status of orders received for shipment to France. This information invariably would necessitate knowing not only the actual quantity of the various commodities on order, but the quantity that was actually on the rails en route to the ports of embarkation for shipment, the quantity that might have been at seaports awaiting shipments and also the quantity that was on the high seas.

When the first shipment of supplies went forward to France many complaints were received resulting therefrom. For example, large shipments of escort wagons were forwarded to Newport News, Virginia. In the loading of the ships the bodies of escort wagons which were knocked down would be loaded on one vessel and the wheels, axles and whipple-trees, etc., on another. The ships would leave the port with clearance papers for the same port in France and while under way one of the ships would be diverted to another port. This would result in the following conditions: The wagon bodies would reach one port and the other accessories necessary for the assembling of the wagons would arrive at another some four hundred or five hundred miles distant. This was a condition over which the office of the Quartermaster General had no control as the trans-

portation service at that time was not under his jurisdiction. However, the condition was afterwards largely rectified as a result of instructions issued from the Cable Service & Overseas Shipments Branch to the effect that wagons complete must be loaded on the same ship.

A system was inaugurated in this Branch which enabled the Quartermaster General and his office to know at all times the status of any requisition for supplies and all shipments made thereunder. The system showed for any order the date of receipt thereof, when shipments were made, the quantity of the commodity that was shipped, the date of its arrival at the port, the total quantity at the port awaiting shipment, the quantity and date when loaded, and the name of ship upon which loaded and date of arrival in France. If, therefore, we had been unfortunate enough to lose any of our ships carrying troops and supplies to France, all of the Quartermasters' supplies that were on any ship that was lost could thus have been immediately reordered, with no delay that would otherwise have been attendant. All shipments were traced and necessary action taken looking toward providing rolling stock, for the Companies making shipments, by this Branch.

This Branch also prepared the first packing regulations that were issued to the army, and in addition thereto originated the baling of blankets, clothing, shoes and other similar commodities instead of shipping them in wooden or other containers, thereby greatly conserving the limited amount of space available for the

shipment of Quartermasters' supplies. Periodically the cubical contents of supplies that were under orders for shipment to France were given to the General Staff so that an appropriate amount of space on the ships would be made available for the shipment of these supplies. This system as herein outlined was standardized for all the bureaus of the War Department.

Captain R. H. Hess, Q. M. Reserve Corps, was assigned to the charge of the Statistical Branch, which before January 1st numbered approximately fifty officers and clerks. Early in November this Branch prepared the first graphic charts showing estimated requirements, the status of stocks on hand, unfilled contracts and the condition of unfilled orders.

On the recommendation of Mr. Street the following were given commissions and assigned to duty: Major Frederick L. Devereux in charge of the Requirements Branch; Major J. R. Orton, assistant to Major Devereux; Major George F. Perkins, in charge of Administrative Branch. Major Frederick B. Wells, formerly Vice President of Peavy and Company of Minneapolis, was assigned to the charge of the Depot Supervision Branch.

By December 31, 1917, the personnel of the Warehousing Division had increased from approximately fifteen to 350 commissioned officers and civilian employees, both included.

Major Frederick L. Devereux, was subsequently promoted to Lieutenant-Colonel and placed in charge of the

work of preparing the Requirements for the entire Army.

Major Frederick B. Wells, was assigned as Chief of the Warehousing Division when Lieutenant Colonel A. E. Williams was ordered for duty in France. Later, after the passage of the Overman law when the consolidation was affected, he was made a Colonel and assigned to duty on the General Staff as Director of Storage, thus being in charge of all warehousing and storage problems for the army.

The men recommended for commission by Mr. Street remained, almost without exception, in the service and performed efficient work during the war. The credit of securing an efficient and adequate personnel, of perfecting the plan for a proper organization and an efficient administration, and outlining the basic principles to effect the same is due to Mr. O. D. Street, the General Manager of Distribution of the Western Electric Company. Acknowledgments are due to the patriotic spirit shown by Mr. Theodore N. Vail, then President of the American Telephone and Telegraph Company, and to Mr. H. B. Thayer, then President of the Western Electric Company, in placing the services of so many of the officials of their companies at the disposal of the Government, as without such action on their part the organization of the Warehousing Division might not have been possible, certainly not in the incredibly short space of time in which it was accomplished.

VIII

CONSTRUCTION DIVISION

Fourteen training camps for officers—Refrigerating plants for use in France—Mechanical repair shop units.

THIS Division had charge of all new construction at posts and the repairs necessary to all buildings. Early in April, 1917, the War Department authorities decided that fourteen training camps for officers would be established at various posts throughout the country. These camps were to have a total capacity of about 40,000 men and were to be opened about the 15th of May. Thus a little more than a month was given in which to have the buildings ready for occupancy. Temporary buildings had to be provided as there was not an available supply of tents on hand.

There was not time to advertise for proposals, and a number of thoroughly competent and reliable constructors were called to the Office of the Quartermaster General and expressed their willingness to undertake the work. As the time was so short it was not possible to secure prices for the material, and as the men would have to be paid for overtime, they were unable to quote a price for undertaking the work, but agreed to do so if paid a commission in addition to the cost of the work.

There was no alternative and as these men had their organizations in existence the offer was accepted. A form of contract was prepared and submitted to the Auditor of the War Department. Modifications were necessary and to save vital time the Quartermaster General notified each of the contractors in writing that the contract would be awarded to him when drawn in acceptable form, provided he would undertake to begin work at once upon the receipt of such notification.

The work was commenced immediately, at one post within an hour after the receipt of the letter above referred to, and was completed in time to receive the student officers on the date fixed by the War Department.

Mr. L. B. Wehle, who was Counsel for the War Finance Corporation of the Treasury Department, and also on the Legal Committee of the General Munitions Board rendered great assistance in the drafting of the form of contract which met the approval of the Accounting Officers of the Treasury Department. The amount involved in this transaction was many millions of dollars.

Shortly after the arrival of the A. E. F. Headquarters in France request was received for a refrigerating plant capable of storing 5,000 tons of beef and of producing 500 tons of ice daily. The Construction Division was directed to supply the necessary machinery, provide for its shipment to France, and secure the necessary machinists and skilled workmen to erect the building and install the machinery, and also to create an organ-

ization to operate the plant. It was found that one of the Packing Companies in Chicago had on hand new machinery for a Refrigerating Plant of the capacity desired which was to be erected for its own use in this country. Upon learning that the Government wished to install such a plant in France, the Company turned over the machinery to it.

The machinery was secured and shipped to France with a requisitè force to construct the buildings and install the machinery and an Ice Plant Company was organized and sent over to operate the plant. This plant was installed at Gievres in France, and its actual capacity was 9,000 tons but at one time there were 20,000,000 pounds (ten thousand tons) of beef in storage. The cost of the machinery, erection of plant and its installation was approximately \$1,000,000. Anticipating that other plants would be required orders were given the Construction Division to secure the machinery, and equipment for two additional plants.

The purchase was made and the machinery, etc., shipped to France. One of the plants was erected at Basseus near Bordeaux. The original design called for 6,000 tons of carcass beef storage and the production of 600 tons of ice daily. As practically no ice was produced, the capacity of the plant was 7,000 tons of carcass beef, though at one time there were 16,000,000 pounds, 8,000 tons, of beef in storage.

The machinery for another refrigerating plant was in France, secured in compliance with the instructions above referred to, and it is understood that just before

the Armistice was signed it was contemplated to erect a third refrigerating plant in the vicinity of Chaumont. This plant would have been of about the same capacity as the others.

At times it was difficult to secure in this country the ammonia required by the refrigerating plants, but the supply at no time failed, and it is understood that there were no losses of beef or other articles in storage in the two refrigerating plants in France.

When the United States entered the war two of the greatest difficulties it had to contend with were time and distance; time, in which to organize, clothe, equip and train the troops, and provide the necessary supplies for their maintenance in the theater of operations; and second, the distance which the men and supplies had to be transported to the theater of operations. Tonnage was therefore the vital element of the problem of supply. In order to make the greatest possible use of the tonnage available it was necessary to get the maximum wear and use from the material shipped to France. This same problem had confronted both the French and the British authorities, and the reports submitted by our Military Attachés, which stated in a general way the methods taken to meet these difficulties, had been carefully studied in the Office of the Quartermaster General prior to our entrance into the war. Fortunately Brigadier General (then Colonel) Thomas Heron, C. B., of the British Army was on duty in the Office of the Quartermaster General. This officer had assisted in organizing and planning the first Salvage Depot which

the British Army established in France, and his advice and assistance was of inestimable value at a critical time. His fundamental principle was that it was far better to err in having a plant too large than not to have one large enough to meet the needs. That was the principle adopted in forming the Mechanical Repair Shop Units, and the instructions given to Colonel Furlow and Colonel Hegeman were to provide the men and machinery required to meet *any* call upon such Units. Colonel Furlow had charge of the work in the office and Colonel Hegeman was designated to accompany the units over to France and have charge of the work there.

The Mechanical Repair Shop Units were organized, trained and equipped at Camp Meigs, Washington, a training camp for the Quartermaster Corps enlisted personnel. When first formed these units were organized to handle all Quartermaster repair and salvage, i. e. repair and salvage of motor and animal drawn vehicles, clothing, shoes, tentage and harness, and arrived in France ready to undertake such work. It was decided, however, to separate the work and that their function should be the repair of vehicles only. Accordingly, the personnel and equipment for repairing clothing, shoes, tentage and harness were detached, but the repair and salvage of animal drawn vehicles remained with these units, as the machinery equipment was to a large extent necessary for the repair of both motor and animal drawn vehicles, and yet not capable of division to permit of operation in two separate plants.

The first Motor Repair Shops were located for a while

at Nevers, and later the large plant at Verneuil were established under the command of Colonel Hegeman.

The Salvage Depot was located at St. Pierre des Corps, and to that station were transferred the personnel and equipment for repairing clothing, shoes, tentage and harness.

It was the opinion that the country was committed to preparing for a long war and consequently the shops for use abroad should be of permanent construction; and fabricated steel buildings which could be bought in this country were considered most suitable. There were purchased thirteen standard buildings, each 100' x 200' in dimensions, and one hundred and thirty unit sections, each 25' x 50', built in accordance with the design prepared by Colonel Hegeman. This formed the basis of the plant established at Verneuil.

On May 18, 1917, by order of the Secretary of War a division known as the Cantonment Division was established in the Office of the Quartermaster General, to be charged with all matters connected with construction at Cantonments and Camps in the United States, and Colonel (later Brigadier General) I. W. Littell was assigned to the charge of this Division. By the order all matters pertaining to the Division were to be taken up by the officer in charge of same direct with the Chief of Staff and the Secretary of War, and the Quartermaster Corps proper thereafter had nothing to do with construction at Camps and Cantonments.

To avoid the formation of two similar organizations abroad and the sending of similar character of supplies

by two Departments to France, the Quartermaster General on May 26, 1917, addressed the following letter to the Adjutant General of the Army:

“Subject: Construction, etc., connection with Expeditionary Force to France.

“1. Under Army Regulations, 1913, in the last paragraph of Par. 1,493, it is stated that, ‘In time of actual or threatened hostilities within the theater of operations, the Engineer Corps has charge of the location, design and construction of wharves, piers, landings, storehouses, hospitals and other structures of general interest; and of the construction, maintenance and repair of roads, ferries, bridges and incidental structures; and of the construction, maintenance and operation of railroads under military control, including the construction and operation of armored trains (C.A.R., No. 46).’

“2. In view of the fact that the Engineer Corps will have in France a trained personnel which could be effectively used in providing not only the military facilities indicated in this paragraph, but in addition thereto, shelter for troops which is implied in the paragraph under ‘other structures of general interest,’ it is recommended:

“(a) Upon arrival of the American Force in France that territory be considered in the theater of operations.

“(b) That the Engineer Corps be authorized to construct not only the facilities indicated in the above paragraph, but in addition thereto, the necessary barracks for housing the personnel of the Expeditionary Force.

“3. The Chief of Engineers has been consulted concerning the above and approves.

"4. If this recommendation is approved, it is recommended that the Engineer Department be instructed accordingly and this office advised of the action taken."

HENRY G. SHARPE,
Quartermaster General.

To have insisted upon the Quartermaster Corps carrying on those functions in that portion of France not included in the "theater of operations" would appear to place the interests of the Corps superior to those of the Army and the country, and if attempted undoubtedly would not have been tolerated by the Commanding General. The above letter was returned by the Adjutant General:

Left with Sec., G. S., May 28, 1917.

Rec'd Back A. G. O., June 15, 1917.

2607231

1st Ind.

War Department, A.G.O., June 16, 1917—To the Quartermaster General, approved, with the information that the Chief of Engineers in connection with the duties assigned to the Corps of Engineers in paragraph 1,493, Army Regulations, has been charged also with the construction of the necessary temporary shelter for housing the personnel of the expeditionary force.

By order of the Secretary of War.

Adjutant General.

Copy for Quartermaster General.

2607231

"From: The Adjutant General of the Army.

"To: The Chief of Engineers.

"Subject: Construction, etc., in connection with Expeditionary Force to France.

"In interpreting paragraph 1,493, Army Regulations, the Secretary of War directs:

"(a) That, upon the arrival of the American Forces in France, that territory be considered in the theater of operations, and

"(b) That the Corps of Engineers be charged not only with the construction of the facilities specified in the above mentioned paragraph of Army Regulations, but also with all other construction necessary in connection with the operations and shelter of the Expeditionary Force."

By order of the Secretary of War.

Adjutant General.

In October, 1917, by orders of the Secretary of War, the Cantonment Division was directed to take over all construction work for the Army in this manner centralizing in one agency all the work of construction which, since the beginning of the war, had been undertaken by the various Supply Departments of the Army, and thus eliminating the competition between bureaus and making it possible to consolidate all of the several constructing agencies of the War Department.

The law, until the outbreak of the War, had directed that all construction work for the Army should be done by the Quartermaster Corps, and this order was a return in a measure to the former practice except that the order establishing the Cantonment Division its chief was instructed to function directly with the Chief of Staff, and the Secretary of War.

IX

QUARTERMASTER DEPOTS

Problem of the Grocery Division—Clothing and Equipage Divisions—Forage and Warehouse Divisions—Purchasing and warehousing materials—Manufacture of uniforms—German vessels and the docks at Hoboken—Business of the depots.

THERE were on December 31, 1917, fourteen supply depots under the jurisdiction of the Quartermaster Corps, with a personnel of approximately 44,000 civilian employees. The following is a summary of the functions of these depots:

ATLANTA.—This was a general supply depot for nine camps in the southeastern section of the country, and it likewise supplied the Coast Artillery and other military posts in that section. Outside of the supply function, which consisted in supplying 229,450 men, it did a small amount of procurement in the nature of cotton materials. Through the assistance of the Chamber of Commerce of Atlanta, an excellent, well adapted and thoroughly equipped storehouse which had recently been completed, was secured. This storehouse was located in a most advantageous site on the railway terminals and supplied with a perfect system of sidings. The occupancy of the entire number of buildings was given during the war and proved to be adequate to meet every

condition. Lieutenant Colonel Robert B. Powers was first in charge of this depot and was succeeded later by Colonel Hugh J. Gallagher.

BALTIMORE.—This was the main supply depot for three camps, and supplied approximately 90,330 men. In addition it procured certain subsistence stores and superintended the manufacturing of a considerable amount of clothing. It was also the location of an Expeditionary Depot in which were accumulated such supplies as were needed for overseas shipments; and from this depot supplies could be promptly shipped to the Port of Embarkation at Newport News, Virginia. At this depot the motor trucks were consigned for shipment to France. At one time as many as 4,000 trucks were held there awaiting available tonnage to make the shipment.

Colonel Amos W. Kimball installed both these depots and for a time was in command of both. Later the duties and responsibilities were divided.

Camp Holabird, a large Motor Repair Shop and Training School, was also located at Baltimore.

BOSTON.—Here was the main source of supply for Camp Devens, Massachusetts, and several posts in the northeastern section of the country. It supplied approximately 32,000 men. It was also a very important procurement depot for shoes and textiles. The greater proportion of the employees of that depot were assigned to the purchase and inspection functions.

This depot took over the Ford Motor Company Assembling Plant at Cambridge as one of its depot build-

ings, and later took over a storehouse and pier belonging to the city of Boston. An immense amount of work was done by this depot in inspecting, receiving and shipping the cloths delivered under contract, and a very creditable record was made by it in the prompt payment for the cloths delivered; the average time in which the payments were made being thirty-six hours after delivery and acceptance.

Colonel George McK. Williamson was the Depot Quartermaster and Lieutenant Colonel William B. Gracie was in charge of the Wool Purchasing Office of the Quartermaster Corps in Boston.

CHICAGO.—At the declaration of war, April 6, 1917, the Depot occupied a five story and basement building located at 115 East Ontario Street, having a total floor space of 37,500 square feet.

The principal functions of the Depot, until the declaration of war, were the procurement and distribution of packing house products to all United States troops, including those stationed in Porto Rico, Hawaii and Philippine Islands; the purchase and shipment of other articles of the nation; subsistence articles for sales; miscellaneous supplies to posts and stations in the Central Department, as well as to troops mobilized on the Texas border, also the settlement of transportation accounts with certain railroads. The number of men supplied in the Central Department at the beginning of the war was about 1,000. In May, 1917, the first officers' training camp was started which added about 20,000 men to the number to be supplied.

During August and September cantonments at Camps Grant, Custer, Sherman and Dodge began to receive National Guard regiments and the men of the draft. This, with the number of men at such stations as Fort Benjamin Harrison and Fort Snelling increased the total to over 200,000 men in the Central Department. At the beginning of the war the Grocery Division of the office consisted of one officer, one inspector and five clerks; when the armistice was signed, the Division had 15 officers, 94 inspectors and 171 clerks (including enlisted men.)

THE BIG PROBLEM OF THE GROCERY DIVISION

(a) *Procurement of Supplies:* The greatest problem of the Grocery Division was to open up fields of procurement where the vast amounts could be purchased. This necessitated a careful and comprehensive survey of the food situation of the Middle West, and the education of contractors who had never done any Government business as to the proper method of handling it, so that the items supplied would conform to all Government specifications.

(b) *Inspection:* An elaborate system of inspection was established in order that food-products purchased by this Division would be of a quality that was pure and wholesome. The Inspection Branch of this Division began with one inspector and on the date the armistice was signed there were 94 of them on duty. To give an idea of the large amount of foods inspected, it should

be noted that on the item of assorted canned foods alone, approximately 10,000,000 cases were purchased from May, 1917, to November, 1918. There was not one instance of a serious complaint about the subsistence stores furnished by this depot.

(c) *Prompt Payment of Invoices:* The policy of the Chicago Depot of paying all invoices within ten days, necessitated close organization of the Contract Branch in order to handle expeditiously all invoices covering payments running into millions of dollars per month. It should be noted in this connection that while only a portion of these invoices bore discount, the Grocery Division during the last five months of the war, paid over 95 per cent. of their invoices within ten days, regardless of whether or not they showed discount, and it is safe to say that this Division saved the Government on discounts approximately one-quarter of a million dollars.

(d) *Distribution:* The distribution of these supplies covered shipments running as high as 250 carloads per day. It was a serious and complicated problem, but by having a corps of inspectors, the Grocery Division was able to ship almost 90 per cent. of the supplies purchased direct from the contractor to the point of consumption.

One of the important items handled by this Depot were special reserve rations.

These special reserve rations were packed in hermetically sealed, galvanized iron containers, in order to render them gas proof and water proof. The reason

for the urgent need of this type of ration was due to the fact that the mustard gas as employed by the Germans in their warfare, destroyed all food products with which it came in contact. These rations were to be used in the first line trenches, in order that troops in these lines could retain their position after a mustard gas attack and still have necessary food. Each galvanized iron container held enough food for twenty-five men for one day. The cost of the total amount of reserve rations furnished during the war was about \$6,000,000.

This depot was also called upon to produce the Armour Emergency Rations. A twelve-ounce can was used, containing nine ounces of ground meat and wheat mixture, and three ounces of chocolate. This was strictly an emergency ration to be carried on the person of the soldier, and was only to be opened upon an order from a commissioned officer, when all other supplies had failed.

This Division placed orders for 2,000,000 of these rations and before the first million was completed, a call came from Washington ordering that everything possible be done to triple the output of this ration. With the coöperation of Armour & Co., and the American Can Company (who were manufacturing the twelve ounce cans) and by changing the method of packing, this Division was able to triple the output of this ration. The manufacture of this emergency ration continued up to the date of the armistice.

The purchase of milk was another big item, and it

was necessary to develop a corps of inspectors to handle this particular commodity alone. The Grocery Division, from the month of June to the end of the war, purchased nearly 1,500,000 cases of evaporated milk, the greater portion of which was shipped directly overseas.

About August, 1917, the Depot Quartermaster effected a reorganization of the office in order to care for the large volume of work which was daily increasing, and separate divisions were formed under the headings of the various supplies handled by the Quartermaster Corps.

All plants equipped for the manufacture of clothing and equipage were listed and classified according to their capacity. Inspections were made by an army officer as to sanitary conditions and recommendations forwarded to the Purchasing and Manufacturing Quartermaster, Washington, D. C.

Arrangements were made for sponging and shrinking all cloth, and this cloth was pro-rated to clothing manufacturers with a view to keeping them all occupied and allowing no accumulation of material at any one plant. As soon as shoe lasts were supplied shoe Inspectors were employed and sent to the factories throughout the Middle West with which contracts had been made, and the contracts transferred to this depot. The Clothing and Equipage Division of the Depot was established about July 1, 1917 and on November 11, 1918, there were about twenty-five officers on duty with this division. The office force proper, not including the clerical force of the C. & E. Branch, Warehousing

Division, consisted of 165 civilian employees and 15 enlisted men. There were 661 inspectors, 228 folders and 30 stampers on the division rolls.

The Motor Division was organized in June, 1917. From June 1, 1917, to May, 1919, purchases of motor vehicles and equipment for the use of the army were made by this Depot amounting to about \$125,000,000.

On October 1, 1917, on instructions from the Quartermaster General, the Forage Division of the Depot was organized. This Division was to purchase and distribute all oats, other grains and bran required by the army, both in this country and overseas. The Purchasing Quartermaster at Kansas City, Missouri, was charged with the supply of all hay and straw and their distribution. In order to carry a reserve stock of oats and bran, arrangements were made with thirty-four elevator companies to store oats for the Government. The amount of storage room secured in the thirty-four elevators totaled 2,800,000 bushels, payment being made only if the space was actually occupied. These elevators were located at practically all important terminal markets, including such places as Chicago, Minneapolis, Omaha, Kansas City, St. Louis, Fort Worth, Texas, Cairo, Illinois, Milwaukee, Toledo, Ohio, and Louisville, Kentucky.

The Warehouse Division was established on May 4, 1917, due to the increased activities of the Depot which also indicated the unsuitability of the quarters occupied at 115 East Ontario St. Captain, later Lieutenant Colonel Unmacht was placed in charge. After a can-

was of the city, a site at 2615 Iron Street was chosen. It was occupied by a Subsidiary of Montgomery Ward & Co. and through the assistance of the officials of this latter corporation occupancy was secured. On July 24, 1917, lease was made of the entire Hawthorne Race Track, a plot of 117 acres, including all its buildings. Additional buildings of a temporary character were immediately put under construction by the Depot Quartermaster and a switch connection made with one of the belt lines. Later, and again with the consent and assistance of the officials of Montgomery Ward & Co., a large concrete warehouse on West 39th St. was secured. Seeing that the available storage would prove inadequate, plans were drawn and appropriation secured for the erection of one-story bungalows on the corner of 39th Street and Ashland Avenue, on ground leased from the Central Manufacturing District. Three buildings were erected, each 96 feet wide and 1325 feet long, of hollow tile construction, equipped with heat, electric lights and complete sprinkler system. The Depot grew from 37,500 square feet to one containing 5,144,900 square feet. Colonel Albert D. Kniskern was the Depot Quartermaster.

EL PASO.—Supplied one camp of about 23,000 men.

FORT SAM HOUSTON.—Supplied four camps comprising approximately 70,715 men.

JEFFERSONVILLE.—This Depot supplied no troops. It was located in the center of a manufacturing district and was the general procurement depot for vehicles, harness, numerous articles of equipages, hardware, field

ranges and field bake ovens and their equipment. This Depot since the close of the Civil War had been manufacturing flannel shirts on a moderate scale, and from time to time the uniforms for Civil War veterans at the Soldiers' Homes, and had thus given partial employment to between seven and eight hundred widows and relatives of Civil War veterans.

In the fall of 1916 it was decided to establish at the Jeffersonville Depot a small plant for the manufacture of outer clothing, coats, breeches and overcoats, and a small appropriation was granted by Congress to enable the necessary alterations to be made in the buildings and to purchase the machinery required. In the manufacture of the shirts the cloth had been cut with shears, and the sewing women paid at the end of the month. Electrical cutting knives were installed and arrangements made for paying the women daily when the garments were turned in.

As the number of sewing women employed increased, sub-stations were inaugurated at Frankfort and Louisville, Kentucky, and at New Albany and other places in Indiana, the largest of these being a sub-station at the Louisville Armory which alone handled the work of 10,000 women. The number of sewing women was increased until a total of some 22,000 was reached.

All the foregoing came about in view of the very evident approaching hostilities in Europe and our actual entrance into the World War. When it seemed quite evident that the United States would soon be brought into war it was deemed advisable to begin to

prepare in ample time so as not to be found wanting when the crisis arrived.

But this constituted only a portion of the large quantities of purchases of supplies and raw materials that were made, such as cotton goods, stoves, field ranges, bake ovens, and hardware of all descriptions. Many of these were largely entered into prior to the declaration of hostilities in anticipation of that event, and others at that time and thereafter.

The gathering together of such large quantities of materials and supplies must necessarily be followed by an ample provision of means to take care of them. This was done by the construction of large warehouses, comprehensive plans of development being laid out, and the work rapidly pushed to completion. To handle goods incoming and outgoing it was necessary to increase the railroad trackage, putting in additional sidings and laying tracks along the new warehouses, and thus the Railway Transportation Department became a very important department in the Jeffersonville Depot, handling as high as 700 carloads a week.

On account of the wearing effect of the motor trucks, and to insure traffic at all times, much road building in the Depot and its vicinity was necessary and thousands of cubic yards of cracked rock were utilized for this purpose.

As an adjunct in securing supplies new shops were erected and shops on hand were enlarged. A modern and up to date harness shop was built to supplement the small one then in existence, and a new cloth shrink-

ing plant, up to date in every particular, was installed. A large building was constructed for shoe repairing, and the carpenter shops and paint shops were placed on a large scale by new construction.

But to handle this increased volume of business the necessary labor and office personnel had to be secured. This was done by consistently augmenting and carefully selecting the force until it had increased from something like two or three officers and 150 civilian employees in October, 1916, to something like 100 officers and 8,000 civilian employees in January, 1918, and this entirely exclusive of the women sewing on shirts. The increase in personnel again brought in new complications and necessities, such as means of transportation of employees to and from the Depot, medical assistance in the form of first aid for the injured, ambulances, doctors and nurses, all of which was arranged. A large cafeteria was established to provide means of furnishing food lunches within the depot grounds.

Immediately at the beginning of hostilities a secret service was established which operated in the neighborhood of Jeffersonville and Louisville and did very efficient work. This was supplemented by a depot guard to insure the security against theft and fire of the property in buildings and in open storage. This was increased as requirements proved necessary and formed a very efficient organization.

Early in 1917, in preparation for the War, large orders for transportation were received at the Depot. These orders became so great that by the fall of 1917

practically the entire vehicle and farm wagon industry, up to probably seventy-five per cent. of its entire output, was engaged in carrying on this work for the Jeffersonville Depot. The entire industry as a unit was put behind the Government. The contracts were so far reaching that there was no available lumber, and in its project the Jeffersonville Depot had to look forward as far as the standing trees in the forest.

It was practically the creation of a new industry, as very few of the contractors had previously manufactured these particular types of vehicles, and none in the magnitude involved. In addition there was much experimental work since the drinking water wagons, also the ration carts, drinking water carts, hand carts and medical carts were all new types of vehicles, the necessity of which was developed by the war, and for the production of which only very indefinite descriptions of the essential requirements were given.

The amount of harness required involved the use of a large quantity of leather, as well as a practical consolidation and expansion of the entire harness industry of the country, as had been the case with the Vehicle and Farm Implement Association in the production of the necessary vehicles.

This was accomplished through the assistance of the Harness Manufacturers' Association and with the same results that were obtained in regard to vehicles, that is, the production of harness was always in advance of the requirements.

An account has previously been given, under the title

Remount Division and Remount Service, of the arrangements made to secure the vehicles and harness which the Quartermaster Corps was called upon to supply, and reference has been made to the effort exerted to secure the necessary commissioned personnel to enable proper inspections to be made of the harness. The disadvantages and embarrassments under which the Depot labored because the necessary personnel to protect the interests of the Government and insure the manufacture and delivery of supplies of suitable quality was not supplied are evident.

A considerable amount of experimental work in the development of a suitable type of Rolling Kitchen had been done at the Jeffersonville Depot. During the prosecution of this work, Engineer W. A. Dorsey, attached to the Depot, devised an oil burner for use with the field ranges. This device was also applied to a type of rolling kitchen sent to the Mexican border for trial, and proved entirely successful. A duplex type of the Dorsey oil burner adaptable for field bakeries was also devised. The Dorsey oil burner is thus adaptable for use with rolling kitchens, field bakeries, army ranges, Sibley tent stoves, field ranges, etc., for heating and cooking purposes.

There were manufactured during the calendar year 1917 by the sewing women at this Depot:

Shirts	3,402,358	Shirts Alone	
Bed Sacks	2,026,000	Jan., 1917.....	84,935
Barracks Bags	126,000	Feb., 1917.....	66,880
Coats	3,700	Mar., 1917.....	53,045
		April, 1917.....	44,630

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Coats, Denim	2,620,000	May, 1917	84,750
Mattress Covers	67,000	June, 1917	117,280
Trousers, O.D.	155,000	July, 1917	293,220
Trousers, Denim.	212,000	Aug., 1917	435,994
		Sept., 1917	512,530
		Oct., 1917	646,354
		Nov., 1917	601,320
		Dec., 1917	461,420
Total	8,612,058		
		Total	3,402,358

There were manufactured during the calendar year 1918:

		Shirts Alone	
Shirts, O.D.	2,371,000	Jan., 1918	394,850
Bed Sacks	532,000	Feb., 1918	341,890
Barracks Bags	6,000	Mar., 1918	421,221
Breeches, Cotton	165,000	April, 1918	447,320
Breeches, Wool	65,000	May, 1918	371,480
Coats, Denim	123,000		
Coats, Denim	121,000	Total	1,976,761
Mattress Covers	62,000		
Trousers, Denim	465,000		
Breeches, Wool	111,000		
Total	4,021,000		

The sewing women employed during the calendar year 1916 were 1,545. This number was increased so that there were on the rolls December 31, 1917, approximately 22,000 women.

In order to distribute shirts, secure the highest production, and accommodate employees in the neighboring country, which included that as far north as Indianapolis and as far east as Frankfort, Kentucky, and similarly in other directions, there were established substations, the first being at New Albany, Indiana, on July 16, 1917. In the first week this sub-depot handled

the work of 3,000 operators. Other sub-depots were subsequently established as follows:

Scottsburg, Ind., opened August 6, 1917; 1,050 sewing operatives, closed December 7, 1918;
 Frankfort, Ky., opened August 18, 1917; 2,366 sewing operatives; closed December 4, 1918;
 Louisville, Ky., opened October 1, 1917; 10,020 sewing operatives, closed December 20, 1918;
 Madison, Ind., opened March 14, 1918; 1,822 sewing operatives, closed December 2, 1918.

These were all in addition to the sewing women whose work was handled at the Jeffersonville Depot proper.

Shirts for all sub-stations were cut at the Jeffersonville Depot, where the cutting capacity was increased to over 30,000 shirts per day. At two yards per shirt, this means 60,000 yards or 33.9 miles of shirting flannel cut daily, for seven days in the week. The records of this Depot show that during the month of April, 1917, \$29,100 was paid to home workers for the manufacture of shirts; that during August, 1917, this sum reached \$198,900.

Expansion of the Jeffersonville Depot

January 1, 1917—17.2 acres, including 251,620 sq. ft. covered storage.

November 11, 1918—145 acres, including 3,711,690 sq. ft. covered storage.

Railroads

January 1, 1917—2 freight tracks, total length 1,000 ft., car capacity 19.

November 11, 1918—12 freight tracks, total length 15,365 ft., car capacity 348.

Before the war, carloads handled in and out—15 to 20 daily.

During the height of the war, carloads handled in and out—80 to 100 daily.

Personnel

January 1, 1917—2 Officers—160 civilian employees—1,545 sewing women.

Spring, 1918—100 Officers—7,500 civilian employees—approximately 22,000 sewing women.

Office Space

January 1, 1917—4489 sq. ft.

November 11, 1918—59,605 sq. ft.

Purchase

April 6, 1917, to November 11, 1918.

General Supplies	\$100,521,185.53
Raw Materials and Paints.....	91,561.28
Clothing and Equipage.....	21,843,526.07

Total \$122,456,272.88

Colonel W. S. Wood, Quartermaster Corps, was the Depot Quartermaster.

NEW ORLEANS: This depot was the principal source of supply for two camps. It was also the headquarters for shipping to the Canal Zone. The depot supplied approximately 54,000 men.

NEW YORK: After the outbreak of the war there were many German and Austrian steamships interned at New York. Many of these vessels were berthed at the Docks at Hoboken, New Jersey, owned or controlled by the North German Lloyd and Hamburg-American Steamship Companies.

Anticipating the entry of this country into the war, Depot Quartermaster at New York, Brigadier General John M. Carson (then Colonel) Quartermaster Corps, wrote the Quartermaster General in December, 1916, urging that plans be prepared to seize the vessels and the docks on behalf of the War Department the instant that war was declared. Upon the declaration of war on April 6, 1917, the German vessels in the United States ports were immediately seized by the representa-

tives of the Treasury Department. The docks at Hoboken of the two German steamship companies were, however, not included, except in so far as it was necessary to safeguard the seized vessels. An investigation was made by the Depot Quartermaster and it was ascertained that the docks were technically owned by domestic corporations that had been organized by the North German Lloyd and Hamburg-American Steamship Companies under the laws of the State of New Jersey. The investigation showed that bonds had been issued and mortgages given which were owned or controlled by American financial institutions, and the Depot Quartermaster recommended that the docks be taken under lease, at rentals sufficient to cover the fixed charges on the two properties. The Depot Quartermaster was directed to proceed to Washington and after a conference held with the Secretary of War, the latter presented the matter to the President who approved the recommendation, made by Brigadier General (then Colonel) Bethel of the Judge Advocates Department, that the docks should be seized at once under the provisions of the Act of Congress, approved August 29, 1916. On the afternoon of April 16, 1916, instructions were given the Depot Quartermaster to take possession of the docks, by direction of the President, and to call upon the Commanding General, Department of the East, for the necessary guard. The representatives of the North German Lloyd and the Hamburg-American companies were informed by the Depot Quartermaster that he took possession of the properties in the name of the Gov-

ernment from that day. On April 18, 1916, the Depot Quartermaster with a Battalion of Infantry from Governors Island, New York, took physical possession of the docks and relieved the representatives of the Collector of Customs, Port of New York, of further responsibility in connection therewith.

On May 21, 1917, instructions were sent from the Office of the Quartermaster General to the Depot Quartermaster to the effect that orders would soon be made to send to France an Expeditionary Force, consisting of Infantry, Field Artillery, Medical Corps, Signal Corps and Quartermaster Corps troops, that would aggregate about 12,000 men and 2,000 animals, and that it was desired to embark the Expeditionary Force, if possible, on June 3rd. A list of vessels controlled by the steamship representatives in New York was furnished and the Depot Quartermaster directed to confer with the steamship representatives and the Commandant of the Navy Yard at New York, and select the vessels and have them properly fitted out, manned and armed for the voyage. Of the list of vessels some were in port discharging or loading cargoes, some were due to arrive shortly, and one or two were not due until June 1st. As a result of the conference it was reported that fourteen vessels would be required, ten for troops and four for animals and supplies, and that it would be impossible to prepare them to sail in convoy before June 9th and probably not until June 10th or 11th. June 10th was fixed as the date of departure and orders were issued for the concentration of troops and supplies

at New York. The composition of the Expeditionary Force was modified by substituting Infantry for Field Artillery and increasing the number of animals to 2,823.

Immediately the various Supply Departments began shipping supplies to the Depot Quartermaster without first inquiring whether such supplies could be handled. One Supply Department alone shipped 12,000 tons. The Quartermaster General invited the attention of the Chief of Staff to this lack of coördination and pointed out that such action would result in the same congestion which existed at Tampa, Florida, in the Spanish War, unless steps were taken to prevent it. He requested an order directing that no supplies be forwarded to New York for shipment to France until the Depot Quartermaster there had been previously consulted to ascertain if the supplies could be handled.

The Quartermaster General recommended the establishment of a Port of Embarkation at New York, and the appointment of a Commandant of the Base to coördinate all matters pertaining to the shipment of troops and supplies to France. No action having been taken on this recommendation, it was renewed and request made that Colonel John M. Carson be designated as Commandant of the Base. This resulted in directions to the Commanding General, Department of the East, to designate a line officer to act as Commandant of the Base, and on June 6, 1917, Colonel J. C. F. Tillson was appointed to act as Port Commander. This officer devoted himself untiringly to the work both day and night, and remained in charge until July 31st when

the Port of Embarkation was established at New York and a general officer designated to the command.

Through the splendid support and assistance of the officials of the companies whose vessels were to be used, aided by their organizations, and the Naval officers of the New York Navy Yard, the work of preparing the vessels for troops and animals was prosecuted day and night. All the shipyards in the harbor capable of handling work of this character were called upon for assistance, and responded fully. It was found that the guns required for the armament of some of the vessels had to be shipped from places outside of New York, otherwise the vessels would have been ready by the date set by the War Department for the sailing. One vessel, the *Finland*, of the American Line, did not reach New York until June 1st, but she was unloaded, refitted and ready to sail on June 10th, as she had already been armed, and therefore the time required to mount the guns was saved.

Practically all the troops forming this first expedition were brought from interior points, a large part of them from military posts and camps in Texas. There was no embarkation camp prepared for this concentration, and it was, therefore, necessary to regulate the arrival of troops so that they could march directly from the train to the vessel. It was also necessary to regulate, as far as possible, the arrival of equipment and supplies, as the docks, in spite of their large capacity, were not adequate to store all of the freight that was to accompany the expedition.

When the supplies were being loaded on the vessels, a strike for higher wages to be paid to the stevedores was threatened. Learning that men to replace them could not be secured in time to permit the sailing of the vessels on the date designated the Depot Quartermaster was authorized to make the advance requested. The Quartermaster General then requested authority to enlist a force of stevedores to handle the vessels in the Government service. This recommendation was opposed by the labor leaders in New York and the authority was not given. Later these leaders withdrew their objection and a force to guard the docks and afford protection against fire was organized. Its composition was such that there were men trained in stevedoring included in the organization.

Shortly after the sailing of the first expedition orders were made to prepare for a second expedition to be embarked as soon as the ships could be secured, and not later than the return of the ships which carried the first expedition. Colonel Carson had been assigned, in addition to his other duties as General Superintendent Army Transport Service at New York, and commenced the organization of the Transport Office with two officers and four civilian clerks from the personnel of the Quartermaster Depot. The organization expanded rapidly to meet the constantly increasing demands, until on November 1, 1917, it consisted of 63 officers and 588 civilian employees, exclusive of the stevedores employed on the docks in connection with the loading and discharging of the vessels.

Mr. P. A. S. Franklin, President, International Mercantile Marine Company; Mr. H. H. Raymond, President of the Clyde Line Steamship Co.; Mr. Clifford Mallory, connected with the Mallory Steamship Line; Mr. A. G. Smith, President of the Ward Line Steamship Co.; Mr. S. G. Schermerhorn, Executive Vice-President of the United Fruit Company; and Mr. E. D. Page, Chairman of the Advisory Committee appointed by the President of the National Chamber of Commerce and the officials of the New York Merchants' Association, rendered most valuable assistance in the preliminary stages of the work.

Under the management of the North German Lloyd and the Hamburg-American Steamship Companies, all freight to and from the docks at Hoboken had been transported either by lighters or trucks. The docks of the North German Lloyd Company had been connected by track with the adjacent trackage of the Hoboken Manufacturers' Shore R. R., whose terminal was a few yards north of the North German Lloyd docks, and this railroad had connection with practically all the railroads entering New York. While the track was in place the North German Lloyd Company had never allowed the Railroad Company to run cars on its docks.

A representative of the railroad company called in May on the Quartermaster General and made the proposition to lease the railroad to the Government. The Depot Quartermaster upon instructions made a thorough investigation and recommended the leasing of the road for the period of the war. The matter was

submitted to the Secretary of War and decision made to purchase the Railroad at a price to be established by a Board of competent appraisers, payment to be made from the contingent fund placed at the disposal of the President. The Depot Quartermaster under instructions took possession of the property on July 1, 1917, in the name of the Government. Steps were at once taken to extend the trackage to the yards in front of the sheds of both the North German Lloyd and the Hamburg-American docks.

The work of the General Superintendent, Army Transport Service, increased so rapidly that Colonel Carson was relieved as Depot Quartermaster on July 15, 1917, by Colonel Thomas Slavens, Quartermaster Corps.

By General Orders, No. 102, War Department, dated July 30, 1917, there was created in the office of the Chief of Staff a section to take charge of the embarkation of troops and supplies for transatlantic transportation and to exercise under the Secretary of War the direct control incident to this service. By direction of the Secretary of War, Primary Ports of Embarkation were organized at New York City and Hampton Roads, Virginia, and officers, with suitable staffs, assigned to their command.

By this order all control of all matters connected with the shipments of troops and supplies was taken from the Quartermaster Corps and imposed upon the Chief of Staff, upon whom the responsibility for the proper execution of the work also vested.

The New York Depot, located as it was in 1917, was necessarily so related to the equipment of new levies of troops and to the supply of the troops in France, that its expansion had to precede all other operations, and its development anticipate all increases in our forces. This was true in all its activities, including Personnel, Warehouses, Wharves, Clothing and Equipment, Forage, Fuel, Hardware, Transportation, both land and water, Stationery, Building Materials, Fire Apparatus, Cooking Apparatus and Utensils, etc., and all the activities depending upon them.

The personnel at the beginning of 1917 was small—there was not to exceed ten officers and eighty employees at the New York Depot. Within a few months, the number had increased to more than 300 officers and 11,000 employees, including about every known occupation or trade, as the purchases extended to so many articles and experts in all lines were required. The number of different items purchased finally reached was near the 200,000 mark. Watchmen had to be employed and organized for guarding the various storehouses, wharves, etc., and fire organizations perfected, which required a large personnel. The New York Depot included activities in New York City, Brooklyn, Governors Island, Hoboken and other cities outside of New York.

Warehouses: The facilities available in New York and on Governors Island early in 1917 were hardly sufficient for peace requirements and totally inadequate for war. With the development of the Transportation Service for France it was determined to occupy a large

amount of storage space of the Hamburg-American and North German Lloyd Steamship Wharves. This subsequently proved to be inadequate, and besides the space was required for shipping purposes, so it was necessary to increase the warehouse facilities. Governors Island with more than 100 acres of land available, offered immediate relief. Other sites examined required much time and preparation, whereas the Governors Island project would permit storage facilities within sixty days. A plan was prepared for this, which was approved by the Department Commander and by the War Department. Work was to be done in accordance with the plans, by the purchase of material, a construction firm to furnish the labor. The work was pushed rapidly, but was delayed for ten days, because of objection to the use of Governors Island site for Depot purposes, made by the Depot Committee of the Council of National Defense, which committee favored a site located on Newark Bay. The Depot Quartermaster had previously examined the Newark Bay site and reported that, in his opinion, it was not suitable. A Board of Officers was sent from the Office of the Quartermaster General to investigate the site and submit a report. The report was adverse to the selection of the Newark Bay site, and the Quartermaster General approved the report and adopted the recommendation. The stoppage of the work was unfortunate as it delayed the completion to some extent.

When work was resumed, it was pushed so that some of the storehouses became available in a short time,

and by the end of the year the railway ferry, dock and storehouse afforded such facilities that the unprecedented activities of the Quartermaster Corps could be carried on. Efforts to obtain storage facilities in New York City indicated that such as were required there could not be found, nor could such existing facilities be found that could be vacated in any reasonable time. Such buildings as could be utilized were rented or seized and taken over by the Government. These buildings with such space as they afforded, and with the Governors Island Warehouse, gave storage space of more than 2,000,000 square feet in and about New York City. Storage space was rented also near the factories supplying articles for Government use, which relieved New York of a great deal of freight handling. In the Governors Island warehouse, the freight was handled with great facility—using, besides the railway, electric trucks, motor trucks, hand trucks, stacking devices, roller transfers, etc.

Wharves: The facilities at Governors Island were entirely inadequate at the outbreak of war. Those of the Transport Service at Hoboken soon became congested, and it was necessary to increase facilities at Governors Island and secure more ship space in New York City. Furthermore, a line of ferry boats had to be established between New York and Governors Island. Wharves to meet these requirements were secured or constructed, and this greatly facilitated the handling of incoming and outgoing freight. Trucks went directly

from New York to warehouse on Governors Island, the same as making deliveries in New York City.

Clothing and Equipment: The procurement and manufacture of clothing and equipment had not been developed in the New York Depot, and consequently had to be initiated and firms induced to undertake the manufacture of articles of clothing, such as were required by the Government. Furthermore the supply of cloth was a ruling factor, and all development requiring cloth, wool or cotton was directly dependent upon the rate at which the cloth could be supplied.

The making of underwear was a great problem and required the united efforts of knit goods manufacturers to meet the needs of the department. Many sub-depots were established, to inspect, receive and ship the products of the manufacturers of clothing and equipment, and this expedited greatly the shipment of such articles, and relieved congestion in New York.

Subsistence: The quantity of sugar, coffee, flour, etc., purchased by the New York Depot was enormous. Arrangements had to be made for storage of meats for at least 15,000,000 pounds and for approximately 30,000,000 rations. This alone was a great undertaking, as practically all articles except meats had to be purchased by the Depot, so that the entire transport, procurement, storage and distribution fell on the Depot. The troops in France were supplied and the New York Depot had to prepare all shipments well in advance, so that space on transports could be secured. Much forage was handled. Hay was used for chocking, and

a large hay yard was established in Hoboken to meet demands of transports for this purpose. Fuel, however, was taken over by the Fuel Administrator and allotment made to the Quartermaster Department for its needs.

Hardware: This was purchased in large quantities and included many items such as buckets and cans of galvanized iron; carpenter, blacksmith and horseshoers' tools, etc.; and many articles never before used in the Army had to be purchased.

Transportation: Shortly after the beginning of the war this was established as a separate service. The Depot, however, retained Harbor, Rail, Motor and Horse Drawn transportation. The rail transportation proved to be a great task, and to avoid congestion, many warehouse stations were established outside of New York City. The Depot on Governors Island with the Railway Ferry relieved this so far as the Depot was concerned. It could and did handle the freight consigned to it. It was found necessary, however, to permit only such articles as were required to be shipped into the Depot. The Ferry established for trucks to Governors Island was not the least of the projects in transportation and greatly assisted the handling of freight.

Stationery: The amount required was enormous and three storehouses 350 feet long and 60 feet wide were required to handle this business.

Building Material: Building material required for

construction of Depot on Governors Island and many other projects were handled.

Fire Apparatus: Fire apparatus in large quantities for France and for the cantonments in the United States was purchased. This was in complete sets, and included fire engines, chemical engines, hook and ladder trucks, etc.

Cooking apparatus and rolling kitchens were supplied in large quantities. Rolling kitchens had to be developed almost from the beginning and a type adapted to the needs of the Army developed. The work required and time spent in this development were in themselves large items.

Motor transports, trucks, autos and spare parts for same, and tools and materials for the great motor shops for France required special personnel and special numbers. Nothing like this had previously been attempted by the Army.

Colonel Thomas H. Slavens, Quartermaster Corps, was the Depot Quartermaster at New York from July 15, 1917, until the end of the year 1917. Shortly after that time he was assigned to duty in France.

OMAHA: This was a purchasing depot for subsistence, fuel and forage. Lieutenant Colonel Frank A. Grant, Quartermaster Corps, was the Depot Quartermaster, and was also in charge of the Signal Corps, general supply depot at that station.

PHILADELPHIA: Philadelphia was wholly a manufacturing and procurement depot. It had a large factory operating division, in which were made a large number

of uniforms. It was the source of supply for the Army of chevrons, ornaments, flags, colors, kitchenware and tableware. Flags, colors and chevrons were, as far as possible, made in its own factory which was noted for the beauty and finish of the embroidery work produced by its operatives.

This depot handled the procurement of all the textiles required for the Army, and through the assistance of Colonel Harry J. Hirsch (one of the officers on duty at the depot, and who was assigned to assist the Committee on Supplies of the Council of National Defense) all the contracts for the purchase of the cloth was made by this depot. The depot also arranged for the inspection of the cloth on delivery, entered into contracts for making the uniforms, shipped the cloth to the manufacturers who had been given contracts, supplied the necessary furnishings and findings required in making the garments, provided for their thorough inspection on delivery, and finally filled the requisitions for the garments to the stations indicated. In October, 1917, a Quartermaster's Purchasing and Manufacturing Office was opened in Washington and Colonel Harry J. Hirsch was assigned to its charge, after which time the Philadelphia Depot was relieved of the duty of making contracts for the purchase of clothing and equipage materials and the manufacture of clothing and other supplies.

Expansion of the Philadelphia Depot during the World's War: In the early part of 1917 the Philadelphia Quartermaster Depot was located on the Schuyl-

kill River at 2620 Gray's Ferry Road (the old Schuylkill arsenal established by act of Congress, April 2, 1794). It covered about eight acres of ground, consisting of two sets of officers' quarters, an office building, museum building (the oldest, built in 1800), two large warehouses and a few smaller ones, with a total of approximately 200,000 square feet of storage space.

At the outbreak of the war the depot was charged with the purchasing and inspection of all clothing and equipage, including band instruments of every kind, furnishings and raw material which entered into the manufacture of clothing and camp and garrison equipage, and the purchase of the supply of table china and glassware for the army.

It became apparent that the facilities of the depot were altogether inadequate to meet the requirements and the Depot Quartermaster at once set about the work of expansion. Improvements were made in the Government plant, which consisted in remodeling the museum building and officers' quarters, fitting them up suitably for offices, and later the erection of a new three-story office building; the installation of new freight elevators in the warehouse to permit the rapid handling of freight; the construction of a new elevated side track to allow the speedy loading and unloading of cars; the removal of small wooden structures to give clear road space and trucking areas; the conversion of the old stables into modern garages, and the erection of a brick garage; the replacing of the old horse-drawn transportation with motor-propelled vehicles.

In the early part of 1917, all the textiles required for the Army and the manufacture of the clothing and equipment were procured through the Philadelphia Depot. The following divisions and branches were established in the Office of the Depot Quartermaster: Administration; Purchasing and Contracting; Inspection; Manufacturing; Supplies; and Finance.

The purchasing was effected after advertising for sealed proposals and awards were made to the lowest responsible bidder, and contracts entered into with same. With the exception of shoes, which were delivered and inspected at the Depot located in the vicinity of the factory manufacturing them, the supplies were all shipped to the Philadelphia Depot for final inspection. After inspection and acceptance, certified vouchers were forwarded to the Finance branch for payment, and the supplies turned over to the Supplies branch for warehousing and eventual distribution to other General Supply Depots, or sometimes sent direct to camps and stations for the equipment of the troops.

All textile materials of every description were received at the Philadelphia Depot where they were placed on perching machines, measured, critically examined yard by yard, tested and every precaution taken to determine whether the materials complied with the specifications in all details. This required most expert and skilful work and was most carefully performed and its successful accomplishment was a great credit to the officers and subordinates in charge. Every piece of goods, woolen and cotton, before being cut up received

this minute and careful inspection at the Depot. Upon completion of this inspection the goods were warehoused at the Depot and eventually either used by the Manufacturing branch or shipped to outside contractors to be manufactured.

All band instruments were likewise shipped to this Depot for final inspection and each instrument was carefully and critically inspected by competent men to determine if they were manufactured in accordance with specifications and were of the prescribed pitch. Underwear, stockings, leggins and overshoes were inspected carefully garment by garment, and piece by piece, and all rubberized clothing received minute inspection. All uniforms manufactured by outside contractors came to this Depot for final inspection; also all crockery and many miscellaneous supplies including stationery, lockers, field desks, etc.

All this work required considerable floor space and many employees at the Depot, but the results justified the labor and expense. It is a difficult task to describe in words the magnitude of this work and the skill and thoroughness with which the task was performed.

The Supplies branch included warehousing, caring for requisitions for supplies, preparation of supplies for shipment, handling of transportation facilities and the clerical work incident thereto. It was a stupendous task and was well performed.

The Manufacturing branch had charge of the factory at the Depot in which were made all the flags, colors and standards used in the Army; all the tentage and

many uniforms. All special-sized work was done at this Depot and many flannel shirts were made there. The uniforms made there were of unusually good workmanship and were produced at less cost than outside work. It was not possible to secure sufficient appropriations to construct buildings and equip them with the necessary machinery to manufacture a large proportion of the clothing required for the Army, nor was there adequate place on the Government reservation for such buildings. Moreover, it was a good policy to have outside contractors always engaged in manufacturing uniforms so as to provide the means of having a large number of additional uniforms quickly made at reasonable cost when an emergency arose. The Manufacturing branch was an efficient organization, and turned out excellent work at low cost and in large quantities and was a credit to the Depot and the Quartermaster Corps. The officers and the subordinates deserve praise for the successful accomplishment of the many difficult tasks imposed upon them.

The Finance branch was charged with the duty of accounting for the funds and supplies, and made payments due under contracts, and also paid all the clerical force, workmen, laborers and others employed at the Depot.

When War was declared this Depot still continued to be charged with the responsibility of furnishing the clothing and equipage. All the other Depots were directed to assist and rendered most valuable aid, but the Philadelphia Depot had charge of the matter and

remained so until the middle of November, 1917, when a Quartermaster Manufacturing and Purchasing office was organized in Washington, D. C. After that time the functions of the Philadelphia Depot were similar to all the other Depots, but from March until November, 1917, an enormous task was imposed upon this Depot.

Tremendous quantities of every item of quartermaster supplies, known as clothing and equipage, were required for the new armies and had to be supplied within a very short time. It was easy to figure the quantity of supplies required, but for a number of years the Philadelphia Depot and a comparatively small number of contractors were able to furnish all the supplies needed. Commercial goods are not suitable for military use in the field, except as a temporary expedient.

The European War had drained the resources of the country in some important items. Commercial business was excellent and manufacturers were not particularly anxious to change over to Government orders. The country as a whole had not recognized the stupendous importance and the vital necessity of devoting itself entirely to the winning of the War. Furthermore, the demand for certain textiles necessitated changes in the looms and many additions which required time to install. There was a large demand for raw materials and in many cases the supply was short on account of the supplies under contract for the Allies. All this threw additional work upon the Philadelphia Depot and the force in all the branches was increased

enormously and provided with every possible means to rapidly and efficiently perform the tasks, but they could continue to function as formerly only on a greatly enlarged scale.

It was seen immediately that it would be impossible to continue shipping the textile materials and other supplies to the Philadelphia Depot for final inspection. The country was therefore divided into zones and each Depot made responsible for the inspection, acceptance, payment and distribution of the supplies manufactured in its zone. A few additional depots were also established for this purpose, but the Philadelphia Depot still continued to be charged with the procurement of the clothing and equipment. However, the peace time method of advertising for sealed proposals and making awards on same was discontinued in most instances and open market purchases effected, so it had not only the responsibility of procuring the supplies but also the grave responsibility of deciding upon prices, selecting contractors and the exercise of good judgment in determining the quantities which could be produced by contractors.

Upon the officer in charge of the Purchasing and Contracting branch was imposed this great task, and when the Committee on Supplies of the Council of National Defense were by orders of the Secretary of War called upon to indicate where the supplies needed could be procured, Colonel Harry J. Hirsch, who was in charge of that branch, was directed to act in cooperation with the Committee on Supplies in selecting

the contractors and arranging for the payment of a just and equitable price for the supplies. In addition, all contracts for the manufacture of uniforms, tentage and other supplies continued to be made by this branch, on the responsibility of the officer in charge of the branch, Colonel Hirsch. The ability possessed by that officer and his excellent judgment contributed very greatly to the successful accomplishment of the work of the Philadelphia Depot, and were also of material assistance to the Committee on Supplies of the Council of National Defense with which he coöperated.

Anticipating the need of greater storage and shipping facilities, the new Municipal Pier on the Delaware River, with a storage capacity of approximately 150,000 square feet and all modern equipment for the loading and discharge of cargo from vessels, was taken over and utilized. This pier afterwards became the nucleus of the embarkation service which was established. The other buildings taken over and leased were as follows: The Merchants' Warehouse, Front and Federal Streets, approximately 30,000 square feet of storage space; The Commercial Museum at 24th and Spruce Streets, 125,000 square feet storage capacity; The Equitable Warehouse, 5th and Willow Streets, 75,000 square feet storage capacity; the third and fourth floors of the old Custom House at 5th and Walnut Streets, about 25,000 square feet; and, in addition, numerous smaller buildings and lofts were leased in various parts of the city for inspection purposes.

In December, 1917, a site comprising sixty-five acres

was selected on 21st and Oregon Avenues, in the Girard Estate, and leased for a term of years for the purpose of erecting thereon five temporary warehouses; the construction of which was commenced about February 1, 1918, and completed about September 30, 1918.

The first of these buildings was completed about April 1st, and was immediately occupied for storage and shipping. The combined storage capacity of the new warehouse aggregated 1,000,000 square feet.

About July 1, 1917, a sub-depot was established in Baltimore to receive and inspect the articles manufactured in that locality. This sub-depot was afterwards merged into the General Depot established at Baltimore.

There were also sub-depots established at Trenton and Red Bank, New Jersey, and at Toronto, Canada.

In April, 1917, there were six commissioned officers and 1,750 civilian employees at the Philadelphia Depot; on December 31, 1917, this personnel had increased to 100 commissioned officers and 6,800 civilian employees.

To take care of this personnel hospitals and dispensaries were established to care for the sick; rest rooms and welfare organizations established to care for the female employees; exchanges and cafeterias opened to provide the meals and lunches at midday for all.

The following is a brief statement of the approximate quantities of uniform cloth, shirting flannel and cotton duck entering into the manufacture of uniforms and tents which were received, stored and issued during 1917:

	Yards
Melton, O. D., 16 and 20 oz.....	8,000,000
“ “ “ 30 “ 32 oz.....	5,000,000
Shirting flannel, O. D.....	7,000,000
Cloth, cotton, O. D.....	20,000,000
Duck, Khaki, 12.4 oz.....	10,000,000
“ “ 8 “.....	6,000,000
“ “ Shelter Tent.....	7,000,000

In addition to the foregoing proportionate quantities of linings, trimmings, findings, etc., were purchased, stored and issued.

The foregoing is only an outline of the growth and expansion of the Philadelphia Depot. The financial records of the Depot show that the disbursements for supplies increased in 1917 from approximately \$200,000 to \$22,000,000 per month. Colonel M. Gray Zalinski, Quartermaster Corps, was the Depot Quartermaster.

PITTSBURG ARSENAL: This was a storage Depot, and while included in the responsibility of the Depot Quartermaster Philadelphia it was intended for the reserve storage of wagons and other supplies produced through the Jeffersonville Depot.

In addition to the storage already at the Depot temporary buildings were constructed shortly after the outbreak of the War, containing 1,329,500 cubic feet of storage space.

PORTLAND, OREGON: This was a purchasing depot for the camps in its vicinity.

SAN FRANCISCO: This Depot was the principal source of supply for three camps on the Pacific Coast, and had under it three sub-depots. The camps supplied by this

Depot included about 71,000 men. A large number of shoes and blankets and a great quantity of cloth were purchased and inspected by this Depot. The troops in Hawaii and the Philippine Islands were entirely supplied by this Depot, and in addition the line of transports operating between San Francisco and those Islands were under the charge of the officer commanding this Depot.

Colonel John T. Knight, Quartermaster Corps, was the Depot Quartermaster and General Superintendent, Army Transport Service, until August, 1917, when he was succeeded by Major General Carroll A. Devol, who continued at the Depot during the remainder of the year.

SEATTLE: This was a purchasing and storage depot for the camps and posts in its vicinity, and also for the troops at stations in Alaska. The transports running to Alaskan posts were operated by the Depot Quartermaster. This depot also had a sub-depot at Tacoma.

Colonel William H. Hart, Quartermaster Corps, was Depot Quartermaster. Later he was succeeded by Colonel George Ruhlen.

LOS ANGELES: A purchasing station for procurement of subsistence stores and such other miscellaneous articles of quartermaster supplies as were obtainable in that vicinity. Major Harry L. Steele was the Quartermaster.

ST. LOUIS: This Depot supplied four camps in which there was a total of about 111,000 men. It also purchased a large number of shoes and such clothes and

blankets as were manufactured in its vicinity, and superintended the making and inspection of a great number of uniforms in the various factories to which contracts had been awarded. A large extension was made to the storehouses located at the Arsenal, and a thoroughly modern and well equipped storehouse and office were constructed.

Colonel William F. Clark was the Depot Quartermaster.

WASHINGTON: This Depot supplied the local posts and departments. In this Depot was effected the settlement of all railroad bills of lading and transportation requests. The Depot Quartermaster also had charge of the new construction which was provided at Fort Myer, Washington Barracks, The Walter Reed General Hospital, the Engineer Camp, and Camp Meigs. This Depot was also called upon to furnish transportation by motor trucks and of individuals in automobiles, and also assisted in moving the various offices to the new buildings when erected.

Colonel George F. Downey, Quartermaster Corps, was the Depot Quartermaster.

X

TRANSPORTATION DIVISION

Rail transportation—Water transportation—Motors—Machine shop unit at Hoboken—Joint Army and Navy Board for the Inspection of Merchant Ships—Planning and designs for new army transports—Army vessel building program for construction of numeral small craft—Militarization of the U. S. Army vessel service—Motor transportation.

RAIL TRANSPORTATION

IN view of the great importance of transportation facilities in the problem of national defense, early attention was devoted to the establishment of a closer coöperation between the Quartermaster Corps and the various transportation interests with a view to coördinating in the movements of troops and supplies for the Army. During the spring and summer of 1915 the officer in charge of the Transportation Division, Office of the Quartermaster General, appeared before several of the transportation associations and outlined a plan of mutual coöperation which would be of benefit to both the carriers and the Government in case any emergency arose involving the transportation of large numbers of troops. These addresses were well received and the railroad men of the country became interested.

On October 26, 1915, a letter prepared by the Quar-

termaster General was sent by the Secretary of War to the American Railway Association (an association composed of the presidents, and other chief operating officials of the American railways) suggesting the establishment within that Association of a committee of military transportation with whom the Quartermaster Corps could work in making such arrangements as might be necessary. Acting on this letter a "Special Committee on Coöperation with the Military Authorities" was appointed by the American Railway Association composed of the following gentlemen: Fairfax Harrison, President, Southern Railway; R. M. Aishton, President, Chicago & North Western Railway; A. W. Thompson, Vice-President, Baltimore & Ohio Railroad; W. C. Besler, President, Central Railroad of New Jersey.

Conferences were held with this committee, and a general plan of coöperation outlined, to be placed in effect at the time of any public emergency, which provided for placing a competent railroad official at each department headquarters, at each mobilization camp, at ports of embarkation and such other points as might be necessary. These representatives were to act as advisors to the officers of the Quartermaster Corps at these various points on any matters affecting rail transportation and were representatives of all lines interested, thereby enabling an absolute coördination of all railroads.

Sub-committees were appointed by the Committee of the American Railway Association to cover each phase of railroad activities. These committees met from

time to time with representatives of the Quartermaster Corps and comprehensive plans were made to utilize to the utmost the resources of the transportation lines in providing for any contingencies that might arise should it become necessary to mobilize and transport the military forces of the United States.

Arrangements were made for centralization of all troop routing (other than inter-departmental movements) in the Office of the Quartermaster General in order that all movements might be coördinated and congestion avoided. Tentative routings from all regular army posts and from state mobilization camps to Atlanta, Gulf, Pacific and Mexican Border points were made up and placed on file in the Office of the Quartermaster General.

Information was collected, collated and filed showing terminal facilities, such as wharves, docks, side tracks and railroad connections at all important ports on the Atlantic, Gulf and Pacific Coasts.

Representatives of the Quartermaster General, the Surgeon General, and the Pullman Company drafted plans for a complete hospital train composed of an operating car, kitchen car, cars for litter cases, cars for ambulatory cases, and a car for the personnel attached to the train. With the authority of the Secretary of War, one of these trains was constructed by the Pullman Company in 1916, and placed on duty on the Mexican Border, and this train formed a model for several other trains constructed during the World War.

Working plans and diagrams were made for the con-

version of freight cars into temporary passenger cars, of Pullman cars and day coaches into hospital cars, and of flat and gondola cars for the transportation of light and heavy guns. These plans and specifications were on file in the Office of the Quartermaster General, and copies of them were also on file with the important railroad companies.

Various transportation forms were drafted including cards to be placed on cars to identify their contents and insure expedition in movement.

In conjunction with the sub-committees on passenger traffic, an agreement was entered into which provided for a distribution of military traffic on an equitable basis between all carriers; in return for which a reduction of five per cent. from the lowest rates otherwise available was made by the carriers. This reduction applied on all military traffic, including individuals as well as troop movements, and resulted in a saving of thousands of dollars per year and the simplification of military passenger traffic.

With the mobilization of the Regular Army and the National Guard on the Mexican Border in 1916, these plans, so far as applicable, were at once placed in effect and fully demonstrated their value; minor changes only being found necessary.

On the declaration of war by the United States the committee above referred to was enlarged to eighteen members and designated as the Special Committee on National Defense of the American Railway Association. About a month later the committee was enlarged

to thirty-three members, certain of them being stationed at each department headquarters. With the outbreak of war the activities of the committee were extended far beyond what was originally contemplated, but the general plans were not changed. The railroads of the country were, so far as troop movements are concerned, operated practically as one system, and while there were some delays in the movements of troops during the winter of 1917-18, these delays were negligible and due solely to the exceptionally severe weather conditions during that winter.

Perhaps the best example of these careful plans made by the Transportation Division of the Quartermaster Corps, in conjunction with the Railway Association, was in the transportation of the drafted men from their home to the mobilization camps. The records show that 2,287,926 men were transported from their homes to mobilization camps, these men came from thousands of draft districts in every part of the United States, thousands of them had performed but little, if any, travel before, but so complete were the transportation plans that all of these millions of men were handled without confusion or delay and without detriment to the regular train service.

Some idea of the magnitude of the troop movement may be had from the following figures taken from the records of the Troop Movement Section of the United States Railroad Administration. From the date of the declaration of war up to and including the date of the Armistice 8,714,582 troops were moved by the rail-

roads. This was in addition to over two million men who were carried on regular trains, being mostly drafted men en route to mobilization camps. A total of 16,535 special trains were necessary to carry troops, 245,529 cars being required for these movements. It is of interest in this connection also to note that over thirty per cent. of these men were handled in pullman cars, the balance being carried in coaches, and it was not necessary at any time to utilize box cars or other freight equipment for their transportation. For transportation overseas 1,758,033 men were moved into the Port of New York alone. In all these vast movements there were sixteen accidents involving death or injury in which thirty-nine men were killed and 335 injured.

That the plans made by the Quartermaster Corps for the movements of troops were well thought out and covered almost every contingency is amply demonstrated by the fact that after the Government took over the railroads, and my successor appointed one of the leading traffic men of the United States as Director of Inland Traffic, absolutely no change was made in the plans that had been laid down during my administration for the movement of troops.

From the foregoing it will be seen that definite plans for the movement of troops were made long before the United States entered the World War, that these plans were comprehensive, carefully thought out and proved highly effective in actual practice. That this was so is due solely to the fact that the transportation of troops was left wholly to officers of the Quartermaster Corps

who were familiar with the matter and understood their duties. The same cannot be said for the transportation of supplies, or what is better known as Freight Transportation. That there was congestion and lack of coördination in the transportation of supplies during the fall and winter of 1917 must be admitted, but this was not due to any fault or lack of plans by the Quartermaster Corps or its officers, as comprehensive plans for transportation of all supplies for the Army were made by the Quartermaster Corps in 1916.

The great volume of all commercial shipments was moved to the Eastern Seaboard in order to meet the requirements for the contracts made by the Allied Governments for supplies, in addition the Shipping Board had enormous quantities of freight to move. This, added to the severe weather conditions and the heavy snow storms of 1917, caused the freight congestion in the Eastern part of the United States during that winter.

WATER TRANSPORTATION

History, of all foreign wars by any nation, shows plainly that the movement of masses of troops by sea is always a determining factor. Plain as this fact may be, yet many military commanders have sought to ignore this teaching of history, for as always the transport of soldiers by ships is fraught with difficulties and by many not regarded as a military but a naval problem, hence many of the greatest captains of the past have had their

military record irretrievably blasted because they could not bring into their program of campaign the problem of the troop ship.

The Spanish War was the object lesson in military sea transport which has set the pace for the United States War Department in establishing a definite military transport fleet, and for continuously maintaining it to the point of highest efficiency.

This U. S. Army Transport Service has from its very inception at the outbreak of the Spanish War been under the full administrative control of the Office of the Quartermaster General.

At the outbreak of the World War it was not thereupon newly discovered as a new found toy to be taken up and experimented with, but instead it was a fully developed organization, time tried with the experience of twenty years and one war. It was not necessary for the Quartermaster General's Office at the outbreak of this World War to take the time to debate upon the desirability of an Army Transport Service, how it should be planned or administered, or the service it could properly undertake; as all this work had already been done in the past years. Nor was it necessary to call in the Navy for their advice or experience in this matter, for strange as it may seem the Navy had no experience in these matters, or at least none worthy of the name. In the minds of the older officers of the Quartermaster Corps it was recalled how at the opening of the Spanish War, when the then Quartermaster General, called upon the Navy Department to aid in the transport of troops

from Tampa to Cuba, the Navy replied that it had grave problems of its own and was in no position to worry over the subject of the movement of troops. Thereupon, without further debate with the Navy, the Secretary of War and the Quartermaster General called into being the U. S. Army Transport Service which as a definite military unit has had an unbroken record up to the present.

The Navy, during the Spanish War, operated a few occasional transports for the service of its own supplies and personnel, but at no time ever accomplished any War Department transportation of any kind. Following this War, the Navy willingly drifted back into its peace-time routine, and was only too glad to have the Army undertake not only all the Army's own sea transportation, but the Navy's sea transportation as well. Strange though it may seem, the U. S. Army has practically kept alive the Asiatic Fleet of the U. S. Navy by the continuous transfer of supplies and personnel from San Francisco to the Orient. These facts of the past regarding the Navy are merely indicated to show that the War Department could not go to the Naval Service for professional advice on the subject of movement of troops over marine routes, but rather it appears that the War Department was in a position to offer the Navy recommendations based on study and experience with this class of sea service of which the Navy knew nothing.

That this twenty-year operation of the Army Transport Fleet was a success is best evidenced by the fact

that this Fleet as an organization lasted so long. The records of other nations in fact, show no such long period of operation after the original military necessity which led to the Fleet's creation had been passed.

The Congress of the United States, shortly after the close of the Spanish War, gave careful consideration to the aspect of further continuance of the Transport Fleet, but each time, after careful scrutiny of the appropriations, and an analysis of figures for equivalent transportation by mercantile marine steamers, always returned to the conclusion that the maintenance of a fleet of transports was not only a military necessity but also that it was an economical procedure.

Unpreparedness for War was never the condition in the Water Transport Branch of the Quartermaster General's Office; for as shown, the U. S. Army Transport Service had never been allowed to lapse either by Congress or the War Department.

On the declaration of War with Germany the U. S. Army Transport Service was a very much alive and flourishing service. To be sure, it did not have many ships, but it had the nucleus of an organization which needed but the orders and the financial allotments before it could be readily expanded to any extent demanded.

No branch of the Quartermaster General's Office could boast of such continuous control and practice of principles as was accorded to the Water Transport Branch. Necessity in other Branches had often required those rotations of officers and methods which in-

terfered with that continuity of means and practices which good administration properly requires, but with the Water Transport Branch from the days of the Spanish War until the opening of the World War, there had been very few changes in the commissioned personnel in charge of this important Division of the Office of the Quartermaster General.

Another official who had a large influence in molding the policies of the whole transport and army vessel service, and who represented a continuous program of policies from the Spanish War to the Mexican Mobilization, was Mr. George A. Anthony, the Supervising Marine Engineer and Naval Architect of the War Department, who was appointed by Quartermaster General Ludington in 1898 and served in his capacity as general nautical adviser to each successive Quartermaster General until 1916. In addition to these duties he also had control of the design and fitting of more than a hundred new vessels for the harbor boat service of the War Department as well as the supervising of personnel and repairs of all classes of vessels of the entire U. S. Army Vessel Service. In 1916 desiring to accept a position in civil life he resigned and his duties were transferred to Mr. Frank Van Vleck, who had during the Spanish War been an Assistant Superintendent Engineer of the U. S. Army Transport Fleet at San Francisco, and who had had in the meantime service in the Department of Yards and Docks of Mare Island Navy Yard, and later as Assistant to Admiral Melville, Engineer-in-Chief of the Navy at Washington.

It should be stated here that many months before there was any thought of the declaration of war, the Quartermaster General had issued instructions for the military examination and survey of every vessel under the American Flag that could by any means be adapted for the transportation of troops and animals. Therefore when war opened there was on hand and ready a list of every available American vessel suitable for charter or commandeered as a vessel of the Army Transport system.

As indicative of the readiness of the transport fleet for sudden exigencies, it may be mentioned that late in 1916, a year before the German War, the second Mexican Border Mobilization was under full way, when a call was suddenly made upon the Quartermaster General to be ready for a campaign by sea from a Gulf port for a destination unknown, presumably again Vera Cruz or Tampico. Lists of American ships in addition to the transports held in reserve at Newport News, Virginia, were picked out as available and instructions were ready for issue in all detail to have these ships all fitted and ready for sea in two weeks for the transportation of at least one American division to the scene of action. Advices from the State Department shortly appeared stating that this proposed movement had been cancelled.

Yet again early in May, 1917, shortly after the declaration of war with Germany, there emanated from the General Staff a request for a troop movement to an overseas destination unnamed, of a division or more, and in which each class of military unit for the voyage

was designated. Here again, the Quartermaster General's Transport Officer had ready in a few hours, the complete designation of all ships by name, their appointed date of rendezvous at the general base, and all to be equipped and provisioned ready to sail in ten days or two weeks. Each ship was designated to carry certain units and no others, everything had been determined as far as possible in advance. This sudden troop movement did not come off at that time, but was evidently changed, as these preliminary plans for merely division movements were merged into the consideration of the larger projects for the now too evident movement of troops by vast units.

Before the declaration of war in April, 1917, instructions were issued directly by the Quartermaster General to Colonel Chauncey B. Baker, Q. M. C., in charge of the Transport Branch of the Q. M. C., to get in touch with the new Chairman of the Shipping Board, Mr. Denman, and to impress upon him that the Nation was rapidly drifting into war, and that the American War Department must have more ships available for eventual transfer or commandeered as transports. Colonel Baker called attention to the fact that although the United States was not at war, yet certain departments of the Army did not propose to be caught unawares, and that what few ships the Transport Service had were all of them busily engaged in necessary military transportation. This was especially so in the nitrate situation as the Ordnance Department realized late in 1916 that if war was suddenly declared, the ob-

taining of Chilean nitrate might be completely cut off. As this contingency was too serious to contemplate, Army transports late in 1916 and 1917 were rushed to Chile for this very necessary constituent of explosives.

Upon the declaration of War with Germany on April 6, 1917, all the German interned vessels at United States ports were seized and their German personnel made prisoners of war.

The War Department at once recognized the importance of this move, as there was thus placed in the hands of the American government a large list of vessels of the most seaworthy type, which would make ideal transports. Still neither the War Department nor the Navy had control over any of these ships. The seizure was first effected by the U. S. Marshals attached to the Treasury Department and a few days later the U. S. Steamboat Inspection Service was instructed to proceed with their repair, as the Germans had left them in a frightful state of intentional damage. Then later the Shipping Board was instructed by the President to proceed with the repairs, yet at this time the Shipping Board had no technical staff whatever to undertake what was to be a herculean task. Thereupon, the War Department was required to take over and start these repairs. Later, the Navy Department, again by direct instructions of the President, took over this whole task of reconditioning. This fitting up work by the Navy did not, however, entitle the boats to go into commission as navy troop ships. Their operation was under the orders of the Shipping Board. That the War

Department did not leave one stone unturned to quickly get hold of some of these ships is shown by a letter to Chairman Denman of the Shipping Board, asking that the following named German interned vessels be at once reserved for the use of the War Department for the early transportation of troops to Europe:

As troops ships	In Boston	the	S.S. Amerika
	“ “	“ “	Cincinnati
	In New York	“ “	Princess Irene
	“ “ “	“ “	Hamburg
	“ “ “	“ “	Geo. Washington
	“ “ “	“ “	Grosser Kurfurst
	“ “ “	“ “	Kaiser Wilhelm II
	“ “ “	“ “	President Lincoln
	“ “ “	“ “	President Grant

In addition thereto there were to be added suitable vessels to form the Supply Train, the names and relative tonnage to be determined by the Shipping Board. Repairs and refitting now in progress, were to be continued, except such alterations as might unfit the interiors for strictly military use. Costs and charges for this work of repair and refit, already performed and contracted for, were to be the subject for future adjustment between Shipping Board and War Department.

In addition to the interned German vessels required for the Atlantic Oversea expeditionary forces, the following were also asked for in separate communications, but are here consolidated into one list:

For San Francisco-Honolulu Manila Service:

At San Francisco	S.S. Serapis
“ Honolulu	S.S. Pommern
“ Manila	S.S. Princess Alice

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At Manila	One Collier for relief of coal situation
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For Harbor and Local Transport and Mine Work:

At Colon	S.S. Prinz Sigismunde
" Colon	S.S. Savoia
" Colon	S.S. Sacksenwald
" New York from Colon	S.S. Grunewald

For either transatlantic or coastwise transports:

At Philadelphia	S.S. Rhaetia
" Philadelphia	S.S. Prinz Oskar

As in case of the transatlantic fleet, all repairs and refitting were to be continued, except such as reduced the military features or capacity.

The Shipping Board's reply not proving satisfactory, the Secretary of War took the matter up directly with the President, and it was thereupon decided that all German interned vessels could be used by the Army, by direct request upon the Shipping Board, and thereafter there was no further trouble on that score. The discussions with the Shipping Board had, however, consumed some of the most valuable early weeks of the War.

There were old laws on the statute books which permitted the War Department to charter, commandeer or seize as circumstances required, any vessel flying the American flag.

Colonel John T. Carson, the Depot Quartermaster at New York, also appointed as General Superintendent

of Army Transports, was ordered to be ready any time after the middle of April, 1917, to commandeer any available ships in that port and order them at once to ship repair yards for immediate refitting into Army troop transports, and was instructed that when such orders came down it was expected that each or all of the ships should be ready for sea in at least two weeks thereafter. As technical aides to Colonel Carson there were rushed across continent to him from San Francisco, Captain Stinson, Marine Superintendent, and Mr. C. B. McCabe, Superintendent Engineer, both of the U. S. Army Transport Service. Both of these officials were experienced men of the old transport fleet, having been in the service since the Spanish War. They were both commissioned as Majors in the National Army and on arrival immediately took hold at Hoboken in organizing for the first transport fleet movement. Other specialists in shipping were engaged from time to time as their services became necessary.

The first transport of American troops to Europe, was designated as the "First Convoy." Colonel Carson at New York telephoned on May 28, 1917, that the following vessels, all of them American, had been decided on—many of the owners even then not yet being informed of the commandeer.

Saratoga	1200	troops
Havana	1200	"
H. R. Mallory.....	1450	"
San Jacinto	1129	"
Lenape	1069	"
Tenadores	1200	"

Finland	1600	troops
Momus	1200	"
Antilles	1200	"
Pastores	1000	"

(All of the above ships being able to maintain fourteen knots at sea.)

Following were animal ships:

Montanan	12 $\frac{1}{2}$	knots
Dakotan	12 $\frac{1}{2}$	"
El Occidente	14	"
Edward W. Luckenbach.....	13	"

Colonel Carson also stated that contracts would be made for repairs and alterations to refit them for troop transports, and that he would have them ready for sea, with steam up and supplies on board, in ten days. These ships were ready at the time specified. This feat, however, required extraordinary work on his part—for it was accomplished in a port already congested with freight, and with repair yards practically closed to additional orders.

As previously stated there was lack of coördination in regard to shipment of freight to New York to be transported on the First Convoy, each Supply Department shipping the supplies which would be required by its representative in France and without consideration being given by anyone as to the priority to be given in the shipment. Limited tonnage only was available; therefore it should have been apportioned among the various Supply Departments by some disinterested of-

ficer, and priority in the supplies of a department itself also indicated.

One Supply Department shipped to New York to be forwarded on the First Convoy about twelve thousand tons of freight. As there were no camps in the vicinity of New York in which the troops could be held until such time as it was possible to load them aboard the transports, it became necessary for Colonel Carson to get in communication with the several posts throughout the country, from which the troops were drawn, and arrange train schedules to provide for the arrival of the troops at such times as they could be placed directly aboard the vessels, upon arrival of the trains. This necessitated keeping in constant touch with the troop trains en route to New York. The construction of the cantonments had not been started at the time the troops for the First Convoy were moved from their stations. The Quartermaster General recommended that no supplies intended for France be shipped to New York by the several Supply Departments until the Depot Quartermaster there had been communicated with, and stated that such supplies could be stored and properly handled.

In order to provide a camp in which to assemble the troops for shipment abroad, insure proper supervision over all matters at the ports of embarkation, provide the proper coördination and supervision over the Supply Departments as related to shipment of supplies, and establish priority as to shipments, the following memorandum was prepared and submitted to the acting

Chief of Staff by the Quartermaster General; and was approved by order of the Secretary of War:

“June 20, 1917.

“MEMORANDUM for the Chief of Staff:

“1. It is recommended that ports of embarkation be established at New York, Newport News, and such other ports as may be found necessary. The port of New York to be designated for the transportation of troops and general supplies, and that of Newport News to be used principally for shipment of animals, forage and heavy ordnance. That a Commanding Officer be designated for each port of embarkation to be directly under the orders of the Secretary of War and be authorized to communicate directly with Chiefs of Bureaux of the War Department.

“2. At New York there should be established a camp of sufficient size to accommodate one division, and the commander of the port of embarkation to be authorized to acquire such number of warehouses, and such storage facilities as may become necessary from time to time, the commander of the port at Newport News to be authorized to lease necessary land and to provide a depot for accommodation of approximately 10,000 animals with camps or cantonments for the supply companies of a division and necessary storage facilities for handling the field train vehicles, forage and heavy ordnance to be shipped from that port.

“3. Bureau Chiefs will furnish timely information of contemplated shipments to the commander of the proper port of embarkation, advising as to the class, weight and cubic dimensions of such supplies. Upon determination of the space available the commander of the port of embarkation will notify each Bureau Chief of the amount of supplies from that Bureau that can

be accommodated and of the date when such supplies should arrive at the port of embarkation. In the meantime the shipment will be held at the point of origin and not forwarded until such time as will cause it to reach the port a day or two in advance of the date designated by the Commander of the port of embarkation. The Commander of the port of embarkation will decide upon the priority of all shipments.

“4. Troops to be transported overseas will be sent to and held at the concentration camp at port of embarkation a reasonable time in advance of time of departure. Their embarkation will be under the direction and control of the Commander, of the port of embarkation.”

HENRY G. SHARPE,
Quartermaster General.

APPROVED:

By order of the Secretary of War.

TASKER H. BLISS,
Major-General,
Acting Chief of Staff.

Immediately upon the issuance of orders for the First Convoy the Quartermaster General recommended the establishment of a Port of Embarkation in New York and the assignment of an officer to its command. No action having been taken, the recommendation was renewed, and the Quartermaster General recommended that Colonel John M. Carson be appointed as Commandant of the Base. This prompted instructions to the Commanding General Department of the East to designate a line officer for such duty, and on June 6,

1917, Colonel J. C. F. Tillson was designated to act as Port Commander.

Shortly after the sailing of the First Convoy information was given that a second division would be sent abroad as soon as possible, and not later than the return of the vessels in the First Convoy. Steps were taken to prepare for this shipment of troops and supplies and before the entire division finally sailed the following memorandum was received from The Adjutant General under date of July 27, 1917:

“The Secretary of War has directed that Primary Ports of Embarkation be organized at New York City and Hampton Roads, Virginia, and has assigned a commanding officer with suitable staff officers to each. The main headquarters office of the former is at Hoboken, New Jersey, and Brigadier-General D. C. Shanks, U. S. A., is to command it. The main headquarters of the other is at the Federal Building, Newport News, Virginia. Colonel Grote Hutcheson has been assigned to this command.

“These Ports of Embarkation are to be regarded by the War Department as single utilities, each made up, among other things, of five depots, one for each supply bureau where accumulations of stores in quantity will be effected, classified, arranged and held in readiness for shipment the instant vessels become available. Each of these depots is to be in immediate charge of an officer of the corresponding supply department who will also be on the staff of the Commander of the Port.

“The special utilities pertaining to each supply bureau should be arranged in harmonious relation with those of all the others and with the terminal and dock

facilities intended to serve all. In order that this condition may be brought about, the Secretary of War directs that you formulate the needs of your department at each Port and by direct correspondence with its commander arrange for the acquisition and development of the required facilities in accordance with a general plan embracing all the utilities needed to complete the Port of Embarkation as a whole. It is the intention of the Department to send experts upon questions of layouts, construction, terminal arrangements, and all related questions, to advise the Port Commanders in the initial stages of acquisition, organization and building, and prompt action by bureau chiefs, as indicated, is desired."

Enclosed with this memorandum was an advance copy of General Order 102, which read as follows:

WAR DEPARTMENT,
Washington, July 30, 1917.

"General Orders,
No. 102.

"1. To enable the Chief of Staff to exercise effectively his supervisory and coördinating powers in respect to overseas movements, there is hereby created in the Office of the Chief of Staff, for the period of the existing war, a section to take charge of the embarkation of troops and supplies for transatlantic transportation and to exercise under the Secretary of War the direct control incident to this service. The Officer in charge is designated as the Chief of the Embarkation Service and he will be given such assistance, commissioned and

civilian, as may be necessary, with office rooms in the War Department building.

"2. The function of this section is to coördinate all shipments of munitions and supplies of every kind and all troop movements whose ultimate destination is Europe, and to advise and assist the Chief of Staff in reference thereto. It will have direct supervision, under the Chief of Staff, of all movements of supplies from points of origin to ports of embarkation; will supervise the operations of the latter, and will control the employment of all Army transports engaged in the transatlantic service and such commercial shipping as may be used to supplement that service. It will arrange with the Navy for convoy service.

"3. It is made the duty of all chiefs of supply bureaux to keep the Chief of the Embarkation Service informed fully of the condition of supplies in their several bureaux, and to this end they will correspond directly with that officer. Direct correspondence between the Chief of the Embarkation Service and the commanding officers of ports of embarkation is authorized. Copies of all requisitions, requests and information of every character received from the Commanding General of our forces in Europe, or his subordinates, which bear upon reinforcements or renewals of supplies will be transmitted to the Chief of the Embarkation Service; and, in general, under the supervision of the Chief of Staff, this officer is charged with the duty of arranging that all supplies for our forces in Europe shall be forwarded in the most expeditious and convenient manner, and to that end he is authorized to call upon all supply officers for information and to exercise control in matters of shipment both within the territory of the United States and in the overseas haul.

"4. Brigadier General F. J. Kernan, U. S. Army,

is detailed, temporarily, as Chief of the Embarkation Service, and Colonel Chauncey B. Baker, Quartermaster Corps, is detailed as principal assistant.

(321.11,AG.O)

“By order of the Secretary of War:

“TASKER H. BLISS,

“Major General, Acting Chief of Staff.”

Official:

H. P. McCain,

The Adjutant General.

The effect of this order was to take from the Quartermaster Corps the responsibility for the shipment of troops and supplies to France, to take from it the providing and handling of the transports, the crews aboard them, and all activities in connection with their loading and discharging, and likewise all control of the wharves and all tugs required in the handling of the vessels. All of these duties were placed upon the Embarkation Service, a section of the office of the Chief of Staff established by this order.

The Quartermaster Corps having thus been relieved of the activities in connection with the handling of transports, services which, under the laws were assigned to that Corps, it would seem just that that Corps would be relieved from criticism concerning matters with which it no longer was permitted to function.

The Quartermaster Corps was, however, blamed in cablegrams from France for matters regarding the loading of the transports and the failure to forward supplies called for on requisitions in accordance with the priority schedule; notwithstanding the fact that fre-

quent requests were made by the Quartermaster General that the authorities in France be informed that the Quartermaster Corps no longer operated the Transport Service, but that it was under the Chief of Staff.

The transport *McClellan* had been supplied with refrigerating machinery, and had a storage capacity of 1,500 tons of frozen beef. This vessel and some other transports early in the year 1917 were turned over to the Shipping Board by direction of the President. Upon receipt of instructions for the sailing of the First Convoy, request was made upon the Shipping Board for the return of the *McClellan*, in order that a supply of frozen beef could be forwarded to France. Mr. Denman, the Chairman of the Shipping Board, demurred, and inquired of the Quartermaster General what disposition would be made of the vessel after its arrival in France. He was told that it would be held there until cold storage facilities could be constructed in France, as there were practically none in that country. Mr. Denman stated that after the arrival in France he desired to send the *McClellan* to Spain to load with a cargo of fruit to be brought to this country. He was informed that the vessel would undoubtedly be interned upon arriving at a port in Spain. After waiting for a long time, and receiving no reply to the request for the transfer of the *McClellan* back to the Corps, the Quartermaster General directed the Depot Quartermaster to load the vessel with frozen beef and to sail in the company with the other vessels forming the First Convoy. After arrival in France the *McClellan* was held there

as a cold storage depot until the conclusion of the war, and was then sold to the French Government.

The members of the French High Commission stated that it would be difficult to unload the vessels of the First Convoy at ports in France as the only stevedoring labor available there was provided by the employment of women and children and a few German prisoners. The problem was assigned to the Supervising Marine Engineer, Mr. Frank Van Vleck, to have 500 stevedores ready in five days, and on board ships of the first convoy ready for France. Without precedent or previous organization he formed a so-termed "Transport Workers' Battalion," composed entirely of colored stevedores from the South, for there was at the time of formation a stevedore strike going on in the southern ports, and it was undesirable and impracticable to glean any of this class of labor from any northern city.

General Pershing and staff were on hand to see the arrival of the First Convoy, and at once made note of these first colored men who handled ship lines and gear like old professionals as they were. As these men looked like soldiers and behaved like soldiers, and appeared under discipline, he thereupon cabled to the effect: "Send immediately eight hundred (800) more of these stevedores, but as they look like and behave as soldiers, therefore make them such." The sending of the next group as soldiers was not performed in five days, however, nor in five weeks, for there all the proper machinery of recruitment and enlistment had to be started. This Water Transport Branch did, however,

secure the services of the first commanding Officer, Mr. W. G. Austin of Savannah, who was thereupon commissioned Major, and shortly after as Colonel commanded the First Regiment of Stevedores.

From one regiment this grew into four, and finally on representations from the Engineer Corps that stevedoring functions in France properly pertained to the Corps of Engineers rather than to Quartermaster Corps, this body of military stevedores was thereupon transferred in France to the Engineer Corps.

MACHINE SHOP UNIT AT HOBOKEN

An interesting outgrowth of the stevedore regiments was the development of a unit of ship workers at Hoboken which later developed into the Military Machine Shop Unit, U. S. A. Thus in forming the plans for a white stevedore regiment for use in New York, it was decided to embrace in it a few companies or a battalion of special ship fitters, such as ship plumbers, wiremen, galley repair men, carpenters, etc. The organization of this technical portion of a regiment was thus proceeded with, while the purely stevedoring battalions never were organized due to questions of expediency prevailing at that time in the whole situation of labor and stevedore unrest in that harbor.

Repairs and alterations on vessels of the first, second and third convoys were coming in rapidly and required careful analysis. The later efficient Machine Shop Unit at Hoboken was not then being organized. Large bills of repairs were also coming in for the interned

German fleet, for at first the Navy had little or nothing to do with these seized vessels, and the Quartermaster Corps had suddenly thrust upon it the responsibility of getting these vessels ready for sea.

The Water Transport Branch, under the old laws and regulations of the Quartermaster Service, continued also to act as the executive for all matters connected with the operations of the United States owned Army Transport Fleet of the Pacific, the Philippines and Panama services, and of the entire Harbor Boat Service of the United States Army then consisting of some 360 vessels of all descriptions.

JOINT ARMY AND NAVY BOARD FOR THE INSPECTION OF MERCHANT SHIPS

This Board was formed before the opening of hostilities late in 1916, when it was found that both the Army and Navy were gathering facts and statistics regarding the possible conversion of the most representative American steamers into troop transports or military freight ships.

As it was found that both the Army and Navy were thus duplicating inspections and record files, it was thereupon decided to join forces and have constituted a Board, to be known as the Joint Army and Navy Board, for the inspection of merchant vessels. The orders establishing this Board specified that inspecting officers should be detailed in each naval district to act as inspectors to examine and review the qualifications

of each vessel as might be reported to it for examination by the general Board sitting in Washington.

THE PLANNING AND DESIGNS FOR NEW ARMY TRANSPORTS

It was early appreciated by the War Department that there would be a deplorable shortage of troop transports to convoy the troops to Europe, and this was recognized even before the draft law was enacted which would surely result in accentuating this shortage. These facts were first presented urgently before the Shipping Board by Colonel, afterwards General C. B. Baker. The suggestion first was to ask conversion of a few ships already requisitioned by the Shipping Board. On examination of the plans of most of these ships it developed that they were totally unsuited for alteration to transports, due either to the fact of having insufficient speed or being inadequately supplied with decks suited for troops.

Two ships, however, were found admirably adapted for conversion, the steamers *Orizaba* and *Oriente* (later named *Siboney*) then nearing completion at the Cramp Shipyard in Philadelphia, having been started on orders from the N. Y. and Cuba Mail, the Ward Line.

Later these two vessels, together with the fast steamers *Great Northern* and *Northern Pacific* made the record for the North Atlantic for the greatest number of trips and the quickest "turn around."

These two great American ships *Great Northern* and *Northern Pacific* were purchased in the fall of 1917 under authority contained in an Act of Congress for

this purpose. They were no sooner placed in service on the North Atlantic than, owing to their high speed and their facility in making round trip voyages, they proved themselves of the highest military value in the rapid transportation of troops to France.

ARMY VESSEL BUILDING PROGRAM FOR THE CON-
STRUCTION OF NUMERAL SMALL CRAFT

U. S. Army Mine Planter *Graham*. This vessel was designed and contracts let with the New York Ship Building Company to be constructed at their Camden Shipyard. The contract had considerable time to run but upon request of the Quartermaster General's Office the construction of the vessel was expedited and it was completed well within the time limit set by the contract.

The trial trip was held late in December, 1916, and shortly thereafter the vessel was sent to Panama for station.

El Aquador—intended for general freight and water service in San Francisco Harbor. The appropriation made for the construction of this vessel not proving ample, due to the increase of prices, the plans for it were modified after consultation with a representative of the Coast Artillery Corps.

Twenty-seven D. B. Boats. By the appropriation act of Congress for 1917 allowance was made for the construction of ten D. B. boats, for use of the Mine Planting Service of the Coast Artillery. While these boats were under construction it was decided to increase the

total number to twenty-seven, so that there would be a D. B. boat available for every harbor of importance on the North Atlantic. Following delivery these boats were sent to their various stations from Portland, Maine, to Galveston, Texas.

Q. Boats. In connection with the work of Coast Artillery posts, it became evident early in the War, that the number of suitable passenger-carrying launches owned by the Army was entirely inadequate for the greatly expanded requirements. Contracts were therefore let for twelve passenger-carrying launches of the *Downes, Neary, Cheney* class; which class had proved to be acceptable. The class for convenience was designated the *Q. Boat*. Some of these boats were sent to France on the decks of vessels of supply ships and were used in the harbors of that country. These were distributed to posts from Maine to Texas.

Fifty-one Mine Yawls. The appropriation for 1917 contained an item for a number of mine yawls for the use of the Coast Artillery Corps in performing work in the mine fields; and it was decided to increase the number originally ordered, so that fifty-one were finally constructed. The original design for these yawls was prepared by officers of the Coast Artillery at Fort Totten.

MILITARIZATION OF THE U. S. ARMY VESSEL SERVICE

As the routine, uniform and discipline of the Army Transport Service savors of military command and con-

trol, it would appear to be to advantage to place all the transport civilians under a full military organization, and successive Quartermaster Generals have sought by law to have the militarization of this vessel service carried into effect.

Congress has usually been friendly to the proposal, as it was readily seen that this military control would produce economy of operation and secure a better discipline of the entire personnel. Opposition has been made by the General Staff because the plan would necessitate commissioning the seagoing officers of the transport fleet.

A year before the War the Quartermaster General's Office inaugurated several attempts to have this service placed on a military basis, and various plans were submitted but all failed to receive the approval of the General Staff.

In the past, instances arose on the different vessels of the Service, indicating insubordination on the part of employees through failure to obey orders, frequent absences from their duties without leave, and refusals to work from time to time without increase of pay, resulting in practically tying up the vessels when their services were urgently needed for immediate Government work. Such cases were reported as arising on the mine planters, harbor boats and vessels of the Transport Service.

Following numerous recommendations from Department Commanders, and others having the employment of such crews under their direct control, and in order to

establish a service over which unquestioned authority could be exercised, with a recognized grade of pay, recommendations were made as early as December, 1915, for the passage of a law authorizing an auxiliary corps of the War Department, with a view to including the civilian personnel on the vessels of the Service. This recommendation was finally put in the form of a bill which was introduced in Congress by Honorable W. S. Bennett, on January 6, 1916.

In this connection, under date of March 20, 1916, the Commanding General of Eastern Department, in forwarding papers on the subject of the crews of Mine Planters, stated that in view of the fact that these vessels were engaged in accomplishing one of our chief defensive operations, (the mining of our harbors), the crews should be a part of the armed force and subject to military laws, and recommended that provisions be made at once to enlist a special class of American citizens for assignment to these positions on the Mine Planters. This communication was presented to the War Department through the Chief of Coast Artillery under date of May 22, 1916, suggesting legislation along the lines previously recommended for an enlisted service for these vessels.

In November, 1916, owing to the trouble which had existed for some time on board the Mine Planters on the Atlantic Coast, the Commanding General, Eastern Department, convened a Board of Officers "for the purpose of submitting a report upon conditions which have existed and now exist, with reference to the crews of

vessels of this class, and to submit recommendations as to the best method of securing for vessels of this type the personnel dependable both in peace and war," and in submitting the report of this Board to the War Department, recommendation was made by the Quartermaster General's Office under date of January 12, 1917, through the Office of the Chief of Coast Artillery, that effort be made to secure legislation placing the officers and crews of these vessels on a practical working basis, attention was invited to the draft of bill to establish an enlisted vessel service in the Quartermaster Corps.

Under date of January 30, 1917, the Quartermaster General submitted a memorandum to the Chief of Staff, outlining in detail the necessity for the enactment of a law to establish an Army Vessel Service for the purpose of bringing into the military service of the United States all persons now comprising the Army Transport Service and Harbor Boat Service, and now carried as Civilian employees. It was pointed out that the desirability of commissioning, warranting and enlisting the members of the crews of the vessels comprising the Army Transport and the Harbor Boat Service had long been considered, and during the existence of the present war, such desirability was rendered still more apparent; that difficulties with certain members of crews arising at almost every sailing of an Army Transport were constantly in evidence, and the same conditions were multiplying on the harbor boats, mine planters and cable steamers.

On March 30, 1917, the matter was again brought

to the attention of the Adjutant General of the Army, citing the case of the Army Transport *Sherman*, which had been put in commission for the purpose of transporting building material from Honolulu in connection with the construction of quarters at Schofield Barracks, and showing that although the vessel was all ready and under orders to sail on March 27, 1917, on account of higher wages being offered by lines operating in connection with the Alaskan Fishing Industry, the *Sherman* crew would leave the transport, unless an increase of wages was allowed, and that the increase had to be granted before the ship could sail.

Recommendation for the establishment of a vessel service was renewed in a letter of April 3, 1917, on the subject of the crew of the transport *Thomas* which refused to sail unless wages were increased; in endorsement under date of April 7, 1917, in the case of the crew of the Mine Planter *Schofield*, reported by the Commanding General, Ancon, Canal Zone, stating that he was having difficulty in maintaining a reliable crew and under date of April 9, 1917, on report of the Quartermaster at Newport, Rhode Island, to the effect that the crew of the harbor boats were about to resign, to enter the Naval Reserve because of better pay.

On June 2, 1917, in an endorsement of the Adjutant General of the Army, reference was made to letter from the Chairman of the Committee on military affairs, in which it is stated that legislation for the creation of a Quartermaster Boat Service in the Quartermaster Corps and a Mine Planter Service in the Coast Artillery Corps

would be taken up with the Committee at once. In this connection, it was requested that the opinion of the Judge Advocate General be obtained as to the possibility of drafting civilian crews of these vessels in the military service, pending the passage of the legislation above referred to. By opinion, dated June 4, 1917, the Judge Advocate General decided that the draft authorized by the Act of May 18, 1917, does not contemplate the selection of any particular persons, such as those comprising the present crews of Mine Planters and retaining them in the Service, and in his opinion, such crews could not be brought into the military service under the general draft act.

As recited in the numerous cases above, the conditions were aggravated from time to time through the general demand, in all lines of shipping, for men of this class, with a consequent increase in commercial rates. With the rate of wages fixed by law, and based upon estimates prepared far in advance, the Department found itself seriously embarrassed and handicapped in undertaking to accede to the demands for increases, and in several instances an adjustment to meet the requirements of the crews had only resulted in a similar request from the same crew in a very short period, so that the Department was placed at the mercy of its employees, with no assurances whatever that an accession to one or two requests for increase pay would not be the forerunner of several such demands.

A plan was devised by Colonel Chauncey B. Baker, Quartermaster Corps, for the formation of six Trans-

port Regiments, Quartermaster Corps, for services as vessel workers, under the authority contained in Section 2, of the Act approved May 18, 1917, which authorized the President to increase temporarily the Military Establishment. The plan was submitted by the Quartermaster General on October 1, 1917, but no action was taken on it.

Late in 1917, the effort was renewed and a draft of a bill, which met the approval of a committee of the General Staff, was presented to Congress, but it failed to be enacted into law.

The mortification occurred of having the Government in time of war have four large ships at New York, with steam up and all military supplies on board, prevented from sailing while a handful of seamen wrangled over wages, which at that time were on a scale that had recently been increased. At Newport News a troop transport, loaded with troops, was held up for three days while stewards and seamen insisted an increased wage. If these men were alien enemies or sympathizers the Government would have been prompt to act and had authority of law for so doing.

When the Quartermaster General endeavored to form a Stevedore Battalion for duty at Hoboken, the Union leader objected, and permission was not granted. Later the same union leader requested the Quartermaster General to organize a battalion for duty there, stating that the men were getting beyond his control. His request was declined as there was no intention of assisting him to remain in control of the union.

The Quartermaster Corps being unable to secure civilians for seagoing ships at constantly increased wage scales, and seeing that the demands of the sea-unions could not be met, the Navy volunteered to man all Army vessels and operate them with Naval crews.

The Navy were enabled to undertake the work and did it splendidly, because their crews were enlisted. It would seem that the lesson to be drawn from this is the necessity of legislation effecting the militarization of the Transport Service, for on the occasion of another war the entire Navy personnel might be required to perform its own work.

MOTOR TRANSPORTATION

Prior to 1916, the use of motor transportation in the Army had been confined to service at the Depots of the Quartermaster Corps, Department Headquarters, and a few of the larger posts. In June, 1915, the Army possessed the following motor vehicles: 35 passenger cars, 88 motor trucks, all classes, and 25 motorcycles.

The advantages to be derived from the use of mechanical motors for the supply of an Army in the field had been stated in my book entitled "The Art of Subsisting Armies in War," published in 1893. It will be noted that that antedated the development of the internal combustion engine. Congress was, however, not very liberal in making appropriation for the purchase of motor transportation. In 1907 an officer of the Corps de l'Intendance of the French Army, after having given

a very elaborate and thorough description of the French system of supply of troops in the field, stated that as Motor Transportation had been adopted in the French Army it would be necessary to investigate the system again after the expiration of about two years, as there would be many changes made in consequence of the adoption of Motor Transportation.

The officers of the Quartermaster Corps who were attached as students to the *École de l'Intendance* made note of these improvements, and one of those officers, Captain (now Colonel) F. H. Pope applied them to the motor truck trains which were formed in Texas in 1916.

During the preceding years a series of tests and experiments had been made of motor trucks by the Quartermaster Corps, with the view of ascertaining the type most suitable for the service, and to establish specifications which the motor trucks must fulfil to meet the requirements of field service.

When in 1916 the Punitive Expedition was sent into Mexico it was necessary on account of length of the line of communications, and because the country was so deficient in water supply, to furnish motor trucks to carry the supplies for the expedition.

When, later in the summer of 1916, the National Guard was called into the Federal service and sent to the Mexican border for duty, it became necessary to provide motor trucks and other motor vehicles for its supply and transportation; and as a result the Quartermaster Corps had on hand at the outbreak of the War, in storage and in operation, the following motor vehi-

cles: 437 motor cars, 3,041 motor trucks, and 670 motorcycles.

Due to the fact that no motor vehicle equipment had ever been prescribed for the Army, no organization for the handling of this class of equipment had been prescribed by the War Department.

This subject was therefore referred by the Quartermaster General in the fall of 1916 to the Office Board with instructions to make a study of our experiences on the Mexican border, and such reports from our Military Attachés as related to the subjects of motor equipment and organizations in the French and British Armies. This Board submitted a full report on the various organizations required in the Quartermaster Corps based on those studies, and this report, as has been previously stated, was submitted to the proper authorities in December, 1916, but was never acted on. The plan proposed an organization for motor car companies, motor truck companies and motorcycle companies, and also for motor repair companies. The plans for these organizations were prepared together with an outline of the duties of the members, at first in mimeographed form and distributed to the various officers of the Quartermaster Corps. Later these instructions were expanded and distributed in printed form, prescribing the blanks to be used in the operation of the vehicles and those to be used for their repairs.

When the motor vehicles were first purchased in 1916, it was necessary to hire civilians to operate and repair them, as there were few men in the Army who had had

such experience and training. These men were employed by the assistance of the motor manufacturers, at or near the point of origin of the shipment of the motor vehicles.

It soon became evident to the officers on duty with these organizations that the services of civilians in these capacities, attached to an Army were unsatisfactory, and all such officers endeavored to have them replaced by enlisted men as soon as the latter could be transferred to the Quartermaster Corps and instructed to operate and repair the vehicles. This necessitated an increase in the enlisted personnel of the Quartermaster Corps, and as new rates of pay had to be established for such men, opposition developed to the project.

The training and development the men received on the Mexican border in the use, operation and repair of motors, and in various other matters connected with Army service, was of inestimable value in assisting in the formation and training of the men required for the Army in the World War.

Tests of Motor Vehicles. During the time that the troops remained in Mexico opportunity was afforded all reliable manufacturers of motor vehicles to test their products, with the view of determining their suitability for military purposes. These tests were made along the line of communications in Mexico.

After the withdrawal of the Punitive Expedition from Mexico a test station was established at Marfa, Texas, from which place the vehicles were operated to

points on the Rio Grande, over a distance of about one hundred and twenty miles.

The results of the tests furnished valuable data, and from them was compiled a list of commercial motor vehicles which would best stand the severe usage such vehicles would be subjected to in the field service of an Army.

Repair Facilities. The establishment of a repair shop at Columbus, New Mexico, was necessary as soon as trucks began operating along the line of communications in Mexico. This shop was first equipped with machinery and supplies for the ordinary minor repairs of motor vehicles. When, however, the results of their service over the almost impassable roads began to show, it was necessary to expand this shop so as to enable it to be possible to make a complete overhaul, or rebuilding of these vehicles.

This shop was later removed to El Paso, Texas, and was there expanded and developed for the more complete work required of it. Other shops were also established at Fort Sam Houston, and at Fort Brown, Texas, and to these shops were sent the motor vehicles which required repair or overhaul after the recall of the National Guard from border service.

Equipment for American Expeditionary Force. Special provision was made for the equipment of the Headquarters of the Expeditionary Force, in accordance with the desire of the Commanding General, and the equipment was purchased and shipped by the Depot Quartermaster, New York.

Similarly special provisions were made for the equipment of the First Division. Purchase was made of part of the motor transportation required, and the balance being shipped with the troops on their departure from the Southern Department.

A suggestion had been made of the desirability of standardizing all motor vehicles so as to keep the number of spare parts to the lowest possible limit. It was reported that the English had purchased about sixty different makes of motor trucks which necessitated carrying several hundred thousand spare parts. In order to be able to provide the motor trucks required, it was thought advisable to purchase as many of the various types of motor trucks which met the tests on the border, as could be produced in a year, before attempting the work of standardization. Consequently, the Depot Quartermaster at Chicago was instructed on May 7, 1917, to advertise for proposals for from one to 35,000 each of Class A ($1\frac{1}{2}$ to 2 ton) and Class B (3 to 5 ton) trucks, specifications for which had been prepared in the Office of the Quartermaster General. Shortly thereafter schedules for motorcycles, motor cars and trucks of $\frac{3}{4}$ to 1 ton capacity (termed type AA) were similarly established.

As it was necessary to make provision for motor transportation facilities abroad, before it was possible to bring about standardization, it is evident that some compromise arrangement had to be made. This compromise arrangement consisted in providing modified commercial trucks that were immediately obtainable in the smallest

numbers that would serve the needs of the Army until the time that standardized trucks would be available; and it was found that a sufficient number could be obtained from six companies.

About July 14, 1917, the Acting Chief of Staff approved a memorandum of the Quartermaster General authorizing the purchase of approximately 17,000 type A and B trucks, and on July 15 and 25, 1917, the Depot Quartermaster at Chicago was directed to make awards to the Packard Motor Car Company, the Locomobile Company of America, The Pierce Arrow Company, The Garford Motor Truck Company, The Four Wheel Drive Auto Company and the Nash Motors Company, the total deliveries under the contracts to be completed by June 30, 1918. As the Class A (1½ ton) truck was not desired for use in France, on December 17, 1917, 1,000 five-ton trucks were ordered from The Pierce Arrow Company, the deliveries to be made of 500 in January and the same number in February, 1918.

From the time of the sailing of the First Convoy to France, there were motor trucks awaiting shipment abroad at the Ports of Embarkation.

There were also overhauled trucks at the Motor Repair Shops at Fort Sam Houston and at El Paso, Texas, likewise available for shipment abroad. The factories producing trucks under the contracts above referred to were obliged to store the trucks because of the congestion on the railroads.

All of the motor transportation referred to above was intended for the equipment of the overseas forces. In

justice to the Embarkation Service it must be stated that recently information has been received to the effect that that service claims that the depot established at Baltimore, Maryland, for the purpose of crating motor vehicles, failed on occasion to have the vehicles crated in time to enable the shipments to be made.

Convoys. Congestion of railroad transportation in the East, caused as indicated in the section treating of Railroad Transportation, forced the Quartermaster Corps to convoy many trucks from the factories to the Overseas Depots and the Ports of Embarkation. The first convoy started in one of the worst snow storms of that severe winter and encountered many difficulties, but came through successfully. Thousands of the motor vehicles all loaded with government freight, were thus driven overland. Convoy driving was given as one of the last features of instruction to the members of all the Division trains that were available.

Domestic Supply. Allowances for the Divisional and other camps throughout the United States were established by the War Department. These were filled in part from the vehicles on hand in the Southern Department and the balance by purchase on the open schedules created under authorization of May 7, 1917, to the Depot Quartermaster, Chicago, Illinois. When the congestion became so great at the Ports of Embarkation, Overseas Depots, and the factories, that more vehicles could not be accommodated, some of the trucks contracted for oversea service were diverted to domestic use, large numbers being required for training purposes.

Equipment of Tactical Units and Special Organizations. The War Department having failed to announce a policy regarding the motor equipment to be allowed tactical units and special organizations, and efforts to secure this information by conference proving unsuccessful, the Quartermaster General on June 8, 1917, addressed the following letter to the Adjutant General:

“It is recommended that this office be informed as to the policy of the War Department in regard to the formation of Divisional trains, the number of divisions to be equipped with motor transportation, and the amount of motor transportation to be furnished to each division; that is, shall it conform to the new tables of organization of 1917? Each divisional train must consist of one type and make of truck. In view of the short hauls involved, it would seem unnecessary to supply the full allowances prescribed in Tables of Organization.

“However, it is thought some wagon and pack transportation should be authorized for each division, and a special table prepared showing the allowances, all kinds, per Infantry Division, for the guidance of all concerned.

“The above information is desired promptly in order to make the necessary awards for deliveries beginning July 1, 1917, and to effect other preparations.”

This paper was returned under date of August 24, 1917, with the following indorsement:

“The Secretary of War directs that the Quartermaster General be informed as follows:

“That the transportation to be procured by the Quar-

termaster General include the following for the equipment of Divisional, Corps and Army Trains:

Divisional Trains

- (a) 42 Ammunition Trains organized as prescribed in the enclosed table (omitted here)
- 42 Mobile Ordnance Repair Shops
- 42 Supply Trains, motorized, organized as prescribed in table 34, Tables of Organization, 1917
- 42 Sanitary Trains organized as prescribed in table 37, Tables of Organization, 1917
- 42 Engineer Trains organized as prescribed in table 45, Tables of Organization, 1917, omitting the Searchlight and Pontoon sections.

Army Corps Trains

- (b) 6 Supply Trains, motorized, organized as prescribed in table 34, Tables of Organization, 1917
- 6 Supply Trains, motorized, transport trains for motor troops, organized as prescribed in table 34, Tables of Organization, 1917.

Army Trains

- (c) 15 Truck Companies, 3 ton trucks
- 10 Truck Companies, emergency reserves
- 4 Truck Companies, motor repair shops.

“That the transportation provided in each National Army Cantonment and National Guard Camp includes the field trains, and one truck company with such additional trucks and other motor vehicles as may be found necessary for purposes of local supply and administration.

“That for the present, motor vehicles, wagons, and animals, less those to be purchased in France by Gen-

eral Pershing, be shipped abroad in such quantities as will permit each division to be equipped with its trains upon its arrival in France; but that as soon as the state of supply of motor vehicles will permit such action to be taken, the Quartermaster General arrange for the establishment of a camp at which instruction can be given to the motor personnel of a division designated for service abroad, for about one month prior to its embarkation. It should be noted in this connection that it is contemplated that the initial organization of the personnel of divisional trains will be effected in their respective divisional cantonments or camps, and their training carried forward in the full extent permitted by the facilities available in such cantonments or camps."

The following are the total number of motor trucks required by the above instructions:

Ammunition Trains.....	101 x 42	4,242
Supply Trains.....	187 x 30	5,610
Sanitary Trains.....	22 x 42	924
Engineer Trains.....	12 x 42	504
Supply Trains (Corps).....	187 x 6	1,122
Transport Trains.....	187 x 6	1,122
Army Trains.....	25 x 29	725
Trains Cav. Div.....	296 x 1	296
		<hr/>
		14,545

It will be observed from the above correspondence that it took from June 8 until August 24, 1917, two months and a half, to secure a reply to a most urgent request for information. Such information was necessary in order to make the contracts, as the proposals had specifically stated that they expired on July 1. This was met by the spirit of coöperation and assistance dis-

played by the manufacturers. But the delay was vital as relating to the possibility of the Quartermaster Corps to make the other preparations required. The effort to establish a Training Camp for the Quartermaster personnel and the delay in authorizing it, have been previously recounted. The steps taken to provide the commercial motor vehicles have been stated.

Several factors have an important bearing on the ultimate success of a motor transport service. The first requirement is that the different designs and makes of trucks in use shall be confined to the fewest practicable number. Another requirement is that the fewest possible changes in construction details of the trucks be allowed, once they have been put in foreign service in large quantities. If it were possible to have all the trucks of a given size of one design, the ideal condition would be fulfilled.

The concentration on one model considerably facilitates the instruction of drivers and repair men and insures better handling and maintenance of the unit. It also reduces to a minimum the number of repair parts necessary to be kept on hand, thus greatly conserving storage and transportation facilities.

The above considerations forcibly advanced by the well qualified assistants and experts in his office induced the Quartermaster General to submit a memorandum to the Chief of Staff on July 16, 1917, on the subject of the standardization of motor trucks. In that memorandum it was stated that for two years with the assistance of the Society of Automotive Engineers various stand-

ards specification for the purchase of motor trucks had been prepared.

The coöperation and assistance received from the leading automotive engineers in the country and the Society of Automotive Engineers had resulted in many conferences.

The memorandum stated that during the last conference with the engineers which was held at the Ohio State University, Columbus, Ohio, on July 9 and 10, 1917, it became evident that it would be thoroughly practicable to effect the complete standardization of each individual unit in all its details in a short time, thus resulting in the complete and thorough standardization of every individual part of which the motor trucks will be composed. It was recommended in that memorandum that the sum of \$175,000 be allotted for use in completing the standardization of motor trucks at the earliest practicable date.

The recommendation was at once approved by the Secretary of War.

On July 21, 1917, a meeting was held at Columbus, Ohio, under the auspices of the Society of Automotive Engineers. All truck manufacturers were invited to attend that meeting and were requested to bring their engineers with them. The Army representatives at the meeting were Major C. B. Drak and Captain W. M. Britton, and the convention went on record officially as thoroughly in accord with the program for standardization, rendering every assistance possible in the prosecution of the work. On July 30, 1917, fifty engineers ar-

rived at Washington and the actual work of truck standardization was commenced.

The committees of the Society of Automotive Engineers which were in charge of the design of the various elements of trucks were represented in most instances by the majority of their membership in the group of engineers, who came to Washington on July 30, 1917. The chairmen of these various committees were constituted into an organization known as the "schedule committee." This was in effect a general executive committee and decided not only the dates and order of procedure, but also policy on important matters of design and contested opinions coming up between different committees. The committee was under the chairmanship of A. W. Copeland, of Detroit, and with Coker F. Clarkson as secretary.

Between September 10th and October 1st the work of completing the drawings, checking them, combining them into the classes designed, and the manufacture of the parts themselves went rapidly forward. The keeping record of this part of the work was under the charge of Major Edward Orton, Jr., former Dean of the Scientific Section of the Ohio State University. In the design of the type B truck about 4,000 blue prints were needed, but over 10,000 had to be prepared because of the changes made necessary upon more thorough study. The enormity of the work performed in such a short time is indicated by that statement.

On September 20, sample parts began to be shipped from the various manufacturers to the two firms Gram-

Bernstein Motor Truck Co., Lima, Ohio, and the Selden Motor Vehicle Company, Rochester, New York, which had been selected to assemble the first two sample trucks. By October, practically all sample parts were completed and delivered to the assemblers, and the assemblers had completed the greater portion of the small parts which had been assigned to them for manufacture in their own plants. The work of assembly proceeded rapidly and the first truck was actually assembled October 7, 1917, three days ahead of schedule. The second truck was finished about two days later.

The trucks, upon completion, were given short tests at the respective factories and were started for Washington overland. The truck made at Lima, Ohio, reached Washington, Sunday, October 13, 1917; and that made at Rochester, New York, reached Washington, Tuesday, October 16th, having crossed the mountains in the first snow storm of the season and encountering very bad weather. Neither truck had any breakdowns or mechanical difficulty other than slight running adjustments. Both trucks arrived in Washington in excellent condition.

The two sample trucks were formally presented to the President and the Secretary of War on October 19, 1917, for their inspection.

The methods adopted in the work of standardization proceeded along two lines. The larger units, such as engines, front axles, transmissions, clutches, controls, frames, wooden wheels, springs, and some other parts, were such as could be designed without fear of in-

fringing the various patented constructions, and the engineers designing these units could go ahead with no other thought than that of securing the very best results. A strict adherence to the policy of eliminating all experimental features in the design was insisted upon. The trucks embodied no novel or freak construction. Every unit and part was typical of the best American practice, and did not differ in principle from those of many commercial trucks. On the other hand, various parts, such as radiators, rear axles, steel wheels, differentials, steering gears, electric parts, storage batteries, lamps, universal joints, magnetos, bumpers, and numerous other parts and accessories were such that practically all meritorious constructions in the market were found to be covered by patents or proprietary designs. It was desired that the truck when completed should not embody patented constructions or proprietary designs on account of legal objections, and also to the advertising advantages which would be conferred by the use of such parts, and accordingly much time was devoted to devising constructions which would avoid this necessity. Groups of manufacturers of each of the different units were called together, and the problem of arriving at a design of that unit without sacrificing efficiency which would nevertheless not infringe the proprietary construction of any of them was requested. This was a matter of extraordinary difficulty in some instances and involved unselfish reversal of all ordinary commercial procedure. These manufacturers met this test splendidly and in practically all units of the truck

a non-proprietary design was reached which was efficient and, in some instances, superior to the best commercial designs. The spirit displayed by these American manufacturers in abandoning their commercial rivalry and giving up their vested rights and producing what was needed without selfish thought in the matter was absolutely unique in American industrial history, and too great praise cannot be given them for the manner in which they have accomplished their task.

Placing of orders for Production. The placing of orders for the production of the three-ton standardized truck began very promptly after the completion of the samples and before any extended test of the trucks themselves was possible. This was necessary in order that trucks might be available during January, 1918. It was thought that revision of the design might possibly create the necessity of throwing away tools or fabricated parts, but that the military necessity would justify this, if the completed trucks should be ready according to schedule time.

Accordingly the first meetings for the allotment of trucks were called for October 12th, and from that date until the latter part of December, meetings of manufacturers in Washington for the allotment of the different parts of the truck occurred at frequent intervals.

Two organizations were created to handle the procurement: First, a board of officers to act as a Purchasing Board to allot the business.

Second, a production board with branches dealing with: (a) Raw materials; (b) Inspection of plants

as to their suitability for taking part in this program; (c) Supervision of parts plants; (d) Supervision of assembly plants; (e) Inspection of parts and products.

The production organization was used; first, to secure preliminary information as to the names of the producers for the different parts of the truck; second, the selection of producers whose plants were best suited for producing the parts of this special truck, with due reference to geographical location; third, acquainting these prospective producers with the material to be produced, and assisting them in formulating their bids; and fourth, furnishing the necessary information for the Purchasing Board. Each producer was required to make a careful statement, not only as to the ability and condition of his plant to do the work, but also as to the material cost of each part upon which he was prepared to submit figures. This information was then taken to the Purchasing Board, and a joint meeting of the Board of Producers arranged for.

The constitution of the Purchasing Board was as follows:

Chairman: General C. D. Baker
Colonel Charles B. Drake
Lieutenant Colonel James W. Furlow
Major Edward Orton, Jr.
Captain L. H. Coart
Mr. Coker F. Clarkson, General Manager
of the Society of Automotive Engineers.

Production of the standardized type B trucks was directed by the following men, who were called to Washington: Christian Girl, head of the Standard Parts

Co. of Cleveland; James F. Bourquin, Continental Motor Co., Louisville, Ky.; Percy W. Tracy, of the Premier Motor Co., Indianapolis; Walter S. Quinlan, of the Maynard H. Murch Co., Cleveland; Guy Morgan, of the Mitchell Motors Corporation, Racine, Wis.; J. G. Utz, of the Standard Parts Co., Cleveland; G. W. Randles, of the Foote-Burt Co., Cleveland; and A. G. Drefs, of the Miller-Franklin Co.

In general, it was the idea to have at least three or four sources of supply for each part that went into the standardized truck, as a result 150 parts manufacturers were given contracts.

One firm offered to erect and install a large plant at Detroit if given the contract for assembling the trucks. This offer was refused as it was desired to have as many assembling plants as possible, and avoid possible congestion in shipments from parts manufacturers, or in shipment or convoy of the trucks.

The allotment of the business of assembling the trucks was by all means the most difficult, as it required the division of 10,000 trucks among plants potentially able to manufacture several hundred thousand. There were approximately 160 plants which had been investigated as possible assemblers. Among the plants which were found to be strongest, best equipped and most favorable ones in the country for that purpose, a tentative allotment of the assembly was made, no plant being allotted more than 1,000 trucks.

Later the Committees undertook the development of plans for the standardization of the 1½-ton and ¾-ton

trucks and also for the standardization of the motorcycle and the bicycle, but none of these standards were ever placed in production.

The production of the order for 10,000 type B trucks was delayed by the shortage of coal and the freight congestion in 1918. In May, 1918, an additional order for 8,000 was placed and in September, 1918, a further order for 25,000 was placed; but on account of the signing of the Armistice no trucks were delivered under this last order.

Spare and Repair Parts and Accessories. Immediately after orders were placed for vehicles, orders for spare and repair parts and accessories were placed. These orders were based on the amounts necessary for a period of six months for one hundred vehicles, and for convenience of access were divided into complements.

The allowance of items was carefully prepared by an officer who had experience with the operation of motor vehicles and with the coöperation of the service managers of the factory manufacturing the vehicles and they were then reviewed by one or more other officers of experience.

Organization. The administration and supply of motor transportation remained in the miscellaneous branch of the transportation division of the office but a section had been created, and officers who had had experience with the operation of motor vehicles and shop experience and others familiar with organization were assigned thereto.

This motors section carefully studied the requirements, and in coöperation with the General Staff perfected the organization of and equipment necessary for motorcycle companies, motor car companies, motor truck companies, machine shop units, repair units, water tank companies, etc.

Personnel. An early estimate was made of the personnel required for the operation and repair of the motor transportation which had been authorized and effort was made in coöperation with the personnel branch of the office to get the requisite number. However, only a small portion of the number estimated as required were allowed and there was therefore at all times a lack of trained mechanics and chauffeurs available with which to organize the units required overseas.

Training. The instructions transmitted by the Adjutant General, August 24, 1917, placed the responsibility on the division commanders for training the units operating with combatant divisions. Other organizations of the Quartermasters Corps were to be trained under the direction of the Quartermaster General.

For this purpose a camp was established at Camp Joseph E. Johnston, near Jacksonville, Florida, but to provide for the first motor repair units a cantonment was erected at Camp Meigs, D. C. These camps were used until the Armistice for the training of Quartermaster personnel and special units.

To provide for the receipt of trucks from factories, for their preparation for overseas services, their overhaul after receipt from factories by convoy, and for the

repair of and rebuilding of vehicles rendered unserviceable in operation in the northeastern and eastern states and to provide additional accommodations for the training of personnel, a cantonment repair shop and crating shop was erected at Camp Holabird, Baltimore, Md.

Smaller shops were also erected at Camp Jesup, Georgia, Camp Normyle, Texas, and at Camp Boyd, Texas, with the necessary cantonment buildings for the personnel of the repair units to operate and for the men undergoing training.

Expert mechanics and chauffeurs were turned out from these schools in large numbers.

XI

CAMP JOSEPH E. JOHNSTON, FLORIDA

Object of the camp—Instruction—Administrative personnel.

THE effort made in June, 1917, to secure authority for the establishment of a Quartermaster Corps Training Camp, and the delays in obtaining it have been previously described. It was not until September 6, 1917, that the final decision was made that the proposed camp would be established at Black Point on the St. John's River, about fourteen miles west of the city of Jacksonville, Fla.

Lieutenant Colonel Fred L. Munson, Quartermaster Corps, was on August 26, 1917, designated as Commanding Officer and Major Frederick I. Wheeler, Corps of Engineers, Reserve Corps, was assigned to as constructing Quartermaster of the Camp.

By the end of September the construction of roads and buildings on the camp site were finally begun whereas, as previously set forth, it had reasonably been anticipated that the construction work would be completed by that time and the school in operation.

OBJECT OF THE CAMP

The Object of a camp of this character was to central-

ize the newly commissioned and enlisted personnel of the Quartermaster Corps in order that the many and various organizations composing it could be uniformly disciplined, trained, and equipped.

Prior to the authorization of this scheme of centralization attempts had been made to mobilize and train, in the many scattered divisional camps, such of the newly acquired organizations as laundry, butchery, fire hose and truck companies, base spare parts units, etc. But it was soon shown that this latter plan was unnecessarily expensive, slower in producing satisfactory results, more costly in instructor personnel, and that it resulted in a lack of uniformity in the system of instruction. To have constructed separate barracks and school buildings at each of the divisional camps for the care of our many new organizations was out of the question. Hence the importance of a large centralized plant for Quartermaster Corps personnel.

Camp Johnston as originally planned was intended to accommodate a maximum of 11,500 officers and men. By the middle of February, 1918, the total population of the camp had reached 17,000. The overflow had to be housed in tents.

Owing to the overcrowded condition of the large recruiting depots in the north, and to the severity of the winter weather in that part of the country, several thousand Quartermaster Corps men were shipped to Camp Johnston fully two weeks in advance of the date they were expected, and before their barracks and mess halls were completed.

The wisdom of having selected the camp site so well to the south was being proved daily during these winter months. The above mentioned problems and numerous others were met and successfully solved by the experienced, efficient, and loyal staff of the Camp Commander. This staff was largely composed of Captains of the Quartermaster Reserve Corps who had received their basic training while Quartermaster Sergeants of the Regular Army.

The transportation problem for passengers between the camp and city of Jacksonville was solved by a merger of the several owners of public auto vehicles under one management. A similar arrangement was made with the owners of steamboats on the St. John's River, thereby establishing a water route to and from the city. The camp and city were also connected by an electric street car line.

INSTRUCTION

Officers. Of the 1,500 first and second lieutenants of the Quartermaster Corps who had been sent to Camp Johnston from the various divisional camps only 1,100 were enrolled as students. The 400 remaining officers were either assigned to duty with the many new Quartermaster Corps units which, at this time were rapidly being organized, or else assigned as instructors in the many different schools for enlisted men.

The school for officers began December 27, 1917. Its curriculum consisted of a sixty days' course in the

following named subjects. Finance, Administration, Construction and Repair, Transportation, and Supply.

Each student who remained long enough to complete the course received twelve days of intensive theoretical and practical training in each of the above five subjects. Owing to the constantly increasing demand for Quartermaster Corps officers for duty with the American Expeditionary Forces abroad not more than 250 of the original 1,100 students completed the entire course of instruction.

Enlisted Men. As rapidly as enlisted men arrived in camp they were temporarily assigned to provisional recruit companies. While in these organizations they were uniformed, partially equipped, and drilled in the school of the soldier, and school of the squad. It was also during this period that the men received frequent lectures by the Camp Commander on the subjects of discipline and customs of the service.

At the close of two weeks of military instruction all men of a recruit company would then be grouped and assigned to units according to trade or profession. For example: All men who had had experience as butchers, or who had expressed a desire to learn the butchery trade, would be quartered together and organized into one or more butchery companies.

There were separate schools for cooks, bakers, auto mechanics, plumbers, carpenters, farriers, teamsters, fire fighters, typewriters and clerks.

All scholastic work was daily supplemented by at least two hours of military training. Organizations

armed with the rifle, such as motor truck, and motorcycle companies, were also instructed in rifle practice on the Camp range. Throughout all the instruction of the men most careful and special attention was given to discipline and good soldierly appearance.

That the men from Camp Johnston who were sent overseas were a credit to both the Quartermaster Corps and to their Camp is evidenced by the following extracts from two separate reports rendered by Major E. B. Cassatt, Inspector General, Port of Embarkation, Hoboken, N. J., to his Camp Commander under dates of March 10 and April 4, 1918, respectively:

(a) "For completeness of equipment, for general soldierly bearing, and evidence of efficiency and interest on the part of the officers in charge, these four Fire Hose and Truck Companies from Camp Joseph E. Johnston, are unexcelled by any organization inspected by the undersigned at this camp."

(b) "The attention of the Commanding General (Camp Merritt, N. J.) is invited to the uniform excellence and completeness of equipment of the detachments of the Quartermaster Corps arriving here from Camp Joseph E. Johnston, and of their generally good military appearance.

"It is suggested that this information be communicated to the Commanding Officer, Camp Joseph E. Johnston."

December 31, 1917, the administrative personnel of the Camp was composed, in part, of the following named officers:

408 THE QUARTERMASTER CORPS

Commanding Officer: Lieutenant Colonel Fred L. Munson, U. S. A.

Adjutant: Captain Jacob H. Spengler, Q.M.U.S.R.

Assistants: Captain Andrew C. Larsen, Q.M.U.S.R.
(Personnel)

Captain Charles Van Buren, Q.M.U.S.R. (Orders)

Captain Edward P. Doyle, Q.M.U.S.R. (Correspondence)

Captain Jackson Middleton, Q.M.U.S.R. (Transfers and Assignments)

Quartermaster: Major James E. Ware, Q. M. Corps.

Assistants: Captain Charles B. Franke, Q.M.U.S.R.
(Finance)

Captain Dennis McSweney, Q.M.U.S.R. (Subsistence)

Captain Nels J. Thorud, Q.M.U.S.R. (Property)

Captain John C. Christophel, Q.M.U.S.R. (Clothing)

Captain Asa Irwin, Q.M.U.S.R. (C. and R.)

Captain William M. Lerner, Q.M.U.S.R. (Transportation)

Surgeon: Lieutenant Colonel Joseph Y. Porter, M. C.
(22 assistants)

Exchange Officer: Captain Daniel R. Raymond, Q.M.
U.S.R.

Mess Officer: Captain Lewis B. Massie, Q.M.U.S.R.

Signal Officer: First Lieut. John T. McAniff, U.S.R.

Ordnance Officer: Captain Raymond C. Keeney, O.D.
U.S.R.

Headquarters Guard: Captain William F. Rock, Q.M.
U.S.R.

Receiving Division: Captain Henry J. Rath, Q.M.
U.S.R.

Captain E. B. Snyder, Q.M.U.S.R.

Captain S. J. Ellis, Q.M.U.S.R.

Captain S. W. Shaffer, Q.M.U.S.R.

Captain M. McMahon, Q.M.U.S.R.

Captain J. S. Walker, Q.M.U.S.R.

Captain T. Kenney, Q.M.U.S.R.

Educational Director: Captain John C. Duncan,
Q.M.R.

Captain John G. DeMuth, Q.M.U.S.R. (As-
sistant)

Director of Correspondence School: Captain Thomas J.
Berney, Q.M.U.S.R.

Captain Richard Gibbons, Q.M.U.S.R. (Assistant)

Officers' School (Construction and Repair): Captain
Charles S. Timmins, Q.M.U.S.R., Senior In-
structor (9 Assistants)

Finance and Accounting: Captain J. M. Clark, Q.M.
U.S.R. (Senior Instructor)

Second Lieutenant Frank E. Parker (Assistant)

Administration: Captain James L. Greene, Q.M.
U.S.R., Senior Instructor (7 Assistants)

Transportation: Captain Osman Freeman, Q.M.U.S.R.,
Senior Instructor (9 Assistants)

Supply: Captain Walter L. Sherman, Q.M.U.S.R.,
Senior Instructor (10 Assistants)

Auto Motive School: Captain Jeremiah W. O'Mahoney,
Q.M.R., Senior Instructor

Motor Cycle School: Captain Harry Diffenbaugh, Q.M.
U.S.R., Senior Instructor

Remount Depot: Captain Timothy H. Murphy, Q.M.R.

The complexity of Quartermaster training may be judged from the variety of technical and special organizations sent out from Camp Joseph E. Johnston, Jacksonville, Fla., the largest of all Quartermaster mobiliza-

tion and training camps. Records show that during the 13 months in which Camp Joseph E. Johnston trained enlisted and commissioned personnel, 82,070 men passed through this camp. Among the more common Quartermaster units organized at this camp were supply companies, butchery companies, salvage units, graves registration units, clothing and bath units, typist and stenographic units, railhead detachments, motor-truck trains, miscellaneous Quartermaster units, sales commissary units, and units consisting of mechanics, plumbers, painters, and electricians. Student officers were trained as specialists in contracts; water, rail, and motor transportation; money accounts; property accounts; general administration and company administration; supplies, subsistence, and clothing and equipage; construction and repair; motor truck; motor car; motorcycle; and personnel. In addition to the many men sent directly overseas, large numbers were assigned to camps and posts in the United States. In all 8,152 were sent from Camp Johnston to other camps for special assignment. Two thousand seven hundred and forty-six officers reported from other stations for duty, and of this number 2,397, up to November 27, 1918, had left the camp for duty elsewhere. The greatest strength of the camp was on August 22, 1918, when there were stationed at Camp Johnston 27,661 men and 944 officers. Three hundred and sixty special technical units were organized in this camp and sent overseas. The total number of units organized in this camp, including those for

overseas, was 405. (Report Quartermaster General for 1919.)

The citizens of Jacksonville, Florida, evinced a genuine interest in Camp Joseph E. Johnston and did everything possible to promote the welfare and contentment and provide sources of amusement for both the officers and the men at the Camp.

CONCLUSION

ALMOST every one of the subjects touched on in this book would, if as fully and exhaustively treated as its importance warrants, make a separate book of itself; and some subjects would require several volumes to completely describe them. The entire subject was of vast and vital importance due to the enormous numbers of men in the service, the fact that the activities embraced such great number and variety of items and covered so large a portion of the world, and that the distances were so great. Further, the amount of money largely exceeded the great sum which would be involved by a combination of the financial statements of many of the greatest corporations in this country.

In fact, the total amount of money appropriated by Congress for the Quartermaster Corps in the year 1917 was nearly four times the total of all the expenditures of our Government for the year prior to our entry into the war.

It has been a considerable task to treat all the subjects in a clear and comprehensive manner and keep this book to a reasonable size, and still bring out the salient features of the work accomplished.

In outlining the work performed by the Quartermaster Corps in the year 1917 in the World War it has been

necessary in many cases to take the entire results accomplished by various organizations or activities then first established. It was not possible to terminate the statement with the end of the year 1917, for many of the contracts made in 1917 and many of the activities then inaugurated were not concluded until late in 1918. Particular pains have been taken, however, to avoid claiming credit for any organization or activity devised in a subsequent period.

In reviewing the summary it may fairly be maintained that the site was cleared and prepared; all the foundations laid; the superstructure planned and a large portion of it constructed and actually occupied. The modifications of the superstructure later effected were, however, erected on the foundations previously laid, which proved adequate to bear the superimposed load. The immense plant drew men from every branch of labor and of science to aid in its completion and assist in its effective operation. The failures were few, and are negligible in comparison with the enormous amount of work accomplished.

The personal knowledge of the large part contributed by the Quartermaster Corps in 1917 to promote the physical welfare and comfort of the men behind the guns has inspired this statement of the facts as a tribute to the loyalty, efficiency and untiring devotion to duty of its members and civilian personnel.

HENRY G. SHARPE,

Major General, U. S. Army,

(Formerly Quartermaster General.)

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