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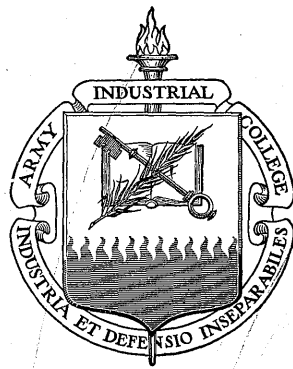
EUROPEAN THEATER OF OPERATIONS IN WORLD WAR II

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QUARTERMASTER SUPPLY

in the

EUROPEAN THEATER OF OPERATIONS IN WORLD WAR II

Volume III

OUTFITTING THE SOLDIER

By

Eudora Ramsay Richardson

and

Sherman Allan

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THE QUARTERMASTER SCHOOL
CAMP LEE, VIRGINIA

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PREFACE

Outfitting the Soldier is the third volume in the series that tells the story of quartermaster supply in the European Theater of Operations in World War II. Volume I is basic to an understanding of the other volumes in the series.

This third volume deals with the provision of clothing and individual equipment. Initial issue was made in the zone of interior, and replacements were requisitioned from the United States; yet many problems arose that were peculiar to the European Theater. In preparing this study, historians have used the objective method. Letting the record speak for itself, they have presented trials and errors and failures and successes without attempting to draw conclusions or to pass judgment.

The documents from which the history is written were assembled in the European Theater by the staff of the Historical Records Branch, Office of the Chief Quartermaster, and were later shipped to The Quartermaster School. The authors have supplemented these data with material from other primary sources and from such secondary sources as were needed for placing the quartermaster supply program against the background of the war.

Perhaps there is no greatest of the three major tasks of the Quartermaster Corps—feeding, sheltering, and clothing the Army. Yet with empty stomachs and parched tongues men have fought well. On desert islands and sea-tossed rafts they have lived for 40 days and 40 nights without food and shelter. Civilized man, however, cannot live

in malarial jungles without hammock, insect bars, and clothing to protect him from the bite of the dreaded mosquito. The soldier fighting in bitter winter weather cannot pull the trigger of his rifle with frozen finger, cannot march on frozen feet, and cannot survive without blankets or sleeping bags and layers of warm clothing.

Supply of clothing and individual equipment to the soldier who fought in the European Theater is shot with mistakes in planning and execution. Yet the outfitting of the men who were able to crush the greatest military machine of all times could not have totally failed.

The chronicler of contemporary events or of events in the immediate past treads a path marked by many danger signals. Supporting documents, though accurately quoted or paraphrased, may have been inaccurately prepared. Statistical reports may have been padded. Letters may have been worded in such a way as to conceal facts. The contemporary chronicle, however, when studied in perspective that only the passing years can provide, furnishes the basis for the definitive history that will be written after time shall have dimmed the outline of personalities and after evidence presented by participants and onlookers shall have been evaluated. Therefore, this series, which is to be used for instructional purposes, is not to be considered official. It is hoped that persons who took part in the quartermaster supply program in the European Theater will send constructive criticism that can be incorporated in a revised edition.

Eudora Ramsay Richardson

15 March 1948
The Quartermaster School
Camp Lee, Virginia

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CHAPTER 1

INVASION PLANS

In World War II the Army of the United States, outfitted for utility, comfort, and appearance, was a far cry from the motley throng of which George Washington took command on 3 July 1775. The Continentals, ready to fight for freedom, were wearing blue coats, black coats, or fringed hunting shirts adorned with streamers and scarlet needlework, and trousers, overalls, or breeches; and in their ranks were Stockbridge Indians, whose nakedness was disguised by paint and feathers. Though no government issue provided clothing and individual equipment for Revolutionary soldiers, standard uniforms had been adopted before the end of the war.

From the Revolution to World War II changes in the uniform were the order of the military day. The first protests against the thick blue cloth and the heavy knapsack, blanket, musket, and cartridge box came in 1846 from the men who sweltered in Mexico. Yet the stifling blue uniform was not replaced by khaki until 1899, when American troops put down the Philippine insurrection led by Aguinaldo. The uniforms issued enlisted men during World War I were satisfactory for the battlefields of France. Clothing and equipping the vast army of World War II, however, put the resourcefulness of the Quartermaster Corps to its severest test.

Upon enactment of the Selective Service Act of 16 September 1940, American scientists, explorers, and manufacturers were immediately called upon to cooperate with the Office of The Quartermaster General in the development of clothing and equipment of the sort that would promote comfort and efficiency. A solid foundation had been laid before the European Theater of Operations was established.

Plans for supplying clothing and individual equipment to troops engaged in an operation on the Continent were only sketchily developed in the European Theater before the spring of 1943. At the Casablanca Conference, 14-24 January, the date for the cross-Channel assault was set for late spring 1944, and the Chiefs of Staffs, Supreme Allied Command, (COSSAC), was created for the purpose of coordinating military plans on land, on sea, and in the air. On 5 February 1943 the first basic planning directive stated that planning was no longer to be considered

a staff-school problem but was to be worked out as an actuality. Under the direction of the Administrative Planning Branch of COS-SAC, the Quartermaster Service began working on a comprehensive plan.

FIRST COMPREHENSIVE PLAN

ROUNDUP, the code name first given to the proposed invasion of the Continent, had been set for the summer of 1943; and SLEDGEHAMMER, a diversionary assault on the French coast to be made if the necessity arose to relieve pressure on the Soviet, had been planned for an even earlier date. The invasion of the Continent of Europe having been postponed by the North African campaign, troop-strength estimates were too indefinite until the spring of 1943 for plans to be formulated with any degree of accuracy. The Quartermaster Corps 100,000-Man Plan, published in the summer of 1943, presented for the first time quartermaster requirements for a cross-water assault and subsequent operations. It recognized the impracticability of providing diversified items of clothing and equipment during the assault stage and sought to eliminate all items that were not absolutely necessary. Providing men a change of clothing and replacement of items lost during the landing was of first importance.¹

The Assault Pack

The method of packing supplies to be landed on the far shore had been carefully studied. As early as August 1942 the Chief Quartermaster had recommended that waterproof barrack bags be supplied each man in the landing party for the protection of extra clothing and individual equipment but had not been able to submit an estimate of the number of bags that would be needed.² On 21 August a cablegram had been sent to the New York Port of Embarkation (NYPE) requesting the shipment of 200,000 bags. A week later NYPE had asked why these bags were necessary and how they would be used. The Chief of the Supply Division replied that they would be issued to landing teams and asked that they be made of waterproof material with watertight closures and that they be capable of standing immersion in water for several hours. They could have

the size and shape of ordinary barrack bags. The Chief of the Procurement Division was at that time investigating the possibility of having the bags made in the United Kingdom but thought that the British would be unable to provide them.³ Though no waterproof bags were available in the United States, 45,000 water-repellent bags could be released for shipment immediately and about 200,000 more could be procured within the next 3 weeks.⁴

Because ports undoubtedly would be destroyed and supplies would have to be handled by men on the beaches and stored in the open, supplies for oversea shipment should be carefully assembled in the United States in packs weighing not more than 100 pounds. It was important that repacking in the theater should not be necessary.⁵ The Chief of Services requested that each service prepare a list of those items considered most essential during the first 3 months of the Continental operation so that specific action might be taken to provide good packing methods. Copies of the list would be furnished the Chief of Transportation. Each service would segregate items arriving properly packed for oversea issue and hold them until the beginning of the operation. Meanwhile, improperly packed supplies already on hand should be repacked.⁶ On 17 June 1943 the Chief of the Supply Division submitted the following list of items that would be essential during the first 3 months of the operation:

Blankets	Individual mess equip-
Calcium hypochlorite	ment
tubes	Individual web equipment
Combat clothing	Entrenching tools
Electric lanterns	Leggings
Field jackets	Parachutist clothing
Field range maintenance	Protective clothing
parts	PX issue kits
Gloves, leather, heavy	Raincoats
Gloves, woolen	Shelter halves
Handkerchiefs	Shoes, service
Helmets	Woolen socks
Herringbone twill cloth-	Woolen underclothing ⁷
ing	

By the middle of July assurance had come from the United States that by 31 December the Quartermaster Service should have received sufficient amphibiously packed supplies to meet the needs of troops to be engaged in the proposed invasion.⁸

In order to provide essential clothing and individual equipment to replace items that inevitably would be lost during the Channel crossing, the 100,000-man plan recommended that assault packs be landed in the ratio of 3 packs to every 100 men. The supplies would be in waterproof bags similar to bar-

rack bags. The assault pack was intended for those men who had lost all supplies before reaching the beaches and not for those who had suffered only minor losses. The clothing in the assault pack would be in three sizes—large, medium, and small. A pack would be clearly marked with the letters L, M, or S. Before shipment the packs would be segregated so that they might be stacked on the far shore in separate piles according to size. They would be landed only in the initial stages of the assault. Losses sustained later would be replaced from assault packs that had been left over from those provided during the initial assault. As soon as depots could be established, assault packs would not be required, for then losses could be met from reserve stock. It was believed that most of the unused clothing and equipment could be recovered for reissue.⁹

The inclusion of the assault pack in the 100,000-man plan had its basis in months of study. On 15 May 1943 the Chief of the Plans and Training Division had suggested that the clothing in the packs be in three sizes only and that each pack contain the following items:

- 1 Pair drawers, cotton, short
- 1 Undershirt, cotton, summer
- 1 Pair socks, wool, light
- 1 Shirt
- 1 Handkerchief, cotton, khaki
- 1 Pair leggings
- 1 Blanket, wool
- 1 Jacket, combat
- 1 Pair trousers, combat, with cigarettes and matches in pocket
- 1 Belt, cartridge, with following items attached:
 - Canteen and cup, with cover
 - Carrier, pack
 - Pouch, first aid
 - Suspenders, pack
- 1 Haversack, containing the following items:
 - Towel, huck
 - Can, meat, with knife, fork, and spoon
 - K Ration and self-heating soup
 - Raincoat, dismantled
 - 1 Hood, cloth, impregnated
 - 1 Cover, protective, individual

Shoes and complete helmets were to be dumped on the beaches separately by the Quartermaster Service. Gas masks, ammunition, and carbines were to be dumped on the beaches by the Chemical Warfare Service and the Ordnance Service.¹⁰

On 17 June 1943 the Chief of Services approved the assault pack and made few changes in the list of quartermaster items that the Chief of the Plans and Training Division had proposed. In the pack would be two pairs of light woolen socks, instead of one; the drawers and undershirts would be protective; toilet paper would be included; and the pack would contain a one-piece herringbone twill protective suit, in the pockets of which would be two handkerchiefs, one pair of protective gloves, one package of cigarettes, and one package of matches. The pack would occupy 3.75 cubic feet and weigh about 45 pounds. It would not be sent in the first wave or possibly in the second or third. The supplies would be packed in a new water-repellent bag recently developed by the Quartermaster Service. This bag was rectangular in shape and measured 13 by 13 by 39 inches. Supplies would be packed in the order of their probable use. The services were asked to comment upon the plan.¹¹

The Chief of Transportation sent his approval. Upon the basis of a 5 percent loss factor, he estimated that 2,500 packs would be needed for an assault force of 50,000 troops and would require shipping space of about 250 measurement tons. He believed that the supply could be handled without serious difficulty.¹² The Signal Service also approved the pack, saying that it seemed to cover all combat needs.¹³ The Chief Surgeon recommended that the following items be added: the new model first aid pack, a shaker package of sulfanilamide, and eight sulfadiazine tablets.¹⁴ The Chemical Warfare Officer recommended that one-fifth of the packs contain diaphragm masks and four-fifths service masks.¹⁵

On 5 July 1943 the Chief of Services turned over to the Chief Quartermaster all the correspondence regarding the assault pack. He requested that OCQM assume immediate and full responsibility for the development of the pack, keeping in close touch with G-3 and G-4.¹⁶ Before beginning the assignment, OCQM asked the United States Assault Training Center in London to comment on the adequacy of the items and the estimated percentage of losses. If the center desired to use the pack for training purposes, OCQM wanted estimates of immediate requirements.¹⁷ The training center replied on 22 July that the items in the pack appeared to be adequate and that the 5 percent replacement factor should be sufficient for assault units. It expressed the belief, however, that if the pack was not to be made available

until the second wave, it would not be needed at all, because by that time men could be supplied by bulk shipments. However, the center requested delivery by 5 September of 50 packs (10 large, 10 medium, and 30 small), which would be used in the making of tests.¹⁸ Although comments upon the pack continued for the most part to be favorable, the quartermaster of the V Corps made an unfavorable report. He believed that the pack was neither necessary nor desirable for the following reasons: It would require additional tonnage and additional personnel in the United Kingdom for handling and loading on ships and it would also require additional personnel on the beaches for unloading and handling; it would contain supplies that could be taken from casualties; and, in addition, men who needed only a few items would have to search through a number of packs to find them, with resultant confusion. The quartermaster of the V Corps made the counter suggestion that regimental or battalion S-4's or company supply officers carry with their units complete combat packs in the amount of 5 percent of their troop strength.¹⁹ Nevertheless, OCQM directed depot G-30 to pack 50 samples for delivery to the United States Assault Training Center.²⁰ Because unfavorable comments continued, a study was made with a view to developing a landing reserve similar to that employed by the British.²¹ The answer to the problem was found in beach maintenance sets and follow-up maintenance sets, which were later developed and incorporated in invasion planning.

THE SOLDIER'S HANDICAP

The amount of equipment a soldier should take to the combat zone was a problem never fully solved in any theater of operations during World War II. It was known that by a weight handicap the speed and stamina of two race horses could be matched to a split second and that similarly a soldier would lose superiority over his enemy if he, like the handicapped horse, was burdened with extra weight. Since the race was to the swift and the battle to the strong, it became clear that the soldier's load should be lightened. "Personal luggage in wartime is a paradox," a well known correspondent wrote from Tunisia. "A man must have it and in order to have it, he must carry it with him, and he can't carry it with him because there is too much of it." The final decision would necessarily be a compromise, which could not be postponed until the attack, when definite information as to weather, terrain,

marching distance, and supply installations would be at hand.

The study of the problem was conducted simultaneously in the Office of The Quartermaster General and in the theaters. Observers sent to North Africa rendered a well-nigh unanimous verdict against overloading. Fighting in Tunisia, Sicily, and Italy proved that troops should not be required to carry individual reserves of clothing, that duffel bags should be light enough to be handled easily by the organic motor transportation of a company or similar unit, and that as early as possible in the initial phases of operations facilities should be established for supplying replacement issues.

"Simplicity of clothing and equipment is a fundamental principle of warfare," said Lieutenant General Joseph W. Stilwell, soldier of 43 years in the service. "Union and Confederate armies during the Civil War fought all over the states with one blanket, one rifle, some ammunition and a pouch—the latter for personal stuff such as stolen apples."

In the early days of World War II a soldier going overseas on a temperate summer-winter movement took with him all he had received in continental United States and, in addition, a complete outfit of protective clothing and an entrenching tool.

"We have cluttered up our people," said a colonel upon his return from West Africa, "to the extent that they carry more weight than the West African porter, who is supposed to carry one of the greatest weights in the world. His headload is 65 lbs., and he doesn't wear clothes, or shoes, and he doesn't carry a rifle. . . . Don't carry anything you don't absolutely need. . . . Settle down and go to war."

Observers in all theaters of operations corroborated the colonel's testimony. They declared that an overburdened soldier, when going into battle, discarded most of his equipment.²²

Early in 1943 the Commanding General, SOS, ETOUSA, recommended that each soldier be issued only one individual barrack bag and that it be similar to the Marine Corps bag, which was large enough and strong enough to meet his needs. The adoption of this recommendation would make impracticable the issue of impregnated clothing, extra blanket, and other special equipment before a soldier's embarkation. Adequate stocks of these items would have to be maintained in

the United Kingdom.²³ The recommendation was forwarded to The Quartermaster General with the request that action be prompt.²⁴ Concurrence, however, would be withheld unless all other theaters wished to adopt the procedure. An enlisted man was then embarking with two barrack bags. He kept with him the A bag, which contained items of clothing and equipment required during the voyage. He loaded the B bag into the hold of the ship. This bag contained the items he would need after arrival at his destination. With the possible exception of the United Kingdom, it was doubtful that any theater was sufficiently stocked to provide such equipment as shoes, clothing and blankets. A recommendation from North Africa that a canvas satchel be issued instead of the barrack bag could not be accepted because several million of the present-type barrack bags were on hand and on contract and had to be disposed of before a new bag could be adopted.²⁵ The Commanding General of the European Theater countered by pointing out to the Commanding General of the Army Service Forces that the authorized allowance was for more than a soldier should take overseas. The A barrack bag, instead of remaining in a man's bunk, was usually stored in the hold of the ship, inaccessible during the voyage and frequently lost. Sometimes the B bag was loaded on a ship other than the one on which the soldier traveled and never reached him. A bag suitable for carrying clothes overseas and into the combat zone should be issued. The barrack bag was intended primarily for laundry and did not meet requirements during the voyage or in combat. The Theater Commander recommended, therefore, that the new-type bag developed in the European Theater be adopted as an item of standard issue. Made of shelter-tent duck, it was water-repellent, cylindrical in shape, and easier to carry, smaller, more compact, and more durable than the barrack bag then authorized.²⁶ The items that were recommended for the soldier to bring from the zone of the interior and those recommended for issue in a theater of operations appear as appendix I.

An observer's report that dealt with the inadequacy of the barrack bag had been sent to The Quartermaster General on 5 April 1943. The cloth did not protect a man's equipment. A bag that was longer and smaller in diameter could be handled more easily. In conclusion, the report pronounced the Marine Corps bag vastly superior to the Army bag.²⁷

The matter hung fire during the months that followed. On 9 October the War Department notified the theater of plans to do away with the barrack bag as an item of issue to troops embarking for theaters of operations, and at the same time proposed a drastic reduction in the scale of T/E 21 items authorized for issue overseas. In a memorandum to the Chief of Operations, the Deputy Chief Quartermaster suggested that a remonstrance be sent to the War Department. Under the proposed plan, he said, a man would have only his pack and blanket roll for carrying clothing, individual equipment, and personal belongings. The authorized items that he could not bring with him apparently would be shipped in bulk. The Deputy Chief Quartermaster proposed that the War Department be told that the European Theater opposed any reduction in authorized T/E 21 allowances, since troops in the United Kingdom required the same individual items as those in the United States. A reduction in the scale for combat troops could be made in the United Kingdom prior to embarkation to the Continent. The elimination of barrack bags for troops who were not moving into combat areas would increase the problem of initial issue in the theater; would require additional distribution of stocks of sized items, additional storage space, and additional labor; and would result in overloading the already crowded rail network. The elimination of the barrack bag would result in an increase of second-hand stocks, the distribution of which would bring about a serious problem. Moreover, sufficient change of clothing for troops in noncombat areas could not be carried in the pack along with essential personal belongings.²⁹

Problems connected with equipping and maintaining troops for an oversea operation were approaching solution toward the end of 1943. In December the Plans and Training Division completed the tentative draft of a plan that had been worked out upon the basis of assumptions and estimates received from COSSAC, the Twenty-first Army Group, the First Army, and the V Corps. The Deputy Chief Quartermaster in London, writing to the Deputy Chief Quartermaster in Cheltenham, expressed the belief that the plan would be followed with only minor variations and that the preparation of supplies might proceed.²⁹ The items worn and carried by combat troops were prescribed for the assault period and for the period following the opening of port facilities. All other items would be turned in at the unit's normal supply depot. (See app. II.)

FINAL PLANS

The COSSAC Administrative Plan for Operation OVERLORD, which was published on 7 January 1944, fulfilled the Deputy Chief Quartermaster's prophecy that the clothing and individual equipment of troops for the invasion of the Continent would be subjected to only minor changes. It will be recalled that in the spring of 1943 OVERLORD had replaced ROUNDUP as the code name for the entire Continental operation and that the assault stages of OVERLORD had been given the code name NEPTUNE. Though COSSAC had decided in June 1943 "to appoint, in due course, a Supreme Commander of all United Nations Forces, for the invasion of the Continent," General Dwight D. Eisenhower's appointment was not confirmed by President Roosevelt until 10 December 1943 and by COSSAC until 14 February 1944. Lieutenant General Walter Bedell Smith, however, having been made Chief of Staff, COSSAC, to replace Lieutenant General Frederick E. Morgan, reached England on 8 January 1944. He informed General Eisenhower that plans for the invasion had been so excellently drawn that he hoped within a short time to coordinate them into a master plan. (See vol. I, ch. 1.)

First Army NEPTUNE Plan

The Supreme Headquarters, Allied Expeditionary Force, (SHAEPF), published the Initial Joint Plan (NEPTUNE) on 1 February 1944. The First United States Army, which was charged with assessing and scheduling the stores required for the assault, sent officers from its G-2, G-3, and G-4 sections to London on 19 December 1943 to work on joint plans with officers of the Twenty-first Army Group (British), which was charged with coordinating the general administrative planning. The First Army plan for NEPTUNE was published on 25 February 1944. Upon beginning their work, the First Army planners requested the Office of the Chief Quartermaster to submit a quartermaster plan. This was published as Annex 7 to the First Army plan. All nonessential items would be eliminated during the operation. Packages would be waterproofed until traffic could be handled through ports. All containing more than one item would be limited to 120 pounds, including those in palletized loads. Single items that weighed more than 120 pounds would be packed in such a way as to be handled by a number of men. As far as possible, awkward and heavy loads would be handled through major ports. Packages

would be marked in such a way as to enable their contents to be quickly identified.

The plan provided, according to the scale prescribed by the army groups, full-scale anti-gas equipment for troops engaged in the operation. The full T/E 21 authorization of protective clothing would be issued all troops in the cross-Channel operation but would be worn only during the assault stage. Protective clothing for troops engaged in later stages would be carried by either individuals or organizations. The clothing and individual equipment that troops would wear, carry, or pack in duffel bags appear as appendix III.³⁰

Maintenance Sets

The plan incorporated the use of beach maintenance sets and follow-up maintenance sets instead of assault packs, the proposal for which had been received with varying degrees of approval and disapproval. These sets would contain items of clothing and equipment to replace losses. Shipment of beach maintenance sets would begin on D-plus-4-day and continue through D-plus-14-day. It was estimated that 61 sets would be shipped in the 10-day period. The sets, with a total weight of about 793 long tons, would be loaded on 1,037 skids.³¹

Quartermaster Supply Plan

The Quartermaster Class II & IV Supply Plan for an Operation on the Continent amplified the quartermaster annex to the First Army NEPTUNE plan. The south of England had been selected for mounting the operation OVERLORD. The area was divided into base sections, each with a commander responsible to the Commanding General, SOS. The Southern Base Section was further divided into two zones, and the zones were divided into marshaling areas, each with a commander. Within the marshaling areas were concentration areas, where troops would be assembled in camps; staging areas, where troops would be formed into parties ready to be called forward; and embarkation areas at ports, where troops would be loaded on ships and landing craft.³² The quartermaster supply plan provided that the Quartermaster Service would be responsible for housing, messing, and storage in these areas. A small reserve stock would be maintained for emergency replacement of important items that might be lost or damaged in transit from home stations. Landing craft and vessels would be supplied two woolen blan-

kets per man and other items for the welfare and comfort of the troops.

The supply plan covered the first 90 days of the Continental operation. Before its publication, supplies and equipment had been requisitioned upon the basis of its provisions. Troops were divided into two groups. Group A units were divisional, tank destroyer, field artillery, reconnaissance (ground), and tank troops. They would be issued protective clothing based upon combat allowances in column 2 (temperate), T/E 21 of 15 December 1943. With the exception of cotton work clothing, their outer garments would be woolen. On D-day these units would not carry meat can, knife, and fork. They would have a minimum pack and would pack a blanket roll, which would be carried on unit transportation. Group A troops would be provided with duffel bags. Group B units were ground force, air force, and SOS troops other than divisional, tank destroyer, field artillery, reconnaissance (ground), and tank troops. Unless minor modifications should have been made by higher headquarters, these troops would wear the items that were worn by group A units and would carry the same pack. They would also carry duffel bags.³³

Shipments of subsistence and clothing and equipment from the United Kingdom would be coordinated and cleared through the Transportation Service so that rail facilities and depot facilities for loading and unloading would not be exceeded. Beach maintenance sets would be shipped from D-plus-4-day to D-plus-14-day. One beach maintenance set would supply 5,000 men for 15 days, or would contain 75,000 man-days of supply. Therefore, the 61 beach maintenance sets planned from D-plus-4-day to D-plus-14-day would contain 4,575,000 man-days of supply. The sets would be skid-loaded; commodities would be segregated as far as possible; and the packages needing protection would be covered with waterproofed cloth. Appendix IV-A lists the contents of class II beach maintenance sets.

From D-plus-15-day through D-plus-43-day follow-up maintenance sets would be shipped. Each of these would contain 450,000 man-days of supply. The packages would be waterproofed but not skid-loaded. Appendix IV-B lists the contents of a follow-up maintenance set, and appendix IV-C the items to be stocked for maintenance sets.

After D-plus-43-day it was expected that a complete schedule of class II supplies would be shipped to the Continent. At approxi-

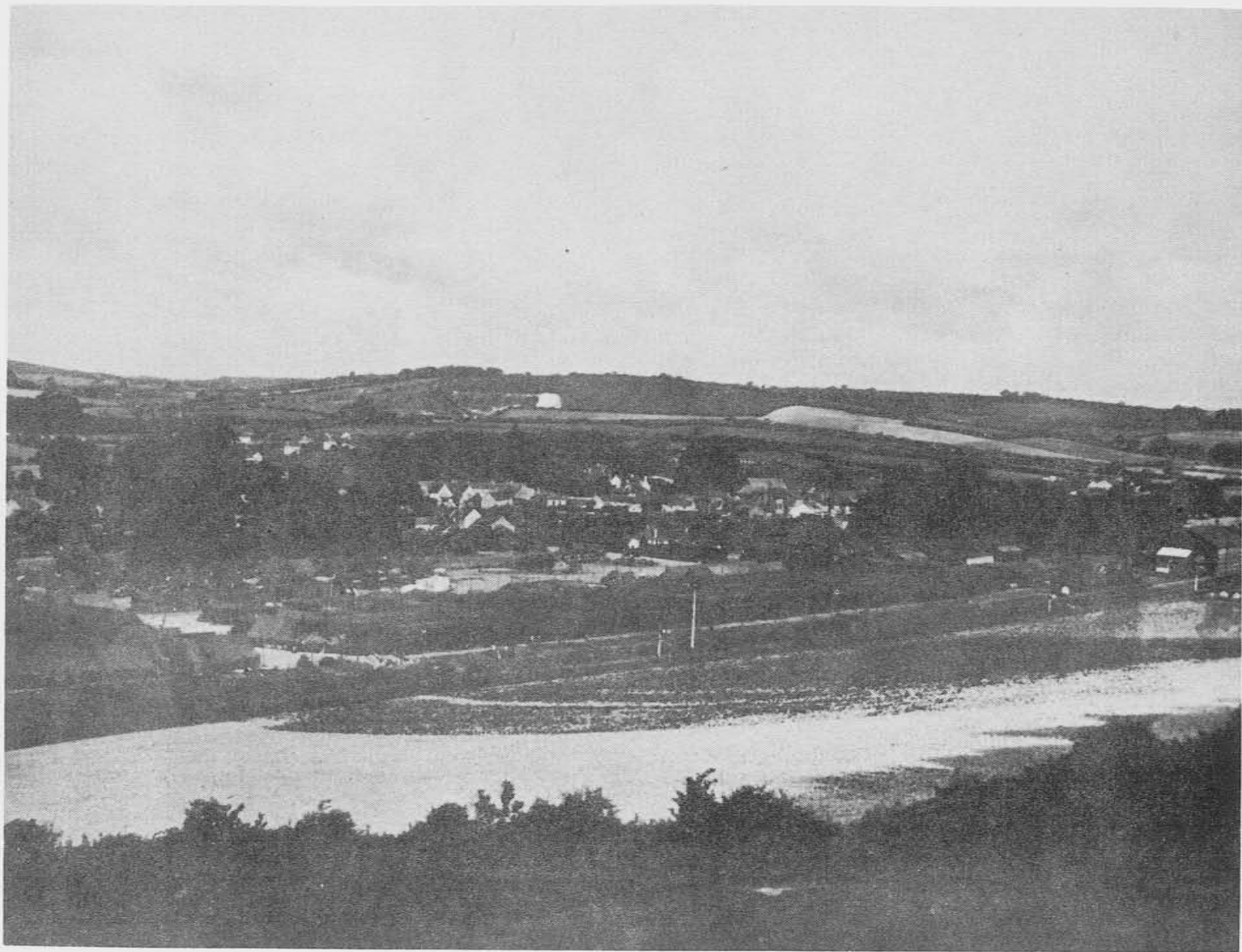


Figure 1.—View of the Maiden-Newton Marshaling Area.

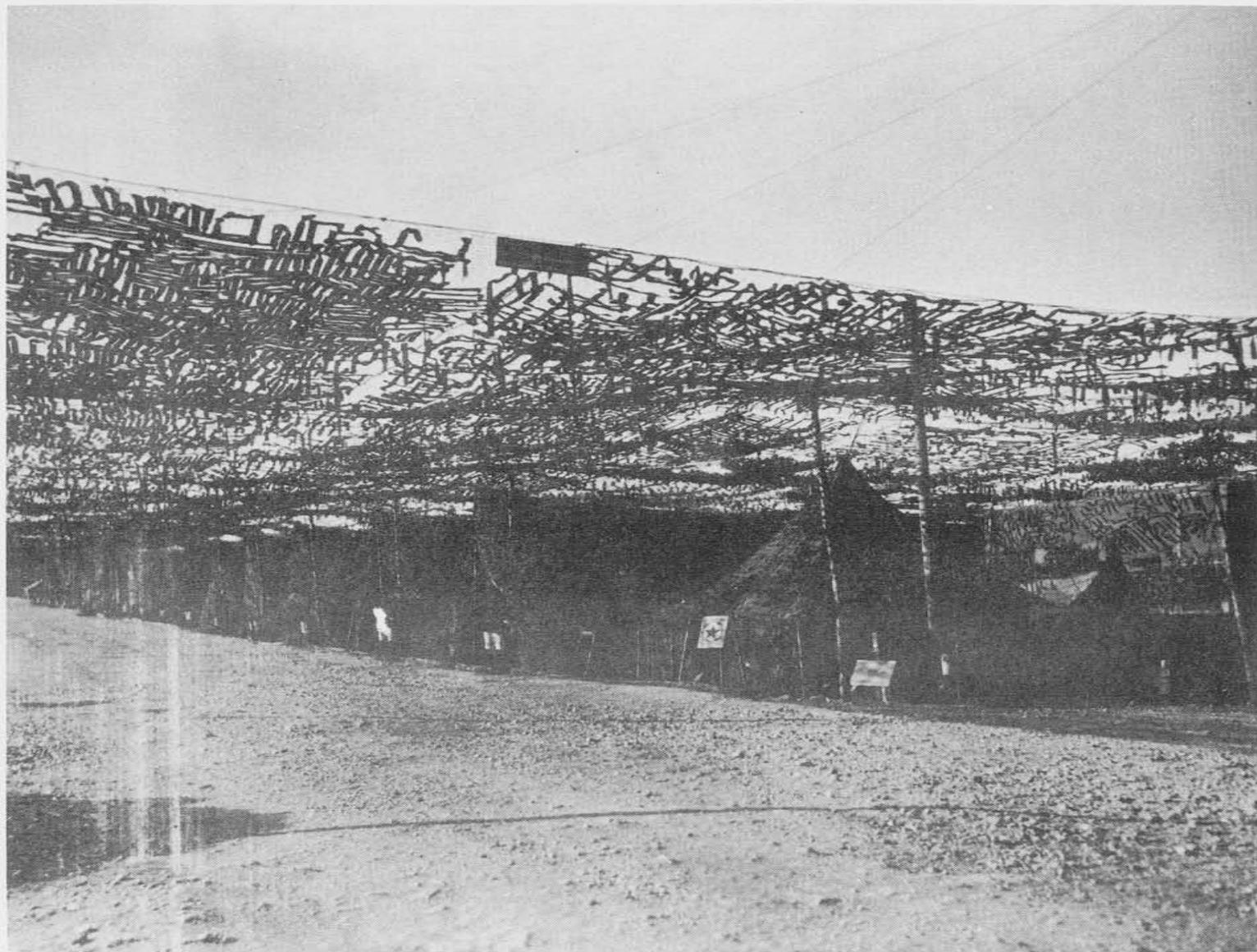


Figure 2.—Class II Issue Section at Maiden-Newton Marshaling Area.

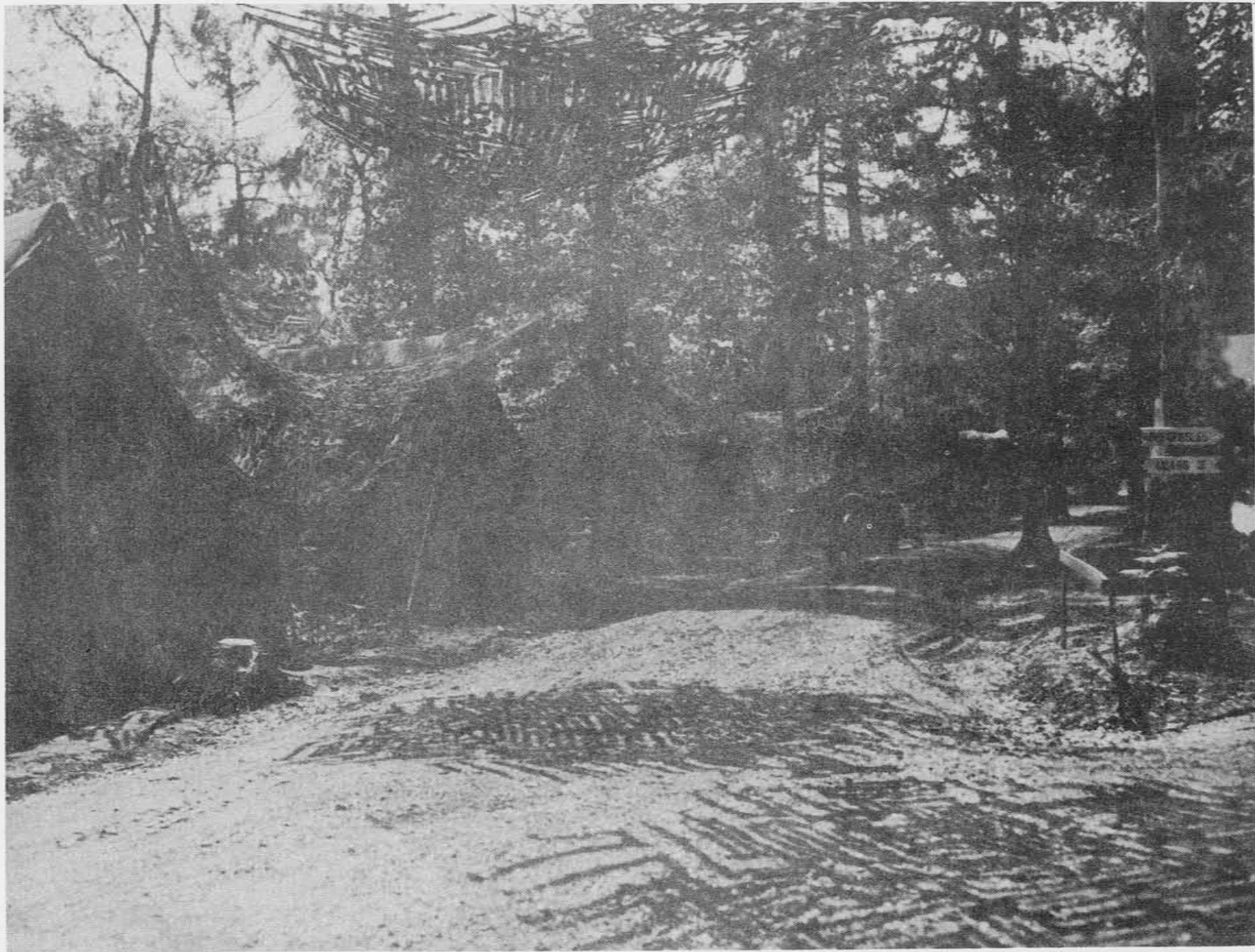


Figure 3.—Class II Issue Section at Portsmouth Marshaling Area.



Figure 4.—Truckhead at Portsmouth Marshaling Area.

mately D-plus-30-day supplies would begin to come direct from the United States in type-loaded ships. Each type-load would be packed with the items that would be used in the follow-up maintenance set and would provide maintenance for 50,000 man-months. The tonnage in each type-load would be approximately 636 long tons, or 930 measurement tons. Additional supplies would be shipped from United Kingdom depots to supplement United States shipments. Officers' and nurses' clothing would not be shipped from United Kingdom depots before D-plus-45-day, when it was expected that quartermaster sales companies would begin to reach the Continent. Before that time enlisted men's clothing would be available in dumps and depots to meet the replacement needs of officers. Essential items of nurses' clothing and accessories would be included in follow-up sets, in type-loads from the United States, and in additional shipments from the United Kingdom. Supplies were computed upon the following basic logistical data:

**CLOTHING AND EQUIPMENT
AND REGULAR SUPPLIES - CLASS II**

Period	Ship tons per	
	Lbs per man per day	1,000 men per day
D-D plus 30		
Clothing, equipment, & regular supplies	.485	.638
Loss factor	.097	.128
Total	.582	.766
D plus 31-D plus 60		
Clothing, equipment, & regular supplies	.731	1.010
Loss factor	.007	.092
Total	.738	1.102
D plus 61-D plus 90		
Clothing, equipment, & regular supplies	.731	1.010
Loss factor	—	—
Total	.731	1.010³⁴

Mounting Plans

On 9 January 1944 the Commanding General, SOS, ETOUSA, notified the chiefs of supply services that he was responsible for mounting the operation OVERLORD.³⁵ On 30 March the quartermaster mounting plan appeared as Annex 10 to the SOS Plan for Mounting the Operation OVERLORD, which

had been published 10 days earlier (see vol. I, ch. 1).

At 5 general depots beach maintenance sets to supply requirements for the first 14 days of the Continental operation were being assembled. The number of sets had been increased from 61 to 73, for which 1,452 skid-loads would be required, with a total weight of 749 long tons. Each was being packed to maintain 5,000 men for 15 days. And in 5 general depots 85 follow-up maintenance sets with a total weight of 9,945 long tons, were also being assembled. For the period D-plus-15-day to D-plus-45-day these sets would be used to meet requirements, supplemented after D-plus-30-day by direct shipments from the United States. Beach maintenance sets would be skid-loaded; follow-up maintenance sets would be amphibiously packed but not skid-loaded. The type-loaded shipments from the United States would consist of 46 bricks, each containing 50,000 man-months of supply. The plan also stipulated the quantity of reserve stock per 1,000 men that would be held in marshaling areas (see app. V).³⁶

As early as July 1943 plans had been formulated for the Services of Supply to function on the Continent under the name of Communications Zone (Com Z).³⁷ OVERLORD plans were published for the Advanced Section of the Communications Zone (ADSEC) and the Forward Echelon of the Communications Zone (FECZ) on 13 April 1944 and 17 April 1944 respectively. FECZ had been delegated the responsibility for over-all planning from D-day to D-plus-90-day. As far as clothing and individual equipment were concerned, the quartermaster annex to the Communications Zone, Administrative Plan for Operation OVERLORD, FECZ, which was published on 30 April 1944, included little that had not appeared in the quartermaster annex to the SOS Plan for Mounting the Operation OVERLORD. It did set, however, the class II levels of supplies as follows:

	In Army Area (days)	In Com Z (days)
D-plus-20	7	0
D-plus-46	7	0
D-plus-90	7	21

In accordance with this plan the Quartermaster Service completed its preparations for the supply of clothing and individual equipment to the troops that would participate in the invasion of the Continent. The allowances of clothing and individual equipment for troops engaged in the Continental operation appear in appendix VI.³⁸

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CHAPTER 2

METHODS OF SUPPLY

The task of outfitting the soldier in Europe was primarily a problem of replacement. The articles brought from the United States wore out. The soldier in combat lost or discarded them when his life was in danger. They had to be replaced if his fighting efficiency was to be maintained. Procedures for supplying in the theater the vast quantities of clothing and individual equipment that were needed were first established in January 1942, when the earliest contingent of United States forces landed in Northern Ireland.

TO THE UNITED KINGDOM

Troops leaving the United States early in 1942 to become a part of the token force composing USAFBI had been provided with the items of clothing and equipment prescribed by Tables of Basic Allowances (T/BA) 21. Replacements for these items would thereafter be shipped from the United States. The requisitions would be placed monthly and would be based upon a 60-day level of supply.¹

The United States and British Chiefs of Staff met in April to discuss plans for an invasion of the Continent in 1942, SLEDGEHAMMER, and an invasion in 1943, ROUNDUP. The BOLERO Combined Committee issued in May a key plan for developing the British Isles into a base from which a Continental operation could be initiated and sustained. In June, the first large shipments of United States forces began to arrive in the United Kingdom. On 8 June 1942 the European Theater was activated, and on 24 June Major General Dwight D. Eisenhower was designated Theater Commander. (See vol. I, ch 1.)

On 10 July, little more than a month after the Office of the Chief Quartermaster had been established, the Chief Quartermaster complained that troops were arriving with too much clothing and equipment. Besides the normal T/BA 21 allowances, they had been provided with a suit of protective outer clothing, a suit of protective underwear, and protective socks, gloves, hats, and leggings. Furthermore, enough supplies were shipped with each contingent for 90-day maintenance. Because storage space was not yet available in the United Kingdom to handle the load,² the War Department announced in August

that troops would carry only minimum maintenance supplies and that bulk maintenance supplies would be shipped later.³

Build-up for TORCH

In the meantime, the United States and British Chiefs of Staff had decided to cancel SLEDGEHAMMER and postpone ROUNDUP. Instead, TORCH, the assault on North Africa, was scheduled for November 1942. Lieutenant General Eisenhower was appointed Commander in Chief of the operation and instructed to proceed with final planning.⁴ Because the European Theater was given the task of mounting one of the task forces for TORCH, the level of supply for clothing and individual equipment was raised to 180 days.⁵

BOLERO Retarded

The third edition of the BOLERO Key Plan was published on 11 November 1942, 3 days after TORCH had been launched. This was an interim plan, which would be effective only during the North African operation. The entire build-up of the United Kingdom was temporarily retarded. The troop strength for the European Theater through May 1943 was reduced to 427,000 men. The levels of supply were reduced to 90 days for clothing and 60 days for individual equipment.⁶ Major General John C. H. Lee, Commanding General, SOS, ETOUSA, questioned the advisability of the reduction. The British also asked that the build-up of supplies for ROUNDUP be continued. Lieutenant General Brehon B. Somervell, Commanding General, SOS, replied that there were not enough ships to support both the North African and European Theaters and that BOLERO would have to be temporarily slowed down.⁷ (See vol. I, ch. 1.)

Interim Levels of Supply

On 10 October the War Department delegated larger powers to oversea commanders, ports, and chiefs of services. It would determine only levels of supply and inter-theater priorities.⁸ Later the New York Port of Embarkation was given full responsibility for supporting TORCH. Supplies in the United Kingdom would be called for only in emergen-

cies. The European Theater, however, would ship to North Africa all clothing in excess of a 90-day level and all individual equipment in excess of a 60-day level.⁹ On 8 December the War Department granted the European Theater an additional 45-day combat maintenance.¹⁰ Therefore, the Chief of the Supply Division believed that the levels had been raised to 135 days for clothing and to 105 days for equipment and reported that requisitions for the next 6 months would be prepared on that basis.¹¹ The Commanding General of the New York Port of Embarkation (NYPE), refusing to accept the higher levels, said that the Office of the Chief Quartermaster had apparently misunderstood combat maintenance.¹² (See vol. I, ch. 4.)

Combat Maintenance

The term "combat maintenance" came from a set of tables, known as "Zone of Interior and Combat-Maintenance Factors," published by the Office of The Quartermaster General. By these factors consumption of items under static and combat conditions were to be computed. The combat-maintenance factor was reached by multiplying the man-years represented in the combat force by the annual allowance per man and dividing the product by the total man-years in the troop basis. If 50,000 troops were to be maintained in a combat force out of a total troop strength of 1,500,000 men and the annual allowance was one pair of boots per man, the combat-maintenance factor was reached by dividing 50,000 by 1,500,000. Thus the combat-maintenance factor for boots would be .033.

The zone-of-the-interior factors that were used in the United States were lower than the combat-maintenance factors used in a theater of operations. Woolen gloves, for instance, had a zone-of-the-interior factor of .91 and a combat-maintenance factor of 2.184. Only those items of clothing that were consumed rapidly in combat had combat-maintenance factors. Ties, for example, had a factor of 2 in both the zone-of-the-interior and combat-maintenance tables.¹³ NYPE explained that combat-maintenance allowances applied only to consumption and were not to be used as a basis for determining levels of supply.¹⁴

BOLERO Reinstated

The full BOLERO program was reinstated immediately after the Casablanca Conference in January 1943 (see vol. I, ch. 1). The Office of the Chief Quartermaster at once

redoubled its efforts to bring more supplies into the United Kingdom and initiated an important study of maintenance factors. The study was based upon a 6-month experience in the European Theater and a limited amount of data from the North African Theater. The committee that conducted the study recommended revision of existing factors and the development of factors for items which would appear in future requisitions and for which no factors had been computed. The factors for clothing coincided in most instances with those determined by the Office of The Quartermaster General, but the factors for individual equipment were at variance.¹⁵ When the Office of the Chief Quartermaster published the factors in *Quartermaster Service Reference Data* of 1 July 1943, The Quartermaster General wrote that the volume was very helpful and would be used in his office as a guide but that he would not approve the factors as recommended.¹⁶

Meanwhile, on 20 February 1943, the War Department had re-defined a maintenance factor as "a measure of the average monthly wastage during the expected life of a piece of equipment, expressed as a percent."¹⁷ The Chief Quartermaster, believing replacement rather than maintenance had been defined, referred to maintenance factors as replacement factors.¹⁸ The practice was subsequently adopted by all agencies. By January 1944 the two terms had become synonymous.

Replacement Factors

A replacement factor was the measure used to express the life span of an item. The factors were derived by a simple formula. A wool serge coat had been found to last 1 year. Therefore, it had an annual replacement of 100 percent. If 1,000 men were to have an initial issue of coats, the monthly rate of replacement would be 83.3 coats per thousand men, 8.33 percent, or a factor of .833. The rate of replacement is found through multiplying the replacement factor by the number of men to be supplied. The annual percentage of replacement is found by dividing the number of items replaced in a year by the number of items in the initial issue. If a man is issued initially 4 pairs of socks and within a year draws 6 other pairs, the annual replacement percentage is found by dividing 6 by 4, which equals 1.5, or 150 percent.¹⁹

The life of an item under combat conditions differed drastically from the life of the same item under static, noncombat conditions. A



Figure 5.—Clothing and Equipment Discarded in Combat.

soldier in the United States would not wear out shoes as rapidly, or be as likely to lose them, as would a combat infantryman in France. Moreover, many items served purposes other than those for which they were intended. Blankets, for instance, were used to cover the wounded or were torn into shreds for the making of tourniquets.²⁰

In May 1943 the Office of the Chief Quartermaster established a second committee to analyze replacement factors for clothing and individual equipment in the United Kingdom. Actual monthly replacement issues for the 6-month period between November 1942 and May 1943 were obtained from base section quartermasters, the 29th Division quartermaster, and the Eighth Air Force quartermaster.²¹ The committee reported that replacement issues in the United Kingdom had been light because units arriving in the British Isles had been issued new equipment in the United States or upon arrival in the Theater. Experience in the United Kingdom, therefore, did not furnish the proper basis for altering replacement factors for all items. It should be applied only to those items that were consumed as rapidly during noncombat conditions as during actual combat conditions. The committee believed that the replacement factors prescribed by the War Department met the demands of the United Kingdom.²²

In the meantime, Lieutenant Colonel Paul Stevenson and Major Hillary Hoskinson, who had arrived from the Office of The Quartermaster General to study replacement factors and rates of consumption, recommended that records of replacement and consumption be sent to the War Department once every 3 months. They agreed with the conclusion of the Office of the Chief Quartermaster committee that War Department replacement factors were adequate for the United Kingdom.²³

Shipping Economies

In the spring of 1943 the Battle of the Atlantic was still a struggle against the Nazi submarine. The Germans already had 400 to 500 submarines in service and were building as many as 20 a month. Allied shipping losses were mounting steadily. More ships were being sunk than were being built.²⁴

Reduced Levels

Consequently, in April 1943 the War Department proposed that the levels for all

classes of supply be reduced to 45 days.²⁵ The Chief Quartermaster objected, saying that a 45-day level was entirely inadequate to meet the demands being placed upon the Quartermaster Service and that the 90-day level for clothing should be retained.²⁶ The Quartermaster General argued for reduced levels because of the need for economy in shipping.²⁷ May, however, brought the turning point in the fight against the U-boat, when more than 30 submarines were sunk.²⁸ Although the need for shipping economy was still desirable, it was no longer imperative. The War Department accepted a recommendation from the European Theater that levels be reduced to 60 days for clothing and 45 days for individual equipment.²⁹

Further Reductions

In April troops were still arriving in the European Theater with a 30-day supply of clothing and equipment in addition to their normal T/BA 21 allowances. The War Department and the Office of the Chief Quartermaster agreed that a reduction could be made by eliminating items already being procured in the United Kingdom and those listed for procurement (see ch. 3).³⁰ The next month, the Office of the Chief Quartermaster suggested that certain items could better be delivered in bulk (see app. VII).

Tighter Controls

The War Department took action in May 1943 to better regulate the flow of supplies to the United Kingdom. It directed the Theater to furnish three monthly statistical reports—a monthly materiel status report, a monthly automatic supply report, and a monthly ammunition supply report (see vol. I, ch. 4). These formed the basis for the new supply procedures that the War Department issued on 20 September 1943. The three basic methods of supply were established—automatic, semiautomatic, and supply by requisition only (see vol. I, ch. 4). Henceforth, 1 month in advance of units, the New York Port would ship automatically initial issue and replacement of materiel status report items. Before departure troops would be provided an initial issue of nonmateriel status report items. Replacements would be requisitioned from the United States.³¹

Preshipment

The Commanding General, Services of Supply, and the Chief Quartermaster were pleased with the new procedures but recommended that preshipped supplies reach the Theater 30 to 60 days ahead of the units for which they were intended.³² G-4 thought, however, that preshipment to the United Kingdom should continue only until D-plus-90-day and that thereafter supplies should be shipped direct to the Continent.³³ Army Service Forces decreed on 1 June 1944 that preshipments to the United Kingdom would stop on 31 August 1944 and that no preshipments would be made to the Continent.³⁴

Increased Supply Levels

On 20 January 1944 the War Department defined the purposes of the three levels of supply and raised the maximum levels for clothing in the European Theater to 75 days (see vol. I, ch. 4).³⁵ The Chief Quartermaster recommended several weeks later that the maximum level be raised to 90 days.³⁶ On 26 April the War Department agreed with the stipulation that the higher level be effective only during the assault on the Continent and that the lower level be re-established when the situation should have become relatively stable.³⁷

Replacement Factors Questioned

In the spring of 1944 the Chief Quartermaster felt certain that the replacement factors would have to be changed when the static period in the theater should have ended. His conclusions were borne out by a study of operational replacement factors in the North African Theater, which showed the official War Department factors to have been too low. Consequently, in submitting requirements for a priority Continental operation (PROCO) project (see vol. I, ch. 4), he based his computations upon higher factors, for which he requested approval.³⁸ The War Department sent approval of one-third of the factors and withheld approval of the others until further study could be made.³⁹

Overseas Requirements Table

Replacement factors were not set by theaters of operations but were published quarterly by the War Department as Overseas Requirements Tables (ORT).⁴⁰ The first was received from the War Department in February 1944. The factors it contained and

those then in use in the European Theater were as follows:

Item	Monthly Percentage Replacement	
	ORT Factor Percent	ETO Factor Percent
Coat, mackinaw, wool	8.3	9.2
Coat, wool, serge	8.3	8.0
Drawers, cotton, short		18.75
Drawers, wool	8.3	5.55
Handkerchief, cotton	12.5	16.7
Overcoat, wool, roll-collar	5.6	4.2
Shirt, flannel	11.1	12.5
Shoes, service	14.2	12.8
Socks, wool	25.0	50.0
Trousers, wool	8.3	12.5 ⁴¹

The Quartermaster General pointed out several reasons for the wide differences between the two sets of factors. First, special allowances authorized in the European Theater were not always known by the War Department, and changes in allowances authorized by the War Department were not always known by the European Theater. Second, the War Department had not taken into consideration the additional allowances the Theater had authorized for troops engaged in outdoor work. Finally, the replacement rates in the Overseas Requirements Tables as applied to the total strength of the Theater took into account no differences in wear or use of items issued to officers, nurses, Wacs, and enlisted men.⁴²

Shortly after D-day, The Quartermaster General sent Captain Harold A. Naisbitt to the European Theater to study replacement rates under combat conditions. He reported that he and the Chief Quartermaster had reached an understanding after having carefully reviewed all conflicting items and that the Office of the Chief Quartermaster would use War Department factors in submitting its next requisition.⁴³

On 20 July Captain Naisbitt submitted to Major General Littlejohn a report on the determination of rates of replacement and consumption in the Theater. Standing operating procedures in effect and in preparation, he said, provided adequately for the maintenance of basic records necessary to the development of replacement factors; yet the Office of the Chief Quartermaster had received no consolidated report of stocks and issues of class II supplies. The determination of replacement factors for the Continent and for the quartermaster section of the report of material consumed was a responsibility of the Research and Statistics Branch of the Plans and Training Division. While control should remain in the Plans and Training Division, relationship with other offices

should be clarified by the publication of an Office of the Chief Quartermaster circular that would provide for appropriate action whenever a change in factors was indicated. Captain Naisbitt specifically recommended that arrangements be made to obtain periodic inventory and issue reports from the armies for consolidation with similar reports from the Communications Zone and that experience on the Continent be tied in with that in the United Kingdom. Information copies of the reports should be sent to the Office of The Quartermaster General in order to facilitate recommendations for changes in factors submitted to the War Department.⁴⁴

Final Procedures

Meanwhile, the War Department had published on 23 May the final procedures for the supply of the European Theater. The three methods of supply were retained, and supply to the European Theater was set up on a semiautomatic basis (see vol. I, ch. 4). Chiefs of Services had been directed on 11 June to place requisitions on NYPE for the rest of 1944. They were given the option of placing requisitions monthly, bimonthly, or quarterly.⁴⁵ The Office of the Chief Quartermaster elected to submit requisitions on a quarterly basis.⁴⁶

TO THE CONTINENT

The procedures for preparing and submitting requisitions for clothing and individual equipment needed on the Continent during the first 90 days of the invasion had been published in April 1944 (see vol. I, ch. 4). The procedures for the succeeding periods through D-plus-360-day were published after the final War Department policy for supplying the European Theater was established.⁴⁷

During the assault period only a small amount of tonnage was allocated to clothing and individual equipment. Then selected items of clothing and equipment were shipped in beach maintenance sets and follow-up maintenance sets (see chs. 1 and 4). The shipment of supplies direct from the United States to the Continent began in August when Cherbourg was ready to receive ocean-going vessels (see vol. I, ch. 5).

After D-plus-90-day supplies were added to the stock pile being built to meet future requirements. Between D-plus-90-day and D-plus-150-day an increased amount of supplies was brought across the Channel, while direct

shipments from the United States were reduced. Ten requisitions for this period were placed upon the New York port in May 1944, asking for nurses' cold-climate clothing, over-the-shoe waders, field jackets, herringbone twill clothing, insignia, medals and ribbons, clothing for American Red Cross personnel, and cloth and findings. Only four of these were filled on time. Part of the insignia arrived in October, but the complete shipment was not received until January 1945. Field jackets did not arrive until February 1945. The other three requisitions were canceled.⁴⁸

Combat Replacement

The requirements for the period from D-plus-150-day to D-plus-210-day were prepared during June and July. The requisitions were mainly for winter clothing and newly standardized items.⁴⁹ The original requirements for these items had been based upon authorized allowances and replacement factors. By August, however, it became apparent that the factors were too low. The first report of Continental replacement, which was made by the ADSEC quartermaster on 4 August 1944, indicated that consumption on the Continent was much larger than that in the United Kingdom. The replacement factors, therefore, prescribed for the European Theater were inadequate. The factor for wool socks, for example, was 25.0 percent, while Continental experience set the factor at 43.8 percent.⁵⁰

On 6 September 1944 Major General Littlejohn wrote that the situation during the early days of the invasion had been "fluid." New depots and dumps had been opened and closed daily. Off-loading facilities had not been able to handle the vast quantities of supplies awaiting discharge. Supplies had been piled wherever space was available. All methods of transportation had been overtaxed. Essential supplies had been moved forward first; and others had been brought up when facilities had become available. In many instances issues had been made as soon as supplies had been unloaded and placed on the beaches. The armies had moved so swiftly that they had not had time to requisition replacements for clothing and equipment. That the increase in replacement factors had been in direct proportion to the increase in consumption was illustrated by the following comparison of factors before and after D-day:

Item	Jan-May	June-Sept
	1944	1944
Bag, water sterilizing	5.4	13.41
Can, meat, with cover	7.1	8.0
Cup, canteen	4.5	8.0
Drawers, cotton, short	12.1	17.3
Drawers, wool, long	4.3	6.2
Jacket, field, wool	9.7	10.7
Kit, sewing	2.5	10.5
Lantern, gasoline, single and double burner	6.9	17.0
Shirt, flannel	3.8	15.10
Shoes, service	7.0	16.0
Socks, wool	11.3	43.8
Trousers, wool	5.9	10.0 ⁵¹

Consequently, Major General Littlejohn recommended the following changes in replacement factors for the Theater:

Item	Experi- ence Factors	Re- quested Factors	Ap- proved Factors
Ax, entrenching	9.66	8.3	6.4
Can, meat, with cover	8.4	4.3	8.0
Cup, canteen	6.0	4.2	8.0
Drawers, cotton, short	18.75	12.5	17.3
Drawers, wool, long	5.6	5.55	6.2
Shoes, service	20.2	14.2	16.0
Tent, shelter half	13.97	8.3	16.3 ⁵²

After Saint Lo

The battle of the replacement factor gained in momentum after the break-through at Saint Lo. Moving at a rate of speed virtually unprecedented in military annals, the United States forces raced across France, driving the Germans beyond the Belgian border to the fringes of the Siegfried Line. On 15 September the Chief Quartermaster wrote as follows:

Due to the swiftness of the campaign, the extended movements and transportation limitations, the Armies confined their demands to food, gasoline and ammunition. It was not until they were faced with a rather unseasonable change in the weather and the stoppage of their forward movement, that they were able to add their demands for clothing and equipment in the daily telegram.⁵³

Under instructions from army commanders, troops arriving on the Continent during the early stage of the operation kept their pack loads to a minimum. As colder weather set in, these troops had to be equipped—or, more appropriately, reequipped—with the lacking items.

The first requisition for winter clothing was sent to the New York Port of Embarkation on 15 August 1944. Another requisition was submitted on 18 September.⁵⁴ On 5 October 1944 the Chief Quartermaster reported

that he was faced with the task of reequipping troops by the end of the year and submitted the requirements for this purpose.⁵⁵

Combat Replacement Factors

The factors upon which the requisition was based had originally been computed during August and September, when combat replacement of clothing had been light. They were recomputed after the advance. Thus, the requisition was based not upon issue experience alone but upon demonstrated combat needs over an extended period of time.⁵⁶

Later OCQM sent the War Department a complete list of combat replacement factors, which army commanders and army base section quartermasters had confirmed. Though not considered final, they would hold until new factors could be calculated. The Chief Quartermaster urged that the requisitions computed upon the basis of these factors be approved.⁵⁷

Continental Experience Factors

A week later, the Chief Quartermaster sent The Quartermaster General a table of Continental experience factors, which had been used to calculate requisitions for the first 3 months of 1945.⁵⁸ In reply The Quartermaster General expressed the position of his office in the following manner:

It is recognized that the consumption—or rather disappearance—of certain clothing items on the Continent averages higher than the so-called “War Department Replacement Factors.” This Continental issue is being considered in connection with reviews and revisions of War Department factors. It is to be noted, however, that War Department factors are intended to reflect average replacement rates over a period of time; seasonal operations, such as issuing of winter clothing, somewhat equivalent to initial issue, and distribution within the Theater are not covered by War Department factors. Special, seasonal, and distribution for issue must, of course, be covered; but it is preferable to provide for those needs by special requisitions specified as such. The Replacement Factors themselves used as a basis for determining future production and procurement especially for items having a long lead time, should be adjusted only after firm trends are established.⁵⁹

The Chief Quartermaster wrote G-4 on 4 November that his recent discussions with the War Department showed that the true meaning of the replacement factor was being overlooked. If a replacement factor, which represented the length of time an item was expected to last, was expressed in months and not in percentages, the following comparisons could be drawn:

Item	According to War Department Factors (months)	According to Continental Factors (months)
Cap, garrison, wool	12	12
Coat, mackinaw	12	8
Drawers, wool, long	6	4
Handkerchief	2.5	1.5
Jacket, field	2.5	1.5
Overcoat, wool, roll-collar	18	9
Shirt, flannel	4.5	3
Shoes, service	3.5	3.5
Socks, wool	4.5	3.5
Trousers, cotton	2.5	2.5
Trousers, wool	6	4
Undershirt, wool	6	4.5 ⁰⁰

War Department reluctance to accept the replacement factors recommended by the Theater was due in part to production in the United States. The rate of consumption on the Continent was not only 2½ times the rate indicated by War Department replacement factors but 2½ times the rate at which supplies were being manufactured in America. The Chief Quartermaster drew the following comparison of consumption on the Continent with production in the United States:

Item	Consumption on Continent (months)	Production in United States (months)
Clothing:		
Coat, mackinaw	6.00	12.00
Gloves, wool, od, with leather palms	4.50	8.00
Handkerchief, cotton	.75	2.00
Jacket, field, od	4.50	7.00
Overcoat, wool, roll-collar	9.00	18.00
Overshoes, arctic	12.00	24.00
Socks, wool	.50	1.00
Trousers, wool	2.56	6.00
Equipage:		
Blanket, wool	2.50	2.75
Can, meat	10.00	24.00
Cup, canteen	10.00	24.00
Fork, M-26	5.00	9.00
Spoon, M-26	5.00	12.00 ⁰¹

The Chief Quartermaster learned on 7 November 1944 that all but eight of the recommended Continental experience factors had been disapproved—some because information available in the War Department did not support the claims of the European Theater and others because they had been cal-

culated on the basis of initial or seasonal issues.⁰² However, on 9 December 1944 the Office of The Quartermaster General agreed to approve the factors for such items as cooking outfits, pistol belts, helmet-liner bands, first-aid packets, and woolen drawers.⁰³

In spite of repeated War Department objections, requests for increased replacement factors continued to leave the Office of the Chief Quartermaster daily. The last request was sent to The Quartermaster General on 13 December 1944.⁰⁴ The Office of The Quartermaster General gave assurance in March 1945 that the recommendations would again be considered.⁰⁵ The end of the war in Europe, however, precluded any further action.

Last Combat Requisitions

Requisitions for the final period were prepared during October and November 1944. These requisitions asked for more supplies of clothing and individual equipment on the basis of increased rates of consumption, changes in tariff scales, and changes in initial issue allowances. In all, 21 requisitions were placed by mid-December 1944. The Office of the Chief Quartermaster prepared 7 others later in December and in January 1945 to meet the losses caused by the Ardennes counteroffensive. These were the last requisitions placed by the Theater in support of a combat force. All requisitions that followed were for supplies to support the army of occupation or for the provisioning of troops being redeployed.⁰⁶

The Final Levels

The 90-day level, which had been in effect during the assault period, had been reduced on 1 September to 75 days (see vol. I, ch. 5). After the Belgian Bulge offensive had been repulsed and victory in Europe assured, the Commanding General of the Army Service Forces thought that the levels were in excess of actual requirements. On a visit to the European Theater in January 1945, he asked the Theater to accept a 15-day reduction in the levels for all classes of supply. He also urged that more careful consideration be given to the break-down of the level within the Theater.⁰⁷ Major General Littlejohn replied that he had already been operating on a 60-day level for clothing and individual equipment and suggested that this level be approved by the War Department.⁰⁸ G-4 subsequently suggested that the proposed 60-day level be broken down as follows:

Theater Level	Army Depots	Advance Depots	Intermediate Depots	Base Depots
60	15	15	20	10 ^{ss}

The Commanding General of the Communications Zone endorsed the suggestions and asked that the Theater level no longer exclude supplies aboard commodity-loaded ships in European waters.⁷⁰ The War Department agreed to the Theater level on 3 March.⁷¹ The Supreme Commander approved the break-down 9 days later, and the levels remained unchanged during the last 2 months of fighting.⁷²

IN THE UNITED KINGDOM

Troops in the United Kingdom were provided clothing and individual equipment on requisition. This policy, begun in July 1942,⁷³ remained in effect throughout BOLERO.

Procedures Established

Division and corps quartermasters, the Eighth Air Force quartermaster, and base section quartermasters received and consolidated requisitions from ground force units, air force units, and service units respectively. These consolidating agencies sent requisitions to the appropriate supplying depot. Requisitions for restricted items—those in short supply—were sent to the Office of the Chief Quartermaster for approval.⁷⁴

Procedures Expanded

By July 1943 the procedures had been clarified and expanded. Requisitions were prepared in quadruplicate and submitted semi-monthly. For security purposes, unit designations and army post office addresses were not shown. Only the organization's shipment number, geographic location, and railhead designation were indicated. In filling requisitions, depots issued used but serviceable clothing—Class B—in preference to new clothing—Class A. Obsolete clothing, such as black neckties, denim trousers, and denim jumpers, continued to be issued until stocks were exhausted. Depots delivered supplies by rail whenever possible and used trucks only in emergencies.⁷⁵

Procedures Standardized

The standing operating procedure for supplying clothing and individual equipment to troops in the United Kingdom was formulated by April 1944. Requisitions were sent in quintuplicate to the nearest depot designated

by the base section commander. The unit would attach to each requisition a certificate citing the Tables of Basic Allowances, Tables of Equipment, or Tables of Allowances upon which the demand was based. Requisitions for quantities in excess of prescribed allowances could be prepared separately and sent to G-4, SOS, ETOUSA, for approval.

Requisitions for restricted items would be approved by the Air Force Service Command quartermaster for air force units; by the army, corps, or division quartermaster for ground force units; and by the base section quartermaster for service units. Final approval of all requisitions, however, would be given by the base section commanders. Approved requisitions would be sent to depots. An information copy would be sent to the Office of the Chief Quartermaster.⁷⁶

Unit and Hospital Stocks

Units could stock clothing and individual equipment only in accordance with allowances prescribed in Tables of Allowances or Tables of Equipment. They were allowed, however, to stock one pair of non-tariff-size shoes for each pair of standard tariff-size shoes.⁷⁷

Originally, troops committed to a hospital's detachment of patients brought their clothing and equipment with them.⁷⁸ Later they were instructed to turn in clothing and equipment at unit supply rooms to be reissued when they returned to duty.⁷⁹ The Office of the Chief Surgeon insisted that some provision had to be made for the patients returning to the United States. In April 1944 each general hospital was authorized stocks of clothing and individual equipment for issue to soldiers being evacuated to the zone of interior.⁸⁰ A list of items and quantities appears as appendix VIII.

The Marshaling Areas

OVERLORD was mounted from the area in southern England adjacent to the Channel ports. Here were established marshaling areas, where troops were assembled, equipped, and otherwise made ready for invasion (see ch. 1).

Units were moved by the Transportation Service from home stations to concentration areas. Here, troops turned in the items of clothing and individual equipment they would not need during the assault. Any essential items that were worn out or that had been lost or damaged in transit were replaced. Troops were moved from the concentration

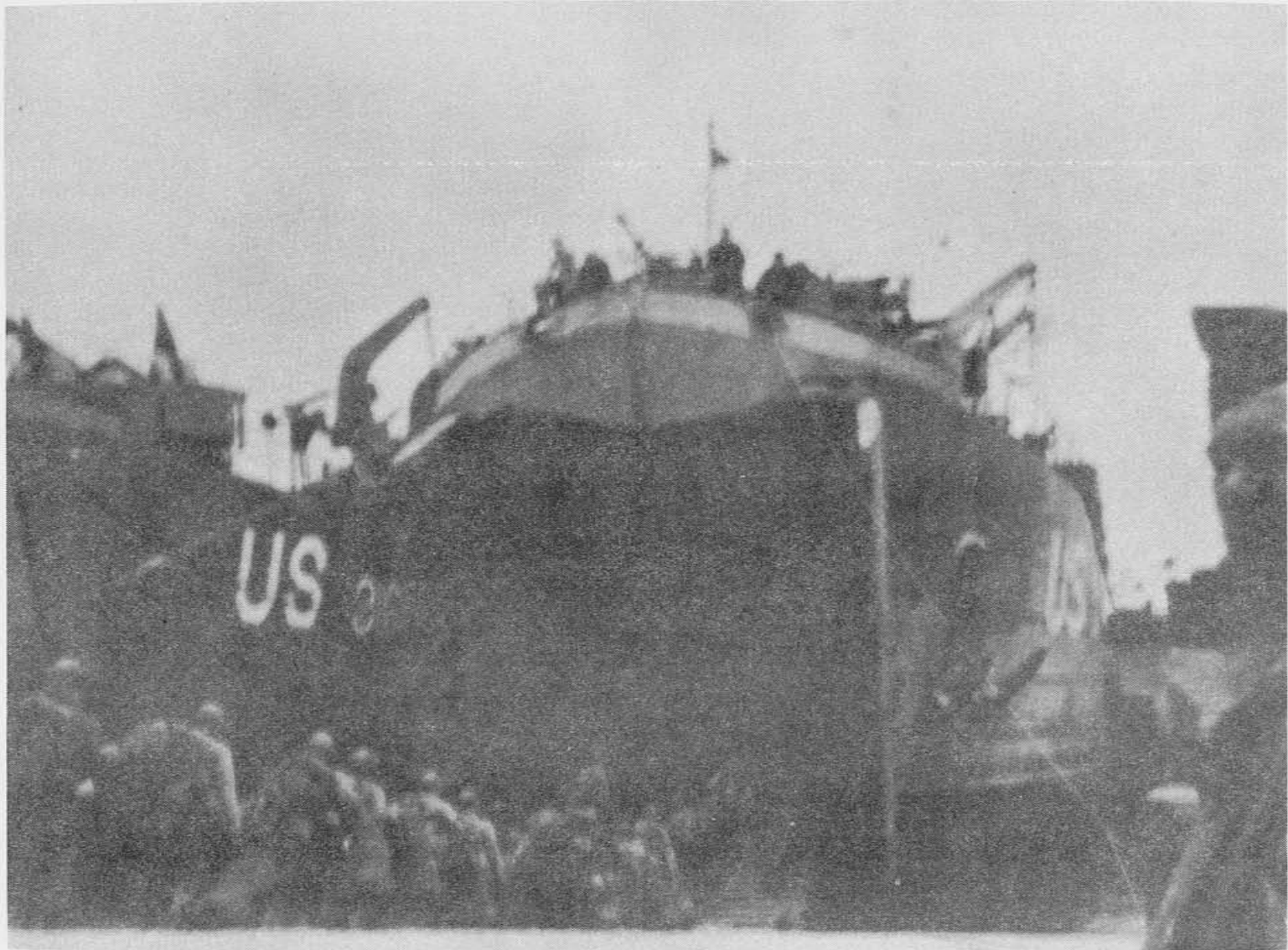


Figure 6.—Troops Embarking for the Continent.

area to the marshaling area, where they remained until called forward for embarkation. Here also any items of clothing or equipment that had been lost or damaged were replaced. When units left the marshaling area, they were completely equipped for their mission.⁵¹

ACROSS THE CHANNEL

The procedure for moving supplies across the English Channel was published on 5 April 1944.⁵² The controlling agencies—Build-up Control (BUCCO), Turn-around Control (TURCO), and Movement Control (MOVCO)—were established 5 days later.⁵³ The first 90 days of the invasion would be the period of greatest activity. Preloaded coasters would be used during the first 8 days of the operation. They would be supplemented by preloaded Liberty ships until about D-plus-20-day. Preloaded and commodity-loaded Liberty ships would begin to arrive from the United States on D-plus-22-day. Ocean-going vessels, largely from the United States, would handle the bulk of supplies after D-plus-40-day. (See vol. 1, ch. 4.)

Actually, there was no supply problem in regard to clothing and individual equipment during the first 45 days of the invasion. Beach maintenance sets began to arrive on D-plus-6-day and continued through D-plus-16-day. Supply was by follow-up beach maintenance sets from D-plus-17-day through D-plus-45-day (see chs. 1 and 4).⁵⁴ Thereafter, the entire problem of moving supplies from the United Kingdom became a question of tonnage priorities and shipping allocations, the procedure for which is described in volume I, chapter 4.

ON THE CONTINENT

The procedures for issuing clothing and individual equipment on the Continent were first published in May 1944. Items would be supplied on requisitions submitted by the armies to the regulating station designated by ADSEC. Deliveries would be made to the supply points designated by the armies. Requisitions for items in excess of T/E 21 allowances would bear a statement of justification. Requisitions for controlled items, those in critical or short supply, would be made separately and sent through the regulating station to ADSEC for approval. If the controlled items requested were in excess of T/E 21 allowances, ADSEC would obtain approval from the Office of the Chief Quartermaster. Credits would be established for

army and air force units at specific ADSEC depots (see vol. I, chs. 4 and 5).⁵⁵

ADSEC Procedures

Because OVERLORD planning did not specify a definite date for the establishment of regulating stations, ADSEC published on 28 May 1944 its own supply procedures.⁵⁶ Clothing and individual equipment would be issued by ADSEC depots on the basis of actual or estimated requirements. Credits would be established and would be based upon recommendation of the ADSEC quartermaster. Requisitions, except those against established credits, would be sent by the unit to the highest administrative echelon for consolidation and approval. Separate requisitions would be prepared for supplies in excess of authorized allowances. The ADSEC quartermaster would edit requisitions against available depot stocks.⁵⁷

Daily Telegrams

These procedures worked substantially as planned until the break-through at Saint Lo. Then extended supply lines made necessary a more closely coordinated procedure for processing requisitions. Not all the supplies that were being requisitioned could be delivered, because not enough transportation was available. Supplies moving forward had to be limited to only the most essential items. Requisitions during this period took the form of daily telegrams (see vol. I, ch. 5).

Quartermaster Procedures

New quartermaster supply procedures were published on 16 September 1944. Thereafter army quartermasters submitted to ADSEC, twice each month, detailed requirements of clothing and individual equipment. The requisitions sent on the 1st of each month covered requirements for the period between the 15th and the 30th of that month. Requisitions sent on the 15th covered requirements for the period between the 1st and 15th of the following month. The daily telegrams designated the items, quantities, and tonnages that were to be shipped during any specified 24-hour period. The total number of items and quantities asked for on daily telegrams during a 15-day period should conform as closely as possible to the original semimonthly estimate.

The ADSEC quartermaster and base section quartermasters submitted their semimonthly requisitions and daily telegrams to

the Office of the Chief Quartermaster, which established credits and designated the depots from which the supplies would be drawn. Base section quartermasters made arrangements with the base section G-4 for bulk transportation or had supplies picked up at depots by unit transportation. Items not available in the assigned depots would be supplied from sources outside the base section.⁵⁰

End of the Daily Telegram

The first quartermaster supplies were discharged at Le Havre on 2 October 1944, 3 weeks after the port had been captured. After mid-November, when issues from the Reims intermediate depot greatly reduced the distance from supply points to the armies (see ch. 4), G-4 developed a more efficient requisitioning procedure. The daily telegram was abolished and the 10-day requisitioning system inaugurated.⁵¹

Under this procedure requisitions for clothing and individual equipment were routed direct from armies to Communications Zone headquarters. There they were processed by the Office of the Chief Quartermaster and approved by G-4. Requisitions were sent to the Office of the Chief Quartermaster 5 days in advance of the period covered by the requisition. Separate requisitions would be prepared for clothing and individual equipment, organizational equipment, regular supplies, and operating supplies such as leather and laundry soap. Separate requisitions would also be prepared for controlled items.

Requisitions were sent to the Office of the Chief Quartermaster and the Reims depot simultaneously, three copies to Reims and one to the Office of the Chief Quartermaster. As soon as Reims received the requisitions from all the armies and Ground Force Replacement Command centers, total requirements for each item were checked against depot stock status reports. Action on controlled items was automatically suspended. If the other requirements could be met, the requisitions were filled. If not, the Office of the Chief Quartermaster allocated available stocks among the requisitioning agencies. Supplies that were not on hand at Reims were drawn from other depots and shipped direct to armies or to Reims for transshipment. Reims distributed the supplies to armies by train or truck within the 10-day period. At the end of the period the depot commander sent the armies a list of the items that had been shipped. Requisitions from ADSEC and

other sections and base sections were handled in the same manner.⁵²

Procedures for "Supply in Depth"

The procedures were not changed again until February 1945. In January 1945, Lieutenant General Brehon B. Somervell visited the European Theater. He recommended that the entire Communications Zone be reorganized on a "supply in depth" basis (see vol. I, ch. 5). These changes resulted in a series of revised operating procedures and distribution plans. On 2 February G-4 published a new standing operating procedure for supply on the Continent,⁵³ and on 9 February the Office of the Chief Quartermaster issued its new procedures.

The requisitioning period was increased from 10 to 20 days. Requisitions were prepared for clothing and individual equipment, organizational equipment, regular supplies, sales store items, post exchange items, flags and band instruments, medals and decorations, chaplain's supplies, salvage and laundry operating supplies, and graves registration supplies. Controlled items would also be requisitioned separately. A chart showing the flow of clothing and individual equipment requisitions appears as appendix IX.

Advance depots normally supplied clothing and individual equipment to the armies. They sent, however, to intermediate depots designated by the Office of the Chief Quartermaster those portions of requisitions that they could not fill. If intermediate depots could not meet the requirements, they sent requisitions to base depots designated by the Office of the Chief Quartermaster.⁵⁴ Because the basic procedures published on 2 February 1945 proved to be unsatisfactory, they were changed in little more than a month.⁵⁵

Final Theater Procedures

The procedures published on 19 March 1945 remained in effect until the end of the European campaign. The new edition of SOP No. 7, which set up procedures for the supply of United States forces on the Continent, outlined "supply in depth," defined the purposes of the various types of depots, assigned supply responsibilities to echelons of the Communications Zone, established replacement procedures, and authorized depot stock levels. It provided that armies would place on the regulating stations requisitions for noncritical items of clothing and individual equipment. These stations would, in turn, send the requisitions to advance depots. Armies would submit requisitions at 10-day intervals.

Emergency requisitions could be placed to meet unforeseen requirements.⁹⁴

Final Quartermaster Procedures

The quartermaster annex to the theater operating procedures was proposed in April and published in July. Armies would requisition clothing and individual equipment every 10 days. Communications Zone sections and base sections would place requisitions at regular intervals prescribed by the section or base section commander. Army units would pick up supplies at army depots or other designated supply points. Communications Zone units would be permitted to pick up supplies at issue depots designated by the section or base section commander. If units could not conveniently draw supplies from an issue depot in their section or if an issue depot was not located in their section, they would draw supplies from an issue depot in an adjacent section.

Unfilled portions of requisitions were to be handled by a new procedure. They could be returned to the unit for resubmission later; they could be held for future delivery; or they could be sent to the Office of the Chief Quartermaster for submission to another depot. Section and base section commanders would study all requests for items in excess of authorized allowances and would give approval only in fully justified cases.⁹⁵

Credits and Controlled Items

Although credits were used throughout the campaign on the Continent, they did not become an important part of the quartermaster supply program until November 1944. Then the Chief Quartermaster recommended that clothing and individual equipment be supplied on a credit basis rather than by the daily telegram.⁹⁶ Because the Twelfth Army Group raised objections,⁹⁷ no action was taken until 19 March 1945, when G-4 incorporated the plan in a new edition of SOP No. 7.⁹⁸

At that time the issue of controlled items of clothing and equipment was governed by the Office of the Chief Quartermaster (see vol. I, app. XLVIII-B), and lists of controlled items were published periodically (see app. X-A and -B). All units submitted separate requests for controlled items to requisitioning agencies, which sent them to the Office of the Chief Quartermaster for approval. Under the proposed system, the supply of controlled items would be decentralized. Section and base section quartermasters would send to

the Office of the Chief Quartermaster a 15-day estimate of requirements for each controlled item. ADSEC estimates would include requirements for the armies. The Office of the Chief Quartermaster would then publish credits on the 10th and 25th of each month. Sections and base sections would determine allocations within these credits.⁹⁹ On 21 April G-4 wrote that the credit system would not be immediately adopted.¹⁰⁰ The Twelfth Army Group and all other major commands still objected to it.¹⁰¹ The specific procedures for the credit system were not put into effect until 18 May 1945.¹⁰²

Replenishment

Standing Operating Procedure No. 7 of 19 March 1945 carried the first procedure for replenishing depot stocks. Advance depots would submit replenishment requisitions to designated intermediate depots three times a month. The intermediate depot would fill the requisition as completely as possible and hold the unfilled portions for future delivery. The chiefs of services would be notified periodically of items and quantities on back orders in intermediate depots and would place shipping orders on base depots. Supplies arriving from the United States and the United Kingdom would replenish base depot stocks. If supplies were not available at base depots, the chiefs of services would redistribute stocks from one depot to another to meet the most urgent demands.¹⁰³ A chart showing the flow of replenishment requisitions appears as appendix XI.

Each depot commander was responsible for calculating quantities to be stocked in his depot. The amounts of clothing and individual equipment would be determined by model stocks, depot missions, levels of supply, and replacement and distribution factors. By means of replenishment requisitions commanders of advance depots would maintain the prescribed levels for clothing and equipment. The Chief Quartermaster would maintain prescribed levels in all other depots.¹⁰⁴

Other Agencies

The final operating procedures set up the policies and principles for supplying clothing and equipment to American Red Cross personnel, British and Allied civilians employed by the United States Army, Allied military forces, displaced persons, prisoners of war, and repatriated prisoners of war. These procedures will be discussed in another volume.

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- ⁴⁸ Report, CQM to OQMG, 17 April 1945.
- ⁴⁹ Report, CQM to OQMG, 17 May 1945.
- ⁵⁰ Letter, QM, ADSEC, to CQM, 4 August 1944.
- ⁵¹ Letter, CQM to QMG, 6 September 1944.
- ⁵² *Ibid.*
- ⁵³ Letter, CQM to ASF, 15 September 1944.
- ⁵⁴ Requisition K-60, ETOUSA to NYPE, 18 September 1944.
- ⁵⁵ Requisition K-94, ETOUSA to NYPE, 5 October 1944.
- ⁵⁶ Cablegram EX-53583, ETOUSA to AGWAR, 10 October 1944.
- ⁵⁷ Letter, CQM to QMG, 15 October 1944.
- ⁵⁸ Letter, CQM to QMG, 21 October 1944.
- ⁵⁹ Letter, QMG to CQM, 25 October 1944.
- ⁶⁰ Memorandum, CQM to G-4, 4 November 1944.
- ⁶¹ Memorandum, DCQM to G-4, 4 November 1944.
- ⁶² Airgram, QMG to CQM, 7 November 1944.
- ⁶³ Cablegram WARX-74954, 9 September 1944.
- ⁶⁴ Derived Replacement and Consumption Factors for Quartermaster Supplies, OCQM, 13 December 1944.
- ⁶⁵ Letter, QMG to CQM, 3 March 1945.
- ⁶⁶ Report, CQM to OQMG, 17 April 1945.
- ⁶⁷ Memorandum, G-4 to CQM, 24 January 1945.
- ⁶⁸ *Ibid.*, 1st ind., CQM to G-4, 27 January 1945.
- ⁶⁹ Cablegram EX-93501, Com Z to 12th Army Group, 1 February 1945.
- ⁷⁰ Cablegram EX-14274, ETOUSA to AGWAR, 15 February 1945.
- ⁷¹ Cablegram WARX-46911, AGWAR to ETOUSA, 3 March 1945.
- ⁷² Cablegram EX-19609, SHAEF to 12th Army Group *et al.*, 12 March 1945.
- ⁷³ Circular Letter No. 2, OCQM, 14 July 1942.
- ⁷⁴ Circular No. 90, ETOUSA, 31 December 1942.

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- 76 Supply and Evacuation Regulations, ETOUSA, (?) April 1944.
- 77 Circular No. 28, ETOUSA, 16 March 1944.
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- 79 Administrative Circular No. 47, SOS, ETOUSA, 24 July 1943.
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- 82 Letter, AG 400.32 OpGD, ETOUSA, 5 April 1944.
- 83 Memorandum, NJC/00/302, 21st Army Group, 10 April 1944.
- 84 *First United States Army Report of Operations, 20 October 1943—1 August 1944*, Annex 14, (undated), pp. 134 and 247.
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- 86 Supply Procedure for Advance Section, Communications Zone Units, ADSEC, 28 May 1944.
- 87 Standing Operating Procedure, ADSEC, 28 May 1944.
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- 90 Circular Letter No. 97, OCQM, 5 December 1944.
- 91 SOP No. 7, ETOUSA, 2 February 1945.
- 92 Circular Letter No. 14, OCQM, 9 February 1945.
- 93 Study No. 27, The General Board, USFET, (undated).
- 94 SOP No. 7, ETOUSA, 19 March 1945.
- 95 Quartermaster Annex, SOP No. 7, ETOUSA, (?) July 1945.
- 96 Memorandum, Chief, Supply Division, to Chief, Field Service Division, 12 November 1944.
- 97 Study No. 27, The General Board, USFET, (undated).
- 98 SOP No. 7, ETOUSA, 19 March 1945.
- 99 Memorandum, OCQM to G-4, 11 April 1945.
- 100 Memorandum, G-4 to OCQM, 21 April 1945.
- 101 Study No. 27, The General Board, USFET, (undated).
- 102 SOP No. 7, ETOUSA, 18 May 1945.
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- 104 Quartermaster Annex, SOP No. 7, ETOUSA, (?) July 1945.

PROCUREMENT

The quartermaster supply program was based upon sound research and careful planning. No army in the history of the nation either required or received items so varied and so specialized as those issued American soldiers between 1942 and 1945.

Each man of the first United States standing army, authorized in 1790 by the First Congress of the newly created republic, received one hat or helmet, one coat, one vest, two pairs of woolen or linen overalls, four pairs of shoes, four shirts, two pairs of socks, one blanket, one stock and clasp, and one pair of buckles. No special items were provided during those days of simple warfare, and few were provided in the next century and a half.

For the men who fought during World War II in northern frigid lands, in mountains, deserts, sloughs, and jungles, hundreds of special items were developed by the Quartermaster Corps. Without adequate clothing and equipment for living and fighting in heat and cold, on scorching desert and rain-soaked soil, no task force could have moved toward the enemy, no battle could have been fought, and no army could have been victorious. American men and women in military offices and laboratories and on farms and in factories worked to provide the Army with the clothing and equipment that would contribute to comfort and efficiency. Soldiers arrived in the European Theater of Operations with their T/E 21 items and later received maintenance issues from stocks manufactured in the United States. Procurement in the United Kingdom and on the Continent, however, supplemented supply and conserved both time and ship tonnage. Volume I, chapter 3, sets forth the policies and procedures basic to all procurement in the European Theater. This chapter deals specifically with the procurement of clothing and individual equipment.

BEFORE D-DAY

The small contingent of troops that reached the United Kingdom in January 1942 received many supplies from the British through arrangements made by Colonel W. H. Middleswart, who was quartermaster first of the Special Army Observers' Group

(SPOBS) and then of the United States Army Forces in the British Isles (USAFBI). Therefore, before the arrival of Brigadier General Robert M. Littlejohn on 4 June 1942 and before the creation of the European Theater of Operations on 8 June 1942, the foundations of the procurement program had been laid. (See vol. I, ch. 1.)

Large-scale procurement had its beginning with the establishment of the General Purchasing Board in the early summer of 1942. The purpose of the board, as defined on 17 June, was the procurement and inspection of all supplies obtained in the United Kingdom. The General Purchasing Agent, responsible to the Commanding General, Services of Supply, was charged with procuring all equipment and supplies for the United States forces in the European Theater of Operations with the exception of certain items used only by the air forces.¹ Each supply service set up a procurement branch, the chief of which was designated an operating member of the General Purchasing Board.²

The Exchange Plan

In the spring of 1942 the German submarines operated off the Atlantic coast of the United States, not in European waters. Throughout the year there were more ships destroyed than new ships built. For both the United States and Great Britain it was essential to win the Battle of the Atlantic.³ Ship space could be saved by the exchange of goods. Items manufactured in Great Britain could be furnished United States forces in the European Theater, and items manufactured in the United States could be shipped to British forces in the Pacific.

On 4 July 1942 the British agreed to exchange 2,000,000 suits of underwear and 2,000,000 blankets for an equal number to be sent from the United States to the British Eastern theaters.⁴ By 11 August 4,000,000 pairs of socks had been added to the exchange plan.⁵ It was estimated that the exchange of underwear, blankets, and socks would bring about a saving of 26,617 ship tons.⁶

On 26 July 1942 the War Department approved the procurement of items on an exchange or replacement basis⁷ but reversed its stand a week later, saying that reverse

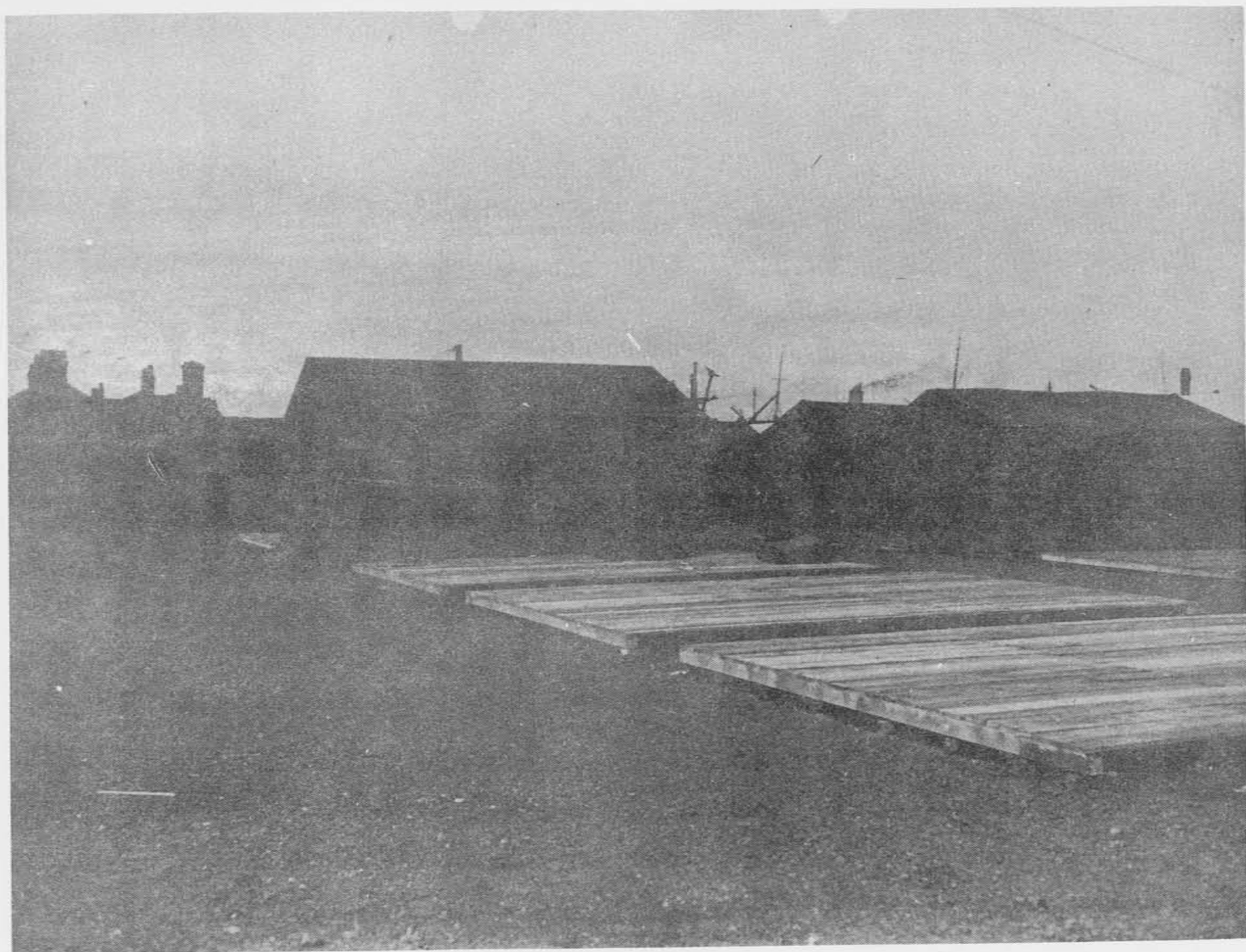


Figure 7.—Stacks Developed at the Wem Depot for Open Storage of Supplies.



Figure 8.—Bins with Movable Shelves, Constructed in the United Kingdom.

lend-lease was the only acceptable basis.⁹ On 15 August Major General John C. H. Lee, Commanding General, Services of Supply, European Theater of Operations, strongly recommended to Lieutenant General Brehon B. Somervell, Commanding General, Services of Supply, that all the agreements formerly made with the British be reinstated.⁹ On 17 September the War Department defined the policy that continued throughout the war. Items of clothing and equipment could be procured from the British if the items were of satisfactory quality and specifications and if no replacement from the United States was required except by prior arrangement. The War Department should be kept informed of all transactions in order that shipments from United States might be canceled whenever possible.¹⁰

Colonel Wayne R. Allen, Chief of the Procurement Division, and Major Peter W. Ricardo of the British War Office undertook a mission to Washington in October 1942 for the purpose of straightening out the difficulties incident to the exchange of blankets, socks, and woolen underwear. At a conference held on 26 October in the Office of The Quartermaster General, the emissaries were able to clarify the procurement procedure in the United Kingdom. It was then agreed that the United States would furnish the following items to the British armies in the Eastern theaters in exchange for items that the British would furnish United States forces in the United Kingdom:

- 600,000 shirts, wool
- 2,500,000 blankets
- 10,000,000 socks, wool and cotton (pairs)
- 1,400,000 comforters, cap (mufflers)
- 3,000,000 jerseys, pull-over (sweaters)
- 6,000,000 drawers, wool (pairs)
- 3,300,000 undershirts, wool
- 7,000,000 hose tops, wool

According to the agreement, the British would deliver to the United States forces in the United Kingdom 1,000,000 pairs of heavy woolen socks and 700,000 pairs of underwear. It was also decided that quantities for the full year should be demanded of the British, who had agreed to provide the entire requirement. Because of commitments already made by the International Supply Committee, large quantities of British uniforms would be made in the United States for the Pacific area. The conferees agreed that full consideration should be given to production of the United States requirements in the United Kingdom.¹¹

The day of the conference Lieutenant General Somervell confirmed the agreement in a cablegram to Major General Lee. Because

of the large number of blankets that would be available in the British Isles, he said, United States soldiers would bring to the European Theater two blankets instead of four.¹² Major General Lee replied that changed conditions had altered the agreement and that the British then proposed immediate delivery of 1,000,000 blankets and 1,000,000 suits of woolen underwear. To offset losses in transit and to set up stocks necessary for combat maintenance (see ch. 2) he asked that troops bring three blankets to the theater.¹³

Delivery of Blankets

Dissatisfaction with British blankets was manifest early in the procurement program. Major General Lee had said in his cablegram of 30 July that, because British blankets had been found unsuitable for combat, they would be issued only in cantonments.¹⁴ After 24 October 1943 British blankets were issued to no United States troops except patients in hospitals.¹⁵ At that time the British had delivered 660,000 of the 1,000,000 blankets in the original exchange agreement. The remaining 340,000 blankets were to be delivered on a monthly basis—140,000 in December, 100,000 in January, and 100,000 in February.¹⁶ Meanwhile, the British, experiencing an acute shortage, estimated that they would require 3,000,000 blankets during 1944. The International Aid Division of the United States War Department agreed to make half that number available in equal monthly installments during the first 6 months of the year. In accepting the compromise terms, the British requested the return of 500,000 of the blankets that they had furnished United States forces. On 30 December the International Aid Committee said that the blankets could be returned.¹⁷ Later Major Ricardo expressed the hope that the 340,000 blankets contracted for by the British but not delivered might be canceled, explaining that the shortage had been occasioned by the necessity to ship blankets to meet Eastern and Mediterranean requirements. He was of the opinion, moreover, that British blankets were being returned because United States troops preferred American blankets.¹⁸

But the Chief Quartermaster thought that the British should fulfill their contract. On 6 March he reminded the British War Office of the agreement made in July 1942 providing that 1,000,000 blankets manufactured in the United Kingdom be exchanged for 1,000,000 blankets manufactured in the United States. Already, he said, a quantity in excess of the

original figure had been shipped to the British Eastern theaters. Because of the increase in troop strength, the United States forces urgently needed for use in cantonments the 340,000 blankets that would complete the exchange.¹⁹ The Director of Clothing and Stores replied that the supply situation was such that even a loan of blankets, which the British had considered, was then impossible.²⁰

Nevertheless, because of a delay in the arrival of blankets from the United States, the British agreed on 6 June to issue before the end of August 360,000 blankets in equal monthly installments. The Director of Clothing and Stores carefully explained that the issue was being made "at the direct expense of issues to British troops," for whose use about 1,000,000 blankets were needed immediately. Because of the critical shortage, additional blankets must be gotten from the United States for the use of both countries. In addition to the 1,500,000 blankets that the United States International Aid Division had agreed to supply, the British had submitted a request for another 1,500,000, raising their 1944 demands to 3,000,000.²¹

Uniforms

Before the creation of the European Theater Colonel Middleswart had opened negotiations with the British for the procurement of enlisted men's uniforms by asking the War Office to investigate the possibility of manufacturing in the United Kingdom from locally produced material 100,000 overcoats, 200,000 service coats, 300,000 pairs of trousers, 50,000 mackinaws, and 400,000 shirts. The Director of Clothing and Stores replied that the production of clothing was insufficient to meet the requirements of the British Army and that an effort was then being made to procure clothing in the United States for shipment direct to the Middle East. The extent to which the requirements of United States forces in the United Kingdom could be met was dependent upon the quantities that the United States could supply British forces in the Middle East. In any case, unless the United States would accept materials already in production, it would be 6 to 9 months before the garments could be supplied. Although the British designs could not be accepted in their entirety, Colonel Middleswart thought that specifications might be modified.²²

When the procurement of coats and trousers again came up for discussion at a meet-

ing held on 4 July 1942, the British agreed to furnish samples of their cloth.²³ On 22 July 1942 the British accepted a trial order of 5,000 enlisted men's uniforms, consisting of overcoats, trousers, and shirts. The uniforms were to be manufactured of British cloth according to American design. It was hoped that delivery could be made within 2 months.²⁴ By mid-August arrangements were made to manufacture 5,000 field jackets patterned after the British battle dress. These were to be used in tests. (See ch. 5.)

Tables of Basic Allowances 21, dated 20 June 1942, authorized one mackinaw for each mechanic in the Army and for all enlisted men in Alaska. This coat was not issued to enlisted men who had been issued winter combat jackets.²⁵ Because of the climate in the European Theater of Operations, the Chief Quartermaster thought that mackinaws should be more widely distributed. On 15 August the Chief of the Procurement Division said that 313,000 mackinaws were needed.²⁶ By February 1943 a sample mackinaw lined with battle-dress serge had been approved and the British had agreed to furnish 150,000 mackinaws.²⁷ Of the 10,000 mackinaws urgently needed, the British agreed to deliver 6,000 in March and 4,000 by 10 April. The remaining 140,000 would be delivered at the earliest possible date.²⁸

The Chief of the Procurement Division was pleased with the mackinaw, which was made of excellent Egyptian cotton twill instead of United States domestic cotton duck.²⁹ By June 1944, 328,802 mackinaws had been delivered, a quantity surpassing the original estimate of needs.³⁰

Knit Goods

The last of November the Procurement Division estimated that the requirements of socks for 1943 would be 12,000,000 pairs. Arrangements had been made in August 1942 to obtain 4,000,000 pairs from the British. On hand or being received from other sources were 1,800,000 pairs. A demand was being placed on the British for an additional 200,000 to be delivered before 30 June 1943. Thus, provisions had been made for the 6,000,000 pairs needed during the first 6 months of 1943. The Chief of the Procurement Division explained that the estimate of 6,000,000 pairs for the second 6 months was for planning purposes only and was subject to such changes as might be directed by fluctuations in troop strength or by responsibility for the supply of certain task forces.³¹

The Director of Clothing and Stores accepted the order for 4,200,000 pairs of socks for delivery by 30 June 1943. By 14 December 1942 the order had been filled to the amount of about 2,000,000 pairs. The requirement for 6,000,000 pairs for July through December 1943, which had been estimated for planning purposes only, was being investigated by the British.³²

However, on 6 January 1943 the quantity required for the second half of 1943 was reduced to 3,000,000. The Chief of the Supply Division made it clear to the War Department that the British could not meet the demand unless an equal quantity was supplied from the United States to meet deficiencies in the Pacific. Having been informed that the International Division, OQMG, and the International Supply Committee, SOS, had agreed on 26 October to furnish the British 10,000,000 pairs of socks, he asked that 3,000,000 pairs out of this number be guaranteed for shipment to the United Kingdom.³³

On 8 March 1943 the British notified the Procurement Division that 500,000 pairs of socks were ready for delivery and asked for consignment instructions.³⁴ Before the end of the month, out of the original demand for 4,000,000 pairs of socks 2,888,620 pairs had been delivered. The Director of Clothing and Stores gave the assurance that the remaining 1,111,380 pairs would be delivered in March.³⁵

During the latter part of May 1943 news came of a "windfall" production, which would make available 2,500,000 pairs of socks, 350,000 knit woolen caps, and small quantities of underwear. Colonel Wayne Allen said these additional quantities would enable 1943 requirements to be met. In all, 7,640,000 pairs of worsted socks, 800,000 pairs of knit gloves, and 1,700,000 suits of underwear had been offered to the Americans.³⁶

The "windfall" was of short duration, for on 6 November the British rejected a request for 2,000,000 pairs of drawers, 1,350,000 undershirts, 675,000 knit caps, and 8,025,000 pairs of socks because production capacity had decreased.³⁷ A week later the General Purchasing Agent wrote the Chief Quartermaster that at a meeting of the United States Requirements and Supply Committee, which he said was really not "a committee but a one-man operation under a British Brigadier," the American requirements had been definitely rejected.

Because requisitions had not been sent to PEMBARK and the United States Army had relied upon procuring these items in the

United Kingdom, Colonel Allen suggested that this "rather late-date rejection" should be examined on an international basis. He pointed out that garments already had been shipped to the British Eastern theaters on an exchange basis.³⁸ Though a strong appeal was made to the BOLERO committee, the General Purchasing Agent reported, "We got nowhere. The rejection stands." The British argued that a decrease in the supply of yarn from 60,000,000 pounds to 53,000,000 pounds and a shrinkage of labor made acceptance of the demand impossible.³⁹

When The Quartermaster General heard of the rejection, he cabled saying, "Undershirts, drawers, and socks are urgently needed in order of priority. If the British will not supply such items to our forces, we shall have to limit the amount of woolen items to the British against their requests on us during 1944."⁴⁰ The British Ministry of Production explained to the Chief Quartermaster that the shortage was due to the War Cabinet's distribution of manpower; less manpower had been apportioned to knit-goods industries and more to services and munitions. He reminded the Chief Quartermaster that the Americans had benefited by the windfall production in 1943 and that by the end of the year had received more than 7,000,000 pairs of socks. This, he said, was the best that could be done.⁴¹ By 8 January, to meet 1944 requirements of woolen items, the British had furnished definite commitments for only 470,000 suits of underwear and 600,000 mufflers.⁴² However, a few days later the commitment for underwear was increased to 500,000 pairs.⁴³

In the early summer of 1943 the Chief of the Procurement Division had been of the opinion that the British all-wool socks, which were heavier than the American part-wool and part-cotton socks, were well suited to the wet climate of the United Kingdom.⁴⁴ As the weather grew warmer, however, the United States forces began to complain that the British socks, though heavy, were not durable and that their knit construction caused perspiration and consequently blisters and other foot troubles.⁴⁵ The Chief of the Clothing Branch, claiming that the British socks were satisfactory only for strenuous field training, suggested that a thorough field test be made.⁴⁶

After prolonged analysis, it was finally recommended in May 1944 that British socks be issued only when requested by units. Individuals who had received the socks, however, should be required to use them rather than

replace them before they were worn out. It was suggested that they be issued in the future to prisoners of war and civilians of occupied countries.⁴⁷ The Procurement Division replied that items of this quality were too valuable to be turned over to prisoners of war and civilians.⁴⁸ In addition, because the British might resent the socks' not being issued to troops, it would be well to hold them until cold weather.⁴⁹

On the whole, the knit-goods program was successful. It conserved shipping space and provided items greatly needed in the Theater. From its beginning to June 1944, the British delivered a total of 8,604,180 pairs of socks and 2,242,151 suits of underwear.⁵⁰

Shoes

When Colonel Middleswart met with British representatives on 9 June 1942 to discuss requirements of United States troops in the United Kingdom, the first steps were taken toward the procurement of shoes. At the outset the British made it clear that American shoes could not be produced without replacement of leather from the United States. The differences in the type of shoes used by the British and the Americans caused the conferees to postpone consideration of shoe production in the United Kingdom for United States forces until the question could be fully studied.⁵¹ On 4 August the British agreed to manufacture for the United States more than 400,000 British-type service shoes if the United States would furnish part of the leather. The offer was rejected on the ground that the United States had already supplied 2,000,000 pairs of shoes to the British Eastern theaters.⁵² Officers' footwear was procured, however, in considerable quantity (see vol. V). It was decided that the British be asked to provide no enlisted men's shoes except in non-tariff sizes.⁵³

Canvas and Webbing

The British supplied many other items too diversified for detailed treatment in this study. Web equipment, for example, having become critical in late 1943, was supplemented by procurement in the United Kingdom. During the calendar year of 1942 the Jeffersonville Quartermaster Depot purchased enough webbing to make a web waist belt that would stretch from the earth to the moon and back again surrounding both planets like a pulley belt.⁵⁴ The earth is 24,860 miles in circumference, the moon 6,687 miles; and the round trip from the earth to

the moon would cover 477,720 miles. Therefore, more than 868,500,000 yards of material would be required for the giant belt that the Jeffersonville depot might have made in 1942.

It had been found that enough factories in the United States were not equipped to produce the hardy fabric. So the Quartermaster Corps called in manufacturers not only of webbing but of other materials only remotely akin, such as field bags, belts, asbestos brake linings, haversacks, carrying straps, and even velvet. New equipment was set up; people were trained to use it; and webbing rolled off the looms. At length, after it seemed that enough webbing had been made, the plants were reconverted, and only a limited amount of webbing could be manufactured in the United States.⁵⁵ Because consumption exceeded expectations, the miscellaneous items of web clothing and equipment procured in the United Kingdom were important to the supply program.

In the spring of 1943, when the Theater was studying the barrack bag (see ch. 1), OCQM developed a new type of barrack bag. Before the end of 1943 demands had been placed upon the British for 60,000 of these bags.⁵⁶ In the fall, however, OQMG announced that the duffel bag had been approved and that troops would be issued only one barrack bag—this to be used as a laundry bag (see ch. 1). Consequently, the Procurement Division canceled the order for barrack bags in favor of 295,000 duffel bags.⁵⁷

A report from the British War Office on canvas and webbing delivered before 31 August 1944 appears as appendix XII.

Effectiveness of Program

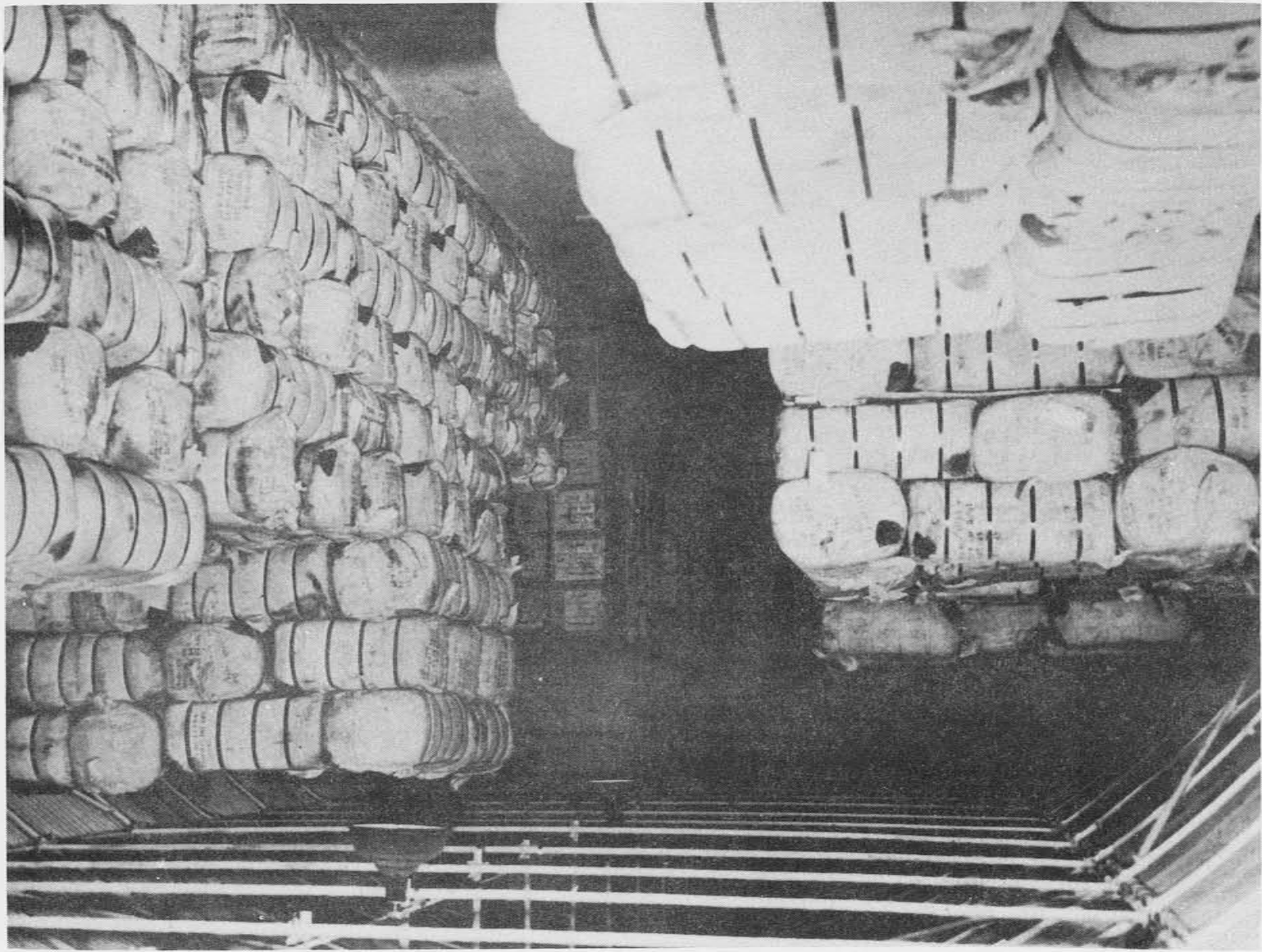
The British provided many items of clothing and individual equipment in addition to those procured on a large scale. Viewed in relation to the difficulties involved, the program was creditably carried out. By the time United States troops reached the United Kingdom in large numbers, Great Britain had already endured 2½ years of blitz warfare, which had taxed productive ability, destroyed many industrial plants, and depleted manpower. American and British manners and customs, patterns and procedures, and temperaments differed widely.

Nevertheless, procurement in the United Kingdom before D-day did contribute to economy of shipping space, fighting efficiency, and comfort. Though final figures covering the total procurement of clothing and individual equipment are not presently available,



Figure 9.—Temporary Issue Counter in a United Kingdom Depot.

Figure 10.—Blankets Ready for Shipment to the Continent.



the Procurement Division reported in June 1944 that cumulative deliveries up to that time were as follows:

Blankets, wool, od	640,000
Blouses, battle-dress	281,077
Caps, garrison	49,220
Coats, mackinaw	328,802
Coats, service	46,270
Drawers, wool, long	1,333,090
Drawers, wool, short	953,100
Greatcoats	19,240
Gloves, wool, od (leather palm)	871,690
Hose tops	—
Jerseys, pull-over	25,000
Mufflers, wool	1,200,000
Shirts, flannel, od (coat style)	61,195
Socks, wool, heavy, and wool, light	8,604,180
Trousers, battle-dress	417,785
Undershirts, winter, long sleeve, 75 percent cotton, 25 percent wool, and	
Undershirts, wool, 50 percent cotton, 50 percent wool	2,242,151
Undershirts, wool, short sleeve	— 58

AFTER D-DAY

Only a small part of the supplies procured after D-day lies within the scope of this volume. The procurement of food, gasoline and lubricants, general supplies, and clothing and individual equipment for officers and other persons authorized to purchase at quartermaster sales stores and for Allied civilian and military personnel belongs to other volumes of this series. Volume I, chapter 3, takes up the general procedures governing procurement on the Continent as well as specific procedures governing procurement in liberated and neutral countries and in Germany. This chapter deals only with the procurement of clothing and individual equipment for the enlisted personnel of the United States forces in Europe.

The Clothing Program

Procurement of clothing on the Continent was made difficult by the shortage of labor, cloth, coal, and raw materials and the poor condition of machinery and industrial plants. In the United Kingdom the Chief Quartermaster dealt with the British War Office, the Ministry of Food, and the Ministry of Supply. These organizations had set up efficient procurement and inspection agencies; whereas economic and political disorder existed on the Continent.⁵⁹

The attempt to produce field uniforms on the Continent was one of the most ambitious programs of the war. It was a manufacturing program dependent upon the shipment of

materials from the United States. To put the program into effect, OCQM would be turned into the hub of a rehabilitated Continental textile industry. The Chief Quartermaster estimated that 3,000 long tons of woolen cloth, findings, and raw materials could be converted into clothing with a monetary value of more than \$45,000,000.⁶⁰

Although the program was developed primarily to manufacture uniforms for officers, it was expanded to include clothing for the Women's Army Corps, the Army Nurse Corps, American Red Cross personnel, British civilians employed by the United States forces, United States civilian technicians, repatriated Allied military personnel, civilians employed by the United States forces in occupied countries, and prisoners of war. It contained also provisions for manufacturing special measurement clothing for enlisted men.

The ETO Uniform

The woolen cloth program was born of the Chief Quartermaster's desire to provide the United States forces in Europe a serviceable and good-looking uniform. It actually had its beginning in July 1942 when the development of the ETO jacket was begun (see ch. 5). The jacket finally accepted by the War Department and the European Theater was made of a material known as cloth, wool-serge, 18-ounce, olive drab, shade 33.

The Office of the Chief Quartermaster had developed, along with the ETO jacket, new-style field trousers, which were manufactured by the British from 20- or 22-ounce wool-serge cloth. They had a higher rise and fuller seat and thigh than the standard trousers then being issued to the American soldier.⁶¹ In July 1943 the Chief Quartermaster sent samples to The Quartermaster General and recommended that the new trousers be standardized.⁶² Meanwhile, the Office of The Quartermaster General had been conducting a study of enlisted men's trousers and had two types in the developmental stage: woolen trousers, made of 18-ounce serge, and woolen field trousers, made of 22-ounce serge. Because the pattern for the woolen trousers proved unsatisfactory, The Quartermaster General directed that it be changed to incorporate the higher rise and fuller seat provided in the field trousers.⁶³

When the design was approved, Major General Littlejohn asked when the trousers would be made available for the European Theater.⁶⁴ The War Department reported

that deliveries would not be made before the spring of 1945, because stocks of old-type trousers would have to be used before production of new-type trousers could be begun.⁶⁵ It announced in May, however, that contracts were being let and that deliveries were scheduled to begin in July 1944. The trousers would be made of 18-ounce wool serge of the same shade as that of the ETO jacket.⁶⁶ Consequently, OCQM ordered from the United States 100,000 ETO uniforms—woolen field jackets and matching trousers. These would be sold to officers.⁶⁷

Production in Eire

Between July 1942 and July 1944 supplies of many kinds had been procured in the United Kingdom. After July 1944, however, the acute shortage of British manpower practically closed the door to procurement of clothing and textiles.⁶⁸ Although the British War Office had agreed to manufacture approximately 500,000 woolen field trousers, the Procurement Division doubted that any deliveries could be expected before December 1944.⁶⁹ Ample production capacity in Eire, however, could be exploited if the United States would provide cloth, findings, and paper patterns. The Chief Quartermaster decided to use the production he could get in Eire for the manufacture of women's uniforms and requisitioned 50,000 yards of wool-serge cloth from the United States.⁷⁰ When the patterns arrived in August, the Procurement Division said that it was ready to go into production as soon as the cloth was received. Of the 50,000 yards, 9,000 would be manufactured into officers' special-measurement jackets and trousers and 40,000 into women's uniforms. The rest would be used for special-measurement clothing for enlisted men.⁷¹

Early Cloth Requirements

In the meantime, the Procurement Division, ADSEC, reported that the possibility of producing uniforms on the Continent appeared to be fairly good. It estimated that approximately 200,000 pairs of trousers, 150,000 field jackets, and between 300,000 and 400,000 garrison caps could be produced monthly.⁷² Consequently, a request for 467,250 yards of cloth was sent to the War Department in August.⁷³ The Office of The Quartermaster General reported that it was doing all it could to meet the demands of the European Theater in view of the limited supply of wool-serge cloth and the production difficulties in the United States.⁷⁴

Attitude in the United States

Many Americans who had given their best efforts during 1942 and 1943 to all-out production of essential war materials suddenly became convinced in the summer of 1944 that the war was just about over.⁷⁵ Unfortunately, the same type of thinking was prevalent in the War Department. The Army Service Forces had directed that contracts be canceled if more than a 60-day supply of the items was on hand. The Office of The Quartermaster General had protested but to no avail.⁷⁶ Consequently, a sizable portion of industry returned to the manufacture of goods for civilians. The War Department refused to let additional contracts for matching trousers and revised the production schedule that called for 3,800,000 woolen field jackets by the end of the year.⁷⁷

Continental Production Survey

The development of a manufacturing program on the Continent seemed to provide the only solution. A survey that was begun shortly after the fall of Paris and completed after the liberation of Belgium gave the first picture of productive capacity on the Continent. A considerable quantity of jackets and trousers could be made in France. It was estimated that 100,000 of each could be produced monthly in the Paris area, 150,000 in the northern provinces, and 90,000 in Lyon. The normal peacetime capacity for the manufacture of women's jackets, skirts, and trousers had been about 10,000,000 garments a year. France had never produced, however, a large number of mannish-type tailored suits. The survey revealed that in a 3-month period 15,000 jackets, 15,000 trousers, and 40,000 skirts could be manufactured. There were also adequate facilities for manufacturing 150,000 garrison caps a month.

French contractors could also manufacture approximately 20,000 embroidered insignia each month. Enough gold and silver thread to meet the manufacturing requirements was available. Both the capacity and the raw materials were adequate for the manufacture of 15,000,000 shoulder patches per year. The estimates were based upon the availability of transportation and labor. Many men workers had been expatriated, and many women workers had been diverted to other trades. In addition, unrest prevailed among workers, and machinery was in a bad state of repair.

The situation in Belgium was somewhat better. Before the war Belgium had had a

large clothing industry. Liberation, however, was of too recent date for the authorities to provide definite information as to productive capacity. Many factory owners had been put in jail for collaboration with the Germans, and government officials had not yet been appointed to take over the management. Belgium had a potential capacity to produce 100,000 battle-dress uniforms a month. Its factories were of two types: those that made the garment from the cutting stage to the finished product and those that cut the garments and sent them out to be finished. While the former factory was the more desirable, the latter could be used if adequate supervision of workers was provided.

The center of the Belgian woolen industry was in Binche, about 37 miles from Brussels. Here the combined output of 40 plants could be about 20,000 outfits a week, with a possible increase in production if an extra shift was used. Ghent was the best source for the manufacture of shirts and caps. The Belgian Government thought that 50,000 suits of cotton work clothing could be produced monthly and that 30,000 leather jerkins could be produced by 15 January 1945.

In Belgium, as in France, obstacles were encountered. The monthly prewar coal production had been about 2,000,000 long tons. The production immediately after liberation was about 700,000 long tons. The country needed 845,000 long tons for its own civilian and military requirements and, therefore, could not allocate coal to meet the manufacturing requirements of the United States Army. The labor situation was considerably better than that of France. Yet machinery was badly in need of repair. After the acceptance of demands, 2 weeks to 1 month would be required for the making of the necessary conversions.⁷⁸

Program Formulated

While the survey was taking place, the Chief Quartermaster learned of the War Department's inability to meet the scheduled production of uniforms and was certain that enough jackets and trousers would not be available to meet winter requirements. Both he and the General Purchasing Agent believed that, if the cloth was supplied by the United States, a substantial portion of the requirements could be produced on the Continent. The Quartermaster General was asked to send a list of items that he felt would be difficult to produce in the United States. Perhaps they could be produced in

Europe.⁷⁹ When the survey was completed, the Chief Quartermaster was convinced that he could manufacture in France and Belgium enough ETO uniforms to reduce his requisitions on the United States. Troops in the European Theater were demanding the ETO jacket and matching trousers. Every officer and enlisted man would unquestionably want a new uniform after VE-day. Because of production difficulties in the United States, supply of the items before 1945 seemed unlikely. A portion of the load could be transferred to the Continent. Yet there was one serious drawback: Prices in France were very much inflated. Although the program would be a boon to France, the Chief Quartermaster intended to place contracts only when it was impossible to get supplies from the United States. If, however, the War Department desired to go into full production on the Continent, a program could be easily developed. Major General Littlejohn asked that he be given a statement of basic policy, definite information about the ability of the United States to supply cloth and raw materials, and availability of technicians to help carry out the program.⁸⁰ The Quartermaster General strongly opposed the over-all production program and wrote as follows:

I recommend strongly against an overall production schedule in France. It is definitely believed that any manufacturing in France should be limited only to emergency production.

My office will do everything possible to insure that your troops receive the best possible combination of clothing so that they are equipped against the weather to be encountered, but at this late date I cannot assure that they will be clothed in matched items for promenades on the streets of Paris.⁸¹

Cloth Requirement

In October, therefore, the Chief Quartermaster wrote that the inability of the United States to produce ETO uniforms constituted an emergency that he intended to meet from production in Europe.⁸² On 4 October OCQM placed a demand on Eire for the manufacture of 10,000 pairs of trousers during October and November. For this order 14,000 yards of cloth would be needed, and for production on the Continent, 4,540,250 yards. The cloth would be used to manufacture the following garments:

Garment	Quantity	Yardage per Garment	Yardage Required
<i>Officers</i>			
Jackets, field, wool	500,000	2.0	1,000,000
Trousers, field, wool, od, shade 33	650,000	1.50	975,000
	<u>1,150,000</u>		<u>1,975,000</u>
<i>Enlisted Men</i>			
Caps, garrison, od, shade 33	50,000	.25	12,500
Coats, wool, serge (special measurement)	15,000	2.50	37,500
Jackets, field, wool (special measurement)	50,000	2.0	100,000
Jackets, field, wool	750,000	1.75	1,312,500
Trousers, wool, od, shade 33 (special measurement)	25,000	1.75	43,750
Trousers, wool, od, shade 33	850,000	1.40	1,190,000
	<u>1,240,000</u>		<u>2,696,250</u>
Total yardage required			4,671,250
Total yardage on hand in ETO			<u>131,000</u>
Total yardage requisitioned			<u>4,540,250</u> ^{ea}

The woolen cloth was requested in five requisitions. The last one, asking for 3,000,000 yards, was prepared on 2 October 1944. By the end of October 55,000 yards had been delivered, 467,250 yards were en route, and 500,000 yards had been approved for delivery by the end of the year.⁵⁴ The Director of Materiel, ASF, reported that the cloth would be delivered in monthly installments of 500,000 yards, which would begin in February 1945.⁵⁵ In December, however, the War Department stated that because of the limited production of cloth in the United States, the European Theater would not receive the 3,508,000 yards promised during 1945. The 1,525,250 yards already approved or delivered was all that could be spared.⁵⁶

The National Agreement

Meanwhile, conferences between representatives of the Procurement Division and the French Government had resulted on 19 November 1944 in an agreement that paved the way for the manufacture of military clothing. French contractors would deliver within 6 months 2,500,000 sets of military garments, consisting of trousers, shirts, and caps, and 100,000 sets of women's garments, consisting of trousers, skirts, jackets, and caps. The Quartermaster Service would provide samples, specifications, schedules, tariff sizes, and patterns and would also supply cloth for samples, which the French would

make up according to their best productive ability and submit for approval. Cloth and findings for the manufacture of the sets would be deposited at depots specified by the French Government. The Director of Textiles and Leather would deliver materials and findings from depots to factories and would see that finished garments were delivered from factories to depots. Since the Quartermaster Service would do no business directly with manufacturers, accountability rested with the French Government, which would be responsible for storage, distribution, and all safeguards against theft, fire, and other hazards. The French Government would provide inspectors, but the finished product would be subject to the approval of the United States Army. The Quartermaster Service reserved the right to withdraw orders from one manufacturer and place them with another if the quality of the finished product should fall below specifications. The Quartermaster Service would provide urgent transportation until French transportation should have become adequate. Prices would be fixed by the French Government in consultation with the Quartermaster Service. Garments that did not meet specifications would be delivered at a reduction.⁵⁷ A copy of the national agreement appears as appendix XIII.

Representatives of the Quartermaster Service, the General Purchasing Board, and the British Ministry of Supply, meeting in conference on Sunday, 22 November 1944, were informed of the agreement. Unanimous confirmation gave the green light to the production program.⁵⁸

Before the consummation of the agreement, the Clothing Branch of the Supply Division had submitted the following quantities of items that it seemed desirable to have produced by the French during 1945:

Item	Unit	Quantity
Apron, baker's butcher's and cook's with bib	ea	25,000
Buckram	yd	5,000
Cap, baker's and cook's white	ea	20,000
Cap, garrison, wool, od	ea	975,000
Coat, baker's and cook's white	ea	15,000
Drawers, cotton, short	pr	500,000
Gloves, cotton, medical	pr	200,000
Gloves, leather, heavy or substitute	pr	500,000
Gloves, riding, lined	pr	350,000
Gloves, riding, unlined	pr	350,000
Handkerchief, od or white	ea	5,000,000
Insignia, sleeve, chevron, cotton	pr	1,000,000
Insignia, sleeve, chevron, wool	pr	1,000,000
Jacket, wool	ea	1,050,000
Ribbon mounts, assorted lengths	yd	100,000
Ribbons, assorted	ea	300,000
Service bar	ea	10,000,000
Shirt, cotton, EM	ea	100,000
Shoulder patch	ea	10,000,000



Figure 11.—Clothing Stored in a United Kingdom Depot.

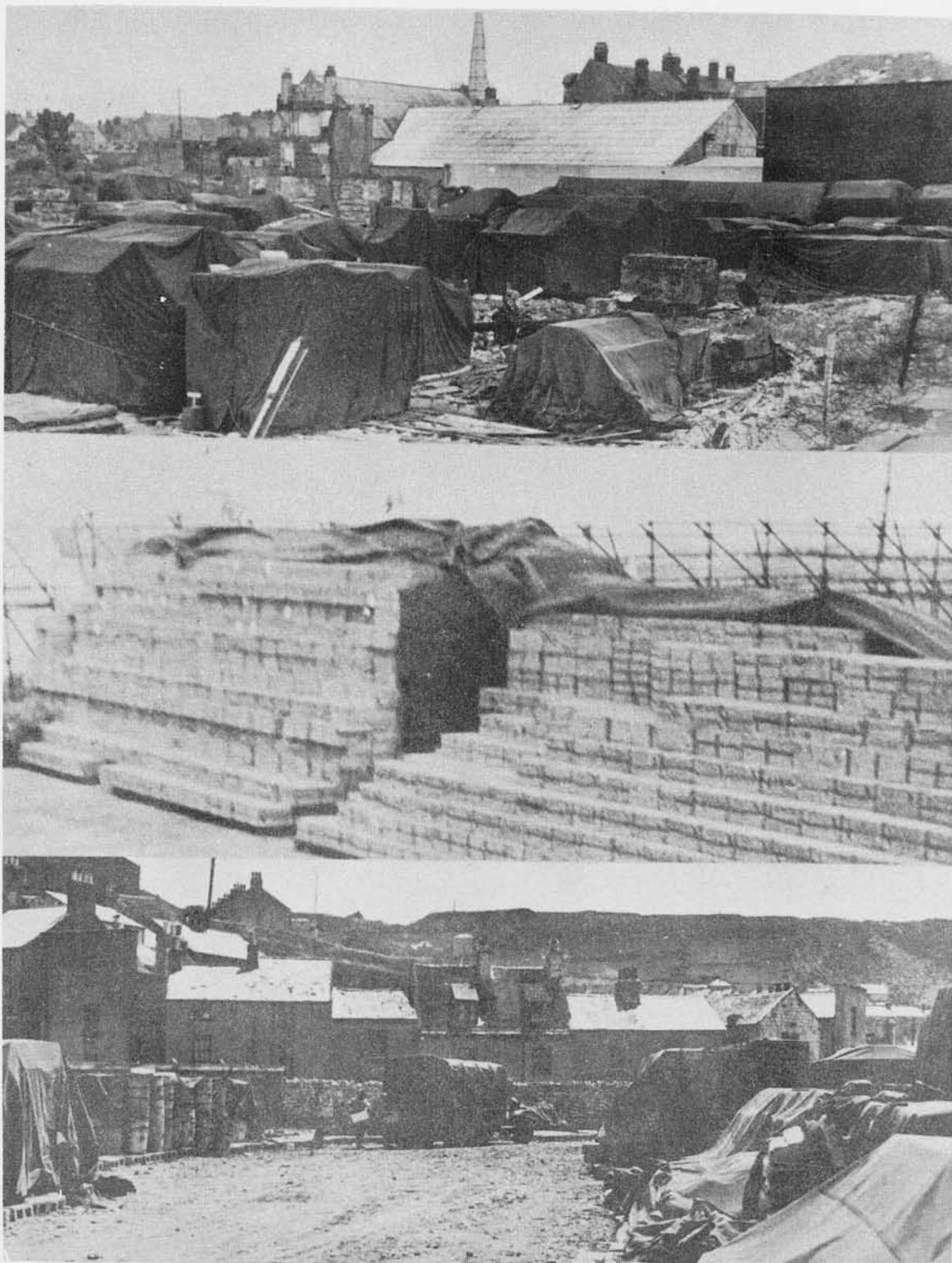


Figure 12.—Clothing Stored in a Sea Dump along the Channel Coast.

Towel	ea	2,000,000
Trousers, baker's and cook's	pr	15,000
Trousers, cotton	pr	100,000
Trousers, wool, od	pr	1,475,000
Undershirt, cotton	ea	500,000 ^{aa}

Snow Capes

In November, when the northern group of armies had captured Antwerp and the Twenty-first Army Group was pressing eastward over snow-covered ground,⁹⁰ the need for snow capes was urgent. On 29 November the Office of the Chief Engineer requested OCQM to procure 50,000 square yards of white material for their manufacture.⁹¹ The request was approved on 8 December.⁹² The Office of the Chief Engineer submitted a sample and asked that 2,000 capes be made available at once and shipped to the engineer of the Ninth United States Army and that 8,000 other capes be made available by 31 December. A factory in France with 25 sewing machines had agreed to rush production. When new cloth was not found, the Chief Engineer asked that airplane-type cloth be diverted into the manufacture of the capes.⁹³ Work on the first 2,000 capes was begun on 18 December, with a promise of delivery in 10 days. Cloth that had been procured for lining pockets of trousers was used for the making of the capes. Because no more cloth of suitable quality could be found, a demand for 60,000 yards was filed on the British.⁹⁴

Difficulties in the United States

On 4 December 1944 Major General Littlejohn submitted to Major General A. L. Browning, Director of Materiel, ASF, his proposed program for procurement on the Continent, with the request that it be discussed with Lieutenant General Somervell, Major General LeRoy Lutes, Director of Plans and Operations, ASF, Major General Lucius DuBois Clay, Director of the Requirements Division, ASF, and Major General Edmund B. Gregory, The Quartermaster General.

Though procurement on the Continent was much more difficult than it had been in the United Kingdom, no items could be eliminated from the program that he was then presenting. Among the specific requests were 15,000 long tons of cloth and findings, 3,000 long tons of rayon or mercerized cotton yarn, 150 long tons of felt, 15 long tons of cotton backing, and 10,000 long tons of raw wool.⁹⁵ The War Department still could not supply all the cloth that was requested. Difficulties in the United States were caused by the lack of

cloth and not by the lack of facilities to produce garments. Contractors could be found, but no material.⁹⁶ There was barely enough cloth available in the United States to keep up the production of jackets and trousers. In order to alleviate this condition, The Quartermaster General had taken steps through the War Production Board to freeze the output of the worsted industry—an action unprecedented during the war. However, it would take about 60 days to retool industry for military production. No improvement, therefore, could be hoped for before March. Even then it was likely that the full cloth reserve in the United States would go into production and that very little would be left for shipment to the European Theater.⁹⁷

Major General Littlejohn could not understand the scarcity of cloth. He reminded The Quartermaster General that, as Chief of the Clothing and Equipage Branch, OQMG, before the war, he had accumulated a \$100,000,000 cloth reserve and asked why some of this reserve could not be used. The Quartermaster General replied that all the cloth had been used.⁹⁸ He had been forced to dip into it when the Army Service Forces canceled all so-called "excess" contracts.⁹⁹ The New York port wrote in late December that The Quartermaster General was "scraping the bottom of the barrel" and that "the \$100,000,000 allotment for reserve cloth that Littlejohn got in 1940 had been wiped out."¹⁰⁰

The Program for 1945

In spite of The Quartermaster General's insistence that approximately 1,500,000 yards of cloth had been shipped, the Chief Quartermaster continued to claim that very little had been received and made repeated demands for cloth and findings. On 18 December 1944 he submitted to OQMG his production program for 1945. As The Quartermaster General was aware, the Chief Quartermaster had exploited resources in the United Kingdom during the past 2 years, and he was now exploiting resources in Eire and the Iberian Peninsula. Production of goods on the Continent presented many difficulties because of the non-existence of raw materials and the many shortages. Nevertheless, Major General Littlejohn expressed the opinion that a large manufacturing program should be begun on the Continent to help meet the military needs in Europe, to offset production deficiencies in the United States, and to bring about a saving in ship tonnage across the Atlantic. Until he could establish a 90-day stock level on the Continent and until he could be assured of an

uninterrupted flow of supplies from local production, he would not be able to cancel requisitions that had been made on the United States.

The program called for 8,930,000 yards of dark-shade wool-serge cloth, of which 4,080,000 yards would be used for enlisted men's uniforms. The production of enlisted men's uniforms, however, was left to the discretion of The Quartermaster General, but 4,850,000 yards of cloth would be needed for officers' clothing. The shipments for officers' clothing were to be scheduled as follows: 2,100,000 yards immediately and 250,000 yards monthly from February through December 1945.

The Chief Quartermaster was working on the conviction that his clothing program required the use of all available productive capacity on the Continent. To this end he would need also approximately 30,000 long tons of assorted wool, cotton, leather, and other raw materials, as well as findings. According to the latest information received on the Continent, the supply of knit goods in the United States would continue to be limited. On the Continent there were enough factories to produce knit goods if raw material was supplied.

As far as footwear was concerned, it was doubtful that factories on the Continent could produce large quantities of shoes that would be acceptable to American troops, but special-measurement and orthopedic shoes could be made in sufficient quantities to meet the demands of the Theater. Major General Littlejohn included an itemized statement of his 1945 requirements (see app. XIV).¹⁰¹ He urged that the cloth be delivered according to schedule because the British had also made arrangements to produce clothing in France. Unless he could guarantee cloth from the United States, part of the available production would be lost. Furthermore, the French Government was also taking a part of the production for its rearmament program.¹⁰²

The Office of The Quartermaster General sent to the Army Service Forces on 5 January 1945 a detailed analysis of Major General Littlejohn's proposed program. Surprise was expressed that the request for large quantities of cloth had been submitted without any reduction in requisitions for finished products. The Chief Quartermaster's explanation that he needed to provide nurses and Wacs with complete new uniforms of 18-ounce serge and that he needed uniforms for resale to officers was not considered sufficient justification for the large order of cloth. The

nurses and Wacs would be receiving duplicates of what they had already, and it was difficult to understand why officers should require new uniforms every 2 months.

Admittedly the wool situation in the United States had been made critical because of limited spinning and weaving capacity. It was also true that large quantities of raw wool could be shipped to the European Theater if transportation could be allocated. The question was raised, however, as to the ability of Continental industry to weave the material, since cloth had to be produced for the civilian population. Though the possibility of manufacturing items in the European Theater should be explored, OQMG thought that no definite action should be taken without considering the over-all picture. It was also of the opinion that the quality of items manufactured in the Theater would be inferior to that of items manufactured in the United States. If raw materials had to be sent across the Atlantic, ship tonnage would not be appreciably saved. Nor could there be a saving in time. European manufacturers had had little experience with volume production. In addition, the parts needed for repairing machinery would have to be ordered from the United States—a situation that would result in inevitable delay.

The analysis ended with the expression of OQMG's opinion that the European Theater had not anticipated its requirements far enough in advance and had not made adequate plans. At this time it would be difficult to work out a satisfactory shipping schedule for raw materials. The taking of raw materials out of America, where they could be manufactured more rapidly than in Europe, was deemed unwise.¹⁰³

The Quartermaster General acknowledged, however, the validity of the Chief Quartermaster's complaint that cloth had not been received. Although 1,525,250 yards had been delivered to the New York port in October and November, all had not been shipped until late December. He agreed to ship 250,000 yards each month from February through December 1945. This, in addition to the 1,525,250 yards that the Chief Quartermaster had been promised in 1944, was all that could be sent.¹⁰⁴

Several weeks later Lieutenant General Somervell, who was touring the European Theater, discussed the production problem with the Chief Quartermaster. Major General Littlejohn said that the proposed delivery of cloth was satisfactory. He felt certain

that enough jackets and trousers could be produced to meet his immediate demands, but he feared that the ultimate requirements would not be met. He was being called upon daily to supply clothing to an increasing number of people: repatriated Allied military personnel, British women employed in Theater and Communications Zone headquarters, Italian service companies, prisoners of war, nurses, Wacs, Allied military personnel assigned to SHAEF, civilians employed by the Army in occupied territories, American Red Cross personnel, Allied Expeditionary Force club workers, members of the Office of Strategic Services, and people employed by the United Nations Relief and Rehabilitation Administration. After VE-day clothing would be needed for veterans accepting civilian employment with the Army, American Military Government personnel, and the entire occupational force. Because the cloth could not be supplied by the United States, the Chief Quartermaster had decided to have it manufactured on the Continent. Dr. W. Y. Elliott of the War Production Board had convinced him that his requirements could be met only by a production program on the Continent.¹⁰⁵

The day after his conference with Lieutenant General Somervell, the Chief Quartermaster wrote The Quartermaster General as follows: "Your letter of 5 January does not answer the questions that I have raised concerning local procurement here on the Continent. What I want is a statement of broad policy of our Government. Next, I need a statement from you as to what you want me to buy in order to relieve the pressure on industry on those items that the Quartermaster Corps is involved in."

Specifically he asked that decisions be given on the following subjects: basic policy, source of raw materials, quantity of raw materials, dates of delivery, and availability of technicians.¹⁰⁶

The Quartermaster General replied in detail on 19 January. He said that he had discussed the ETO procurement program at length with Lieutenant Colonel T. V. Barber, Chief of the Procurement Division, OCQM, who was then in Washington, and that he believed Colonel Barber understood the factors involved. According to the policy that had been established by ASF, the following types of supplies might be procured in a theater of operations:

Any item in short supply in the Theater, if necessary raw materials were available locally

Any item in short supply in the Theater, irrespective of local availability of raw materials, if the Director of Materiel, ASF, had given assurance that raw materials could be made available

Any item or material, if the Director of Materiel, ASF, had requested procurement and had assured the Theater that essential raw materials could be supplied from either United States or United Kingdom stocks

Major General Gregory approved in general the policy of using every available facility to obtain the manufacture of supplies that were needed in the Theater. No more cotton or woolen cloth could be shipped to the Theater in addition to the 250,000 yards a month that had been promised. He believed it would be wise to use stitching facilities on the Continent for repair and renovation. He labeled as unnecessary the need to reequip troops after VE-day. "First, steps should be taken," he wrote, "to ensure that requirements submitted by the Theater are not padded to permit the type of re-equipping described by the Chief Quartermaster." Although some justification could be found for the varied categories of personnel to be clothed, The Quartermaster General believed that the European Theater requirements could be met at home.

Raw cotton and wool in the grease could be shipped, but no scoured wool. Because facilities for making socks, woolen gloves, and woolen underclothes were taxed in the United States, any socks that could be manufactured on the Continent would help the supply situation materially. Likewise, a shortage of leather in the United States indicated that an effort should be made to procure leather on the Continent.¹⁰⁷

After further detailed discussions with the Chief Quartermaster, Lieutenant General Somervell wrote from Europe that no special concern should be given to a reequipment program after VE-day but that the technicians Major General Littlejohn requested for his production program should be made available as soon as possible.¹⁰⁸

Wool-Knit Program

Negotiations with the British for the procurement of knit items continued after D-day. By October 4,700,000 British socks were stock piled in depots, and 1,300,000 pairs were due in. Heavy woolen socks had proved highly desirable in Italy, where combat conditions were comparable with those

in France. The Chief of the Procurement Division suggested that a reserve of four pairs per man be maintained for Continental operations and that others be returned to the British.¹⁰⁹ With the coming of winter, woolen socks were in very short supply and in great demand. The Procurement Division requested of the British from 600,000 to 800,000 pairs in small sizes, even if they would have to be replaced within the next few months.¹¹⁰

In January 1945 the War Department authorized a large program for the production of knit garments in France upon the grounds that United States manufacturers were unable to meet the needs of the European Theater and that rehabilitation of French industry was important. Agreeing to supply raw material for the manufacture of wool-knit goods, the War Department asked for information bearing upon priorities and the grades of wool required.¹¹¹ Immediately the Office of the Chief Quartermaster and the Wool Control Section of the British Ministry of Supply undertook jointly a survey of facilities for the production of wool-knit items both in the United Kingdom and on the Continent.¹¹² On 4 February 1945 the Chief Quartermaster set forth a tentative program in a letter addressed to the General Purchasing Agent. For 2 years, he said, he had not been able to get from the United States enough wool-knit goods to meet his requirements. Already he had utilized local procurement in the United Kingdom. Now he intended to utilize local procurement on the Continent. It was necessary not only to import the raw materials but also to rehabilitate French industry. The items and quantities that he estimated as his needs were as follows:

Item	Unit	Quantity
Drawers, long	ea	7,000,000
Gloves, wool, od	ea	6,000,000
Muffler, wool, od	ea	2,000,000
Serge, wool, od, 22-ounce, shade 33	yd	8,000,000
Socks, wool	pr	20,000,000
Sweater, high-necked	ea	2,500,000
Undershirt, long-sleeved	ea	7,000,000

Before going further, he wanted assurance that production capacity would be available when the raw materials arrived from the United States. As preparation for the program he thought that a commission of French wool technicians and United States Army personnel should be organized to pass on samples produced by French manufacturers and to supply specifications.¹¹³

On 3 April the War Department approved production on the Continent of 15,000,000

shirts, 7,000,000 drawers, and 2,500,000 high-necked sweaters. Approval of additional items should be held in abeyance until the first demands had been met.¹¹⁴ The Belgian Government, when asked to produce 1,000,000 undershirts, 2,000,000 drawers, and 1,000,000 sweaters, replied that the program could be carried out if coal could be made available.¹¹⁵

For a number of reasons the wool-knit program progressed haltingly. On 26 April Brigadier General Wayne R. Allen, General Purchasing Agent, cabled Lieutenant General Somervell asking that no action be taken immediately upon the French request for wool. First, he said, the French Government should approve the United States Army's production program, provide for the manufacture of woolen items for its own rearmament program, and agree not to permit its domestic wool program to interfere with the European Theater program. The French were contending that they should be given an economic interest in the coal of the Saar basin. The United States Embassy in Paris had requested Edward R. Stettinius, Secretary of State, to make available to France a token shipment of coal in the immediate future.¹¹⁶ The War Department replied at once that materials would be withheld until the United States wool-production program should have been accepted.¹¹⁷ The Belgian Government was unable to accept the wool-knit program until assurance could be given that between July and December 1945, 11,700 long tons of coal could be made available.¹¹⁸ Though the program in its entirety was held in abeyance, conferences took place concerning the possibility of having specific items produced. On 4 May 1945 representatives of the Procurement Division and their civilian consultants met with the French Ministry of Industrial Production and a number of French textile manufacturers. The Procurement Division then submitted a request that 60,000 dozen woolen leather-palm gloves and 90,000 dozen woolen glove inserts be manufactured. The French agreed to supply a list of factories and to assist in having orders confirmed. It was necessary to deal with not only the plants that made the finished product but also those that spun the yarn.¹¹⁹

The British had previously agreed to furnish 12,000 bales of wool to be manufactured on the Continent. The General Purchasing Agent had assumed that the entire quantity would be of the best grade. When a committee from the Procurement Division visited

the British Wool Control Section on 5 May 1945, however, they found that half the wool earmarked to fill the requirements was of an inferior quality unsuitable for cushion-sole socks but reasonably satisfactory for sweaters. The British could not supply more than 6,000 bales of the quality desired and would be happy to cancel the entire contract. The committee recommended, therefore, that the wool for the Belgian program be requisitioned from the United States and that the procurement of British wool be postponed until the French Government should have reached a decision as to the acceptance of the United States wool-knit program.¹²⁰

Meanwhile, the possibility of manufacturing wool-knit goods in Spain was being explored. On 9 May 1945 the OCQM Iberian representative reported that adequate machinery and suitable dyes could not be found in Spain.¹²¹ In January 1944, OCQM had met with disappointment in its effort to use Spanish gloves, 54,000 pairs of which had been delivered to a depot in the United Kingdom. At first the Procurement Division had thought that about 25,000 of the gloves would be acceptable.¹²² When the gloves were inspected, however, they were found to be wholly unsatisfactory. In the first place, they were too small to fit a normal man's hand. Their linings were dirty and broken; some of the gloves were infested with live insects; and many were molded.¹²³ Therefore, the Chief of the Supply Division requested that the gloves be removed from the depot as soon as possible.¹²⁴

On 2 June ETOUSA cabled the War Department that the French Government had rejected the wool-knit program, giving the shortage of coal as its reason. The Belgian Government, however, had approved the necessary amount of coal and the production facilities for the manufacture of 5,000,000 pairs of socks, 2,000,000 pairs of drawers, 1,000,000 undershirts, 1,000,000 sweaters, and 1,000,000 pairs of gloves, contingent upon the arrival of raw wool by September.¹²⁵ Because Belgium did not have cotton-carding capacity sufficient to manufacture blended wool and cotton yarn without interfering with the United States cotton-duck program, the Procurement Division suggested that only all-wool items be manufactured in Belgium.¹²⁶

For delivery figures see appendix XV.

Mess Gear

The procurement of mess gear was begun on 16 October 1944, when an emergency

need arose to supply 750,000 each of knives, forks, spoons, tin plates, and tin cups for prisoners of war. Though the items had to be approved by the Surgeon General, they would not have to be of the best quality.¹²⁷ Procurement was initiated 3 days later.¹²⁸ On 31 October the Chief of the Procurement Division reported that arrangements had been made with the French and that deliveries would be as follows:

Knives—250,000 immediately and 500,000 in December

Forks and spoons—50,000 immediately, 300,000 between the middle of November and the end of January, and 400,000 as soon thereafter as possible

Plates and cups—750,000 between the middle of November and the end of January.¹²⁹

On 16 November the Deputy Chief Quartermaster asked that 400,000 meat cans and 500,000 canteen cups be procured to meet the immediate requirements of the armies. He had found that a factory in Paris had both labor and material necessary for the making of the items.¹³⁰ The next day a demand was placed on the French Government for 1,000,000 meat cans and 750,000 canteen cups.¹³¹ The Ninth Army quartermaster wrote on 25 November requesting procurement for immediate delivery of 60,000 meat cans, 160,000 canteen cups, 80,000 spoons, 80,000 knives, and 30,000 forks.¹³² The Chief of the Procurement Division replied that demands already placed with the French Government would take care of the needs of all armies and of all other troops on the Continent and that equitable distribution would be made.¹³³ The shortage of meat cans had become a serious problem. Though news had been received that seven ships were bringing the items, the total number expected was not enough to supply the deficiencies of a single army.¹³⁴

On 2 December the French General Committee of Industrial Production told the General Purchasing Agent that 15,000 dozen knives were ready to be picked up in Thiers. The knives would be delivered to a United States depot in Paris if a refund of the gasoline used for transporting them from Thiers could be guaranteed.¹³⁵ Within a few days the Director of Mechanical and Electrical Industry informed the General Purchasing Agent that the 15,000 dozen knives were being sent to Paris and that 50,000 forks and 50,000 spoons were available in the Paris area and 20,000 each at Etampes. Raw

material had been released for the manufacture of plates and cups, but the shortage of stainless steel was so acute that no delivery date could be set. Aluminum sheeting could be obtained for the manufacture of the type of mess kit that the French had supplied the United States Army during World War I. It would be possible, therefore, to deliver 100,000 of these kits by the end of February.¹³⁶

The situation grew increasingly distressing. It was said that troops were actually eating with their fingers from tin cans and that the shipment expected from the United States would be far from sufficient to meet the needs.¹³⁷ Because the French reported that about 3 months would be required to make the tools necessary for manufacturing the standard type of mess equipment, a demand was placed on the Belgian Government for 500,000 items, about 100,000 of which were to be standard. The Belgian Government replied that 10,000 items could be delivered by 15 January and that others could be produced at the rate of about 50,000 a week.¹³⁸ Of the 1,000,000 meat cans demanded of the French on 17 November, 100,000 would be of the 1918 model and 900,000 of the standard model. Because deliveries had not been made as late as 19 February, the Chief of the Procurement Division requested the Procurement Division of SOLOC to visit factories in Lyon and see what he could do to speed production.¹³⁹

Appendix XV shows the great disparity between the goods ordered in liberated countries and the goods delivered. This presents an interesting contrast to Major General Littlejohn's estimated requirements as set forth in appendix XIV.

Procedure

After the formulation of the procurement program, the Chief Quartermaster expressed himself as somewhat confused by the General Purchasing Agent's failure to publish regulations for procurement in the field. "The SOP's written in Britain can be used for firewood over here," he wrote, "nobody reads them and they are out of date and outmoded."¹⁴⁰

Writing to G-4 in January, he outlined procedure that he would like to see established at once in order that a substantial amount of raw materials might be shipped to the Continent in February. The chief of a service who desired the production of any item would prepare requisitions on the United States for

the raw materials that would be needed. He should bid for the total tonnage required to meet the production program, indicating his monthly requirements. After having obtained approval from G-4, the chief of a service should submit monthly a consolidated bid for all approved projects. G-4 should provide a separate tonnage allocation to each service. A priority system should be established between the European Theater and the New York Port of Embarkation, and chiefs of services should designate the priority of lift they desired within their allocated tonnages.¹⁴¹

The Office of the Chief Quartermaster clarified procedure for Continental procurement with the publication of a circular letter on 26 January 1945. Headquarters procurement was defined as all procurement for quartermaster depot stocks and all procurement to meet long-term requirements. This type of procurement was the responsibility of the Procurement Division, OCQM. Field procurement was defined as day-to-day procurement of emergency requirements. It was governed by the procedure set up in SOP's 10, 10F, 10D, 10L, and 10G (see vol. I, ch. 3). All procurement of quartermaster supplies within the Communications Zone would be made by only purchasing and contracting officers under special orders.¹⁴² All requisitions would be forwarded to the Procurement Division, which would also receive all inquiries concerning the status of deliveries and all requests for information. The London Branch of the Procurement Division would effect coordination with the Procurement Division in Paris.¹⁴³ This procedure, later incorporated in Continental Operating Instructions,¹⁴⁴ remained unchanged until 26 April.

The procurement representatives of OCQM who were stationed in the several countries needed not only standing operating procedures but also specific directives setting forth items to be procured, items to be investigated, raw materials to be supplied, methods and places of delivery, and procedures for submitting reports and receiving payment. On 1 February the Chief Quartermaster directed the Deputy Chief Quartermaster to have these directives prepared. He had already worked out an informal agreement with the General Purchasing Agent by which he could draw contracts for goods costing less than \$1,000,000. The General Purchasing Agent entered the picture only when contracts required the payment of more than \$1,000,000.¹⁴⁵

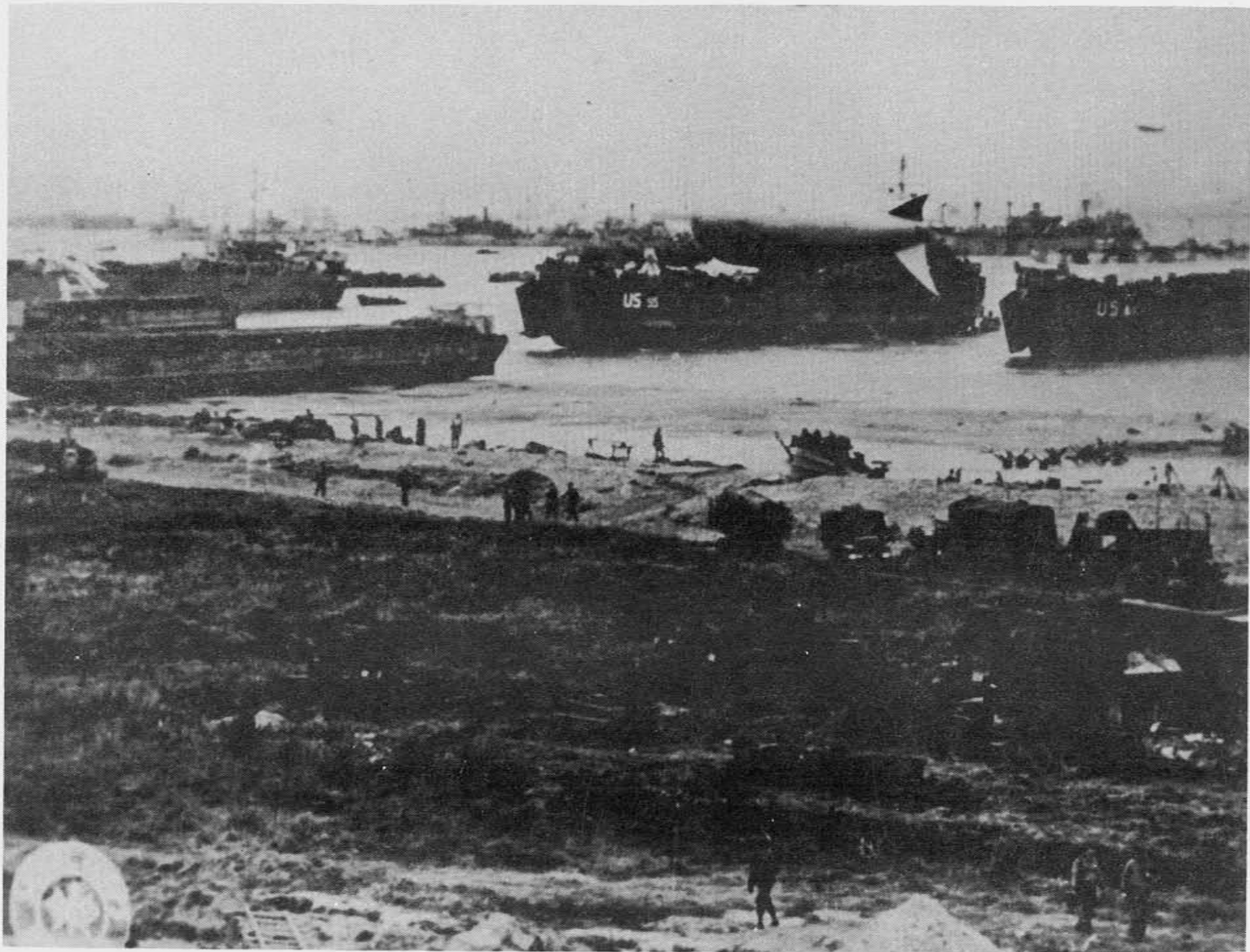


Figure 13.—Supplies Reaching OMAHA Beach on D-plus-4-day.

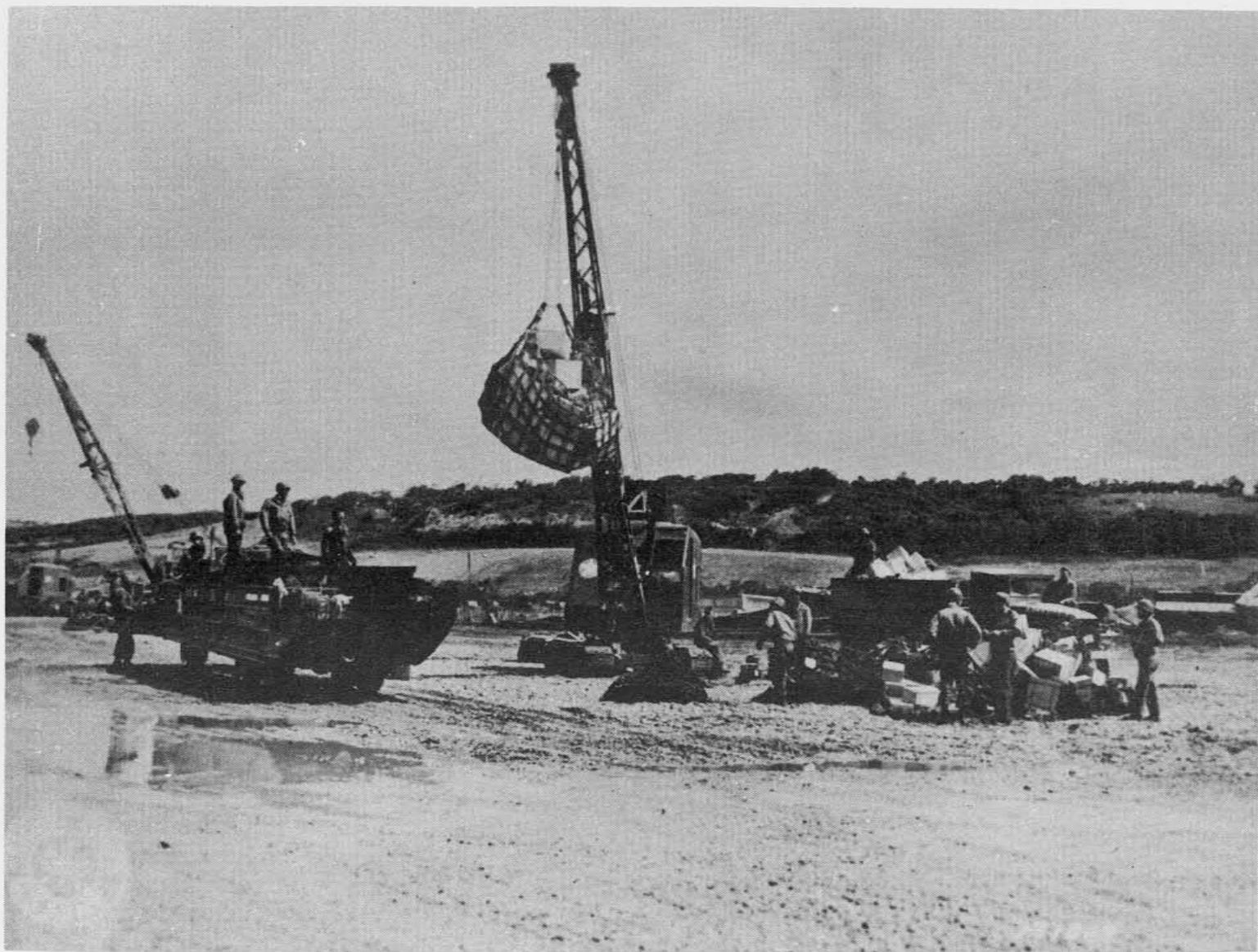


Figure 14.—Supplies Landed by DUKW's.

The Office of the Chief Quartermaster published a new office memorandum on 26 April 1945 establishing somewhat changed procurement procedure. Quartermaster supplies would continue to be obtained to a maximum extent from sources in the United Kingdom and on the Continent. Responsibility was vested in the Commodity Division, which would place demands on the Procurement Division and would cancel requisitions on PEMBARK when items could be obtained locally. The Supply Division would requisition from PEMBARK packing and crating materials not obtainable in the United Kingdom or on the Continent. The Procurement Division would make full use of supplies obtainable locally. When raw materials were supplied, it would determine requirements, make requisitions, and estimate the quantities

of finished products that would be manufactured. The Military Planning Division would provide the information on which requirements could be calculated and would review all requirements that were submitted. The Storage and Distribution Division would allocate the tonnage to move raw materials, provide storage for raw materials, and arrange with the Transportation Corps for the moving of finished products. It would also compute quantities of materials handling equipment and packing and crating materials.

Requisitions placed on the Procurement Division would state the use that would be made of supplies. The Procurement Division would confer with the Storage and Distribution Division concerning depots for the storage of raw materials and would maintain complete stock records.¹⁴⁶

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STORAGE AND DISTRIBUTION

The supply task of the Quartermaster Corps is threefold—getting the goods, storing the goods, and distributing the goods. Storage and distribution are closely welded links in the chain that connects the farm and factory in the zone of the interior with the fighting front in a theater of operations. However great may be the volume of goods requisitioned from the home base or procured from friendly countries, a supply system totally fails if storage and distribution in a theater are not skillfully planned and efficiently administered.

In times of war "storage space" is an elastic term. It may apply to the great quartermaster depot in Philadelphia, to a blitzed area in England, to a cave at the outskirts of Cherbourg, to cleared ground in a French forest, or to the muddy shoulders of a road in Belgium. The people who did the job of army storage and distribution in World War II were as diverse as the materials they handled. They were soldiers or civilians. They were women who ran fork lift trucks in the Boston Quartermaster Depot; they were train crews on the Pennsylvania Railroad; they were stevedores at ports; they were strong-armed seamen of the Merchant Marine; they were brawny laborers recruited in Allied countries; and they were United States soldiers who had once worked in cotton, wheat, or oil field, in forest, in coal mine, in steel plant, or on the automobile assembly line.

Chapter 5 of volume I presents the over-all picture of storage and distribution in the European Theater of Operations. It deals with the procurement of space in the United Kingdom and on the Continent and with the general procedure that governed the handling of all supplies from ports to front lines. This chapter contains only those data that bear specifically upon the storage and distribution of clothing and individual equipment.

IN THE UNITED KINGDOM

When the European Theater of Operations was created, storage was in the hands of the General Depot Service, which in the reorganization of the Army on 9 March 1942 had been established as coordinate with other services under the Services of Supply.¹ The General

Depot Service was discontinued on 11 July 1942,² and the supervision of depots in the European Theater of Operations was transferred to the Office of the Chief Quartermaster on 19 August 1942.³

Storage Factors

The Quartermaster Service was responsible for the storage of clothing and individual equipment not only for ground and service forces but for air forces as well.⁴ In June 1942, when the Chief Quartermaster opened his office in the recently established European Theater of Operations, he found to his surprise that storage space was distressingly limited. In the large task of building stock piles for an invasion, which at that time was to be in 1943, with a contemplated diversionary assault on the Continent in 1942, he had as his guide only the obsolete factors used during World War I, which were per man per day .00825 square feet (net) for clothing and .00825 square feet (net) for equipage, a total of .0165 square feet per man per day.⁵ According to the second edition of the BOLERO Key Plan, which was published on 25 July 1942, the strength of the United States forces to be stationed in the United Kingdom by D-day was estimated at 1,147,000 men. On 27 August the level of supply for clothing and individual equipment was set at 180 days (see ch. 2). Thus, when the World War I factor was multiplied by the number of men and the product multiplied by the number of days of supply, it was found that, in order to maintain the prescribed reserve, 3,406,590 square feet (net) of storage space would be required. Yet in the summer of 1942 the British had assigned only 5,781,600 square feet of both closed and open space for the storage of all classes of supply.⁶ In the fourth edition of the BOLERO Key Plan, which was published on 12 July 1943, the troop-strength estimate for D-day was raised to 1,340,000. In the meantime the level of supply for clothing and individual equipment had been reduced to 60 days (see ch. 2). If the World War I factor had been used for the computation of space, 1,326,600 square feet would have been required to maintain the prescribed reserve. At that time the British had assigned to United States forces slightly more than 6,000-



Figure 15.—Storing Clothing and Equipment during the Early Days on the Continent.

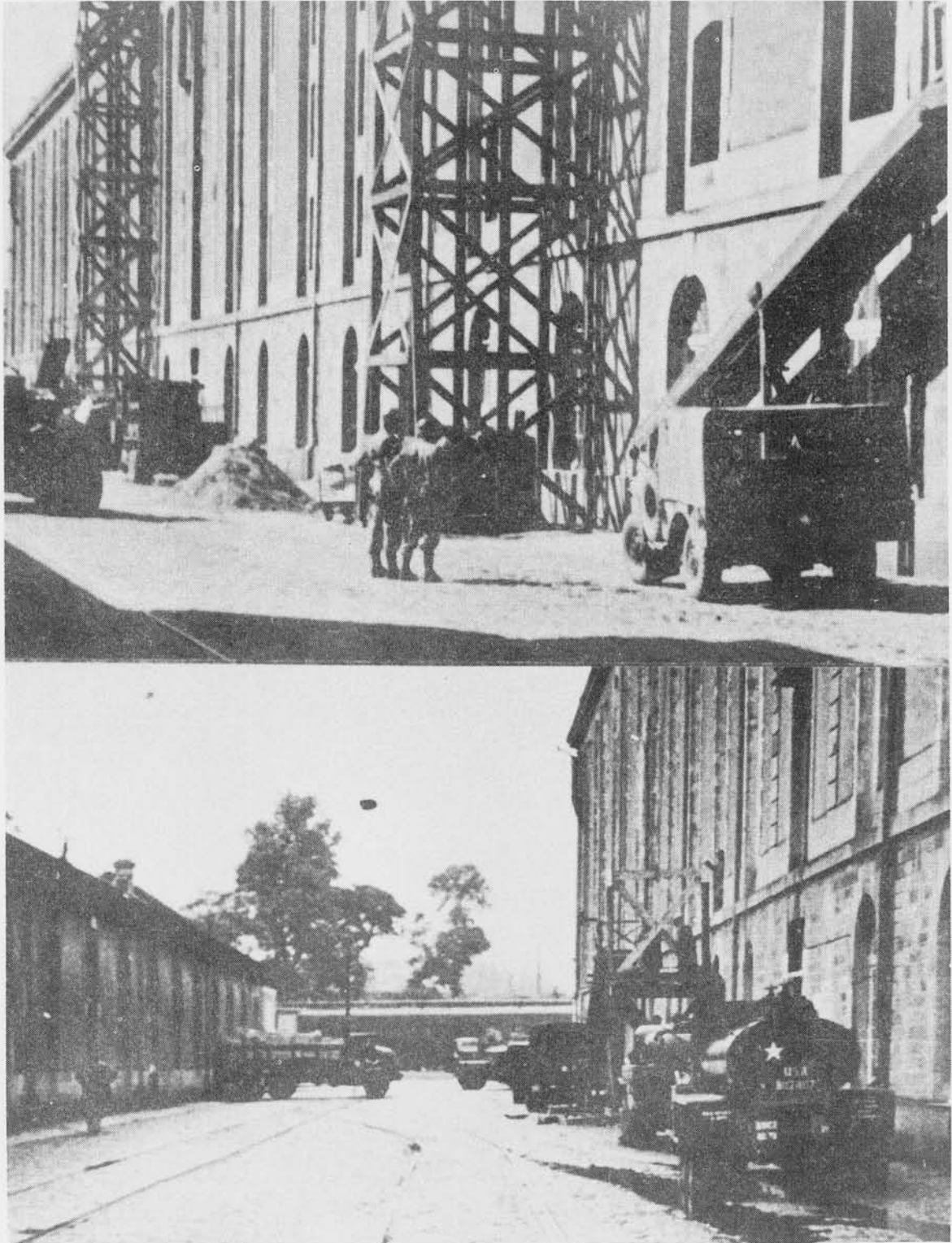


Figure 16.—The Class II and Class IV Depot at Cherbourg.

000 square feet of closed storage space for all classes of supplies. (See vol. I, chs. 1 and 2.)

The situation became critical as men and supplies in the United Kingdom increased in number and quantity and the space that the British had assigned remained in blueprint form. The problem was partly solved through compromise, ingenuity, and initiative. About half of the clothing and individual equipment was placed in open storage under conditions far from ideal in the damp air of England but made tolerable by dunnage and protective covers.⁷ Immediately upon finding that storage space was limited, the Chief Quartermaster set out to reduce the space factor. By January 1944 the factor used for clothing was .00483 square feet per man per day and the factor for individual equipment .00569, a total of .01052 as against the World War I factor of .01650.⁸ On 6 December 1943 the missions of the depots had been defined and the space required to maintain the class II level of supply had been estimated (see app. XVI).

On D-day, when the level of supply for clothing and individual equipment had been placed at 90 days (see ch. 2) and approximately 1,550,000 United States troops were in the Theater, about 1,467,540 square feet of space was needed for clothing and individual equipment. At that time the British had allotted to United States forces for all classes of supplies 8,966,043 square feet of storage space, of which 5,021,955 square feet was closed.⁹ The campaign to hasten the new construction, which the Chief Quartermaster had begun in the summer of 1943,¹⁰ had brought about gratifying results. Yet, because of the necessity to store under cover many expendable general supplies and all perishable foods, much clothing and individual equipment continued to be stored in the open. Improved methods of packing, packaging, and stacking made possible the conservation that enabled depots to operate with a fair degree of efficiency despite the lowered space factor. During the last 4 months of 1943 and the first 2 months of 1944 the distribution of class II supplies in the Southern Base Section, where troops were concentrated, was as follows:

Organization	Headquarters	Supplying Depot
101st Airborne Division	Greenham	Thatcham-Newbury
29th Division	Plymouth	Coypool
VII Corps	Breamore	Weyhill
9th Division	Barton-Stacey	*Thatcham-Newbury or Weyhill

2d Armored Division	Tidworth	*Thatcham-Newbury or Weyhill
4th Armored Division	Chippenham	Westbury
4th Division	Tiverton	*Taunton or Exeter
XIX Corps	Knook	Westbury
5th Armored Division	Chisledon	Thatcham-Newbury
30th Division	Chichester	Hilsea
6th Armored Division	Batsford	Honeybourne
XX Corps	Marlborough	Thatcham-Newbury

*Discretion of Commanding General, Southern Base Section.¹¹

Procedure

Clothing and individual equipment were stored and distributed according to the overall procedure described in volume I, chapter 5. Specific depots were designated for their storage, and those to which this class of supplies was delivered through error were instructed to ship the items to proper depositories.¹² Because limited space necessitated maximum use of open storage, detailed instructions were issued about safeguarding against theft and against ground and weather.¹³

Directions were explicit concerning the storage of supplies that required special care. Woolen items, though having been sprinkled with naphthalene flakes when originally packed, were to be repacked in boxes lined with wrapping paper and naphthalene flakes were to be sprinkled in the folds. When placed on shelves for issue, the items—and the shelves as well—were sprinkled with naphthalene flakes.¹⁴ Special instructions were issued from time to time concerning the handling of impregnated clothing, which had to be stored in clean, cool, and dry places. The room was to be well ventilated and protected from sunlight. While mothproofing was not necessary, the boxes in which the garments were packed were to be lined with waterproofed paper. Impermeable clothing was to be placed on hangers, if possible, since pressure caused the material to crack. Otherwise it was to be loosely folded and arranged in small stacks.¹⁵

During the BOLERO period, procedure governing distribution of clothing and individual equipment differed little from that prescribed in the zone of the interior. Railheads and truckheads were not used as distributing points for class II supplies except for special field exercises. Normally the depot was the distributing point, from which units

requisitioned supplies. Sometimes, however, rail shipments were made from depots to units.¹⁶ As D-day approached an extra supply of clothing and individual equipment was stocked at sea dumps to replace items that might be injured while craft were being loaded at the wharves.¹⁷ A chart comparing individual clothing and equipment stock-piled in the United Kingdom on 12 May 1944 with the requirements for the first period of the Continental operation appears as appendix XVII.

Days of Training

United States forces arriving in the United Kingdom during the BOLERO period were not merely a mass of men awaiting shipment to the Continent. They transformed the British Isles into a huge land-based aircraft carrier. They turned quaint English villages into proving grounds for tanks, half-tracks, and armored cars. They converted summer-resort beaches into practice areas for amphibious exercises. Engineer labor battalions constructed new roads and depots. Ordnance men repaired trucks, jeeps, half-tracks, and tanks, in many cases learning their trade as they went. Truck drivers and train crews moved supplies from ports to depots and from depots to units. Artillerymen assembled and tore down their weapons until they could do the work blindfolded. Infantrymen, armored division troops, rangers, and paratroopers practiced and trained. Everyone learned the job he would ultimately be called upon to do. Therefore, clothing and individual equipment were distributed with purpose and forethought to organized corps, divisions, and regiments in much the same manner as they would be distributed on the Continent.

ON THE CONTINENT

Storage and distribution on the Continent were too closely linked with military developments for advanced plans to be of great value. Planning Directive, Series A, published on 7 February 1944, had provided that the First United States Army would turn over army dumps on the beaches to the Advance Section (ADSEC), Communications Zone, on D-plus-10-day. Four major depots would be established by D-plus-90-day—Granville, Laval, Vitre, and Rennes. Vitre and Rennes would be set up to operate through D-plus-90-day, and by D-plus-70-day Laval would be able to handle their overflow. Granville would be established on a temporary basis. ADSEC would assume control of Granville on D-plus-

30-day, and the Communications Zone would assume control of depots in the Vitre and Rennes areas on D-plus-40-day.¹⁸

Storage Estimates

Each service was requested to submit its storage requirements up to D-plus-90-day. The Quartermaster Service reported on 21 February 1944 that it would need 3,056,800 square feet of open and closed space. Of this amount the class II estimates were as follows:

Date	Supplies to Be Stored (long tons)	Closed Space (sq ft)	Open Space (sq ft)
D+30	1,222	—	75,600
D+90	7,319	60,400	362,400
D+180	21,147	410,000	508,700 ¹⁹

The estimates had been based on a per-man-per-day space factor of .582 pounds of clothing. It was thought that the factor might be gradually reduced and by D-plus-90-day would be considerably lower.²⁰

The office of the Chief Quartermaster issued its final depot plan for OVERLORD on 7 May 1944. At that time it was known that closed storage would not be available until D-plus-60-day or later. The Quartermaster Service then estimated that it would need 10,191,880 square feet of space by D-plus-120-day and 14,697,736 square feet by D-plus-210-day. Of this amount the following closed and open space would be required for class II items:

Date	Closed Space (square feet)	Open Space (square feet)
D	37,800	48,652
D+30	306,751	394,819
D+60	461,804	594,386
D+90	582,596	749,358
D+120	662,625	852,862
D+150	767,250	987,525
D+180	850,950	1,095,255
D+210	955,575	1,229,917 ²¹

On the Beaches

During the first days of the Continental operation, supply dumps on the beaches were the responsibility of the First United States Army. Beach maintenance sets, 61 of which had been requisitioned for arrival between D-plus-4-day and D-plus-14-day (see ch. 1), reached the beach between D-plus-6-day and D-plus-16-day, 2 days behind schedule. Bins and sheds, made with the skids and palletizing material on which the sets were packed, provided dunnage and cover not only for items in the beach maintenance sets but also for the clothing and equipment in the follow-up maintenance sets, which began to arrive

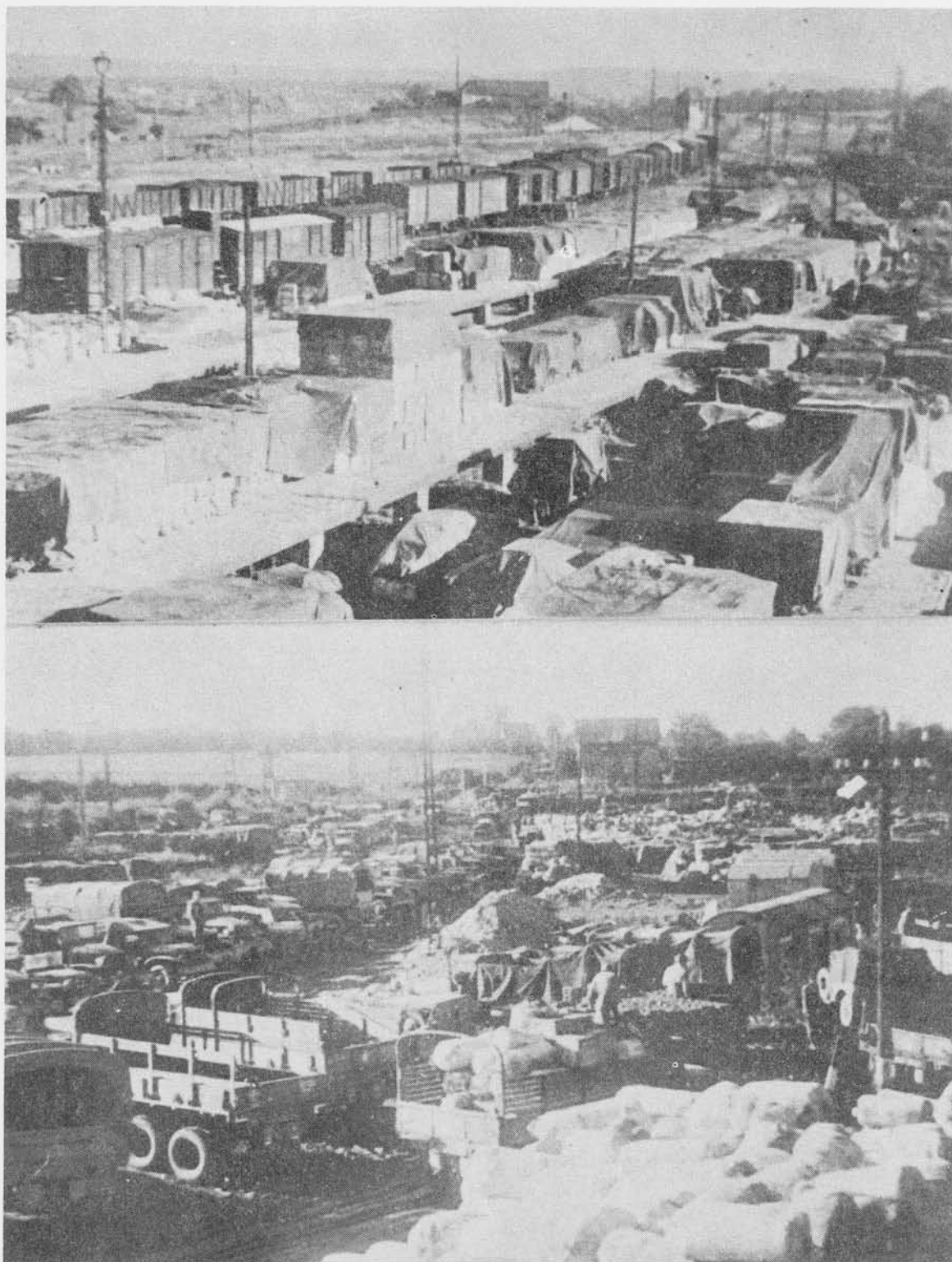


Figure 17.—A First Army Class II Truckhead on the Belgian-German Border.

on D-plus-17-day and which were neither skid-loaded nor palletized. These supplies were unloaded at a dump set up in the area of the 6th Engineer Special Brigade.²²

On 16 June 1944, D-plus-10-day, one officer and one enlisted man of ADSEC reached UTAH beach and made contact with the personnel of the First Army quartermaster's office, who were then supervising the dumps at OMAHA beach, and laid plans for taking over these operations and establishing other supply installations on the Continent as the army advanced. ADSEC assumed supervision of the supply of clothing and individual equipment in the last week of June immediately after the fall of Cherbourg.²³

Early in July Colonel H. M. Florsheim, Chief of the Storage and Distribution Division, visited supply dumps in First Army areas. He reported that quartermaster supply activities were operated by the First Army except in the immediate vicinity of Cherbourg, where ADSEC was in control. The division of responsibility made it difficult to determine the quartermaster supply situation. Within a few days the storage and beach dumps adjacent to UTAH beach would be turned over to ADSEC. Colonel Florsheim reported also that quartermaster supplies were stored in two areas, one near UTAH beach and the other near OMAHA beach. An effort had been made to classify supplies, which were issued directly from dumps.

Supplies were brought from storage areas by DUKW's or trucks, segregated, and then sent to their proper stacks. Bulk and skid-loaded supplies were arriving in excellent condition despite the rough handling they were receiving. Though all storage was in open fields, very little dunnage was used and tarpaulins were scarce. When Colonel Florsheim recommended that the stacks be covered at once, 1,200 tarpaulins were found in an OMAHA dump and used.

All class II and class IV items were being issued from a dump close to OMAHA. Though they were handled well, they were provided with neither cover nor dunnage. There seemed to be no tie-up between shipments from the United Kingdom and receipts on the far shore. Unfortunately, the First Army and ADSEC had not been able to use the detailed information that had been provided by the Storage and Distribution Division. Colonel Florsheim concluded his report by saying that the procedure was complicated and should be simplified.²⁴

In mid-July the Chief Quartermaster made an inspection trip to the Continent. He visited the front and also spent much time at ADSEC headquarters, making changes in organization and methods. On the basis of his observations he submitted several recommendations to the Chief of Staff of the Communications Zone. First, he said that an army rear boundary should be designated at once. He also believed that the Communications Zone should have a voice in the troop flow to the Continent and in the control of tonnage and of supplies that were moved forward. In order that the Communications Zone might meet the rapid changes in the military situation, he felt strongly that the port of Cherbourg should be developed on a permanent basis and that the work should begin at once.²⁵

Issue of Class B Clothing

Immediately before and after D-day large stocks of used clothing had been accumulated. Many items had been turned in at marshaling areas, and many others had been discarded by troops going into combat. The Chief Quartermaster wanted this clothing distributed in order that stocks of class A clothing would not be depleted. Many of the items were as good as new or needed merely to be pressed.

Major General Littlejohn had reached the opinion that a new definition for class B clothing was needed. The Depot Operations Manual described class B clothing as clothing that might "still be used by the army for the purpose for which it was intended." AR 30-2145 described it as clothing "used but still serviceable." AR 651-40 set up another classification known as "combat serviceable" clothing, which was defined as clothing "suitable for extended field service." The unit commanders in the European Theater of Operations needed to have a clearer understanding of the meaning of "combat serviceable." Class B clothing had not been used in the United Kingdom in sufficient quantities, because some officers thought that only new clothing should be issued to troops moving to the Continent. The Chief Quartermaster suggested that clarification be made in the proposed new edition of the Depot Operations Manual and that class B clothing be defined as clothing that was combat serviceable for extended use. He wanted the issuing officer to be designated as the person to determine whether or not clothing was actually combat serviceable. If the responsibility should be definitely placed on his shoulders, better distribution would result.²⁶ By 20 July 1944

progress had been made possible by the segregation of classes A, B, and X clothing in both storage and inventories. Class B clothing was being more generally issued to troops, and class X clothing was being issued to prisoners of war and certain civilian laborers.²⁷

A few days later it was found that stocks of class B clothing in the United Kingdom were approaching the vanishing point. No definite policy had been set up to provide or maintain a level of supply of either class B or class X to meet theater requirements. Therefore, no stock piles existed. The Chief Quartermaster wanted steps to be taken at once to build up a stock pile on the far shore and in the United Kingdom. ADSEC should determine the levels required for prisoners of war who were used as laborers in the Communications Zone and also for civilian laborers in the Communications Zone. Therefore, he made plans to maintain a 75-day level in a single depot.²⁸

Fighting through Ditches and Hedgerows

Though Cherbourg had been taken on 27 June, its port had been so nearly demolished by the enemy that supplies continued to be landed on the beaches. By 1 July Allied forces had deepened the beachhead by advances in the area between Caen and Saint-Lo against stoutly defended hedgerows of the Cotentin Peninsula. General Eisenhower had written on 5 July, "The going is extremely tough, with three main causes responsible. The first of these, as always, is the fighting quality of the German soldier. The second is the nature of the country. Our whole attack has to fight its way out of the very narrow bottlenecks flanked by marches and against an enemy who has a double hedgerow and an intervening ditch almost every 50 yards as ready-made strong points. The third cause is the weather. Our air has been unable to operate at maximum efficiency and on top of this the rain and mud were so bad during my visit that I was reminded of Tunisian wintertime."²⁹

Supplies Landed at Cherbourg

Under such conditions food, ammunition, and petroleum products were the first necessities. Clothing and individual equipment did not reach the port of Cherbourg until 16 July 1944. By the end of the month about 45,000 tons of quartermaster class II and class IV items had been received and three large dumps had been placed in full opera-

tion.³⁰ In the United Kingdom were 18,000 long tons of class II and class IV supplies ready for shipment to the Continent.³¹ But tonnages off-loaded in France were about 20 percent behind schedule. It was hoped that in the immediate future the capacity of beaches and ports could be so increased that deficiencies might be made up. The Acting Quartermaster, ADSEC, asked that additional tonnage of critical class II items needed before D-plus-90-day be shipped as follows:

Commodity	Amount (Long Tons)	Priority
Combat and officers' raincoats	50	I, II, & III
Class B clothing	100	I
	150	II
	750	III

It was requested that shipments to France in the period from D-plus-90-day to D-plus-150-day be sufficient to provide each man by 1 October initial issue of the following items: sleeping bags, woolen undershirts, woolen drawers, overcoats or mackinaws, arctic over-shoes, woolen knit caps, and woolen gloves.³²

On 31 July the Battle of Normandy ended with the liberation of Avranches, and the Battle of France began. On 19 August the First United States Army submitted its requirements for the period ending 28 August. No quartermaster class II and class IV supplies were requested until 23 August, but thereafter 75 long tons would be required daily.³³

Plans of late August looked toward the discharge in the United Kingdom during September of 60,000 measurement tons of class II and class IV supplies. With the thought of expediting deliveries to the armies, G-4 inquired of the Office of the Chief Quartermaster as to whether all tonnage from the United States should be shipped direct to the far shore. The Chief of the Storage and Distribution Division replied that the plan seemed good and that any supplies needed to balance stocks in the United Kingdom could be sent from the Continent.³⁴

Priorities and Allocations

The procedure governing shipment of supplies during the first period of the Continental operation was put in final form on 17 April 1944, a little more than a month after the Forward Echelon of the Communications Zone was created. Only three priorities were used: priority I, covering absolutely essential items; priority II, covering less essential items on shipping orders or in balanced cargoes; and priority III, covering the least essential of all required supplies. Bids for



Figure 18.—Outdoor Storage of Clothing and Individual Equipment at Reims.



Figure 19.—Issue Bins of the Clothing Depot at Huy, Belgium.

cargo space and for commodity-loaded ships would be forwarded to G-4 45 days before the month of the loading.³⁵ As the armies approached Paris, the Theater Commander revised the system, limiting the number of items and requisitions in the first three priorities and setting up priority IV, which would include all supplies not designated in any other priority.³⁶

The timetable set up in May for the shipment of supplies to the Continent was not met. Shipments by preloaded coasters during the first 10 days of the operation arrived on time, but the vessels did not return to the United Kingdom according to schedule. A bottleneck having developed at Continental ports, ships were unloaded according to need rather than priority. Lack of usable Continental ports was the main cause of the failure.³⁷

The Quartermaster Service was not given space to ship a sufficient quantity of supplies to the Continent, or the Chief Quartermaster sufficient latitude in the selection of items to be shipped.³⁸ Consequently, on 7 September Major General Littlejohn urged that the system be revised. He wanted the allocation for the Quartermaster Service during September to be increased to 88,750 long tons, 50,750 long tons of which would be used for winter clothing. The Office of the Chief Quartermaster had been allocated 55,000 long tons of space for clothing and equipment during June, July, and August. Only 29,000 long tons had been delivered. The deficit had been caused by the relative unimportance of these types of supplies. The armies, racing across France, had neither time nor inclination to ask for anything but food, ammunition, and gasoline. Not until they were halted east of the Seine did they calculate clothing replacements. The weather having suddenly turned cold, warm clothing was then in demand. (See ch. 7.) G-4 raised the quartermaster allocation to 123,000 long tons but said that probably not all the allocation would be moved. Ships were not turning around rapidly enough because of the bottleneck at Continental ports.³⁹

The allocation was so consistently reduced during the next 3 months that by December only 47,000 long tons was allocated for quartermaster supplies. The Chief Quartermaster, insisting that the allocations were far below his minimum requirements, asked for an allocation of at least 70,000 long tons monthly during the first 6 months of 1945. Aided by a general increase of activity in the United Kingdom Base, G-4 was able to increase

quartermaster allocations for the first 4 months of 1945 to an average of 90,200 long tons.⁴⁰

New Storage and Supply Plans

After the fall of Paris on 25 August 1944 and the sweep of United States armies north through the Pas de Calais and into Belgium and east toward the German border, the Chief Quartermaster instructed the Plans and Training Division to prepare new over-all plans. These plans were to be based upon the assumptions that the depot at Cherbourg would not be changed, that OMAHA and UTAH depots would operate through October and thereafter would have their missions transferred to Brest, that Metz and Le Mans would carry supplies for 500,000 men for 15 days, that Paris would carry supplies for 500,000 men for 30 days, and that Coblenz would become a major installation to be supplied by rail from southern and western France and by water down the Rhine.⁴¹

Tentative Plans

Tentative over-all plans known as the long-term plan and the short-term plan were published by the Plans and Training Division on 9 September in answer to the Deputy Chief Quartermaster's instructions of 31 August. The long-term plan was based upon the assumption that United States forces would have to be supported at the German border during a period of stabilized warfare. It provided that the Normandy Base Section would take over some of the supply work that had been planned formerly for the Brittany Peninsula. This load would later be transferred to Le Havre and other Channel and river ports to the northeast. The short-term plan contemplated the rapid progress of armies into Germany. Paris would first be constituted as the main storage area, to be followed by Metz. The mission that the short-term plan provided for the Normandy Base Section was identical with that of the long-term plan.⁴²

The Brittany Base Section had already prepared a plan for the receipt and disposition of class II and class IV supplies. This plan received OCQM sanction on 8 September 1944. Its purpose was to provide class II and class IV supplies for the next 60 days. Supplies would be shipped from the United Kingdom to Morlaix by LST's. Cargo would be discharged directly from quayside to waiting railway cars and then shipped to the quartermaster depots at Saint Thegonnec or L'Her-

mitage. Issues would be made from supply points as required. Maintenance would be provided for 175,000 troops. Of this number, it was estimated that 30,000 troops would require initial issue because of having lost clothing and equipment in combat. All troops would have to be provided with overcoats, blankets, overshoes, coats, and mackinaws. The requirements for individual clothing and equipment, as set forth in the plan, appear in appendix XVIII.⁴³

Meanwhile, a rest area had been established at Barneville for which supply plans fell into two periods. During the first period 20,000 troops would be cared for and would carry complete issue of T/E 21 clothing and individual equipment. By 28 August requisitions had been placed for the total amount needed. During the second period 40,000 troops would be cared for. It was estimated that half the clothing turned in by the first group could be salvaged and made available to the second group. Therefore, initial issue was requested for 30,000 second-period troops.⁴⁴

To meet the continuous emergency demands of the armies, items had to be shipped from rear-area dumps. Because this plan required long hauls and brought about considerable delay, the Chief Quartermaster proposed that about 500 long tons of class II supplies be stocked in the Paris area and held to meet emergency requisitions from the armies.⁴⁵ Plans at the time provided for the use of the ports of Le Havre and Rouen. The ships that discharged at Le Havre would be loaded with class I and class V supplies. Rouen would be used for unloading quartermaster and ordnance class II supplies.⁴⁶

Supply Plan of October 1944

The first of the series of over-all quartermaster supply plans that were worked out to conform to rapidly changing situations was published on 30 October 1944. The Supreme Commander had organized the Twelfth Army Group, consisting of the First, Third, and Ninth Armies. While the Twenty-first Army Group continued to sweep along the Channel coast, United States forces would drive out preparatory to an attack on the Rhine River. The October plan was developed to meet the new military situation. For the first time depots were designated as base, or port, and intermediate. The port depots were to be at Cherbourg, Le Havre, and Antwerp and were to have a combined storage capacity of 3,100,000 square feet of space for class I,

class II, and class IV supplies. The intermediate depots were to be in the Liege and Verdun areas and in Reims and Paris and were to have a combined storage capacity of 7,450,000 square feet of space for class I, class II, and class IV supplies.

Until class II stocks should have become more nearly adequate, they would be concentrated in Reims and Cherbourg. The Normandy, Loire, and Brittany Base Sections would be supplied from the Reims depot. After Antwerp should have been opened, the Liege intermediate depot would relieve Reims of supplies for the First and Ninth Armies and part of ADSEC. All captured enemy class II supplies would be reported to OCQM and shipped to Le Mans as directed. All class II supplies of any nature flowing into any ports and intended for prisoners of war would be shipped to Le Mans until the opening of the port of Antwerp.

A 60-day level of class II supplies was to be maintained for 2,000,000 United States troops and 600,000 prisoners of war. The level was to be distributed as follows: 10 days at port depots; 30 days at intermediate depots; 5 days in army areas, sections, and base sections; and 15 days in the process of being unloaded at ports or on wheels.⁴⁷

Interim Plans of November 1944

Early in November plans were developed for the establishment of a class II dump at Huy or Verdun. It was understood then that no advanced class II depot would be established other than the one at Reims.⁴⁸ Bulk movement of depot stocks out of Normandy could not be made until benefits should be obtainable from discharge at Antwerp. Then about 600 long tons of class II supplies were being shipped daily by train from Cherbourg. Transportation for 600 long tons daily from Le Havre was requested by 15 November.⁴⁹ Le Havre, moreover, was considered more desirable than Cherbourg for discharging class II supplies. When unloaded in Normandy, supplies were far from the organizations that needed them. The Chief of the Supply Division advocated a temporary delay in shipping if he could be assured that Le Havre would soon receive the large quantities of clothing and equipment that were then being sent to Cherbourg.⁵⁰

Supply Plan of December 1944

The first quartermaster supplies were unloaded at Antwerp on 3 December, a month after the German garrison had been cleared



Figure 20.—Inside Storage of Clothing and Equipment at Antwerp.



Figure 21.—Inside View of Clothing Warehouse at Reims.

from the mouth of the Scheldt River.⁵¹ The flow of quartermaster supplies from Antwerp to the armies radically changed the whole supply picture. Accordingly, a new quartermaster supply and storage plan was developed. Published on 1 December 1944, it was based upon the assumption that before 1 January 1945 a large quantity of quartermaster supplies could be unloaded daily at Antwerp and promptly cleared from the port and that berths for off-loading quartermaster supplies at Antwerp, Le Havre, Rouen, and Cherbourg would be adequate to discharge all quartermaster supplies. Therefore, supplies would be off-loaded at the ports nearest the depots designated to receive them.

Reims depot, in its intermediate mission, would hold all reserves of class II supplies for the entire Continent except Normandy and Brittany and would make bulk shipment to all armies, sections, and base sections except Normandy and Brittany. It would also supplement Le Mans in the storing and issuing of captured class II supplies and other class II supplies for Allied and enemy prisoners of war. This depot would retail all classes of supplies to Oise Section troops as directed by the Oise Section quartermaster. It would hold a 40-day level of class II supplies for 1,925,000 United States troops and 100,000 other persons. Its estimated storage requirements were 2,500,000 square feet.

Depots in Liege, Luxembourg, and Verdun would retail class II supplies as directed by the ADSEC quartermaster but would make no bulk shipment of clothing and individual equipment. Cherbourg, in its intermediate capacity, would hold reserves of class II supplies for Normandy and Brittany Base Sections. It would also retail all classes of supplies to Normandy Base Section troops as directed by the Normandy Base Section quartermaster. It would hold a 40-day level of class II supplies for 75,000 United States troops and 55,000 other persons. Its estimated space requirements for class II supplies were 150,000 square feet. The Charleroi area was to be developed immediately. The indications were that it would store and handle substantial quantities of class II supplies to support the Liege and Reims depots and to help clear quartermaster supplies from Antwerp. The Paris depot would retail class II supplies for Seine Section troops but would not make bulk shipment. The estimates of class II and class IV tonnage receipts by ports were as follows:

Off-loading Class II and IV Supplies
(long tons)

		Le Havre and Rouen			Antwerp	Total
		Cherbourg	Rouen	Antwerp		
December	1944	20,000	75,000	20,000	115,000	
January	1945	—	20,000	90,000	110,000	
February	1945	—	15,000	85,000	100,000	

Efforts would be made to arrange for larger off-loadings at Le Havre and Rouen. If the tonnage in December should reach the estimate, the handling capacity of Reims would probably be exceeded. In that case, OCQM would designate certain categories of class II supplies to be handled at Charleroi. As soon as class II stocks should improve—probably by 1 January 1945—arrangements would be made to establish stocks farther forward. All captured enemy class II supplies suitable for use would be reported to OCQM, which would direct that they be shipped to either Le Mans or Reims. All class II supplies shipped to the Continent for Allied or enemy prisoner-of-war use would be sent to Le Mans or Reims.⁵² The normal flow of class II supplies, as set forth in the plan, appears as appendix XIX.

Supply Plan of January 1945

The changes in depot missions brought about by the German offensive in the Ardennes, which began on 16 December, were made for the purpose of meeting the supply needs of the armies. They did not affect basic policies and procedures.⁵³ On 20 January 1945, when British and United States divisions had made such progress that reduction of the Ardennes salient was assured,⁵⁴ another quartermaster supply plan was published. This plan differed from that of 1 December in that it directed the establishment of class II depots at Lille and Le Havre and set up an enlarged depot area that included the Charleroi and Mons depots. It also directed that each section or base section carry the theater reserve of class II for the military population of its area. The activation of Lille and Mons as major class II depots would enable the northern area to be almost independent of Reims within the next 30 days. Class II items suitable for Allied and enemy prisoners of war would be concentrated in Paris, Reims, and Lille. The stock at Le Mans would be liquidated as rapidly as possible. A 60-day theater level of supplies was authorized. The plan provided that reserves would be held as follows:

Depot	Clothing and Equipment and Regular Supplies (Percent)	Allied and Enemy Prisoner War Stocks (Percent)
Antwerp	1	--
Lille	27	25
Reims	32	25
Paris	4	25
Le Havre	8	--
Rennes	1	--
Cherbourg	2	--
Army areas	5	5
Unloading at ports and on wheels	20	20
Total	100	100

Though British and United States commands had agreed that the Antwerp area would be under British control and that United States forces would not establish a depot at the port, a distributing point had been set up for the maintenance of United States troops in the area.⁵⁵ It had become evident, however, that depots close to the port were needed if supplies were to be cleared daily. Therefore, in the new supply and storage plan, the Antwerp distributing point was given what amounted to depot status. It would hold reserves of classes I, II, and III supplies for Channel Base Section troops in the Antwerp area and would retail supplies to Channel Base Section troops as directed by the Channel Base Section quartermaster. It would hold a 15-day level of class II supplies for 50,000 United States troops and for this purpose would require 500 long tons of space.

The Le Havre depot would hold reserves of class II supplies for personnel of the Channel Base Section who were in its depot area; would supply the Le Havre-Rouen (RED HORSE) staging area (see vol. I, ch. 5); and would be prepared to receive, store, and sort those supplies unloaded at Le Havre and Rouen for which transportation was not immediately available. It would hold a 45-day level of class II supplies for 200,000 United States troops and would require 7,500 long tons of space.

The Lille depot would hold reserves of class II supplies for the First and Ninth Armies, a portion of ADSEC, and a portion of the Channel Base Section. It would hold about one-third of the theater reserves of class II supplies for Allied and enemy prisoners of war and such miscellaneous class II supplies as were directed to the depot by OCQM. It would retail class II supplies to a portion of the Channel Base Section troops and maintain a 45-day level of class II supplies for

750,000 United States troops. About 60,000 long tons of space would be needed, of which 70 percent would be for clothing and equipment and 30 percent for general supplies.

The consolidated Charleroi-Mons depots, in its intermediate capacity, would hold up to 45,000 long tons of miscellaneous class II supplies. All sized items would be held at Mons, however. The consolidated depot would retail all classes of supplies to those parts of ADSEC and the Channel Base Section that were in the vicinity of its depot area.

Rennes, another new depot for which the plan provided, would hold reserves of class II supplies for troops in the Brittany Base Section and would retail all classes of supplies to these troops as directed by the Brittany Base Section quartermaster. It would hold a 45-day level of class II supplies for 45,000 United States troops and would require 7,500 long tons of storage space.

The Cherbourg depot would continue to hold reserves for the Normandy Base Section and would retail all classes of supplies to Normandy Base Section troops as directed by the Normandy Base Section quartermaster. It would maintain a 45-day level of class II supplies for 250,000 United States troops and would require 700 long tons of storage space.

The Paris depot, in its intermediate capacity, would hold reserves of class II supplies for the Seine Section and about one-third of the theater reserve of class II supplies for Allied and enemy prisoners of war. It would retail all classes of supplies to Seine Section troops and would maintain a 45-day level of supplies for 100,000 United States troops. In order to fulfill its mission, this depot would require 2,000 long tons of space for Seine Section class II supplies and 2,500 long tons of space for Allied and enemy prisoner-of-war class II supplies.

Reims continued to be an important class II depot. Its ultimate intermediate mission was holding reserves and making shipments of class II supplies for the Oise Section (including the Fifteenth Army), the Third Army, and a portion of ADSEC, and also acting as a back-up depot to balance the stocks in class II depots in the Seine Section, the Brittany and Normandy Base Sections, and a portion of the Channel Base Section. It would also hold additional stocks of unbalanced class II supplies as directed by OCQM and one-third of the theater reserve of class II supplies for Allied and enemy prisoners of war. Its temporary intermediate



Figure 22.—Buildings of a Belgian Varnish Gum Plant, Used as a Class II and Class IV Subdepot at Antwerp.

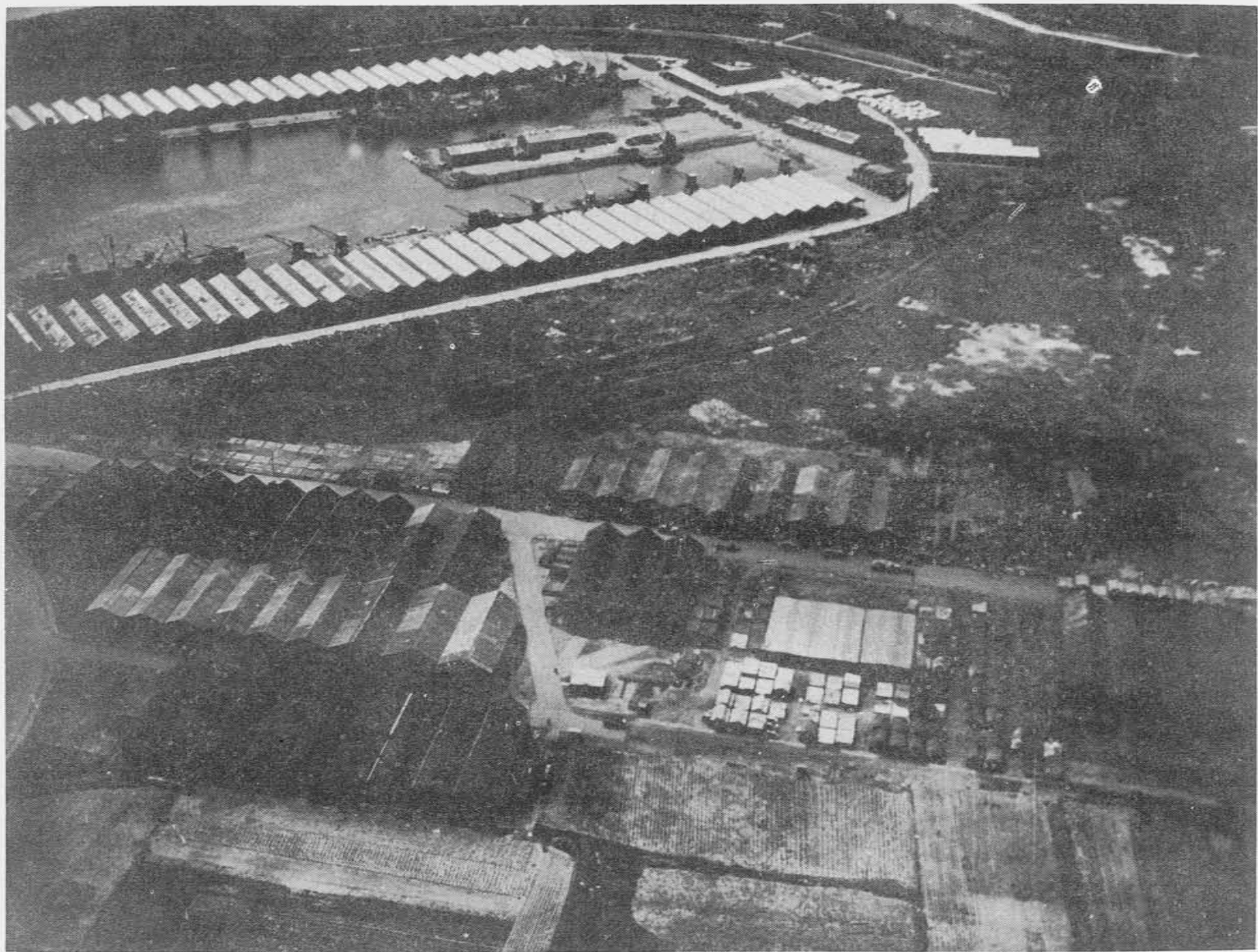


Figure 23.—Aerial View of a Class II and Class IV Subdepot at Antwerp.

mission was as follows: Until the Lille and Charleroi-Mons depots should be sufficiently stocked to accomplish their class II missions, Reims would continue to ship to all armies, sections, and base sections as required. It would retail all classes of supplies to Oise Section troops. It would hold a 45-day level of class II supplies, ultimately for 850,000 and temporarily for 1,000,000 United States troops. Ultimately it would require 21,000 and temporarily 25,000 long tons of space. The Verdun and Liege depots would hold no reserves and maintain no class II supply levels but would retail all classes of supplies to ADSEC troops.⁵⁶

The normal flow of class II supplies for United States forces and for Allied and enemy prisoners of war, as set forth in the plan, appears as appendix XX-A and XX-B.

Other Changes in Supply Program

Lieutenant General Brehon B. Somervell, who was in the Theater when the quartermaster plan of 20 January 1945 was published, prefaced his report on the supply situation by saying, "The accomplishments of the Communications Zone to date have been outstanding and represent one of the major achievements of the war." He expressed the opinion, however, that the various services had not put into effect what he termed "supply in depth" (see vol. I, ch. 5).⁵⁷ The Chief Quartermaster, entirely in agreement with Lieutenant General Somervell's proposal, replied that he had set up what he called a "vertical" system, which was identical with the "supply-in-depth" system recommended. He had endeavored to have supplies travel in a straight line from a base depot at a port to an intermediate depot and an advance depot and thence to the troops. The intermediate and advance depots were stocked on a selective basis: the fast-moving items were taken out at the port and stored in the forward areas, and the slow-moving items were held at the port until needed. The Quartermaster Service had endeavored to disperse supplies along the line of communications.⁵⁸

The War Department had designated depots in the zone of interior as base, filler, and issue.⁵⁹ The European Theater used the names base, intermediate, and advance.⁶⁰ An advance depot, which was forward, supplied the immediate needs of the armies and carried a limited stock of fast-moving class II supplies. A base depot, which was near the port, carried limited model stocks and unbalanced stocks. An intermediate depot,

which was between a base depot and an advance depot, carried balanced stocks of class II supplies.⁶¹

Early on the morning of 18 January 1945 the First United States Army left the control of the Twenty-first Army Group and came under the control of the Twelfth Army Group. The boundary between the First and Third Armies ran at first from St. Vith through the Losheim Gap but was soon altered to place the gap within the area of the Third Army. The boundary between the First and Ninth Armies ran from Eupen to Germond and northeast to Zulpich. A letter of instructions issued on 24 January by the Twelfth Army Group stated that the First Army would continue to press the enemy preparatory to a resumption of a strong offensive. By the end of January the withdrawal of the enemy from the Ardennes was in its final stages. On 7 February the Twelfth Army Group issued another letter of instructions, assigning the First Army the general mission of securing the Roer dams, clearing the enemy west of the Roer River, and supporting the operation in the lower reaches of the Rhine. The offensive would begin on or about 14 February.⁶²

The Quartermaster Service was notified on 16 February that it must be prepared within the next 90 days to support 3,000,000 persons near and in advance of the Liege-Charleroi-Verdun-Nancy line, a large portion of whom would have to be supplied from advance depots near the Rhine. The Chief of the Military Planning Division believed that it would be necessary to activate one advance depot to serve each army area.⁶³ Already, in line with the policies established by the Communications Zone, the Chief Quartermaster, and the Commanding General of ADSEC, a plan had been drawn up for advance depots. Immediately behind the army boundary two advance depots would be activated in order that a source of all quartermaster supplies might be continually accessible to troops. These depots would eliminate the danger involved in holding large stocks in advanced areas and would lessen the task of sorting and handling supplies. Provisions had been made for a 15-day level of class II fast-moving items to be held in advance depots, a model stock of which ADSEC and OCQM were already preparing.⁶⁴ Later three advance depots were planned, two to be operated by ADSEC in support of the Twelfth Army Group and one to be operated by CONAD in support of the Sixth Army Group. It seemed wise to have these depots hold

only a 10-day stock level, upon the assumption that the armies could be supported by intermediate depots along the Liege-Verdun line even after they had crossed the Rhine.⁶⁵ Later, however, the Chief Quartermaster directed that a 15-day class II supply level be maintained in advance depots.⁶⁶

Because the military situation made imperative the establishment of a major United States depot at Antwerp, the Communications Zone was attempting in late February to get the British to set aside the old agreement by which the only depot in the Antwerp area would be under British control. The Quartermaster Corps requested a class II and class IV depot at Antwerp containing 1,500,000 square feet of closed space and 1,000,000 square feet of open space, which would be used to receive practically all class II supplies unloaded at the port. Adequate quantities of these supplies would be furnished to support the First and Ninth Armies and all Communications Zone areas not supplied by Reims. Such a measure would result in the establishment of a 45-day supply level for 800,000 troops.⁶⁷

Supply Plans of February and March 1945

In February and March 1945 the Chief Quartermaster issued in the form of memorandums to base section quartermasters the last over-all quartermaster supply and storage plan formulated before the surrender of Germany. When the Southern Line of Communications (SOLOC), the supply organization for troops in southern France, went out of existence on 12 February, the boundaries of the European Theater were clearly defined.⁶⁸ The new plan put into operation all the types of depots for which the supply-in-depth plan called.

Plans were developed in March for the establishment of a depot at Antwerp, the British having expressed willingness to set aside the whole agreement regarding control of the port depot.⁶⁹ Until the establishment of a base depot at Antwerp, the Antwerp distributing point would continue to receive from the port those selected items of class II supplies that were not to be shipped inland. It would receive and store class II supplies for Channel Base Section troops in the Antwerp area and distribute them as directed by the Channel Base Section commander. It would receive also additional quantities of class II supplies from the port and make such shipments as were directed by OCQM. The depot would maintain a 45-day level of class II supplies for 75,000 United States troops

and would require 17,000 long tons of storage space.⁷⁰

The Cherbourg depot remained the principal depot in the Normandy Base Section. In this area the Le Havre depot continued to serve the RED HORSE staging area, the clearing house for troops entering the continent and leaving the continent on furlough.⁷¹ The missions of the Rennes depot and the Le Mans depot were not defined in the plans of the spring of 1945. In June Rennes was liquidated and Le Mans was reduced to the status of a class I distributing point under the Le Havre depot.⁷² The Cherbourg depot, in its intermediate capacity, held class II reserves for the Normandy and Brittany Base Sections; and, in its retail capacity, issued class II supplies to Normandy Base Section troops as directed by the Normandy Base Section quartermaster. It maintained a 40-day class II supply level for 75,000 United States troops and 55,000 other persons and required 150,000 square feet of space.⁷³

The class II mission of the Charleroi depot was merely retailing supplies to troops in its area.⁷⁴ The Lille-Mons depot, in its intermediate capacity, held reserves and made shipments of class II supplies to the First and Ninth Armies (or to advance depots serving the armies) and to portions of ADSEC. It also held such additional unbalanced class II stocks as were directed by OCQM. As a distribution depot it held reserves and made shipments of class II supplies to a portion of the Channel Base Section. This depot held a 45-day class II supply level for 800,000 United States troops and unbalanced class II stocks for Allied and enemy prisoners of war. Advance depots to be established would hold for the armies a 15-day supply of balanced class II items in order to reduce the level of supply at Lille-Mons to 30 days for all items with which they were stocked.⁷⁵

The Reims depot held reserves and made shipments of class II supplies to Oise Section troops (including the Fifteenth Army), the Third Army, and a portion of ADSEC and continued to act as a back-up depot for balancing class II depots in the Seine Section and the Brittany, Normandy, and Channel Base Sections. It held additional stocks of unbalanced class II items as directed by OCQM and one-third of the theater reserves of class II items for Allied and enemy prisoners of war. Until the Lille-Mons depot could be sufficiently stocked to accomplish its class II and class IV missions, Reims would continue to ship to all armies, sections, and base sec-

tions as required. It would also retail class II supplies to Oise Section troops as directed by the Oise Section quartermaster. This depot held a 45-day class II supply level for 800,000 troops, consisting of 400,000 troops of the Third Army, 100,000 troops of ADSEC (South), and 300,000 Oise Section troops (including troops of the Fifteenth Army). Its space requirements were 4,000 long tons for Allied and enemy prisoners of war and 15,000 long tons for United States troops. In order to fulfill its ultimate mission, the depot would require 20,000 long tons of space for the storage of model stock, 4,000 long tons for Allied and enemy prisoners of war, and 15,000 long tons for the storage of miscellaneous class II items.⁷⁶

The Paris depot, in its intermediate capacity, received and stored class II theater reserves; and, in its capacity as a distribution depot, issued class II supplies to Seine Section troops as directed by the Seine Section commander. This depot maintained a 45-day class II supply level for 150,000 United States troops, of which 50,000 were transients, and required 16,000 long tons of space.⁷⁷ The Liege and Verdun depots had only retail missions, issuing supplies to ADSEC troops as directed by the ADSEC quartermaster.⁷⁸

On 17 March 1945 the Chief Quartermaster published plans for three depots in the Delta Base Section. The Delta Base Section had become a part of the Communications Zone, in November 1944, along with the Continental Advance Section (CONAD), which was the advance section in southern France, corresponding with ADSEC in northern France.⁷⁹ This section served as the supply base for the Sixth Army Group and for French troops under the French rearmament program. It also supplied three major leave centers operated by the Communications Zone (see vol. I, ch. 5). Marseille was the principal port in the Delta Base Section. The depot received, sorted, classified, and stored class II supplies off-loaded at the port and shipped them forward as required. It held a portion of the theater reserves for CONAD, the Seventh United States Army, and the French First Army. As a distribution depot, Marseille distributed all classes of supplies to troops in the Delta Base Section. It held a 45-day class II supply level for 600,000 United States troops and an additional 60,000 long tons for other persons. Its storage requirements were 75,000 long tons.⁸⁰ The Dijon depot, in its intermediate capacity, received, stored, and issued class II supplies and made shipments to the Seventh United States Army, the French

First Army, and CONAD. It also distributed class II supplies to troops in its depot area. This depot held a 30-day class II supply level for 600,000 United States troops and required 10,000 long tons of storage space.⁸¹ The Nancy-Metz depot, in its intermediate capacity, received and stored class II supplies and shipped them to the Seventh and Third Armies and advance depots. As a distribution depot it issued all classes of supplies to troops in its depot area. This depot maintained a 30-day class II supply level for 1,000,000 United States troops and required 26,000 long tons of storage space.⁸²

A summary of class II depot missions contained in the supply plans of February and March 1945 appears as appendix XXI.

Disarmament Plan

Planning Directive, Series K, which was published between 5 March and 10 May 1945, covered supply plans during operation ECLIPSE, or the disarmament of Germany. Plan A of Planning Directive, Series K, No. 1, had provided that ADSEC would continue to support the Twelfth Army Group and that the area in which it was located would become the Eastern District of the United States area of occupation, to be controlled by the Third Army. CONAD would support the Sixth Army Group, and its area would become the Western District of the United States area of occupation, to be controlled by the Seventh Army.⁸³ By 22 June the Western Military District, the Eastern Military District, and the Berlin District had been established.⁸⁴

Plan C of Planning Directive, Series K, No. 1, had provided for an enclave in the British zone around Bremen and its port, Bremerhaven, which would support United States forces in Southern Germany.⁸⁵ On 30 July the relationship of depots in liberated countries to those in Germany was clarified. Marseille, Le Havre, Charleroi, and Antwerp would continue to be base depots handling all types of quartermaster supplies. Paris would be a filler depot. Other depots in liberated countries would continue to supply depots and distributing points within Germany. It was thought that quartermaster supplies in Germany would be built up by 1 September 1945 and that thereafter depots in the liberated countries would be assigned decreased missions.⁸⁶ United States Forces in Austria (USFA) was formally constituted on 5 July 1945.⁸⁷ On 27 August the Eastern Military District, controlled by the Third United States Army, was made responsible for the logistical support of USFA.⁸⁸

The Office of the Chief Quartermaster issued the final storage plans for Germany on 30 July 1945. The depots in liberated countries were assigned missions, and their relation to depots in Germany was established. The base depots, of which Marseille, Antwerp, and Bremen were typical, held a 60-day class II supply level for troops in their local areas and a 15-day level to back up depots in Germany. As a back-up for depots east of the Rhine, the filler depot at Paris held a 15-day class II supply level. In support of the occupational forces, the filler depot at Berlin and the intermediate depot at Verdun held 45-day class II supply levels.⁹⁰

SIZE TARIFFS

Combat infantrymen in front-line foxholes, stock-record clerks in depots, and men at ports unloading ships—everyone from front to rear—needed properly fitted clothing. Soldiers' demands for specific sizes affected the workings of the supply channel from a clothing factory in Philadelphia to a railroad in Belgium. There were 90 sizes of shoes, 25 sizes of M-1943 field jackets, 34 sizes of trousers, and 27 sizes of shirts. The method of forecasting the quantity of each size required for a given number of men was based upon the interpretation of the size tariff.

A size tariff is a table showing the average number of sizes of an item needed to fit a given number of troops properly. Experience indicated, for example, that the following tariff would supply summer cotton undershirts to 1,000 troops:

Undershirts, cotton, summer, sleeveless	
Size	Per 1,000 Men
34	220
36	365
38	265
40	98
42	35
44	12
46	5 ⁹⁰

Size tariffs were established by the War Department and were based on experience records of the Army.

Background

In November 1940, when the first selectees of World War II were issued clothing at reception centers, the War Department found the size tariffs, which were based on the experience of World War I, to be no longer right. The Office of The Quartermaster Gen-

eral, therefore, began in December 1940 to revise army tariffs. Reception centers were instructed to prepare extra copies of individual clothing records for every man inducted. These records formed the basis for the revised tariffs, which were published in August 1941.⁹¹ A second table appeared in July 1942, a month after the European Theater was organized.⁹²

Use of Size Tariffs

The tariff table was used to determine size requirements of clothing. The tariff for short cotton drawers, for example, authorized the following sizes and quantities for 1,000 men:

Drawers, cotton, short	
Size	Per 1,000 Men
28	47
30	240
32	340
34	208
36	90
38	43
40	19
42	9
44	3
46	1 ⁹³

If a tariff table was to be set up for 12,000 men, the number of items in each size would be multiplied by 12. The resulting tariff would then be as follows:

Drawers, cotton, short	
Size	Per 12,000 Men
28	564
30	2,880
32	4,080
34	2,496
36	1,080
38	516
40	228
42	108
44	36
46	12 ⁹⁴

The Office of the Chief Quartermaster used the tariff tables to determine size breakdowns for all clothing requisitioned from the New York Port of Embarkation. If the proper size tariff was not applied, demands from the field could not be met. Thus, the table of size tariffs converted total requirements for the Theater to sized requirements. The requisition placed against NYPE provided the Theater with a balanced stock.⁹⁵

Model Stocks

The application of size tariffs in the European Theater led to the development of



Figure 24.—Clothing Being Sized in a United Kingdom Depot.



Figure 25.—Soldier Getting His Service Shoes, Size 13, Width EE.

"model stocks." A model stock was the estimated quantity of specific items required to supply a given number of men for a given period of time. Stocks could not be model unless they were balanced. A balanced model stock contained the required quantities not only of each item but of each size.⁹⁶

One of the earliest basic model stocks for all quartermaster and general depots in the United Kingdom was published on 1 August 1943. The quantities and items included were planned to meet the requirements of 10,000 men for 30 days. Although OCQM was responsible for determining the basic model stocks, each depot was responsible for adjusting its stock to meet its particular need. If, for example, the depot was supplying 40,000 men instead of the 10,000 set forth in its model-stock level, the depot commander would merely multiply the suggested stock level by four.⁹⁷ The model stock for clothing appears as appendix XXII. The final edition of basic model stocks for quartermaster depots on the Continent, which was published on 20 January 1945, dealt with requirements of 100,000 men for 30 days. The model stock of clothing appears as appendix XXIII.⁹⁸

Nontariff Sizes

There was need for a small number of out-of-the-ordinary sizes for oddly shaped individuals. These sizes were known as nontariff sizes and appeared in Tables of Supplemental Size Tariffs.⁹⁹ All nontariff sizes were stocked at designated depots.¹⁰⁰

Size Problems

Size tariffs became an important question in October 1944. On 8 October elements of the First United States Army captured Crucifix Hill, and a week later the United States ring around Aachen was completed. The Germans defending the city refused to accept Lieutenant General Courtney Hodges' terms of surrender, and fighting continued until 21 October.¹⁰¹

Meanwhile, Lieutenant General George S. Patton had met on 3 October with the assistant chiefs of staff, G-4, of the Third Army and of the Communications Zone. He reported that his forces, then fighting at Nancy and Metz, needed combat boots and that Third Army stocks of boots and shoes were improperly sized.¹⁰² The Chief Quartermaster explained that, because of transportation difficulties, balanced shipments of sized items had not always arrived at army supply

points. Moreover, many ships arriving from the United States did not contain balanced loads (see ch. 7). He hoped, however, that the situation would be rectified by the establishment of intermediate depots, where supplies would be balanced before they were shipped to the armies.¹⁰³

Boots and Shoes

Footwear continued to be the greatest fitting problem of the European campaign. In mid-October the First Army quartermaster reported that there was a shortage of wide, large-sized combat boots. The Office of the Chief Quartermaster organized at once a committee to study size tariffs. The committee reported that the War Department tariff was inadequate and that the trend for wider sizes on the Continent was caused by several peculiar conditions. It recommended that the tariff be revised to allow more than twice as many E-width and more than three times as many EE-width boots (see ch. 7).¹⁰⁴

The sizes of boots and shoes that the troops were demanding were supplemental, or nontariff, sizes. Consequently, to meet the requirements as rapidly as possible, the Chief Quartermaster directed that all stocks of nontariff shoes and boots be stored and issued at Reims (see app. XXIV).¹⁰⁵ But sufficient stocks of large-sized wide boots were not available. On 2 January 1945, the Chief Quartermaster reported that 75,000 pairs of combat boots and 37,000 pairs of service shoes in E and EE widths were still not being supplied against requisitions placed on the New York Port of Embarkation.¹⁰⁶ Even though studies proved that many cases of trench foot were caused solely by tight shoes (see ch. 7), the answer to the tariff problem had not been found by March 1945.¹⁰⁷

Overshoes and Shoepacs

The detailed discussion of overshoe and shoepac problems appears in chapter 7. This section is concerned only with the problem of fitting troops with these items. The increased demands for larger, wider boots and shoes caused a great deal of difficulty in the European Theater. There were 10 sizes of overshoes but 90 sizes of shoes and boots. It was essential, therefore, that the sizes of overshoes conform to changes in the tariff of shoes. In the earliest requisitions smaller-sized overshoes had been requested. Therefore, large sizes were not available when the troops began to wear larger shoes and boots. Moreover, the cloth-top overshoes could not

withstand the Continental winter. In reply to the Chief Quartermaster's repeated demands for larger and better overshoes, The Quartermaster General reported on 16 January 1945 that the new M-1945 arctic overshoe would be supplied to the European Theater and that production in the United States had been keyed to meet the demand for larger sizes.¹⁰⁸

When shoepacs were first supplied to the European Theater, they had been given no size tariff. Consequently, OCQM developed a trial table for troops on the Continent. The sizes of shoepacs corresponded to the sizes of service shoes and combat boots.¹⁰⁹ The table proposed by OCQM and the table approved by the War Department appear as appendix XXV.

PACKING AND CRATING PROBLEMS

Brigadier General Littlejohn, soon after his arrival in the European Theater, asked for improved methods of packing and marking supplies shipped from the United States.¹¹⁰ A special representative, whom The Quartermaster General sent to the United Kingdom in July 1942,¹¹¹ reported at the end of a 3-month tour of depots, camps, and ports that the damage caused by improper packing of clothing and individual equipment was relatively small. Lack of closed storage space, he said, was the chief difficulty. The weather-proof solid fiber cases, in which the material was packed, stood up well during shipment. Their top and bottom flaps, however, usually arrived unsealed or they broke open if the cases were stacked outdoors and subjected to constant dampness and intermittent rains. Burlap bags used by the Philadelphia Quartermaster Depot were completely unsatisfactory. Packages of rubber heels shipped by the Boston Quartermaster Depot were arriving in very bad condition. The boxes had not been completely filled and had sagged, caved in, or buckled. Items, such as unbaled blankets, which should have been shipped cross-strapped, were being crated by depots in the United States. The representative recommended several corrective measures. A waterproof sealing compound should be used on all packages and cartons. Burlap bags should be eliminated. If blankets could not be baled for shipment, they should be sent cross-strapped and not crated.¹¹²

In June 1943 the Chief Quartermaster was still complaining of poor marking and packing.¹¹³ The War Department subsequently recommended the use of pallets and skids for the assault period and developed the UGLY

system of marking supplies to be sent to the European Theater. Many tons of supplies packed for amphibious landing began to arrive in the United Kingdom during the spring of 1944. (See vol. I, ch. 4.) These were segregated from normally packed supplies and held exclusively for the first 90 days of the invasion.

In April 1944 the Chief of the Storage and Distribution Division was still dissatisfied. He wrote that a great many supplies were being lost, damaged, or stolen because of a general relaxation of Army-Navy packing specifications.¹¹⁴ Utter confusion characterized the early days of the assault. Ships neither landed nor discharged their contents according to schedule. Supplies were stacked and piled wherever there was room. Cases were opened and supplies issued soon after arrival. Some were dropped into the water and not into DUKW's or landing craft. Others were smashed on the beach. There was no way of keeping accurate inventories or stock records. Similarly no accurate evaluation could be made of the quality of the packing or of the containers.¹¹⁵ As late as October 1944, when Le Havre was opened, a representative of the Field Service Division reported that supplies were arriving in an unsatisfactory condition. Apparently no consideration had been given to space conservation and commodity-loading. Boxes, bottles, barrels, and cases were piled in such a way that a considerable loss was incurred.¹¹⁶

At the same time the Director of the Storage and Distribution Division, OQMG, then visiting the European Theater, asked a number of questions with regard to the packing of supplies. He wanted to know if damage by water was still an important factor, if baling was absolutely necessary, if laminated burlap tubing was being used, if luminous tape was practical, and if the fiberboard boxes were being re-used.¹¹⁷ The Office of the Chief Quartermaster replied that damage by water was greatest during the early stages of an amphibious operation but could be reduced as storage facilities became available. It could never be eliminated in the European Theater, however, because of open freight cars, old equipment, and poor closed storage. Bales should continue to be used because they saved space in ships' holds, freight cars, and depots. Laminated burlap tubing had been used in the European Theater for the outer cover of supplies only during the early stages of the assault. Any further use of the material was not contemplated. Luminous tape had not been practical be-

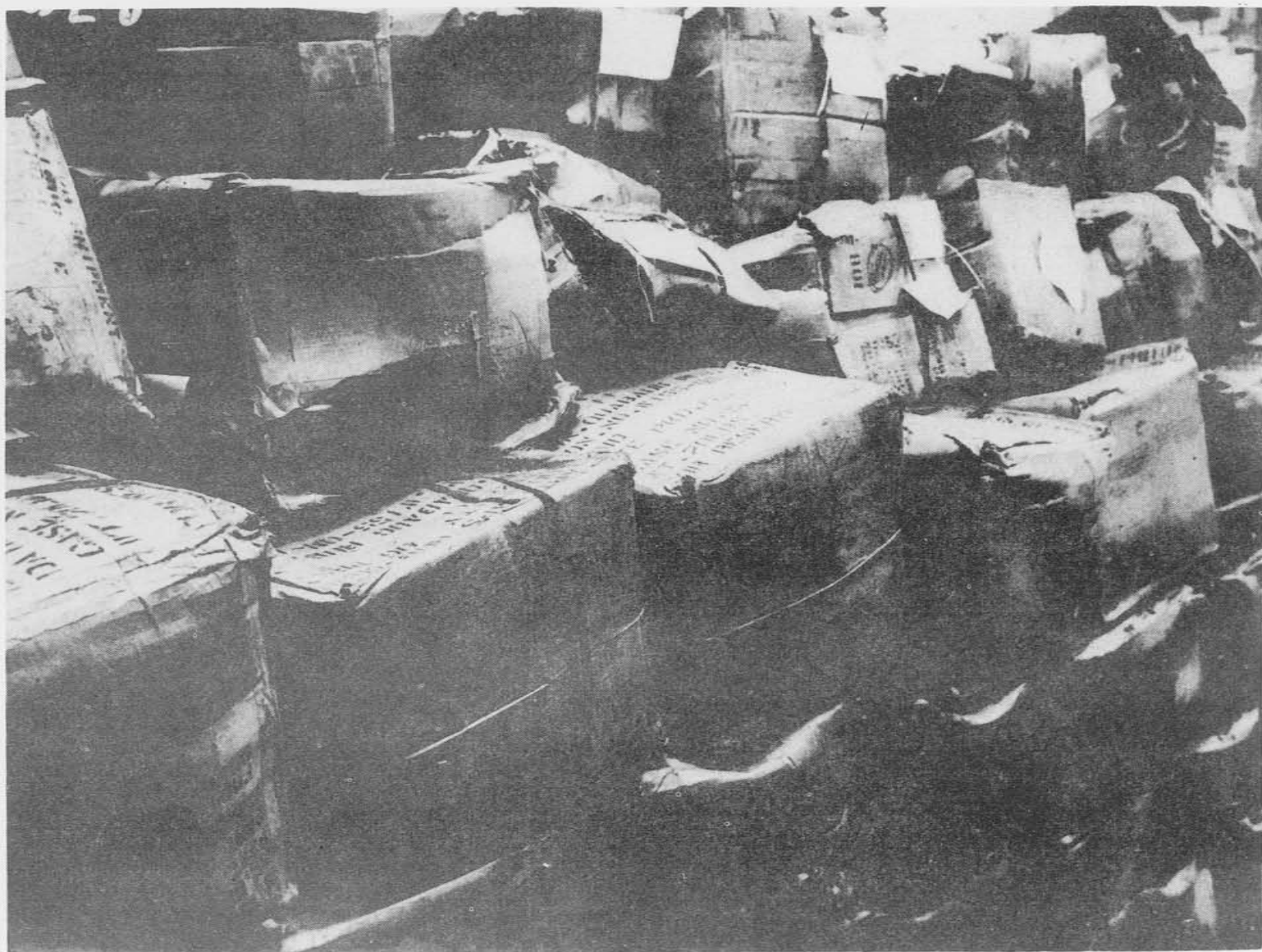


Figure 26.—Rubber Heels That Had Been Improperly Packed.



Figure 27.—British Women Repacking Supplies.



Figure 28.—Clothing before Repacking at the Reims Depot.



Figure 29.—Clothing after Repacking at the Reims Depot.

cause it was easily rubbed off. Fiberboard boxes were used primarily for repacking supplies to be consumed in the United Kingdom.¹¹⁸

During the winter of 1944 and the spring of 1945 the packing of supplies shipped to the Theater improved, but the packing of supplies within the Theater became a greater problem. In November G-4 reported that inspections of army areas had shown that shipments of individual clothing and equipment had been arriving with articles unsuitable for issue. Containers and bales were poorly packed, and some clothing and equipment had not been renovated.¹¹⁹ The Office of the Chief Quartermaster replied that the packing had been done in a salvage depot in the United Kingdom when emergency shipments of class B clothing were necessary and that steps had been taken to prevent poor packing.¹²⁰

A month later, however, the Chief Quartermaster learned that another bad situation had developed at Rouen. There, large quantities of urgently needed class II and class IV supplies were stacked on the piers. These supplies were poorly packed and improperly stored. Major General Littlejohn

at once demanded that they be moved to Reims and that the port quartermaster at Rouen be replaced by a competent officer and trained staff.¹²¹ He suggested at the same time that a written program for proper packing be published by OCQM and distributed to the field. The Storage and Distribution Division believed, however, that it would be a mistake to publish at that time instructions likely to be changed within a month or 6 weeks and that the general program outlined in the Depot Operations Manual of August was sufficient.¹²²

Redeployment planning was accelerated in the spring of 1945 (see vol. X). Then, it was necessary to publish new packing instructions for supplies being returned to the United States. These, as well as the instructions for packing supplies for the occupation forces, were incorporated in the last edition of the Depot Operations Manual. To prevent further damage and double handling, the depots operating in support of the occupation forces should establish repacking areas near receiving points for the immediate repair of damaged containers. Repaired packages should be used if possible, and packages that could not be repaired should be salvaged.¹²³

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THE ETO FIELD JACKET

The protective clothing controversy caused Brigadier General Robert M. Littlejohn to undertake the development of a uniform that could be used unimpregnated for dress or impregnated for combat. The experiment had its beginning in the summer of 1942. The upper garment, later known as the ETO field jacket, was made of British cloth and, though cut by a United States pattern, was similar to the jacket of the British battle dress.

PROCUREMENT IS INITIATED

When news of Brigadier General Littlejohn's program reached Washington, Lieutenant General Brehon B. Somervell, Commanding General, Services of Supply, expressed the opinion that the plan had merit. Though Major General Edmund B. Gregory, The Quartermaster General, believed that the Army had enough of the type of uniform that Brigadier General Littlejohn was developing, Lieutenant General Somervell wrote Major General John C. H. Lee, Commanding General, SOS, ETOUSA, authorizing procurement of enough battle-dress uniforms for testing.¹ The Chief Quartermaster proceeded, therefore, with the procurement of the new-type field jacket and had 5,000 impregnated by the Chemical Warfare Service for use in testing.

Major General Lee requested authorization to procure 360,000 other jackets from the British at the rate of 90,000 a month.² General Eisenhower, thinking that all the jackets were to be used for testing, at first limited the procurement to 90,000.³ Reconsideration was requested, however, with the assurance that the jackets were needed to complete the protective clothing supply in the European Theater⁴ and resulted in authorization for 300,000 jackets, which General Eisenhower said would be enough to issue one to each man in the proposed ground forces and services of supply.⁵

When the European Theater directed on 5 May 1943 that impregnated herringbone twill suits would be issued, plans to impregnate woolen field jackets were abandoned.⁶ Development of the field jacket, however, as part of the combat uniform was continued. On 30 April the Chief of Staff, SOS, ETOUSA, wrote the Theater Commander that

1,000 of the new-type battle-dress jackets would be ready by 10 May 1943. He requested authorization for the Eighth Air Force and the following units in the 29th Division to conduct the test: a mechanized cavalry troop, an engineer company, an infantry company, a quartermaster company, and a field artillery battery. He said that the test would require from 6 to 8 weeks and should be made under varying conditions.⁷

JACKETS ARE TESTED

The test actually began on 10 June. A few days later the Chief of the Clothing Branch, Procurement Division, wrote the Chief Quartermaster that the jacket as manufactured embodied all the desired features of a combat uniform. It was loose and full enough to provide freedom of action and could also be worn over heavy or light under-garments. The cuffs had a button fastening, which gave protection against wind. The convertible collar could be worn buttoned or unbuttoned, and the tab at the throat caused the garment to fit snug. In addition, the strap and buckle at the bottom of the jacket enabled it to be adjusted to suit various types of weather. The cloth could stand rough treatment and not only dried quickly but retained its shape after being wet. The jacket could be produced in any country with about one-sixth the labor required to produce the service coat. The actual cost of production would be between \$3.00 and \$3.50 a jacket.⁸

While the test was in progress, Brigadier General Littlejohn wrote Major General Gregory a full analysis of the standard army uniform. A 2-year experience as Chief of the Clothing and Equipage Branch, OQMG, had qualified him to speak with a high degree of authority. The officers' and enlisted men's uniforms were well tailored, he said, and made of superior cloth. They were designed, however, "more for the dress parade than for the battle field." Men in foxholes wanted uniforms that were comfortable and warm and yet good-looking. The standard field jacket had not been satisfactory. It soiled easily, was difficult to clean, and did not retain its shape. The winter combat jacket was preferred in the field. But it, too, was difficult to clean and had a collar and cuffs



Figure 30.—First Model ETO Field Jacket (left), British Battle Jacket (right), June 1943.

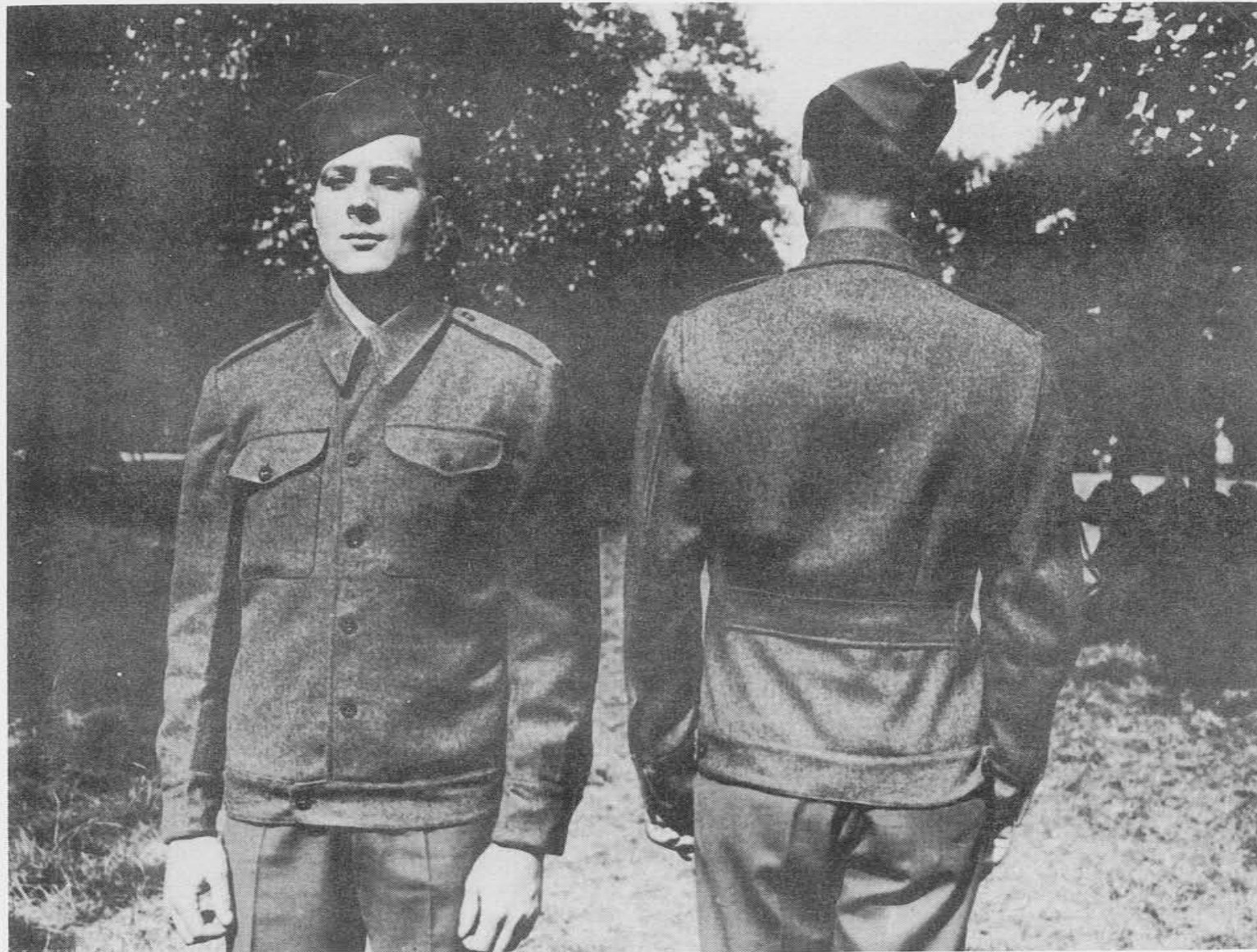


Figure 31.—ETO Field Jacket with First Revisions, July 1943.

that frayed quickly. Upon the basis of experiments that had been conducted for about a year in cooperation with the Chemical Warfare Service, the Quartermaster Service had developed a field jacket suitable for use under both static and combat conditions. The Chief Quartermaster sent samples for The Quartermaster General to inspect. The garments had been produced in the United Kingdom, but production in the United States would simplify supply. He concluded his letter by saying that the new garment would meet the needs of the combat soldier. He asked, therefore, that consideration be given to manufacturing it in substantial quantities. In the meantime, the present supply of field jackets could be used.⁹ Brigadier General Littlejohn wrote the Theater Commander that the field jackets that had been produced in the United Kingdom would be placed in reserve.¹⁰ Of the 300,000 ordered, 2,000 had been delivered by 21 June,¹¹ and 26,000 were ready for delivery.¹²

JACKETS ARE PRAISED

At the conclusion of the test the Chief Quartermaster made a full report to The Quartermaster General, reiterating much that he had said in his earlier letter. The ETO field jacket was warmer than the poplin field jacket. It allowed greater freedom of action, was easier to clean, and stayed clean longer. Its olive-drab shade was less conspicuous in the field than the lighter shade of the poplin jacket. The troops had liked the new jacket but had recommended a few modifications. Because the tongue and buckled belt were awkward, they thought there should be a button tab in front and adjustable button tabs at the side of the jacket. They recommended that the slash pockets with flaps be changed to outside patch pockets with flaps placed higher on the chest. The pockets were not accessible under the pack straps and were uncomfortable under the weapons belt. The collar should be changed so that it could be either fastened or folded back and so that it would not bunch under the back strap. The straps should be taken off the sleeves, and the sleeves should be opened at the cuffs. The protective flap in the front of the jacket should be eliminated to relieve strain on the buttons. Shoulder straps should be provided for the Chemical Warfare Service gas detector, and there should be more fullness in the body of the jacket and more inside pockets. Upon the basis of these recommendations, changes had been made that brought about a jacket

believed to be entirely satisfactory. Again The Quartermaster General was furnished samples.¹³

Brigadier General Littlejohn sent field jackets to a number of high-ranking officers in the European Theater of Operations and the zone of the interior. The jackets were received with enthusiasm. They were comfortable, wrote the Deputy Commander of the Eighth Air Force, and could replace the old-type field jacket, combat jacket, and wool-serge coat. Their adoption would result in economy of production and great saving in uniform cloth.¹⁴ The Commanding General of the V Corps recommended that the "experimental-type battle jacket be substituted for the present-type field jacket." The wool shirt, he thought, should continue to be issued because it could be worn with or without the battle jacket.¹⁵ At the request of the Commanding General of the Eighth Air Force,¹⁶ Lieutenant General Jacob L. Devers, Theater Commander, authorized on 27 October 1943 the issue of "battle-dress jackets" to flying personnel instead of leather jackets.¹⁷

PRODUCTION IS DISCONTINUED

During the spring and summer of 1943 the Research and Development Branch, OQMG, had been working on a short woolen jacket.¹⁸ In the fall of 1943, the RANKIN Case C (Norway) plan, which looked toward northern landings on the Continent, had placed in review the whole question of winter clothing (see vol. I, ch. 1).

The Theater Commander decided, therefore, that the production program in the United Kingdom should be stopped until action should have been taken by the War Department. Consequently, the Chief Quartermaster directed that no additional field jackets be procured by the Quartermaster Service. When the current contract for 300,000 enlisted men's jackets and 500 officers' jackets should have been completed, the Quartermaster Service would be "out of the business," he said. Arrangements would be made to distribute the enlisted men's jackets according to the wishes of the Commanding General of the Eighth Air Force, with the understanding that the Ninth Air Force would get its share. Of the 500 officers' field jackets, 300 would be issued to the air force in the United Kingdom and 50 to the air force in Africa, and 150 would be held for shipment to individuals designated by the Chief Quartermaster.¹⁹

QUESTION REOPENED

Early in November Major General Littlejohn visited the United States to confer on various matters relative to theater policy. He brought with him, of course, a few of the officers' jackets. Two of these he sent to General H. H. Arnold, Commanding General, Army Air Forces.²⁰ General Arnold wrote in acknowledgment that he had seen on General Eisenhower, General Spaatz, and General Marshall jackets like the ones he had received and that he was "tickled to death" to get them because they were better than anything he had "ever had before." He concluded his letter with this postscript, "Confidentially, is all this some sort of 'hush money' or is it merely an honest endeavor to make the Old Man look good?"²¹ In reply Major General Littlejohn said, "The answer to your confidential postscript is 'neither,'" and went on to explain that in the European Theater this type of field jacket was considered the proper garment to be worn by air force personnel at all times. Then he told General Arnold that Lieutenant General Devers had approved the issue of ETO field jackets to the air forces but had directed that no further production be undertaken until the War Department had acted.²²

Profoundly believing that the ETO field jacket was one of the answers to the combat-uniform problem, Major General Littlejohn continued to battle in its behalf and reopened the question on 26 January in a letter to General Eisenhower, who had just returned to assume command in the European Theater. The Chief Quartermaster reminded General Eisenhower of the ETO jacket's origin, saying that, after the authorization of herringbone twill as the material to be used for protective garments, he had given up the idea of introducing the ETO jacket as an item for impregnation. He said, however, that he still hoped to see the jacket authorized for immediate issue to replace the olive-drab jacket, the olive-drab wool-serge coat, and the combat winter jacket. He recommended that as many as possible be procured in the United Kingdom and that the others necessary to supply the troops be manufactured in the United States.²³ A few days later Major General Littlejohn, amplifying his argument, reminded General Eisenhower that the newly designed jacket was proposed to The Quartermaster General on 23 June 1943 and again on 21 July 1943 with recommendations that its production be started in the United Kingdom. The War Department had taken no

action to furnish this jacket to the Theater, but about 300,000 had been produced in the United Kingdom and distributed to the air forces. To meet requirements through December 1943, 3,415,000 jackets would be required. Of this number 1,813,000 would be for initial issue and 1,602,000 for maintenance. If the ETO jacket was not authorized, 2,911,000 wool-serge coats, olive-drab field jackets, and combat winter jackets would be required. The adoption of the new jacket would result in the following savings in replacements:

Garments	1,309,000
Man hours	8,173,000
Woolen material (yd.)	2,207,000
Cotton material (yd.)	4,300,000
Zippers	1,900,000

The monetary saving was estimated at \$15,721,000.

The Chief Quartermaster concluded his letter with the recommendation that 3,115,000 field jackets be produced in the United States by 31 December 1944 and that at least 300,000 be procured in the United Kingdom. He suggested that priority of issue be given to troops mounting the operation and to air force troops.²⁴

JACKET AUTHORIZED BY THEATER COMMANDER

On 17 March 1944 General Eisenhower authorized the ETO field jacket for issue. He cabled the War Department recommending that a production program be begun at once to provide 3,959,000 ETO field jackets for initial issue and maintenance through 1944. He estimated that 4,259,000 would be needed, of which 300,000 could be produced by the British.²⁵

LARGE-SCALE PRODUCTION PLANNED

Major General Littlejohn went to Washington during the latter part of March. Plans for production of the ETO field jacket occupied an important place on his agenda.²⁶ On 11 April he telephoned London asking Brigadier General Royal B. Lord, Chief of Staff, SOS, ETOUSA, to send Major Robert L. Cohen, Chief of the Clothing Branch, to Washington immediately with the latest models of the ETO field jacket. He said that he had been conferring with Major General Lucius D. Clay, Chief of the Requisitions Branch, ASF, in an effort to reach agreement as to the final design of the jacket. Major Cohen had recently made in the jacket some



Figure 32-A.—ETO Field Jacket as Approved by General Eisenhower, April 1944 (front).

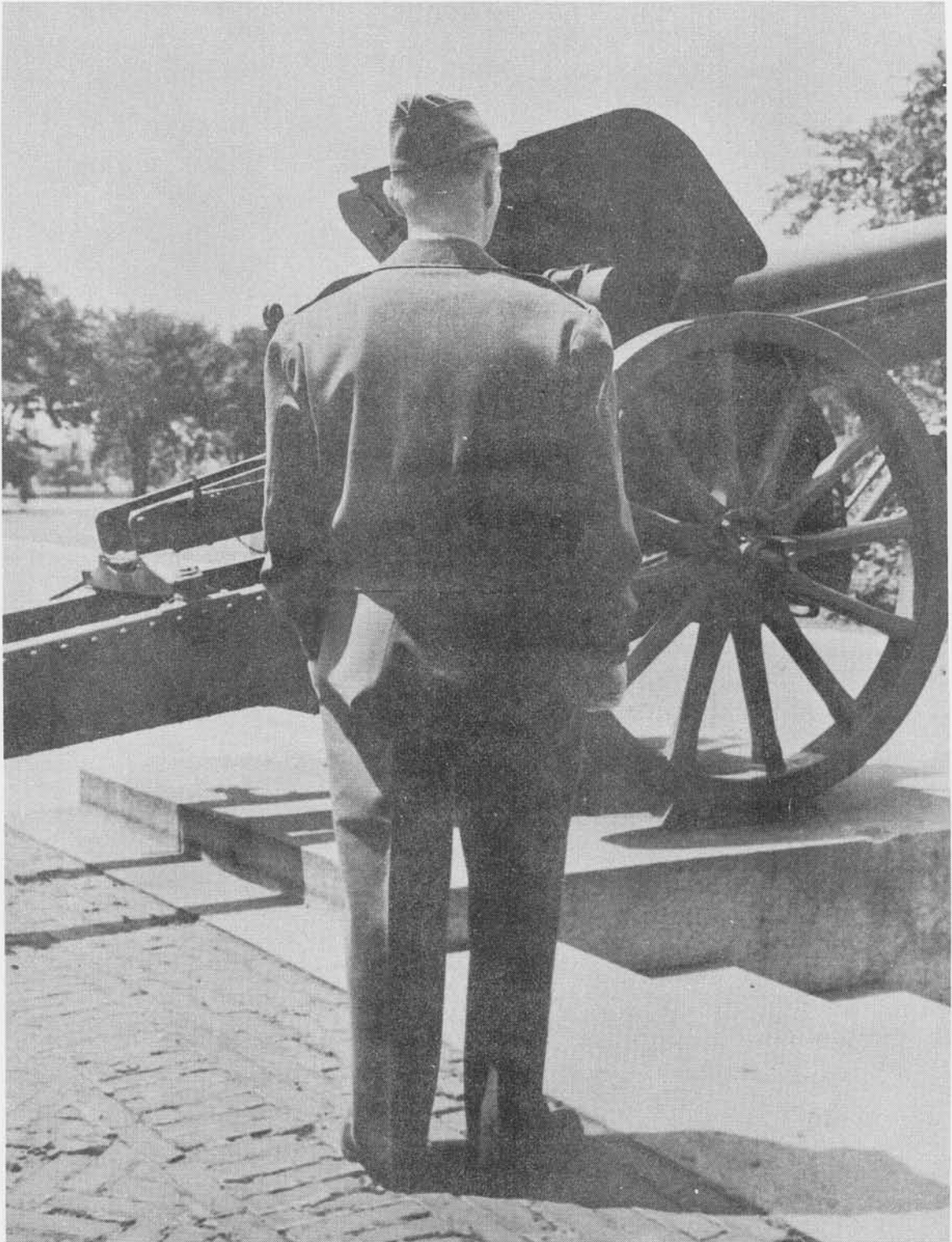


Figure 32-B.—ETO Field Jacket as Approved by General Eisenhower, April 1944 (back).

changes that General Eisenhower had recommended. Major General Littlejohn wanted to show the revised jacket to Major General Clay.²⁷

Major Cohen and the jackets came in record time. Therefore, on 17 April Major General Littlejohn was able to present four sample jackets to ASF. The first sample was the original ETO model. The second sample was the revised ETO model. This had been modified in such a way as to enable the soldier to wear his equipment comfortably. It could be worn with either the old-type or the new-type trousers. The third sample was a model made by OQMG at the Chief Quartermaster's request. This jacket could also be worn with any type of woolen trousers. The belt, however, needed to be changed in order to give style to the jacket. The fourth sample was a model made in the European Theater on the OQMG design. It had no belt and was similar to the British battle dress. General Eisenhower had approved this model.

The Chief Quartermaster would accept any one of the four models. Though he did not want the pleat on the pocket, he would agree to the War Department decision. Though he wanted 22-ounce cloth similar to that of the British battle dress, he would agree to the standard 18-ounce cloth of the United States Army. He would also agree to the pivot sleeve that OQMG wanted. Until the new jacket could be issued, the Theater would accept the winter combat jacket or the olive-drab field jacket. Major General Littlejohn suggested that 500,000 field jackets be obtained from the British. These could be delivered if they should be replaced by 500,000 British-type jackets manufactured in the United States. General Eisenhower had suggested that the trousers in the OQMG design be amended to provide an outside patch pocket. The Chief Quartermaster did not make this request, since he understood that only one type of trousers was being developed to replace the old type and since the addition of a patch pocket would necessitate two types of new trousers.²⁸

Three days after receiving the samples, Lieutenant General Somervell cabled General Eisenhower that the design for the new woolen field jackets had been agreed upon and would be adapted to the available 18-ounce serge cloth. The cablegram stated definitely that the ETO field jacket would be for dress wear. The first shipment of 500,000 jackets could be made in September. The quantity could be increased by 100,000 a month, reaching 800,000 in December. The

total number to be shipped in 1944, therefore, would be 2,600,000. Meanwhile, the Theater would be furnished with the olive-drab field jacket as a substitute. No new-type trousers would be available until the spring of 1945, because their production could not be begun until stocks of old-type trousers had been exhausted. Wool-serge coats, which would be replaced by the new-type jacket, would no longer be shipped to the Theater. The stocks on hand, however, would be issued until exhausted. It was not practicable from a production standpoint to accept the 500,000 field jackets from the British if replacement was required.²⁹

A field jacket acceptable to OQMG and OCQM was submitted to ASF on 29 April 1944. Its specifications were as follows:

- Outer cloth, 18-ounce serge
- Lining, Albert Twill
- Undercollar and waistband lining, 18-ounce serge
- Sleeve cuffs, adjustable
- Sleeves, constructed to permit lengthening 1 inch
- Box pleat in breast pocket, open
- Waistband, adjusted from the side
- Garments, made according to pattern and graded to the following dimensions for size 38 regular garment:
 - Length, including waistband, 24 inches
 - Sleeves, from center back to bottom of cuff, 33 inches
 - Waist, 32 inches
 - Half of back, 9 inches
 - Chest, 46 inches
 - Sleeves at elbow, 17½ inches

Provision was made for a long 38 and a short 38, the former to be 1½ inches longer than the regular jacket and the latter to be 1 inch shorter.³⁰

After ASF had accepted the compromise field jacket, Major Cohen sent the following reassurance to the Chief Quartermaster: "It is my opinion that this garment will in all probability serve the purpose and is the best substitute we can get out of the Research and Development Branch." With the exception of paratroopers, all troops in the European Theater would ultimately receive the new field jacket.³¹

M-1943 JACKET RESISTED

Soon it became known that M-1943 field jackets were being sent to the Theater instead of the olive-drab field jackets, which the Chief Quartermaster had agreed to accept until the ETO field jackets should be available.³² The M-1943 jacket was an integral part of the combat uniform developed

by OQMG on the layering principle (see ch. 7). Knowing that OCQM, in its advocacy of a short woolen jacket, had definitely resisted the M-1943 jacket,³³ the Chief of the Clothing Branch, Storage and Distribution Division, OQMG, inquired as to whether the substitution would be acceptable. The delivery schedule for the ETO field jacket, he said, was as follows: 150,000 in July, 500,000 in August, 700,000 in September, 750,000 in October, 800,000 in November, and 850,000 in December.

Though the War Department had stated definitely in its cable of 21 April 1944 that the ETO jacket would be for dress wear, the Chief Quartermaster continued to hope that it would be part of the combat uniform. He pointed out that the shipment of M-1943 field jackets was not according to his agreement with the Requirements Division, ASF, by which the issue of M-1943 field jackets would be only to paratroopers. Since the Theater wanted woolen field jackets, high-necked sweaters, overcoats, and mackinaws instead of the sateen field jacket and sweater combination that was recommended in the OQMG layering program, he argued that the M-1943 field jacket would be an excess item as soon as the ETO field jacket arrived.³⁴ The Office of The Quartermaster General replied that Quartermaster Board tests had proved the sweater with the M-1943 field jacket better protection than the overcoat, sweater, and ETO field jacket. Because the War Department had approved the M-1943 jacket, it would be sent to the Theater if it was wanted. However, if the Theater still preferred to retain the overcoat and dispense with the M-1943 field jacket and sweater combination, the War Department asked to be notified.³⁵

In a series of conferences with the Chief Quartermaster, the Commanding Generals of the Twelfth United States Army Group and the First United States Army expressed themselves as preferring the overcoat, ETO jacket, and high-necked sweater to the War Department combination. Men needed the overcoat, they said, to keep their legs warm. In addition, at night it took the place of an extra blanket.³⁶

Having asked how many olive-drab field jackets were still on hand³⁷ and having been informed that the number was 479,000,³⁸ the Chief Quartermaster requisitioned the entire quantity.³⁹

JACKETS ARRIVE FROM THE UNITED STATES

Late in June the first of the new field jackets reached the Theater, some manufactured by the Philadelphia Quartermaster Depot and some by a commercial firm. The Chief Quartermaster immediately wrote The Quartermaster General an analysis of the jackets. The commercial jacket was about 1½ inches too big in the upper arm. This defect, he said, should be corrected. The snap fastener on the Philadelphia jacket could be opened too easily and knocked out of shape too easily. Because a special tool was required to replace the fastener, maintenance would be difficult. The Chief Quartermaster suggested, therefore, that a buckle or another type of fastener be used.⁴⁰

Colonel Georges F. Doriot, Director of the Military Training Division, OQMG, replied that the snap fastener had never before been criticized. This was the type of fastener used on work and sport clothing, leather jackets, and such combat items as cartridge belts, pistol belts, canvas covers for the rifle, and cotton field parkas. Nevertheless, the Military Planning Division would see whether or not an alternate closure could be found. The sleeve of the jacket manufactured by the commercial firm, Colonel Doriot said, was cut according to measurements provided by the Chief Quartermaster. He closed his letter with the assurance that substantial quantities of the ETO field jackets were scheduled for early shipment.⁴¹

REQUIREMENTS VERSUS PRODUCTION PROBLEMS

On 2 July 1944 the Chief Quartermaster submitted his 1945 requirements. The 2,600,000 ETO field jackets that had been promised by 31 December needed to be supplemented by 700,000 others in order to complete the initial issue of one to each enlisted man. For the initial issue of a second jacket to replace the service coat 2,700,000 ETO jackets would be required, and 5,160,000 would be required as replacements and for maintenance of a 45-day minimum supply level. The total requirement for 1945, therefore, was 8,560,000 ETO field jackets.⁴²

On 15 July OQMG submitted to ASF the following schedule of anticipated receipts, which was based upon contracts signed with manufacturers:



Figure 33.—ETO Field Jacket as Standardized for Production, May 1944.

	Monthly	Cumulative
July	32,000	32,000
August	225,000	257,000
September	400,000	657,000
October	600,000	1,257,000
November	800,000	2,057,000
December	900,000	2,957,000
January	850,000	3,807,000
February	258,000	4,065,000 ⁴³

The Office of The Quartermaster General faced production problems that required drastic measures for their solution. Anticipated deliveries up to 31 December showed a deficit of 480,000 field jackets in the commitments to the European and North African Theaters, and the Philadelphia Quartermaster Depot was unable to contract for the final 5,000,000 jackets required during 1945. All day conferences took place in Colonel Doriot's office on 17 and 18 July, at which several workable plans evolved. In order to speed up production, it would be necessary to simplify the field jackets in minor details and allocate them to industry on mandatory orders.⁴⁴ The Chief of the Supply Division, then in Washington, insisted that changes in specifications should not be made without the Chief Quartermaster's approval and immediately wrote General Littlejohn to that effect.⁴⁵ Though the Chief Quartermaster was not entirely satisfied with the changes, he did not want production to be stopped as a result of his criticisms. He would like, however, to have his suggestions accepted as soon as possible.⁴⁶

News came on 4 August by cablegram that the 2,600,000 jackets scheduled for delivery before 31 December might be exceeded.⁴⁷ Yet on 13 August OQMG requested the Communications Zones to concur in the cancellation of 1,050,000 of the field jackets that had been requisitioned in addition to the original 2,600,000.⁴⁸ The Communications Zone withheld concurrence and cited the cablegram of 4 August.⁴⁹ The Office of The Quartermaster General replied on 7 September that unforeseen difficulties necessitated revision of former production schedules. On 1 September 1944 only 56,400 ETO field jackets had been stocked. Of this number 47,000 were being shipped to the New York Port of Embarkation. It was estimated that only 300,000 field jackets would be delivered by contractors during September. Five-sixths of the total production would be allotted to the European Theater of Operations.⁵⁰ Yet The Quartermaster General wrote on 9 September that he saw no reason why the full demands

of the European Theater could not be met. "I can assure you," he said, "that no stone is being left unturned in our efforts to deliver the jackets to you at the earliest possible date."⁵¹

Nevertheless, Colonel A. M. Brumbaugh, then Quartermaster of the United Kingdom Base, was pessimistic concerning the delivery of field jackets. Because the only shipments that had reached the United Kingdom were those for which he had made arrangements while in the United States, he suggested that a telephone call be put through to The Quartermaster General.⁵² Alarmed by the deficiency of more than 1,000,000 jackets, the Chief Quartermaster asked The Quartermaster General to let him know what substitutes would be available. He would take old-style field jackets, obsolete combat jackets, woolen coats, or anything else that would enable him to keep the troops warm.⁵³ The Office of The Quartermaster General replied by cablegram that the following items were available: 245,239 combat serviceable olive-drab field jackets, 23,107 class B olive-drab field jackets, 47,741 class A arctic field jackets, 27,898 winter combat field jackets, and 1,569,000 wool-serge coats.⁵⁴ "We don't like it," the Chief Quartermaster wrote to the Chief of the Supply Branch, Plans and Training Division, "but will have to take it." He was definite, however, in his refusal to accept class B jackets in the European Theater.⁵⁵ The substitutions as approved by General Eisenhower consisted of 457,741 arctic field jackets, 245,239 olive-drab field jackets, and 797,020 wool-serge coats.⁵⁶ Major General Littlejohn cabled at once that he would accept these substitutions.⁵⁷

The army commanders said at once that wool-serge coats were not suitable for combat. Although they had to be accepted, they would be issued as emergency items and retained only until men had been provided two ETO field jackets. It was then that Major General Littlejohn decided to accept M-1943 field jackets and asked that they be sent to the Theater instead of wool-serge coats.⁵⁸ The issue of two ETO field jackets to each man, however, was disapproved. The War Department decreed on 10 November 1944 that clothing for the European Theater of Operations would be as prescribed in T/E 21 of 1 June 1944, except that the ETO field jacket would be issued instead of the wool-serge coat. One ETO field jacket would be allowed each man; the only other jacket allowed was the M-1943 field jacket; and all other jackets in the European Theater would

be replaced as soon as possible by the M-1943 field jacket.⁵⁰

As late as 14 November The Quartermaster General hoped that 2,600,000 ETO field jackets would be ready for shipment before 31 December.⁵⁰ A chart prepared by the Storage and Distribution Division showed that on 23 November 236,000 field jackets had been reported on United Kingdom depot inventories, that 350,000 were en route from the United States to the United Kingdom, and that 33,000 had been shipped to the Continent.⁵¹ By 13 January 1945, 1,872,117 ETO field jackets had been shipped from the New York Port of Embarkation.⁵² By February the Theater had received 2,054,393 ETO field jackets.⁵³

But only a few ETO field jackets were issued as combat jackets. Observers reported that, though the troops had had only limited experience with the ETO field jacket, they had expressed the opinion that it was too dressy for combat use. They preferred the winter combat jacket to all others.⁵⁴

LARGE SHIPMENTS FOR DISTRIBUTION

As VE-day approached, field jackets arrived in large shipments for distribution to troops who were to remain in the army of

occupation and to troops who were to return to the United States.⁵⁵ On 11 June 3,000,000 field jackets were on hand and 600,000 had been issued to enlisted men. The Chief Quartermaster directed the Deputy Chief Quartermaster to take definite action to get field jackets to all troops immediately. "If we have to haul some special trains," he said, "let us do it." He was determined that the armies should be equipped within the next 30 days. At the end of that time jackets might be issued to Communications Zone troops even if wool-serge coats would have to be turned in for salvage.⁵⁶ On 2 August the Chief Quartermaster reported to the Commanding General of the Communications Zone that enough jackets were on hand to equip the entire command authorized to receive them and to provide maintenance stocks through 31 March 1946.⁵⁷ Upon Major General Littlejohn's request, an expert fitter had been sent from the United States to the Theater on temporary duty to supervise the fitting of the jackets.⁵⁸ On 15 October 1944 Major General Littlejohn had said, "As soon as the fighting is over, it will be mandatory to put the Army into a good looking uniform."⁵⁹ He had achieved this part of his objective. The field jacket, which had been first designed as part of a combat uniform, dressed up soldiers who remained on the Continent and soldiers who returned to the United States.

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- ⁶ Administrative Circular No. 17, ETOUSA, 5 May 1943.
- ⁷ Memorandum, Chief of Staff, ETOUSA, to CG, ETOUSA, 30 April 1943.
- ⁸ Memorandum, Chief, Clothing Branch, Procurement Division, to CQM, 19 June 1943.
- ⁹ Letter, CQM to QMG, 23 June 1943.
- ¹⁰ Memorandum, CQM to CG, ETOUSA, 28 June 1943.
- ¹¹ Memorandum, Chief, Procurement Division, to CQM, 21 June 1943.
- ¹² Memorandum, Chief, Clothing Branch, Procurement Division, to Chief, Procurement Division, 21 June 1943.
- ¹³ Letter, CQM to QMG, 21 July 1943.
- ¹⁴ Memorandum, Deputy Commander, Eighth Air Force, to CQM, 1 September 1943.

- ¹⁵ Memorandum, CG, V Corps, to CQM, 8 September 1943.
- ¹⁶ Memorandum, CG, Eighth Air Force, to CG, ETOUSA, 30 September 1943.
- ¹⁷ *Ibid.*, 1st ind., CG, ETOUSA, to CG, Eighth Air Force, 27 October 1943.
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- ¹⁹ Memorandum, CQM to DCQM, 13 November 1943.
- ²⁰ Letter, CQM to CG, AAF, 7 December 1943.
- ²¹ Letter, CG, AAF, to CQM, 20 December 1943.
- ²² Letter, CQM to CG, AAF, 21 December 1943.
- ²³ Letter, CQM to Supreme Commander, AEF, 26 January 1944.
- ²⁴ Memorandum, CQM to CG, ETOUSA, 4 February 1944.
- ²⁵ Cablegram W-13166, General Eisenhower to AGWAR, 17 March 1944.
- ²⁶ Letter, CQM to Acting CQM, 29 March 1944.
- ²⁷ Transcript of telephone conversation between CQM and Chief of Staff, ETOUSA, 11 April 1944.
- ²⁸ Letter, CQM to Director of Materiel, ASF, 17 April 1944.
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Figure 34-A.—M-1943 Field Jacket (front).

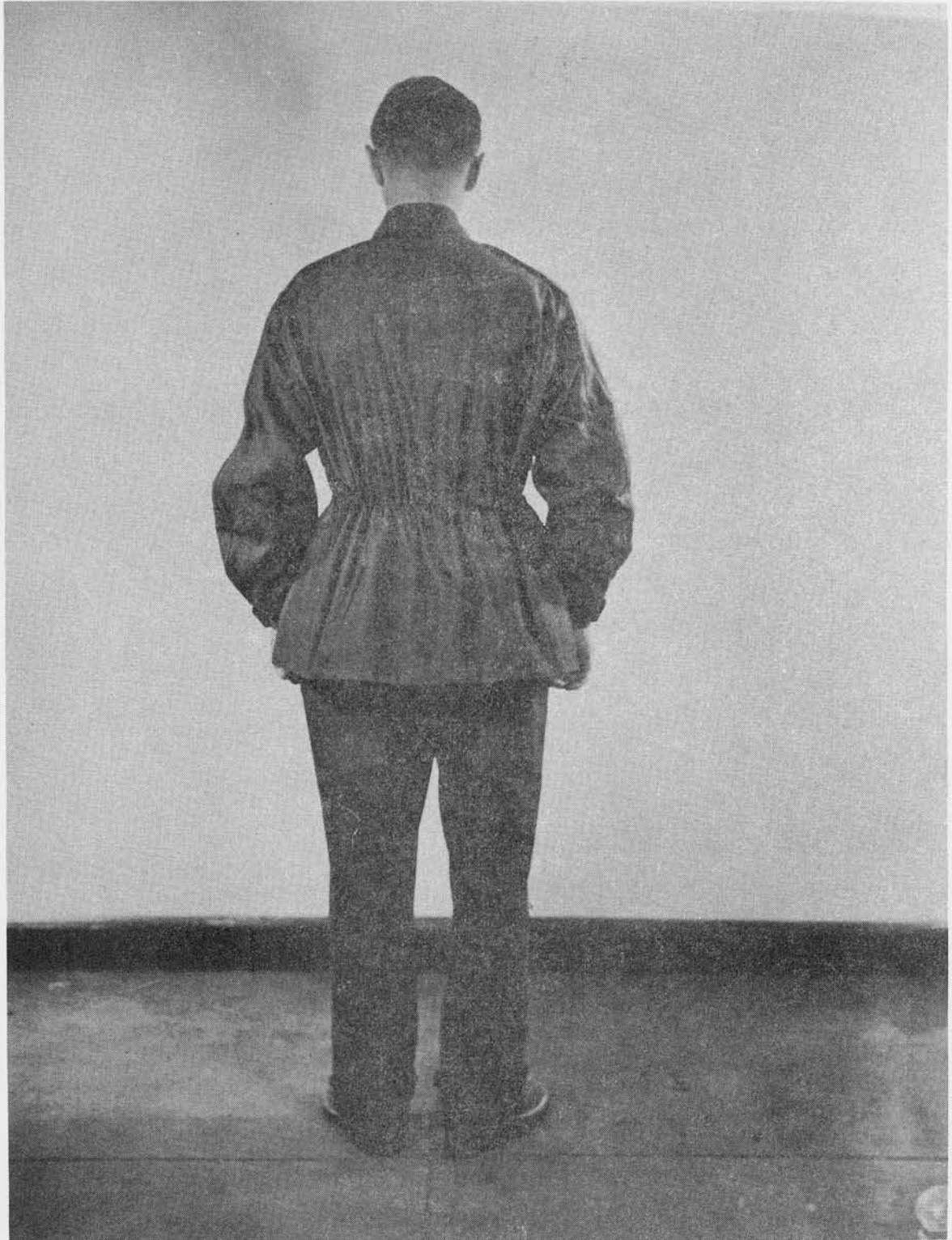


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PROTECTIVE CLOTHING

Protective clothing was a topic of controversial discussion in the European Theater from the arrival of the first large contingent of troops in the United Kingdom to D-day and beyond. The T/E 21 temperate summer-winter issue weighed 12.44 pounds exclusive of the gas mask. It was said that men on transports washed the impregnate off their shoes. They disliked the odor and the clammy feeling of the garments. Observers in all theaters reported that gas masks were either discarded or packed in such a way as to be worthless when needed.¹

Yet at the beginning of World War II military strategists confidently expected that the enemy would resort to the use of gas—one of the most diabolical forms of modern warfare. The Chemical Warfare Service and the Quartermaster Corps were jointly responsible for protecting troops against the menace of dangerous gases. The Chemical Warfare Service impregnated clothing and issued gas masks; and the Quartermaster Corps procured, stored, issued, and maintained the garments. It was found during World War I that ordinary clothing soaked up poisonous gases as blotting paper soaks up ink. The mask was capable of protecting the eyes and respiratory system, but unless porous garments had been treated in such a way as to cause vapors and droplets to be neutralized, gases that saturated fabrics proved painfully injurious to the skin. Although oilskin or slicker-type materials do not absorb gases and therefore do not need impregnation, they exclude air and cannot be worn comfortably for long periods of time. Therefore, chemical impregnating companies dipped garments into a neutralizing solution and dried them for issue. Since protection can be accomplished only when all the body is covered, a complete outfit consisted of an impregnated outer suit, a hood, socks, leggings, drawers, and an undershirt that had been impregnated, and of shoes and gloves that had been treated with impregnate.

FIRST WAR DEPARTMENT BROAD POLICY

Six days after Brigadier General Robert M. Littlejohn reached England and two days after the European Theater was created, the War Department enunciated a broad policy

with respect to protective clothing. As a temporary expedient, oversea personnel would be furnished two impregnated undershirts, two pairs of impregnated drawers and gloves, one impermeable cape with a hood, and protective ointment. The immediate objective would be equipping personnel with two suits of impregnated outer clothing, a hood, gloves, and a cape, while the ultimate mission would be equipping all oversea personnel with complete sets of impregnated clothing and providing sufficient plants for impregnating garments after they were laundered.²

On 21 June OCQM began its Sunday morning conferences at which divisions discussed plans and problems. The Chief Quartermaster announced at the first of these conferences that within the next 10 days protective clothing as a security policy would be taken up and that questions needing replies would be sent to the War Department.³

Though American troops had been in the United Kingdom since January, no protective clothing had been shipped from the United States. The lack of it was a matter of concern to Colonel W. H. Middleswart, Deputy Chief Quartermaster, who had had charge of quartermaster activities in the United Kingdom under the Special Army Observers Group and the United States Army Forces in the British Isles. Colonel Middleswart wrote Brigadier General Littlejohn on 29 June 1942 that provision of protective clothing to troops in the United Kingdom was of immediate importance. Doubting that the considerable quantity procured from the British was then in the hands of troops, he suggested that the Chief Quartermaster first get the facts from the Chemical Warfare Service and then arrange to procure additional protective equipment from the British until supplies should begin to arrive from the United States.⁴

First OCQM Recommendations

On 4 July the Chief Quartermaster requested necessary supplies to meet the conditions of the War Department letter of 10 June. The task of providing the equipment had been difficult for several reasons. In the first place, supplies were limited. In the second place, the impregnating process caused clothing to shrink, and resizing facili-

ties were not at hand. Upon the basis of his 2-year experience with protective clothing, the Chief Quartermaster suggested that each man be issued gloves, a hood, impregnated socks, and a one-piece herringbone twill suit modified as to trousers and pockets and that the garments be kept impregnated always. He further recommended that the cape be substituted for the raincoat. The suit should be oversized so that it could be slipped over outside clothing. In order to develop a workable program, the Chemical Warfare Service and the Quartermaster Service should study the question with the help of the British.⁵

In an effort to put into effect the policy set forth on 10 June, the War Department announced on 24 July that after 1 August all troops leaving the New York Port of Embarkation would be equipped with the impregnated outer clothing authorized by T/BA 21. The outfit would consist of a shirt, a pair of trousers, leggings, with special closures, protective gloves, an impermeable cape, a gas mask, impregnate for shoes, and protective ointment. Each officer would receive this equipment in addition to his uniform, which would not be impregnated. Protective cotton underwear and light-weight protective woolen socks would be shipped to the United Kingdom on the basis of one set per individual, to be stored and issued when needed. All maintenance items would be impregnated in the United States and shipped to the United Kingdom for stocking. The ordinary type of underwear, coats, and overcoats would not be impregnated. According to the plan, each enlisted man would wear at all times an outer set of impregnated woolen clothing and would be issued protective underwear when he needed it.⁶

Soldiers' Complaints

United States troops who disembarked in clothes that were unpleasantly odorous, sticky, and cold saw no reason for soldierly fortitude. Such an outfit, they argued, was conducive to neither popularity nor comfort. The Chief Quartermaster championed their cause. The soldier needed protection against poisonous gases, he argued, but the soldier needed also a suitable uniform to wear when he was on pass. As a possible solution he suggested that protective capes be shipped to the Theater in sufficient quantities to be issued to all officers and enlisted men; that modified uniforms be obtained from the British, these to be made of British cloth but cut

according to American patterns; and that standard uniforms be shipped to build up reserve levels. Both the Services of Supply and the Chemical Warfare Service thought well of the Chief Quartermaster's recommendations.⁷

It was at this time that the Chief Quartermaster began the development of the ETO field jacket, with the thought of having it impregnated for combat use (see ch. 5). Because The Quartermaster General had said that garments already standardized would be adequate if properly impregnated, the Chief of the Chemical Warfare Service expressed the opinion that the Chief Quartermaster, before authorizing any changes, should obtain approval of the Commanding General of the Theater, who had power to prescribe the combat uniform.⁸ Lieutenant General Brehon B. Somervell, Commanding General, Services of Supply, declaring that Brigadier General Littlejohn's plans had merit, said it would be satisfactory to procure enough of the proposed field jackets to enable tests of their suitability to be conducted.⁹

Conflicting Policies

The War Department policy and the European Theater policy with regard to protective clothing were at variance. Whereas the War Department had directed that only impregnated shirts and trousers be issued in the United States to troops embarking overseas, Circular No. 48, ETOUSA, of 18 September directed that upon the arrival of troops impregnated clothing be taken up and stored as soon as unimpregnated clothing could be issued and that organization commanders make prompt requisition for unimpregnated clothing. The circular provided that each officer and enlisted man would be supplied with one complete set of impregnated clothing, consisting of shirts, trousers, leggings, gloves, capes, underwear, and socks, in addition to T/BA allowances of unimpregnated items.¹⁰

A study conducted by the Quartermaster Service and the Chemical Warfare Service indicated that neither plan solved the problem. The War Department policy of wearing impregnated shirts and trousers was unsatisfactory for a number of reasons. First and perhaps foremost, the men did not like the strong odor, the cold clamminess, and the untidy appearance; and medical officers reported that the clothing, when worn in wet weather, caused a skin rash. The laun-

dry and cleaning facilities in the United Kingdom were inadequate for keeping the garments clean. It was impossible to determine with any degree of accuracy when the garments should be reimpregnated. If shirts and trousers were to be worn constantly, the shipping space required for impregnated materials would be large. It was estimated that impregnating the shirts and trousers of 100,000 men for a month would require between 225,000 and 315,000 pounds of impregnating materials.

The Theater policy was also unsatisfactory for a number of reasons. The issue of two unimpregnated shirts and trousers and one pair of unimpregnated leggings to each man upon arrival in the Theater was impossible, for stocks were based on maintenance and not on initial issue. Furthermore, shirts had to be washed too frequently for impregnation to be practicable.

Argument was then advanced for the impregnated woolen battle dress—in other words, for Brigadier General Littlejohn's field jacket. This outfit could be worn impregnated or unimpregnated—and not next to a man's skin—and would not require frequent washing. As a permanent solution the following garments were recommended for all personnel, with the exception of members of the Air Corps and the Armored Force, who would receive one protective herringbone twill suit:

Jacket, field, impregnated	1 ea.
Trousers, wool, impregnated	1 pr.
Leggings, impregnated	1 pr.
Gloves, cotton, protective	2 pr.
Hood, wool, protective	1 ea.
Cover, individual, protective	2 ea. ¹¹

CHANGE IN WAR DEPARTMENT POLICY

The problem approached solution in 1943. On 18 January the War Department authorized The Quartermaster General to design and standardize special clothing modified for gas protection. The design should be established with the technical advice and assistance of the Chief of the Chemical Warfare Service. The Quartermaster General would procure sufficient clothing to meet staff directives and deliver it to Chemical Warfare Service impregnating plants and would keep the Chemical Warfare Service informed regarding the requirements of special clothing computed for the army supply program.¹² The list of protective clothing prescribed in T/BA 21 of 7 January 1943

was rendered obsolete a month later. On 8 February protective clothing was defined as follows: the impregnated permeable type consisting of porous material treated with chemical agents, and the impermeable type consisting of materials impervious to chemical agents. The directive prescribed minimum individual protective equipment to be as follows:

Clothing

Suit, one-piece, herringbone twill, protective	1 ea.
or	
(Jacket, herringbone twill, protective	1 ea.
(Trousers, herringbone twill, protective	1 pr.
Drawers, cotton, protective	1 pr.
Undershirt, cotton, protective	1 ea.
Socks, wool, light, protective	1 pr.
Leggings, dismounted, canvas, protective	1 pr.
Hood, wool, protective	1 ea.
Gloves, cotton, protective	1 pr.

Accessories

Covers, protective, individual, (cellophane-type)	2 ea.
Mask, gas, (service, diaphragm, optical or training)	1 ea.
Tube of ointment, protective, and cotton waste	1 ea.
Can of impregnite, shoe	1 ea.

Complete individual protective equipment would consist of the following items in addition to those included in the list of minimum individual protective items:

(Shirts, flannel, od, protective	
(or	
(Shirts, cotton, khaki, protective	
(Trousers, wool, serge, protective	
(or	
(Trousers, cotton, khaki, protective	
(or	
(Breeches, wool, od, protective	
(or	
(Breeches, cotton, khaki, protective	
Drawers, cotton, protective	
Undershirts, cotton, protective	
Socks, wool, light, protective	
Leggings, dismounted, canvas, protective	
Hoods, wool, protective	
Gloves, cotton, protective	

All individuals going overseas would be issued prior to embarkation one set of minimum equipment over and above T/BA allowances. Troops already overseas and not fully equipped would be supplied with necessary items to provide minimum equipment. Theater commanders would obtain from the stock of impregnated clothing already in the theaters all items that they required in addition to those prescribed in the directive.¹³



Figure 35.—Soldier in Holland Receives Winter Clothing in October 1944.

Thus the case was decided in favor of the European Theater of Operations. Enlisted men in the United Kingdom would have protective clothing in addition to their T/BA allowances and no longer would need to go on pass smelling like embalming fluid and feeling like forgotten corpses.

STATUS IN THEATER

On 1 March 1943 the War Department asked for information concerning the status of protective clothing in the Theater.¹⁴ In reply OCQM stated its mission as storing, issuing, classifying, and sizing protective garments. Its purpose was providing all officers and enlisted men with clothing to protect them against gas attack, which meant that 115,000 men would have to be equipped immediately and 1,100,000 by April 1944. The protective clothing policy, as restated in ETOUSA Circular No. 25, 8 March 1943, was in complete agreement with the War Department policy. Each man would be issued the following items:

Suit, one-piece herringbone twill, protective	1 ea.
or	
(Jacket, herringbone twill, protective	1 ea.
(Trousers, herringbone twill, protective	1 pr.
Drawers, cotton, protective	1 pr.
Undershirts, cotton, protective	1 ea.
Socks, wool, light, protective	1 pr.
Leggings, dismounted, canvas, protective	1 pr.
Hood, wool, protective	1 ea.
Gloves, cotton, protective	1 pr.
Covers, protective, individual (cellophane-type)	2 ea.

As far as could be determined, all troops in the Theater then had the prescribed allowances of underwear, gloves, and hoods; and depot stocks of these items were sufficient to supply troops through July. Troops that had arrived since 1 August 1942 had been equipped with one pair of protective canvas leggings, two protective covers, and impregnated flannel shirts and woolen trousers on the basis of two for each man. A few units had received from the United States direct shipments of protective light woolen socks, undershirts, and drawers. The initial issue had to come from the United States or garments had to be impregnated with materials supplied by the United States.¹⁵

On 5 May 1943 the European Theater of Operations directed that herringbone twill and not wool would be impregnated and provided that each officer and each enlisted man would be issued the following items:

Suit, one-piece, herringbone twill, protective	1 ea.
or	
(Jacket, herringbone twill, protective	1 ea.
(Trousers, herringbone twill, protective	1 pr.
Drawers, cotton, protective	1 pr.
Undershirt, cotton, protective	1 ea.
Socks, wool, light, protective	1 pr.
Leggings, dismounted, canvas, protective	1 pr.
Hood, wool, protective	1 ea.
Gloves, cotton, protective	1 pr.
Covers, protective, individual (cellophane-type)	2 ea.

Clothing would be stored by organizations and would be accessible for emergencies or for training. The impregnated items would be in addition to the authorized issue of unimpregnated clothing.¹⁶

The inventory of 23 April 1943 showed the following stock of protective clothing on hand in the Theater:

Impregnated clothing	
Drawers, cotton, protective	504,985
Jackets, herringbone twill, protective	0
Shirts, flannel	13,760
Suits, one-piece, herringbone twill, protective	1,616
Trousers, herringbone twill, protective	0
Trousers, flannel, protective	11,622
Undershirts, cotton, protective	538,690
Leggings, canvas, dismounted, protective	4,558
Covers, individual, protective	13,642
Gloves, cotton, protective	589,316
Hoods, wool, protective	328,471
Socks, wool, light, protective	45,574
Impermeable clothing	
Suits, protective, one-piece, impermeable	2,438
Gloves, protective, impermeable	3,968 ¹⁷

ISSUE TO CIVILIANS

According to an early agreement, ETOUSA was to provide protective clothing for British civilians employed in United States depots. Reminded of the commitment,¹⁸ OCQM made an inquiry on 28 September 1943 as to the number of persons for whom provision should be made¹⁹ and was informed that the employees numbered 4,519 who would receive initial issue and for whom reserves would be held at gas cleansing centers. These persons were employed at hospitals, base section headquarters, and depots other than quartermaster and general depots.²⁰ The Chief of the Plans and Training Division, OCQM, reported that the Quartermaster Service was employing 6,662 British civilians. The total number of British civilians, therefore, to be provided protective clothing and equipment was 11,181.²¹

WEARING IN COMBAT

Though the basis of issue had been agreed upon early in the year, the policy as to the wearing of protective clothing in combat had not been fixed. On 19 November 1943 the Chief Quartermaster recommended that each man engaged in the operation should wear minimum protective clothing and should be provided one change of protective underwear and socks. He requested, therefore, immediate authority to requisition stocks from the United States sufficient to provide a 25 percent reserve for troops embarking between D-day and D-plus-90-day and also an additional pair of socks for each man.²²

The Chief of the Chemical Warfare Service took the position that two layers of impregnated clothing were needed for adequate protection and expressed concern because no statement to that effect had been made by the War Department. Though shipment from the United States was desirable, it could not do away with the necessity for ample reimpregnating facilities in the United Kingdom during the Continental operation.²³

On 10 December 1943 the First United States Army Group stated its policy with regard to equipping troops. Provision had been made for the issue of protective clothing authorized by T/E 21 of 10 March 1943. Protective clothing would be worn by troops in the assault stages and would be carried by individuals or organizations for all other troops.²⁴ The Office of the Chief Quartermaster began at once to prepare a reserve requisition for the entire theater troop strength as estimated for 31 July 1944. A 25 percent reserve had been authorized to meet last-minute replacements prior to embarkation. Authorization had been received for the additional issue of one pair of socks and one change of underwear for each man engaged in the operation from D-day to D-plus-90-day. It was necessary that stocks be delivered before 1 May 1944.²⁵

NEW PLAN RECOMMENDED

Studies made by the Chemical Warfare Service led to the conclusion that troops should be divided into three classes. The first class consisted of troops in areas where gas attack was likely to take place and who would probably be in contact with the enemy. The second class consisted of troops in areas where gas attack was likely to take place but who would not be in contact with the enemy. The third class consisted of troops in areas

where gas attack was not likely to take place and who would not be in contact with the enemy. To provide for the various degrees of protection, clothing should be issued as follows:

First class

- Hood, wool, protective
- Suit, herringbone twill, protective, one-or two-piece
- Socks, wool, light, protective
- Leggings, canvas, dismantled, protective
- Gloves, cotton, protective
- Drawers, cotton, protective
- Undershirts, cotton, protective

Second class

- Hood, wool, protective
- Suits, herringbone twill, protective, one-or two-piece
- Socks, wool, light, protective
- Leggings, canvas, dismantled, protective
- Gloves, cotton, protective
- Shorts, cotton, protective (not standard items)

Third class

No protective clothing

It was recommended that every theater maintain a stock pile of all items of impregnated clothing sufficient to equip its troops. Impregnating plants in a theater would be able to provide 90 percent of the necessary impregnation. A reserve of 300,000 sets of impregnated protective clothing would be maintained in the United States. Troops leaving for a theater would be issued impregnated clothing unless other instructions were received from the theater or task force commander.²⁶

The Office of the Chief Quartermaster received a copy of the plan on 11 January 1944²⁷ and replied that it seemed unwise to initiate so great a change in policy as the Chemical Warfare Service had recommended. Planning for the future operation had already been done on the theory that assault troops would wear double-layer clothing and that all other troops would be required to have items of minimum protective clothing in their possession. Upon that basis requisitions had been placed for the period from D-day through D-plus-90-day.²⁸ The status of protective clothing in the United Kingdom on 9 February 1944 appears as appendix XXVI.

D-DAY PLANS COMPLETED

Preparations for equipping troops were based upon the operational plans of the First Army. A study of these plans showed that action needed to be taken immediately to impregnate large quantities of clothing.

Quartermaster depots would ship the garments to Chemical Warfare Service plants, and quartermaster personnel would do the repacking after the garments were impregnated. The quantities needed were as follows:

Leggings, canvas, dismounted	263,692
Suits, one-piece, herringbone twill	215,096
Jackets, herringbone twill	280,500
Trousers, herringbone twill	401,610 ²⁹

As D-day drew near, other questions presented themselves for immediate answers. On 15 April the Chemical Warfare Service, reporting that the latest information received from G-2 indicated that gas warfare would begin early, suggested an elaborate protective clothing program. It was proposed that each individual in the United Kingdom have in unit supply rooms one complete uniform of impregnated protective clothing; that the Quartermaster Service maintain reserves in the United Kingdom to meet last-minute shortages; that depot stocks be sufficient to have on the Continent by D-plus-90-day supplies of impregnated clothing to meet the prescribed class II theater levels; and that reserves be maintained in the United Kingdom on the basis of one uniform for each man on the far shore by D-plus-90-day. The Chemical Warfare Service would have facilities capable of impregnating 120,000 pounds, or 20,000 uniforms, a day. The plan further proposed that after D-day all troops embarking and certain troops in the United Kingdom wear protective leggings, socks, gloves, and a hood.³⁰

Again OCQM did not concur. Stocks had been procured on the basis of an agreement between the First Army Group and the Quartermaster Service that protective clothing would be shipped to the far shore in bulk. It did not seem advisable to impregnate items that would be used after D-plus-43-day, because such a policy would necessitate in United Kingdom depots large stocks of impregnated items and would bring about a shortage of other necessary items. Shipment of prescribed impregnated clothing would be made at regular intervals in beach maintenance and follow-up maintenance sets. In addition, a 25 percent maintenance reserve would be available in the United Kingdom, and a theater reserve would be held, consisting of two suits of impregnated underwear, two pairs of gloves, and one hood per individual. The First Army plan, moreover, had not provided for the wearing of the hood, protective cotton gloves, and impregnated underclothing. If Chemical Warfare Service plants

could impregnate 120,000 pounds of clothing a day, items could be impregnated with sufficient rapidity to meet any situation that might arise. The drastic changes that the Chemical Warfare Service had suggested would necessitate shipping to the Continent a complete initial issue of unimpregnated clothing. Accordingly, at this late date it was not looked upon with favor by either the First Army or OCQM.³¹

Final decision had been made as to the use of herringbone twill or woolen clothing for impregnation. The First Army plan had provided that woolen protective clothing would be worn and that troops not equipped with woolen protective clothing would wear herringbone suits over their uniforms.³² The Chief of the Plans and Training Division, however, had said on 9 February 1944 that the trend was toward herringbone twill rather than wool, the proportion at that time having been 75 percent herringbone twill to 25 percent wool.³³ The question was definitely answered on 22 May 1944, when General Dwight D. Eisenhower cabled the War Department that impregnated flannel shirts and woolen trousers were not desired because troops requested herringbone twill.³⁴

COMBAT EXPERIENCE

After the invasion of the Continent experience in actual combat brought about revisions in the protective-clothing policy. A meeting was called on 17 June of representatives from the Chemical Warfare Service, G-3 of SHAEF, the First Army Group, and OCQM. The conferees agreed that the War Department letter of 28 April 1944 would cover the issue of protective clothing and the holding of reserves. The Theater Commander, however, would decide as to whether the initial issue would be in the hands of troops or in depot stocks.³⁵

On 8 July the following stocks, adequate to meet theater requirements, were on hand in United Kingdom depots:

Drawers, cotton, protective	2,805,623
Undershirts, cotton, protective	2,869,335
Gloves, cotton, protective	2,050,908
Hoods, wool, protective	1,520,013
Jackets, herringbone twill, protective	181,201
Trousers, herringbone twill, protective	180,647
Suits, one-piece, herringbone twill, protective	77,745
Socks, wool, light, od, protective	766,713
Leggings, canvas, dismounted, protective	203,391 ³⁶

Items then in short supply appear in appendix XXVII.

Requisitions had been made upon the basis of the War Department letter of 24 April 1944 and computed in accordance with information on theater troop strength. Early in July, however, it was evident that the policy would be changed. The Deputy Chief Quartermaster had been informed that First Army troops debarked with only a portion of the protective clothing issued to them; that the Third Army planned to leave all protective clothing in the United Kingdom unless gas warfare should begin before its departure; and that, if no gas warfare should have developed by D-plus-30-day, the protective-clothing program would undergo radical revisions. The quartermaster of the First Army had said informally that orders were being issued directing troops to use protective clothing until it was worn out. Military strategists were now of the opinion that gas warfare was improbable. If the theater policy was to be changed, requisitions should be modified. Therefore, the Deputy Chief Quartermaster thought that OCQM should be given definite information.³⁷

Change in Army Policy

The First United States Army Group announced a change in protective-clothing policy on 21 July 1944. Commanders of United States armies and other United States commanders of comparable level were authorized to discontinue the issue of protective clothing to troops on the Continent and to troops that had been alerted, to turn in to depots on the far shore unworn impregnated clothing that was in the hands of troops, and to withdraw gas masks but to keep them accessible. The armies would prescribe the organizational gas protection that would be retained by all units except those of the Chemical Warfare Service and would turn in all equipment that was not prescribed. Reserve stocks of equipment in the United Kingdom would not be shipped to the Continent unless requested by commanders.³⁸

Immediately after the new instructions were issued to the armies, the Adjutant General of the Communications Zone asked the Chief Chemical Warfare Officer to recommend the policy to be followed by the Commanding General of the Communications Zone with regard to the amount of protective equipment that should be left with Communications Zone troops.³⁹ In reply the Chief of the Chemical Warfare Service recommended

that one complete issue of impregnated clothing be held in depot storage for each individual. He thought that motorized units should retain gas masks and other items but that foot troops should turn in all protective equipment except shoe impregnite, gas masks, ointment, eye shields, and protective covers. He recommended that a 45-day level of supply be maintained in the United Kingdom for all troops in the United Kingdom and that a 45-day level of supply be maintained for troops on the far shore, 24 days of which would be stored in the United Kingdom. The Office of the Chief Quartermaster, awaiting the publication of a new theater policy, forwarded no requisitions for protective clothing.⁴⁰

The Twelfth United States Army Group published its new instructions on 11 September. United States troops on the Continent were no longer required to wear protective clothing, and no troops sent forward for service would be equipped with protective clothing. Troops, however, would use the items as long as they were serviceable; and officers, warrant officers, and nurses might turn in all items for which replacement was not required.⁴¹

Controversy Concerning Protection

The Chemical Warfare Service and the Quartermaster Service were not in agreement concerning the theater level of protective clothing. The Chemical Warfare Service had held that protective clothing should be maintained for 100 percent of the troops needing "first class" protection but agreed at a conference held on 26 September to recommend that the level be reduced to 50 percent of the total theater strength.⁴² The Quartermaster Service continued to argue that a 50 percent reserve for troops needing first class protection was too high and should be reduced to 25 percent. The space occupied by protective clothing in the crowded United Kingdom depots was needed for other supplies. If the enemy should resort to gas warfare, the 25 percent reserve would be adequate until other clothing could be impregnated.⁴³

The argument between the Chemical Warfare Service and Quartermaster Service continued for weeks. Finally, on 9 November Colonel John B. Franks, the Deputy Chief Quartermaster, having reached the conclusion that he had said enough, wrote to G-4 that he was recommending a 25 percent reserve. Clearly, he was washing his hands of the whole matter.⁴⁴ Having lost the battle, Colonel Franks instructed the Chief of the



Figure 36.—Machine Gunner near Siegfried Line Tries on New Overcoat in October 1944.

Supply Division on 23 December to prepare a cable to the War Department recommending that first class protection be reduced to 50 percent of the theater strength.⁴⁵

No Gas Warfare

After the Rhine had been crossed, the Allies again feared that the desperate enemy would use gas. On 31 March, G-4 urged that protective clothing be readily available and asked for information as to the amount then in storage.⁴⁶ The Office of the Chief Quartermaster replied that stocks were being held not only in the United Kingdom but in eight depots in France. Because no space cold and dry enough was available in the advance sections, stocks were concentrated in the Mons and Metz depots, which were the most advanced locations for class II and class IV supplies. About 200,000 square feet was required to store the initial issue of two-layer

protection for all armies in advance sections. Of this amount one-half would be at Mons and one-half at Metz.⁴⁷

There was no gas warfare in the European campaign. Therefore, impregnated clothing was not used. On 25 May 1945 the Theater notified the New York Port of Embarkation that the following items of protective clothing could be returned to the United States and asked for shipping instructions:

Drawers, cotton	2,000,000
Jackets, herringbone twill	500,000
Trousers, herringbone twill	500,000
Suit, one-piece, herringbone twill	200,000
Undershirts, cotton	2,500,000
Leggings, canvas	1,202,700
Gloves, cotton	5,560,000
Socks, wool, light	2,000,000
Hood, wool	4,298,000
Shirt, flannel	76,300
Trousers, wool	181,200 ⁴⁸

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WINTER CLOTHING

When President Roosevelt and Prime Minister Churchill met at Quebec in August 1943, three major developments had affected the course of the war in the European Theater. The air offensive against Germany, which had been gaining intensity since 1 July, had settled down to a steady round-the-clock bombing. The Reich was being dealt shattering blows by the Eighth United States Air Force by day and by the Royal Air Force by night. The Russian Armies had started on 5 July the great counteroffensive in the Kursk-Orel sector, destined to drive the Germans back to the Dnieper River. On 25 July Benito Mussolini had been replaced as Premier of Italy. The Allied leaders were determined that these events should be the first steps in the collapse of the Axis. Consequently, three decisions were made at Quebec looking toward the opening of the major effort in the European Theater. The invasion of Italy would be hastened; the Soviet Union would be drawn into full concert with Great Britain and the United States; and the French Committee of National Liberation, headed by General Charles de Gaulle, would be recognized.

The Combined Chiefs of Staff, convinced that the time had come to plan an invasion of the Continent, met with the foreign secretaries of the United Nations at Moscow in October 1943 to discuss preliminary plans for a joint operation in Europe.¹

BACKGROUND

Soldiers in the United States Army during every war and during interims of peace had known what it meant to be hot, even though actual jungle experience had been denied them. Few, however, since the days of George Washington's northern campaigns, had fought in cold weather. For almost three-quarters of a century men composing the little garrison in Alaska had led a placid enough existence. On occasion they had been outdoors in extremely cold weather, but they could always return to glowing coals and warm barracks. They wore clothing patterned after the garments of the Eskimos and made of furs readily available for outfitting a small force. It is true that in 1918 United States troops participated in expeditions sent by the Allies to Siberia and Arch-

angel. The Table of Allowances for the Alaska garrison, however, had furnished the basis of issue for the Siberian force; and the men sent to Archangel had been equipped in England.

World War I at an end, little thought was given to the possibility of future fighting in frigid lands. The Alaskan list of clothing and equipment, slightly revised in 1928, was virtually unchanged until 1940. By 1935, however, the aggressive policy of Japan, coupled with the development of long-distance aircraft, had focused attention upon the vulnerability of Alaska. Then it was that cold-weather clothing for United States troops became the subject of scientific research.

Fur was expensive and possibly not available in sufficient quantities to equip all the soldiers that might be needed in defensive and offensive operations. After much experimentation a pile fabric was developed and found to be cheaper, lighter, and warmer than fur.

Research and experimentation added new information relative to keeping warm. It had long been known that coverings do not produce body heat but merely prevent body heat from escaping. Scientists said that still air was one of the best insulators and that several layers were better than one. So, instead of wearing one heavy garment, a man should be clothed in several light garments.

The Office of The Quartermaster General began in the fall of 1942 to work upon a winter combat uniform based on the layering principle. The uniform developed by OQMG consisted of three layers of protection for the legs and four layers of protection for the torso: woolen underwear; woolen shirt and trousers; woolen sweater and outer cotton trousers; and the sateen M-1943 field jacket.²

CLOTHING FOR NIGHTLIGHT

On 30 October 1943 COSSAC published the plan for the operation RANKIN Case C, which would go into effect should Germany be weakened in the winter of 1943-44 by military disaster in Russia or the collapse of morale within the Reich or by both. If the Supreme Commander decided to invade when German surrender was imminent, a task

force, NIGHTLIGHT, would be employed to overcome remaining resistance before the general move to the Continent. A separate RANKIN Case C plan applicable to Norway was issued prior to General Eisenhower's appointment as Supreme Commander. This plan, which provided for joint occupation of Norway by United States and British forces, directed the Chief Quartermaster to make available special arctic clothing and equipment. (See vol. I, ch. 1.)³

The requirements for NIGHTLIGHT were sent to the War Department in September 1943 while the plans for RANKIN Case C were being formulated. The Quartermaster General asked that representatives of his office be sent to the Theater to acquaint supply officers with the new items of winter clothing developed in the United States. Before the request could be approved, Brigadier General Littlejohn sailed for the United States.⁴ During his visit he was shown the new items of winter clothing that had been adopted by the Army Service Forces. These items appear as appendix XXVIII.⁵

CLOTHING FOR OVERLORD

In February 1944 OVERLORD planning was progressing rapidly. The Supreme Commander gave definite assurance that the attack against Germany would be a full-scale assault and the RANKIN-NIGHTLIGHT planning could be temporarily shelved.⁶ The Chief Quartermaster reported that sufficient stocks of clothing for NIGHTLIGHT had been segregated and that his office was concentrating on a warm uniform for the men taking part in the Continental invasion.⁷ After his return to OCQM, he had requested samples of the new items.⁸ They were brought in February 1944 by a representative of the Research and Development Branch, Military Planning Division. This officer, Captain William F. Pounder, was to familiarize quartermasters in the European Theater with the new items and assist OCQM in adopting a suitable combat uniform for use in northwestern France and Germany.⁹

In May the Plans and Training Division and the Supply Division agreed that the winter uniform should consist of service shoes, light woolen socks, woolen underwear, flannel shirt, woolen trousers, olive-drab field jacket, and overcoat. The Quartermaster General agreed with the basic items selected but believed that the use of the overcoat would "have extremely serious and detrimental results on the efficiency of the com-

bat soldier." It should be replaced by the M-1943 field jacket and high-necked sweater. This combination was not only warmer than the overcoat but lighter in weight. The proposed OCQM uniform weighed 21¼ pounds. If the jacket and sweater were used, the weight would be reduced to 18½ pounds.¹⁰ The Theater Commander subsequently agreed to accept the high-necked sweater. The overcoat would not be eliminated, however, and would be issued to all troops except paratroopers, who would be the only troops to receive the M-1943 field jacket.¹¹

First Army troops entered Cherbourg on 25 June and took the city the next day. Other First Army troops had swung south and were forming the attack on Saint Lo. The Chief Quartermaster, fearful that they might be bogged down to a period of hard fighting before the Seine could be reached, stressed the need for a winter uniform. On 30 June 1944 the Deputy Chief Quartermaster announced that the winter uniform should be primarily composed of the following items:

(Boots, service, combat	Cap, field, cotton, or
(or	cap, wool knit
(Shoes, service	Poncho, lightweight
(Socks, wool, cushion-sole	Jacket and trousers,
(or	herringbone twill (to
(Socks, wool, light	be worn with woolen
	uniform for protection
	against cold and rain)
Overshoes (for troops	Shirt, flannel, olive-drab
with service shoes)	Jacket, field, wool
Leggings (for troops with	Overcoat or mackinaw
service shoes)	Sweater, high-necked
Underwear, wool	Gloves, wool, olive-drab,
Trousers, wool	leather-palm ¹²

Captain Pounder believed that this proposed uniform was lacking in water-repellent items and suggested that it be improved as follows:

Shoepacs	Jacket, field, wool
Socks, ski	Jacket, M-1943
Underwear, wool	Cap, field, cotton
Trousers, wool	Trousers, field, cotton
Shirt, wool, olive-drab	Glove-inserts, wool
Sweater, high-necked	Glove-shells, leather
Ponchos, synthetic resin	Insoles, felt (for shoe-
	pacs) ¹³

The Chief of the Supply Division accepted all the items Captain Pounder recommended except M-1943 field jackets, shoepacs, ski socks, cotton field trousers, and leather glove-shells with woolen glove-inserts. He insisted that the M-1943 jacket did not give as much protection as the overcoat or the mackinaw. Though shoepacs were more nearly water-



Figure 37.—Soldiers Make their Homes in the Ardennes.

proof than shoes or boots, the soft rubber sole wore out quickly and did not give proper support or protection. Ski socks were required only if shoepacs were worn. Cotton field trousers were required only if M-1943 jackets were worn. Leather glove-shells with woolen glove-inserts were satisfactory for drivers but not for infantry troops. Two pairs were bulky, interfered with the trigger finger, and were more likely to be lost than one pair. The woolen gloves with leather palms would provide adequate warmth to combat troops.¹⁴ Captain Pounder believed, however, that the Chief Quartermaster would follow OQMG's suggestion and that the winter uniform for troops would ultimately consist of the following basic items:

Shoepacs	Cap, field, cotton
Insoles, felt	Glove-inserts, wool,
Socks, ski	trigger-finger
Undershirt, wool	Glove-shells, leather,
Sweater, wool, high-necked	trigger-finger
Jacket, field, wool, or	Drawers, wool
jacket, field, olive-drab	Mufflers, wool
	Bag, sleeping, wool

Combat troops would wear the herringbone twill jacket and trousers over the woolen uniform. Service troops in rear areas would be supplied overcoats.¹⁵

First Requirements

Because Captain Pounder could not say when items would be available, the Chief Quartermaster asked Washington for details.¹⁶ The Quartermaster General replied that all the items that had been sent with Captain Pounder were recommended for winter combat wear on the Continent. Several other items that the Chief Quartermaster had seen in November and that Captain Pounder did not have were also recommended. These included reversible ski parkas, parka-type overcoats with pile liners, wet-weather parkas, wet-weather trousers, and such limited standard items as winter combat trousers, kersey-lined trousers, woolen field trousers, cushion-sole socks, and combat service boots. For those not immediately available suitable substitutes could be supplied (see app. XXIX).¹⁷ Brigadier General Herman Feldman, the Deputy The Quartermaster General, would be sent to the European Theater with a detailed schedule of winter-clothing production in the United States.¹⁸ Consequently, on 29 July 1944, shortly after his arrival in the Theater, Brigadier General Feldman was given an informal statement of requirements.¹⁹ He suggested that the re-

quirements be sent as a formal requisition to the New York Port of Embarkation.²⁰

The first requisition for winter clothing was sent to the War Department on Tuesday, 15 August 1944, the day United States and French forces invaded Southern France at Marseille. The requirements were based upon the strength of one field army and attached troops and covered initial issue and a 90-day replacement for all items. Half of the supplies were to be delivered in September and half in October.²¹ The items and quantities requested appear as appendix XXX. The Quartermaster General replied that practically all the items requested would be available for shipment on 30 September (see app. XXXI).²² When OCQM gave definite assurance that no further requirements would be made, OQMG included the items on the production schedule through November 1944.²³

Distribution Problems

Cold weather came to northern Europe in the early fall of 1944. On 7 September, the day the Third United States Army crossed the Moselle River, the Chief Quartermaster wrote the Commanding General of the Communications Zone as follows:

Cold weather is here. Fighting forces are demanding heavy clothing and additional blankets which the assault troops and a substantial percentage of the entire force did not bring to the Continent. Issues must be complete by 1 October if the fighting efficiency of the troops is to be maintained.²⁴

On 25 August 1944, the day Paris was liberated, the Supreme Commander had announced that the invasion was 5 days ahead of schedule. The rapid advance had caused major transportation difficulties. There were not enough port facilities to allow all the supplies needed for the operation to be unloaded. A great many ships had accumulated in European waters. On 31 August, the Quartermaster Service had 57 ships awaiting discharge, 8 of which contained clothing and equipment. Only 12 berths were available, however, leaving 45 ships still to be off-loaded. This situation naturally cut down the amount of shipping space available to move supplies from the United Kingdom to the Continent. G-4 approved an allocation of 119,000 long tons to the Quartermaster Service for the month of August, 31,000 long tons of which would be used for clothing and equipage. Actually, only 60,486 long tons sailed out of the United Kingdom, because ships were not

available. Even with this extremely limited amount of shipping, not enough rail and road transportation existed on the Continent to move supplies from port to troops. On 1 August, 28,700 long tons of clothing and equipment were at the ports. Only 12,500 long tons were moved during the month, leaving a backlog of 16,200 long tons on 1 September. It was necessary, therefore, to establish a system of priorities for off-loading and transporting supplies on the Continent. The first priority was given to ammunition, food, and gasoline, and the second priority was given to medical supplies, signal communications equipment, and construction materials for highways, railroads, and harbors. Because of the ever-changing military situation, clothing naturally received a low priority.²⁵

When the tonnage allocations for moving supplies out of the United Kingdom during September were assigned to the supply services, the Quartermaster Service received an allocation of 62,000 long tons.²⁶ The Commanding General of the Communications Zone, aware that the allocation was far below actual quartermaster requirements, approved within the over-all allocation a priority schedule that gave the Quartermaster Service preference over all other services.²⁷ G-4, United Kingdom Base, reported, however, that shipments could not be made according to schedule because of the urgent demands from the other services.²⁸ Whereupon the Chief Quartermaster told the Commanding General of the Communications Zone that the need for quartermaster tonnage was greater than it had been before the allocations were made. The minimum requirement was 88,750 long tons. Of this amount a 10,000-long-ton allocation for winter clothing would allow for a 6,000-long-ton lift by air to place supplies near the front for issue to combat troops, a 1,000-long-ton lift by LST to Brittany ports, a 2,000-long-ton lift by LST to Le Havre, and 1,000 long tons that could be applied where most needed.²⁹

G-4 replied that the allocation for the Quartermaster Service would be raised immediately to 123,000 long tons. Difficulties in moving supplies forward, however, were expected to continue until more transportation could be made available. The break-down of the 10,000-long-ton winter-clothing allocation was not approved. The 6,000-long-ton air lift was refused because all available air transport space was being used to fly gasoline and other petroleum products into the combat zone. The 1,000-long-ton lift by LST

to Brittany would not be possible unless shipments of rations and gasoline should be reduced. Approval of the 2,000-long-ton lift by LST to Le Havre was withheld pending the capture of the port.³⁰

By 20 September OCQM had developed a plan that provided for the movement of 8,000 long tons of winter clothing to the combat forces. Of this amount 6,000 long tons would be brought from the United Kingdom and 2,000 long tons would be supplied from stocks in the Normandy Base Section. The first 2,000 long tons would be moved in Liberty ships from the United Kingdom. A representative of OCQM was then at the Channel ports supervising commodity-loading. When the loading should have been completed, the representative would bring the manifest of each ship to OCQM in Paris. A quartermaster officer of the United Kingdom Base would accompany each ship to Cherbourg and would be responsible for the supplies until they were turned over to the port quartermaster. The remaining 4,000 long tons would be moved in LST's from the United Kingdom to Fecamp, a beach north of Le Havre. Another representative of OCQM would be at the Channel ports to supervise the loading of the craft. He, too, would bring to OCQM the manifest for each ship when the loading should have been completed. Quartermaster officers of the United Kingdom Base would accompany each LST.

The 2,000 long tons of clothing brought to Cherbourg by Liberty ships would be moved to the Cherbourg clothing depot and combined with the 2,000-long-ton stock already on hand. The Office of the Chief Quartermaster would then issue distribution directives to move 400 long tons daily to Reims. The first daily 400-long-ton train was to move on 23 September, and shipments were to continue for 10 days. The 4,000 long tons discharged at Fecamp would also be moved to Reims in 10 days. (See app. XXXII).³¹

The Chief Quartermaster reported 4 days later that G-4 had not approved the plan. In the meantime, the LST's had been loaded and had to be discharged somewhere on the Continent. The alternative to the Fecamp plan was to receive the ships at Cherbourg. Either the Quartermaster Service would be allocated one 400-long-ton train for the next 10 days or the daily allocation of tonnage to the Seine Section would be reduced to 100 tons and the difference allocated to the Quartermaster Service to build up a winter-clothing reserve in Paris.³²

After a conference with G-4, the Chief of the Supply Division reported that definite arrangements for moving winter clothing had been made. The Office of the Chief Quartermaster and G-4 agreed that both LST's and Liberty ships should be unloaded at Cherbourg. Therefore, 8,000 long tons of winter clothing had to be moved out of the Normandy Base Section. The Quartermaster Service would be allocated two 400-long-ton trains daily out of Cherbourg. At that time the total daily off-loadings at all ports and beaches in Normandy amounted to about 35,000 long tons. The Quartermaster Service had averaged about one-quarter of this amount, approximately 8,750 long tons. The Transportation Service had thirty 400-long-ton trains available for movement out of Normandy. G-4 had allocated 21 of these to the Quartermaster Service for food and gasoline, and no more could be spared. The Office of the Chief Quartermaster agreed, therefore, to divert 800 long tons of food daily from Cherbourg to Morlaix, where G-4 had agreed to make two trains available daily. This released 800 long tons on trains leaving Cherbourg. G-4 further agreed to make an additional train available at Cherbourg for every train the Quartermaster Service used at Morlaix.³³

The Winterizing Program

The distribution of warm clothing to the armies began at once. On 13 October the Chief Quartermaster announced that the so-called "winterizing program" was completed. "I say so-called winterizing," he wrote, "because it does not mean that all the winter items that are to be provided in this Theater have been furnished to the armies."³⁴ It merely meant that all the warm garments and items of winter equipment that the Quartermaster Service had available in the European Theater had been given to the combat forces. The troops of the First Army entering Aachen and the troops of the Third Army at Nancy and Metz received more than 6,500 long tons of clothing and equipment (see app. XXXIII).³⁵

Meanwhile, requests for items that were not yet available continued to flow into OCQM. "It is cold and the troops are becoming impatient," the Third Army Quartermaster wrote. "The whole army is rushing me. . . . I am being pressed all the way from the Surgeon and G-4 to the Commanding General."³⁶ By mid-September the Twelfth Army Group and ADSEC had presented winter

clothing requirements. Subsequently, the War Department was notified of the seriousness of the winter-clothing situation. Stocks of blankets, overcoats, overshoes, socks, gloves, and virtually all other items had been depleted. Approximately 75 percent of the combat forces would have to be equipped with winter uniforms. Millions of items had to be shipped from the United States immediately. (See app. XXXIV.)³⁷ The New York port replied that half of the requirement had been approved for immediate shipment. Undershirts, drawers, overshoes, socks, overcoats, gloves, woolen trousers, shirts, wool-knit caps, and leggings could not be shipped for at least 2 weeks. The chief Quartermaster was asked to review all woolen clothing requirements and make as many reductions as possible. Any further requirements would have to be supported by a complete justification, showing stocks on hand and due in and other pertinent data.³⁸

On 10 October 1944 the Chief Quartermaster notified the War Department that he was faced with the task of completely re-equipping 1,500,000 troops with T/E 21 allowances during the next 60 days.³⁹ The combat forces had brought to the Continent only the barest essentials. Overcoats, blankets, overshoes, woolen underwear, and other bulky items had been left in the United Kingdom to be sent over later. The task was, therefore, not to equip but to re-equip. The speed of the campaign had forced the armies to confine their daily telegram demands to food, ammunition, and gasoline. It was not until they slowed down that they were able to take stock and place their requisitions for clothing and equipment.⁴⁰ When these demands were made, the Chief Quartermaster had definite proof that "blitzkrieg" combat eats up supplies at a rate faster than anyone had expected. "I had known for some time," he wrote the Chief of Staff, Army Service Forces, "that consumption here on the Continent was much higher than the War Department factors. However, I did not have sufficient statistics . . . until additional requisitions were placed."⁴¹ Articles that had been expected to last a year wore out in a few months. The War Department expected a pair of socks to last about 4 months under normal combat conditions. Experience on the Continent proved they wore out in about 15 days. Woolen undershirts that had been expected to last 6 months wore out in 4½ months. Overcoats expected to last 18 months had to be replaced in 9 months. (See ch. 2.) Consequently, the task of re-equipping the greater portion of the United States forces

on the Continent would require more clothing than had been requisitioned. The Commanding General of the Communications Zone assured the War Department that only the minimum additional quantities had been asked for and that the complete cooperation and understanding of the War Department were essential.⁴²

By 13 October 1944 the Director of the Storage and Distribution Division, OQMG, arrived in the European Theater. One of the first topics of discussion was winter clothing. He reported that the original requisition placed by OCQM in August had not yet left the New York Port of Embarkation. He believed, however, that the requisition would be filled by November. One reason for the delay had been a similar request from the North African Theater of Operations. Army Service Forces had determined that the distribution of stocks in the United States should be equitable.⁴³ Another reason for the delay was that OCQM had requested that all items in the August requisition be loaded aboard a single ship.⁴⁴ The War Department had not approved the recommendation, because the shipments would be made from Philadelphia, Boston, and New York and because any further consolidation beyond commodity-loading would cause more delay.⁴⁵ Later the New York port reported that only half of the additional items requested for the re-equipping program had been approved. Action on the remaining quantities had been suspended until justification should have been received from the Theater.⁴⁶ Major General Littlejohn argued that the quantities approved by the War Department would not meet requirements. Deficits existed for such items as mackinaws, wool-serge coats, woolen caps, and blankets. The War Department having subsequently approved the rest of the requirement, the New York port said on 24 October that the shipment would be set up within a week. Though several minor discrepancies still existed, the Chief Quartermaster asked that the supplies be sent in a single ship as quickly as possible.⁴⁷

The Army Service Forces could not understand the repeated demands for shipment. The New York port reported that eight ships containing winter clothing had sailed from the United States in October—three from Brooklyn, three from Philadelphia, and two from Boston.⁴⁸ Four of these ships had been awaiting discharge in European waters for almost 2 weeks.⁴⁹ The Chief Quartermaster not only confirmed this statement but added that the ships might not be unloaded for

several weeks. The main line of battle had reached the Ardennes and the advance was gaining momentum daily. Of necessity, the highest unloading priority was being given to gasoline and ammunition.⁵⁰

Major General Littlejohn said that promises of delivery according to schedule would do no good unless the supplies were sent from the United States loaded on a single ship. If this request had been granted earlier, the ship could have been discharged at one port and the winter clothing could have been issued to the troops without delay. As it was, the commodity-loaded ships had to wait their turn in the priority schedule. Because the ships did not contain balanced loads but specified quantities of critical or essential items, three or four of them had to be unloaded and the supplies sorted and consolidated at an inland depot before a balanced supply of winter clothing could be sent to the armies. Limited transportation and army loading facilities prevented some ships from completely discharging their cargoes for weeks. Nevertheless, the War Department again refused to sanction the single-ship suggestion and insisted that the supplies be commodity-loaded because movement from depots to ports within the United States had been set up on that basis.⁵¹ Actually, the War Department had delivered by 15 December 1944 practically all the winter clothing that the European Theater had requested.⁵² The only shortages were for woolen field jackets and M-1943 jackets. The ships carrying the supplies were not completely off-loaded until 5 January 1945 (see app. XXXV).

Meanwhile United States forces, battling during the Belgian Bulge in the Bastogne sector and at Malmedy, were keeping warm as best they could. Warm uniforms of all kinds were being improvised. Riflemen were wearing combat boots, two pairs of woolen socks, one pair of woolen drawers, two woolen undershirts, one pair of woolen trousers, a flannel or woolen shirt, a high-necked sweater, woolen gloves with leather palms, a field jacket of any variety, a muffler, steel helmet, and a wool-knit cap.⁵³ Artillery units were wearing the same woolen uniform and an outer layer of herringbone twill.⁵⁴ Tank crews were wearing service shoes, overshoes, cotton and woolen under-clothing, woolen shirts and trousers, two or three pairs of socks, winter combat jackets, leather glove-shells, and woolen glove-inserts.⁵⁵ Significantly, the overcoat had been discarded by everyone but Communications Zone troops.⁵⁶



Figure 38.—Troops Fight in Belgium without New-type Winter Clothing, December 1944.



Figure 39.—Troops Joyfully Receive Partial Issue of New-type Winter Clothing, January 1945.



Figure 40.—Combat Winter Uniform Issued in February 1945.

By the end of December the German counterattack in the Ardennes had been checked and the stage had been set for the drive to the Rhine. The Chief Quartermaster announced that the opening of Antwerp had made possible the unloading of enough winter clothing for distribution to the armies. Immediately the Twelfth Army Group submitted requirements for the next 60 days.⁵⁷ A chart of Twelfth Army Group requirements, items requested in August and items available for distribution on 3 January, appears as appendix XXXVI. The first truckloads of special winter clothing began to arrive by mid-January, when the First and Third Armies joined hands at Houffalize, concluding the Battle of the Ardennes. A breakdown of the total amount of items delivered to the armies is included as appendix XXXVII.

Winter Clothing Conferences

On 19 January 1945 the Chief Quartermaster summoned quartermasters from the army groups, armies, corps, divisions, air forces, ADSEC, and sections and base sections to a cold-climate clothing conference, the purpose of which was to decide upon a satisfactory winter combat uniform for the European Theater or any other theater with similar climatic conditions.⁵⁸

The First Winter Clothing Conference was held on 29 January 1945. Because the new items of winter clothing had not yet received adequate field testing under combat conditions, it was agreed that test quantities of winter clothing be issued to the armies composing the Twelfth Army Group and to the Ninth United States Air Force.⁵⁹ On 2 February 1945 the Commanding General of the Twelfth Army Group notified the Commanding Generals of the First, Third, Ninth, and Fifteenth United States Armies that 1,200 pile field jackets, woolen field jackets, and woolen field trousers would be distributed. Three basic uniform combinations would be used. The first consisted of the M-1943 field jacket with the pile liner, cotton field trousers, woolen field trousers, and cotton field cap. The second consisted of the M-1943 field jacket, woolen field jacket, cotton field trousers, woolen field trousers, and cotton field cap. The third consisted of the winter combat jacket, winter combat trousers, and the combat helmet. All these would be worn with woolen underwear, woolen shirts, high-necked sweaters when necessary, shoepacs or overshoes when necessary, combat boots, and ski

or cushion-sole socks.⁶⁰ Similar tests were conducted in the Ninth United States Air Force and the XVIII Airborne Corps.⁶¹ The tests were concluded by 1 March 1945, and results were presented at the Second Winter Clothing Conference on 17 March 1945. United States forces in the Mediterranean Theater of Operations and the Sixth Army Group, which had been supported by the Mediterranean Theater until November 1944, had been using the items tested for a considerable length of time. They were represented at the conference.⁶²

Recommendations

The committee appointed to consolidate the recommendations of the testing agencies reported that the uniform best suited for a winter in the European Theater should be composed of the following items:

General Issue

Drawers, wool	Muffler, wool, olive-drab
Undershirts, wool	Cap, field, cotton, olive-drab, with visor
Shirt, flannel, olive-drab coat style	Hood, jacket, field, M-1943
Boots, service, combat	Glove-shells, leather
Shoepacs, 12-inch, with insoles	Glove-inserts, wool
Socks, wool, ski	Overshoes, arctic, all rubber
Socks, wool, cushion-sole	Socks, wool, heavy
Jacket, field, pile, olive-drab	Jacket, field, M-1943
Jacket, field, wool, olive-drab (noncombat wear only)	Sweater, high-necked
Trousers, field, cotton, olive-drab	Trousers, field, wool, 22-ounce
Overcoat, field, (trench-coat type)	Poncho, lightweight, olive-drab
	Bags, sleeping, wool
	Blankets, wool, olive-drab
	Case, bag, sleeping, water-repellent

Limited Issue

Cap, field, pile	Bag, sleeping, mountain
Gloves, leather, heavy	Boots, rubber, high
Mittens, shell, trigger-finger	Boots, rubber, knee
Mitten-inserts, trigger-finger	Waders, over-the-shoe
Poncho, wet-weather	Overcoat, parka-type, pile-lined
	Trousers, wet-weather
	Suspenders, trouser

Snow Camouflage

Mittens, over, white	Parka, over, white
	Trousers, over, white

The OQMG representatives pointed out that, because of production difficulties in the United States, certain substitutions should be indicated. The committee recommended,

therefore, that, until all items could be supplied, overshoes be used in place of shoepacs, winter combat jackets in place of pile field jackets, winter combat trousers in place of woolen field trousers, Melton overcoats in place of field overcoats, and synthetic resin-coated ponchos in place of lightweight ponchos. The committee insisted, however, that leather-palm woolen gloves and light woolen socks should not be accepted.⁶³

The Chief Quartermaster sent the committee's recommendations to The Quartermaster General on 3 April. They were not to be regarded as the official or final decision of the European Theater. First, the various agencies represented at the conferences had not been able to agree on all items. The special committee had merely arrived at an acceptable compromise. Secondly, if the complete recommendations of the committee were approved, the supply to the European Theater alone would greatly exceed manufacturing capabilities in the United States. The results of the tests and the recommendations would have to be studied further before a conclusion could be made.⁶⁴ Later, the Chief Quartermaster concurred with many of the recommendations. Of the 34 articles of winter clothing requisitioned for the European Theater, he said, 20 would be accepted as manufactured and 12 would be modified (see app. XXXVIII). The Quartermaster General was asked to send the production schedule for the items recommended as the proper uniform for the European Theater.⁶⁵ The Commanding General, Army Service Forces, replied on 4 June 1945 that the cold-weather clothing and equipment prescribed in T/E 21 of 1 January 1945 would be supplied from sources within the Theater and not from the United States. Light woolen socks would be shipped regardless of individual preferences, and the rest of the requirement would be filled with heavy woolen socks and woolen socks with cushion soles. The European Theater would be supplied only heavy, leather gloves, since all other types were being sent to active theaters. Because of established demands from the Pacific Theater, production of nonstandard, limited standard, or modified items of winter clothing for the European Theater was not approved. The main responsibility of the Communications Zone was the support of the occupational forces, who would operate under conditions similar to those in the United States. Consequently, they would receive no special clothing and equipment not provided to troops in the United States. The basis of supply for

the European Theater would be the summer-winter issue column of T/E 21, 1 January 1945.⁶⁶

PROBLEMS

The Special OQMG Winter Clothing Committee, which was sent to the European Theater in March 1945 to help the Chief Quartermaster prepare recommendations for a winter uniform, was composed of representatives from the Procurement, Military Planning, and Storage and Distribution Divisions. For the benefit of future research and development, the committee gathered soldiers' reactions to articles of clothing. Discussions and observations in 18 divisions had indicated general satisfaction with the items that had been provided. There were, however, four articles about which the principal differences of opinion existed: sleeping bags, field jackets, footgear, gloves, and ponchos.⁶⁷

Sleeping Bags

On 23 February 1944 The Quartermaster General approved the woolen sleeping bag for production.⁶⁸ This bag, which weighs about 3 pounds and has the warmth of two blankets, was said to be adequate in temperatures as low as 40° F. but not lower.⁶⁹ The Office of the Chief Quartermaster requested 50,000 woolen sleeping bags shortly after receiving news of their standardization.⁷⁰ On 24 May the New York Port of Embarkation said that 2,580,000 bags could be shipped by November 1944. The 50,000 woolen sleeping bags that had been requested would reach the United Kingdom in time for D-day. The basis of issue was one bag for each man, replacing two of the four blankets authorized by T/E 21.⁷¹

Troops taking part in the assault, having been instructed to carry light loads, had turned in two of their blankets in marshaling areas. This policy necessitated salvaging articles and re-equipping troops.⁷² The Chief Quartermaster reported that 2,761,801 sleeping bags were needed on the Continent for initial issue and replacement.⁷³ The Quartermaster General replied that this requirement exceeded by more than 180,000 bags the stocks that had been earmarked for delivery to the European Theater.⁷⁴ The Deputy Chief Quartermaster, then in Washington, was told that only the amount originally specified for the European Theater would be shipped.⁷⁵ The demand was subsequently reduced to conform to the OQMG shipping schedule, which provided for 2,580,000 sleep-

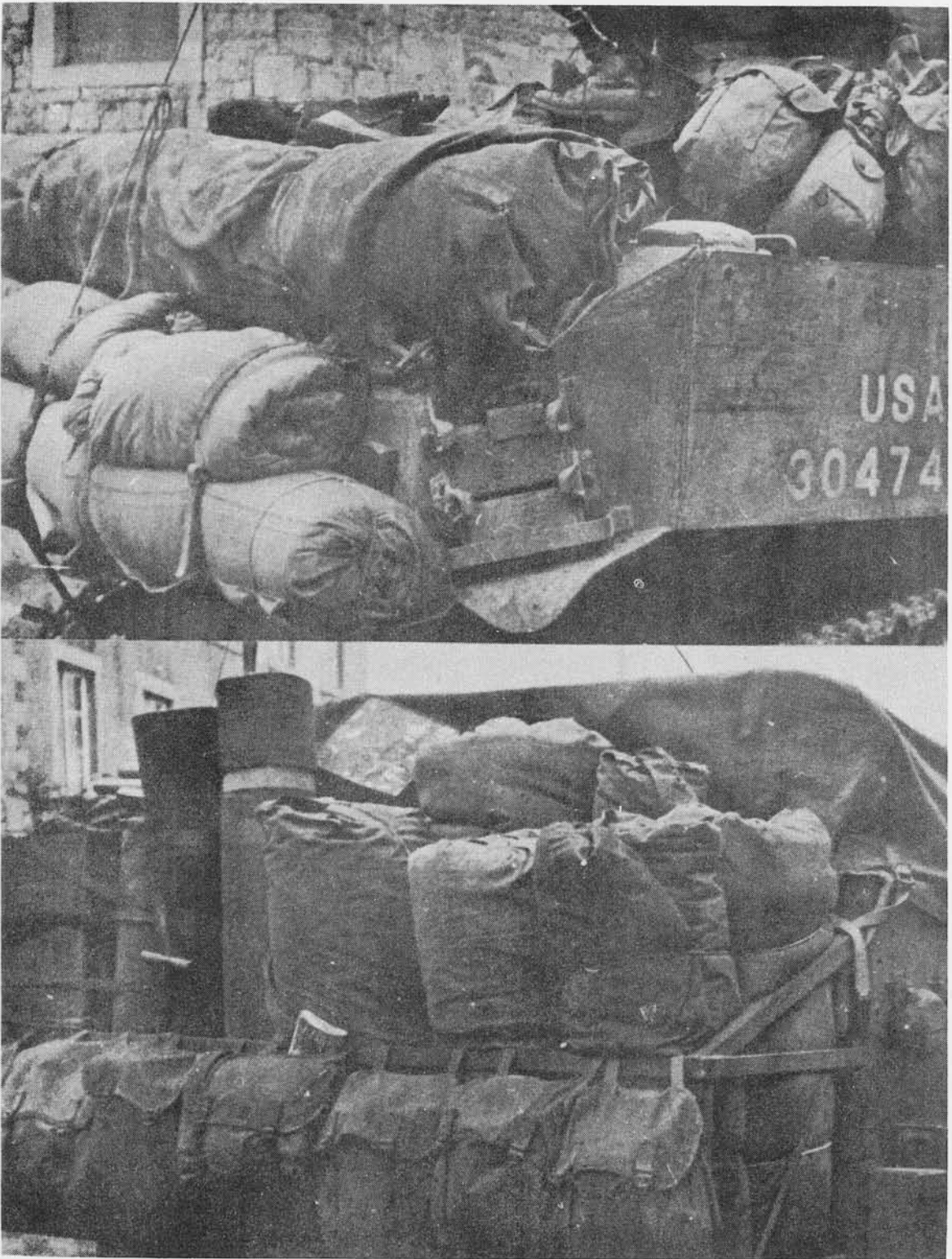


Figure 41.—Blankets and Sleeping Bags Being Transported by Half-tracks and Tanks.

ing bags by 31 October 1944, and a definite agreement was reached that no additional blankets would be shipped to the European Theater.⁷⁶

First Army troops entered Germany near Aachen on 12 September, and a week later the city was subjected to heavy shelling. Because the weather had suddenly turned cold, the need for blankets or sleeping bags was great. During the race across France, blankets had been used in dugouts and foxholes and had been left in the mud by troops forced to move quickly. Others had been used by hospitals and by personnel of the Medical Service to throw over wounded men on litters or in the field. The unexpectedly large number of prisoners of war had also required more blankets than had been anticipated. French territorial forces fighting with the Allies had also been supplied. The estimated requirement for United States forces until the end of the year was 7,470,594 blankets. In spite of assurances from the War Department that 2,100,000 sleeping bags would be delivered by October, only 57,721 had been received by mid-September. This was equal to 115,442 blankets. Because supplies were insufficient to issue each man four blankets or two blankets and one sleeping bag, the War Department was asked to ship 3,140,000 blankets or 1,512,279 sleeping bags.⁷⁷ The New York port explained that a production lag had caused the shipment of sleeping bags to be 1 month behind schedule. The most recent production schedules, however, indicated that the full requirement would be shipped during November.⁷⁸ The Chief Quartermaster subsequently requisitioned 648,621 more bags, bringing the total to 3,228,621 sleeping bags, of which 2,845,514 were received by March 1945.⁷⁹

Soldiers' Comments

During the Second Winter Clothing Conference, held in March, observers from OCQM and OQMG reported that throughout the entire campaign combat troops had expressed preference for blankets. Actually, during an attack the soldier did not use either blankets or sleeping bags but left both with the battalion field supply train, to be brought up when conditions should become static. After an attack, when men were entrenched in two-man foxholes, they made a pallet of two blankets and two sleeping bags and used the other two blankets as covering. They did not get into the bags because they feared that they could not get out quickly

enough in case of a surprise attack.⁸⁰ The First Army quartermaster made a similar report. Troops in direct contact with the enemy repeatedly expressed their desire for four blankets rather than for the sleeping bag and blanket combination.⁸¹ Communications Zone troops, however, who had been issued only two blankets, wanted sleeping bags because two blankets were not enough during a Continental winter.⁸²

Field Jacket

Although the War Department had developed a standard winter combat uniform by November 1943, six different field jackets were used in combat in the European Theater. The uniform developed by the Office of The Quartermaster General was based upon the layering principle and included the wind-resistant, water-repellent M-1943 field jacket worn in combination with the woolen undershirt, the flannel shirt, and the high-necked woolen sweater. The European Theater did not submit requisitions for the M-1943 field jacket, however, until October 1944.⁸³ In spite of The Quartermaster General's conviction that the M-1943 field jacket and sweater combination, which embodied the layering principle, was necessary for adequate warmth in winter combat, the Chief Quartermaster resisted the M-1943 field jacket. Although Lieutenant General Brehon B. Somervell had said that the ETO field jacket should be for dress wear, OCQM continued to consider it a combat jacket. When stocks of olive-drab field jackets were utterly depleted, requisitions were submitted for such limited standard and obsolete garments as the winter combat jacket. Finally, even wool-serge coats were requested as substitutes for the M-1943 field jacket. (See ch. 5.)

By October the troops, the army commanders, and the Supreme Commander were demanding that something be done. The worst winter experienced on the Continent in years, perhaps since 1917-1918, was setting in. Because the Siegfried Line defenses were formidable, United States divisions were paying heavily for every inch of ground they tore from the fanatical defenders. "Unless some trouble develops from within Germany," the Supreme Commander wrote, "the enemy should be able to maintain a strong defensive front for some time, assisted by weather, floods, and muddy ground."⁸⁴ Morale would be endangered if the men continued to be cold. The olive-drab field jacket had proved unsatisfactory. Troops in the front line had complained about the overcoat. It was too

bulky for combat duty when dry and too heavy when wet. The wool-serge coat definitely could not be used for any purpose but dress wear.⁸⁵ Consequently, on 26 October OCQM asked that 797,200 wool-serge coats, previously requisitioned, be replaced by an equal number of M-1943 field jackets.⁸⁶ Another requisition for 1,206,123 jackets followed less than 2 weeks later.⁸⁷ The New York port assured the Theater that the jackets would leave Brooklyn in December.⁸⁸ Troops of the Twelfth Army Group began to receive the M-1943 field jacket just before the winter-clothing conference of January 1945.

Soldiers' Comments

During the first conference army and army-group quartermasters reported that they had not had enough experience with the M-1943 field jacket and sweater combination to make specific recommendations. The armored forces, however, were of the opinion that the winter combat jacket was more suitable in the European Theater than the M-1943 field jacket.⁸⁹ Opinion had changed little when the second conference was called in March, after the various uniform combinations had been tested for a month. The Special OQMG Winter Clothing Committee, then in the European Theater, reported that among elements of the First, Third, and Ninth Armies the demand for the winter combat jacket was still widespread. In most cases these troops had used the M-1943 field jacket with pile liner and sweater for only a few weeks.⁹⁰

The reaction of troops in the Sixth Army Group was quite different. These forces, which had invaded Southern France, had been supplied until November by the Mediterranean Theater of Operations. They had been using the complete OQMG uniform for a considerable period of time and were unanimous in expressing satisfaction.⁹¹

The Quartermaster General explained that the pile field jacket, which was really a liner for the M-1943 field jacket, more than took the place of the winter combat jacket. It carried to the extreme the layering principle of holding body heat by insulation. Soldiers' comments suggesting minor modifications of the jacket would be investigated, but the basic principle would not be altered.⁹²

Footgear

The Boston Quartermaster Depot announced on 25 January 1944 that orders for 1,525,000 pairs of combat service boots had

been placed with 25 manufacturers.⁹³ The combat boot had been designed to replace the service shoe and leggings. Made of heavy leather, it stood 10 inches high and was laced from the instep to the two-buckle cuff at the top. The flesh side of the leather was turned outward in the lower part of the boot and inward in the cuff. The sole and heel were made of synthetic rubber. The cuff was lined with heavy canvas, which held tucked-in trousers securely in place. In 1943 the boot had undergone field tests in North Africa and the Southwest Pacific and in maneuvers in the United States.⁹⁴

The European Theater was notified in March 1944 that boots would be supplied in the near future and that they would be issued, except to air force personnel, on the basis of two pairs per man. Service shoes and leggings, however, would be issued until stocks should be exhausted.⁹⁵ In July the Deputy Chief Quartermaster, then in Washington, asked that one pair of combat boots be issued to each soldier awaiting shipment to the European Theater. In this way stocks of service shoes on hand could be reduced to the minimum required by air force personnel. Initial issue of combat boots to all other forces already in the Theater could be made from stocks shipped to the United Kingdom.⁹⁶ The Quartermaster General did not grant the request. First, not enough boots had been manufactured for issue at posts, camps, and stations. Secondly, such a plan would be possible only if all troops going to the European Theater should pass through the Boston or New York staging areas.⁹⁷ The Commanding General, Army Service Forces, upheld the decision on 22 July.⁹⁸

Early in July, 1,275,000 pairs of combat boots had reached the Theater or were due in from the United States. These would be used to provide an initial issue of one pair to each man. All subsequent requisitions would be placed only to provide replacements for service shoes, completing the T/E 21 allowance of two pairs of boots per man.⁹⁹ After the War Department refused to issue boots at ports of embarkation, the Theater Commander directed that each man in the combat forces be issued one pair of boots and one pair of service shoes.¹⁰⁰ This policy was accepted by the War Department and remained in effect throughout the campaign.¹⁰¹ On 2 October the War Department decreed that troops leaving the United States after 20 November 1944 would be provided one pair of combat boots and one pair of service shoes and leggings.¹⁰²



Figure 42.—Battle-weary Shoes.



Figure 43.—Shoes That Caused Trench Foot.

Difficulties

Soon after the combat boot was issued, difficulties were reported. On 9 June 1944, for example, the Director of the Military Planning Division, OQMG, wrote that samples of worn, flesh-side-out service shoes and combat boots returned from the Theater showed that polish had been used. The directives that prohibited this practice, he said, should be enforced.¹⁰³ The Chief Quartermaster replied that, in spite of all regulations, some soldiers would polish shoes and some commanding officers would require soldiers to polish shoes.¹⁰⁴

The combat boot was extremely popular among the troops when it was first issued in the United Kingdom and continued to be throughout the first 4 months of the invasion. Then, in October 1944, as First United States Army forces were completing the ring around Aachen, serious shoe problems developed. The First Army quartermaster reported that there was a shortage of combat boots in widths E, EE, and EEE.¹⁰⁵ A study, started at once by OCQM to determine the adequacy of the War Department size tariffs for service shoes and combat boots,¹⁰⁶ proved that the difficulty was caused not by the tariff but by conditions on the Continent. Most men had been fitted during the summer in United Kingdom or at reception centers in the United States, when they had worn light woolen or cotton socks. The American soldier's desire for a snug, well-fitting shoe was a national characteristic. The boots and shoes, therefore, were too small and too narrow when worn over several pairs of heavy woolen socks.¹⁰⁷ The Office of the Chief Quartermaster immediately sent requisitions for larger, wider boots¹⁰⁸ and directed that all large-sized boots and shoes then in the Theater be stocked in intermediate depots, from which they would be sent to the armies, and would not be put into balanced loads in port depots.¹⁰⁹

Complaints grew louder as increased numbers of combat boots reached the front lines. The boots leaked and were cold, even after constant dubbing. Troops provided with flesh-side-out service shoes made the same complaint. Though smooth-surfaced leather was preferred, all troops wanted the combat boot because it did away with leggings.¹¹⁰ Many troops in the First Army who had not received combat boots sewed leather cuffs onto service shoes.¹¹¹

Trench Foot

The Twelfth Army Group began maneuvering on 8 November 1944 for its offensive eastward from Aachen. When the attack was touched off a week later by an intensive air-artillery bombardment on fortified positions north of Eschweiler and west of Duren, the armies that launched the attack were not up to full strength because more than 4,700 troops were incapacitated by trench foot.¹¹²

Trench foot is a term used by the Medical Department for injury to feet caused by prolonged exposure to cold at temperatures just above freezing. It is similar to frost-bite, which is caused by exposure in below-freezing temperatures.¹¹³ In the French Army during World War I trench foot amounted to 3.02 percent of the total number of battle casualties. During the period October 1944 to April 1945, 46,107 United States soldiers in Europe were hospitalized because of it. This figure equaled the troop strength of three combat divisions and was 9.25 percent of the total number of casualties during the entire Continental campaign.¹¹⁴

Trench foot broke out among the combat forces like a contagious disease. The first wave began in November and lasted until the second week in December. The second wave began during the German counterattack in the Ardennes. The third, which was really a wave of frost-bite, broke out early in January 1945.¹¹⁵ Trench foot was most common in infantry divisions where soldiers had been living in the wet and cold without the opportunity to change shoes and socks regularly.¹¹⁶ Trench foot was attributed to five causes: improper care of the feet, the wrong kind of footwear, inadequate winter clothing, failure to rotate troops, and cold and wet weather.¹¹⁷

The earliest directive that stressed proper care of the feet was issued by the War Department on 22 July 1944.¹¹⁸ The higher echelons of command in the European Theater in turn sent similar circulars to the field.¹¹⁹ The lower echelons, however, were extremely lax in enforcing the regulations and in stressing the importance of the proper care of the feet.¹²⁰ It was not until January 1945 that a theater-wide trench-foot-control program was begun. Unfortunately, one of its major provisions was unsound. Dubbing did not make boots and shoes waterproof; and it shut out air, thus causing perspiration and consequently cold feet. In spite of regulations some commanders insisted that shoes be polished; and most troops preferred shoe polish to dubbing.¹²¹

The nature of the operation on the Continent did not permit troops to carry the proper types or quantities of spare clothing with them. New items or replacements could not be delivered when needed because of extended supply lines and inadequate stock piles of winter clothing.¹²² When two or three pairs of socks were worn, combat boots and service shoes were too tight and interfered with circulation. Large-size boots and shoes could not be delivered immediately. Heavy woolen and ski socks were available only in limited numbers during the trench-foot season. Troops were instructed to change socks daily. Yet socks could not be dried overnight and a change of socks could not be provided.

Overshoes were not the answer. They were tiring on long marches; they interfered with proper ventilation; and they were not available in large enough sizes. Some troops discarded boots or shoes and instead put several thicknesses of blanket padding inside their overshoes.¹²³

Shoepacs, although not entirely satisfactory, were the best footgear provided in the European Theater. Sufficient stocks, however, were never available to equip all combat troops. Because the first models did not have heels high enough to provide proper arch support, troops were reluctant to accept them. The War Department corrected the design, but the improved models did not become available in time to make a complete issue to combat troops before the spring of 1945.¹²⁴

To be completely effective, the layering principle had to be applied to the entire body. The Office of the Surgeon General reported that, when the soldier took his hat off, his feet got cold.¹²⁵ During the period of the Belgian Bulge, 19 December 1944 to 31 January 1945, the average maximum temperature was 33.5° F.; the average minimum temperature 22.6° F.¹²⁶ The men were severely chilled by constant rain or snow. Troops living and fighting in these near-freezing or freezing temperatures were cold unless they had all parts of the winter uniform. Although there was an ample supply of ordinary winter clothing, the special items developed in the United States were not available for general distribution in the European Theater until late January 1945.¹²⁷

Rotation of troops was as much associated with trench foot as it was with combat fatigue.¹²⁸ When troops were relieved periodically from front-line duty and returned

to rest areas, they were less susceptible to injury by cold. No general rotation policy was in effect in the United States armies. Each division, regiment, battalion, company, or squad had its own. Usually, rotation took place in two forms: a complete rest period once a week or a short rest period after 2 or 3 hours on outpost duty.¹²⁹ Even daily rotation was difficult during offensive operations when "one more step and . . . one more shot" might accomplish an objective.¹³⁰

Nothing could be done about weather and terrain. The United States forces fought in the worst weather the Continent had experienced in at least two decades. One company of the 9th Infantry Division, for example, took some unoccupied enemy trenches, which were filled with 18 inches of water. Enemy fire forced the troops to take cover in these trenches, where they remained for 4 days.¹³¹ Even in May 1945 foxholes and dugouts were still full of water.¹³²

Final Recommendations

During the winter-clothing conferences in March 1945, the special committee from OQMG assured the Chief Quartermaster that the feasibility of changing the leather in the combat boot would be studied in the War Department.¹³³

At the same time, Mr. Lawrence B. Sheppard, footwear representative from the War Production Board, expressed his belief that there was a definite need for both overshoes and shoepacs. Shoepacs were good items in extremely cold weather, he said, but overshoes were more satisfactory during milder weather, because they could be removed when not actually needed. Shoepacs, once issued, had to be worn until turned in for shoes or boots. Mr. Sheppard advocated the elimination of light woolen socks, arctic socks, and cotton socks as part of the winter combat uniform in the European Theater and said that for use with combat boots and shoepacs they were not as good as heavy woolen socks and ski socks. He believed the use of dubbing on flesh-side-out shoes and boots to be of no practical value.¹³⁴

Mittens and Gloves

Experience in the European Theater proved that troops liked leather glove-shells with wool inserts.¹³⁵ These gloves were prescribed in T/E 21 of 1 June 1944 for only mounted enlisted men, mechanics, and vehicle drivers. Woolen gloves with leather palms

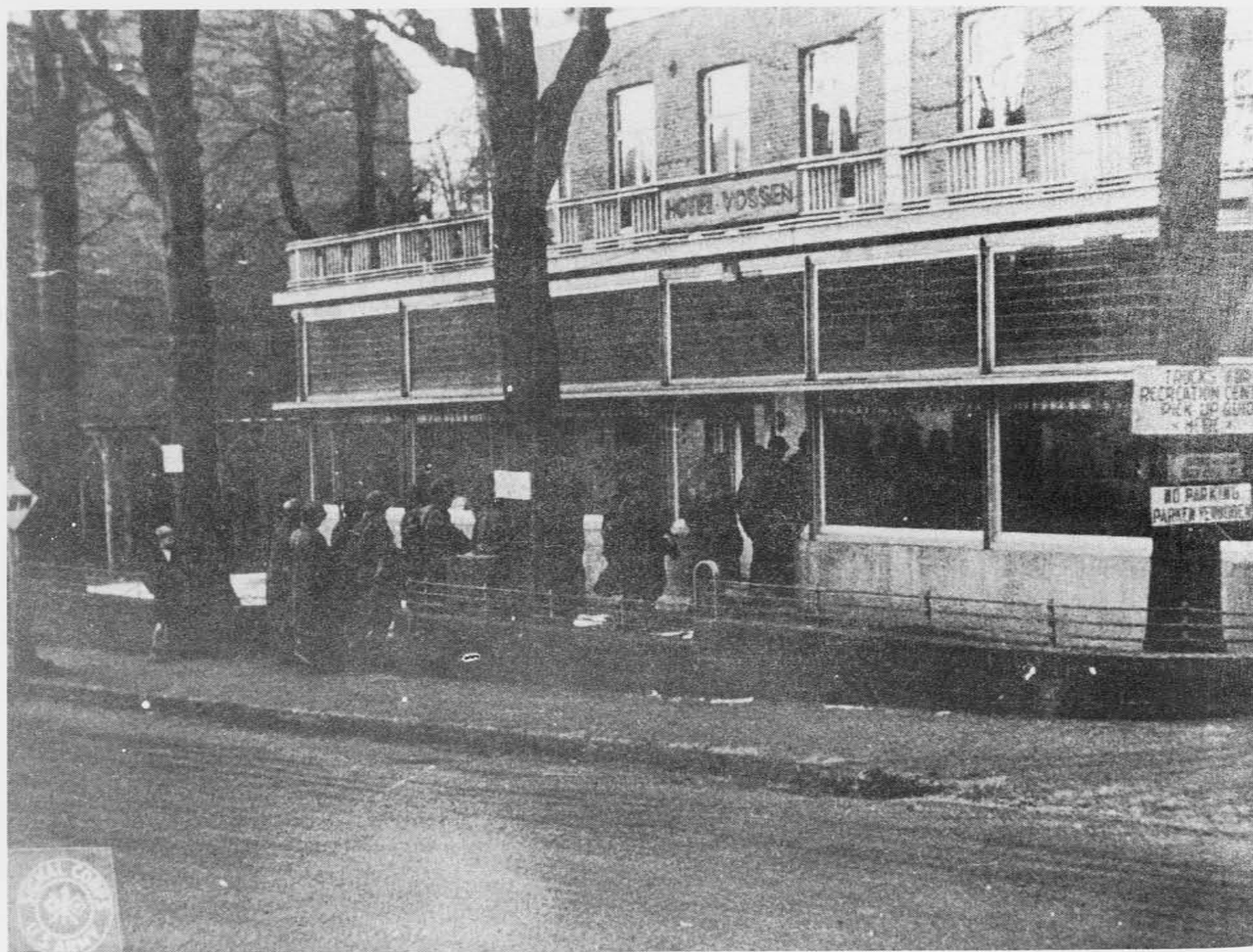


Figure 44.—Rest Area in Volkenburg, Holland, January 1945.



Figure 45.—Nothing Could Be Done about Weather and Terrain.

were prescribed for general issue. The trigger-finger mitten—with leather shell and wool insert—was authorized for troops operating in wet-cold, extremely cold, and mountainous areas.¹³⁶ The Office of the Chief Quartermaster had said originally that woolen gloves with leather palms were warm enough for winter combat on the Continent,¹³⁷ but OQMG had recommended the wool-insert and leather-shell combination. Actually trigger-finger mittens were more desirable, but the leather supply in the United States could not support an issue of one pair to each man. The Quartermaster General later reported that enough mittens could be produced to equip “enlisted men in units, in divisions, and in service units not organically part of a division.”¹³⁸ Consequently, OCQM authorized mittens for winter combat and requisitioned from the United States 569,000 pairs of leather glove-shells and 1,538,000 pairs of wool inserts.¹³⁹

Meanwhile, OCQM had requisitioned from the United States more than 3,525,000 pairs of woolen gloves with leather palms. Although none were received in time for the winterizing program in October, enough were on hand to make fairly complete distribution to troops by January 1945.¹⁴⁰

Complaints began to be heard almost as soon as the gloves were issued. Troops of the 705th Tank Destroyer Battalion did not like the glove, because it wore out quickly.¹⁴¹ Members of the 17th Airborne Division complained that, when the glove was worn, the entire hand got numb with cold.¹⁴² When these complaints were sent to the War Department, The Quartermaster General wrote as follows:

No glove or mitten can possibly be adequate if the rest of the body is chilled. There is no question that a double glove is warmer than a single glove, but very soon you will run into the question of its being very cumbersome. This is the first serious complaint that we have had about the glove, wool, leather palm. The

reports from the Aleutians and Italy were favorable.

If the Theater Commander desired, 1,500,000 pairs of wool inserts and leather-shell, trigger-finger mittens could be shipped as substitutes.¹⁴³ SHAEF replied that mittens should be shipped immediately.¹⁴⁴

Because woolen, leather-palm gloves were badly received, OCQM shipped forward every other type of glove available in the European Theater. Combat forces at once found leather-shell gloves with wool inserts most satisfactory because they could be worn while weapons were being fired.¹⁴⁵

A limited distribution of trigger-finger mittens was made in January 1945. Troops of the 17th Airborne Division were well pleased with the item. The division quartermaster believed the mitten should be an essential part of the winter combat uniform. Even though it cut down the full use of the fingers, its warmth and protection were sufficient compensation.¹⁴⁶ A wider distribution of mittens began in March, before the Chief Quartermaster called the Second Winter Clothing Conference. All troops agreed that the mitten was the warmest handgear issued but that it was too bulky for firing the M-1 rifle, the carbine, or the machine gun. Troops of the 53rd Armored Infantry Battalion reported that with the mitten it took 30 seconds to get a new clip of ammunition from the cartridge belt into the magazine of the rifle—an operation that took ordinarily about 10 seconds.¹⁴⁷

The Office of The Quartermaster General representatives did not feel that the criticisms justified any change in the mitten combination.¹⁴⁸ The Office of the Chief Quartermaster, nevertheless, asked again that the opinion of troops be taken into consideration and that the wool inserts and leather glove-shells be provided to the European Theater of Operations.¹⁴⁹ The Commanding General, Army Service Forces, wrote on 4 June 1945 that the European Theater would receive only heavy leather gloves, as all other types had been allocated to active theaters.¹⁵⁰

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OUTFITTING THE WOMAN SOLDIER

Mass clothing of women soldiers had its beginning during World War II. Yet the fighting woman is as old as the human race. While primitive man went fishing and hunting, primitive woman protected the cave, treetop, wigwam, or hut. Her weapons were crude, and her clothing was made from the skins of animals. The legends of the Amazons, that nation of women warriors, doubtless had their basis in fact. There could have been no clothing problem, however, for women who needed only a helmet and a very short tunic.

The story of pioneer days in America tells of many women who protected the stockades while their men were away. There was Ann Bailey, for instance, Cockney immigrant who "halways carried a hax and a hauger" and killed more Indians than "hany man." There are records of women who took part in the American Revolution and in the Civil War both as fighters and nurses. Though 1,500 contract nurses served during the Spanish-American War and though the Army Nurse Corps was created by Act of Congress on 2 February 1901, nurses were not given relative rank until 1920 and actual rank until 9 June 1944. During World War I women served in the Navy and the Marine Corps as "yeomanettes" and "marinettes" but remained in the zone of interior. Nurses who accompanied the American Expeditionary Forces were not so numerous as to create a clothing problem of magnitude.

On 14 May 1942 the 77th Congress established the Women's Army Auxiliary Corps. Then it was that the Quartermaster Corps faced a new and perplexing problem.¹ Their vast knowledge of testing, military planning, procurement, storage, and distribution seemed to serve them in no good stead. Many questions needed to be answered before attractive young women could be issued clothing both practical and becoming. Should the women be provided uniforms similar to those worn by enlisted men and officers? Should skirts or trousers be prescribed, or both? What sort of military cap would suit the coiffures of the season? Would pockets accommodate the vanity case, lipstick, and other accessories women thought indispensable? When the subject of nether garments

that should be both military and satisfactorily feminine came up for discussion, wise generals scratched bald and graying heads and looked at their subordinates like the Theban Sphinx ready to destroy all who failed to answer their perplexing riddle.

The country was combed for experts who were commandeered for the solving of the problems. Consequently, by the time the first women reported at Fort Des Moines on 20 July 1942, they were outfitted, though not entirely to their satisfaction.

The patron of the Women's Army Auxiliary Corps, the goddess Pallas Athena, had sprung fully clothed and armed from the head of Zeus, chief of the Olympian gods. Unfortunately, however, the Waacs had been born with no sartorial adornments or military equipment. The development of a suitable uniform, therefore, was an evolutionary process.

Before the corps was established, Major General James E. Chaney, Commanding General, USAFBI, had sent to the United Kingdom a plan for women to serve with the United States Army in the United Kingdom. Because no action had been taken, members of British military organizations were used. Abuse of the practice brought about instructions that British service women should be used only in cases of emergencies.²

The first WAAC personnel arrived for duty in the European Theater of Operations in February 1943.³ The WAAC Staff Director, however, did not reach the Theater until April.⁴ On 1 July 1943 the 78th Congress authorized the Women's Army Corps as a component of the Army of the United States, effective 1 September 1943.⁵ Thereafter the corps grew in numbers and in dignity. In August 1943, 600 Waacs were in the United Kingdom and 500 were expected to arrive in the immediate future.⁶ On 19 May 1945 tentative strength figures of the occupational forces included 10,000 enlisted women and 2,700 WAC officers and members of the Army Nurse Corps.⁷

THE FIELD UNIFORM FOR WOMEN

As early as the summer of 1942 the need was apparent for a field uniform that was warm and serviceable and also adaptable to



Figure 46.—M-1943 Field Jacket and Trousers (left) and M-1943 Woolen Liners for Jackets and Trousers (right).



Figure 47.—ETO Field Uniform for Women—Field Jacket, Skirt, and Slacks of Matching Material.

standardization for all the women of the Army. Although the ETO field uniform was originally designed for nurses and WAC officers, it was approved by the War Department General Staff for all WAC personnel. The women's uniforms that were sold at quartermaster sales stores will be taken up in other volumes. This chapter deals only with the uniforms of enlisted women.

Earliest Uniform

Almost a year after the arrival of the first WAAC detachment in the United Kingdom, G-1 reported the clothing issued to enlisted women did not give enough protection against the British weather. Approximately 75 percent of the Waacs worked in poorly heated buildings or in under-ground cable and tele-type stations. Many enlisted women were employed as truck drivers and messengers. All had to walk long distances between offices and barracks in extremely cold and damp weather.⁸ Although the issue of outer-cover trousers and wool-liner trousers had been authorized in June 1943 for only enlisted women engaged in outdoor activities, the WAC Director in the European Theater recommended that these items be issued to all enlisted women. This would provide a winter uniform composed of the following items:

Cap, WAC, winter	Shirt, WAC, winter
Jacket, WAC, winter	Stockings, wool, knee-length
Overcoat, field, women's	Shoes, service, low, women's
Scarf, women's	Sweater, WAC
Trousers, women's outer-cover	Trousers, women's wool-liner ⁹

Even this uniform was inadequate because it did not provide enough woolen garments. Furthermore, laundry and dry-cleaning facilities were extremely limited. The only solution was an increase in authorized allowances.¹⁰ At that time the War Department did not favor increased allowances for WAC personnel in the European Theater, and T/E 21 had made no provision for extra clothing.¹¹

In April 1944, however, Lieutenant Colonel Anna M. Wilson, WAC Staff Director, European Theater of Operations, learned that the Tables of Equipment were being revised to authorize M-1943 jackets for enlisted women and asked that enough be requisitioned for all women in the Theater.¹² The Chief of the Supply Division explained that nothing could be done until official notice was received but

that enlisted men's olive-drab field jackets would be issued until women's garments had been received.¹³

The M-1943 Uniform

The Office of The Quartermaster General had begun in the fall of 1943 the development of the women's field jacket M-1943. The Quartermaster General believed that the outdoor uniform for women should be built upon the layering principle that applied to the uniform for men. Consequently a pile jacket, which could be worn either separately or under the M-1943 field jacket, was developed for enlisted women. The jacket and liner combination, as well as outer-cover trousers and wool-liner trousers, were authorized on 1 June 1944 for issue to all enlisted women.¹⁴ Later the WAC Staff Director and the War Department agreed that all WAC personnel scheduled for shipment to the European Theater after 1 August would be equipped with two pairs of the combination trousers, one M-1943 jacket and liner, three winter skirts, and three woolen vests.¹⁵ This combination was known as the M-1943 uniform for women. The pile field jacket was replaced by a woolen liner in the fall of 1944, but no other changes were made throughout the European campaign.

The ETO Uniform

The Chief Quartermaster opposed the adoption of the women's M-1943 jacket in the European Theater. Although the M-1943 uniform was durable and warm, it was bulky, heavy, and unbecoming; and the jacket faded and shrank when laundered under field conditions. Consequently, the Chief Quartermaster and the WAC Staff Director agreed on the development of a woolen field uniform that would be serviceable in the field and presentable in the cities. This uniform, similar in design to that developed for men, consisted of a woolen skirt and slacks and the ETO field jacket, modified to resemble the British Auxiliary Territorial Service blouse, all manufactured from the type of cloth used in the men's ETO uniform.¹⁶

In April 1944 Major General Littlejohn discussed with the War Department uniform for both men and women and made arrangements to have no M-1943 jackets shipped to the European Theater except those needed by paratroopers (see ch. 5). He wanted the ETO field jacket to be modified for women and approved to replace the women's M-1943

field jacket and liner. To complete the uniform, he wanted woolen field trousers, skirts, and garrison caps, all made of material identical with that of the jacket.¹⁷ This uniform not only would reduce the amount of WAC clothing prescribed in T/E 21 of 1 June but would simplify the entire WAC supply problem. The comparison of the two allowances was as follows:

	Proposed ETO Allow- ances	T/E 21 Allow- ances
Jacket, WAC, winter	1	2
Jacket, field, M-1943, women's	0	1
Jacket, pile, women's	0	1
Jacket, field, wool, women's	2	0
Shirt, WAC, winter	1	3
Skirt, field, wool, winter	2	0
Trousers, outer-cover	0	2
Trousers, wool liner	0	1
Trousers, field, wool, winter	2	0
Cap, garrison, wool, WAC	2	2
	—	—
	10	12 ¹⁸

At the same time, the Procurement Division reported that, even though the British had refused to produce any more ETO jackets for men, a substantial quantity of women's jackets could be procured if cloth was made available from the United States (see ch. 3). Because the pattern was familiar to British manufacturers, production would not be difficult.¹⁹ As soon as cloth could be made available, production of 20,000 jackets, 8,000 skirts, and 15,000 pairs of slacks could be begun. These uniforms would be for WAC officers and nurses. At the same time arrangements were made in Eire for 6,000 sets of enlisted women's uniforms.²⁰

War Department Reaction

The Office of The Quartermaster General repeatedly denied the request that the ETO uniform for women be approved. On 14 July, the Military Planning Division wrote that no such items could be made available during 1944.²¹ A week later the Storage and Distribution Division wrote that no action could be taken to standardize the ETO jacket for women until the matter was formally "channeled."²² All the serge available in the United States had been earmarked for the manufacture of the woolen field jacket for men. Therefore, the supply of woolen field jackets for women could be effected only at the expense of jackets for men.²³ Accordingly, representatives of the Army Nurse

Corps, the Women's Army Corps, and the War Department General Staff decided in favor of the M-1943 field jacket with woolen liner.²⁴

The Woolen Liner

The Office of The Quartermaster General began the development of the woolen liner in April 1944 at the request of the Office of The Surgeon General and the Director of the Women's Army Corps. The liner was to replace the women's pile field jacket, which was too bulky and confining. It was made of 20-ounce flannel; and it was similar to the men's winter combat jacket—hip-length and form-fitting, with knit collar and cuffs. Another woolen jacket, similar to the ETO jacket, was rejected by nurses and Wacs, who felt that it was more for dress than for field wear. When the liner was presented to the Quartermaster Corps Technical Committee, though arguments were advanced in favor of the ETO field jacket for women, the committee recommended to the Army Service Forces that the liner be standardized.²⁵

The Office of the Chief Quartermaster agreed to accept a liner for every M-1943 field jacket in use by Wacs on the Continent. As soon as woolen field jackets could be made available, requisitions for liners would be canceled.²⁶ Later OCQM requisitioned 52,280 liners for delivery by 31 January 1945.²⁷ The War Department replied that no more than 29,000 could be delivered by that time²⁸ and that OCQM should try to reduce requirements.²⁹ After OCQM explained that a reduction was impossible,³⁰ the New York port agreed to ship 29,000 liners according to schedule.³¹ Although this schedule called for the delivery of 7,120 liners by 15 December 1944, none had appeared on ships' manifests by that time.³²

ETO Jacket Authorized

Although the ETO uniform for women had been turned down by the War Department in August 1944, women in the European Theater continued to wear battle-dress jackets manufactured in England and Eire.³³ In October the Chief Quartermaster reopened the campaign to have the uniform approved. A letter was prepared for G-4, reviewing the WAC clothing situation and ending with the request that the ETO field jacket for women be presented again to the War Department.³⁴ At the same time, the WAC Staff Director, ETOUSA, having just learned



Figure 48.—The ETO Field Jacket, with Skirt and with Trousers.



Figure 49.—WAC Winter Uniform.

that the ETO uniform had been disapproved, wrote Colonel Oveta Culp Hobby, WAC Director, War Department, and asked that the decision be reconsidered. "It is definite," she said, "that there will be little heat for offices and barracks on the Continent during the current winter. Most of our WAC personnel will be living under field conditions for which we are not adequately clothed."³⁵ Several days before, however, Colonel Hobby had written Lieutenant General Somervell, asking that The Quartermaster General develop a woolen field jacket for women that might be worn by Wacs but "would not be an item of issue."³⁶

When the woolen field jacket had been standardized for men, the War Department had authorized it for "military personnel." The Director of the Storage and Distribution Division, OQMG, explained that OQMG had always interpreted this statement as including Wacs. The Military Planning Division, OQMG, he said, was having made two or three models of woolen field jackets for women, which would be given to Colonel Hobby for approval. At that time, however, the only jacket being issued to women was the M-1943 field jacket with the woolen liner.³⁷

Since Army Regulations prohibited enlisted personnel from buying clothing at sales stores, Major General Littlejohn recommended that the ETO field jacket be made an item of issue to all enlisted women. He also requested approval of the other items of the ETO uniform—namely, trousers, skirt, and cap.³⁸

Further Developments

Twice more the Chief Quartermaster wrote to the War Department asking that the ETO uniform for women be approved. With both letters he submitted samples of the garments developed in the European Theater.³⁹ General George C. Marshall, Chief of Staff, replied on 16 December 1944 that a woolen field jacket was being designed to be made of the same material as that of the winter skirt. The trousers recommended by OCQM could not be produced, he said.⁴⁰ The jacket, which would be issued only overseas, would not be available for some time.⁴¹

The Chief Quartermaster wrote 2 days later that the case of the women's uniform was closed, at least temporarily. Part of the 6,000-uniform order that had been placed in Eire would be ready by mid-January. The first of these uniforms received would be is-

sued in Paris according to plans worked out by the WAC Staff Director.⁴² When the Assistant Chief of Staff, G-1, was getting ready for a trip to the United States on 20 December 1944, Lieutenant Colonel Anna Wilson wrote him that he was not to bring up the subject of the battle-dress uniforms for Wacs in the European Theater.⁴³

Though OQMG still questioned the necessity for a woman's battle jacket and continued to recommend the woolen liner instead, several jackets were designed and sent to the General Staff for approval.⁴⁴ In January 1945 a woolen field jacket was accepted for optional wear in the United States.⁴⁵ There was no indication that it would be standardized for procurement, but officers and enlisted women might buy their own jackets if they desired.⁴⁶

One Uniform for All Women

On 19 March Major General Littlejohn reminded The Quartermaster General that the ETO field uniform had not been accepted. He understood the production order had not been let in the United States because so few women were involved. Yet both nurses and Wacs in the Theater were requesting the uniform.⁴⁷ Consequently, part of the cloth requisitioned from the United States (see ch. 3) would be used to manufacture jackets, skirts, slacks, and garrison caps. The ETO uniforms produced would be issued to all Wacs and nurses. In this way all women of the Army would have one common uniform. The only distinction would be the insignia. Different uniforms, however, would continue to be issued to American Red Cross personnel, hostesses, librarians, and British civilians employed by the United States Army. The ETO uniform would also be issued to all United States civil service employees.⁴⁸

On 31 March the WAC Staff Director wrote the Chief Quartermaster that the three-piece ETO uniform was the best solution to the problem of clothing women on the Continent. It served equally well for field work and for dress. Women liked both the design of the uniform and the firm sag-resistant texture of the material and wanted a garrison cap of matching material.⁴⁹ The Theater Commander authorized maximum local procurement, and all women were furnished at least one complete uniform by September 1945.⁵⁰

THE OFF-DUTY DRESS

Whether in an underground office in England or in an unheated office in France, the

enlisted woman of the Women's Army Corps held down an important job. She and her brother soldier endured the same hardships and knew the same fears. She took the training and passed the tests that made her a good soldier, but she was still a woman. "Take a pert little United States Wac," wrote a reporter on a New York paper, "in olive drab and put her in the same office with an American civilian girl in the fripperies dear to a woman's heart—and the temperature will be 20° cooler." Take the same little Wac a thousand miles from home in a battle-weary uniform with a whole war almost behind her and put her in a metropolis like Paris, and her morale will drop even more than 20°.

For months after 1 September 1943, when the Women's Army Corps came into being, Wacs had no alternate outfit. As soldiers in the Army of the United States, they could no longer wear civilian dresses for unofficial social functions. Therefore, the two-piece uniform had to be worn on all occasions. The off-duty dress, developed in the Office of The Quartermaster General, was authorized by the War Department on 25 May 1944 as an item of issue to enlisted women.⁵¹ Sufficient quantities of the dresses were to be ready by 10 June 1944 for issue to Wacs of the Military District of Washington.⁵²

On 15 July 1944 the WAC Section, G-1, recommended to OCQM that the off-duty dress and cap be requisitioned for all WAC personnel in the European Theater of Operations. The War Department had authorized, as accessories to be used with the off-duty dress, gloves and a scarf of chamois color, brown leather pumps of commercial design, and a brown leather handbag. If these items were to be made available under the present policy, the WAC Section, G-1, asked that they be requisitioned so that they might be purchased when the new dresses arrived.⁵³ The Chief Quartermaster sent his requisition immediately, at the same time inquiring about the purchase of shoes and bag.⁵⁴

The WAC Staff Director reported dolefully on 1 November 1944 that the new garrison cap and off-duty dress, although requisitioned sometime before, had not yet arrived. "They will provide a real 'lift' when finally obtainable," she said.⁵⁵ The dresses began to reach the Theater early in 1945. They were to be worn for the first time on Easter Sunday 1945. In order to make the deadline, the Chief Quartermaster sent traveling alteration teams throughout the Theater. So it came about that Wacs in Paris, London, and other

metropolitan centers happily joined the Easter parades.⁵⁶

"I have heard with admiring submission," wrote Ralph Waldo Emerson, "the experience of a lady who declared that the sense of being well dressed gives a feeling of inward tranquillity which religion is powerless to bestow." It was said that Wacs walked with an air of tranquillity on that Easter morning.

MISCELLANY

Providing comfortable, useful, and attractive clothing for Wacs was not the headache in the European Theater that it was in the zone of interior, where were developed many items for which there was neither model nor precedent. Yet this chapter has not begun to tell all the ups and downs connected with supplying women whom an ocean separated from their home base.

There was the perennial problem, for instance, of stockings, which had to be replaced because of ever appearing runs and snags. In January 1945 a quarterly issue of four pairs per individual was authorized.⁵⁷ Maintenance was based upon the turn-in of stockings for salvage. This plan proved somewhat undesirable, since it was thought to encourage women to turn in stockings rather than mend them and since it promoted careless washing of stockings.⁵⁸

Shoes gave trouble too. In the summer of 1944 the Theater asked that Wacs be equipped with two pairs of field shoes and two pairs of service shoes.⁵⁹ At that time the authorized issue was two pairs of field shoes and one pair of service shoes. The War Department had replied that, because of the critical leather situation, the request should be withdrawn or completely justified.⁶⁰

As in the case of men, overshoes did not fit properly over field shoes. The Quartermaster General tried to correct the situation by sending three size schedules to be used as guides for fitting overshoes. One was to be used for the women's four-buckle arctic overshoe that had been issued in the Theater, another for the women's field shoe, and a third for the new four-buckle arctic overshoe, a supply of which was being sent to the Theater.⁶¹

The procurement of clothing for women was so closely linked with the procurement of clothing for men that chapter 3 covers it in general terms. The magnitude of the program, however, is suggested by the figures included in appendixes XXXIX and XL. The clothing allowances for enlisted women, as



Figure 50.—WAC Off-duty Winter Dress.



Figure 51.—WAC Herringbone Twill Uniform.



Figure 52.—WAC Exercise Suit (left) and WAC Cook's and Baker's Outfit (right).

published on 12 January 1945, appear as appendix XLI.

STORAGE AND DISTRIBUTION

From the outset, difficulties were encountered in maintaining adequate stocks of women's clothing and individual equipment. Though the groups of women supplied by the Quartermaster Service were relatively small, each group had its own uniform, consisting of many items.⁶² On 21 November 1942, when it was known that Waacs would be stationed in the United Kingdom, the Chief Quartermaster requested that a 90-day maintenance be provided,⁶³ which he said later he would like to have shipped automatically.⁶⁴ The New York Port of Embarkation replied on 6 February 1943 that no maintenance shipments had been set up for Waacs because the War Department had approved local procurement and had already forwarded plans and specifications. If the authorized items in Table of Basic Allowances No. 21 could not be procured in the United Kingdom, the port would like to be informed.⁶⁵ Nevertheless, OCQM immediately repeated the request for automatic shipment of 90-day maintenance for Waacs.⁶⁶ To this cablegram the New York Port of Embarkation replied that the Theater would be informed by cable when maintenance for WAAC summer and winter clothing and individual equipment could be provided to the amount of a 30-day reserve for TORCH and a 90-day reserve for the United Kingdom.⁶⁷

The Chief of the Supply Division recounted the story to the Chief Quartermaster on 23 June 1943 and reported that no stocks of needed items were available and that stocks on hand were as follows:

Item	Number
Jacket, winter	26
Jacket, summer	38
Overcoat, member	24
Overcoat, utility with hood	35
Panties, summer, regular	88
Panties, summer, long	128
Panties, winter	76
Pajamas	80
Skirt, summer	120
Skirt, winter	122
Slip, rayon	80
Suit, exercise	159
Sweater	38
Waist, summer	408
Shoes, service, WAAC	151
Shoes, athletic, WAAC	104 ⁶⁸

However, the Chief of the Supply Division was able to report on 18 October 1943 that the position of clothing for enlisted women was satisfactory. Shipments, which had started in May, had been received regularly.⁶⁹

Plans for the early days of the invasion provided that 150 enlisted women and 10 WAC officers would move to the Continent on D-plus-20-day and an equal number on D-plus-30-day. Until D-plus-45-day, when full facilities would be established, these women would be supplied by maintenance sets (see chs. 1 and 3). The WAC Section, G-1, requested, therefore, that follow-up maintenance sets, containing the following items, be provided for issue to each of the 340 women who would be on the Continent by D-plus-45-day:

- Anklets, wool, women's
- Cap, wool, knit
- Cap, garrison, od
- Gloves, wool, od, women's
- Jacket, combat
- Leggings, canvas, women's
- Overshoes, four-buckle, women's
- Panties, winter, women's
- Shirts, herringbone twill, special, women's
- Shoes, field, women's
- Stockings, cotton, women's
- Trousers, herringbone twill, special, women's
- Vests, winter, women's
- Waist, wool, women's

Special Equipage

- Belts, sanitary
- Napkins, sanitary (12)⁷⁰

In the United Kingdom WAC clothing was stored in a single depot, first in G-30 and then in G-45, near London.⁷¹ On the Continent WAC clothing was first stored in the open and issued at widely dispersed places. Consequently, stock control was not good, and at the distributing points the range of sizes was small. Because several items of different sizes were packed in one container, packages had to be broken open and their contents resorted before issue could be made. Thus clothing in the opened packages was exposed to weather and to theft. The Chief of the Plans and Training Division recommended, therefore, that all shipments of women's clothing from both the United Kingdom and the United States be directed to Cherbourg and that the following items, as well as all broken packages, be put in closed and guarded storage: stockings, shoes, girdles, rayon underwear, woolen underwear, and gloves. He further recommended that a model stock of 60 days of supply for 1,000 en-

listed women be set up at Cherbourg, that stocks then in other depots be transferred to Cherbourg, that later the majority of stock be moved to Paris, and that unit requisitions be consolidated.⁷²

The levels of supply for women's clothing had been set at 60 days for the Continent and 45 days for the United Kingdom. On 4 October the Chief of the Plans and Training Division announced that in WAC requirements the following items had been included for additional initial issue:

Item	Per individual
Anklets	1
Cap, garrison, winter, WAC	2
Leggings	2
Necktie	1
Off-duty dress	1
Overshoes, arctic, 4-buckle	1
Panties, winter, women's	1
Shoes, field	1
Skirt, winter, WAC	1
Stockings, wool, knee-length	2
Vest, winter, women's	1
Waist, cotton	2
Jacket, field, M-43	1
Trousers, outer cover	2
Wool liner	1

The Chief of the Plans and Training Division recommended that balanced stocks be set up on the Continent and that stocks be concentrated in the Paris depot, where a 60-day level for 3,500 women should be maintained.⁷³ His recommendation was accepted.⁷⁴

After VE-day, however, the concentration of WAC clothing in Paris presented problems. Women's Army Corps detachments were stationed throughout Germany in an area that included such widely separated cities as Luxembourg, Bremen, Frankfurt, Heidelberg, Berlin, and Munich. Toward the latter part of July plans were on foot to send a detachment of Wacs to Vienna. Because the largest number of Wacs was in Frankfurt, the WAC Administrative Officer suggested to OCQM that a depot in that city be stocked with WAC clothing and individual equipment.⁷⁵ The Deputy Chief Quartermaster, appreciating the difficulty of supply, took immediate action to establish WAC stocks in the Marberg depot near Frankfurt.⁷⁶

There can be no doubt that both OQMG and OCQM tried to provide clothing and equipment that would make the Wacs happy. That Major General Littlejohn's efforts met with a high degree of success is attested by the following excerpt from a letter written by Lieutenant Colonel Anna W. Wilson, WAC Staff Director, on 7 July 1945: "When problems seemed insurmountable, I always knew it was merely a question of going to you personally and that they would be immediately straightened out. I tried not to over-use this privilege because a man with your responsibilities has much more with which to be concerned. It was the assurance that I could go to you when I wanted to that made the WAC Supply Program such an easy one."⁷⁷

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- ³ *Ibid.*, p. 1.
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- ⁵ *Ibid.*, p. 4.
- ⁶ Memorandum, Chief of Staff, ETOUSA, to WAAC Section, G-1, (?) August 1943.
- ⁷ Memorandum, CG, ETOUSA, to WAC Section, G-1, 19 May 1945.
- ⁸ Memorandum, G-4 to CG, SOS, ETOUSA, (?) December 1943.
- ⁹ Memorandum, WAC Staff Director, SOS, ETOUSA, to CG, SOS, ETOUSA, (?) December 1943.
- ¹⁰ Study No. 11, The General Board, USFET, (undated), vol. I, p. 72.
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- ¹⁵ Cablegram EX-36185, ETOUSA to AGWAR, 4 July 1944; and cablegram WARX-62728, AGWAR to ETOUSA, 10 July 1944.
- ¹⁶ Letter, CQM to QMG, 19 March 1944.
- ¹⁷ Memorandum, CQM to DCQM, 7 July 1944.
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- ¹⁹ Memorandum, Chief, Clothing Branch, Procurement Division, to CQM, 9 July 1944.
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APPENDIX I
PROPOSAL FOR T/E 21 CLOTHING AND EQUIPMENT
ACCOMPANYING TROOPS OVERSEAS*

Items Soldier Should Bring from the Zone of the Interior

Item	Number Authorized	In Pack and Worn by Individual	Carried in New Type Barrack Bag
Bag, barrack	2		1
Bag, canvas, field, or Haversack and Pack Carrier	1	1	
Belt, cartridge, cal. 30, or Belt, pistol or revolver	1	1	
Belt, web, waist	1	1	
Blanket, wool, od	4	1	1
Can, meat	1	1	
Canteen	1	1	
Cap, garrison, wool	1		1
Cap or Hat, herringbone twill	1		1
Case, canvas, dispatch	1	1	
Coat, wool, serge	1		1
Cover, canteen	1	1	
Cup, canteen	1	1	
Drawers, cotton	3	2	1
Drawers, wool	2		2
Fork	1	1	
Gloves, wool	1		1
Handkerchief, cotton	4	4	
Helmet, steel, M-1	1	1	
Jacket, field	1	1	
Jacket and Trousers, herringbone twill, or Suit, one-piece, herringbone twill	2		2
Knife	1	1	
Leggings, canvas, dismantled	2	1	1
Necktie, cotton, khaki	2	1	1
Overcoat, wool, or Coat, mackinaw	1	1	
Pins, tent, shelter	5	5	
Pole, tent, shelter	1	1	
Pouch, first aid	1	1	
Raincoat	1	1	
Shirts, wool, od	2	1	1
Shoes, service	2	1	1
Socks, cotton, tan	3		3
Socks, wool, light	3	3	
Spoon	1	1	
Tag, identification	2	2	
Tape, identification	1	1	
Tent, shelter half	1	1	

Item	Number Authorized	In Pack and Worn by Individual	Carried in New Type Barrack Bag
Toilet Set	1	1	
Towel, bath	1		
Towel, huck	2	1	
Tool, entrenching	1	1	
Trousers, wool, od	2	1	1
Undershirt, cotton	3	2	1
Undershirt, wool	2		2
Whistle, thunderer	1	1	

Items Soldier Should Be Issued in Theaters of Operations

Number	Item
1	Bag, barrack (For use as laundry bag)
1	Bar, mosquito
2	Blanket, wool, od
1	Cap, wool, knit
2	Cover, mattress
2	Cover, protective, individual
1	Drawers, cotton
1	Gloves, cotton
1	Hood, wool
1	Leggings, dismantled
1	Overshoes, arctic
1	Socks, wool, light
1	Suit, working, one-piece, or Jacket and Trousers, herringbone twill
1	Undershirt, cotton

*Memorandum, CG, SOS, ETOUSA, to CG, SOS, WD, 16 January 1943; and 5th ind., CG, ETO-USA, to CG, ASF, WD, 12 April 1943.

APPENDIX II
EQUIPMENT OF TROOPS*
 () December 1943

ASSAULT PERIOD (approximately D-day through D-plus-6-day)

Items Worn by Individual

Belt, web, waist
 Drawers, wool
 Handkerchiefs
 Helmet, steel, complete
 Jacket, field
 Leggings, canvas
 Shirts, flannel
 Shoes, service, type III
 Socks, light, wool
 Tags, identification, with necklace
 Trousers, wool
 Undershirts, wool

Items Carried by Individual

Belt, cartridge or pistol, and Pocket,
 magazine, DW
 Blanket
 Canteen, cover and cup
 Gloves, wool
 Haversack, or Bag, canvas, field, with sus-
 penders and strap
 Pouch, first aid
 Spoon
 Tablets, water-sterilizing
 Toilet articles
 Toilet paper

Items in Blanket Roll

Number	Item
2	Blanket
	Can, meat, with knife and fork
2	Handkerchief (placed inside meat can)
1	Shelter half

Items in Duffel Bag

Number	Item
1	Blanket, wool
1	Cap or Hat, herringbone twill
2	Drawers, cotton, short
2	Drawers, wool
2	Handkerchief
2	Jacket and Trousers, or Suit, her- ringbone twill
1	Leggings, canvas
1	Overcoat or Mackinaw
1	Shirt, flannel
1	Shoes, service
3	Socks, wool
2	Towel, huck
1	Trousers, wool
2	Undershirt, cotton
2	Undershirt, wool

PERIOD AFTER PORT FACILITIES ARE AVAILABLE

Items Worn by Individual

(Same as in assault period)

Items Carried by Individual

Number	Item
	Belt, cartridge or pistol, pocket, magazine, DW (if pistol belt is worn)
2	Blanket
	Can, meat, with knife, fork and spoon
	Canteen, cover and cup
1	Drawers
1	Gloves, wool
2	Handkerchief

Items Carried by Individual

Number	Item
	Haversack, or Bag, canvas, field, with suspenders and strap
	Pouch, first aid
	Shelter half
1	Socks, wool
	Toilet paper
1	Undershirt, wool

Items in Duffel Bag

Number	Item
1	Bag, barrack
1	Blanket, wool
1	Cap or Hat, herringbone twill
2	Drawers, cotton, short
2	Handkerchief
2	Jacket and Trousers, or Suit, her- ringbone twill
1	Leggings, canvas
1	Overcoat or Mackinaw
1	Shirt, flannel
1	Shoes, service
2	Socks, wool
2	Towel, huck
1	Trousers, wool
2	Undershirt, cotton
1	Undershirt, wool

*Memorandum, DCQM, London, to DCQM, Cheltenham, (?) December 1943.

**APPENDIX III
EQUIPMENT OF TROOPS†**

25 February 1944

(D-day to D-plus-44-day)

Items Worn by Individual		Items Carried by Individual	
Number	Item	Number	Item
1	Belt, web, waist	1	Bag, canvas, field with strap and suspenders, when authorized
1	Drawers, wool	1	Belt, cartridge, pistol or BAR
1	*Gloves, cotton, protective	1	Canteen
2	Handkerchief	1	Cover, canteen
1	Helmet, steel with liner	1	Cup, canteen
1	*Hood, wool, protective	1	Haversack
1	Jacket, field, or Jacket, combat winter, (when authorized)	1	Pack carrier
1	Leggings, canvas, protective	1	Pocket, magazine, DW or Pocket, carbine
1	Shirt, flannel, protective	1	Pouch, first aid
1	Shoes, service	2	Tags, identification, with necklace
1	Socks, wool, protective		
1	Trousers, wool, protective		
1	Undershirt, wool		

Items in Haversack or Field Pack

Number	Item
1	Can, meat
1	Fork
1 bot.	Halazone tablets
2	Handkerchief
4	Heat unit—1½-oz.
1	Insecticide, 2-oz. can
1	Knife
1	Raincoat
3	Socks, wool, light
1	Socks, wool, protective
1	Spoon
	Toilet articles
1	Towel, huck

Items Carried in Organization Vehicles of Divisions and Tank Destroyer, Field Artillery, Reconnaissance, and Tank Units

Number	Item
2	Blanket
1	**Can, meat
1	Drawers, wool
1	**Fork
2	Handkerchief
1	*Jacket, herringbone twill
1	**Knife
5	Pins, tent, shelter half
1	Shoes, service
2	Socks, wool
1	*Suit, herringbone twill
1	Tent, shelter half and pole
1	Towel, bath
1	*Trousers, herringbone twill

Items Carried in Duffel Bags on Organization Vehicles by All Other Troops

Individual Clothing

Number	Item
3	Drawers, cotton, short
2	Handkerchief
2	*Jacket, herringbone twill
1	Leggings, canvas, dismounted
1	Shirt, flannel
2	Socks, cotton, tan
1	Socks, wool, light
2	Suit, one-piece, herringbone twill
2	*Trousers, herringbone twill
1	Trousers, wool
3	Undershirt, cotton

Individual Equipment

Number	Item
2	Blanket
5	Pins, shelter half
1	Tent, shelter half and pole
1	Towel, bath
1	Towel, huck

*If herringbone twill protective clothing is worn, it will be worn over regular od flannel shirts and od woolen trousers. Each unit will be initially clothed in either od protective or herringbone twill protective clothing.

**Not carried by assault troops.

†Operation OVERLORD, First United States Army Plan, NEPTUNE, Annex 7, 25 February 1944.

APPENDIX IV-A

CLASS II BEACH MAINTENANCE SETS*

Basis: 5,000 men for 15 days (75,000 man-days of supply)

SUMMARY SHEET

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Item	Unit	No. of Pkg.	Quantity No. per Pkg.	Total	Gross Weight (pounds)		Cubage (cu. ft.)	
					Per Pkg.	Total	Per Pkg.	Total
Clothing								
Drawers, wool	ea	5	100	500	80	400	5.2	26.
Gloves, leather, heavy	pr	3	200	600	102	306	4.8	14.4
Head band, adjustable, liner, steel helmet	ea	2	400	800	41	82	1.5	3.
Helmet, steel, M-1	ea	20	10	200	32	640	2.5	50.
Jacket, field, od	ea	10	45	450	89	890	4.5	45.
Jacket, herringbone twill	ea	4	70	280	120	480	5.	20.
Leggings, canvas, dismounted	pr	4	150	600	118	472	5.	20.
Liner, steel helmet	ea	15	30	450	40	600	7.	105.
Neck band, liner, steel helmet	ea	2	400	800	5	10	1.	2.
Shirt, flannel, od	ea	5	100	500	120	600	5.9	29.5
Shoes, service, type III	pr	125	12	1,500	57	7,125	3.5	437.5
Socks, wool	pr	7	720	5,040	95	665	5.	35.
(Additional 2,880 to be included)								
Suit, one-piece, herringbone twill	ea	9	30	270	92	828	4.	36.
Trousers, herringbone twill	pr	4	70	280	96	384	5.	20.
Trousers, wool, od	pr	8	60	480	126	1,008	5.6	44.8
Undershirt, wool	ea	5	100	500	88	440	5.	25.
Total		228				14,930		913.2

Item	Unit	No. of Pkg.	Quantity No. per Pkg.	Total	Gross Weight (pounds)		Cubage (cu. ft.)	
					Per Pkg.	Total	Per Pkg.	Total
Equipment								
Ax, intrenching	ea	4	25	100	64	256	1.7	6.8
Bag, field, canvas	ea	4	50	200	85	340	5.5	22.
Bag, ammunition-carrying	ea	1	40	40	80	80	5.7	5.7

Item	Unit	No. of Pkg.	Quantity No. per Pkg.	Total	Gross Weight (pounds)		Cubage (cu. ft.)	
					Per Pkg.	Total	Per Pkg.	Total
Equipment								
Belt, cartridge, cal. 30	ea	4	40	160	100	400	3.	12.
Belt, magazine, BAR	ea	1	60	60	123	123	5.6	5.6
Belt, pistol or revolver	ea	2	100	200	75	150	4.	8.
Blanket, wool, od	ea	50	20	1,000	85	4,250	5.	250.
Can meat	ea	4	60	240	80	320	5.9	23.6
Canteen	ea	4	75	300	67	268	6.1	24.4
Carrier, ax, intrenching	ea	1	100	100	26	26	.8	.8
Carrier, wire-cutter	ea	1	100	100	23	23	1.2	1.2
Carrier, pack, M-28	ea	2	100	200	71	142	4.	8.
Carrier, pick, intrenching	ea	1	100	100	40	40	2.	2.
Carrier, shovel, intrenching	ea	1	200	200	72	72	3.7	3.7
Cover, canteen	ea	2	180	360	90	180	6.	12.
Cover, mattress	ea	4	50	200	120	480	5.	20.
Cup, canteen	ea	2	105	210	71	142	5.9	11.8
Cutter, wire, heavy	ea	1	100	100	105	105	1.9	1.9
Fork, M1926	ea	2	500	1,000	44	88	1.4	2.8
Haversack, M1928	ea	5	40	200	108	540	6.	30.
Knife, M1926	ea	2	500	1,000	63	126	1.5	3.
Pick mattock, intrenching	ea	4	25	100	71	284	1.7	6.8
Pocket, magazine, double web, M1923	ea	1	150	150	28	28	1.3	1.3
Pocket, magazine, double web, carbine	ea	1	150	150	40	40	2.1	2.1
Pouch, first-aid	ea	1	500	500	90	90	2.	2.
Shovel, intrenching	ea	5	40	200	112	560	4.8	24.
Sling, carrying, ammunition and magazine	ea	1	60	60	75	75	3.6	3.6
Spoon, M1926	ea	2	500	1,000	57	114	1.5	3.
Suspenders, belt	ea	2	60	120	75	150	3.	6.
Total			115			9,492		504.1

Item	Unit	No. of Pkg.	Quantity		Gross Weight (pounds)		Cubage (cu. ft.)	
			No. per Pkg.	Total	Per Pkg.	Total	Per Pkg.	Total
Regular Supplies								
Adapter, lantern, gasoline	ea	1	100	100	25	25	2.	2.
Battery, electric, hand lantern	ea	5	50	250	82	410	.8	4.
Bulb, electric, hand lantern	ea	1	250	250	12	12	1.2	1.2
Candle, type II	ea	2	450	900	90	180	2.23	4.46
Lantern, electric, portable, hand	ea	1	20	20	89	89	6.6	6.6
Lantern, gas, with adapter	ea	2	12	24	96	192	7.7	15.4
Matches, waterproof	bx	5	200	1,000	25	125	1.8	9.
Paper, toilet	roll	40	60	2,400	40	1,600	2.2	88.
Range, field, pack "B"	ea	1	1	1	400	400	17.6	17.6
Soap, laundry, ordinary issue	lb	17	60	1,020	68	1,156	1.3	22.1
Tablets, water-sterilizing	btl	4	288	1,152	83	332	2.18	8.72
Total		79				4,521		179.08
Grand total (Clothing, Equipment, and Regular Supplies) 422 pkgs.						28,943 pounds	1596.38 cu.*ft.	(12.92 long tons) (39.91 ship tons)
Factors: Per man per day						.3859 pounds	.00053 ship tons	

*The QM Class II & IV Supply Plan for an Operation on the Continent, OCQM, 1 March 1944.

**APPENDIX IV-B
FOLLOW-UP MAINTENANCE SETS***

Basis: 15,000 men for 30 days (450,000 man-days of supply)

SUMMARY SHEET

Item	Unit	No. of Pkg.	Quantity		Gross Weight (pounds)		Cubage (cu. ft.)	
			No. per Pkg.	Total	Per Pkg.	Total	Per Pkg.	Total
Clothing								
Belt, web, waist	ea	4	300	1,200	88	352	3.5	14.
Cap, herringbone twill	ea	5	500	2,500	112	560	5.4	27.
Cap, wool, knit	ea	3	400	1,200	70	210	4.8	14.4
Coat, mackinaw, od	ea	34	20	680	95	3,230	5.	170.
Drawers, cotton, short	ea	8	500	4,000	100	800	5.1	40.8
Drawers, wool	ea	38	100	3,800	80	3,040	5.2	197.6
Gauntlets, barbed wire	pr	1	100	100	122	122	5.	5.
Gloves, leather, heavy	pr	8	200	1,600	102	816	4.8	38.4
Gloves, horsehide, riding unlined	pr	2	300	600	76	152	4.3	8.6
Gloves, wool, od, leather palm	pr	6	300	1,800	72	432	5.6	33.6
Handkerchief, cotton, white	ea	7	2,400	16,800	115	805	5.2	36.4
Head band, liner, adjustable	ea	4	400	1,600	41	164	1.5	6.
Helmet, combat, winter	ea	7	200	1,400	100	700	5.5	38.5
Helmet, steel	ea	63	10	630	32	2,016	2.5	157.5
Jacket, combat, winter	ea	46	30	1,380	90	4,140	5.	230.
Jacket, field	ea	47	45	2,115	89	4,183	4.5	211.5
Jacket, herringbone twill	ea	30	70	2,100	120	3,600	5.	150.
Laces, legging	pr	1	4,320	4,320	85	85	5.	5.
Laces, shoe	pr	1	3,000	3,000	53	53	3.2	3.2
Leggings, canvas, dismantled	pr	20	150	3,000	118	2,360	5.	100.
Liner, steel helmet	ea	42	30	1,260	40	1,680	7.	294.
Mittens, asbestos	pr	1	80	80	107	107	5.	5.
Neck band, liner, helmet	ea	1	1,800	1,800	16	16	.75	.75
Overshoes, arctic	pr	40	12	480	45	1,800	3.3	132.
Raincoat, dismantled	ea	75	25	1,875	87	6,525	3.6	270.
Shirt, flannel, od	ea	38	100	3,800	120	4,560	5.9	224.2
Shoes, service, type III	pr	500	12	6,000	57	28,500	3.5	1,750.
Socks, wool	pr	42	720	30,240	95	3,990	5.	210.

Item	Unit	No. of Pkg.	Quantity No. per Pkg.	Total	Gross Weight (pounds)		Cubage (cu. ft.)	
					Per Pkg.	Total	Per Pkg.	Total
Suit, one-piece, herringbone twill	ea	56	30	1,680	92	5,152	4.	224.
Trousers, combat, winter	ea	46	30	1,380	111	5,106	5.	230.
Trousers, herringbone twill	ea	50	70	3,500	96	4,800	5.	250.
Trousers, wool, od	ea	63	60	3,780	126	7,938	5.6	352.8
Undershirt, cotton, summer, sleeveless	ea	27	140	3,780	100	2,700	5.	135.
Undershirt, wool	ea	38	100	3,800	88	3,344	5.	190.
Wristlets, knit	pr	1	300	300	48	48	3.8	3.8
Total (Clothing)		1,355				104,085		5,760.25

Equipment, Individual

Bag, canvas, field, od, M-36	ea	13	50	650	85	1,105	5.5	71.5
Bag, duffel	ea	16	40	640	97	1,552	6.55	104.8
Belt, cartridge, cal. 30	ea	11	40	440	100	1,100	3.	33.
Belt, magazine, BAR	ea	3	60	180	123	369	5.6	16.6
Belt, pistol or revolver	ea	4	100	400	75	300	4.	16.
Blanket, wool, od	ea	201	20	4,020	85	17,085	5.	1,050.
Can, meat, M-42	ea	21	60	1,260	80	1,680	5.9	123.9
Canteen, M-10	ea	12	75	900	67	804	6.1	73.2
Carrier, pack, M-28	ea	6	100	600	71	426	4.	24.
Cover, canteen, dismantled, M-10	ea	11	180	1,980	90	990	6.	66.
Cup, M-10	ea	9	105	945	71	639	5.9	53.1
Fork, M-26	ea	2	1,000	2,000	88	176	2.8	5.6
Haversack, M-28	ea	15	40	600	108	1,620	6.	90.
Knife, M-26	ea	2	1,000	2,000	120	240	1.5	3.
Pin, tent, shelter wood	ea	15	720	10,800	115	1,725	6.	90.
Pocket, magazine, DW, M-23	ea	1	100	100	19	19	.84	.84
Pocket, magazine, DW, carbine	ea	2	200	400	44	88	1.8	3.6
Pole, tent, shelter	ea	11	100	1,100	120	1,320	2.6	28.6
Pouch, first-aid	ea	3	500	1,500	90	270	2.	6.
Spoon, M-26	ea	3	750	2,250	85	255	1.13	3.39
Strap, carrying, bag, od, canvas	ea	1	500	500	75	75	2.15	2.15

Item	Unit	No. of Pkg.	Quantity No. per Pkg.	Total	Gross Weight (pounds)		Cubage (cu. ft.)	
					Per Pkg.	Total	Per Pkg.	Total
Suspenders, belt	ea	6	60	360	75	450	3.	18.
Tent, shelter half	ea	75	30	2,250	106	7,950	4.	300.
Total (Equipment, individual)		443				40,238		2,138.48

*The QM Class II and IV Supply Plan for an Operation on the Continent, OCQM, 1 March 1944.

APPENDIX IV-C
ITEMS TO BE STOCKED FOR MAINTENANCE SETS*

Clothing Item	Size	At each Depot G-20, G-40, G-35, G-50, G-47	Depot G-45	
Drawers, wool	28	608	660	
	30	1,200	1,300	
	32	1,792	1,940	
	34	1,200	1,300	
	36	592	640	
	38	608	660	
	42	247	265	
Gloves, leather, heavy	large	2,400	2,600	
	medium	4,800	5,200	
Head band, liner, adjustable		9,601	10,395	
Helmet, steel		2,400	2,600	
Jacket, field	34R	1,080	1,170	
	36R	1,620	1,755	
	36L	540	585	
	38R	1,080	1,170	
	38L	540	585	
	40R	540	585	
	44R	59	65	
	Jacket, herringbone twill, protective	34R	426	460
		36R	840	910
		38R	1,254	1,360
40R		426	460	
42R		414	449	
Leggings, canvas, dismantled, protective	1R	1,800	1,950	
	2R	3,600	3,900	
	3R	1,800	1,950	
		5,400	5,850	
Liner, steel helmet	4	9,601	10,395	
Neck band, liner, helmet				
Shirt, flannel, od	14 x 32	411	445	
	14½ x 32	395	425	
	14½ x 33	806	870	
	15 x 32	395	425	
	15 x 33	1,200	1,300	
	15 x 34	395	425	
	15½ x 32	411	445	
	15½ x 33	790	850	
	15½ x 34	411	445	
	16 x 33	395	425	
	17 x 33	395	425	
	Shoes, service	5E	71	77
		5½E	73	79
		6C	71	77
		6D	73	79
		6E	71	77
		6EE	73	79
6½C		144	156	
6½C		144	156	
Shoes, service, type IV	6½D	215	233	
	6½E	144	156	
	6½EE	73	79	

Clothing Item	Size	At each Depot G-20, G-40, G-35, G-50, G-47	Depot G-45
	7B	71	77
	7C	217	235
	7D	432	468
	7E	217	235
	7EE	73	79
	7½B	71	77
	7½C	361	391
	7½D	647	701
	7½E	288	312
	7½EE	73	79
	8A	215	233
	8B	144	156
	8C	576	624
	8D	864	936
	8E	361	391
	8EE	144	156
	8½A	73	79
	8½B	217	235
	8½C	720	780
	8½D	864	936
	8½E	359	389
	8½EE	71	77
	9A	73	79
	9B	288	312
	9C	864	936
	9D	864	936
	9E	288	312
	9EE	71	77
	9½A	73	79
	9½B	359	389
	9½C	720	780
	9½D	1,079	1,169
	9½E	217	235
	9½EE	71	77
	10A	73	79
	10B	359	389
	10C	720	780
	10D	505	547
	10E	215	233
	10EE	71	77
	10½A	73	79
	10½B	288	312
	10½C	432	468
	10½D	359	389
	10½E	71	77
	10½EE	73	79
	11A	71	77
	11B	215	233
	11C	288	312
	11D	217	235
	11E	73	79
	11½A	71	77
	11½B	73	79
	11½C	144	156

Clothing Item	Size	At each Depot G-20, G-40, G-35, G-50, G-47	Depot G-45
	11½D	71	77
	11½E	73	79
	11½EE		
	12A	71	77
	12B	73	79
	12C	71	77
	12D	73	79
	14C	36	36
	15C	36	36
	13C	37	43
	14B	36	36
Socks, wool	10	4,380	4,740
	10½	8,641	9,355
	11	12,902	13,970
	11½	17,282	18,710
	12	13,020	14,100
	13	4,261	4,615
Suits, one-piece, herringbone twill, protective	36R	720	780
	36L	182	200
	38R	898	970
	38L	182	200
	40R	547	595
	40L	178	190
	42R	360	390
	44R	178	190
Trousers, herringbone twill, protective	30 x 33	426	460
	32 x 31	840	910
	34 x 31	426	460
	34 x 33	414	450
	36 x 33	426	460
	40 x 33	414	450
	42 x 33	247	265
Trousers, wool, od	30 x 33	365	395
	31 x 31	720	780
	31 x 33	355	385
	32 x 31	355	385
	32 x 33	365	395
	32 x 35	355	385
	33 x 29		
	33 x 31	355	385
	33 x 33	365	395
	34 x 31	365	395
	34 x 33	720	780
	36 x 31	355	385
	36 x 33	365	395
	36 x 35		
	38 x 33	355	385
	40 x 33	365	395
Undershirt, wool	34	1,200	1,300
	36	2,400	2,600
	38	1,808	1,960
	40	592	640
	44	247	265

Equipment Item	At each Depot G-20, G-40, G-35, G-50, G-47	Depot G-45
Adapter, kit, gasoline lantern	1,200	1,300
Ax, intrenching	1,200	1,300
Bag, field, canvas, od, M1936	2,400	2,600
Bag, carrying, ammunition	480	520
Battery, electric hand lantern	3,000	3,250
Belt, cartridge	1,920	2,080
Belt, magazine, BAR	720	780
Belt, pistol or revolver	2,400	2,600
Blanket, wool, od	12,000	13,000
Bulb, electric, hand lantern	3,000	3,250
Candle, type II	10,801	11,695
Can, meat, M1932	2,880	3,120
Canteen, M1910	3,600	3,900
Carrier, ax, intrenching	1,200	1,300
Carrier, cutter, wire	1,200	1,300
Carrier, pack, M1928	2,400	2,600
Carrier, pick mattock, intrenching	1,200	1,300
Carrier, shovel, intrenching	2,400	2,600
Cover, canteen, dismantled, M1910	4,320	4,680
Cover, mattress	2,400	2,600
Cup, M1910	2,520	2,730
Cutters, wire, heavy	1,200	1,300
Fork, M1926	12,000	13,000
Haversack	2,400	2,600
Knife, M1926	12,000	13,000
Lantern, electric, hand, portable	240	260
Lantern, gasoline, w/adaptor	288	312
Matches, waterproof	12,000	13,000
Paper, toilet, rolls (1,000 sheets)	28,803	31,185
Pick mattock, intrenching	1,200	1,300
Pocket, magazine, DW	1,800	1,950
Pocket, magazine, DW, carbine	1,800	1,950
Pouch, first aid pack	6,001	6,495
Range, field, pack "B"	12	13
Shovel, intrenching	2,400	2,600
Sling, carrying, machine gun and ammunition	720	780
Soap, laundry, ordinary issue	12,241	13,255
Spoon	12,000	13,000
Suspenders, belt	1,440	1,560
Tablets, water-sterilizing (bottle)	13,825	14,971

*Supply Branch, Plans and Training Division, (?) March 1944.

APPENDIX V
 CLASS II RESERVE STOCKS FOR MARSHALING AREAS*
 30 March 1944

Item	Unit	Quantity per 1,000-man capacity
Clothing		
Belt, web, waist	ea	50
Drawers, wool	ea	50
Handkerchief	ea	100
Head band, liner, steel helmet	ea	50
Helmet, steel, M-1	ea	50
Jackets, field, od	ea	50
Leggings, canvas, dismantled, protective	pr	100
Liner, steel helmet	ea	50
Neck band, liner, steel helmet	ea	50
Raincoat	ea	25
Shirt, flannel, od, protective	ea	50
Shoes, service, type III	pr	100
Socks, wool, protective	pr	200
Trousers, wool, od, protective	ea	100
Undershirt, wool	ea	50
Equipment, Individual		
Bag, canvas, field, od	ea	25
Bag, carrying, ammunition	ea	25
Belt, BAR	ea	25
Belt, cartridge, cal. 30	ea	50
Belt, pistol or revolver	ea	50
Can, meat	ea	50
Canteen	ea	50
Carrier, pack, M1928	ea	25
Cover, canteen	ea	50
Cup, canteen	ea	50
Fork, M1926	ea	100
Haversack, M1928	ea	50
Knife, M1926	ea	100
Pocket, magazine, carbine	ea	50
Pocket, magazine, DW, M1923	ea	50
Pouch, first-aid	ea	50
Spoon, M-1926	ea	100
Suspenders, belt	ea	25

*SOS Plan, Mounting the Operation OVERLORD, Annex 10, SOS, ETOUSA, 30 March 1944.

APPENDIX VI
ALLOWANCES OF CLOTHING AND EQUIPMENT
FOR
TROOPS ENGAGED IN THE CONTINENTAL OPERATION*
30 April 1944

Item (For Enlisted Men)	Unit	Allowance		Basis of Issue and Remarks
		For Troops Assigned to Communica- tions Zone	For Troops Assigned to Armies	
Clothing				
Belt, web, waist	ea	1	1	Per enlisted man
Drawers, cotton	ea	3	3	Per enlisted man
Drawers, wool	ea	3	1	Per enlisted man
Gloves, leather, heavy	pr	1	1	Per enlisted man When authorized By Commanding Officer (ETO Cir. No. 97)
Gloves, wool	pr	1		Per enlisted man
Handkerchief	ea	6	6	Per enlisted man
Helmet, steel, complete	ea	1	1	Per enlisted man
(Jacket, field (or	ea	1	1	Per enlisted man
(Jacket, combat	ea	1	1	Per individual in crew of combat vehicle
(Jacket and Trousers, (herringbone twill (or	ea	2	2	Per enlisted man
(Suit, one-piece, (herringbone twill	ea	2	2	Per enlisted man
(Jacket and Trousers, (herringbone twill, (protective	ea	1	1	Per enlisted man
(or (Suit, one-piece, her- (ringbone twill, protective	ea	1	1	Per enlisted man
(or (Shirt, flannel, pro- (tective, and Trousers, (wool, protective	ea	1	1	Per enlisted man
Leggings, canvas	pr	1	1	Per enlisted man
Leggings, canvas, protective	pr	1	1	Per enlisted man
Raincoat	ea	1	1	Per enlisted man
Shirt, flannel	ea	1	1	Per enlisted man
Shoes, service	pr	2	2	Per enlisted man
Socks, wool	pr	4	5	Per enlisted man
Socks, wool, protective	pr	2	2	Per enlisted man
Trousers, wool	ea	1	1	Per enlisted man
Undershirt, cotton	ea	3	3	Per enlisted man
Undershirt, wool	ea	3	1	Per enlisted man

Item (For Enlisted Men)	Unit	Allowance		Basis of Issue and Remarks
		For Troops Assigned to Communica- tions Zone	For Troops Assigned to Armies	
Individual Equipment				
(Bag, canvas, field, (with Suspenders, belt, (and Strap, carrying (or (Haversack and Carrier, (pack	ea	1	1	Per enlisted man
Bag, duffel	ea	1	1	Per enlisted man
(Belt, cartridge (or (Belt, pistol (or (Belt, magazine, BAR	ea	1	1	Per enlisted man
Blanket, wool, US	ea	2	2	Per enlisted man
Can, meat	ea	1	1	Per enlisted man
Canteen	ea	1	1	Per enlisted man
Cover, canteen	ea	1	1	Per enlisted man
Cup, canteen	ea	1	1	Per enlisted man
Fork	ea	1	1	Per enlisted man
Knife	ea	1	1	Per enlisted man
Necklace, identification tag, with extension	ea	1	1	Per enlisted man
Pin, tent, shelter half	ea	5	5	Per enlisted man
(Pocket, magazine DW (or (Pocket, carbine	ea	1	1	Per enlisted man
Pole, tent, shelter half	ea	1	1	Per enlisted man
Pouch, first-aid	ea	1	1	Per enlisted man
Spoon	ea	1	1	Per enlisted man
Tag, identification	ea	2	2	Per enlisted man
Tent, shelter half	ea	1	1	Per enlisted man
Towel, bath	ea	1	1	Per enlisted man
Towel, huck	ea	2	2	Per enlisted man

Item (For Officers)	Unit	Allowance	Basis of Issue and Remarks
Clothing			
Helmet, steel, complete	ea	1	Per officer
(Jacket and Trousers, (herringbone twill, (protective (or (Suit, one-piece, herringbone (twill, protective (or (Shirt, flannel, protective, (and Trousers, wool, protective	ea	1	Per officer
	ea	1	Per officer
	ea	1	Per officer

Item (For Officers)	Unit	Allowance	Basis of Issue and Remarks
Leggings, canvas, protective	ea	1	Per officer
Socks, wool, protective	ea	1	Per officer
Individual Equipment			
Blanket, wool, od	ea	2	Per officer
Can, meat	ea	1	Per officer
Canteen, M1910	ea	1	Per officer
Cup, M1910	ea	1	Per officer
Fork, M1926	ea	1	Per officer
Knife, M1926	ea	1	Per officer
Necklace, identification tag, with extension	ea	1	Per officer
Pin, tent, shelter, wood	ea	10	Per officer
Pole, tent, shelter	ea	2	Per officer
Pouch, first-aid packet, M1924	ea	1	Per officer
Roll, bedding, water- proofed, M1935	ea	1	Per officer
Spoon, M1926	ea	1	Per officer
Tag, identification	ea	2	Per officer
Tent, shelter half	ea	2	Per officer

Item (For Nurses)	Unit	Allowance	Basis of Issue and Remarks
Clothing			
Helmet, steel, complete	ea	1	Per nurse
(Jacket, field, and (Trousers, herringbone (twill, protective (or (Suit, one-piece, herringbone (twill, protective (or (Shirt, flannel, protective (and Trousers, wool, (protective	ea	1	Per nurse
Leggings, canvas, pro- tective, women's	pr	1	Per nurse
Individual Equipment			
Bag, canvas, field, M1936	ea	1	Per nurse
Bag, duffel	ea	1	Per nurse
Belt, pistol or revolver	ea	1	Per nurse
Blanket, wool, od	ea	2	Per nurse
Can, meat	ea	1	Per nurse
Canteen, M1910	ea	1	Per nurse
Cover, canteen	ea	1	Per nurse
Cup, canteen	ea	1	Per nurse
Fork, M1926	ea	1	Per nurse
Knife, M1926	ea	1	Per nurse
Necklace, identification tag, with extension	ea	1	Per nurse

Item (For Nurses)	Unit	Allowance	Basis of Issue and Remarks
Pouch, first-aid	ea	1	Per nurse
Roll, bedding, water- proofed, M1935	ea	1	Per nurse
Spoon, M1926	ea	1	Per nurse
Strap, carrying, bag, canvas, field	ea	1	Per nurse
Suspenders, belt, M1936	ea	1	Per nurse
Tag, identification	ea	2	Per nurse

*Quartermaster Annex, Communications Zone Administrative Plan, OVERLORD, FECZ, 30 April 1944.

APPENDIX VII
ITEMS TO BE BULK SHIPPED*

11 May 1943

Item	Present System as Indicated by Movement Orders with Troops	Recommended System	
		With Troops	Bulk
Bag, barrack	2	1	1
Blanket, wool, od, M1934	2	2	2
Cap, wool, knit, M1941	1	-	1
Cover, protective, individual	2	-	2
Drawers, cotton, protective	1	-	1
Gloves, cotton, protective	1	-	1
Handkerchief, cotton, white	4	-	2
Hood, wool, od, protective	1	-	1
Undershirt, cotton, protective	1	-	1

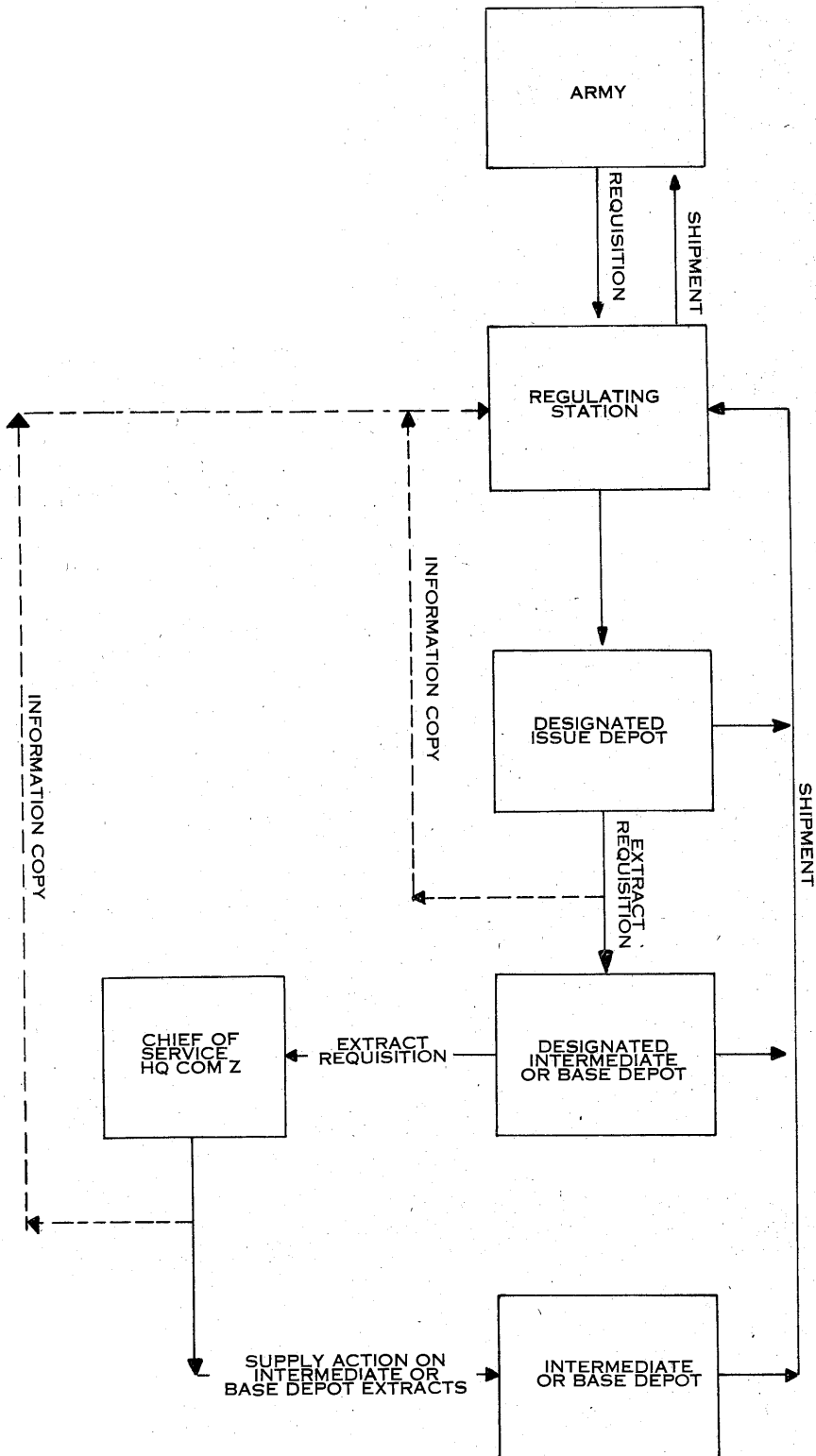
*Memorandum, DCQM to G-4, 11 May 1943.

APPENDIX VIII
HOSPITAL STOCKS*
April 1944

Item	Amount
Bag, barrack	50
Belt, cartridge	50
Belt, web, waist, assorted sizes	50
Blanket, wool, od	24
Blouse, wool, od, assorted sizes	50
Can, meat, M1932	50
Canteen	50
Cap, garrison, assorted sizes	50
Cover, canteen, dismantled	50
Cup, M1910	50
Drawers, cotton, assorted sizes	50
Fork, M1926	50
Gloves, wool, od, assorted sizes (pair)	50
Handkerchief, white, cotton	100
Haversack	50
Helmet, steel, assorted sizes	50
Insignia, collar, EM, "U. S."	100
Jacket, field, assorted sizes	50
Knife, M1926	50
Leggings, canvas, dismantled (pair)	50
Mask, gas, service	50
Muffler, wool, od	50
Necktie, khaki	25
Overcoat, assorted sizes	50
Shirt, wool, od, assorted sizes	50
Shoes, service, M1937, assorted sizes (pair)	50
Socks, light wool, assorted sizes (pair)	100
Spoon, M1926	50
Trousers, wool, assorted sizes	50
Undershirt, wool, assorted sizes	50

*Supply and Evacuation Regulations, ETOUSA, (?) April 1944.

APPENDIX IX
 FLOW OF CLOTHING AND
 INDIVIDUAL EQUIPMENT *
 2 FEBRUARY 1945



* SOP NO. 7. ETOUSA. 2 FEBRUARY 1945.

APPENDIX X-A
HEADQUARTERS
COMMUNICATIONS ZONE
EUROPEAN THEATER OF OPERATIONS
Office of the Chief Quartermaster
APO 887

10 October 1944

SUBJECT: Controlled Items.

1. Bulletin Number 3, OCQM, dated 7 October 1944, is recinded and the following bulletin substituted therefor. For ready reference, it should be placed in OCQM "Continental Operating Instructions" dated 30 Sept 44 in place of Exhibit XV.

2. The following items will not be issued without the specific approval of each requisition by the Office of the Chief Quartermaster, Headquarters Com Zone, except as indicated in Section VIII, OCQM Continental Operating Instructions, dated 30 Sept 44.

- a. Stoves, tent, M-41
- Sweater, wool, high neck
- *Trousers, field, cotton
- *Trousers, field, wool
- *Jackets, field, M-43
- Boots, service, combat
- Covers, mattress
- Blankets, wool, od
- Bags, sleeping, wool
- w/water repellent liner

3. Movement orders to the continent prescribed that certain items would not be carried. These items varied according to the command which issued the orders. Replacements for items authorized by movement orders will be issued in the normal manner. Initial issue to Com Zone troops of items not brought will be made only after approval of the Chief Quartermaster, Hq Com Zone, to insure that priority of issue is granted to combat units. These items are:

- Drawers, wool
- Undershirts, wool
- *Caps, garrison, od
- Coats, mackinaw
- *Coats, wool, od
- Gloves, wool, od

- *Insignia, collar, EM
- Overcoats, wool, od
- *Neckties, cotton, mohair
- Mufflers, wool, od
- *Overshoes, Arctic
- Caps, wool, knit

4. Spare Parts: See Section VIII, OCQM Continental Operating Instructions, dated 30 Sept 44.

ROBERT M. LITTLEJOHN
Major General, USA
Chief Quartermaster

*The Seine Section Quartermaster may approve these items to units stationed in the Paris area.

**APPENDIX X-B
ITEMS CONTROLLED BY OCQM***

April 1945

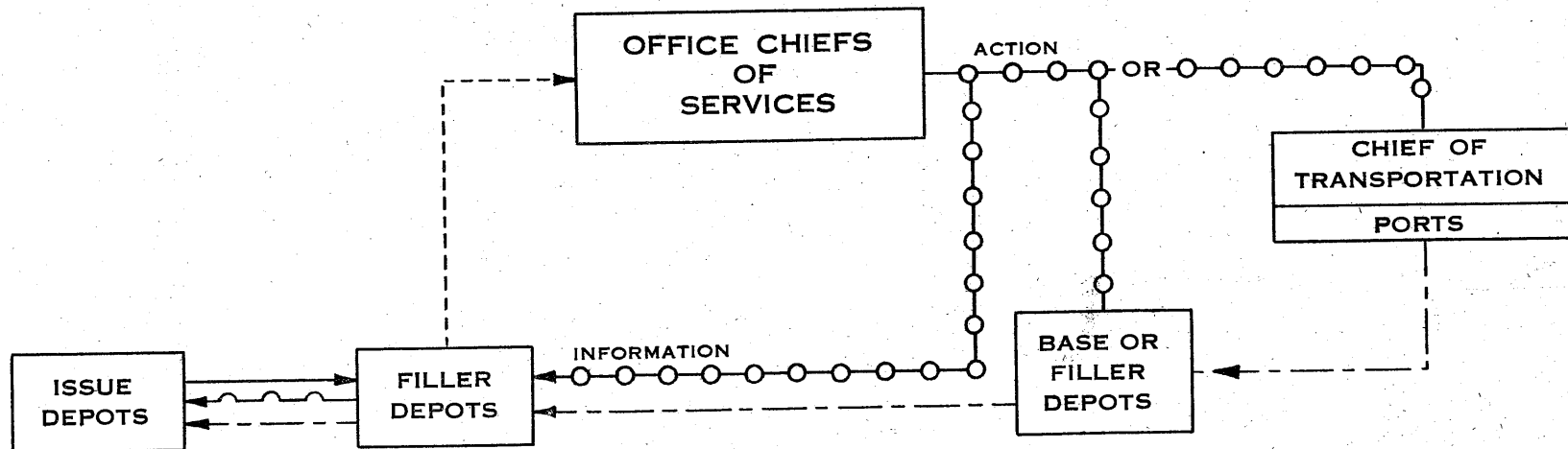
Class II Clothing Items

Controlled because of Short Supply	Controlled because of Restricted Use
Jackets, field, wool, od Trousers, field, wool, serge, dark shade, 18 oz.	Enlisted Women's clothing Gloves, mosquito Mufflers, wool, od Overcoats, parka type, reversible, pile-lined Ponchos Protective clothing Shoe pacs and insoles Socks, ski or arctic Trousers, field, cotton Trousers, field, wool (20 oz)

*Memorandum, CQM to G-4, 11 April 1945.

APPENDIX XI
REPLENISHMENT REQUISITION AND SHIPMENT FLOW*

19 MARCH 1945



124

Key:

- Replenishment Requisition
- ~~~~~ Edited Replenishment Requisition
- - - - - Replenishment Shipment
- - - - - Stock Status Report including back order quantities
- Shipping Order or Shipping Directive

Document Copies:

Replenishment Requisition—Depot prepared three copies.

1. Depot.—One for file—forwards two copies.
2. Replenishment Depot.—One for file—returns one edited copy.

Shipping Order or Shipping Directive—Chief of Service prepares three copies.

Chief of Service—one for file—forwards one copy to shipping depot or Chief of Transportation and one copy to depot receiving shipment.

Replenishment Requisition Cycle

On 10th, 20th, and last day of each month.

*SOP No. 7, ETOUSA, 19 March 1945.

APPENDIX XII
REPORT OF INDIVIDUAL EQUIPMENT PROCURED FROM BRITISH SOURCES*
1943-1944

Item	Due 1943	Delivered 31 December 1943	Due 1944	Delivered 31 August 1944
Bag, barrack	60,500	5,000	(Cancelled for bag, duffel)	
Bag, duffel	295,000			252,070
Bag, field, canvas	244,310	233,770	274,180	144,434
Belt, BAR	30,066	19,726	25,061	18,006
Belt, cartridge, cal. .30	106,197	99,917	190,370	86,377
Belt, pistol	267,760	225,800	309,920	155,846
Carrier, pack	236,342	217,562	227,980	151,462
Carrier, pick mattock, intrenching	48,676	44,016	47,172	37,039
Carrier, shovel, intrenching	90,700	74,600	84,800	68,180
Cover, canteen	94,065	87,225	102,500	60,985
Cover, canteen, dismounted	501,580	426,400	840,909	248,599
Haversack (with pouch, meat can)	276,412	236,532	339,040	152,270
Pouch, first-aid packet	1,020,720	888,760	950,470	666,115
Strap, carrying, bag, canvas, field	336,110	304,200	327,412	178,976
Suspenders, belt	143,245	127,350	155,500	70,613

*Compiled from records, Procurement Division, OCQM, 1943-1944.

APPENDIX XIII

DRAFT of French Government's procedure establishing general terms for the manufacture of military clothing

19 November 1944

The Quartermaster, U. S. Army, representing the U. S. Government and the Directive of Textiles and Leather to the Ministry of Production representing the Provisional Government of the French Republic agree as follows:

ART. I—The Dir. of Textiles & Leather undertakes to Manufacture by the purchase of the American Quartermaster, 2,500,000 sets of military garments consisting of:

1 pr trousers)	
1 Jacket	)	per set
1 Cap)	

100,000 sets for women consisting of:

1 pr trousers)	
1 skirt	)	per set
1 Jacket)	
1 Cap)	

ART. II—These articles must conform to the type garments provided by the Quartermaster. To ensure this the Q. M. will provide 250 sets of these type garments, with specifications, schedules, size tariffs and patterns in proportion.

ART. III—All cloth and findings necessary for manufacture will be deposited by the QM into depots specified by the French Government. Upon their receipt in these depots the accountability for this property rests with the French Government.

The amount of needles and repair parts furnished to the Direction will be a matter of discussion between the QM and the French Government to determine the actual amount needed for the manufacture of army garments before manufacture starts; any such needles and repair parts furnished will be charged to the Government Agency.

All cloth and findings supplied by French manufacturers will be credited to the French Government, who, in turn, can bill the U. S. Government.

ART. IV—The quality of all garments manufactured must be approved by U. S. authorities. Manufacturers must adhere to delivery schedules agreed upon, in addition the QM reserves the right to direct the Government to withdraw orders from one manufacturer and place with another if it is felt that the manufacturer has not acted in good faith.

Manufacturers receiving contracts should be made to put up a performance bond with the French Government in order to ensure proper performance.

Manufacturers' samples must be approved by a combined Inspection Branch of the QM and the French Government.

ART. V—The QM will provide, in cooperation with the Direction, urgent transportation only until such time as their own transportation becomes available. As transportation is limited it is recommended that articles should not be manufactured in too many parts of France.

ART. VI—Prices will be fixed by duly appointed Government agency who will consult with the QM for approval before contracts are placed for large quantities. Recommended procedure is by tender to the Direction at which time they will confer with the QM for approval of prices.

ART. VII—The Direction must furnish qualified inspectors for the various plants to ensure proper use of all material supplied and proper progress of any production being undertaken. In addition to this, there will be overall inspection by QM Officers.

ART. VIII—The QM if necessary, and if French transport is not available, will make necessary arrangements for the picking up of finished garments.

ART. IX—As the QM is not doing business directly with the manufacture, the responsibility of storage, distribution (except when in U. S. carriers) theft, fire, damage and any other losses occurring, except those due to action of war, rests with the French Government. Any damage or loss due to acts of war must be certified to by proper French officials.

ART. X—At all times the QM will be made cognizant of any problems arising which may retard progress of manufacture. The QM will be consulted as to distribution of contracts to the manufacturers.

ART. XI—An additional Article XI will be incorporated as follows:

Packing and marking will be governed by availability of material and will be directed by the Quartermaster.

**Comments of the Procurement Division, OCQM, on the first draft
of procedure establishing General Terms for the Manufacture of
Military Clothing**

GENERAL—In reference to the first paragraph, it is to be understood that the U. S. Army, thru Quartermaster General, would deal directly with the French Provisional Government thru its duly appointed agency.

ART. I—Whereas the draft specifically stated that 2,500,000 sets of military garments consisting of:

1 pr. trousers)
1 Jacket) per set
1 Cap)

and 100,000 sets for women consisting of:

1 pr. trousers)
1 Skirt) per set
1 Jacket)
1 Cap)

The Q. M. would like it understood that any production equivalent of that number of garments may be undertaken and not be confined to those items set forth in Art. I. In addition to this, there will also be included items of special measurements and also garments that are non-tariff sizes.

ART. II—The Q. M. will provide a few sets (as many as possible) of type garments with specifications, schedules, size tariffs and patterns in proportion. In addition, to make up the desired quantity they will provide cloth for sealed samples which the manufacturers will make up to the best French productive ability. Those samples should be made in a way that is familiar to French manufacturing and will be subject to the approval of the QM.

The QM will furnish sufficient sets of specifications, patterns and samples for the manufacture of each type garment but duplicate copies may have to be made by the Direction of Textile & Leather for distribution to other manufacturers if more than one factory is contracted for the same garment.

ART. III—Cloth and all findings necessary for the manufacture of these garments will be deposited by the QM into a spot or depots determined and agreed upon by the QM and the Dir. of Textiles & Leather, or the organization defined in Art. X. The QM will also provide sewing machine needles and such repair parts as are indispensable.

In the event of the Dir. of Textiles & Leather being able to furnish manufacturers with small quantities of findings such as, buttons, hooks, embroidery etc., of French manufacture, it will arrange with the QM as to the distribution of these findings, payment for which will be independent to the price of manufacture.

ART. IV—Delivery of these garments will be spaced over a minimum time limit of five months, at an average monthly delivery 500,000 sets.

The above time limit to date, 15 days from the delivery to the factory of the materials detailed in Art. III and on condition that the sets of type garments, patterns, etc., as detailed in Art. III are delivered at least 15 days before the arrival in France of the material.

ART. V—The QM is to provide the Dir. of Textiles & Leather with the transport necessary to ensure the delivery of material, and findings to the manufacturers. A detailed schedule for this transport will be laid down by the quartermaster.

ART. VI—Prices for the present contract will be fixed according to French law on the basis of an average price per Trouser, per Jacket, per Cap. Payment of these goods will be made by the QM as and when delivered in part to the Organization laid down in Art. X.

ART. VII—Representatives of the QM will have the right to inspect manufacture throughout and to approve the finished garments.

ART. VIII—The QM will make all necessary arrangements for the picking up the approved goods.

ART. IX—The French Government shall not be held responsible for the replacement in kind of any goods lost or damaged. It is relieved of all responsibility for damages by war action.

ART. X—The Dir. of Textiles & Leather agrees to entrust the Distribution of the work anticipated as herein stated to the Executive Control of an Organization formed by it and agreed to by the Quartermaster.

APPENDIX XIV
RAW MATERIALS IMPORT PLAN*
18 December 1944

Estimated Production on the Continent			Materials Required		
Item	Unit	Quantity	Description	Unit	Quantity
Cloth, Wool-serge					
(For Enlisted Men)					
Cap, garrison	ea	400,000	Serge, wool, od Shade #33	yd	80,000
Jacket, field, wool, ETO	ea	1,000,000	Serge, wool, od Shade #33	yd	2,000,000
Trousers, wool, od	pr	1,300,000	Serge, wool, od Shade #33	yd	2,000,000
Knit Goods					
(For Male Officers)					
Scarf, wool	ea	300,000	Yarn, wool	lb	150,000
(For Enlisted Men)					
Cap, wool, knit	ea	3,000,000	Yarn, wool	lb	1,000,000
Drawers, wool	ea	7,000,000	Yarn, wool	lb	8,400,000
Gloves, wool, od	pr	6,000,000	Yarn, wool	lb	2,000,000
Muffler, wool, od	ea	2,000,000	Yarn, wool	lb	900,000
Socks, wool, od, men's	pr	15,000,000	Yarn, wool	lb	4,750,000
Sweater, wool, high-necked	ea	2,500,000	Yarn, wool	lb	2,750,000
Undershirt, wool	ea	7,000,000	Yarn, wool	lb	9,000,000
Undershirt, cotton summer, sleeveless	ea	12,500,000	Yarn, cotton	lb	4,250,000
Embroidered Insignia and Patches					
Bars, service, overseas					
Hand-made	ea	200,000)	(Felt, pressed	sq yd	7,000
		)	(Bullion, gold	lb	500
Machine-made	ea	10,000,000)	(Yarn, gold	lb	10,000
		)	(Buckram, 2.5 oz.	sq yd	7,000
Brassard, blue and white, MP	ea	300,000	Felt, pressed	sq yd	15,000
Insignia, combat, identification, noncommissioned officers'	ea	5,000,000	Cloth, green	sq yd	15,000
Insignia, combat, identification, officers'	ea	3,000,000	Cloth, green	sq yd	15,000
Insignia, hand-made					
Rank	pr	500,000)	(Felt, pressed	sq yd	2,000
		)	(Wire, bullion, gold	lb	1,500
Branch	pr	100,000)	(Wire, bullion, silver	lb	3,000
		)	(Edging, beaded, gold	lb	500
U. S.	pr	200,000)			

**Estimated Production on the
Continent**

Materials Required

Item	Unit	Quantity	Description	Unit	Quantity
Aviation	ea	200,000)	(Edging, beaded, (silver	lb	500
			(Buckram, 2.5 oz.	sq yd	2,000
Insignia, machine-made					
Rank	pr	1,500,000)	(Felt, pressed	sq yd	4,000
			(Yarn, gold	lb	2,000
U. S.	pr	250,000)	(Yarn, silver	lb	2,000
Aviation	ea	250,000)	(Buckram, 2.5 oz.	sq yd	4,000
Insignia, sleeve, shoulder	ea	10,000,000	(Felt, pressed	sq yd	120,000
			(Cover, yarn	lb	70,000
			(Buckram, 2.5 oz.	sq yd	120,000
			(Yarn, cotton, (white		
Ribbons, assorted	yd	300,000	Yarn, rayon	lb	25,000
				lb	10,000
Leather Goods					
(For Male Officers)					
Gloves, dress, leather	pr	650,000	Deerskin	sq yd	175,000
(For Enlisted Men)					
Gloves, leather, heavy	pr	1,200,000	Full-chrome cowhide bellies	sq yd	300,000
Steel and Aluminum					
Can, meat	ea	3,500,000	Aluminum	Long ton	3,500
Cup, canteen	ea	3,500,000	Aluminum	Long ton	2,500
Knife M1926	ea	5,576,000)	Steel	Long ton	1,000
Fork M1926	ea	5,576,000)			
Spoon M1926	ea	5,651,000)			

*Letter, CQM to QMG, 18 December 1944

APPENDIX XV
COMPARISON OF COMMODITIES REQUIRED
AND PROCURED FROM CONTINENTAL PRODUCTION*
February - September 1945

Item	Number Demanded	Number Received
Bar, service, overseas, wool	10,000,000	311,000
Can, meat	750,000	161,244
Cap, garrison, od	2,300,000	138,021
Cape, snow, camouflage	150,000	133,174
Cup, canteen	750,000	689,911
Drawers, cotton, short	500,000	Unknown
Drawers, wool	7,000,000	49,720
Fork, M1926	750,000	363,168
Gloves, leather, heavy	500,000	Unknown
Gloves, wool, od	6,000,000	1,097
Insignia, arm or service	2,600,000	578,646
Insignia, officer's, grade	1,773,000	3,924,724
Insignia, sleeve, shoulder	10,000,000	2,172,307
Jacket, field, wool	2,500,000	45,331
Knife, M1926	750,000	325,176
Ribbon, single, campaign and decoration	300,000	83,128
Shirt, wool, od	25,000	23,919
Spoon, M1926	750,000	572,616
Sweater, wool, high-necked	2,500,000	Unknown
Trousers, wool, od	2,500,000	350,394

*Compiled from Delivery Reports of Continental Procurement, Procurement Division, OCQM, February - September 1945.

APPENDIX XVI
DEPOT MISSION IN UNITED KINGDOM*

Depot	Mission	Storage Space Required (Square Feet)
G-14	85,000 men for 30 days	110,839
G-15	40,000 men for 30 days	28,442
G-16	70,000 men for 30 days	31,052
G-18	25,000 men for 30 days	81,263
G-20	60,000 men for 30 days	68,112
G-22	55,000 men for 30 days	41,926
G-23	45,000 men for 30 days	28,441
G-24	50,000 men for 30 days	36,465
G-25	40,000 men for 30 days	14,588
G-30	20,000 men for 30 days	114,407
G-35	50,000 men for 30 days	105,495
G-40	64,000 men for 30 days	65,583
G-45	100,000 men for 30 days	141,470
G-47	53,000 men for 30 days	39,913
G-50	85,000 men for 30 days	100,617
G-55	60,000 men for 30 days	36,544
G-65	65,000 men for 30 days	38,872
G-75	45,000 men for 30 days	28,475
Q-101	40,000 men for 60 days	29,176
Q-103	10,000 men for 60 days	6,895
Q-104	45,000 men for 60 days	31,026
Q-105	30,000 men for 60 days	19,750
Q-107	70,000 men for 60 days	46,094
Q-108	30,000 men for 60 days	19,760
Q-111	133,000 men for 30 days	45,847
Q-125	55,000 men for 30 days	18,960
Q-140	35,000 men for 60 days	27,986
Q-150	35,000 men for 60 days	23,050
	Total	1,381,048

*Memorandum, CQM to All Depots, 6 December 1943.

APPENDIX XVII

COMPARISON OF CLOTHING AND INDIVIDUAL EQUIPMENT REQUIREMENTS AND ASSETS FOR FIRST PERIOD OF A CONTINENTAL OPERATION

(1) ITEM	(2) UNIT	(3) REQUIRMENTS UNITED KINGDOM										(4) REQUIRMENTS UNITED KINGDOM					(13) INVENTORY 23 APRIL 1944	(14) TOTAL DUE IN UNITED KINGDOM 23 APRIL 1944	(15) DUE ON CONTINENT IN TYPE LOADS*	(16) ESTIMATED SALVAGE EXPECTED TO BE AVAILABLE FOR PERIOD D--D/90	(17) TOTAL ASSETS	(18) OVER	(19) SHORT
		(5) SPECIAL INITIAL ISSUE IN UNITED KINGDOM PRIOR TO MOUNTING	(6) MAR-SHALING AREA SUPPLIES	(7) RESERVE STOCK FOR MAR-SHALING AREA	(8) SEA PASSAGE SUPPLIES	(9) UNITED KINGDOM D--D/90	(10) BEACH MAINTENANCE D/4--D/14	(11) FOLLOW-UP MAINTENANCE D/15--D/41	(12) FULL SCALE MAINTENANCE D/42--D/90	(13) PRISONERS OF WAR	(14) MOBILE CIVILIAN LABOR	(15) AMERICAN RED CROSS											
<i>Clothing</i>																							
Belt, web, waist	ea	285,000				560,395		102,000															
Coat, mackinaw, od	ea					130,235		57,800															
Drawers, cotton, short	ea					1,120,790		390,000		108,000													
Drawers, wool	ea			13,250		1,116,307		608,198		36,000													
Gauntlets, carbed-wire	pr					2,511		8,500															
Gloves, horsehide, riding, unlined	pr					104,906		51,000															
Gloves, leather, heavy	pr					414,244		224,790		43,200													
Gloves, wool, od, leather palm	pr					550,380		153,000															
Handkerchief, cotton, od or white	ea			26,500		2,241,580		1,428,000															
Head band, liner, helmet, adjustable	ea			13,250		748,688		185,000															
Helmet, steel	ea			13,250		188,293		14,400															
Jacket, field, od	ea			13,250		627,059		32,400															
Jacket, herringbone twill, protective	ea							20,160															
Laces, leggings	pr					74,689		367,200															
Laces, shoe	pr					224,158		255,000															
Leggings, canvas, dismounted, protective	pr			26,500				43,200															
Liner, steel helmet	ea			13,250		373,582		107,100															
Mittens, asbestos	ea					27,840		6,800															
Neck band, liner, helmet	ea			13,250		748,688		57,600															
Overshoes, arctic	pr					132,746		40,800															
Raincoat, dismounted	ea					560,395		159,375															
Shirt, flannel, od	ea					995,261		36,000															
Shoes, service	pr					1,775,311		108,000															
Socks, wool, light	pr			26,500		8,483,159		570,240															
Suit, one-piece, herringbone twill, protective	ea					19,440		142,800															
Trousers, herringbone twill, protective	ea					20,160		297,500															
Trousers, wool, od	ea					747,163		321,300															
Undershirt, cotton	ea					1,120,790		110,880															
Undershirt, wool	ea			13,250		1,116,307		323,000															
Wristlets, knit	pr					71,731		25,500															
Socks, wool, protective	pr			1,175,000		53,000																	
<i>Special Clothing</i>																							
Helmet, combat, winter	ea					36,056		12,600															
Jacket, combat, winter	ea					36,056		12,420															
Trousers, combat, winter	ea					36,056		12,420															
<i>Equipment, Individual</i>																							
Bag, canvas, field, od, M1935	ea					6,625		191,655		14,400													
Bag, duffel or barrack	ea					188,293		102,177															
Belt, cartridge, cal. .30	ea			13,250		12,328		11,520															
Belt, magazine, BAR	ea			6,625		2,152		4,320															
Belt, pistol or revolver	ea			13,250		15,041		14,400															
Blanket, wool, od	ea			848,300		261,000		1,201,487															
Can, meat, M1932	ea			15,000		13,250		38,000															
Canteen, M1910	ea					13,250		251,057															
Carrier, pack, M1928	ea					6,625		171,167															
Cover, Canteen, dismounted	ea					13,250		348,297															
Cup, M1910	ea					13,250		38,000															
Fork, M1928	ea					15,000		26,500															
Haversack, M1928	ea					13,250		171,167															
Knife, M1925	ea					15,000		26,500															
Pin, tent, shelter half	ea							373,582															
Pocket, magazine, DW, M1923	ea					13,250		325,203															
Pocket, magazine, DW, carbine	ea					13,250		16,000															
Pole, tent, shelter	ea							324,088															
Pouch, first-aid, M1924	ea					13,250		373,582															
Spoon, M1926	ea					15,000		26,500															
Strap, carrying, bag, canvas, od	ea					15,000		38,000															
Suspenders, belt, M1936	ea							96,388															
Tent, shelter half	ea					6,625		324,088															

*Either raincoat, mackinaw, or field jacket will be issued.

(Report, Storage and Distribution Division, 12 May 1944)

APPENDIX XVIII
INDIVIDUAL CLOTHING AND EQUIPMENT REQUIREMENTS
BRITTANY BASE SECTION*
8 September 1944

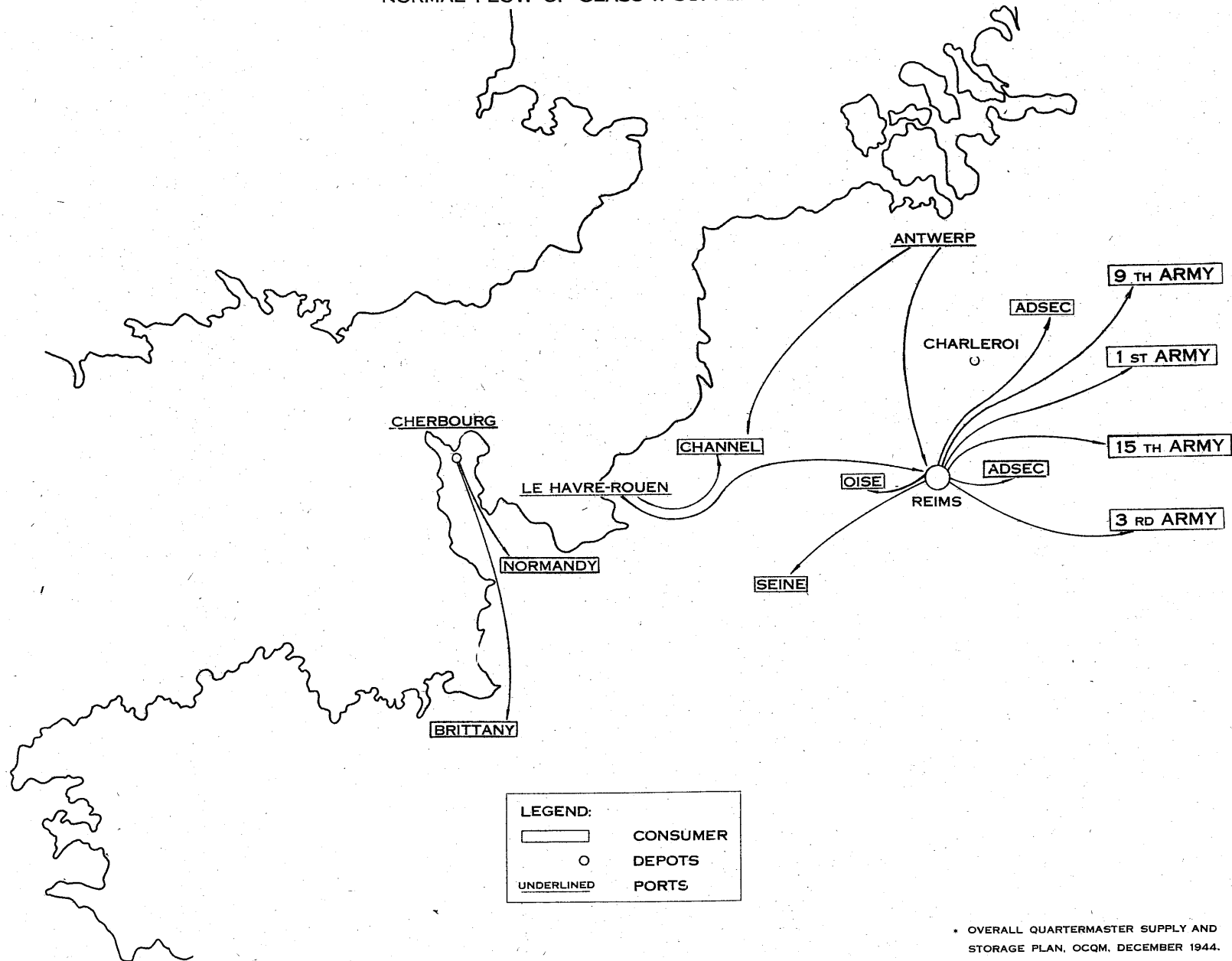
Item	Initial Issue (Due to combat losses)	Replacement (60 days maintenance for 175,000)	Total
Clothing			
Belt, web, waist	27,690	28,800	56,490
Cap, knit, wool	29,164	28,800	57,964
Coat, mackinaw, od		16,320	16,320
Drawers, cotton, short	13,840	96,000	109,840
Drawers, wool	44,510	91,200	135,710
Gloves, horsehide, riding, unlined		14,400	14,400
Gloves, leather, heavy	15,000	38,400	53,400
Gloves, wool, od, leather palm	27,540	43,200	70,740
Handkerchief, cotton	165,980	403,200	569,180
Head band, liner, helmet	30,000	38,400	68,400
Helmet, steel	30,000	15,120	45,120
Insignia, sleeve, chevron wool	78,690	76,693	155,383
Jacket, combat	22,162	33,120	55,282
Jacket, field	7,388	50,760	58,148
Jacket, herringbone twill	47,430	50,400	97,830
Laces, legging	9,000	25,200	34,200
Laces, shoe	9,000	14,000	23,000
Leggings, canvas	31,897	72,000	103,897
Liner, helmet, MI	29,820	30,240	60,060
Neck band, liner, helmet	29,820	43,200	73,020
Raincoat, od	27,690	45,000	72,690
Overcoat, wool, od	175,500	13,160	13,160
Overshoes, arctic	92,150	11,520	11,520
Shirt, flannel, od	55,350	91,200	146,550
Shoes, combat	41,513	48,000	89,513
Shoes, service	13,837	17,500	31,337
Socks, cushion sole	29,064	116,000	145,064
Socks, wool	35,897	544,210	580,107
Trousers, herringbone twill	47,250	84,000	131,250
Trousers, wool, od	55,350	90,720	146,070
Undershirt, cotton	13,840	96,000	109,840
Undershirt, wool	44,510	91,000	135,710
Individual Equipment			
Bag, canvas, field	3,900	15,600	19,500
Bag, duffel	30,000	15,360	45,360
Belt, cartridge, 30 cal.	8,220	10,560	18,780
Belt, magazine, BAR	221	4,320	4,541
Belt, pistol	21,570	9,600	31,170
Blanket, wool, od	60,000	96,480	156,480
Can, meat	30,000	30,240	60,240
Canteen, M1910	30,000	21,600	51,600
Carrier, pack	21,570	14,400	35,970
Cover, canteen	30,000	47,520	77,520
Cup, canteen	30,000	22,680	52,680
Fork, M1926	30,000	48,000	78,000
Haversack	14,400	14,400	28,800
Knife, M1926	30,000	48,000	78,000

Item	Initial Issue (Due to combat losses)	Replacement (60 days maintenance for 175,000)	Total
Pin, tent, shelter-half	160,000	259,200	419,200
Pocket, magazine	1,365	2,400	3,765
Pocket, magazine for carbine	19,020	9,600	28,620
Pole, tent, shelter	32,190	26,400	58,590
Pouch, first-aid	30,000	36,000	66,000
Roll, bedding	2,220	1,158	3,378
Spoon, M1926	30,000	54,000	84,000
Strap, carrying	15,600	11,000	26,600
Suspenders, belt	15,180	8,640	23,820
Tent, shelter-half	32,190	54,000	86,190

*Plan for Class II and IV supplies, Plans and Training Division, 8 September 1944.

APPENDIX XIX
 NORMAL FLOW OF CLASS II SUPPLIES *

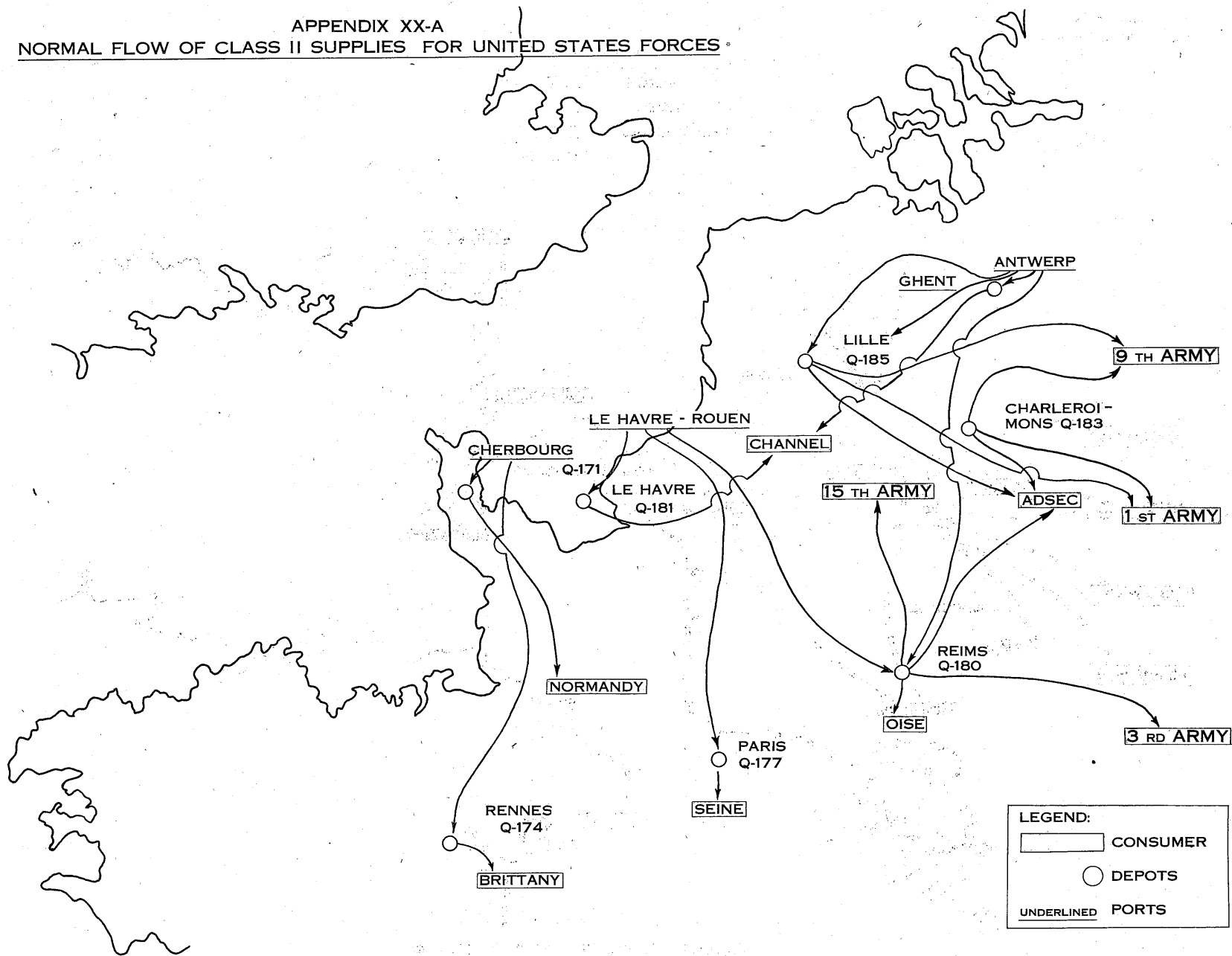
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* OVERALL QUARTERMASTER SUPPLY AND STORAGE PLAN, OCQM, DECEMBER 1944.

APPENDIX XX-A
NORMAL FLOW OF CLASS II SUPPLIES FOR UNITED STATES FORCES*

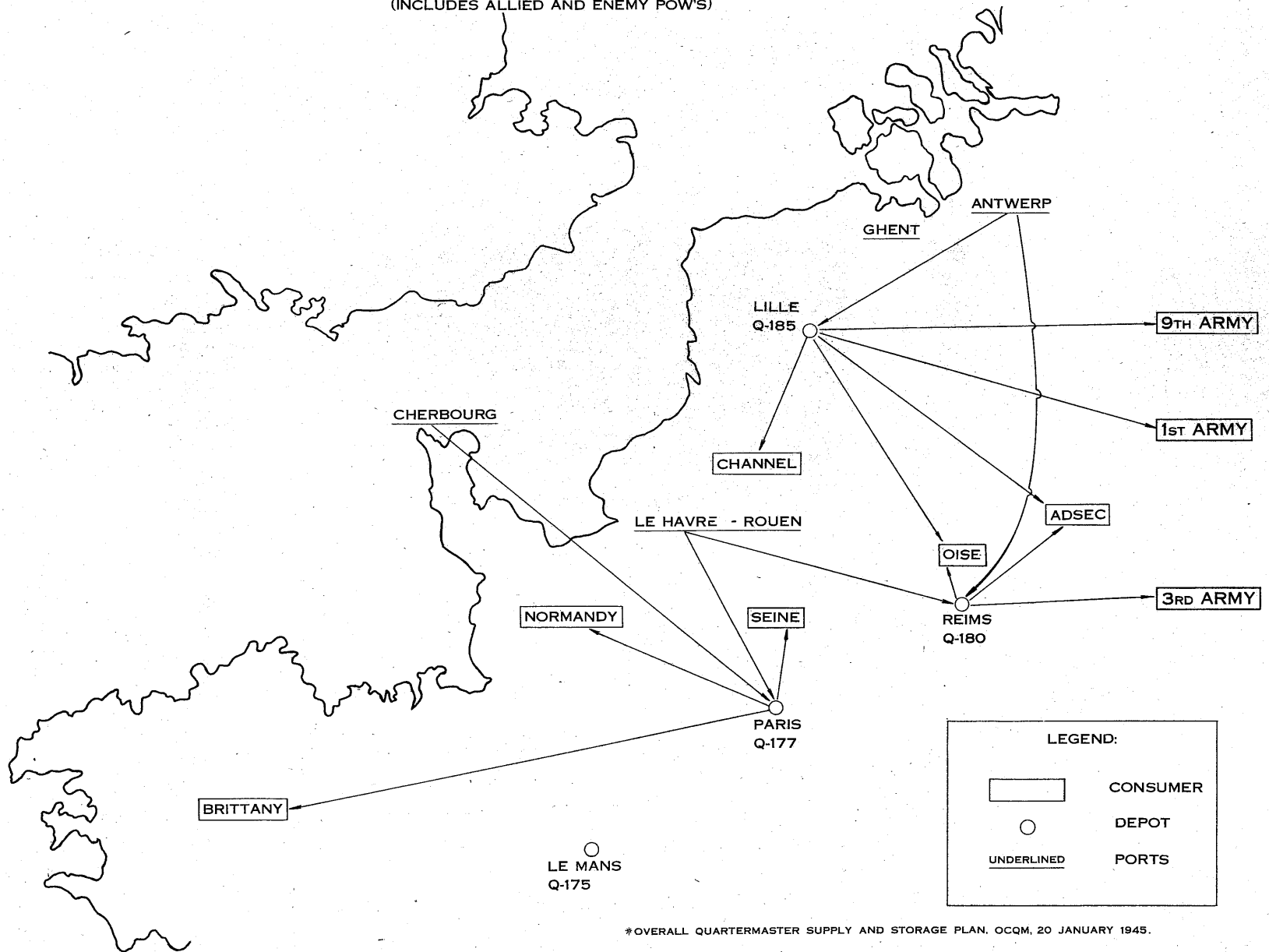
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* OVERALL QUARTERMASTER SUPPLY AND STORAGE PLAN, OCQM, 20 JANUARY 1945.

APPENDIX XX-B
 NORMAL FLOW OF CLASS II SUPPLIES FOR POW *
 (INCLUDES ALLIED AND ENEMY POW'S)

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*OVERALL QUARTERMASTER SUPPLY AND STORAGE PLAN. OCQM, 20 JANUARY 1945.

APPENDIX XXI

SUMMARY OF CLASS II DEPOT MISSIONS*

Depot	Model Stock Days/Strength	Model Stock	Enemy and Allied POW Stocks	Additional Stocks	Total	Long Tons to Be Handled Daily (In and out)	Remarks
Q—171 Cherbourg) Q—174 Rennes) Q—175 Le Mans) Q—181 Le Havre)	45/225,000	5,500	6,500	5,000	17,000	400	In addition, initial issue T/E for 20,000 U. S. Military at Le Havre, and POW stocks at Cherbourg and Rennes. <i>Note:</i> Tonnages to be stored and handled were not furnished in letter to QM, Normandy Base Section, which requested preparation of depot missions.
Q—177 Paris	45/150,000	3,500		12,500	16,000	800	Includes level for 50,000 transient troops. Central storage point for flags, band instruments, and chaplains' supplies for all areas except 6th AG, CONAD, and Delta.
Q—178 Verdun) Q—179 Liege) Q—183 Charleroi)							(Retail to Depot Area as directed by Base Section Commander)
Q—180 Reims (a)	45/800,000	20,000	4,000	15,000	39,000	2,400	
Q—185 Lille-Mons	45/800,000	20,000	3,500	70,000	93,500	4,500	
Q—185 Antwerp	45/75,000	2,000		15,000	17,000	600	
Q—186 Nancy-Metz (a)	30/600,000	17,000	4,000	5,000	26,000	1,500	
Q—187 Dijon	30/600,000	10,000			10,000	700	
Q—188 Marseille	45/600,000	15,000		50,000	65,000	1,600	

Depot	Model Stock Days/Strength	Model Stock	Enemy and Allied POW Stocks	Additional Stocks	Total	Long Tons to be Handled Daily (In and out)	Remarks
Q-256 Reims (Sal- vage)	(See Remarks)				9,000	260	Maintenance/spare parts-- 60 days/entire Continent. Repair and laundry operat- ing supplies---45 days/en- tire Continent. Special purpose trailers (except bakery & refrig. trailers) —total reserves.

(a) Class II for the Third Army and ADSEC (South) is included in both Reims and Nancy-Metz Depot Missions. Third Army will continue to be supported from Reims until sufficient storage and handling capacity is obtained at Nancy-Metz.

*Compiled from memorandums sent by CQM to all section and base section QM's, February and March 1945.

APPENDIX XXII

MODEL STOCK CLOTHING*

(10,000 Men for 30 Days)

1 August 1943

Item	Model Stock
Personal Clothing	
Belt, web, waist	1,250
Braid, rayon cord edge	830
Cap, garrison, wool, od	830
Cap, herringbone twill	1,670
Cap, wool, knit	830
Coat, mackinaw, od	290
Coat, serge, wool	830
Drawers, cotton, short	2,500
Drawers, wool	2,500
Gloves, horsehide, riding, lined	80
Gloves, horsehide, riding, unlined	230
Gloves, leather, heavy	920
Gloves, wool, od, leather palm	1,230
Handkerchief, cotton, white or od	5,000
Hat, herringbone twill	540
Head band, steel, helmet, M-1	1,670
Helmet, steel, M-1	420
Insignia, collar, EM	630
Insignia, collar, EM, US	630
Insignia, sleeve, chevron, service, cotton	3,240
Insignia, sleeve, chevron, service, wool	2,200
Jacket, field	1,400
Jacket, herringbone twill	2,260
Laces, leggings (extra)	170
Laces, shoe (extra), low quarter or service	500
Leggings, canvas, dismantled	1,970
Liner, helmet, steel, M-1	830
Muffler, wool	560
Neck band, helmet, M-1	1,670
Necktie, cotton, mohair (or cotton, tan)	1,670
Overcoat, wool, roll collar	450
Overshoes, arctic	300
Raincoat, dismantled	1,250
Shirt, flannel, od	2,220
Shoes, service	3,960
Socks, cotton, tan	3,340
Socks, wool, light or heavy	10,000
Strap, shoulder, MP	10
Suit, one-piece, herringbone twill	1,120
Trousers, herringbone twill	2,250
Trousers, wool, od	1,640
Undershirt, summer, sleeveless	2,500
Undershirt, wool	2,500

Protective Clothing

Cover, protective, individual	3,330
Drawers, cotton, protective	4,000
Gloves, cotton, protective	4,000
Hood, wool, protective	4,000
Jacket, herringbone twill, protective	2,700
Leggings, canvas, dismounted, protective	4,000
Outfit, protective, impermeable, type II	60
Socks, wool, light, protective	4,000
Suit, one-piece, herringbone twill, protective	1,300
Trousers, herringbone twill, protective	2,700
Undershirt, cotton, protective	4,000

*Basic Model Stocks, OCQM, 1 August 1943.

APPENDIX XXIII

MODEL STOCK CLOTHING*

(100,000 Men for 30 Days)

20 January 1945

Item	Total Quantity Prescribed By Model Stock	Breakdown by Size		Breakdown by Size Nontariff	
		Size	Quantity	Size	Quantity
Belt, web, waist	11,600	32	638		
		36	6,380		
		40	3,480		
		44	835		
		48	174		
		52	58		
Cap, garrison, wool, od	15,300	56	35		
		6 1/4	31		
		6 1/2	77		
		6 5/8	230		
		6 3/4	612		
		6 7/8	2,417		
		7	3,825		
		7 1/8	3,856		
		7 1/4	2,632		
		7 3/8	1,055		
		7 1/2	413		
		7 5/8	107		
		7 3/4	30		
7 7/8	15				
Cap, herringbone twill	15,400	6 1/2	77		
		6 3/4	770		
		7	6,083		
		7 1/4	6,237		
		7 1/2	1,848		
		7 3/4	385		
Cap, wool, knit	8,300	Large	1,245		
		Medium	6,557		
		Small	498		

Item	Total Quantity Prescribed By Model Stock	Breakdown by Size		Breakdown by Size Nontariff	
		Size	Quantity	Size	Quantity
Coat, mackinaw, od	4,410	34	335		
		36	1,323		
		38	1,535		
		40	794		
		42	287		
		44	124		
		46	12		
Coat, serge, wool	7,651	33 R	23	39 XL	16
		34 R	144	40 XL	13
		34 S	45	42 XL	6
		35 R	265	44 S	8
		35 L	152	44 L	6
		35 S	99	44 XL	2
		36 R	667	46 S	1
		36 L	341	46 R	15
		36 XL	83	46 L	1
		36 S	182	46 XL	5
		37 R	720	48 R	1
		37 L	439	48 L	2
		37 XL	91	50 R	1
		37 S	205	52 R	
		38 R	795		
		38 L	499		
		38 XL	114		
		38 S	190		
		39 R	545		
		39 L	303		
39 S	167				
Coat, serge, wool		40 R	492		
		40 L	227		
		40 S	174		
		42 R	265		
		42 L	106		
		42 S	106		
		44 R	135		

Item	Total Quantity Prescribed By Model Stock	Breakdown by Size		Breakdown by Size Nontariff	
		Size	Quantity	Size	Quantity
Drawers, cotton, short	34,700	28	1,615	48	138
		30	8,245	50	122
		32	11,680	52	87
		34	7,145		
		36	3,092		
		38	1,477		
		40	653		
		42	309		
		44	103		
		46	34		
Drawers, wool	34,700	28	1,201	46	347
		30	8,245		
		32	11,508		
		34	7,214		
		36	3,264		
		38	1,718		
		40	687		
		42	344		
		44	172		
Gloves, cotton, white	539	7	16		
		8	108		
		9	221		
		10	113		
		11	81		
Gloves, leather, heavy	8,350	Large	2,922		
		Medium	5,428		
Glove-inserts, wool	737	Small	122		
		Medium	438		
		Large	177		
Glove-shells, leather	971	Small	160		
		Medium	578		
		Large	233		
Gloves, wool, od, leather palm	17,700	8	2,654		
		9	8,762		
		10	5,222		
		11	1,062		

Item	Total Quantity Prescribed By Model Stock	Breakdown by Size		Breakdown by Size Nontariff	
		Size	Quantity	Size	Quantity
Handkerchief, cotton	78,800				
Head band, liner, helmet, M-1	16,700				
Helmet, steel	4,200				
Insignia, collar, EM	5,820				
Insignia, collar, EM, US	5,820				
Insignia, sleeve, chevron, service, cotton	17,178	M/Sgt	203		
		1st Sgt	149		
		T/Sgt	537		
		S/Sgt	1,440		
		T/3	249		
Insignia, sleeve, chevron, service, cotton		Sgt	1,640		
		T/4	1,700		
		Cpl	1,780		
		T/5	3,640		
		Pfc	5,840		
Insignia, sleeve, chevron, service, wool	19,335	M/Sgt	269		
		1st Sgt	198		
		T/Sgt	714		
		S/Sgt	1,920		
		T/3	324		
		Sgt	2,170		
		T/4	2,250		
		Cpl	1,660		
		T/5	3,750		
		Pfc	6,080		
Jacket, field, M-43	13,100	34 R	2,205	48 R	91
		34 L	713	50 R	37
		36 R	3,761	52 R	3
		36 L	1,323		
		38 R	2,529		
		38 L	908		
		40 R	869		
		40 L	182		
		42 R	324		
		44 R	117		
		46 R	38		

Item	Total Quantity Prescribed By Model Stock	Breakdown by Size		Breakdown by Size Nontariff	
		Size	Quantity	Size	Quantity
Jacket, field, od	13,100	34 R	2,205	48 R	91
		34 L	713	50 R	37
		36 R	3,761	52 R	3
		36 L	1,323		
		38 R	2,529		
		38 L	908		
		40 R	869		
		40 L	182		
		42 R	324		
		44 R	117		
Jacket, herringbone twill, special	35,900	46 R	38		
		34 R	4,443	46 R	184
		36 R	12,262	48 R	114
		38 R	11,551	50 R	53
		40 R	5,153	52 R	4
		42 R	1,599	54 R	4
Leggings, canvas, dismounted	18,400	44 R	533		
		1 R	5,009	4 R	184
		2 R	10,474		
		3 R	2,733		
Liner, helmet, M1	8,230				
Mask, face, felt, wool, od	26				
Muffler, wool, od	19				
Neck band, liner, helmet	16,700	Small	5,177		
		Medium	6,680		
		Large	4,843		
Necktie, cotton, mohair, khaki	15,300				

Item	Total Quantity Prescribed By Model Stock	Breakdown by Size		Breakdown by Size Nontariff			
		Size	Quantity	Size	Quantity		
Overcoat, wool, od, RC	7,480	34 R	615	44 S	16		
		34 L	200	46 S	2		
		34 S	170	46 R	37		
		36 R	1,629	46 L	2		
		36 L	726	48 R	10		
		36 S	370	48 L	1		
		38 R	1,355	50 R	6		
		38 L	622	52 R	1		
		38 S	370				
		40 R	518				
		40 L	207				
		40 S	185				
		42 R	193				
		42 L	52				
		42 S	89				
		44 R	82				
		44 L	22				
		Overshoes, arctic	6,300	6	82		
				7	365		
8	1,040						
9	1,638						
10	1,626						
11	989						
12	409						
13	120						
14	25						
15	6						
Raincoat, od, dismounted	11,600			Small	5,220		
		Medium	5,220				
		Large	1,160				

Item	Total Quantity prescribed by Model Stock	Breakdown by Size		Breakdown by Size Nontariff	
		Size	Quantity	Size	Quantity
Shirt, flannel, od, coat-style	30,000	13½ x 32	239	18 x 34	57
		14 x 32	1,841	19 x 34	30
		14 x 33	861	20 x 34	3
		14½ x 32	3,980	14½ x 35	180
		14½ x 33	3,029	15 x 37	8
		14½ x 34	802	16 x 37	8
		15 x 32	3,326	17 x 37	7
		15 x 33	3,950	18 x 37	7
		15 x 34	1,129		
		15 x 35	356		
		15½ x 32	1,841		
		15½ x 33	2,911		
		15½ x 34	1,040		
		15½ x 35	416		
		16 x 32	653		
		16 x 33	1,337		
		16 x 34	594		
		16 x 35	267		
		16½ x 33	564		
		17 x 33	356		
		17 x 35	119		
		17½ x 33	89		
Shoes, service, or boots, combat	26,000	5A	1		
		5B	2		
		5C	9		
		5D	27		
		5E	34		
		5EE	46		
		5½A	1		
		5½B	3		
		5½C	17		
		5½D	55		

Item	Total Quantity prescribed by Model Stock	Breakdown by Size	
		Size	Quantity
		Size	Breakdown by Size Nontariff Quantity
Shoes, service, or boots, combat		5½E	80
		5½EE	69
		6A	3
		6B	16
		6C	45
		6D	186
		6E	147
		6EE	143
		6½A	6
		6½B	24
		6½C	124
		6½D	331
		6½E	239
		6½EE	210
		7A	10
		7B	64
		7C	302
		7D	636
		7E	420
		7EE	277
		7½A	19
		7½B	115
		7½C	454
		7½D	907
		7½E	703
		7½EE	316
		8A	34
		8B	170
		8C	715
		8D	1,167
		8E	788
		8EE	365
		8½A	50
		8½B	245
		8½C	866
	8½D	1,225	
	8½E	860	
	8½EE	380	
	9A	84	
	9B	305	
	9C	1,018	
	9D	1,210	

Item	Total Quantity prescribed by Model Stock	Breakdown by Size	
		Size	Quantity
		Size	Quantity
Shoes, service, or boots, combat		9E	725
		9EE	323
		9½A	111
		9½B	319
		9½C	880
		9½D	948
		9½E	577
		9½EE	262
		10A	134
		10B	300
		10C	714
		10D	685
		10E	512
		10EE	190
		10½A	107
		10½B	249
		10½C	473
		10½D	430
		10½E	368
		10½EE	127
		11A	94
		11B	157
		11C	298
		11D	268
		11E	211
		11EE	99
		11½A	52
		11½B	99
		11½C	155
		11½D	115
	11½E	89	
	11½EE	56	
	12A	43	
	12B	64	
	12C	89	
	12D	75	
	12E	49	
	12EE	30	

Item	Total Quantity prescribed by Model Stock	Breakdown by Size		Breakdown by Size Nontariff	
		Size	Quantity	Size	Quantity
Socks, wool, cushion-sole	92,300	10	5,077		
		10½	8,768		
		11	22,521		
		11½	23,075		
		12	24,367		
		13	7,846		
		14	646		
Socks, wool, light or heavy	61,600	10	4,312		
		10½	8,932		
		11	18,172		
		11½	14,353		
		12	12,320		
		13	3,080		
Suit, one-piece, herringbone twill	3,580	14	431		
		34 R	233		
		36 R	1,164		
		36 L	222		
		38 R	858		
		38 L	215		
		40 R	376		
		40 L	107		
		42 R	233		
		42 L	18		
		44 R	107		
		44 L	11		
		46 R	36		
		Trousers, herringbone twill, special	35,900	30 x 33	6,575	34 x 35	163
32 x 33	12,333			36 x 35	109
34 x 33	9,240			46 x 33	62
36 x 33	4,087			48 x 33	25
38 x 33	1,777				
40 x 33	853				
42 x 33	427				
44 x 33	249				

Item	Total Quantity prescribed by Model Stock	Breakdown by Size		Breakdown by Size Nontariff	
		Size	Quantity	Size	Quantity
Trousers, serge, wool, od	23,100	28 x 31	229	34 x 29	64
		29 x 29	457	36 x 29	46
		29 x 31	778	38 x 29	25
		29 x 33	435	40 x 29	14
		30 x 29	526	46 x 33	5
		30 x 31	1,509	48 x 33	2
		30 x 33	1,006	50 x 33	2
		31 x 29	503	31 x 35	53
		31 x 31	1,715	42 x 35	5
		31 x 33	1,509	44 x 35	4
		32 x 29	526	32 x 37	3
		32 x 31	1,898	34 x 37	2
		32 x 33	1,852	36 x 37	2
		32 x 35	755	38 x 37	2
		33 x 29	435	40 x 37	2
		33 x 31	1,189		
		33 x 33	1,212		
		34 x 31	1,440		
		34 x 33	1,121		
		34 x 35	549		
		36 x 31	983		
		36 x 33	618		
		36 x 35	229		
		38 x 31	457		
		38 x 33	297		
		38 x 35	92		
		40 x 31	206		
40 x 33	160				
42 x 33	114				
44 x 33	69				
Undershirt, cotton, sleeveless	34,700	34	7,558	48	246
		36	12,538	50	101
		38	9,104		
		40	3,367		
		42	1,202		
		44	412		
Undershirt, wool	30,800	34	5,885	48	219
		36	10,825	50	89

Item	Total Quantity prescribed by Model Stock	Breakdown by Size		Breakdown by Size Nontariff	
		Size	Quantity	Size	Quantity
Undershirt, wool		38	8,890		
		40	3,293		
		42	1,220		
		44	457		
		46	122		
Sweater, high-necked	7,670	Small	2,531		
		Medium	3,452		
		Large	1,687		

*Basic Model Stocks, OCQM, 20 January 1945.

APPENDIX XXIV

SUPPLEMENTAL SIZE TARIFFS FOR SHOES, SERVICE, TYPE III*

7 November 1944

AAA	AA	A	B	C	D	E	EE	EEE	EEEE
3	3	3	3	3	3	3	3	3	3
3½	3½	3½	3½	3½	3½	3½	3½	3½	3½
4	4	4	4	4	4	4	4	4	4
4½	4½	4½	4½	4½	4½	4½	4½	4½	4½
5	5							5	5
5½	5½							5½	5½
6	6							6	6
6½	6½							6½	6½
7	7							7	7
7½	7½							7½	7½
8	8							8	8
8½	8½							8½	8½
9	9							9	9
9½	9½							9½	9½
10	10							10	10
10½	10½							10½	10½
11	11							11	11
11½	11½							11½	11½
12	12							12	12
12½	12½	12½	12½	12½	12½	12½	12½	12½	12½
13	13	13	13	13	13	13	13	13	13
13½	13½	13½	13½	13½	13½	13½	13½	13½	13½
14	14	14	14	14	14	14	14	14	14
14½	14½	14½	14½	14½	14½	14½	14½	14½	14½
15	15	15	15	15	15	15	15	15	15
15½	15½	15½	15½	15½	15½	15½	15½	15½	15½

*Circular Letter 78, OCQM, 7 November 1944.

APPENDIX XXV
SHOEPAC SIZE TARIFFS*
1 November 1945

Recommended by OCQM		Approved by OQMG	
Size Worn in Shoes, Service	Trial Size of Shoepacs, 12"	Size	Number per 1,000 Men
5, 5½, and 6	6	6	7
6½ and 7	7	7	29
7½ and 8	8	8	123
8½ and 9	9	9	245
9½ and 10	10	10	289
10½ and 11	11	11	199
11½ and 12	12	12	85
12½ and 13	13	13	15
13½ and 14	14	14	8
14½ and 15	15		

*Operational Study No. 7, OTCQM, 1 November 1945.

APPENDIX XXVI
STATUS OF PROTECTIVE CLOTHING*
9 February 1944

Item	Protective Items in Depots 23 January 1944	Nonprotective Items in Depots Capa- ble of Im- pregnation 23 January 1944	90-day Require- ments	Days of Supply	Protective Items in Hands of Troops 25 November 1944	Basis of Individ- ual Issue	Basis of Reserve
Individual Outer Clothing							
Jacket, herringbone twill	190	1,351,864	515,493	236	198,308	1	0
Shirt, flannel, od, coat-style	183,561	1,351,864	507,492	329	136,363	1	0
Suit, one-piece, herringbone twill	4,058	550,276	255,780	194	86,433	1	0
Trousers, herringbone twill	494	1,206,741	515,378	211	184,455	1	0
Trousers, wool, od	183,365	939,698	375,681	225	138,817	1	0
Underclothing and Accessories							
Cover, individual	464,908	—	—	—	802,078	2	60-day level
Drawers, cotton	1,523,978	1,798,759	571,500	265	378,137	1	2
Gloves, cotton	1,268,830	—	—	—	403,397	1	2
Hood, wool	290,756	—	—	—	407,647	1	1
Leggings, dismounted, canvas	53,323	1,177,790	451,027	235	400,108	1	0
Socks, wool, light	68,111	4,052,103	2,286,000	159	391,581	1	0
Undershirt, cotton	1,593,966	2,480,903	571,500	391	330,582	1	2
Organizational							
Gloves, impermeable	31,965	—	—	—	38,125	T/E	60-day level
Suit, one-piece, impermeable	31,628	—	—	—	17,069	T/E	60-day level
Miscellaneous Items							
Shirt, cotton, khaki	0	—	—	—	1,767	0	0
Trousers, cotton, khaki	0	—	—	—	1,139	0	0

*Memorandum, Chief, Plans and Training Division, to DCQM, 9 February 1944.

APPENDIX XXVII
STATUS OF ITEMS OF CLOTHING AND INDIVIDUAL EQUIPMENT
IN SHORT SUPPLY IN THE UNITED KINGDOM*

15 July 1944

Item	Unit	Total Require- ments	Stock in UK Depots as of 8 July 1944	Days of Supply on hand for Replace- ment	Due In on Manifest Through 15 August 1944
Ax, intrenching	ea	86,838	64,004	0	38,312 (B)
Bag, carrying, ammunition	ea	72,803	51,016	13	5,950 (C)
Blanket, wool, od	ea	825,631	273,794	0	77,259 (A)
Carrier, ax, intrenching	ea	90,999	73,862	6	41,220 (B)
Carrier, pick mattock, intrenching	ea	186,227	56,400	0	61,105 (B)
Carrier, shovel, intrenching	ea	745,414	382,194	0	184,896 (B)
Cover, protective, individual	ea	510,094	454,086	-	0
Glasses, sun (all types)	ea	184,204	15,623	6	0
Goggles, w/green lens	ea	202,371	96,530	0	74,230
Laces, legging, extra	pr	816,968	57,114	1	472,874
Pick mattock, intrenching	ea	205,829	134,481	0	82,523 (B)
Shovel, intrenching	ea	734,587	190,808	0	413,903 (B)

(A) Quantities of blankets in the marshaling areas sufficient to cover requirements.

(B) Requirements include the quantities still needed to equip troops with intrenching tools and carriers according to increased factors authorized by cablegram SPTAA 20571-OS, 23 April 1944.

(C) Cases, magazine, 30-round, stocked in sufficient quantity for issue as a substitute item.

Note: Total requirements include maintenance for the troops in the United Kingdom only, plus a 30-day level for United Kingdom troops and a 20-day level for the troop strength on the far shore. (This is based on the assumption that troops on the far shore will have a 10-day reserve on 31 July.)

Class II items also include anticipated initial issue for the next 30 days, unfilled requisitions and other anticipated requirements for the next 30 days.

*Memorandum, Chief, Supply Division, to Chief, Plans and Training Division, 20 July 1944.

APPENDIX XXVIII

ITEMS OF WINTER CLOTHING

RECOMMENDED BY THE OFFICE OF THE QUARTERMASTER

GENERAL*

November 1943

Item	Date Approved for Adoption by Army Service Forces
Cap, field, cotton	12 August 1943
Cap, field, pile	8 August 1943
Glove-inserts, wool	21 July 1943
Gloves, wool, leather palm	20 August 1942
Glove-shells, leather	21 July 1943
Insoles, felt	20 April 1942
Jacket, field, M-43	9 September 1943
Jacket, field, pile	11 August 1943
Shoepacs, 12-inch	26 July 1943
Socks, ski, wool	12 August 1942
Sweater, wool, high-necked	18 July 1942
Trousers, field, cotton	9 September 1943

*Report, Military Planning Division, OQMG, (?) January 1945.

APPENDIX XXIX

**CLOTHING AND EQUIPMENT
RECOMMENDED FOR CLIMATIC CONDITIONS
SIMILAR TO WINTER IN NORTHERN FRANCE AND GERMANY***

Item	Recommended Basis of Issue	Substitute Item
Clothing		
Belt, waist, web, EM	1 per individual	
Boot, service, combat	1 pr. per individual	
Cap, field, cotton, od	1 per individual	Cap, wool, knit
Cap, field, pile	10%, group (A)	
Drawers, wool	2 per individual	
Glove-insert, wool	1 pr. per individual, groups (A), (B), and (C)	Glove, wool, od, leather palm
Glove-shell, leather	1 pr. per individual, groups (A), (B), and (C)	Glove, wool, od, leather palm
Hood, jacket, field, M1943	1 per individual	
Insoles, felt	2 pr. per individual, groups (A), (B), and (C)	
Jacket, field, M1943	1 per individual	
Overcoat, parka-type, w/pile liner	10%, group (A)	Overcoat, parka-type, reversible, w/pile liner
Overshoes, arctic, cloth-top	1 pr. per individual (except those issued shoepacs)	Overshoes, arctic, rubber top
Parka, wet-weather	5%, group (A)	
Poncho, lightweight	1 per individual, groups (A), (B), and (C)	Poncho, synthetic, resin, od
Shirt, flannel, od	2 per individual	
Shoepacs, 12-inch	1 pr. per individual, groups (A), (B), and (C)	(Shoepac, 16-inch (Shoepac, 10-inch
Socks, ski, wool	3 pr. per individual, groups (A), (B), and (C)	Socks, arctic
Socks, wool, cushion-soled	3 pr. per individual	(Socks, wool, light (Socks, wool, heavy
Suspenders, trouser	1 pr. per individual	
Sweater, high-necked	1 per individual	
Trousers, field, cotton, od	2 pr. per individual	(Trousers, kersey-lined (Trousers, combat, winter
Trousers, wet-weather	5%, group (A)	
Trousers, wool, od	2 pr. per individual	(Trousers, kersey-lined (Trousers, combat, winter
Undershirt, wool	2 per individual	
Equipment		
Bag, sleeping, mountain	1 per individual not in billets	Comforter, wool-filled
Bag, sleeping, wool	1 per individual, groups (A), (B), and (C)	2 Blankets, wool
Case, water-repellent, bag, sleeping	1 per individual, groups (A), (B), and (C)	

Note: Group (A) Army Ground Forces Combat, (B) Army Ground Forces Service, and (C) Service of Supply Combat.

*Letter, SPQRD 400.1141, OQMG to CQM, 24 June 1944.

APPENDIX XXX
WINTER CLOTHING FOR SPECIAL CONDITIONS

15 August 1944

DATED Aug 1513154 '44

Recd Aug 1538158

FROM : HQ COM ZONE APO 887 from Lee signed Eisenhower cite SOS
ACTION TO: AGWAR for Somervell
INFOR TO : HQ COM ZONE (FORWARD) APO 887 for QM
REF NO : EX-43895

Subject: Winter clothing for special conditions.

European climatic conditions on continent during winter months necessitate following items for field Army with attached troops of 353,000 men during coming winter. Items required are additions to those now being supplied to ETO troops as a whole:

Item	Quantity
Shoepacs, 18 inch high with two insoles, felt	446,000
Insole, felt, block type, replacements	122,850
Socks, ski	630,000
Ponchos, nylon, type (additional 250,000 raincoat type currently requisitioned on J-10)	250,000
Mufflers, wool, od	407,000
Mittens, shell, trigger finger	369,000
Mittens, insert, trigger finger	1,150,000
Caps, field, cotton with visor	445,000
Trousers, field, cotton	456,500

Above requirements represent initial issue for type Army, 45 days level and three months replacement for all items, except insoles felt, as explained.

Project number is QM-260-A-II. Requisition number is HAIL-QM-II-J-48. Estimated tonnage, 2,020 long tons, 7,450 ship tons.

Delivery required, 50% September 50% October. Float September lift Priority I in lieu of proportionate allocation of Items 22 and 23, TWX Conference 2 August, Subject No. II, October Priority furnished later.

APPENDIX XXXI
WINTER CLOTHING FOR SPECIAL CONDITIONS
9 September 1944

HEADQUARTERS
COMMUNICATIONS ZONE (MAIN)
EUROPEAN THEATER OF OPERATIONS
Office of the Chief Quartermaster
APO 887

DATED SEPT 0323202

9 September 1944

FROM : AGWAR

ACTION TO: Hq Com Zone (Main)

INFOR TO : Pembark

REF NO : WARX—34098

Subject: Winter Clothing for special conditions.

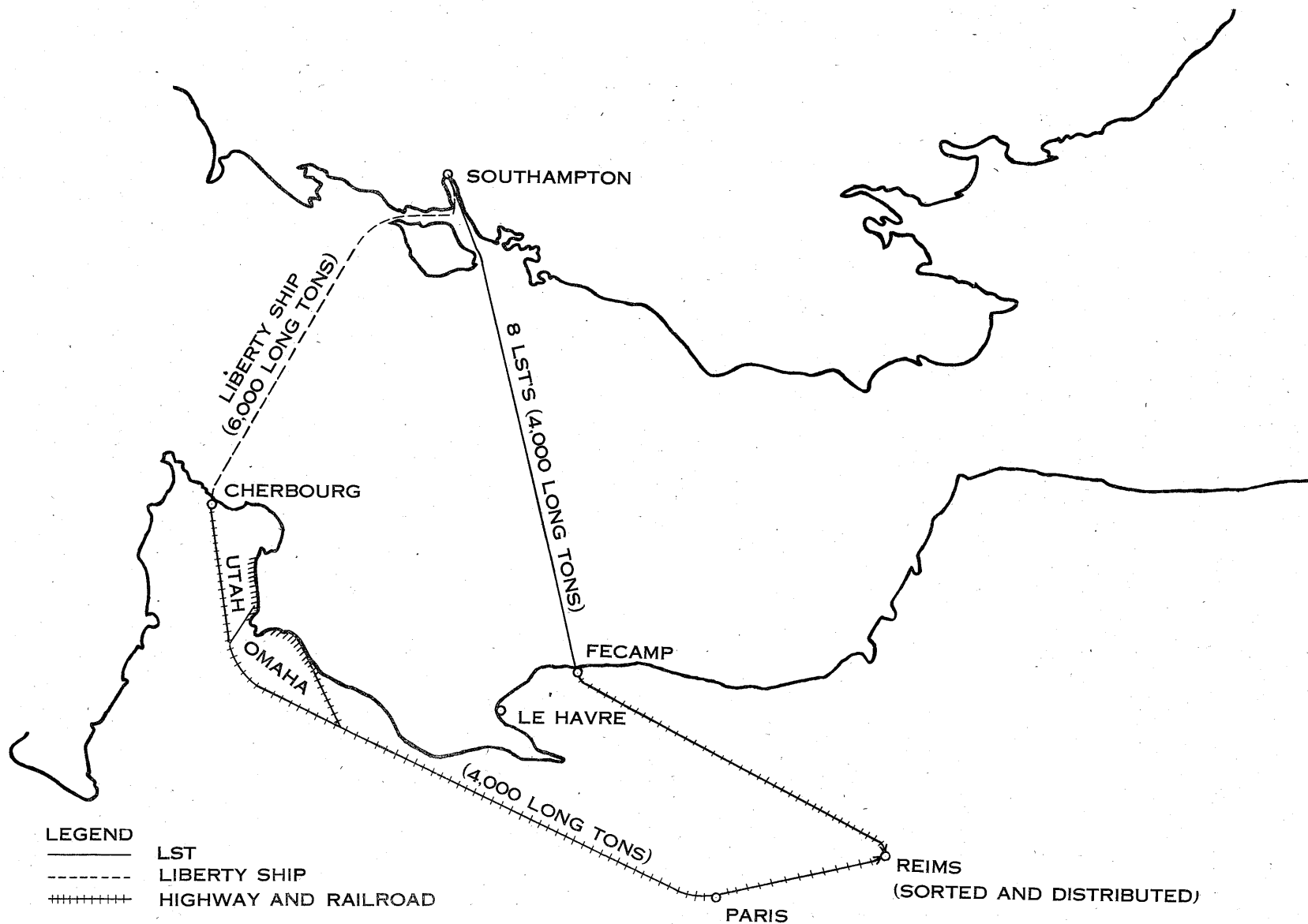
Items and quantities listed below are being moved toward Pembark to apply in requisition HAIL-QM-II-J46.

Item	Quantity
Shoepacs, 12 inch standard	223,000
Shoepac, high and low	233,000
Insoles	368,000
Mufflers, wool, od	407,000
Mittens, shell trigger finger, type I	569,000
Mittens, insert trigger finger, type I	1,136,000
Socks, wool, ski, including socks arctic	1,128,000
Cap, field, cotton with visor	446,000
Trousers, field, cotton	146,000
Ponchos, raincoat material	332,000
Ponchos, nylon	162,000

All items above except ponchos can be placed at Pembark by 30 September. 73,000 Ponchos to Pembark by 30 September, 263,000 by 31 October. Raincoat material for 162,000 nylon coats to Pembark by January or February 1945. Due to policy, non-availability and time element made it necessary to substitute as listed above. Advise if you concur and furnish new shipping instructions.

APPENDIX XXXII
 MOVEMENT OF WINTER CLOTHING TO ARMIES *
 20 SEPTEMBER 1944

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APPENDIX XXXIII
THE WINTERIZING PROGRAM*
October 1944

Item	Army	Required	Shipped
Bag, sleeping Blanket	Third		50,000
	First	700,900	455,086
	Third	600,000	441,445
	ADSEC	112,000	
	Ninth AF	122,000	
	Ninth	155,000	
Cap, wool, knit	Com Z	220,000	
	First	358,000	340,700
	Third	160,000	185,220
	ADSEC	167,000	52,000
Drawers, wool	First	369,000	511,800
	Third	300,000	306,900
	ADSEC	145,000	230,000
Gloves, wool	First	323,000	395,900
	Third	246,000	295,620
	ADSEC	150,000	82,000
Jacket, field	First	233,600	90,760
	Third	116,000	121,840
	ADSEC	1,600	29,000
Leggings	First	73,000	101,600
	Third	65,000	85,030
	ADSEC	16,000	22,000
Mackinaw	First	50,000	181,767
	Third	80,000	113,418
	ADSEC	43,000	58,000
Overcoat	First	315,000	351,392
	Third	125,000	132,857
	ADSEC	82,000	111,000
Overshoes	First	355,000	258,832
	Third	150,000	136,641
	ADSEC	162,000	2,600
Raincoat	First	170,000	180,700
	Third	150,000	160,936
	ADSEC	10,000	11,000
Shirt, wool	First	338,604	287,000
	Third	150,000	165,600
	ADSEC	18,000	117,000
Socks, wool	First	1,232,000	1,405,000
	Third	1,020,000	1,426,331
	ADSEC	120,000	205,000
Trousers, wool	First	304,721	264,800
	Third	150,000	184,110
	ADSEC	13,000	42,000
Undershirt, wool	First	369,000	380,700
	Third	300,000	338,850
	ADSEC	145,000	200,000

*Minutes, Press Conference, OCQM, 13 October 1944.

APPENDIX XXXIV
ADDITIONAL WINTER-CLOTHING REQUIREMENTS*
2 October 1944

Item	Required	On Hand and Due In	On Requisition	Balance to Be Shipped by December
Bag, sleeping, wool	2,270,000	840,000	1,740,000	
Blanket	6,140,000	3,340,000	1,300,000	1,500,000
Boots, service, combat	2,000,000	1,200,000	300,000	500,000
Cap, wool, knit	3,000,000	2,000,000		1,000,000
Coat, serge, wool	2,250,000	1,200,000	600,000	450,000
Drawers, wool	7,250,000	2,120,000	2,232,000	2,900,000
Gloves, wool, leather-palm	3,300,000	1,450,000		1,850,000
Jacket, field, od	2,800,000	590,000	495,000	1,500,000
Leggings	4,600,000	1,300,000	1,140,000	2,200,000
Mackinaw	1,060,000	1,000,000		60,000
Overcoat	1,820,000	830,000	290,000	700,000
Overshoes	2,760,000	500,000	1,000,000	1,300,000
Shirt, wool	5,280,000	2,050,000	715,000	2,500,000
Socks, wool	24,000,000	6,000,000	8,200,000	9,200,000
Sweater, wool, high-necked	1,997,000		2,110,000	
Trousers, wool	5,800,000	1,300,000	1,000,000	3,500,000
Undershirt, wool	7,250,000	1,485,000	3,311,000	2,500,000

*TWX Conference, NYPE-ETOUS, 2 October 1944.

APPENDIX XXXV

WINTER CLOTHING IN ETO WATERS*

20 NOVEMBER 1944 - 1 JANUARY 1945

DATE ARRIVED ETO		6 OCT	13 OCT	13 OCT	13 OCT	19 OCT	19 OCT	19 OCT	19 OCT	25 NOV	25 NOV	1 DEC	1 DEC	1 DEC
DATE DISCHARGE COMPLETED		9 DEC	5 JAN	15 DEC	20 DEC	7 DEC	14 DEC	24 NOV	7 DEC	18 DEC	28 DEC	14 JAN	10 FEB	4 JAN
ITEM NO	ITEM	¹ NY 343	¹ PH 309	¹ PH 310	¹ BO 920	¹ NY 410	¹ NY 446	¹ BO 932	¹ PH 316	¹ PH 341	² NY 597	² NY 632	² BO 968	² BO 971
1	Bag, sleeping, wool	36,010	-	-	-	100	108,500	-	58,400	-	-	224,090	35,335	83,560
2	Blanket, wool, od	-	-	-	-	-	-	-	-	87,072	-	-	-	-
3	Boots, service, combat	-	3,970	4,328	3,696	-	7,396	10,019	-	21,904	-	72,488	8,636	120,054
4	Jacket, field, M-1943	-	-	-	143	-	-	427	-	-	-	225,387	301	373
5	Overshoes	-	-	-	-	-	-	-	-	-	-	77,529	-	60,660
6	Raincoat	-	4,583	4,583	-	-	-	9,246	-	19,116	-	154,100	-	178,750
7	Shirt, flannel	458	42,518	36,534	36,337	36,337	-	35,273	342	61,490	92,480	102,420	-	412,599
8	Shoepacs	-	-	-	-	-	-	-	-	58,470	238,669	-	76,324	9,216
9	Socks, ski	-	-	-	-	-	12,640	-	-	85,590	679,410	-	47,250	68,850
10	Sweater, high-necked, wool	53,177	-	3,600	-	-	-	3,421	4,142	17,143	13,380	-	-	-
11	Trousers, wool, od	1,712	1,660	2,289	584	-	-	1,829	42	100	-	123,966	104,648	510,314
12	Underwear, wool (shirts and drawers)	397	91,781	46,839	45,600	-	127,200	173,975	-	17,457	317,224	242,919	52,519	328,305

DATE ARRIVED ETO		1 DEC	4 DEC	9 DEC	9 DEC	12 DEC	16 DEC	19 DEC	19 DEC	19 DEC	24 DEC	24 DEC	24 DEC	24 DEC
DATE DISCHARGE COMPLETED		27 DEC	28 DEC	8 JAN	29 DEC	2 JAN	15 JAN	15 JAN	28 JAN	19 JAN	28 JAN	30 JAN	3 FER	9 FEB
ITEM NO	ITEM	² BO 978	² BO 980	² NY 645	² BO 995	² NY 616	² NY 635	² BO 4	² NY 673	² BO 999	² BO 2	² PH 376	² NY 708	² NY 713
1	Bag, sleeping, wool	-	-	-	-	18,580	-	-	-	-	-	61,600	-	-
2	Blanket, wool, od	-	-	-	-	-	-	-	-	-	-	95	-	-
3	Boots, service, combat	22,320	20,544	-	29,382	135,290	-	24,945	-	17,831	6,130	-	-	293
4	Jacket, field, M-1943	-	-	2	-	284,181	-	250	78,400	-	-	18,679	-	-
5	Overshoes	95,948	25,200	-	20,235	54,171	-	34,204	26,148	12,652	-	-	-	-
6	Raincoat	117,785	16,575	-	-	111,250	-	-	-	-	-	-	-	-
7	Shirt, flannel	124,960	78,400	-	72,305	304,629	-	42,560	800	44,220	42,695	-	-	6,600
8	Shoepacs	-	6,792	-	-	900	-	-	-	8,328	-	-	-	240
9	Socks, ski	-	-	-	75,940	-	-	-	-	-	-	-	-	-
10	Sweater, high-necked, wool	33,101	-	-	97,135	42,020	-	7,455	15,000	-	20,220	-	-	-
11	Trousers, wool, od	354,150	51,374	-	228,458	548,647	-	46,090	63,357	7,936	49,383	-	-	1,742
12	Underwear, wool (shirts and drawers)	643,873	52,621	-	5,000	374,267	-	105,250	-	49,695	45,240	-	-	48,063

¹Ships in ETO waters as of 25 November 1944.²Ships in ETO waters during period of 25 November 1944 to 1 January 1945.

**APPENDIX XXXVI
SPECIAL COLD WEATHER CLOTHING**

3 January 1945

HEADQUARTERS TWELFTH ARMY GROUP

APO 655

U. S. Army

420 (QM)

3 January 1945

SUBJECT: Special Cold Weather Clothing.

TO : Commanding General, Communications Zone, European Theater of Operations,
APO 887, U.S. Army.

1. Reference is made to letter, this Headquarters, file 420 (QM), dated 11 Dec 44, subject as above, and to 1st Indorsement, this Headquarters, to letter your Headquarters, file AG420 OpQM, dated 12 Dec 44, subj: "Distribution of Special Winter Clothing." It is requested that the previous figures be amended and that credits now be established according to the allocations set forth below. Allocations are computed on the basis of Requisition J-48, OCQM (Cold Climate Clothing).

A Item	B Amount on Req'n J-48	C First Army	D Third Army	E Ninth Army	F L of C Divi- sion	G Sp Trs, Twelfth Army Gp	H Twelfth Army Gp Bulk Credit
Shoepacs, high & low	446,000	33%	35%	18%	1%	1%	12%
Insoles, replacement	568,000	33%	35%	18%	1%	1%	12%
Socks, ski & arctic	1,128,000	33%	35%	18%	1%	1%	12%
Ponchos, raincoat and nylon	500,000	50%	*	28%	2%	2%	18%
Mittens, shell	569,000	33%	35%	18%	1%	1%	12%
Mittens, insert	1,138,000	33%	35%	18%	1%	1%	12%
Mufflers	379,106	33%	35%	18%	1%	1%	12%
Caps, cotton, field	446,000	33%	35%	18%	1%	1%	12%
Trousers, cotton, field	446,000	33%	35%	18%	1%	1%	12%
Suspenders, trouser	153,000	33%	35%	18%	1%	1%	12%

*5,000 each Ponchos, nylon, to be shipped to Third Army for sale to officers, and the balance of each type to be prorated according to percentages shown.

2. Subordinate units of this command have been advised informally that shipments on the above percentages include sixty (60) days maintenance and that no other stocks are immediately available. Further information as to the allocation of the allowances shown in column H, as bulk credits for Twelfth Army Group, will be furnished as future situation warrants.

3. In view of the fact that these types of special winter clothing are new to most troops in this theater, it is recommended that detailed instructions as to their use be furnished by your Headquarters, through technical channels, to each of the receiving units named in paragraph 1 above.

4. Information is requested as to when distribution will start and as to when it is expected that shipments will be completed.

For the Army Group Commander:

WALTER SCZUDLO
Lt Col, AGD
Asst Adj Gen.

APPENDIX XXXVII
TOTAL ISSUES AS OF 17 FEBRUARY 1945*

Item	First Army	Third Army	Ninth Army	Fifteenth Army
Socks, ski	165,868	169,950	99,098	13,553
Socks, arctic	203,163	173,994	118,129	8,549
Muffler	134,372	155,928	73,280	31,844
Insoles, felt	71,598	75,901	38,239	7,136
Insoles, blucher	93,750	75,910	55,126	10,731
Cap, field, cotton	125,992	94,261	60,921	5,924
Mittens, insert	336,650	252,363	165,052	60,934
Mittens, shell	189,013	159,200	101,308	47,795
Poncho, nylon	59,107	5,005	35,855	11,800
Poncho, raincoat	106,915	2,400	59,048	23,675
Shoepacs, high	69,077	76,008	40,124	14,757
Shoepacs, low	66,177	76,649	30,047	9,911
Trousers, field, cotton	132,316	117,626	80,094	13,741

*Memorandum, CQM to OQMG, 17 April 1945.

APPENDIX XXXVIII

WINTER CLOTHING FOR EUROPEAN THEATER OF OPERATIONS*

9 March 1945

Item

Bag, sleeping, mountain
**Bag, sleeping, wool, od
Blanket, wool, od
**Boots, service, combat
**Cap, field, cotton, with visor
Coat, mackinaw
Drawers, wool
Glove-inserts, wool
Glove-shells, leather
**Gloves, leather, heavy
Hood, jacket, M-43
Insoles, felt
**Jacket, combat, winter
Jacket, field, M-43
**Jacket, field, pile
Jacket, field, wool
Mittens, shell, trigger-finger
Overcoat, wool, od, roll-collar
**Overshoes, arctic (all rubber)
Parka, wet-weather
Poncho, nylon, lightweight
Raincoat, dismantled
Shirt, flannel
**Shoepacs (all rubber)
Socks, ski
Socks, wool, cushion-soled
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**Trousers, combat, winter
**Trousers, field, cotton, od
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Trousers, wet-weather
**Undershirt, wool

*Memorandum, CQM to Supply Division, 17 May 1945.

**Items requiring modification.

APPENDIX XXXIX
REQUIREMENTS FOR LOCAL PROCUREMENT OF CLOTHING
AND INDIVIDUAL EQUIPMENT FOR ENLISTED WOMEN*

Item	Unit	Total Requirement	Delivery Schedule												
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Anklets, wool	pr	81,000		20,250			20,250			20,250			20,250		
Cap, winter, WAC	ea	10,250		2,563			2,563			2,563			2,563		
Dress, winter, WAC	ea	44,000		11,000			11,000			11,000			11,000		
Gloves, dress, cotton	pr	20,000		5,000			5,000			5,000			5,000		
Gloves, dress, leather	pr	47,000		11,750			11,750			11,750			11,750		
Gloves, wool, od	pr	81,000		20,250			20,250			20,250			20,250		
Handkerchief	ea	600,000		150,000			150,000			150,000			150,000		
Insignia, Pallas Athena	pr	24,000		6,000			6,000			6,000			6,000		
Insignia, sleeve, wool, tan	pr	44,000		11,000			11,000			11,000			11,000		
Jacket, field, women's	ea	79,000		19,750			19,750			19,750			19,750		
Jacket, winter, WAC	ea	11,000		2,750			2,750			2,750			2,750		
Necktie, women's	ea	161,000		40,250			40,250			40,250			40,250		
Overcoat, winter, WAC	ea	9,600		2,400			2,400			2,400			2,400		
Pajamas, winter, WAC	pr	153,000		38,250			38,250			38,250			38,250		
Panties, summer, WAC	pr	299,000		74,750			74,750			74,750			74,750		
Panties, winter, women's	pr	299,000		74,750			74,750			74,750			74,750		
Scarf, dress, WAC	ea	44,000		11,000			11,000			11,000			11,000		
Scarf, women's	ea	40,300		10,075			10,075			10,075			10,075		
Shirt, herringbone twill, women's	ea	241,000		60,250			60,250			60,250			60,250		
Skirt, winter, WAC	ea	45,000		11,250			11,250			11,250			11,250		
Slip, WAC	ea	248,000		62,000			62,000			62,000			62,000		
Stockings, cotton	pr	107,000		26,750			26,750			26,750			26,750		
Stockings, rayon	pr	1,153,000		288,250			288,250			288,250			288,250		
Stockings, wool	pr	226,000		56,500			56,500			56,500			56,500		
Trousers, herringbone twill, special	pr	228,000		57,000			57,000			57,000			57,000		
Trousers, outer cover	pr	155,000		36,250			36,250			36,250			36,250		
Trousers, wool liner	pr	77,000		19,250			19,250			19,250			19,250		
Vest, winter	ea	242,000		60,500			60,500			60,500			60,500		
Waist, cotton	ea	180,000		45,000			45,000			45,000			45,000		
Waist, wool	ea	117,000		29,250			29,250			29,250			29,250		

*Memorandum, Chief, Procurement Division to Chief, Supply Division, 27 December 1944.

APPENDIX XL
1945 RAW MATERIALS IMPORT PLAN—KNIT GOODS FOR
ENLISTED WOMEN*

Estimated Production on the Continent			Materials Required	
Item	Unit	Quantity	Description	Quantity (pounds)
Panties, summer WAC	pr	300,000	Yarn, rayon	70,000
Panties, winter, WAC	pr	300,000	Yarn, wool	180,000
Slip, WAC	ea	300,000	Yarn, rayon	100,000
Stockings, cotton	pr	125,000	Yarn, cotton	20,000
Stockings, rayon	pr	1,500,000	Yarn, rayon	200,000
Stockings, wool	pr	300,000	Yarn: 50% wool 50% cotton	60,000

*Report, CQM to QMG, 18 December 1944.

APPENDIX XLI
CLOTHING ALLOWANCES FOR WAC ENLISTED WOMEN*

Item	Unit	Annual Replacement Allowances		Monthly Replacement Allowances per 1,000 Enlisted Women	
		Present	Revised	Present	Revised
Anklets, wool, women's	pr	4	4	333	333
Bag, utility, WAC	ea	1/4	1	20	83
Caps	ea	2	3	167	250
Cap, garrison, wool, WAC, or					
Cap, winter, enlisted women's, WAC					
Coats	ea	5/6	2	69	167
Coat, utility, WAC, or					
Overcoat, enlisted women's, WAC					
Dress, winter, tan, enlisted women's, WAC	ea	—	1	—	83
Gloves, dress, cotton, WAC	pr	1	2	83	167
Gloves, dress, leather, women's	pr	1/2	2	42	167
Gloves, wool, od, women's	pr	1	1	83	83
Insignia, cap, WAC	pr	1/4	1/4	21	21
Insignia, collar, WAC	pr	1/4	5	21	415
Jackets	ea		3		250
Jacket, field, M-43, women's, or	ea	1		83	
Jacket, winter, WAC	ea	1		83	
Necktie, women's	ea	3	4	250	333
Overshoes	pr	1 1/2	1 1/2		125
Overshoes, arctic, buckled, women's, or	pr			—	
Overshoes, low, women's	pr			53	
Pajamas, winter, WAC	pr	1	2	83	167
Panties	pr		8		666
Panties, summer, women's, WAC, or	pr	4		333	
Panties, winter, women's, WAC	pr	1 1/2		125	
Raincoat, parka-type, women's	ea	1/2	1/2	42	42
Scarf, dress, cotton, WAC	ea	1	3	83	250
Shirt, HBT, special, women's	ea	1	1	83	83
Shoes	pr		4		333
Shoes, field, women's, or	pr	2		167	
Shoes, service, low, women's	pr	2		167	
Skirt, wool	ea	1 1/2	3	125	250
Slip, WAC	ea	1 1/2	3	125	250
Stockings	pr	12	15	950	1225
Stockings, cotton, biege, or					
Stockings, rayon					
Stockings, wool, knee-length	pr	6	4	475	333
Sweater, women's	ea	3/4	1	67	83
Trousers, HBT, women's	pr	1	1	83	83
Trousers, outer-cover, women's	pr	2	2	167	167
Trousers, wool-liner, women's	pr	1	1	83	83
Vest, winter, women's	ea	1 1/2	3	125	250
Waists	ea		9		750
Waist, cotton, women's, or	ea	7		552	
Waist, wool, women's	ea	1-1/3		107	

*Memorandum, OCQM to CG, NYPE, 12 January 1945.

GLOSSARY

- ADSEC. Advance Section, Communications Zone.
- AG. Adjutant General.
- AGRC. American Graves Registration Command.
- AGWAR. Adjutant General, War Department, (cablegram address for Washington).
- ALADDIN. Late code word for the occupation of Norway in the event of German withdrawal.
- AFHQ. Allied Force Headquarters, North African Theater of Operations.
- Ameri-cans. 5-gallon gasoline cans of American design.
- AMG. American Military Government.
- APOSTLE. Late code word for the occupation of Norway.
- ASF. Army Service Forces (designation of supply services, War Department, after 12 March 1943).
- BOLERO. The build-up of men and supplies in the United Kingdom in preparation for the Continental invasion.
- BUCO. Build-up Control (an organization controlling flow of men and supplies across the English Channel).
- Center Task Force. One of the task forces engaged in the North African operation.
- Chief of Operations. Temporary title of G-4.
- Chief of Services. Temporary title of G-4.
- Classes of Supply.
- Class I —Food and rations.
 - Class II —Clothing, individual equipment, and expendable supplies.
 - Class III —Petrol, oil, and lubricants.
 - Class IV —Organizational equipment, general supplies, officers' and nurses' clothing, and sales store and post exchange supplies.
 - Class V —Ammunition.
- Communications Zone (Com Z). Later designation of Services of Supply, European Theater.
- CONAD. Continental Advance Section (Advance Section, Communications Zone, supporting the invasion of Southern France).
- COSSAC. Chiefs of Staff, Supreme Allied Command.
- D-day. The day the invasion of the Continent took place—6 June 1944.
- DCQM. Deputy Chief Quartermaster.
- DQMG. Deputy The Quartermaster General.
- DRAGOON. The invasion of Southern France.
- DUKWS. Amphibious trucks.
- ECLIPSE. The primary disarmament and control of Germany.
- ETOUSA. European Theater of Operations, United States Army.
- FECZ. Forward Echelon, Communications Zone.
- FUSAG. First United States Army Group (early command organization for United States forces under Supreme Headquarters, Allied Expeditionary Force).

G-1, G-2, G-3, G-4, G-5. General Staff Sections of major United States commands.

G-1 - Administration

G-2 - Intelligence

G-3 - Troops and Training

G-4 - Supply

G-5 - Civil Affairs

GOOSEBERRIES. Artificial ports off the beaches.

GRENADE. Operation for crossing the Roer River.

Jerri-cans. 5-gallon cans patterned after German cans.

JOMP. Joint Outline Maintenance Projects (for administration and maintenance of all forces on the Continent).

Joint Q Planning School. Joint Supply Planning School.

LIGAMENT. One of the task forces organized to carry out occupation of Norway before German surrender.

Long ton. 2,240 pounds.

LUMBERJACK. Tactical plan for advance to the Rhine River at Cologne.

Marshaling Areas. The areas along the English Channel coast from which the operation on the Continent was mounted.

MTO. Mediterranean Theater of Operations (later designation of NATOUSA).

MULBERRIES. Artificial harbors.

NAAFI. Navy, Army, Air Force Institute (British organization corresponding to the United States Army Exchange Service).

NATOUSA. North African Theater of Operations, United States Army.

NEPTUNE. The assault stage of the Continental operation.

NIGHTLIGHT. Task force organized to carry out occupation of Norway in the event of German surrender.

NYPE. New York Port of Embarkation.

OCQM. Office of the Chief Quartermaster.

OCCWO. Office of the Chief Chemical Warfare Officer.

OCE. Office of the Chief Engineer.

OCO. Office of the Chief Ordnance Officer.

OCS. Office of the Chief Surgeon.

OCSO. Office of the Chief Signal Officer.

OCOT. Office of the Chief of Transportation.

OMAHA. The invasion beach at Saint Laurent-sur-Mer between Le Havre and the Cotentin Peninsula.

OMGUS. Office of the Military Government, United States.

QQMG. Office of The Quartermaster General.

OTCQM. Office of the Theater Chief Quartermaster (later designation of OCQM).

OVERLORD. The Continental operation.

PEMBARK. Port of Embarkation.

PLUTO. The submarine gasoline pipe line across the English Channel.

POL. Petrol, oil, and lubricants.

POW. Prisoners of war.

PROCO Project. Priority Continental operation project (method of requisitioning and shipping essential operational supplies).

QMG. The Quartermaster General.

RANKIN CASE B. Plan for occupation of Scandinavian countries in the event of German withdrawal.

RANKIN CASE B (Norway). Plan for occupation of Norway in the event of German withdrawal.

RANKIN CASE C. Plan for occupation of Scandinavian countries 1943—1944 upon unconditional surrender of Germany.

RANKIN CASE C (Norway). Plan for occupation of Norway 1943 upon unconditional surrender of Germany.

RASC. Royal Army Service Corps.

RED BALL. Rapid system of moving supplies from the United Kingdom to the Continent and on the Continent.

RHUMBA. Plan for closing installations, accommodations, and facilities in the United Kingdom after the Continental invasion.

ROUNDUP. Proposed British-American invasion of the Continent in 1943.

SCAEF. Supreme Commander, Allied Expeditionary Force.

Service d'Aide aux Forces Allies. French lend-lease agency.

SHAEF. Supreme Headquarters, Allied Expeditionary Force.

Ship ton. Ship space required to store 2,000 pounds of material—also called measurement ton.

Sixth Army Group. United States and French forces that invaded Southern France.

SLEDGEHAMMER. Diversionary invasion of the Continent proposed in 1942.

SOLOC. Southern Line of Communications—the communications zone supporting the invasion of Southern France.

SOP. Standing Operating Procedure.

SOS. Services of Supply.

SPOBS. Special Army Observers Group.

Task Force Z. One of the task forces organized to carry out occupation of Norway before German surrender.

TOMBOLAS. Ship-to-shore pipe lines for gasoline.

TORCH. Assault on North Africa in 1942.

TSFET. Theater Service Forces, European Theater, (later designation of Communications Zone).

TURCO. Turn-around Control (agency controlling turn-around of ships in English Channel).

Twelfth Army Group. Command organization of United States tactical forces under SHAEF.

Twenty-First Army Group. Command organization for British forces under SHAEF.

TWX. Trans-Atlantic Wire Exchange.

USFA. United States Forces in Austria.

USAFBI. United States Army Forces in the British Isles.

USANIF. United States Army, Northern Ireland Forces.

USFET. United States Forces, European Theater, (later designation of ETOUSA).

USFOR. United States Forces (cablegram address for the European Theater).

USSOS. United States Services of Supply (cablegram address for SOS, ETOUSA).

USSTAF. United States Strategic Air Force (headquarters of United States Air Force in Europe).

UTAH. The invasion beach on the eastern coast of the Cotentin Peninsula north of Isigny.

VE-day. The date that the German surrender was signed—8 May 1945.

VERITABLE. Operation calling for an advance to the Rhine River.

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