CHAPTER 6

CAPTURED MATERIALS

By mid-September 1943 the Fifth United States Army had won the Battle of Salerno. In the Pacific, other United States armies were battling for footholds on the Solomon Islands. Along Germany's eastern front, powerful Russian forces were fighting fiercely and successfully to retake Bryansk and Smolensk. In Washington, the Combined Chiefs of Staff were drafting plans for the invasion of the Continent. They had learned many lessons during the campaigns in North Africa and in Italy. One was the importance and value of captured enemy materials.

CONTINENTAL PROCEDURES

The Combined Chiefs of Staff issued on 17 September 1943 the first document dealing with the use and disposal of captured enemy materials on the Continent.

The Supreme Commander had the right to retain for use by the forces under his command all captured materials except items needed for technical research. These excepted supplies would be disposed of by agreement between American and British authorities. Materials that the Supreme Commander did not need would be regarded as part of the resources of the United Nations and would be turned over to the control of the London Munitions Assignment Board. Clothing and equipment not required for military purposes could be used for civilian relief on instructions from the Supreme Commander. The ultimate disposal of ferrous, nonferrous, and rubber scrap would be made by the Combined Raw Materials Board.[1]

A later edition of this directive, published by SHAEF or 28 April 1944, delegated the powers of the Supreme Commander with regard to the disposal of captured materials, except scrap, to the Allied Naval Commander, the Air Commander in Chief, the Commanding General of the First United States Army Group, and the Commanding General of the Communications Zone.[2] These commanders would control captured enemy materials and protect them from destruction and unauthorized use until they could be taken over by proper communications zone authorities. They would make sure that all Allied force demands were met, that materials not needed for military purposes were used for civilian relief, and that excess materials were disposed of according to theater instructions. They would send to SHAEF once each month an inventory of all captured materials not needed for military purposes or civilian relief. Ground force commanders would report to appropriate air force or naval commanders the location of captured air force and naval items. Air force commanders would turn over to ground force commanders German antiaircraft equipment, including ammunition, searchlights, and fire-control equipment. The responsibility for disposing of equipment used by two or more services rested with the service that was the greatest user.[3]

The Standing Operating Procedure, *Maintenance and Salvage,* which was published on D-day, provided that captured material would be turned over to the Communications Zone by the army commanders at designated collecting points. It would be segregated as new or unusual material required for technical examination; material needed by the armed forces in any theater either for military purposes or for civilian relief; fuels; and scrap. Chiefs of supply services would submit to the Theater Commander monthly inventories of usable captured materials.[4]

These procedures remained unchanged until 25 August 1944, the day Paris was liberated. Then, new procedures were published listing the types of supplies that would be considered captured war materials. Enemy supplies were only those that the Germans had used, bought, or requisitioned. Materials that had been hidden from the Germans during the occupation, and articles and facilities that the Germans had rented or leased would be returned to their original owners. Materials needed by the United States would be rented or requisitioned. Civilian authorities would receive only enough captured materials to maintain minimum essential needs and would pay for them at the rate established for imported civil-affairs supplies.[5]

By the end of November United States forces had liberated France, Belgium, Luxembourg, and parts of the Netherlands, and were fighting in Germany. Separate procedures had to be established, therefore, for handling captured materials in the liberated countries and in Germany.

In France

For operations in France, captured war material was defined as arms, equipment, or other property belonging to, used by, or intended for

FIGURE 65.—Captured Supplies without Benefit of Procedure.

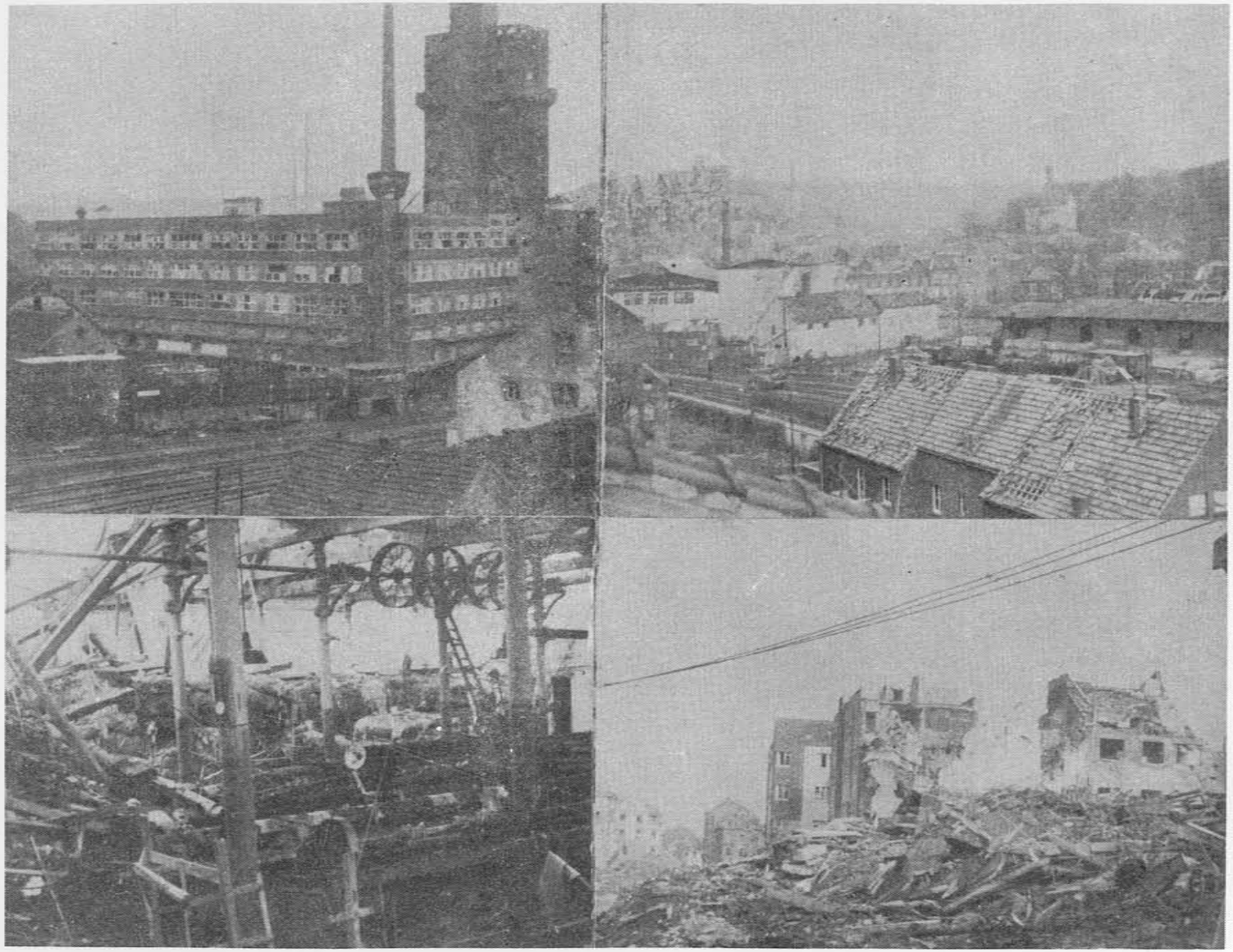

FIGURE 66.—Some German Factories Were Captured Intact, Some Were Demolished.

use by any enemy military formation. It was divided into three categories: category A, materials that had not been produced or constructed by German order and had been privately or publicly owned before the enemy acquired them; category B, materials produced or constructed by German order; and category C, materials not included in the two other categories.

Category-A materials required by the United States forces would be requisitioned from the French. Critical items not required by the United States forces would be released to the French central authority—the Chief Major General of State for National Defense. Noncritical items not required by the United States forces would be released to mayors, through whom such materials could be returned to private owners. Category-B materials would be used by the United States forces for as long as they were needed. Then they would be released to the French central authority. Category-C materials would become the common property of the forces under SHAEF. They would be classified either as scrap or as unusable material. Scrap would be disposed of according to instructions from SHAEF, and unusable material would be disposed of by G-4, Communications Zone.[6]

These procedures were further clarified on 13 December 1944, when commanders were urged to be liberal in their application of captured war material policies. Products ordered by the Germans from the French, which had not been delivered at the time of liberation, were actually captured war materials. They would not be claimed, however, if there was any chance that such action would cause hardship to French interests.

The French central authority would designate officers to represent French military regions or parts of military regions within the geographical limits of each base section. These regional commissioners would receive captured war materials on behalf of the French central authority. French commanding generals of aerial regions and French naval commanders also could act in this capacity. Captured war materials in categories A and B would be returned to the French without payment. Dumps containing captured war materials would be inspected by representatives of both the French central authority and the Communications Zone.[7]

The final documents dealing with the disposition of enemy war materials in France were published in the spring of 1945. If category-A materials were private property, the United States forces would requisition them. If they were public property, the United States forces would acquire them through reciprocal-aid agreements. No changes were made in the procedures for transferring to the French critical and noncritical materials that the United States forces did not want. The method of transfer, however, was explained. All claimants would be referred to local French authorities, usually the mayor or prefect, who would certify to the satisfaction of the base-section commander that the property was actually privately owned and that the claimant had proper title. The claimant and the mayor would then be sent to the base-section or section representative of the service involved who, in coordination with the section or base-section G-4 and G-5, would take the necessary action to have the property returned without payment. Category-B materials no longer required by the United States forces would also be turned over to the French central authority at base-section level. This category included not only German war materials captured in France but also French war materials, salvage, and scrap.

Category-C materials classified as salvage or scrap would be disposed of by SHAEF. Chiefs of services would send SHAEF a monthly inventory of such materials. Usable category-C materials would be disposed of by G-4, Communications Zone. They could be turned over, however, to French authorities for civilian relief if they would aid the economy of France. The supply services would send to G-4 each month an inventory of all excess category-A and category-B materials.[8]

In the Field

The armies and base sections established their own policies within the framework of Theater procedures. In the First United States Army, all captured materials were classified according to service, inventoried, and guarded by the appropriate service personnel until they were reissued for army use or turned over to the Communications Zone. The First Army Quartermaster established six field teams, which worked in conjunction with teams from other services under the control of the army Captured Material Section. As soon as abandoned supplies were found, they were placed under guard and inventoried. The inventories were sent to the army Captured Material Section, which sent copies to all interested services. After these services had decided what supplies they wanted, the inventories were sent back to the Captured Material Section. A list of supplies that the services did not need was then sent to G-5, which selected the items it wanted for civilian relief. All supplies not wanted by the

services or G-5 were released to the Communications Zone.[9] The system in the Third Army was practically the same, except that the inventories were sent only to the supply services. After the stocks had been turned over to the Communications Zone, G-5 had to pick up from ADSEC the captured supplies it wanted.[10]

In Germany

The procedures for disposing of captured and surrendered war materials in Germany were first published in October 1944 as the First Army was preparing for the capture of Aachen. Enemy equipment was defined as all German resources and facilities. It was broken down into three categories: military equipment, material for military use; civilian equipment, material for civilian use; and military-civilian equipment, material for both military and civilian use. All enemy equipment acquired because of the general collapse or surrender of Germany would be placed in a common pool. The pooling would become effective either on the date of formal surrender or on the date that organized resistance came to an end—whichever came first. The date marking the end of organized resistance would be determined by the European Advisory Commission. The pool would be administered by a tripartite agency known as the Disposal Board and composed of representatives of the United States, the United Kingdom, and Russia.

All military equipment and the facilities for producing it would be destroyed or reduced to scrap. The only exception related to unique items that the United Nations desired for military purposes. These items and the facilities for producing them would be removed from Germany and Austria, but only with the permission of the Disposal Board. Civilian equipment that had been temporarily used by the German Army would be retained by or restored to the original owners. If it was still needed by the Allied forces, adequate compensation would be arranged. Trade processes and inventions that could be of value to the United Nations would be taken over by the armies of occupation and reported to the Disposal Board. Banks, insurance companies, and fiduciary agencies also would be taken over and put under the control of the Disposal Board. Military-civilian equipment would be distributed by priority to the armies of occupation, to the United Nations for use in the war against Japan, and to agencies engaged in civilian relief.

The chiefs of supply services were instructed to prepare their own plans for collecting, evacuating, storing, and processing enemy equipment. They would provide for the destruction of military equipment or for its reduction to scrap, for the removal of unique items from Germany, and for the issue of other enemy equipment to United States occupational forces.[11]

The Chief of the Military Planning Division asked G-4 for additional information almost as soon as the directive reached OCQM. The main problem was personnel. The Quartermaster Service would not be able to supply guards in the United States area of occupation for all establishments containing quartermaster equipment. Large numbers of its personnel would be needed to prepare enemy equipment for shipment to other Allied areas in Germany, to other countries in Europe, and to the Pacific. Consequently, the Chief of the Military Planning Division wanted to know how many quartermaster installations were likely to be taken over in the United States zone of occupation, if SHAEF would allow German labor to be used in these installations, and the extent to which captured quartermaster equipment would be sent to the Pacific. He also asked for assurance that quartermaster personnel would not be used as guards.[12]

G-4 replied that the information was not available because SHAEF had not yet decided upon Communications Zone responsibilities. The Chief Quartermaster would be notified of his obligations when the time came.[13] Though OCQM replied that the answers did not depend upon SHAEF's decision,[14] G-4 did not answer the questions until 23 November and then said that, without definite plans from SHAEF, several assumptions had been made. First, it was understood that the Communications Zone would not be given area responsibility inside Germany. Charged, however, with the logistical support of the armies, the Communications Zone would be responsible, as far as disarmament was concerned, for collecting, segregating, classifying, and disposing of captured war materials taken from the German army. The occupying field armies would be responsible for initial disarmament and security.[15] The Deputy Chief Quartermaster, still not satisfied, again asked for specific information.[16] From G-4 came the reply on 3 January 1945 that the ECLIPSE planning directive then being published would answer any questions that OCQM might raise.[17]

POSTHOSTILITIES PROCEDURES

Operation ECLIPSE would go into effect either when the German High Command signed the terms of surrender or when the major portion of the German forces capitulated. Its mission was the primary disarmament and control

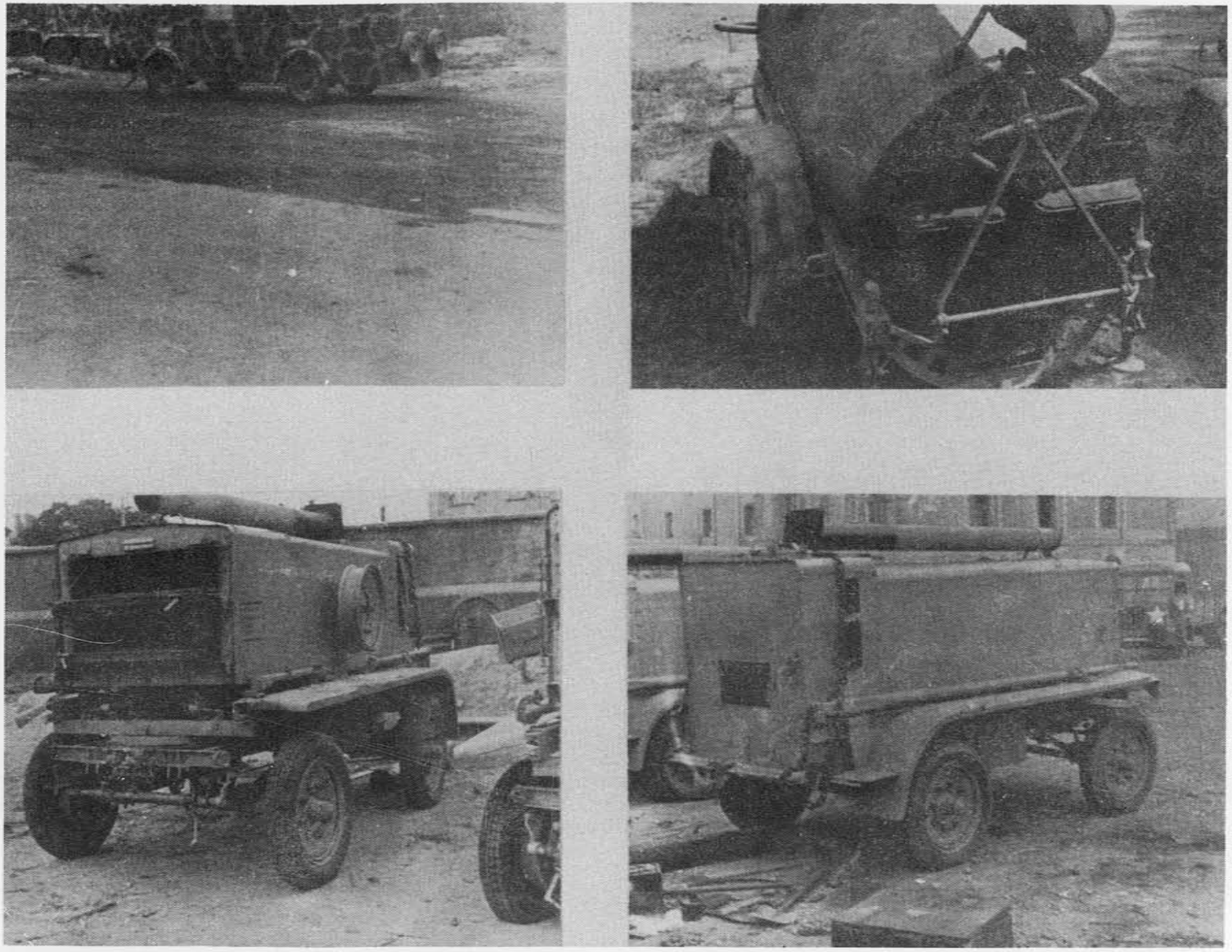

FIGURE 67.—Foreign Field Bakeries.

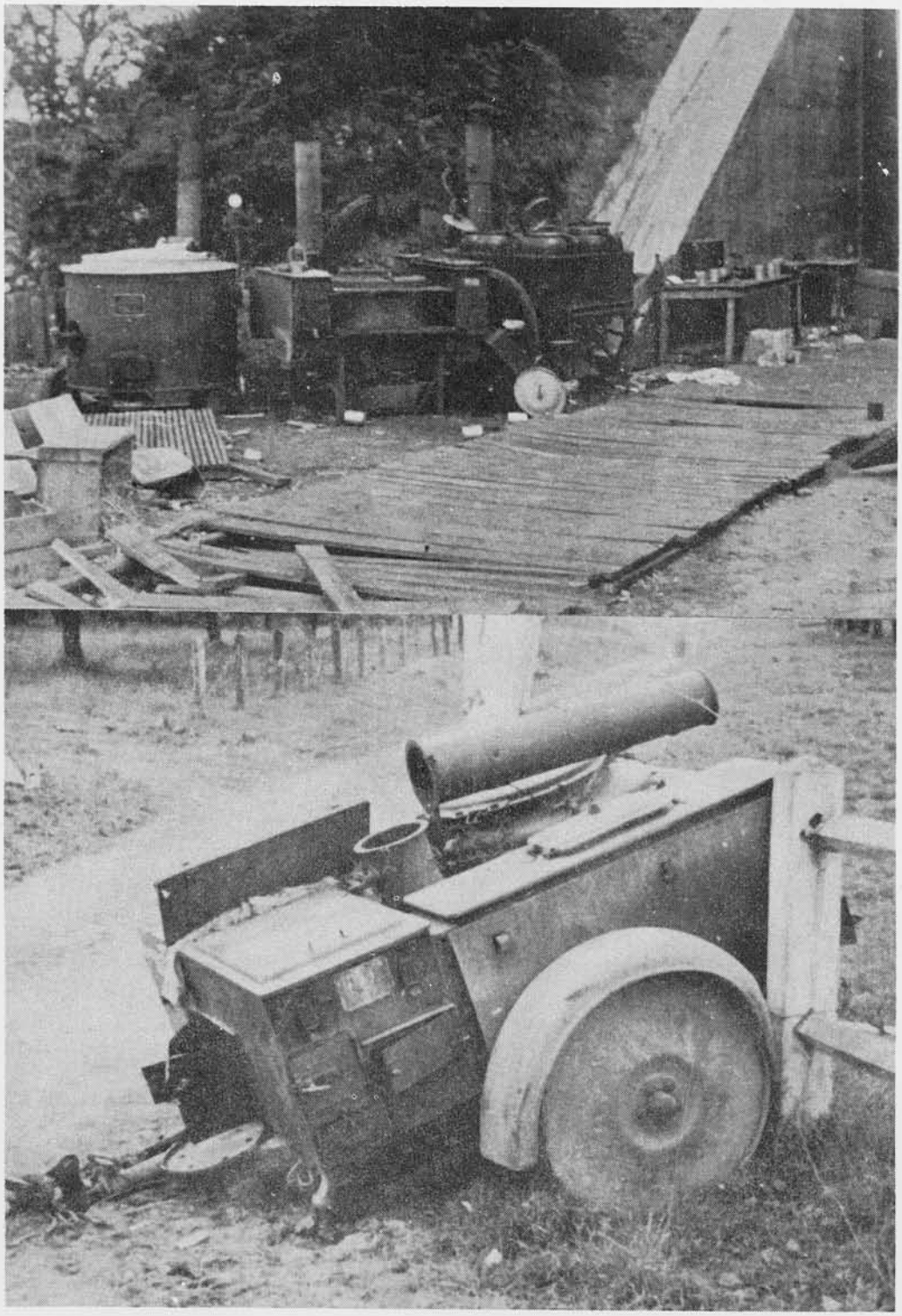

FIGURE 68.—Units of Captured German Field Kitchen.

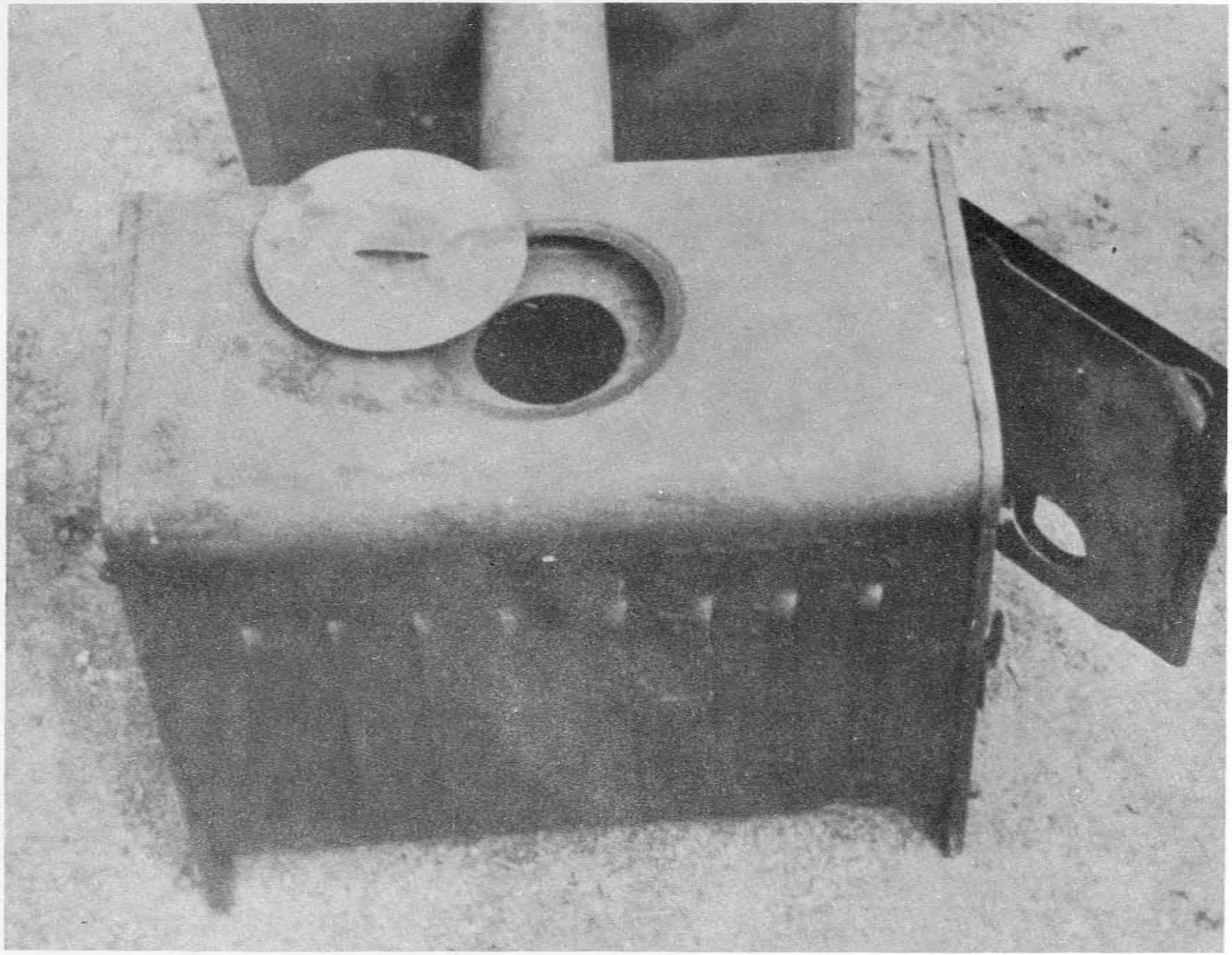

FIGURE 69.—German Tent Stove.

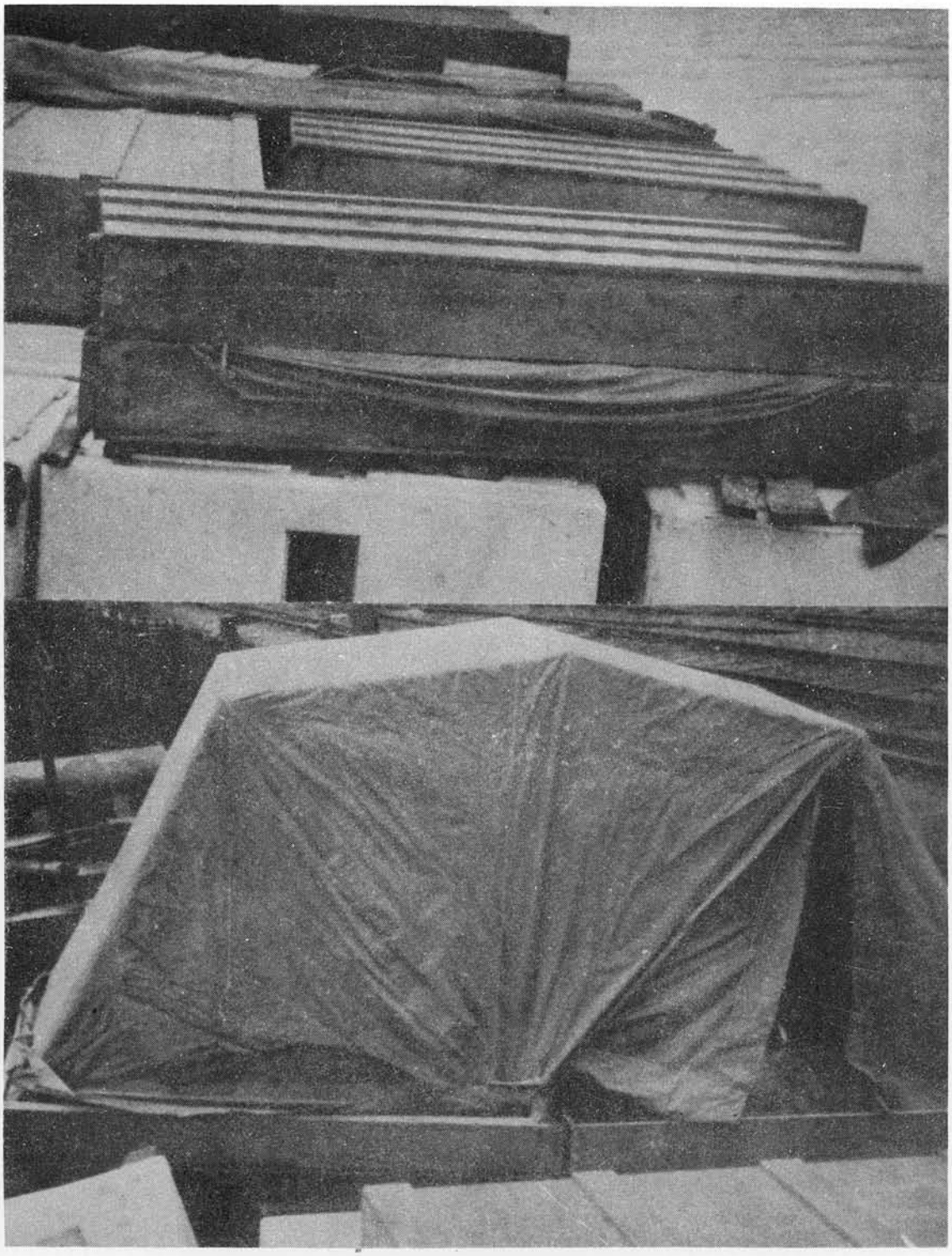

FIGURE 70.—A Boxed Tent That Required No Pitching.

of the German forces and the enforcement of the terms of surrender.

As planned in November 1944, the operation would be carried out in two main periods. In the primary period the Allied armies would advance to strategic areas inside Germany—including Berlin. In the secondary period the Supreme Commander's zone of occupation would be established, enemy forces would be disarmed, and enemy equipment would be disposed of. During the first period arrangements would be made for safeguarding German war materials both in Germany and in liberated countries, the responsibility to rest upon the commander in whose area the materials were located. Arrangements for handling new or unique types of equipment desired for technical research were the same as those that had been made in France. At first, personnel needed to handle enemy materials in Germany would be provided by the Twelfth and Sixth Army Groups, and personnel needed in other areas of the Continent by the Communications Zone.[18] An amendment to the plan, published in January 1945, stated that the Communications Zone would take over German war materials from the army groups during the second period and dispose of them according to SHAEF instructions.[19]

Instructions appeared in the form of ECLIPSE memorandums. The first of these, which the Supreme Commander issued on 25 November 1944, dealt with the disarmament of the German forces and the disposal of equipment. The German High Command would be responsible for the immediate and total disarmament of all its land forces. Unless a standard layout for dumps was received from Allied representatives, war materials would be segregated and stocked by type and using service. War materials in factories, depots, dumps, or parks would remain where they were. Dumps and depots would be assigned armed guards and would not be abandoned without Allied instructions. German authorities would cooperate fully with the Allied forces in supervising the control and disposition of war materials. They would also provide the necessary labor. They would, when ordered to do so, turn over any plant and its operating personnel. They would be responsible for moving war materials from place to place as directed by the Allied forces.

German commanders would be required to prepare consolidated inventories of all war materials held at German dumps, factories, and depots. Supplies would be broken into three lists. List A, due 2 weeks after the cessation of hostilities, would include items that the Combined Chiefs of Staff desired for research or military purposes. List B, due 1 month after the cessation of hostilities, would include all other types of material. The following quartermaster items would be considered list-B material: gasoline, oils, lubricants, individual clothing and equipment, cooking and mess equipment, entrenching tools, tentage, and general and regular supplies. List C, due 3 months after the cessation of hostilities, would include all repair and maintenance tools, spare parts, and accessories.[20]

The procedures for the primary disarmament of the German land forces and the short-term disposal of war materials were also published on 25 November. Primary disarmament was designed to prevent a renewal or continuance of hostilities, to safeguard Allied forces, and to establish law and order in the Supreme Commander's area of occupation. Later disarmament was designed to bring under Allied control all stocks of weapons and equipment, factories and war production plants, and fortifications. The responsibility for the control and protection of war materials rested upon the Allied commander in whose area the supplies were located. At field dumps, however, where it was impossible to station Allied personnel, German organizations would continue to work with and protect war materials. Here German maintenance, classification, and inventorying would receive close Allied supervision. Allied army commanders would be responsible for supplies common to the German Army, Navy, and Air Force. They would also be responsible for disposing of salvage and scrap materials.[21]

On 1 December 1944, the Commanding General, ETOUSA, directed the services to prepare plans for taking over surrendered war materials in Germany. Each service would clearly state its responsibilities and set forth its plans for organizing disarmament teams; locating depots to store, safeguard, and process material for shipment; and handling, segregating, inventorying, reporting, and disposing of war materials.[22]

The Deputy Chief Quartermaster replied that OCQM could not prepare its plan until G-4 answered the questions OCQM had asked in October. He said, however, that OCQM had based tentative plans on the assumptions that the Chief Quartermaster would be called upon to control some 25 installations in the United States zone of occupation, that labor would be provided by German authorities, and that guards would be provided by the ground forces. The Deputy Chief Quartermaster also said that no captured quartermaster items would be destroyed and that only those needed for civilian relief would be moved from depots.[23]

During ECLIPSE

The Communications Zone plan for ECLIPSE was published on 5 March 1945. Enemy war material was defined as all arms, ammunition, explosives, military equipment, stores, and all other supplies used by the enemy forces. It included all naval vessels, both surface and submarine; all merchant shipping, afloat or under repair, built or being built; aircraft of all kinds; all transportation and communication facilities; all military establishments and installations; all factories, plants, shops, laboratories, research institutions, and testing stations; and all technical data, patents, plans, blueprints, drawings, and inventions. Captured enemy war material was that taken by Allied forces before the cessation of hostilities. Surrendered enemy war material was that taken by the Allied forces after the cessation of hostilities.

The pre-ECLIPSE period would begin when the United States forces were across the Rhine. During this period the armies would disarm enemy forces and locate and guard captured enemy materials. The armies would report the locations of supplies to ADSEC or CONAD, which would take over the supplies as soon as possible. If the armies located captured enemy material faster than the Communications Zone could assume control of it, they could turn over their guarding responsibilities to the Fifteenth Army—the tactical headquarters in the rear. The United States air force and naval task force in the area would be responsible for captured enemy air and naval equipment. The disposition of items common to the German Army, Navy, and Air Force would be an army responsibility. Within the communications zone the responsibility for handling captured enemy materials rested with the section or base-section commander. German civilian or military laborers would be used for most of the work, but the chief of each supply service would assign supervisory personnel to ADSEC, CONAD, and other sections or base sections.

The ECLIPSE period would begin when the United States forces were advancing toward Berlin, Kiel, Hamburg, Dresden, Munich, and Nuremberg. Then the armies would become responsible for locating and guarding both captured and surrendered enemy materials. Surrendered materials would be inventoried, reported, and disposed of according to instructions from SHAEF.[24]

SHAEF published specific instructions on 28 March 1945. Surrendered enemy materials needed for technical research would be moved from installations before inventories were begun. Army commanders, who would be responsible for factories and plants in their areas, would control production through normal staff procedures; and the supply services would provide technical supervision. The military government policy would be carried out as closely as possible: the Germans to be held responsible for all authorized production with only such supervision as would assure the carrying out of Allied instructions. Plants and factories would not be abandoned or dismantled without the army commander's approval.

Surrendered enemy supplies that army commanders did not need for military purposes would be turned over to ADSEC or CONAD. Supplies used by the military government for essential civilian needs would be considered a part of military requirements. As a general rule, surrendered materials held in occupied or liberated territory would be stored with similar United States equipment.

War materials taken over by the Allied forces in Germany, whatever their country of origin, would be considered the property of the United Nations and would be disposed of according to normal procedures. The chiefs of supply services would report to G-4 all surrendered materials turned over to them by the armies. G-4 would then issue instructions for disposal. Surrendered materials would at first be stored in German dumps or depots. Because enough soldiers would not be available to guard all depots, the only depots to be guarded were those containing articles that could be used for guerilla warfare, articles that the United States forces needed for military purposes or civilian relief, heavy engineer and construction equipment, artillery, and armored vehicles. Army commanders would destroy materials that would endanger public safety or military security if they could not be guarded.

War materials unsuitable for civilian relief and requiring third echelon maintenance would be treated as scrap. All spare parts and assemblies for which there was no civilian use and for which there was no foreseeable demand would also be treated as scrap. These materials, along with normal German battle scrap, would be sorted and stored in depots near railroads, canals, or ports. ADSEC and CONAD would take over scrap collected by naval and air forces. Until SHAEF should have established definite policies, G-4, Communications Zone, would be responsible for disposing of enemy war materials. This authority would later be delegated to lower command echelons.[25]

For Special Materials

As the bitter winter of 1945 came to a close, it was clear that the war in Europe was rushing

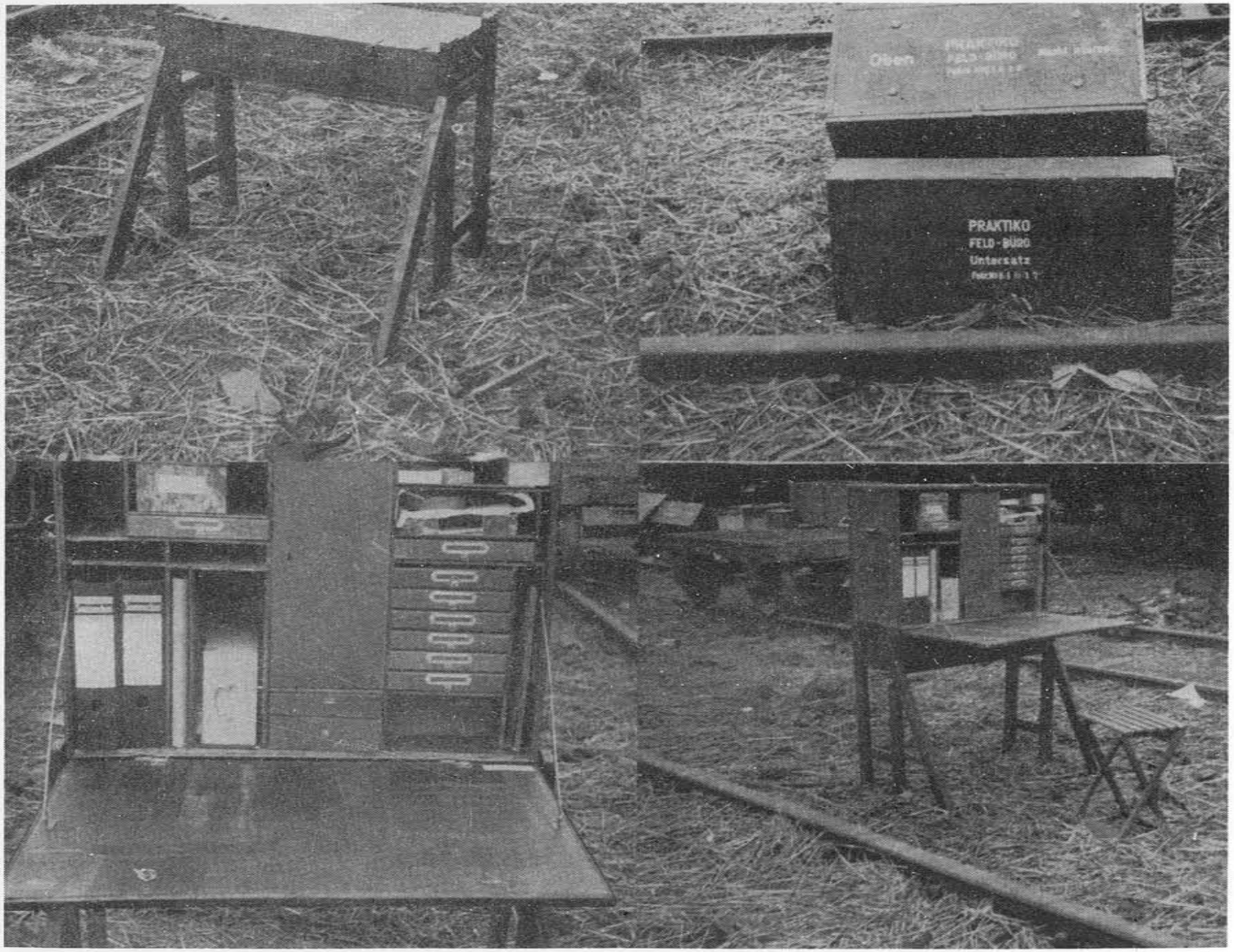

FIGURE 71.—German Solution for the Field Desk Problem.

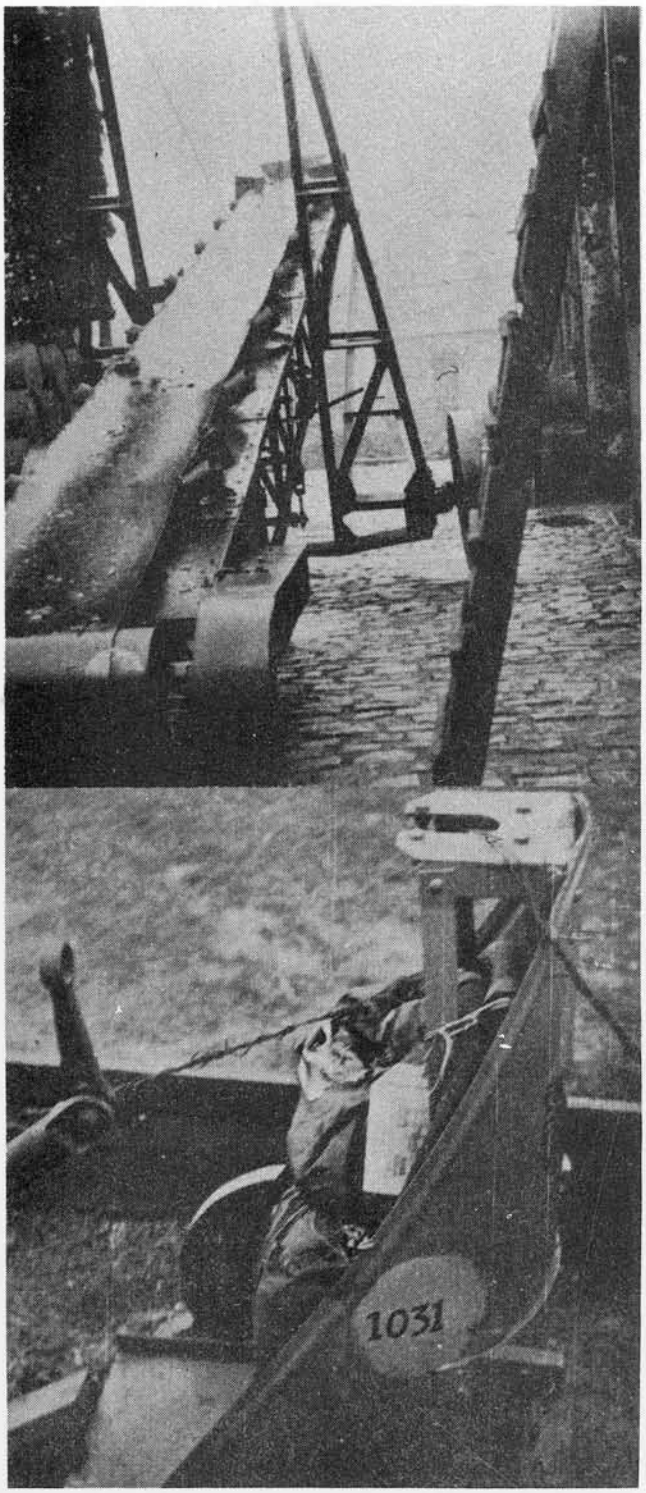

FIGURE 72.—German Drum Loader and Hand-operated Drum Carrier.

toward victory. Yet in the Pacific United States troops were being slaughtered on Iwo Jima, relentless war was being waged on Luzon, preparations were under way for the conquest of Okinawa, and the principal islands of Japan were an objective to be reached in the indefinite future. The European Theater of Operations, knowing that help must be sent to the Far East, took stock of resources.

Whatever new and effective equipment had been invented by the Germans must be made available to the Allies for study and possible production. On 6 March 1945 SHAEF directed that all enemy war materials needed for scientific or military research be guarded by Allied personnel and moved from the Continent as quickly as possible.[26]

Specialist field teams and technical-intelligence service teams were the agencies to which materials for scientific investigation would be entrusted, the former having charge of selecting the items and the latter of shipping them out of the combat zone. Specialist field teams were directly responsible to SHAEF. Each technical-intelligence service team was responsible to the supply service that set it up. Specialist field teams would operate independently or with task forces. When operating independently in the combat zone, they would give to the army G-2 lists of the equipment that they wished to evacuate and would notify G-2, SHAEF, when equipment had been turned over to the technical-intelligence teams for shipment. When operating independently in rear areas, they would communicate directly with G-2, SHAEF. When operating with task forces in the combat zone, they would send to the task force commander the lists of equipment they wished to evacuate. These teams would be responsible for tagging every item of equipment and marking each crate. The technical-intelligence service teams would move the materials by TOOT SWEET express from advance depots to Paris, where they would be packed for shipment to the United States or the United Kingdom. A team would move only materials that pertained to its service. Usually, task force commanders would provide guards for equipment until the technical-intelligence service teams could assume control. If specialist field teams were operating independently, however, they would guard supplies. Under no circumstances would the equipment be left unguarded during transit. Section or base-section commanders would act as task-force commanders for evacuating supplies found in their sections.

Separate procedures were set up for moving machinery from Germany and from France. In Germany, mayors would be required to state whether the machinery was public or private property. If public property, it would be turned over without requisition. If private property, a requisition would be filled out. In France and other liberated countries, standard procurement procedures would prevail.[27]

For Liberated Countries

Final procedures were published in the late spring of 1945. On 28 April ETOUSA revised the section of Standing Operating Procedure No. 30 that dealt with enemy war materials. Though for the most part a summation of all that had gone before, it did contain new instructions for the disposition of enemy war materials in Belgium, Holland, and Luxembourg. Although definite policies could not be made until arrangements with these governments had been concluded, it was anticipated that they would be similar to those applicable in France. Several exceptions, however, were indicated. First, category-A material would be used by the United States forces if needed. In that case, a record would be made and copies would be kept by the base-section commander and the control authority of the country concerned. Category-A material not used would be released for civilian relief. Category-A and -B material not needed for either purpose would be reported to G-4 for disposition.[28] On 7 May 1945 the Combined Chiefs of Staff made several modifications in their captured-war-material procedures. All war materials in Germany and category-C materials in liberated countries that were not needed for military purposes, civilian relief, technical research, or shipment to other theaters would be destroyed or treated as scrap.[29]

QUARTERMASTER PROCEDURES

When the United States entered World War II, the doctrine that covered the handling of enemy materials was contained in FM 30-15, *Examination of Enemy Personnel, Repatriates, Civilians, Documents, and Materiel.* This field manual had been published in 1940. It was not revised until December 1943. Then the collection and examination of captured materials were assigned to the supply arms and services. Captured quartermaster supplies, for example, would be delivered by combat or base-section forces to the army or base-section quartermaster, who would send samples to the theater quartermaster. After a preliminary examination, the theater quartermaster would send samples to The Quartermaster General for final analysis.[30]

Meanwhile, the War Department had issued two letters setting forth tables of equipment for intelligence specialist teams.[31] A third letter

appeared in February 1944 and a fourth in April 1944.[32] On 14 March 1944 the Commanding General, Army Service Forces, wrote that these teams would be known as enemy-equipment intelligence service teams. Assigned to the chiefs of supply services for administration but to the theater commanders for operation, they would operate in combat areas to assist in the collection, examination, and study of captured enemy materials and to see that samples were sent to the United States.[33]

The Commanding General, ETOUSA, directed on 22 April that each service chief designate teams to accompany the assault forces. These teams would make preliminary examinations of captured equipment and report to combat commanders any information that could be used to prepare countermeasures. The first sample of any new or unusual item would be sent to the United Kingdom for examination by British and United States agencies, and the second sample to the United States.[34]

The Chief Quartermaster eventually organized six teams and assigned one to each of the United States armies (the First, Third, Ninth, and Seventh), one to the French First Army, and one to the Communications Zone.[35] The two that had been organized by D-day were assigned to FECZ.[36]

The Research and Development Division, OCQM, was created on 2 August 1944. It became responsible for the two teams that were then operating with the First and Third Armies.[37] The division retained this responsibility until it was dissolved in June 1945.[38] Then the teams passed to the jurisdiction of the Production Control Division at Frankfurt.[39]

The work of these enemy-equipment intelligence teams was but a small part of the activities of the Quartermaster Service with regard to captured enemy materials. On 12 October 1944 the War Department asked theater commanders to send larger quantities of captured materials to the United States. Captured enemy materials should be collected and moved along with salvage from the combat zone to depots in the communications zone. Considered as salvage, the materials would be gathered by salvage-collecting companies, passed through salvage-collecting points, and sorted and classified at salvage depots. If not actually needed in the theater, they should be shipped to the United States to meet increasing demands.[40]

Less than 2 weeks later, the Chief Quartermaster established the Captured Enemy Supplies Branch of the Storage and Distribution Division to control the inventory, storage, and issue of captured materials. The Petroleum and Fuels, Installations, Subsistence, and Supply Divisions appointed captured-enemy-supplies officers who, with members of the Storage and Distribution Division, decided upon the disposition of the materials according to the needs of their respective divisions.[41] The Captured Enemy Supplies Branch was transferred to the Field Service Division on 20 October[42] and was abolished on 23 November.[43]

A new plan was then put in operation. The Storage and Distribution Division would receive and record captured materials and distribute inventories to interested divisions within OCQM. It would store, distribute, and transport captured materials; direct section and base-section quartermasters to turn over to other services items that did not pertain to the Quartermaster Service; and report to G-5 all excess captured quartermaster supplies available for issue to civilian relief agencies. The Supply Division would keep records of captured class II and class IV supplies and issue these supplies to prisoners of war. It would obtain from the Procurement Division samples of captured materials that could be used in the manufacturing program. The Subsistence Division would handle all stocks of captured food. The Petroleum and Fuels Division would handle all stocks of captured petroleum and petroleum products. The Research and Development Division would continue to supervise the work of the enemy-equipment teams. The Procurement Division would use as much captured material as possible to meet manufacturing requirements and would supervise the disposition of captured wines and liquors. The Field Service Division, acting as an inspecting agency, would see that prescribed policies were carried out in OCQM and in installations.[44]

The Chief Quartermaster soon discovered that spheres of responsibilities had not been clearly defined and that the Research and Development Division, the Supply Division, and the Field Service Division were stepping on each other's toes.[45] Because of conflicting reports, contradictory orders, and duplication of effort, he set up as of 13 December 1944 one central control agency—the Captured Enemy Material and Prisoner of War Supply Division.[46]

The new division had two missions: the establishment of procedures for the use and disposition of captured material and the supply of clothing and equipment to prisoners of war. In conjunction with the Storage and Distribution Division, it would supervise the taking of inventories. It would tell the Supply Division what materials could be turned over to other services. In conjunction with the Supply Division, it would send to G-5 inventories of all excess materials available for civilian relief and

FIGURE 73.—Line-up of German Prisoners during the Battle of the Bulge.

FIGURE 74.—Headquarters of a Technical Intelligence Team and Weary Workers at Rest.

FIGURE 75.—Frau Forced to Surrender Hidden German Uniforms.

to G-4 lists of all the materials that G-5 did not want. It would get samples for the Procurement Division. It would see that prisoners of war were using captured materials and that United States items were issued to them only when absolutely necessary. It would give to the Supply, Subsistence, Petroleum and Fuels, and Installations Divisions the location of captured class II and class IV supplies, food, gasoline and oils, spare parts, and repair equipment.

The responsibilities of the Supply, Subsistence, Petroleum and Fuels, Research and Development, and Procurement Divisions were not changed by the new procedure. The Installations Division, however, was required to record all captured spare parts and repair equipment and to supervise their disposition, if such power had not been delegated to the section or base-section commander.[47]

The Captured Enemy Material and Prisoner of War Supply Division was dissolved by February 1945, and its functions were returned to the various divisions. The Installations Division was given the major portion of the duties, because the handling of captured enemy material was closely related to salvage operations.[48]

In Base Sections and Depots

The procedure by which the duties of ADSEC would be correlated with those of sections and base sections was established by February 1945. ADSEC, as the source from which captured enemy war material was supplied, would keep an officer at each advance depot to acquire as quickly as possible stocks of captured supplies turned in by the armies. The depots at Cherbourg, L'Hermitage, Reims, and Mons would be the principal storage depots.

Though captured materials would normally be issued to prisoners of war, United States forces would receive them if their need was greater. The following items, however, could not be issued to prisoners of war or to civilian relief agencies without approval of OCQM: captured items similar to controlled items of United States equipment; furniture and fixtures; china and glassware; post exchange supplies; cloth and findings; office equipment; tentage; electrical equipment; and buckles, thread, yarn, and similar findings. German prisoners would be forced to improvise before materials of any sort would be requisitioned for them. Ropes, for example, would be used for belts. Salvaged oil drums would be turned into stoves. Empty B- and C-ration cans would be used as cups. A full discussion of prisoner-of-war supply will appear in volume IX of this series.

After captured enemy materials reached the depots, base-section quartermasters and base-depot commanders would send to OCQM samples of such supplies as cloth, leather, thread, yarn, raw wool, buttons, snaps, and buckles. Stocks of these items would be frozen until released by OCQM.[49] Base-section quartermasters would establish captured-enemy-material and prisoner-of-war supply branches in their supply divisions. They would continue to search their areas for captured materials and to provide clothing for prisoners of war.

Base-depot commanders would also establish captured-enemy-supply and prisoner-of-war supply branches in their supply divisions. They would store, inventory, and guard captured materials, maintain stock records, and edit requisitions for captured supplies on the basis established for United States materials. They would take special precautions to control and safeguard clothing and individual equipment. Mobile laboratories would analyze all captured fuel and lubricants. Captured petroleum would not be used in United States equipment, except in emergencies. Captured cigarettes, tobaccos, tooth paste, shaving cream, and other post exchange items would be saved for resale to prisoners of war.[50]

PROBLEMS

In the larger sense the entire program constituted a problem, the solution of which depended upon planning, training, organization, and ingenuity. Specific problems, however, were constantly throwing clogs into the machinery. The most persistent problems centered around inventories, personnel, and information.

Inventories

As early as 17 September 1944 the Deputy Chief Quartermaster urged base-section quartermasters to keep accurate inventories, warning that laxity would complicate supply for prisoners of war. He was particularly concerned about the depots at Le Mans and Paris, which were being set up as central enemy-material depots.[51] The Chief of the Supply Division echoed this cry 4 days later.[52] The Chief of the Equipage Branch of the Supply Division reported on 27 September that inventories from depots were too old or too meager to be of any value. At that time reports from the depots, he said, were adequate for the Salvage Branch of the Installations Division, to which they were directed, but not for the Supply Division. He suggested, therefore, either that the depots be instructed to send inventories to the Supply Division or that the Installations Division be made

responsible for the entire enemy-material program.[53] The Storage and Distribution Division's reply 2 days later led to the establishment of the Captured Enemy Supply Branch and the assignment of duties to the various divisions.[54]

On 27 November and again on 30 December the Chief Quartermaster notified all base-section quartermasters and base-depot commanders that inventories would have to be taken properly. He directed that reports be broken down to show the amount of material that could be used for military purposes, for civilian relief, and for issue to prisoners of war.[55] Major General Littlejohn vehemently criticized the 58th Quartermaster Base Depot at Liege, which he accused of "completely muffing the ball on its own mission." This large advance depot was to receive captured enemy supplies from the armies and reship them to depots in the rear. This it had not done. "The 58th," Major General Littlejohn wrote, "has taken unto itself the job of setting up a Class II and a Class IV depot and gathering up everything, forward, sideways, and from the rear." He directed that a member of the Field Service Division immediately investigate the situation at Liege and see that the material was shipped to the central depots at Reims and Le Mans. He also wanted an officer from the Procurement Division to move to Liege at once and set up a procurement office. His job would be to examine all captured material brought into Liege and arrange to have as much of it as possible manufactured into items for issue either to United States forces or to prisoners of war.[56]

Personnel

The limited number of personnel available to carry on enemy-material activities proved to be a problem more difficult of solution than the one presented by incomplete inventories. The liaison officer of the Field Service Division wrote his chief on 23 October 1944 that the program was sound in theory but weak in practice. There were barely enough troops to keep a limited amount of salvage flowing smoothly. The use of prisoners of war seemed to be the answer. Yet 1 American soldier had to guard every 10 prisoners. The increase in the number of guards would be proportionate to the increase in the number of prisoners used to handle larger volumes of salvage and captured material. If salvage activity continued at its slow pace, both Allied and enemy supplies would be lost.[57]

The Chief of the Military Planning Division answered that he had conferred with the Chief Provost Marshal and that the number of prisoners one man could guard was an arbitrary figure. The Chief Provost Marshal merely wanted enough guards to insure security and confinement. The entire problem could be worked out at base-section level.[58]

The personnel problem was characterized by inadequacy of performance, as well as inadequacy of numbers. The Chief Quartermaster was dissatisfied with the enemy-equipment teams, upon whose work successful collection of enemy material largely depended. Their job was to locate supplies and make accurate reports to the armies and OCQM. "The captured enemy material teams are spending," Major General Littlejohn wrote, "a nice comfortable fall in the forward areas, occupying the best hotels, drinking the best champagne and smoking the best cigars."[59]

As the approach of VE-day caused emphasis to be placed on ECLIPSE planning, G-4 complained that SHAEF had placed conflicting demands on service troops. In one instance it directed the Communications Zone to collect, segregate, inventory, guard, and dispose of surrendered war material in Germany. In another, it directed the Communications Zone to assume responsibility for repairing, renovating, and handling supplies to be sent to other theaters. G-4 asked, therefore, that OCQM prepare a statement showing how the conflicting demands would hamper its operations.[60]

Brigadier General William H. Middleswart, Deputy for Administration, could not see that any conflicting demands existed. "Generally speaking," he wrote, "the types of personnel required for the control of German installations and supplies and the types of personnel required for salvage operations are not the same, although in an emergency one may be substituted for the other to a *limited* extent." Then he reminded G-4 that OCQM had asked in March 1945 for a definition of quartermaster responsibility during ECLIPSE and that, having received no reply, had based its plan upon assumptions. Since no information from G-4 had been received subsequently, Brigadier General Middleswart assumed that OCQM's evaluation of responsibilities had been correct. Upon this evaluation plans had been made that would enable the Quartermaster Service to fulfill the dual mission that SHAEF had imposed upon it.

The redeployment of quartermaster units, however, was giving Brigadier General Middleswart considerable concern. Quartermaster personnel were being redeployed at a rate that was not proportionate to the over-all troop basis. This matter had been the subject of numerous discussions between OCQM and G-4, and of numerous communications as well. G-4's intention at that time to use 1,600 quartermaster

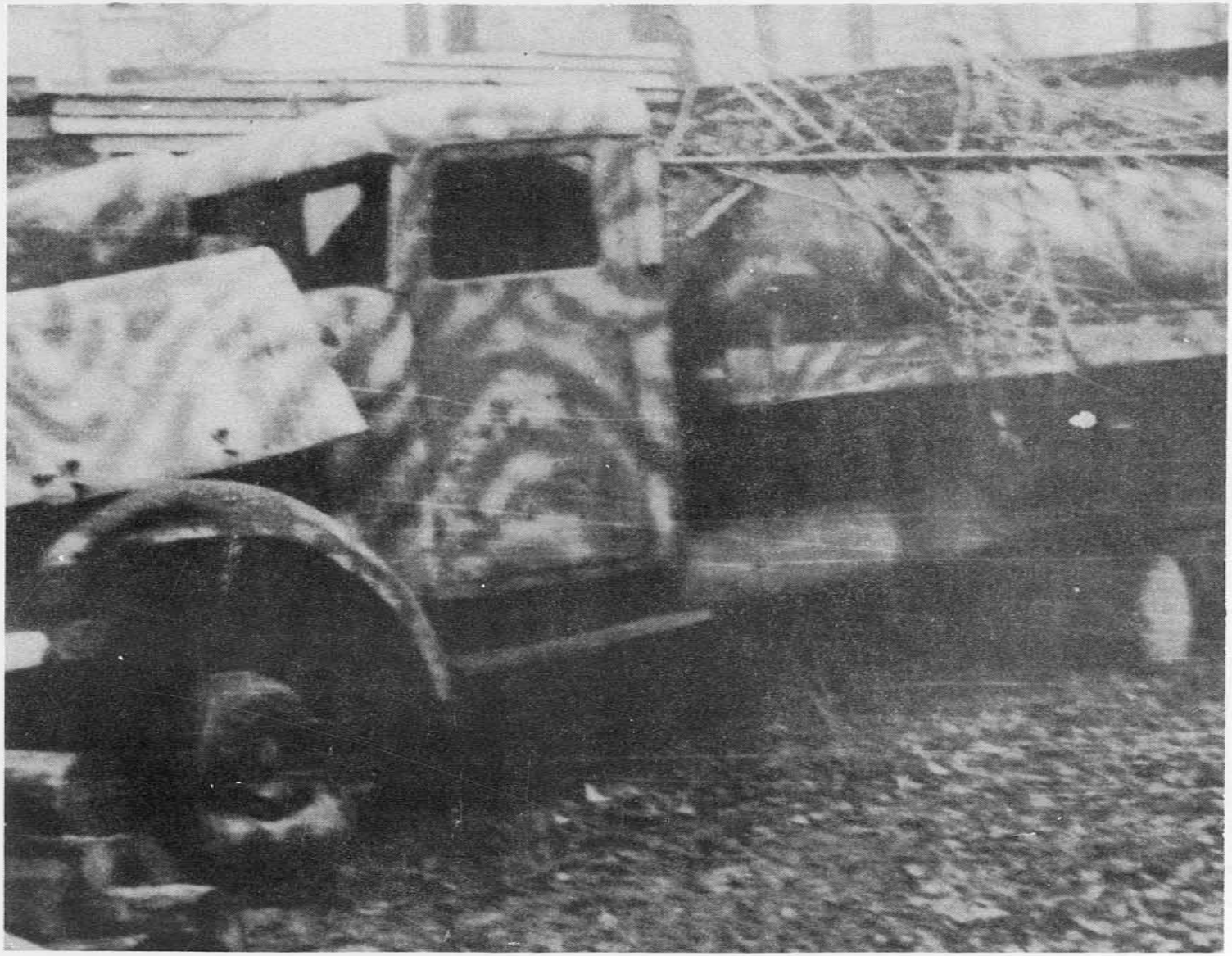

FIGURE 76.—German Truck Useless without Tires.

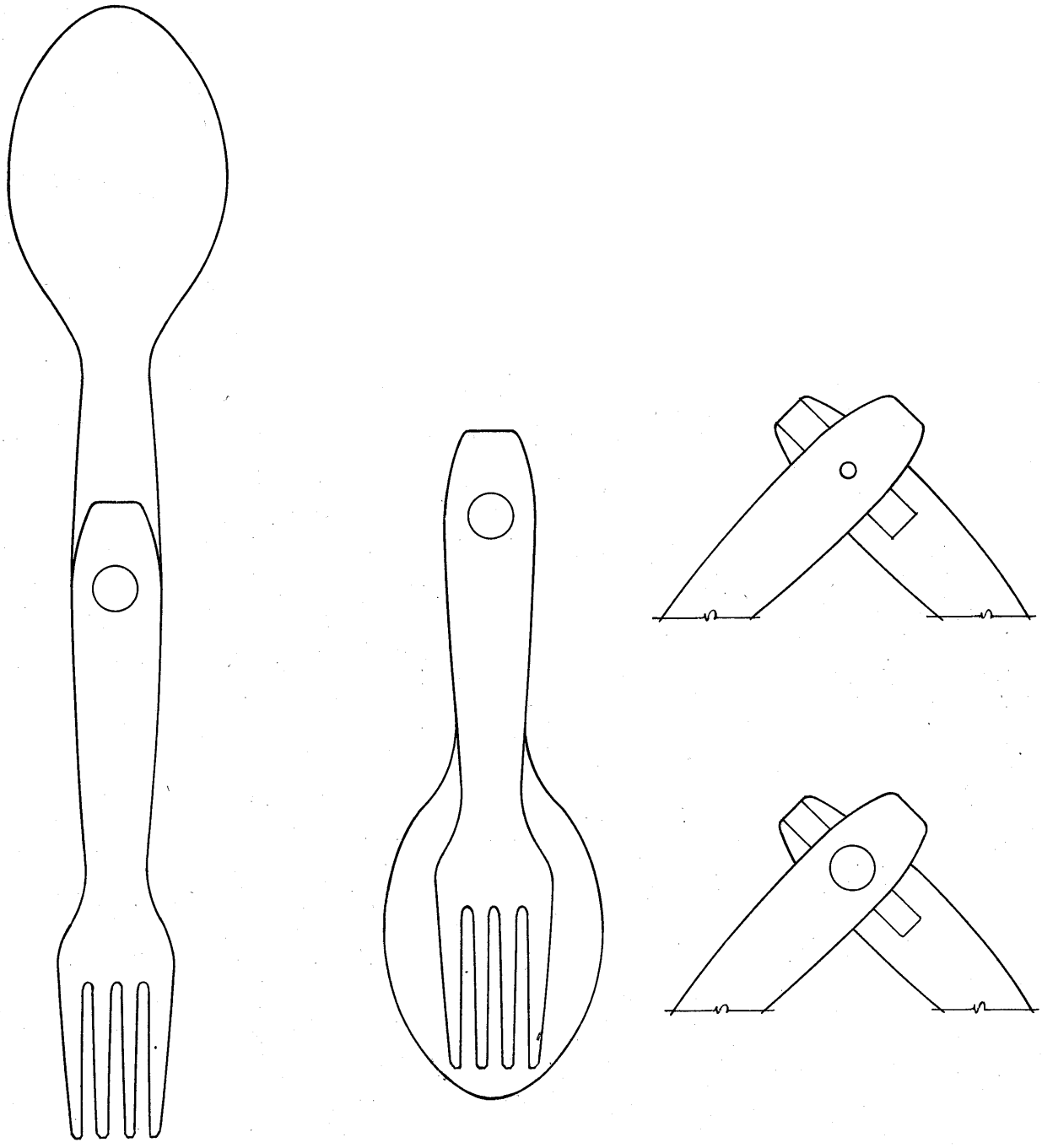

FIGURE 77.—German Fork-and-Spoon Combination.

troops to guard German prisoners of war, if carried out, would affect OCQM's ability to provide personnel for the supervision of German installations and quartermaster redeployment activities.[61] The personnel problem, unfortunately, was one of those problems that were never fully solved.

Information

As late as 19 April 1945, Colonel Samuel W. Smithers, Quartermaster of ADSEC, was still complaining about the lack of information regarding captured enemy supplies. The armies were sending their first reports to SHAEF and not to ADSEC. Moreover, the armies were using most of the military supplies they captured. What little was left was turned over to civilian relief. Captured civilian facilities were virtually nonexistent. By the time ADSEC learned of their location, they had been either destroyed or ransacked, for combat forces failed to realize their importance and civilians were constantly on the prowl for anything of value. He believed that the only solution was to place officers from OCQM and ADSEC in advance depots and with SHAEF at Frankfurt to get information as soon as it came in.[62]

The Chief of the Control Division said that nothing could be done as long as SHAEF's procedures remained in effect. Army commanders had the right to use as much captured material as they needed and were obligated to give the military government the first chance at the rest. Furthermore, they were not required to report to ADSEC stocks of materials for which there was a foreseeable demand either for military purposes or civilian relief. This authority was so broad that it practically eliminated the return of any captured supplies to the communications zone.[63]

Others

Many other smaller problems arose from time to time to interrupt the smooth flow of captured material. Rumors that captured supplies were being wasted were persistent. Material left along the path of battle was often stripped of its valuable parts. Policies for disposing of captured horses and for repairing captured supplies were late in the making.

Rumors

On 29 September 1944, the Chief Quartermaster asked the Seine Section Quartermaster if there was any truth in the rumor that captured enemy supplies in the Paris area were being wantonly dissipated.[64] The Seine Section Quartermaster replied that the report was completely unfounded. He had recently sent 22 carloads of material to Reims for issue to civilian relief agencies. The shipment had contained 250,430 items, which included kitchen and dining-room utensils and also clothing of all kinds —even 1,940 girdles for issue to civilian women.

In fact, the Paris base depot had conducted an exhaustive search for captured material. It had located some clothing in tailor shops, laundries, and dry-cleaning establishments. It had found in factories many items that the Germans had ordered but had not had time to collect—for example, 19,000 meters of cloth, 12,980 pairs of trousers, 5,000 pairs of shoes, and 1,550 woolen jackets. The depot had in stock 88,082 items, ranging from 1 folding steel cot to 50,150 shovels. Inventories were correct, the Seine Section Quartermaster insisted, and supplies were well guarded.[65]

Missing Parts

There were innumerable cases of valuable captured equipment that was useless because parts were missing. For instance, as protection against theft, the French Government removed the tires from a large number of German fuel trucks. Early in October 1944 the Chief of the Procurement Division asked the General Purchasing Agent to procure tires so that the trucks could be put into service.[66] There is no evidence that this suggestion was followed.

Captured Horses

The Chief Veterinarian wrote on 3 March 1945 that his office was flooded with inquiries about captured horses. "I can say without fear of contradiction," he wrote, "that there isn't a halter, picket line, curry comb, brush, or set of branding irons in theater stocks." Hay cost between $40 and $96 a ton. Straw sold for $40 a ton. Forage was scarce. Barley and oats were not procurable. Clearly, therefore, United States forces should not bring captured horses into France. Horses that the French Government wanted for slaughter should be turned over to the French central authority, which would assume the cost of upkeep and transportation. The Chief Veterinarian thought, however, that the horses should be left in Germany under German care, that stocks of captured forage and veterinary supplies should be frozen, and that the horses should eventually be turned over to German farmers.[67] The Chief Quartermaster had no objection to the plan but believed that SHAEF should make the final decision. In the meantime, horses captured in France would be turned over to G-5, and horses captured in Germany would be turned over to civilians and reported to G-5.[68]

Supreme Headquarters announced its policy shortly after VE-day. Horses would be disposed of according to the following priorities: to the Allied armies for their own needs, to German farmers through military government agencies, to German authorities for hauling purposes, and to G-5 for use in other liberated areas of Europe.[69]

Repairs

It was one thing to issue captured material to prisoners of war. It was another to keep it repaired. Because the number of prisoners increased daily, the Chief Quartermaster feared that he would be faced with the problem of operating repair centers for German clothing as well as for American. He decided, therefore, to overcome this problem by making prisoners of war self-supporting. He authorized base-section quartermasters to issue 2 sewing machines and 5 shoe lasts to every 3,000 prisoners. The necessary amounts of thread, buttons, needles, hammers, nails, and pincers would also be provided. One tent-repair kit would be issued for every 300 tents.

He also outlined an alternate plan to be followed if the location of enclosures within the base section made it more practicable. One central prisoner-of-war salvage-repair depot, operated by the prisoners, might be established in the main prisoner-of-war camp. Here the sewing machines, shoe lasts, and necessary supplies would be concentrated.[70]

UNUSUAL ITEMS

Of the thousands of items collected by quartermaster technical-intelligence teams, a fairly small number merited detailed examination in the United States. These fall into two categories: those that United States combat forces found superior to their own and those that had features lacking in comparable United States items. Though only a few can be described in this volume, pictures of others serve to illustrate German ingenuity and solicitude for fighting men.

Fork-and-Spoon Combination

The most sought-after item was perhaps the German fork-and-spoon combination, which was discovered in August 1944. The handles of the fork and spoon are joined by a single aluminum rivet, which allows the combination to open and close like a pocketknife. The combination weighs 1.1 ounces and measures 9 inches open and 6 inches closed. It is lighter, more compact, and less expensive than the individual fork and spoon used by the United States forces. The Office of The Quartermaster General believed, however, that the German item was less durable and less sanitary. It believed, too, that the German item was more likely to corrode because it was made of an aluminum alloy rather than of stainless steel.[71]

United States forces, however, preferred the German combination on every count. "The men want," a Special Service survey read, "an easy to clean, rustless, non-rattling set of eating tools like the German combination fork and spoon."[72] Soldiers of the 80th and 90th Divisions, asserting that they rarely used their knives, clamored for the German combination.[73] Troops of the 3d Armored Division preferred the combination to the United States utensils because it was easier to carry.[74] The commanding officer of the 378th Infantry Regiment reported that his troops acclaimed it the best utensil for C rations.[75] The 29th Division quartermaster said that it was being used by every man who could get his hands on one.[76]

Uniforms

The technical-intelligence teams sent samples of eight types of uniforms to the office in Paris. The first was the camouflage uniform that had been issued to Waffen Schutzstaffel (Airborne Elite Guard) divisions in the spring of 1944. It consisted of a short well-fitting jacket of herringbone twill and trousers to match. Except for its camouflage pattern, it was similar to the United States fatigue uniform. This pattern consisted of small spots of green, brown, and tan, which blended at a distance into large patches of color. The uniform could be worn either by itself or over the woolen uniform. The earliest samples were captured north of Rome in July 1944. Later samples were taken from members of the Waffen Schutzstaffel Division, Das Reich, at Saint Denis-le-Gast in August 1944. The newer trousers were cut by a slightly different pattern, and the jacket was reversible. The camouflage pattern was predominantly green on one side and predominantly brown on the other.[77]

The second uniform was a quilted reversible ensemble, camouflaged on one side and white on the other. Issued only to troops engaged in special operations, it was found on prisoners taken in the First Army area around Stolberg and Aachen in late November 1944[78] and on prisoners taken around Bastogne early in January 1945. It was assumed, therefore, that the uniforms were worn when the temperature dropped below freezing.[79] Another report submitted in February 1945, when the temperature had risen an average of 48 degrees, substantiated the earlier assumption. Then only a few

FIGURE 78.—United States Observer Modeling German Camouflage Uniform.

FIGURE 79.—Black Uniform of Panzer Grenadier.

FIGURE 80.—German Battle Jacket.

FIGURE 81.—German Hoods and United States Imitations.

FIGURE 82.—German All-felt Knee-high Boot.

Germans captured in the Canadian First Army's area around Cleve, Nijmegen, and Arnhem were wearing quilted uniforms.[80]

The Ninth United States Army uncovered three other types of uniforms during its drive to the Rhine in March 1945—a herringbone twill work uniform, a windproof uniform, and a black uniform worn by Panzer grenadiers and consisting of a waist-length double-breasted jacket and matching woolen trousers, which bloused at the knee and fitted into the leggings or boots.[81]

The most interesting uniform, however, was the new German woolen uniform. The jacket resembled the ETO field jacket. Like its American counterpart it had been patterned after the British battle dress jacket. The First United States Army intelligence team reported that the German and British jackets were so similar that they could be identified only after close observation. The uniform was cut so that a black turtleneck sweater, always an integral part of the German winter uniform, could be worn under the jacket. The trousers could be worn either on the outside of the boots or tucked into them. The uniform came in gray green or olive drab.[82]

Mittens

German mittens were another item often sent back to OCQM. The first type, found in Nancy, were elbow-length oilskin mittens used in decontamination work.[83] Reversible camouflage mittens, worn with camouflage uniforms, were found in Belgium. They were gauntlet style, white on one side and camouflaged on the other. The mittens were attached to a long cord and could be hung around the neck when not in use.[84] The intelligence team operating with the Twenty-first Army Group in the vicinity of Arnhem and Cleve made three other noteworthy discoveries: fur-lined mittens, fleece-lined mittens, and woolen mittens. Only the fur-lined type had no trigger finger. The fleece-lined mittens were gauntlet style with leatherette palms. The prisoner from whom they were taken had just received his, but he understood that they were to be issued to machine-gun sections. The woolen mittens were designed to be used only as shells, but the liners had not been made available. This type seemed to be worn usually by guards, antiaircraft crews, and artillerymen. The fur-lined mitten was the most popular because of its warmth. The lack of a trigger finger was its main disadvantage.[85]

A gauntlet-style, trigger-finger mitten with leather palm was discovered near the Rhine in March 1945 by the First Army team. This mitten was made of either lightweight olive-drab or heavy brown canvas. It had two adjustable leather straps and snaps, one at the wrist and one at the forearm, and was usually worn with felt inserts. Still another style was the green canvas mitten with leather thumb. This was gauntlet style with no trigger finger and was worn over wool-knit gloves.[86]

The Third Army team located some peculiar cream-colored mittens at Eckenheim. Made of burlap, they had a flannel lining, could be worn on either hand, and were evidently used for handling ammunition, heavy guns, and hot barrels.[87]

Underwear

The German soldier was issued a shirt-undershirt combination instead of the separate shirt and undershirt issued to the American soldier. It was the only type of garment, other than the turtle-neck sweater, that was worn under the jacket.[88] It had four front buttons, two buttons at each wrist, and two small breast pockets.[89]

A small stock of paper underwear was found near Aachen on 29 November 1944. Although some units at the front reported that Germans were wearing paper underwear, the team operating with the Ninth Army was not able to verify the reports.[90]

Rainwear

The quartermaster enemy-equipment teams found nothing significant about German rainwear, except a one-piece rain suit. It was taken in the First Army area from a United States jeep driver, who preferred it to the American raincoat for driving in open vehicles. It was made of black rubber-coated cloth and had a hood. The tabs on the cuffs of the trousers were similar to those on the United States cotton field trousers.[91]

Overcoats and Hoods

German prisoners wore many types of overcoats, but all styles had two things in common. They were long and they had hoods. The hoods buttoned on the inside of the collar and, when not in use, hung inside the coat.[92] The Germans were issued separate hoods also, which could be worn with any uniform. Two types were most common—a fur-lined hood worn under the helmet and a reversible woolen hood.[93]

United States soldiers asked for hoods many times. The hood that could be used with the M-1943 field jacket partly solved the problem. Because enough hoods were not available during the cold winter months, many troops improvised hoods from mufflers and salvaged blankets. The makeshift hoods were sewed either on the neck of the sweater or the inside collar of the field jacket.

Boots and Shoes

During the period from October 1944 to April 1945, 46,107 United States soldiers in Europe were hospitalized because of trench foot. This figure represented 9.25 percent of the total casualties incurred during the entire Continental operation (see vol. III, ch. 7). Although German statistics are not available for this period, records reveal that the German medical staff was aware of the disease's potentialities.

German army physicians made no distinction between trench foot and frostbite, but they realized that trench foot was caused by dampness and moisture and frostbite by cold. Most cases could be graded as follows: grade I, first-degree frostbite, characterized by red, swollen, and numb feet; grade II, second-degree frostbite, characterized by waxy-white feet with blisters, cracks in the skin, and pus discharges; and grade III, third-degree frostbite, characterized by blue or black feet.

A captured battalion surgeon reported that 7 percent of the battalion suffered from first- or second-degree trench foot but that only one case of third-degree trench foot was treated at the battalion aid station. He admitted, however, that a great many cases of first-degree trench foot were treated by medical corpsmen. He said, too, that the number of cases was greater where preventives were lacking.

The German medical department was convinced that the soldier himself could prevent trench foot. The body could be hardened to withstand cold temperatures by washing in ice-cold water and massaging frequently with snow. On sunny days troops should be made to exercise, stripped to the waist. The men were encouraged to take alternate hot and cold showers. Every soldier was issued a tube of frostbite-prevention salve. This active ingredient helped to rebuild tissues and stimulate blood circulation. Feet should be kept as dry and warm as possible. If they should become cold and damp, they should be massaged until circulation was restored. Then the salve should be applied. The German staff was so sure that trench foot could be prevented that soldiers who contracted the disease were given severe punishment. They were placed in solitary confinement for 3 days and deprived of furlough privileges for a year. Most captured medical corpsmen, however, agreed that this policy was often a boomerang. Soldiers faced with the dilemma of losing feet or furloughs rarely reported for treatment until the disease had reached its final stages.

The treatment for first-degree cases was an application of frost-bite salve containing ichthyol. Sulfanilamide was used for second-degree cases. Third-degree trench foot could not be cured and necessitated amputation.[94]

German footwear was another factor in the prevention of trench foot. Most German soldiers wore regulation ankle-high black shoes or knee-length leather boots, one pair of woolen socks, and leggings that were really heavy canvas anklets, and wrap-arounds. Worn inside the shoes or boots, wrap-arounds were part wool and part cotton cloths, 18 inches long and 24 inches wide. Most German soldiers were issued two wrap-arounds and one pair of socks.

Technical-intelligence teams reported that trench foot was not often found among prisoners who wore wrap-arounds under any type of leather boot. It was frequently found, however, among men who wore wrap-arounds under rubber boots.[95] The wrap-arounds kept feet warm and dry even though boots were cracked, muddy, and wet. The men who wore only shoes and wrap-arounds were able to keep their feet warm and dry. Quartermaster intelligence teams located a large number of these wrap-arounds and sent them to the salvage depot at Reims. The United States Army apparently did not know what the Germans used them for or put little stock in the idea, because the wrap-arounds were sewed together to make blankets for prisoners of war (see ch. 4).

The Germans evidently believed that felt gave added protection to the feet. At any rate, most of the boots captured in the winter of 1944 were felt-lined. One of the most interesting types was an 18-inch leather boot with felt top and felt lining. The sole was not only stitched to the welt but held down with wooden pegs as well. The boot could be adjusted at the top by means of buckle and strap. It was used on the Russian front extensively and very successfully.[96] Another type was the all-felt knee-high boot, usually worn over socks and a wrap-around.[97]

Lieutenant Colonel Mason Ladd of The Surgeon General's office, in his final report on trench foot in the European Theater, stated that the disease was caused by three major factors: the lack of proper foot discipline among troops, the inadequacy of footwear and clothing, and the failure to rotate troops (see vol. III, ch. 7). German experience seems to indicate that trench foot can be decreased if every item of footwear is of permeable material. A comparison of the winter uniforms worn by the British, German, French, Russian, and American soldier appears as appendix XX.

The Pocketknife

United States soldiers wanted pocketknives. The ones they took from Germans were prized

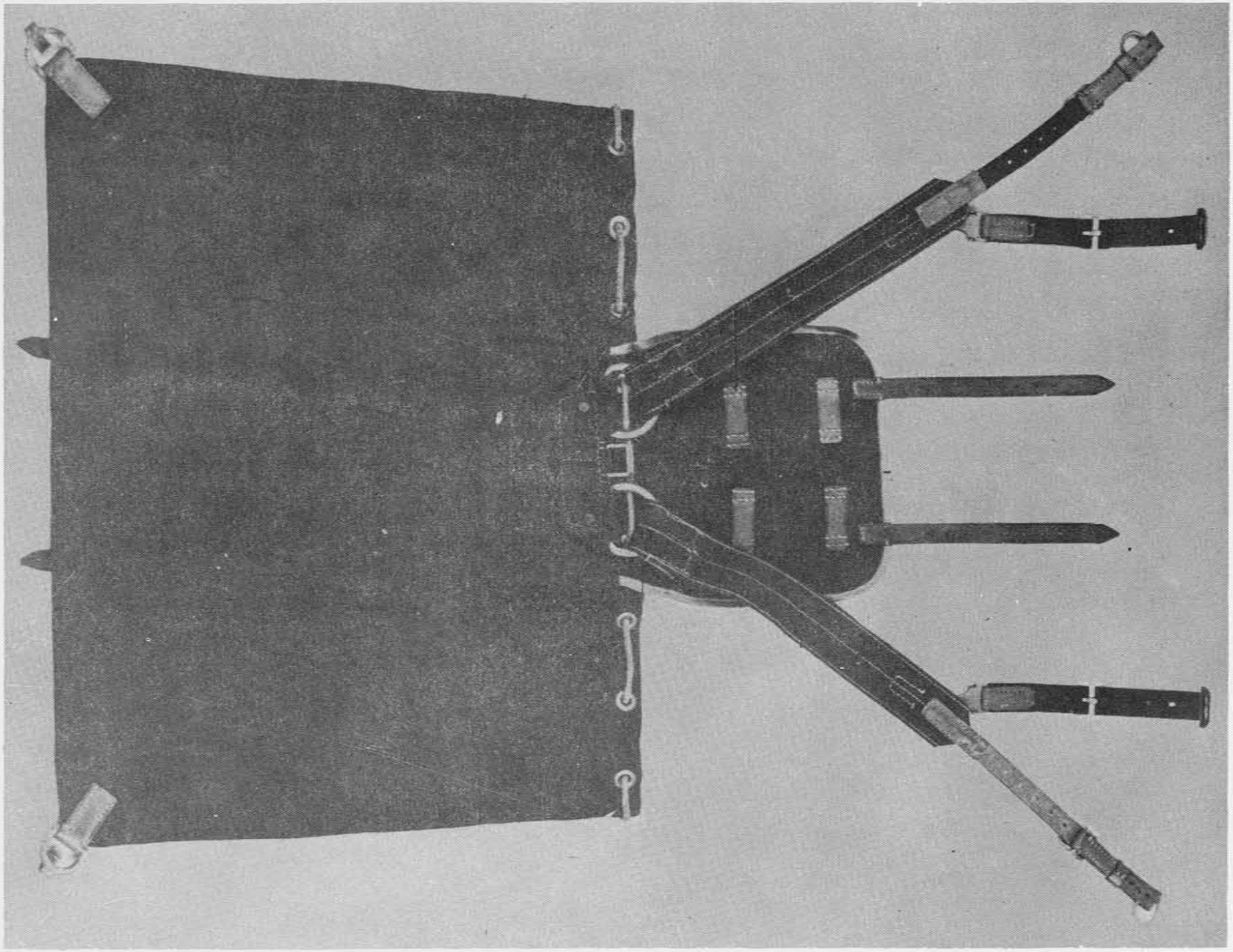

FIGURE 83A.—Outside View of German Rucksack.

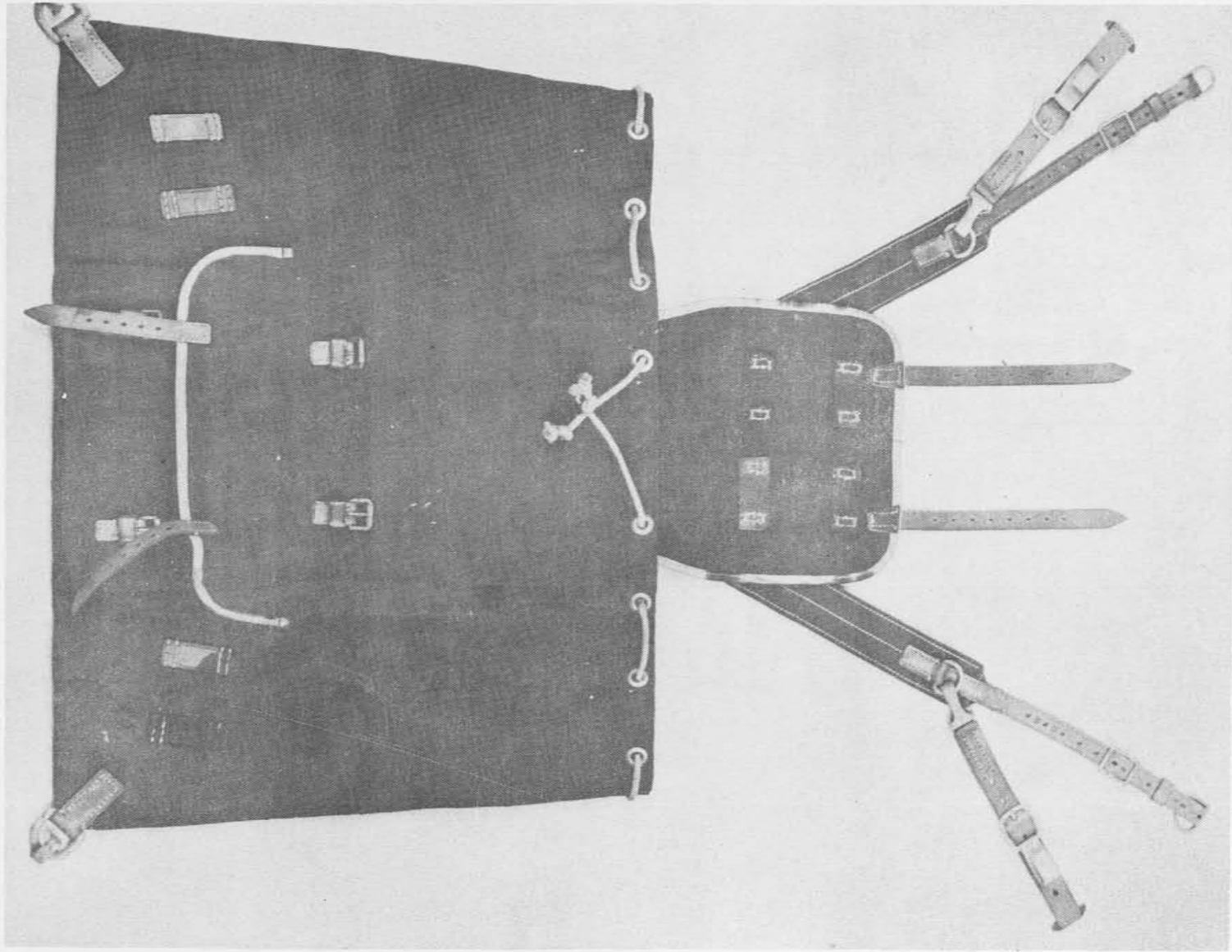

FIGURE 83B.—Inside View of German Rucksack.

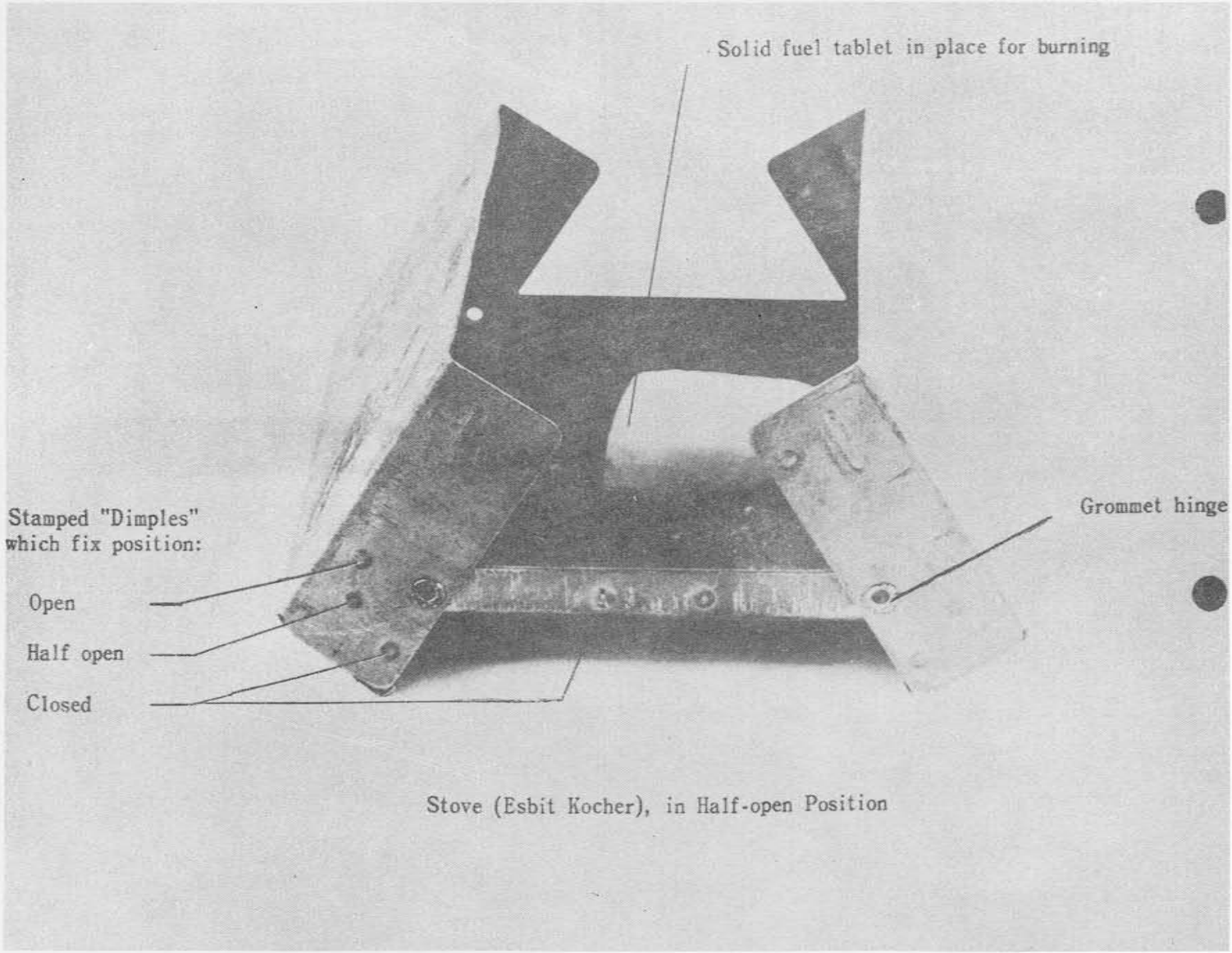

FIGURE 84.—Esbit Kocher and Fuel Tablet.

second only to Lugers.[98] The German knife, distributed to German soldiers through post exchanges, had all the attachments soldiers considered most necessary: a can opener, large blade, screw driver, leather punch, corkscrew, and bottle opener. The only similar American item was the mountain knife, which was superior in quality but inferior in usefulness.[99]

Consequently, The Quartermaster General announced that a pocketknife had been developed and that it would be sent to the Quartermaster Corps Technical Committee for standardization not later than November 1944. It had a stainless steel handle and five of the attachments found on the German model. Only the corkscrew was lacking. Oversea theaters were asked to submit recommendations for bases of issue.[100] The Chief Quartermaster suggested that the knife be either made a part of each soldier's initial issue or distributed through post exchanges.[101]

Rucksacks

The German mountain rucksack was another interesting item. Because the mountain trooper had to be self-sufficient for several days at a time, he needed to carry varied loads of equipment. His rucksack had to be large and strong but not burdensome. The German mountain rucksack filled these requirements perfectly. In addition to permanent shoulder straps it had two detachable straps, which could be fastened to the shoulder straps at one end and to the cartridge belt at the other. The notable feature of this item was its simplicity. The two ample pockets were easily fabricated. As in other German items there was a generous use of good leather. The fabric was light but strong and evenly woven.

The hardware finish on the steel parts of the rucksack, however, was inferior in appearance to that noted on other German equipment. The grommets, D-rings, and snaps on rucksacks and bags formerly examined had been made of aluminum; whereas on this rucksack they were made of steel, coated with zinc or lacquered zinc. The United States tack buttons, moreover, were considered superior to the sewed-on buttons of the enemy rucksack in that there was no thread to break and cause the buttons to be lost.[102]

Heat Units

A unique German item was the individual heating unit—the Esbit fuel tablet and stove. This unit was first seen in southern France in August 1944 shortly after the landing of the Seventh Army. The unit could heat a canteen cup of soup or coffee in a very few minutes. Esbit fuel is hexamethylene tetramine with a small amount of binding to facilitate its being made into tablets. Each tablet measured 5/8 inch by 1 5/16 inches, and 20 tablets were packed in 1 carton. Esbit is a compact and highly efficient fuel but difficult to ignite at both hot and cold temperatures. The flame is moderately luminous, midway between that of alcohol fuels and paraffin, and does not produce soot.

The Esbit Kocher (stove) was made of a zinc-coated rolled sheet steel. It was 3.9 inches long, 2.9 inches wide, .8 inch high when closed, and 1.95 inches high when open. The compact pocket-sized unit weighed 7.05 ounces, the 20 tablets 3.18 ounces, and the stove 3.25 ounces.[103]

ESTIMATE OF PROGRAM

The General Board, USFET, was established in June 1945 to study and analyze the strategy, tactics, and administration of the United States forces during the Continental operation.[104] It concluded its final report on captured enemy material by stating that the program had been only moderately successful. All echelons had been continually handicapped by the lack of definite and specific policies and procedures and clearly delineated responsibilities. This was particularly true with regard to the relationship among the United States forces, civil affairs authorities (G-5), and military government agencies.[105]

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CHAPTER 7

BATHING AND DELOUSING

The United States soldier of World War II was the cleanest soldier in all history. Three major services of the United States Army protected him from the dreaded diseases that go hand in hand with war. The Medical Service injected him with serums and toxins. In the combat zone the Quartermaster Service bathed him and fumigated his clothing. In the communications zone the Engineer Service constructed showers for him. Pestilence—the white horseman of the Apocalypse—did not ride over the Allied battlefields in Europe during World War II.

THE SELF-RESPECTIN' SOLDIER

The Chief Surgeon of the American Expeditionary Forces of World War I reported that more than 90 percent of the troops were in a verminous condition.[1] Though the Quartermaster Corps became responsible for bathing and delousing troops in May 1918, it did not work out a successful program until after the signing of the armistice. Then, the Bathing and Delousing Service was set up under the Chief Quartermaster.[2] From November 1918 to March 1919, this service gave 11,300,000 baths and disinfested 25,000,000 pieces of clothing.[3] Much of this work was done at the bathing and delousing plant at Bordeaux, known to the soldiers as "the Mill."[4] Its fame has been preserved by one of the unknown soldier-poets of World War I in the following bit of doggerel.

Well, on the way out here from town,
We meets some guys a goin' down
Togged up an' neat from head to feet
An' jinglin' real money.
"Hey, Bud," I hollers, "where'd you get the jack?
Say, you got an extra cigarette in that pack?
And where'd you nose out all them clothes"?
It sured looked mighty funny.
"Listen," they says, "out on that hill
They got a joint they calls the Mill.
It grinds away all night and day,
Sure be, like I told yer.
You go in one end—dirty, broke,
So dog-tired ya can't see a joke,
You come out paid an' plum remade—
A self-respectin' soldier."[5]

STERILIZATION AND BATH

The Quartermaster Corps continued to maintain the soldier's self-respect during the years that followed World War I, though not on a wartime basis until 1940. Then, sterilization and bath battalions were organized. They consisted of 14 quartermaster officers, 16 medical officers, 561 quartermaster enlisted men, and 2,400 medical enlisted men, who made up 4 sterilization-and-bath companies. The battalions gave showers, examined soldiers for lice, and sterilized clothing. They could process about 1,000 men an hour—a triangular division a day.

Sterilization-and-bath companies consisted of 3 quartermaster officers and 138 quartermaster enlisted men. They could process 2,500 men in 10 hours.[6] Sterilization-and-bath companies and battalions were abolished in April 1942. Then, quartermaster sterilization companies were created.[7] They would operate with mobile laundries in rest areas behind combat zones and with salvage-repair battalions in communications zones. Their duties were to sterilize clothing, bathe men, and issue clean clothing. They could process about 400 men an hour.[8]

These companies were not used in the European Theater to do the work for which they were intended. They operated in the communications zone as units at static salvage installations, as 5-man delousing teams, or as training groups.[9]

FUMIGATION AND BATH

Fumigation-and-bath companies were established on 1 June 1943.[10] They deloused and bathed troops, deloused clothing and equipment, and issued clean clothing. They could process 3,600 men in 12 hours. Fumigation-and-bath companies differed from sterilization companies in that they disinfested with methyl bromide, and sterilization companies with steam.[11] Fumigation-and-bath companies operated independently in the European Theater. Their capacity rarely exceeded 3,600 men in a 16-hour period. Usually 5 fumigation-and-bath companies were assigned to each army. A troop basis of 1 fumigation-and-bath company for each division, however, would have been preferred.[12]

Methyl bromide replaced steam for a number of reasons. Its comparatively light fumigation chambers could be taken to the very fringe of the combat zone. The sterilization semitrailers

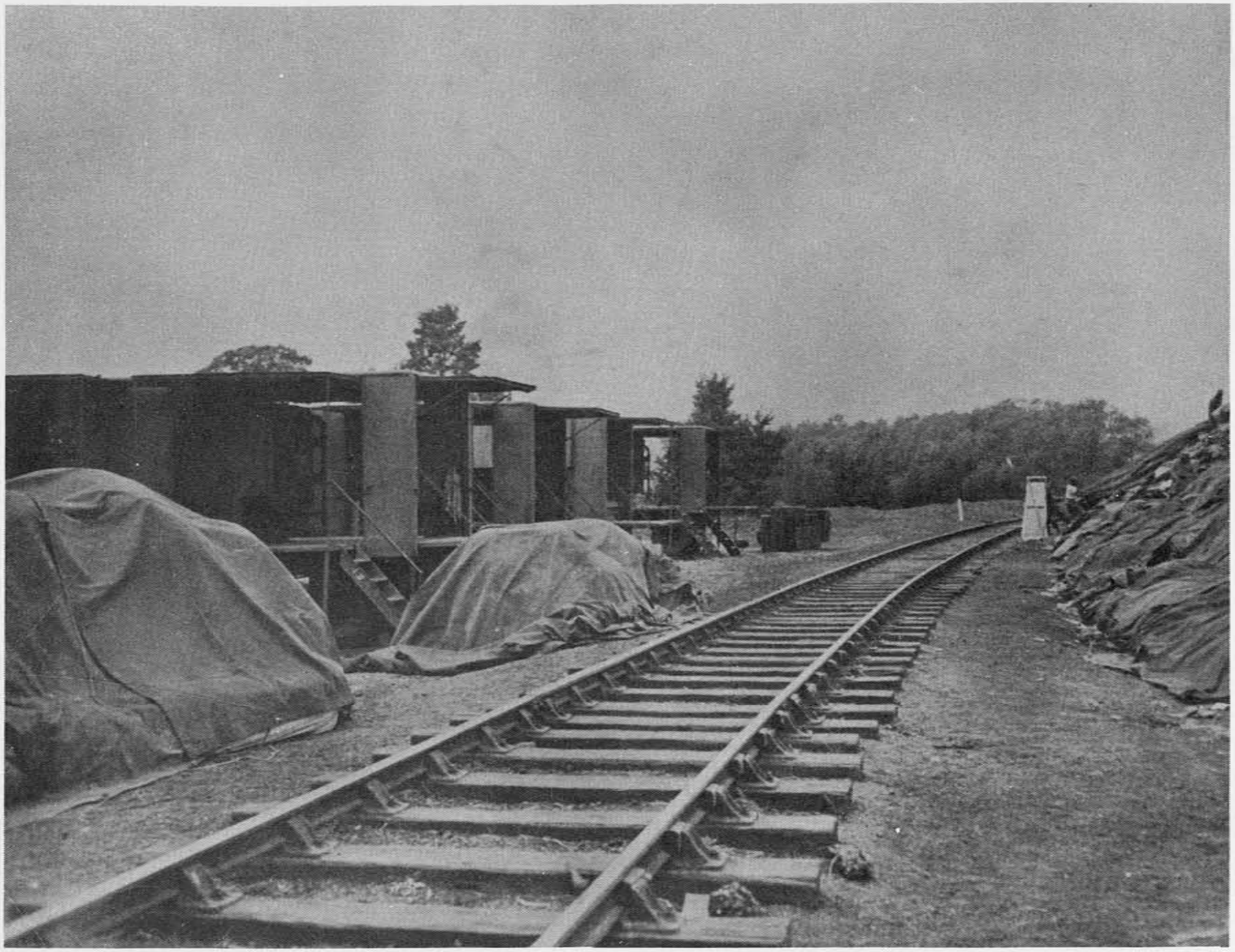

FIGURE 85.—Mobile Sterilization Trailers in Use at the Lydney Depot.

FIGURE 86.—Fumigation Chamber Operating in the Mud of Belgium.

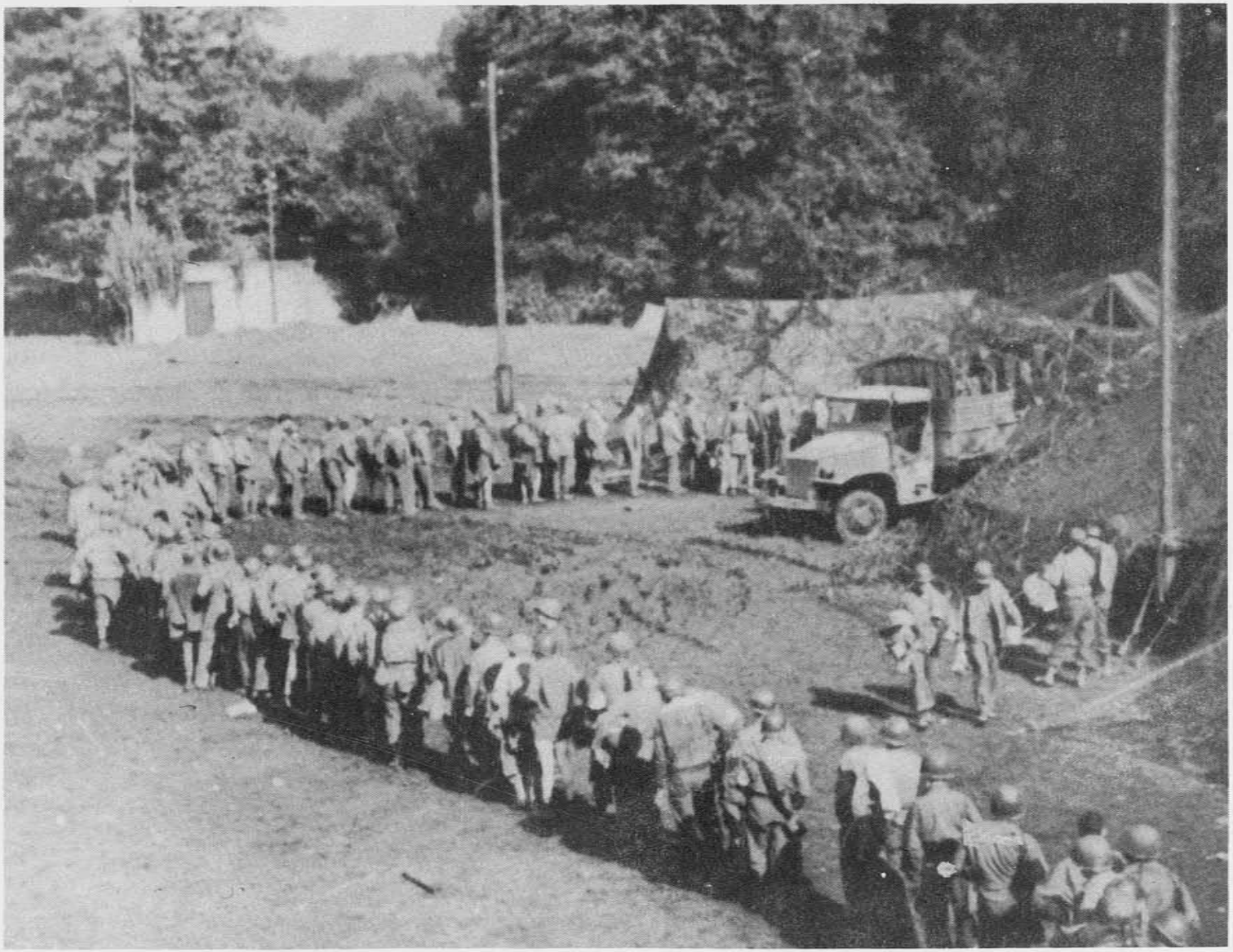

FIGURE 87.—Troops of 9th Division Line Up for Shower.

FIGURE 88.—A Welcome Signpost on the Continent.

were heavy and cumbersome and, because they required water, had to be set up near ponds or streams. Unlike steam, methyl bromide does not shrink clothing but leaves a size 15 shirt still a size 15 shirt. It works faster than steam and can disinfest men and clothing in about half an hour.[13] A colorless, volatile liquid, methyl bromide came in 1-pound cans for use in the field, in 150-pound cylinders and 400-pound bilge barrels for use at permanent installations, and in 20-cubic-centimeter ampules for use in delousing bags when chambers could not be set up.[14]

In the United Kingdom

The Chief Surgeon requisitioned methyl-bromide chambers from the United States on 5 October 1942. He was told that they were quartermaster items but not yet available. If the Chief Quartermaster agreed, methyl-bromide ampules and delousing bags would be sent instead. The Chief Quartermaster requisitioned both items on 11 November 1942. Early in January 1943 the Operations Division suggested that the Procurement Division attempt to obtain 8 chambers from the British. The Chief of the Procurement Division reported a month later that he had asked for 40 chambers. The British could not meet the demand immediately because plywood and engines were not available. They could, however, deliver nonstandard chambers. Thinking the acceptance of substitutes unwise, the Service Installations Division recommended that a requisition for 48 chambers and 216,000 pounds of methyl bromide be sent to the United States. This represented the total demand for 1943. The Service Installations Division decided 3 days later to ask the United States for 154 more chambers to meet requirements for 1944. The Supply Division refused to send the requisition without assurance that the United States could fill the 1943 requisition. Meanwhile, OCQM should order 48 chambers from the British even though immediate delivery was not possible. When the Supply Division learned on 25 March that the New York port could not meet the 1943 requirements, it suggested that 154 chambers for 1944 also be procured in the United Kingdom. The Chief of the Procurement Division reported on 30 March that the British had agreed to deliver 48 chambers by November 1943. The requirement for 1944 had not yet been approved.[15] Apparently, it was never approved, because on 28 July 1943 the Chief Quartermaster sent to the United States a PROCO Project (see vol. I, ch. 4) for 132 fumigation chambers.[16]

Planning for the Continent

At this time, too, the first fumigation-and-bath plans for operations on the Continent began to take shape. The Office of the Chief Quartermaster, working in close harmony with the Office of the Chief Surgeon, estimated that one can of louse powder would be issued to each man leaving for the Continent between D-day and D-plus-30-day. Thereafter, louse powder would be issued on the basis of 800 cans for each 1,000 men.

Fumigation chambers would begin operation in France on D-plus-30-day. Not more than 50 percent of the troops ashore would need to be deloused at one time. Half of these troops would have their clothes deloused in methyl-bromide chambers and half in bags. It was estimated that approximately 12 chambers and 300 bags would be required by D-plus-30-day. For every 1,000 men ashore, 550 methyl-bromide ampules and 15 pounds of methyl bromide in cans would be issued to the fumigation-and-bath companies monthly. For 25 percent of the force ashore, delousing bags would be issued on the basis of 1 for every 360 men, and fumigation chambers on the basis of 1 for every 10,000 men.[17]

The Office of the Chief Quartermaster prepared in the early months of 1944 a series of plans for a Continental operation. These plans outlined what could be done by the Quartermaster Service during the mounting and launching of an invasion. They later became the basis for the quartermaster OVERLORD and NEPTUNE plans.[18] The first fumigation-and-bath plan, published in January 1944, provided for the use on the Continent of 3 sterilization battalions and 23 fumigation-and-bath companies. The sterilization battalions would be assigned to the Communications Zone and would operate at ports and along lines of communication. The fumigation companies would be assigned as follows: 4 companies to salvage-repair battalions operating with combat forces, 3 companies to salvage-repair battalions operating in the communications zone, 8 companies to combat forces, and 8 companies to the Communications Zone to operate at ports and along lines of communication.

The plan also called for the use of 68 fumigation chambers. Of these, 48 would be assigned to the sterilization battalions on the basis of 16 per battalion, 6 would be assigned to static laundries, and 14 would be kept in reserve. Methyl-bromide delousing bags would be issued to organizations in infested areas on the basis of 1 bag for 40 men. All organizations would be issued insecticide powder on the basis of 20 cans a month for 1,000 men. The powder would

also be given to fumigation-and-bath companies for spraying troops after their showers.[19]

The plan was radically changed in February 1944. Then, the Plans and Training Division stated that the 3 sterilization battalions would be replaced by 12 sterilization companies, which would be used at ports and along lines of communication. Of the 23 fumigation-and-bath companies, 7 would be operated in conjunction with salvage-repair activities. The remaining 16 would meet sterilization requirements in the communications zone and army service areas, but as many of these as might be needed would be temporarily attached to field forces. No change was made in the number and assignment of fumigation chambers or in the basis of issue for delousing bags. Insecticide powder would be issued on the basis of 250 cans a month for 1,000 men.

The plan stated that the 12 sterilization companies but only 4 of the fumigation-and-bath companies had reached the United Kingdom. Another 6 fumigation-and-bath companies were expected by 30 April 1944, and all 23 would be operating by 1 February 1945. Of the 68 fumigation chambers, 16 were on hand and 50 were due by 30 April 1944. The plan contained no information concerning the other 2 chambers. The 57,444 delousing bags that were available would meet requirements. Of the required 1,776,800 cans of insecticide powder, 867,600 were on hand and 909,200 were expected by 30 April 1944.[20]

Power Dusting

Less than a month after the invasion of the Continent, the War Department wrote the European Theater that a method had been developed for delousing soldiers by dusting them with DDT powder. The apparatus used in this method consisted of a portable gasoline engine, an air compressor, 10 lengths of hose, and 10 power dusters. The men could be treated with their clothes on and at the rate of 600 an hour. The War Department asked how many units the European Theater wanted for treating troops, prisoners of war, and civilians. It wanted to know also whether or not fumigation-and-bath companies should be reorganized. Specifically, should the bath unit be retained as part of the company, made into a separate company, or abolished?[21] The Chief Surgeon replied that fumigation companies in the Theater were already trained in the power-dusting method. He believed that 46 units, with a 1-year supply of spare parts, should be shipped at once.[22] Major General Littlejohn wrote that in each fumigation-and-bath unit 2 power-dusting units should be substituted for 2 methyl-bromide chambers. The bath unit should definitely be retained at the front as part of the fumigation company, for here bathing was essential. He, too, asked that 46 power dusters be sent at once.[23]

On the Continent

The status of fumigation-and-bath activities on the Continent immediately after the Saint Lo break-through was presented on 2 August by a representative of the Personnel Division. There was little, if any, evidence of infestation among the troops. Because methyl-bromide chambers had not yet been used, they were being damaged and, therefore, should be stored in army or ADSEC depots until needed. The companies were fumigating clothing in delousing bags and bathing about 280 men an hour. The rate compared favorably with the 300-man-an-hour rate set by the War Department. If the flow of troops had been constant, greater speed would have been possible. Because men arrived in bunches, units had operated 16 or 18 hours a day. Men were saying that the tent used for bathing was too small to house the bath unit and that a squad tent would be better. The capacity of the water pump was too small. The shower heads were not designed properly and should be replaced by jet-type nozzles that would spray water. The Tables of Organization should be changed to provide for 4 officers per company.[24]

The First Army reported that 2 fumigation-and-bath companies began operating on 8 July and that a third had been borrowed from ADSEC. By 1 August 75,000 men had been bathed.[25] A sterilization company began operating in Cherbourg on 24 July. It was set up in a former German sterilization plant on the Avenue Francois Millet. Captured enemy material brought over from the salvage depot nearby was about all that had been deloused. The company's main job was to give showers. On its biggest day, 25 July, it bathed 3,077 soldiers. When the Cherbourg water supply ran short in August, the company was all but shut down. On 8 August, for instance, it gave only 210 showers. When water again became plentiful in September, the company began to bathe and sterilize civilians. It took over the Cherbourg public baths, opposite the Notre Dame Cathedral, and bathed about 1,000 civilians every week end.[26] ADSEC opened 2 other showers—1 in Bouteville and 1 in Barneville-sur-Mer.[27]

Additional Equipment

Fumigation-and-bath companies had been operating on the Continent for about a month when Major General Littlejohn wrote The

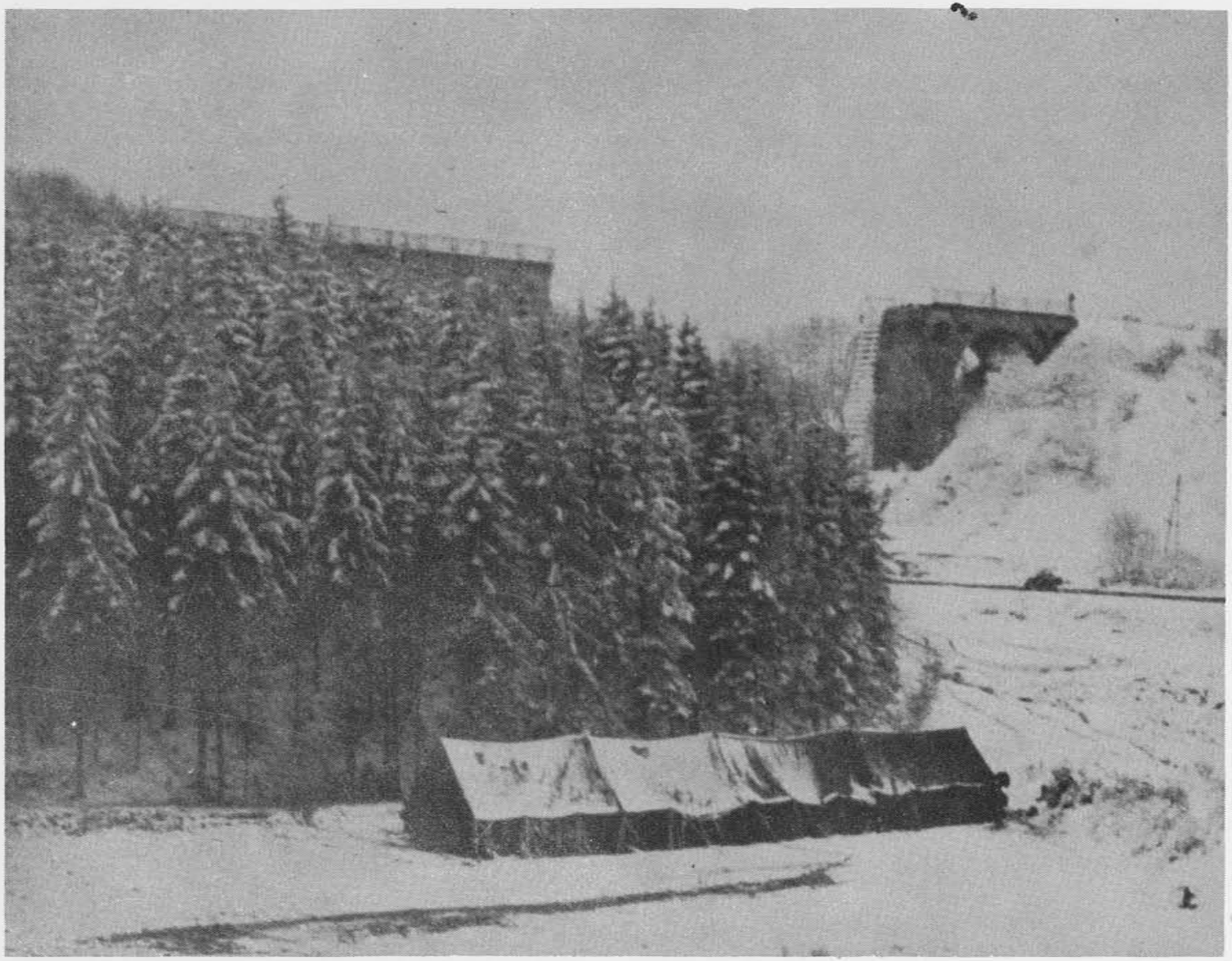

FIGURE 89.—First Army Shower Unit in Belgium.

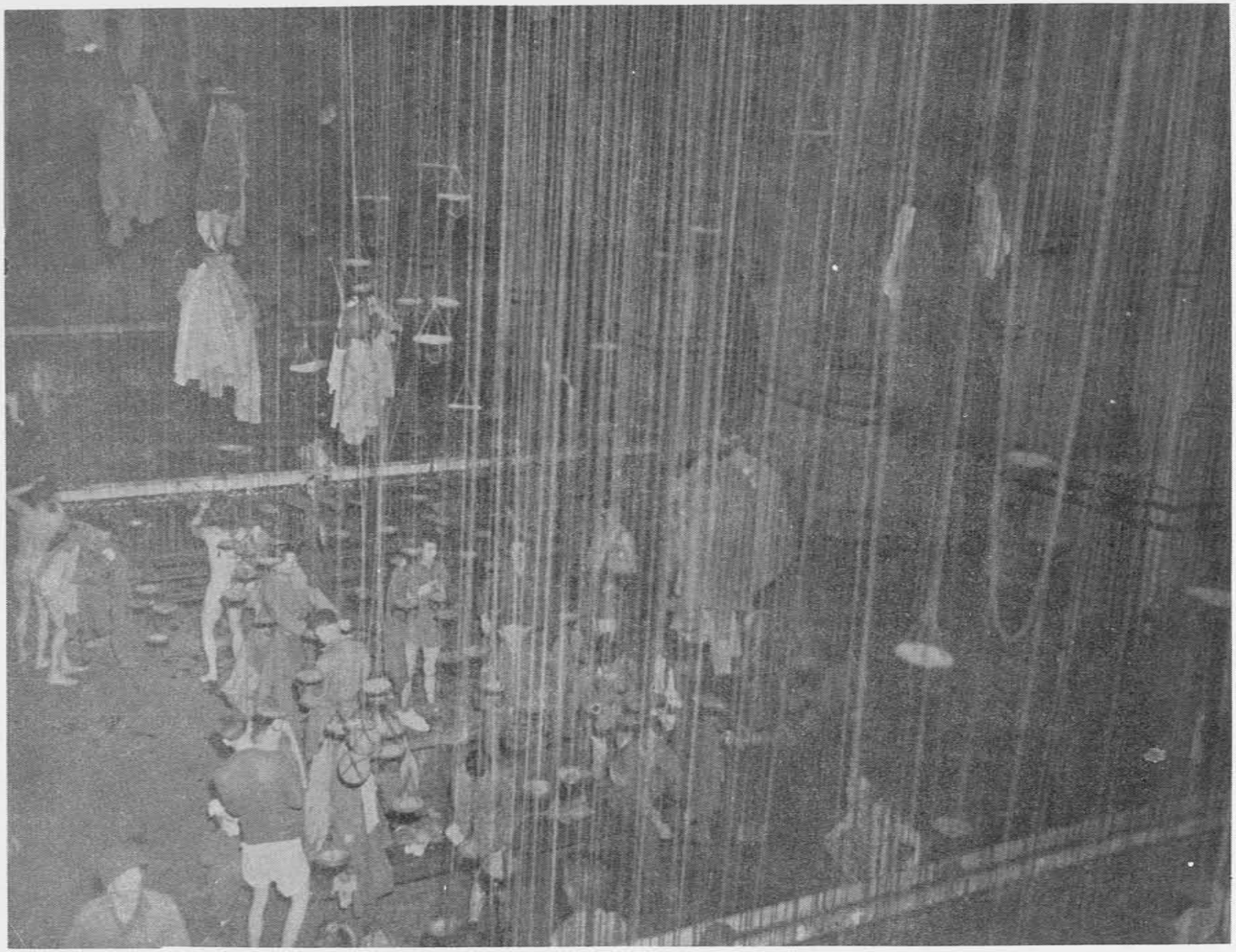

FIGURE 90.—Dressing Room in Coal Mine, Lintford, Germany.

FIGURE 91.—Next to Godliness.

Quartermaster General that additional pumps were needed. Practically every unit reported difficulty in drawing water from streams. Another pump and 50 feet of 1½-inch hose should be added to the equipment of each company. These items were available for companies already in Europe but should be issued to all units scheduled to leave the United States after 31 August.[28] The Quartermaster General wrote on 19 August that the equipment requested, as well as 98 additional pumps, had been shipped.[29]

Meanwhile, the Third Army had been asking for more bath trailers. Colonel Everett Busch, Third Army Quartermaster, though wanting four bath trailers assigned to each fumigation-and-bath company, expressed his willingness, if they were not available, to accept two engineer-type portable showers instead.[30]

The Installations Division replied that delousing was the primary mission of fumigation-and-bath companies and that bathing was carried on only in forward areas where other facilities did not exist, such as civilian establishments, fixed shower or bath units constructed by the engineers, or engineer mobile shower units. Though standing operating procedures and engineer directives indicated that these facilities would be used extensively, the Chief Engineer could not promise that any mobile units would be available before the end of 1944. Of the 600 that he had requisitioned from the United States, the 32 that he had received had been given to air force units. Evidently, if soldiers were going to be bathed at all, quartermaster companies were going to do it. The Quartermaster Service would have 13 extra bath units by 1 August 1944. Of these, 2 had already been promised to SHAEF, but 11 were unassigned. A study was being made in the United Kingdom to determine whether or not the shower capacity of the bath unit could be increased by the addition of more pipes and shower heads. If the results of the study were favorable, the bath units of the Third Army would have to be given merely extra pipes and shower heads. If not, the 11 extra units could be assigned to the Third Army.[31] The study, which was concluded on 11 July, proved that the capacity of the bath unit could be increased by the addition of 12 shower heads. The Procurement Division, having already entered into negotiations with the British, agreed to have the first items delivered to the Third Army.[32]

Delousing Teams

Colonel John B. Franks, Quartermaster of ADSEC, organized 5-man delousing teams on 24 July. Their mission was to prevent the spread of typhus among civilians until representatives of the Typhus Commission should arrive. He had formed 10 of these teams with personnel of quartermaster sterilization companies.[33] Each team was organized as follows:

Personnel	Title	Duties
1 technical sergeant	Detachment foreman	Dusting
1 sergeant	Assistant detachment foreman	Dusting
1 private	Chauffeur	
2 privates		Dusting
	Equipment	
	1 2½-ton cargo truck	
	1 1-ton, 2-wheel trailer	
	7 hand-operated dust guns	
	3,500 cans of dusting powder or enough powder to delouse 10,000 persons[34]	

In the First Army

The First Army made little use of its fumigation chambers during the Continental liberation. It kept one or two at its main salvage depots to delouse captured material and salvage, but that was all. Only a negligible number of troops had to be deloused. Its bath units, however, were more active. During the period immediately following the Saint Lo break-through, 1 August to 12 September 1944, 115,942 men were bathed; and during the next 4 months 310,048. By 15 December, the day before the German counterattack, 465,990 men had been bathed.[35] During the period of the Belgian Bulge and after, when the First Army advanced to the Roer River, 334,093 baths were given. This sharp rise led to a minor clothing problem. To make sure that each man got a clean uniform after his bath, the First Army Quartermaster increased the stocks of clothing held by each bath unit to 5,500 shirts, trousers, sets of underwear, and pairs of socks. By 22 February 1945 bath units of the First Army had bathed 800,083 men.[36]

In the Third Army

The story in the Third United States Army was basically the same. Because there was no evidence of lice among the troops at the front, fumigation units were used only in conjunction with salvage operations. The Third Army, in fact, fumigated all salvaged clothing until December 1944. Then the practice was stopped by order of OCQM.[37] All salvaged clothing scheduled for reissue, the Deputy Chief Quartermaster said, need not be fumigated. Cleaning or laundering was sufficient if clothing had not been in contact with infested articles. He urged,

however, that soldiers handling salvaged clothing be dusted biweekly, or as often as they changed clothing, to prevent any outbreak of disease.[38]

In Ninth Army

A Ninth Army fumigation-and-bath company —the 872d—was noted throughout the European Theater for its improvisations. One of its platoons arrived at Lintfort, Germany, while sniping was still going on and found the shower rooms at one of Germany's largest coal mines undamaged. It set aside for enlisted men one of the larger rooms, containing 200 shower heads, and for officers a smaller room, containing 25 shower heads. Even though the mine was put back into operation for the United States forces, the showers were opened every day from 8 o'clock in the morning until 5 o'clock in the afternoon. German laborers were used to fire the boilers, keep the showers in repair, and clean the shower and dressing rooms.[39]

This company encountered a problem common to practically all fumigation-and-bath companies. "When the men come out of action and get a hot bath here," Captain Theodore Birdsong said in March 1945, "we furnish them clean clothing. Right now we have about 2,300 sets of clean uniforms on hand and really need about 4,000 before we can issue a uniform to each man." The nearest laundry was 45 miles away. Although it gave the fumigation company a 24- to 48-hour service, the distance was a definite drawback. It was important that fumigation-and-bath and laundry companies be as near to each other as possible.[40]

Special Problems

The provost marshal of the Forward Echelon, Communications Zone, (FECZ), wanted two fumigation-and-bath companies assigned to him by D-plus-50-day to disinfest prisoners of war.[41] Colonel John B. Franks, Quartermaster of FECZ, replied that no companies had been scheduled for that purpose. The Chief Quartermaster had agreed earlier to make one company available to the provost marshal in the United Kingdom on a 15-day notice but had never promised two.[42]

Shortly after the Continental operation began, the Quartermaster Service was again faced with the problem. The Chief Quartermaster had been prepared to provide methyl bromide, insecticide, and delousing equipment to the provost marshal, but he had not intended to do the job of fumigating pirsoners of war. Preinvasion plans, however, went amiss in that there was not enough transportation to evacuate the large number of prisoners to the United Kingdom. Consequently, fumigation-and-bath companies had to delouse and bathe more than 65,000 prisoners taken in Normandy.

The quartermaster section of ADSEC continued to dust and bathe prisoners of war during and after the Saint Lo break-through. More than 75,000 men were processed at Le Mans and Alencon. When ADSEC headquarters moved to Reims, the quartermaster section dusted and bathed prisoners of war and fumigated their clothing at Suippes and Compiegne.[43] When ADSEC headquarters moved to Namur, Belgium, the quartermaster section stopped delousing prisoners of war. Then, this responsibility was taken over by the medical section.[44]

Estimate of Program

United States troops did not encounter typhus fever among civilians in Germany until March 1945. Then, because of the precautions taken by the Quartermaster, Medical, and Engineer Services, only a few cases were reported among United States soldiers.[45] The record speaks for itself. Veterans of two wars, remembering the lice-infested trenches of 1917-1918, bear eloquent testimony to the antilouse campaign of World War II.

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15 Memorandum, Chief, Supply Division, to DCQM, 30 March 1943.

[16] QM Project No. 203-A, OCQM to AG, WD, 28 July 1943.

[17] Memorandum, DCQM to Chief, Supply Division, 17 July 1943.

[18] *First United States Army, Report of Operations, 20 October 1943—1 August 1944*, (undated), Annex 14, pp. 125-26.

[19] Memorandum, Chief, Installations Branch, to Chief, Plans and Training Division, 7 January 1944.

[20] Memorandum, Installations Branch, to Chief, Plans and Training Division, 22 February 1944.

[21] Cablegram WARX-62566, AGWAR to ETOUSA, 5 July 1944.

[22] Cablegram EX-41256, ETOUSA to AGWAR, 3 August 1944.

[23] Cablegram EX-41609, ETOUSA to AGWAR, 5 August 1944.

[24] Memorandum, Personnel Division to Plans and Training Division, 2 August 1944.

[25] *First United States Army, Report of Operations, 20 October 1943—1 August 1944*, (undated), Annex 14, p. 230.

[26] Information supplied by the Services of Supply Port Historical Team, Historical Section, ETOUSA.

[27] *History of the Quartermaster Section, Advance Section, Communications Zone, 28 September 1943—25 June 1945*, ADSEC, (undated), p. 47.

[28] Letter, CQM to QMG, 10 August 1944.

[29] Letter, QMG to CQM, 19 August 1944.

[30] Letter, QM, Third United States Army, to OCQM, 2 July 1944.

[31] Memorandum, Chief, Installations Division, to Chief, Plans and Training Division, 10 July 1944.

[32] Memorandum, Chief, Installations Division, to Chief, Plans and Training Division, 11 July 1944.

[33] Letter, QM, ADSEC, to CQM, 24 July 1944.

[34] Memorandum, DCQM to CO, 4231st Sterilization Company, 10 September 1944.

[35] *First United States Army, Report of Operations*, 1 August 1944—22 February 1945, (undated), Annex 10, p. 97.

[36] *Ibid.*, pp. 72, 117.

[37] *After Action Report, Third US Army, 1 August 1944—9 May 1945*, vol. II, part 21, 1945, p. 16.

[38] Memorandum, DCQM to QM, Twelfth United States Army Group, 20 November 1944.

[39] Press Release, PRO, OCQM, March 1945.

[40] *Ibid.*

[41] Memorandum, QM, FECZ, to G-4, FECZ, 24 April 1944.

[42] Memorandum, QM, FECZ, to G-4, FECZ, 28 April 1944.

[43] *History of the Quartermaster Section, Advance Section, Communications Zone, 28 December 1943—25 June 1945*, ADSEC, (undated), p. 47.

[44] *Ibid.*, p. 48.

[45] Monthly Progress Report, section 7, ASF, 30 July 1945.

CHAPTER 8

LAUNDRY AND DRY CLEANING

In the combat zone a man thinks of little besides taking the enemy's life and saving his own. Regulations that concern neatness in dress and the wearing of the uniform are cast to the four winds when land mines are showering mud, bullets are whizzing by, and bombs are exploding. But when the tumult and the shouting dies, a man wants fresh clothes—and quickly! All the training in the world can never take the place of morale. The soldier who is dirty and slovenly in the rest area or in the city is invariably a chap whose morale is so low that he is of little use on the battlefield. The companies that provided laundry and dry-cleaning services in World War II helped to keep men physically and mentally fit. Their work was far from glamorous, but it ranked high in importance.

IN THE UNITED KINGDOM

When the European Theater of Operations opened its office on 8 June 1942, the United States Army Forces in the British Isles (USAFBI) had already encountered problems that bore upon the welfare of troops stationed in a foreign country. Keeping soldiers' clothing clean was one that had not been satisfactorily solved.

The troops who arrived on 26 January 1942 had brought with them no laundry or dry-cleaning equipment.[1] Lieutenant Colonel William H. Middleswart, however, Quartermaster of USAFBI, had arranged with British war agencies for quartering and supplying American troops.[2] The quality of Irish hospitality was somewhat strained by the vast amount of clothing that had to be washed in order that American soldiers might make a creditable appearance on the streets of Belfast. Civilian laundries had had their labor troubles even before guests arrived from across the sea. Authorities in Northern Ireland partly solved the problem by designating some laundries to serve civilians exclusively and others to serve United States troops exclusively.[3]

Though the second contingent of United States troops, which reached Northern Ireland on 2 March 1942, were better off than their forerunners, there were still tangles that required unraveling. The procedure had involved agreements between unit commanders and civilian laundries, with the United States Government assuming no financial obligations.[4] Before the Office of the Chief Quartermaster was set up, therefore, precedent had been established for laundry and dry cleaning to be done by British civilian agencies under the general supervision of the British War Office.

Early Negotiations

Brigadier General Littlejohn reached England on 4 June 1942 to assume his duties as Chief Quartermaster of USAFBI, which 4 days later became the European Theater of Operations. By 1 July he was able to report that he had ascertained the several official agencies of the British Government through which negotiations should be made and that he had taken preliminary action to obtain needed supplies and services. While final decisions on many questions necessarily would be delayed, he reported that the British in all likelihood could furnish a considerable amount of laundry service and laundry equipment for mobile units.[5]

Arrangements were sufficiently definite by 20 August for OCQM to publish a field memorandum covering procedure to be followed until a Theater circular could be prepared. This memorandum was superseded in a few days by another that clarified several details. Until quartermaster laundries could be established, all laundry and dry-cleaning services for enlisted men, organizations, and hospitals would be obtained through the local post, camp, or station quartermaster, who would furnish the names and addresses of laundry and dry-cleaning establishments designated to serve the United States forces.[6]

Meanwhile, Services of Supply headquarters had sent Theater headquarters a draft of a proposed circular.[7] The Office of the Chief Quartermaster was then operating two offices: one in Cheltenham, headed by Brigadier General Littlejohn, Chief Quartermaster, and Colonel Turner R. Sharp, Deputy Chief Quartermaster, and one in London, headed by Colonel William H. Middleswart, Deputy Chief Quartermaster (see vol. I, ch. 2). Theater headquarters sent the draft of the circular to the London office for comment. Colonel Middleswart returned it on 14 August with many suggestions for revision.[8] The circular was rewritten in Theater headquarters and returned to Colonel Middleswart,[9] who gave it a second review and sent it back.[10] It then passed from G-4 to the Chief of Staff of the Theater and on to the Adjutant General for signature and distribution.[11] The first indorsement to Major General Lee's

letter, which was written by the Adjutant General by command of Lieutenant General Eisenhower on 29 August, incorporated Colonel Middleswart's suggestions for revision of the circular.[12] Upon receipt of this communication in OCQM Cheltenham headquarters, Colonel Sharp wrote as follows to Brigadier General Littlejohn:

> This is an example of a case where Headquarters, E.T.O., has referred a proposed Circular, submitted by the Commanding General, S.O.S., for publication, to your subordinate in London for comment. In my opinion this subordinate has no authority to act on paper submitted by this Office for publication.
>
> The Deputy Quartermaster, E.T.O., London, should be instructed that any request received for comment on publications submitted by the Commanding General, S.O.S., should be referred back to this Office so that comment can be made from this Office. Please note the comments of Colonel Middleswart on this subject.[13]

The correspondence that followed dealt with a number of controversial subjects, which had to be settled before negotiations between the British and Americans could be consummated. Chief among these were the size of the bundle and the method of payment.

Size of the Bundle

A larger bundle of soiled clothes than the British soldier sent to the laundry each week had been allowed the United States soldier at home. In fact, the British rationing program for military and civilian personnel had been established long before United States troops landed in the United Kingdom. It was natural that England should not want guests to be on a more generous rationing basis than the one prescribed for its own people. Labor shortage had caused the British soldier's laundry bundle to be reduced in size. Hardship though it might be, the Chief of the Procurement Division was of the opinion that the size of the United States soldier's bundle should also be reduced. The British had already indicated that soap could be supplied for both laundry and personal use. This, too, the British War Office thought should be rationed to United States troops and British troops on the same basis, and the Chief of the Procurement Division expressed himself as in agreement.[14] Accordingly, when arrangements were made by the War Office for civilian installations in the United Kingdom to do laundry work and dry cleaning for American soldiers, instructions were given that the basis would be identical for host and guest.[15]

By mutual consent of the Ministry of Supply and OCQM, the bundle for an enlisted man would consist of the following pieces:

1 pair drawers, wool or cotton
3 handkerchiefs (to count as 1 article and to be pressed)
1 necktie (to be pressed)
2 pairs socks (to count as two articles)
1 shirt, wool or flannel, (to be pressed)
1 towel, bath
1 towel, face, (to be pressed)
1 undershirt, wool or cotton

Any nine of these articles could be sent each week—except shirts, which would be limited to two in any one bundle.

The bundle for nurses was also limited. On the reasonable assumption that nurses would prefer to wash their stockings and all underwear except slips, the weekly bundle might contain only the following items:

5 belts
1 blouse, cotton
1 cap
1 slip
5 uniforms

All items generally used by hospitals were listed as eligible for laundering. The quantities were to be determined by the surgeon in charge of the hospital but should be limited to actual needs. Similarly, a unit commander would determine how many of the following articles might be included in the weekly bundle of organizational clothing and equipment:

Bags, barrack
Blankets, woolen
Covers, mattress, or substitute
Suits, herringbone-twill, (to be pressed)
Suits, parachute jumper, (to be pressed)

Dry-cleaning allowances were characterized somewhat by British wartime austerity. The enlisted man could send to the cleaner one garrison cap and one uniform each month. The only organizational articles of clothing that could be dry-cleaned were woolen mackinaw coats, woolen field jackets, and woolen overcoats.[16]

A few changes were made later in the articles that might be in the enlisted man's bundle. For instance, a barrack bag and one herringbone-twill suit—a two-piece suit to be counted as a single article—were added to the list. The

bundle, however, continued to be restricted to nine pieces.[17]

The First Payment Plan

When Major General John C. H. Lee, Commanding General, SOS, ETOUSA, informed the War Department on 6 July 1942 that contracts should be made with the British for laundry and dry-cleaning services, he proposed that payment be made on a reverse lend-lease, or reciprocal-aid, basis.[18]

The draft of the proposed Theater circular on laundry, dry cleaning, and shoe and clothing repair, which Major General Lee forwarded on 5 August 1942 to Lieutenant General Eisenhower, stated that payment to British enterprisers for laundry and dry-cleaning services rendered the United States forces would be on a reverse lend-lease basis.[19] Colonel Middleswart in his review of the proposed circular had pointed out the illegality of the payment plan. No provision of law, he said, authorized the personal laundry of enlisted men to be done at Government expense. The transfer of the cost to reverse lend-lease he declared equivalent to a charge against the United States Government. Moreover, the War Department had specifically ruled on 23 January 1942 that, though unit commanders might make contracts for civilian laundry service, the Government must not be obligated.[20] Theater headquarters reiterated Colonel Middleswart's comments in the revisions proposed on 29 August 1942.[21]

Brigadier General Littlejohn, writing the second indorsement to General Lee's letter, urged that no charge be made against the enlisted men for laundry and dry cleaning. Army Regulations and circulars dealing with the subject, all written before 1942, obviously referred to peacetime operations of stationary laundries. Because laundry facilities would not always be available, a great amount of paper work would be required to determine "how much and who should be charged for laundry." It was necessary to depend on the British for all laundry services. Moreover, the Deputy Director of Ordnance, British War Office, had said that he could not estimate the amount to be charged for any specific work but preferred the charge to be on a reverse lend-lease basis.

The Chief Quartermaster reluctantly made a counter recommendation, which he considered a poor solution. If enlisted men had to pay for their laundry, a flat rate of $1.50 a month might be charged. Such a plan would probably cause repercussions in the United States. Men would write home that, even though they had had no laundry work done, they had been charged for it.[22]

The controversy ended with a triumph for Brigadier General Littlejohn's plan. On 22 September 1942 General George C. Marshall cabled Major General John C. H. Lee approving arrangements that had been made with the British for laundry and dry-cleaning services and saying that payment might be under reverse lend-lease.[23] This cablegram was construed as authority to continue the practice of making no laundry charges to enlisted men.

Procedures Established

The circular establishing Theater policies was published on 23 September 1942. The procedures it prescribed differed from those of the field memorandums that had been governing laundry and dry-cleaning services since midsummer. Laundering and dry cleaning for enlisted men would be obtained through the local post, camp, or station quartermaster, who would furnish organization commanders with information as to the enterpriser designated to accomplish the work. All contracts for services would be made by the Deputy Director of Ordnance Service of the British command in which a unit was stationed. No United States officer or enlisted man would negotiate contracts, but unit commanders would deal directly with the designated laundry and dry-cleaning agencies. If an article was lost, the Deputy Director of Ordnance Service would withhold its value when making payment. The quartermaster would then issue a similar article as replacement.[24]

Though the general policies laid down on 23 September 1942 remained in effect, refinements of procedure were published on 16 August 1943. The base-section quartermaster was then charged with responsibility for seeing that adequate service was rendered to all members of field forces, air forces, and services of supply units within base sections. He would also arrange laundry service for the members of the American Red Cross. Payment for services performed under contracts continued to be on a reverse lend-lease basis. Payment for services rendered officers, however, would be on a cash basis and would be the responsibility of the officers themselves. Deliveries or collections would be made weekly by means of the most economical transportation available. Base-section quartermasters would direct that unclaimed items in the hands of contractors be shipped to the effects quartermaster at the United States general depot in Liverpool. The depot would dispose of unclaimed items of enlisted men's clothing as salvage. Charges for unclaimed items of officers' clothing would be paid on a reverse lend-lease basis. Unidentified items of officers' clothing would become the property of the United States Government, and

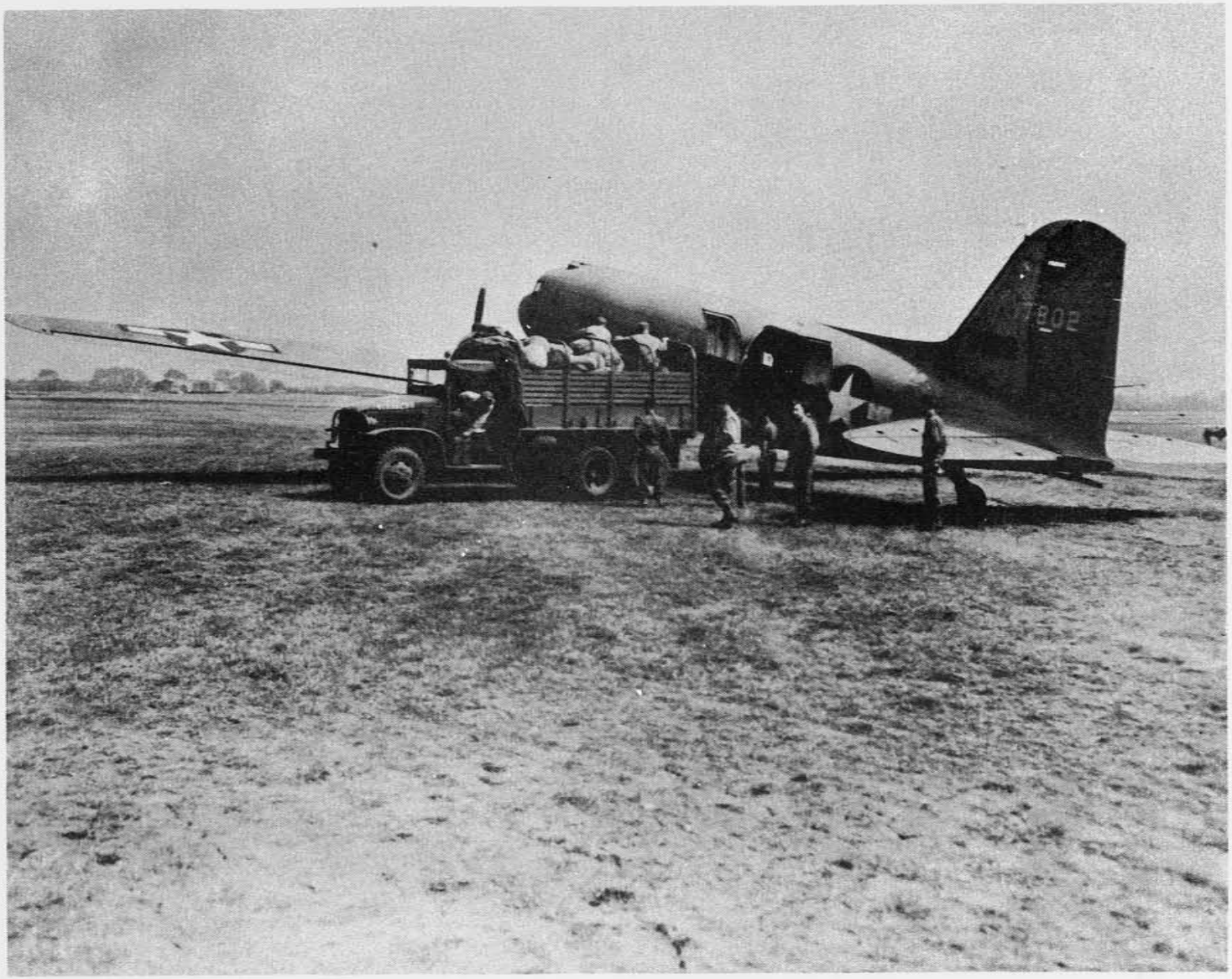

FIGURE 92.—Clothing Being Flown to Dry-cleaning Plant in Belfast.

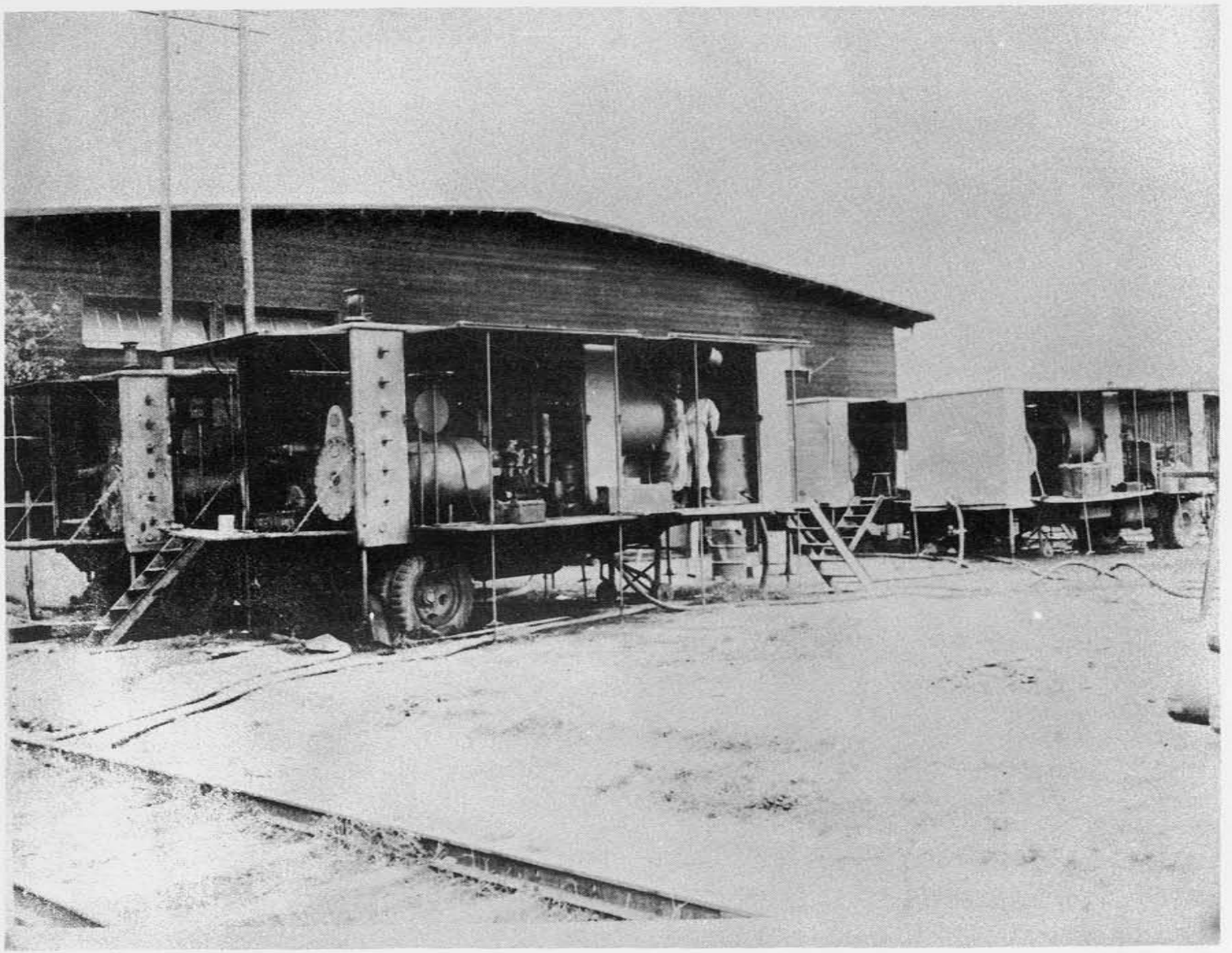

FIGURE 93.—Mobile Laundry, Made in USA.

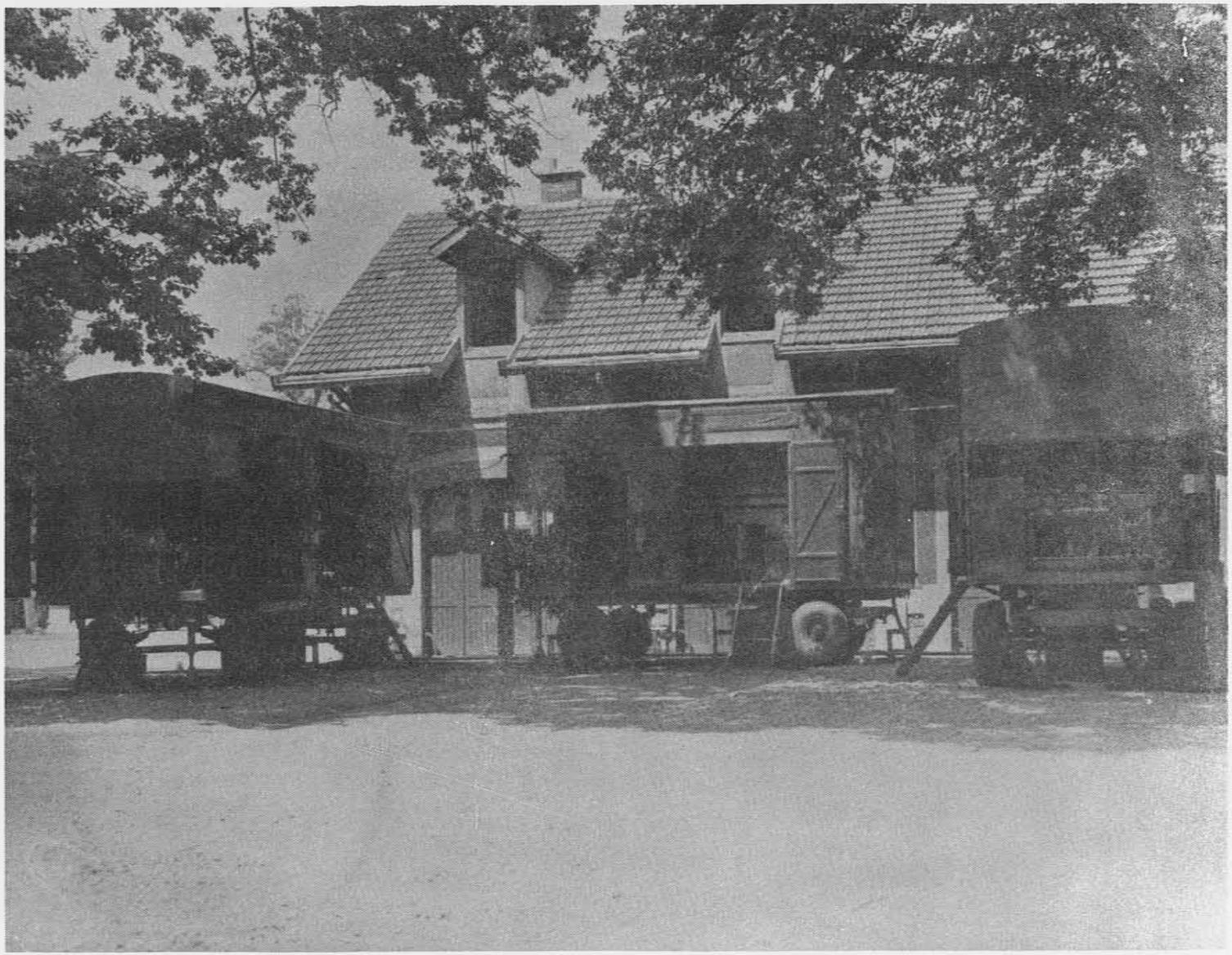

FIGURE 94.—Mobile Laundry, Made in England.

identified items of officers' clothing would be disposed of by instructions issued in each case by SOS headquarters.

For the first time a laundry list was prescribed for the enlisted woman. The weekly bundle, like that of the enlisted man, would contain only nine articles. The following items of clothing would be laundered and pressed: brassieres, handkerchiefs (three to count as one article), neckties, and waists (limited to four a week). The following items were to be laundered and folded: girdles, pajamas, panties, slips, towels, and vests.[25]

Payment Plan Reversed

Whether or not an enlisted man should pay his laundry services came up again for discussion in the summer of 1943. A War Department letter of 13 January 1943 had directed that in oversea theaters charges would be made for services furnished by post-quartermaster laundries or fixed installations, whether operated by civilians or enlisted persons. Mobile field laundries, however, would not charge persons who had no access to quartermaster laundries or fixed installations.[26] The letter had been construed as not applicable to the plan by which laundry and dry-cleaning services in the United Kingdom were charged against reverse lend-lease. The enlisted men, therefore, continued to have their laundry and dry cleaning done free.

In June 1943 the Commanding General of the Eighth Air Force caused the plan to be aired again. Because the men in his command were being served by a quartermaster laundry, he recommended that ETOUSA Circular No. 50 of 23 September 1942 be amended to provide laundry service free whether it was furnished by a civilian establishment or a quartermaster laundry.[27] Colonel Oliver E. Cound, Deputy Chief Quartermaster, thought that the recommendation could be accepted because of the small number of troops to which it would apply at that time.[28] The Chief of Services of the Theater, however, thinking that the increase of troop strength might bring about other requests similar to the one made by the Eighth Air Force, wanted the procedure reviewed. Citing the War Department letter of 13 January 1943, he declared the laundry charge against enlisted men to be entirely proper.[29] In reply, Colonel Cound argued that the War Department letter was merely an interpretation of Army Regulations and urged that the nonpayment plan be continued.[30]

On 11 November 1943 the War Department directed that enlisted persons be charged for laundry and dry-cleaning services furnished by British installations and that reimbursement "be effected by deduction on the monthly pay rolls."[31] Fortunately, the reversal of policy would not affect arrangements that had been made with the British. Though enlisted persons were to pay a monthly flat rate, charges for the services of enterprisers would continue to be against reverse lend-lease. This ruling, made by the General Purchasing Agent, was passed to the General Purchasing Board.[32]

For a time OCQM continued to protest.[33] When Major General Littlejohn, then in Washington, received word of the War Department decision, he expressed his opinion in no uncertain terms and then gave up. "Any discussions here," he wrote Colonel Franks, "involve academic nothings." Adding that further effort was a waste of time, he concluded his letter with the terse sentence, "Draw up the regulations and put them out to the field."[34] Accordingly, Circular No. 37 of 9 April 1944 provided that "all enlisted personnel receiving laundry and/or dry-cleaning services" would be charged monthly $1.00 for laundry and $ .35 for dry cleaning.[35] On 17 May the charge for laundry was changed to $ .25 for the nine-article bundle.[36]

Service to Static Troops

The Laundry Branch of the Salvage and Laundry Division had a two-fold mission during the static period—providing service to troops in the United Kingdom and laying plans for service to troops who would operate later on the the Continent. BOLERO, the name given to the build-up of men and supplies, proceeded haltingly while emphasis was being placed upon the North African campaign. It was accelerated, however, after the Casablanca Conference of January 1943. (See vol. I, ch. 1.)

Inadequate Facilities

Soon the mounting troop strength in the United Kingdom caused laundry service to become a problem. The British Ministry of Supply had given assurance that facilities would be available to provide laundry and dry-cleaning service to 600,000 troops, whether the men were in camps or hospitals.[37] The fourth edition of the BOLERO Key Plan, which was published on 12 July 1943, provided for a United States troop strength of 1,340,000 men by D-day—[38] a figure that was raised to 1,446,000 little more than a month later.[39] Actually, there were 775,362 United States troops in the United Kingdom at the end of 1943.[40]

Estimates of laundry requirements had been based on a weekly change of clothing for each

man. The Medical Service considered that less than that amount would be conducive to diseases. Yet a study of facilities in the United Kingdom led to the fear that the British had been too optimistic in estimating that laundry service could be provided 600,000 troops. The figure 350,000 seemed more nearly right.[41] United States units were operating at only five locations: in Salisbury, where they served a 100-bed hospital; in Exeter, where they served a 500-bed hospital; in Belfast, where they served a salvage depot; and in Gloucester and Wellingborough, where they served a total of 400 troops. The only dry-cleaning unit that was operated by United States personnel served the salvage depot in Belfast.[42]

Major General A. C. Duff, the British Deputy Quartermaster-General, admitted on 8 September 1943 that the civilian laundry service would not be able during the next 9 months to handle the laundry load that would be imposed by United States and British troops.[43] Plans had been made for the arrival of 12 semimobile laundry companies with a capacity to serve 576,000 troops. The time of their coming, however, was indefinite.[44]

Only the large metropolitan centers had commercial laundry and dry-cleaning establishments capable of handling additional loads of considerable size. The Central Base Section—the London area—was the most fortunately situated. Here British facilities could more than meet United States requirements.[45] The Eastern Base Section in the summer of 1943 was faced with a labor shortage, which would probably grow worse. The troop strength on 25 August 1943 was 142,209 men, and the number was expected to be 299,200 by 31 December. The capacity of assigned British laundries was 1,932,489 pounds; whereas the United States requirements were 1,092,584 pounds on 25 August, an amount that was expected to rise to 2,081,220 pounds by 31 December. Dry-cleaning service was barely adequate and would be exceedingly bad as more troops arrived.[46] The situation in the Western Base Section was so critical that as early as September 1943 it looked as though soldiers would have to do their own washing.[47]

The Southern Base Section presented the greatest problem. Here troops were being concentrated for invasion of the Continent. On 25 August 1943, 125,720 troops were stationed here, and the number was expected to be 425,842 by 31 December. The weekly capacity of the 74 assigned laundries was 1,453,894 pounds; whereas the United States requirements were 1,218,875 pounds on 25 August, an amount that was expected to rise to 3,722,312 pounds by 31 December. The situation in the dry-cleaning industry was even worse. On 25 August facilities were sufficient for each man then in the base section to have one uniform cleaned a month but were incapable of expansion to meet the increase in troop strength.[48] The first mobile laundries to reach the United Kingdom would be assigned to the Southern Base Section, but when they would arrive was anybody's guess. Meanwhile, Major E. L. Ritchie, a laundry expert, was sent to the section to give instructions concerning the installation of the units.[49]

The summer of 1943 was marked by frequent conferences between OCQM and representatives of British agencies. Several palliatives were suggested as substitutes for full solution of the problem. Further restrictions imposed upon civilians would release facilities for military use. The British laundry rationing, however, had reached a point below which there would be a complete breakdown of the industry.[50] United States soldiers might do their own washing or find washerwomen in the vicinity of their stations. This expedient was adopted in a great many cases and perhaps would have been adopted more often if washerwomen could have been found and if posts, camps, and stations had provided facilities for washing clothes.[51] The labor shortage might have been overcome by employing United States troops to man civilian laundries. Experienced troops, however, were not available in sufficient numbers. The suggestion that the size of the soldier's bundle might be decreased was rejected by both British and United States authorities.[52]

Unit Bulk Laundry

Unit bulk laundry was found to be the most practicable palliative. The BOLERO Labour Sub-committee endorsed the plan on 17 August 1943. "It is their opinion, in which I concur," wrote Sir Findlater Stewart, "that a contribution towards the solution of this problem can be made by introducing into the Army a system of unit bulk washing despite its known inconvenience; and I propose to put this into effect."[53]

Two bulk systems had been suggested—the gross and the unit. By the former, men would not get back their own clothes but garments that approximated theirs in size. By the latter, the unit's individual bundles of marked clothing would be consolidated. Upon return from the laundry, garments would be sorted in the unit supply room and returned to their rightful owners. The only objection to the plan was that time and labor would be involved in the sorting. The advantage that was stressed by the British lay in the ability to ship laundry from concentrated areas, where facilities were inadequate,

FIGURE 95.—Cleaned and Pressed and Ready for the Streets of Paris.

to metropolitan centers, where facilities were in excess of requirements.[54]

The Chief Quartermaster, first having resisted the unit bulk system,[55] directed the base sections on 5 September 1943 to give it a trial.[56] Because the system was found to work satisfactorily, OCQM directed on 6 December 1943 that it be adopted in all base sections.[57]

Men who were stationed in the United Kingdom throughout the long waiting period attested that their clothes were washed by one means or another. They were not above rubbing out a piece or two in a wash basin on those rare occasions when some British woman was not found to do an emergency job for a handful of cigarettes or a few candy bars. In many instances men got their clothes washed by "girlfriends"—a service that might be construed as the supreme expression of devotion.

PREINVASION PLANNING

The Quartermaster Service began work upon its laundry plans for the Continent in the early spring of 1943 soon after Lieutenant General Frank M. Andrews, Commanding General, ETOUSA, had said that planning for a Continental invasion must no longer be considered a staff school problem (see vol. I, ch. 2). All laundry plans continued to be based upon giving each soldier one change of clothing a week, the minimum amount set by the Medical Corps. The principal problem centered about obtaining necessary equipment.

Mobile Laundries

The problem of procuring mobile laundries plagued OCQM for more than 2 years. Arrangements with the British were always uncertain. Deliveries were postponed, canceled, and rescheduled. The Office of The Quartermaster General and the Office of the Chief Quartermaster clashed over laundry requirements for various troop strengths. The required number of mobile laundries rose steadily, whereas shipping space from the United States remained critical. British production could not keep pace with increased demands from both United States and British forces.

On 15 July 1942 the Chief of the Procurement Division placed a demand on the British for 200 mobile laundry trailers. The British War Office approved the request on 18 August and agreed to deliver all 200 trailers by April 1943. It reported on 31 October, however, that delivery could not be completed before August 1943.[58]

From the United States

Meanwhile, the Chief Quartermaster, fearful that the British might not be able to meet their contract, asked the War Department if 200 mobile laundries could be sent from the United States.[59] The New York port and the Office of The Quartermaster General at once replied that, according to present and projected troop strengths, the Chief Quartermaster did not have an immediate need for more than 48 mobile laundries.[60]

The Chief Quartermaster, explaining that he had merely made inquiry and had not placed a requisition, again asked if 200 units could be shipped by 30 September 1943.[61] Before replying, the New York port discussed the matter with the Office of The Quartermaster General. The Director of the Service Installations Division believed that there was a definite formula for calculating mobile laundry requirements. At least 10 percent of all army troops in the European Theater would use fixed laundries; 15 percent would be hospitalized and served by fixed laundries; and 37½ percent would be in combat and require no laundry service. So only the 37½ percent of the troops who would be in rest areas would need mobile laundry service. He further believed that all troops in the United Kingdom were receiving adequate service from fixed laundries. If not, additional fixed laundries should be established, because mobile laundries provided only rough-dry service.[62]

The Office of the Chief Quartermaster did not reply until May 1943. Then, using the approximate troop strength set forth in basic planning directives, it outlined the laundry plan for the European Theater. The first basic planning directive, published on 5 February 1943, preceded the fourth edition of the BOLERO Key Plan by 6 months and called for a troop strength of 1,118,000 men.[63]

The first part of the plan dealt with laundry service for the total troop strength to be in the United Kingdom before the invasion, approximately 1,110,000 men. The British, OCQM believed, could be relied upon to serve approximately 350,000 men. The remaining 760,000 men would be served by 288 mobile laundry units. The second part of the plan dealt with laundry service for troops on the Continent and in the United Kingdom. Approximately 54 percent of the troops, or 600,000 men, would be on the Continent. They would be served by 224 mobile units. The 510,000 men still in the United Kingdom would be served by both British and United States facilities. British commercial laundries would continue to serve about 350,000 men. The remaining 160,000 men would be

served by 56 United States mobile laundries. The 8 other mobile laundries would be held in the United Kingdom for salvage work and as a reserve.

The plan explicitly called for mobile units for several reasons. First, OCQM did not believe that enough fixed laundries could be made available. Second, mobile laundries could be concentrated where loads were heaviest. Third, mobile laundries could assist in salvage work. Fourth, in the combat zone only mobile laundries would be used.

Several points needed to be clarified before a final plan could be drawn. The European Theater took issue with the War Department's estimate that only 15 percent of the total troop strength would be hospitalized. If the estimate was correct, only 32 mobile laundries would be needed for hospital work on the Continent. The Medical Corps, however, had asked for no less than 88 units to provide daily laundry service for hospital patients. The Quartermaster Service did not accept the War Department's estimate that only 37½ percent of the troops would require mobile laundry service and argued that the estimate should be raised to at least 50 percent. There would be a constant flow of troops in and out of rest areas. Old units would leave as new ones arrived. Consequently, a laundry backlog would accumulate in each rest area. Some men would have to leave without their laundry if adequate service was not available.[64]

Lieutenant General Brehon B. Somervell wrote on 7 June that the OCQM laundry plan had not been favorably considered. The War Department would ship in advance the equipment for laundry companies in the approved troop forecast but would make no other equipment available.[65] Because the European Theater had not previously requisitioned extra laundries or shown any indication of doing so, it had been given an extremely low priority and would have to rely upon local procurement.[66]

From the United Kingdom

In the meantime, negotiations with the British for mobile laundries bogged down. The Director of Clothing and Stores, British War Office, informed Major General Lee early in April that mobile laundry equipment could not be supplied because of a serious situation in North Africa. Inadequate water supply prevented the British from using their large seven- or nine-trailer laundries. British observers said that nothing but one-trailer laundries could be accepted. Production of these trailers for the United States forces, therefore, would have to be suspended.[67]

Even though the Deputy Chief Quartermaster was forced to agree that the needs of the European Theater were not so imperative as those of North Africa, he was perturbed about this latest postponement. Soon personnel would be available to operate mobile laundries, but there would be no equipment. Mobile laundries had not been requisitioned from the United States, because shipping space was at a premium. United States troops were totally unfamiliar with British equipment and would need intensive training.[68]

The argument continued during the spring and summer of 1943, OCQM insisting that the 200 laundries be delivered by 1 January 1944 and the British War Office stating and restating that material was not available. Finally on 30 July members of the Procurement Division and the British War Office met in conference. The British said that they would do everything humanly possible to deliver the 200 laundries by the end of the year. The Salvage and Laundry Division, pleased but doubtful, believed that United States equipment should continue to be shipped.[69]

The Problem Solved

The Chief Quartermaster had 53 mobile laundries on hand in October 1943. Of these, 15 had been delivered by the British and 36 by the United States and 2 had been transferred from Iceland. The Chief of the Salvage Branch, reviewing the entire laundry situation, recommended on 4 October that arrangements be made to reduce the British order to 110 mobile laundries. The War Department's decision to ship equipment for laundry companies on the approved troop forecast meant that, on the basis of 16 trailers for each of the 12 scheduled companies, 192 mobile laundries would be delivered. The New York port would ship at some later date 29 additional units as replacements for combat losses. Thus, 221 trailers were due from the United States. If 200 were delivered by the British, the Office of the Chief Quartermaster would have 421 trailers on hand by 31 December 1943. The plan outlined on 7 May called for only 288 trailers. This plan should be amended to call for 331 trailers. The 43 extra trailers—29 American and 14 British—would be held as a reserve. Of the 288 trailers actually to be used, 192 would be American and 96 British.[70]

Continental Plans Completed

The final plan for laundry service on the Continent, published on 22 February 1944, pro-

vided for 35 quartermaster semimobile laundry companies, 6 static laundries, 68 quartermaster hospital laundry platoons, and 164 British mobile laundry trailers. The semimobile laundry companies would normally launder the clothing of troops and salvaged clothing for reissue. Though most hospital laundry would be done by static laundries, some semimobile laundries would work with field and evacuation hospitals. Laundry companies that were assigned this task would be set up near medical supply depots, where soiled linen could be exchanged for fresh.

The static laundries would be designed, erected, and maintained by the Engineer Service. They would be set up at ports of entry and, if circumstances permitted, along lines of communication. Each static laundry could serve 10,000 men weekly. None, however, would be in operation until D-plus-180-day.

Quartermaster hospital laundry platoons would be attached to general hospitals on the Continent for rations, quarters, and administration. They would operate the 1,000-bed static hospital laundries installed by the Engineer Service. The British mobile laundry trailers would be used in three different ways: They would be given to sterilization companies; they would be operated as independent semistatic laundries; or they would be assigned to salvage depots.

Civilian facilities and labor played important parts in the plan. Civilian laundries would be used in the communications zone as much as possible. Civilian laborers would operate the 10,000-man laundries and the British mobile laundry units.[71]

ON THE CONTINENT

A man in combat gives little thought to his appearance. Clean clothes are not important when he is squatting in a foxhole or crawling through the mud and slime of a battlefield. The moment the fighting stops, however, a soldier wants a bath, clean underwear, clean socks, and a clean shirt. The sterilization company and the fumigation-and-bath company, which took their equipment close to the front lines, operated frequently with a semimobile laundry company. In other wars soldiers got no valet service in the field. The Revolutionary soldiers who were stationed in the North from 1776 to 1781 must have done little laundry work in the icy streams of New England, Pennsylvania, and New York. From 1776 to 1917 United States fighting took place for the most part in southern areas, where men could do their washing on the rocky edges of warm streams and dry their clothes on a hickory limb. In World War I laundry was done almost entirely in static installations, which could not give quick service to combat troops.

Many a fighting man of World War II declared that the first thing a soldier thought of upon returning from the front was a bath and clean clothes. He wanted also a spotless uniform with creases in the trousers and creases in the sleeves. It was the same in all theaters. Everywhere there was some girl to impress—signorina, mademoiselle, verboten fraulein, or even a Burma girl by the old Moulmein Pagoda.

Early Operations

The 456th Quartermaster Laundry Company began operations in Normandy on D-plus-3-day, 9 June 1944. Attached to the First Army, it served hospitals only and by 1 August had done 778,309 pounds of laundry. Troop, organization, and salvage laundry was begun on 13 July by the 579th Quartermaster Laundry Company, which was followed by the 595th on 15 July, and by the 599th and 600th on 20 July. By 1 August these companies had done a total of 815,282 pounds.[72]

Though Communications Zone units, these companies operated under the First Army; and though serving corps area troops, they were not a part of a corps and were not attached to a corps. Yet for purposes of movement or location within the corps sector they were subject to the orders of the corps quartermaster. The army commander directed that laundry companies be placed in concealed positions and that, in order to avoid interruptions, they and their equipment be moved as infrequently as possible. While it was not necessary that a laundry company be located at a bath point, arrangements were to be made for clothing from each bath point to receive immediate service from the laundry campany attached to the corps. Laundry units would serve all troops in the corps sector, whether they belonged to divisional, corps, army, or air corps units. The corps quartermaster would fix priorities of service. The officer in command of the bath platoon was charged with the responsibility for delivering the stock of clean clothing at the bath point.[73]

When operations were in the planning stage, it was realized that laundry units attached to the armies, even though supplemented by civilian laundries, would not be able to supply all the service that would be required. Military capacity would probably be sufficient to handle hospital and salvage laundry. Troop laundry would be handled by excess unit capacity, by civilian plants not used for hospital and salvage laundry, and by the troops themselves. The following priorities were established by ADSEC: priority 1, hospital laundry; priority 2, salvage

laundry; and priority 3, troop laundry. This priority list went into effect in the early days of the invasion and remained unchanged throughout all ADSEC operations.

Seventeen laundry platoons, hospital type B, were assigned to the ADSEC quartermaster for attachment to hospitals on the Continent. These, beginning to arrive on 6 July 1944, were placed in the quartermaster assembly area. When ADSEC general hospitals began to reach the Continent in mid-July, one laundry platoon was assigned to each for administration, rations, quarters, and performance of laundry service. Immediately two difficulties arose. The first had to do with water supply. Laundry units were designated to be set up beside streams, where adequate water was available. Behind UTAH beach, however, high tides backed up salt water into the streams. At one location the problem was solved through the pumping of water from an abandoned rock quarry. Behind OMAHA beach swift-moving streams supplied enough water, but the streams were so shallow that the pumping apparatus would become clogged with dirt and other material. This problem was solved by deepening the stream bed and sinking boxes to form clear pools from which water could be drawn. The second difficulty had to do with supervising the laundry platoons, hospital type B. Trained officers were not to be found in sufficient numbers. This problem was never solved.

On 2 July a survey of Cherbourg led to the opening of the first static laundries on the Continent. Within a week four civilian plants had been sufficiently repaired for operations to begin. The laundry work here was done entirely by civilians. The capacity of these civilian facilities was never sufficient to meet requirements. The most up-to-date laundry in the city had been taken over by the Navy. Other facilities were suitable for rough-dry work but not for pressing.[74]

Procurement of Services

The policy of exploiting local resources was applicable to laundry services as well as to other types of procurement. When a territory was liberated, its support was sought immediately. The Battle of Normandy ended with the capture of Pontorson on 1 August 1944, which opened a wide corridor into Brittany. In a single day tanks raced 40 miles down the road to Rennes, the capital of Brittany. On 21 August, Rennes having been captured almost 3 weeks before, a reconnaissance party inspected the factories in the city. All establishments were found to need coal and laundry supplies. The best-equipped laundry could wash and iron from 4,000 to 6,000 pounds a week in addition to its normal work. Another could handle from 6,000 to 8,000 pounds of rough-dry work a week—an amount that could be increased to 15,000 pounds if supplies could be furnished. The other laundries, for the most part hand-operated, were too small for military use.[75]

By the end of August Paris had been captured and the Allied front had been stretched nearly 200 miles across northern France. On the extreme right the Third United States Army, continuing to set the pace of advance, captured Verdun and pressed on toward Metz. Northwest of Paris the First Army was only 30 miles from the Belgian border.

Shortage of Supplies

The procurement of laundry services, like all other procurement on the Continent, was hampered by run-down equipment and lack of coal and other supplies. When the imminent capture of Paris was about to open many civilian installations for army use, the shortage of soap began to cause great concern. On 20 August the Chief of the Installations Division telephoned the Deputy Chief Quartermaster for information as to shipments of high- and low-titer soap. The next day the Deputy Chief Quartermaster wrote that a total of 2,432,000 pounds of soap was either on the way to the Continent or had been stock-piled on the Continent. One ship had landed at OMAHA beach on 13 August with 100,000 pounds aboard, and another 5 days later with 235,000 pounds aboard. Still another ship had left the United Kingdom on 13 August with 190,000 pounds aboard. Information was not available, however, as to the date of its arrival.[76]

The armies, of course, used a staggering amount of soap for the daily operation of attached laundry and fumigation-and-bath companies. In late August requirements of the First and Third Armies for a 30-day period were 80,000 pounds of high-titer soap, 80,000 pounds of low-titer soap, and 60,000 pounds of laundry soda. The inventory showed that 37,000 pounds of high-titer soap, 32,000 pounds of low-titer soap, and 24,000 pounds of soda were on hand. It was learned on 23 August that 90,000 pounds of high-titer soap, 50,000 pounds of low-titer soap and 44,000 pounds of soda were at OMAHA beach waiting to be unloaded. If these supplies could be made available, they would be sufficient to fill immediate requirements.[77] The situation was critical chiefly because laundry supplies had been given a low priority in the off-loading of ships. The Deputy Chief Quartermaster expressed the hope that improvement could be accomplished within 30 to 60 days. Until

FIGURE 96.—Laundry Being Sorted in the Field.

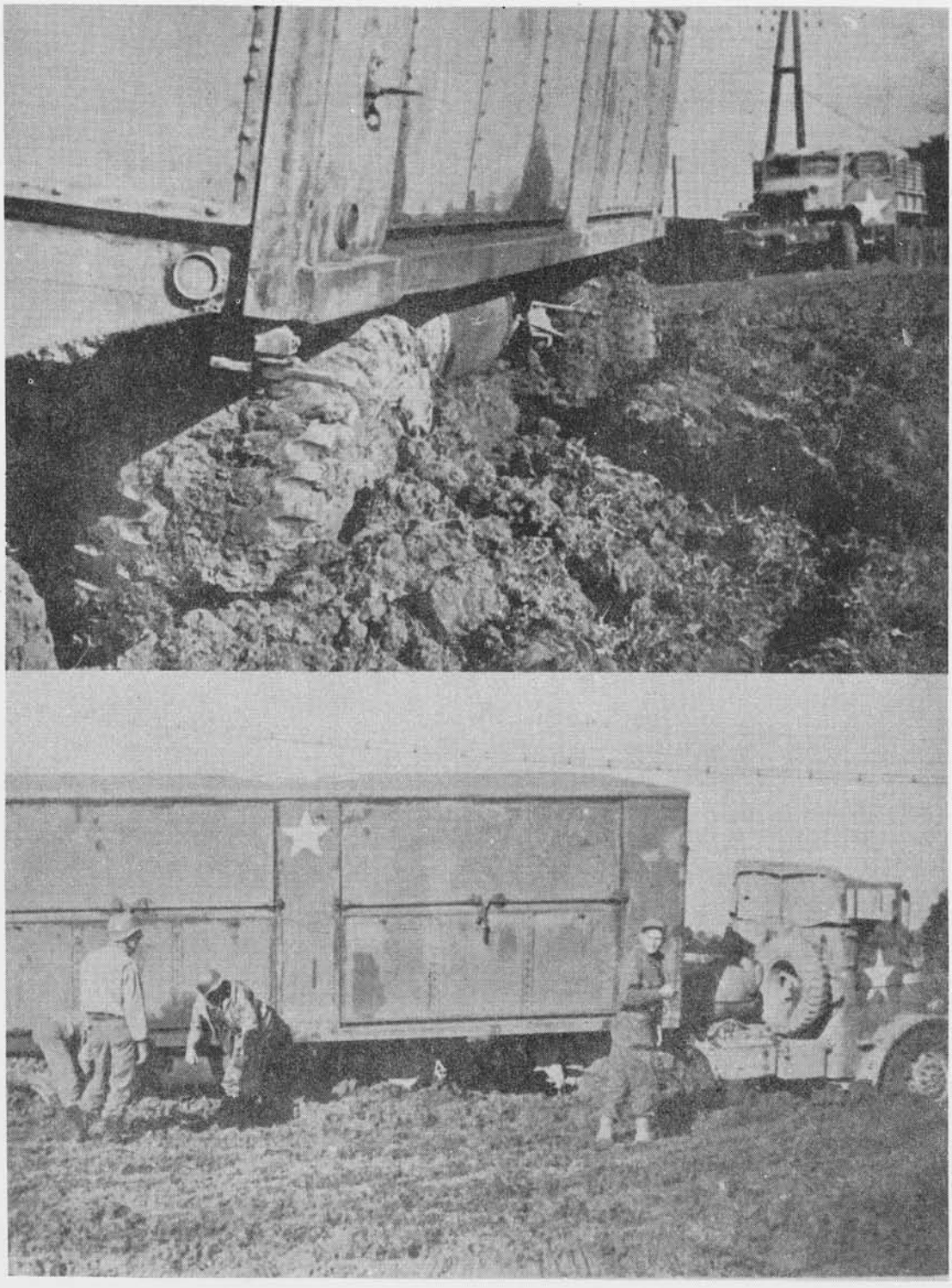

FIGURE 97.—Laundry Trailer Mired near Aachen.

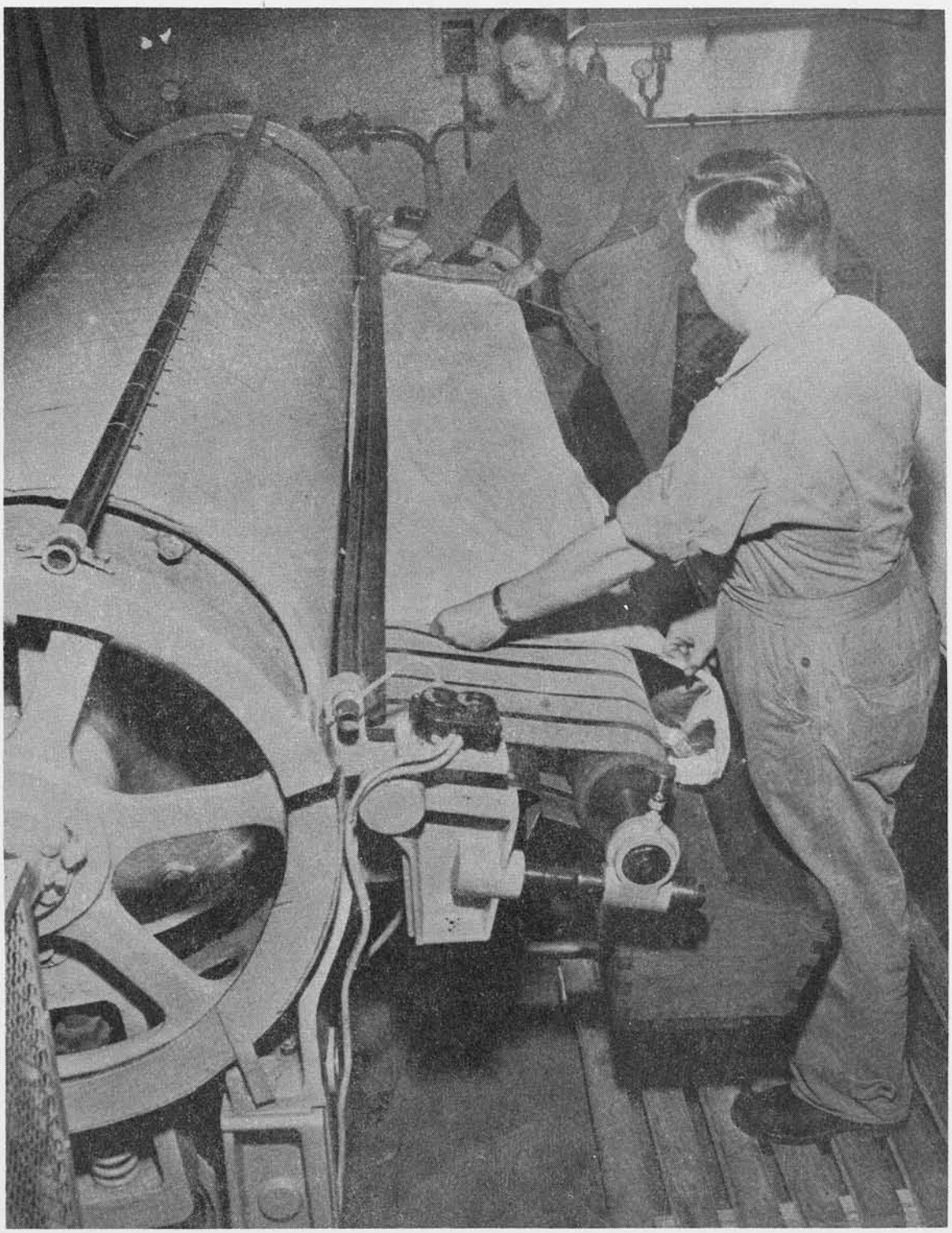

FIGURE 98.—Flat-work Ironer in Operation at a Paris General Hospital.

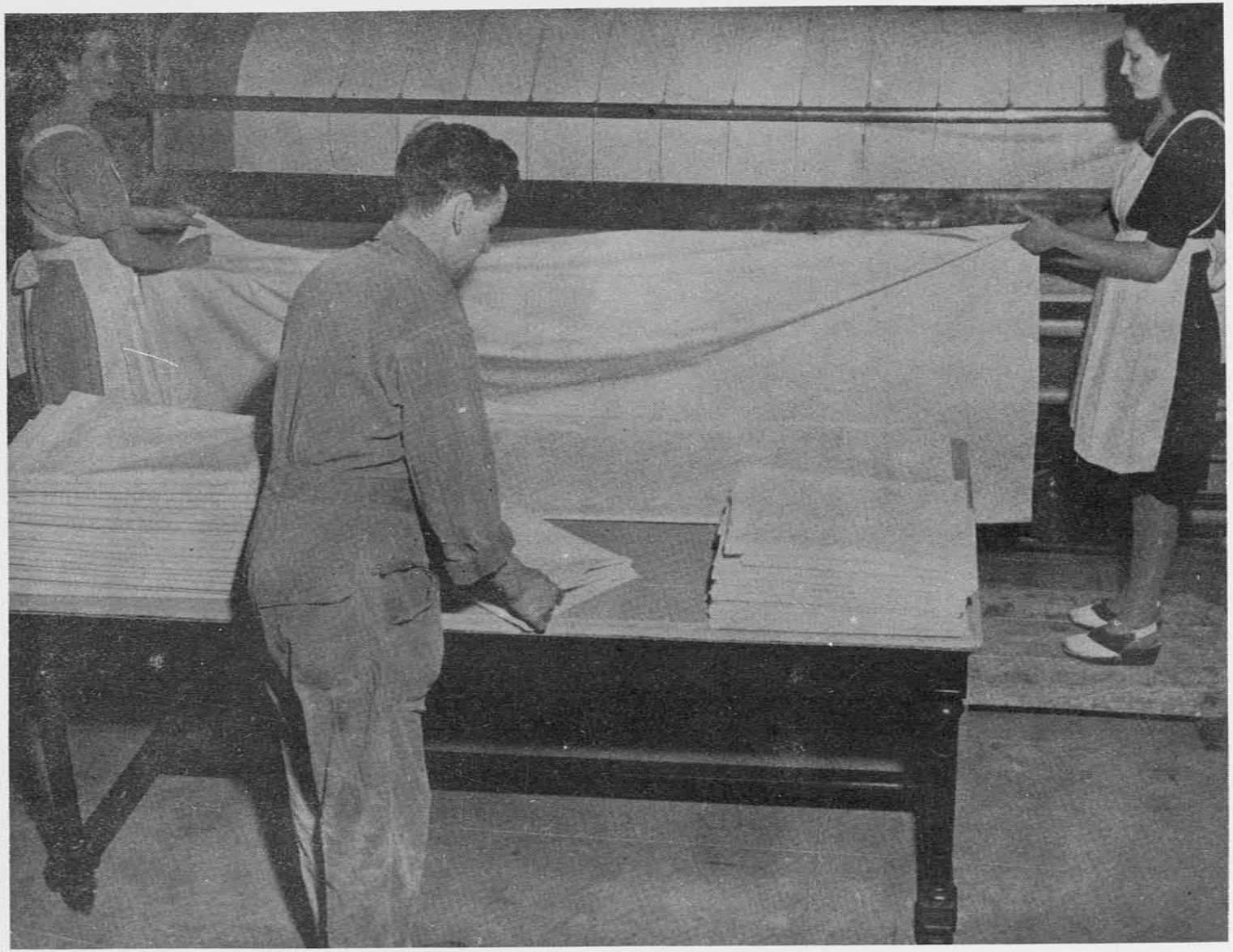

FIGURE 99.—Static Hospital Laundry Operating in Germany.

a new off-loading schedule could be put into effect, supplies would have to be rigidly controlled. They would be stocked with the 64th Quartermaster Base Depot, which was then being moved to Le Mans. The Deputy Chief Quartermaster asked, therefore, that all requisitions be placed with the 64th Depot until laundry supplies could be issued to class II depots.[78]

Accelerated Program

The procurement program was accelerated in the fall of 1944 as it became apparent that the number of quartermaster units would be far from enough to provide laundry and dry cleaning for all troops on the Continent. Manifestly, the base sections could not fulfill their responsibilities without using civilian resources. Colonel John B. Franks, Deputy Chief Quartermaster, requested, therefore, that surveys be made and that results be reported to OCQM.[79]

On 9 September a party of quartermaster officers visited the laundry and dry-cleaning establishments in St. Malo. One plant, which had been completed in 1939, had a capacity of 5,000 pounds a day. Though fire and artillery shells had somewhat damaged the building, the equipment was in excellent condition. If the city would grant authority to Madame de St. Meleuc, the owner of the laundry, to purchase 100 tons of pea coal that belonged to the owner of a bombed-out distillery, the laundry could be put into operation. A small laundry plant, which had been operated by the Germans but subsequently converted into a dairy, could be made usable again with a few alterations.[80]

Procedures Established

On 12 September French and United States representatives conferred concerning laundry requirements in the Seine Section. The French were asked to furnish facilities to take care of laundry for 50,000 enlisted men, 6 pounds a week—or 9 pieces—per man; all hospital and mess hall laundry; the laundry of hotels in which United States officers and enlisted persons were billeted; the laundry of the Red Cross and allied units; and the laundry of officers in the Theater.

Colonel Albert Barden reported at the conference that several laundries in the Paris area had submitted prices "fantastically high"—for instance, 20 francs, or 40 cents, for laundering an undershirt. Laundrymen, he said, knowing that the prices were black market, claimed to be following orders issued by the laundry association. The French representatives agreed to fix an official price. They were then instructed to make the scale the same for a general living at the George V Hotel and a lieutenant living in a second-class hotel on the outskirts of the city.

The French estimated that the following supplies would be needed monthly in the Seine Section:

For Laundries

Item	Amount
Coal	1,000 tons
Electricity	100,000 kilowatts
Soda ash	40 tons
60 percent fatty acid soap	14 tons
Chloride	10,000 liters

For Dry-cleaning Plants

Items	Amount
Coal	30 tons
Electricity	3,000 kilowatts
Benzine or some other solvent	3 tons

Colonel Barden said that so critical an item as choloride was not necessary and that the United States Army would accept unbleached laundry.

It was brought out at the meeting that five laundries had on hand sufficient supplies to last from 10 to 20 days. The United States representatives requested that these facilities be made available for the exclusive use of the United States Army. Hospital work should be begun first, to be followed by less urgent requirements. The secretary of the laundry association indicated that supplies could be found in France and that transportation would be the principal obstacle.[81]

At a second conference, which took place on 21 September, the Office of the Chief Quartermaster and the French authorities reached an understanding. Arrangements were then made for the Installations Division to furnish necessary supplies, which sections and base sections would distribute to laundries and dry cleaners. Procedures, though set up for the Seine Section, would apply elsewhere.

The United States Army had been using French laundries; yet, no formal arrangements had been made with the French Government. The conferees agreed that a section would submit requests for facilities to its French liaison officer. Requests would then be passed to the section representative of the French dry-cleaning and laundry industry, who would allocate facilities. The section in turn would allocate facilities to the units under its control.

The enlisted man in France, as in the United Kingdom, might send to the laundry nine pieces a week. He would attach to the bundle a slip bearing his name and unit and a list of items. The French laundry association would inspect several sample bundles and then fix a price, which would be subject to the approval of the Installations and the Procurement Divisions. As in the United Kingdom, payment would be made by reverse lend-lease. An officer would turn in laundry by the bundle but would be charged by the piece. The price was to be fixed by the French laundry association, subject to the approval of the Installations and the Procurement Divisions. Charges for Red Cross, hospital, and hotel laundry would be by the piece and would be paid by reverse lend-lease.

The French representatives at the conference agreed to provide the necessary dry cleaning. Few plants in France, however, were equipped to do both laundry and dry cleaning. An agreement would be drawn up with a large firm, which was already handling a considerable volume of work for the United States Army, and efforts would be made at once to find other plants that could be used. Each unit, hotel, or other authorized agency would send items to the dry cleaners that had been designated by the section quartermaster and would make direct payment.[82]

Theater Procedure Published

The procedures governing laundry and dry cleaning in the communications zone, exclusive of the Southern Line of Communications, were incorporated in Circular No. 116, ETOUSA, which included also procedures governing shoe and clothing repair. This circular set forth policies that were in effect many weeks before its publication date—5 December 1944. Only facilities designated by section quartermasters would be authorized to provide laundry and dry cleaning for enlisted persons. Section quartermasters and section purchasing agents would pass on the prices negotiated by French authorities. These prices would be based upon supplies being furnished by the firms. If section quartermasters should issue supplies that were not obtainable in normal markets, they would make proper deductions before authorizing payment of the bill.

The Chief Quartermaster was responsible for formulating over-all policies, for making arrangements with the French Government, for furnishing necessary information to section quartermasters, for assisting in the technical operation of United States facilities, for calculating requirements, and for providing supplies and maintenance equipment for United States facilities. Section quartermasters were responsible for establishing an administrative system, for obtaining facilities from French authorities according to prescribed procedure, for establishing and supervising quartermaster laundry organizations, for inspecting static and mobile installations, for making equitable distribution of laundry services, and for seeing that the laundry requirements of their sections were met.[83]

Quartermaster Laundry Operations

Meanwhile, laundry companies attached to the armies were moved so frequently that their operations were restricted.[84] Those attached to ADSEC, however, were operating at full capacity. From 21 August to 8 September 1944, when ADSEC had headquarters first at Le Mans and then at Etampes, its laundry activities were confined to hospital service. Throughout the entire Continental operation hospital laundry was never a problem. It was performed by laundry platoons attached to hospitals or by laundry companies operating for hospitals. During this period the only laundering of salvage was done by the 640th Quartermaster Laundry Company, operating at OMAHA beach.

During the last 3 weeks of September and throughout October ADSEC conducted laundry operations in three main areas: Reims and Verdun, France; and Huy, Belgium. The 640th Quartermaster Laundry Company then served Reims, and the 457th Quartermaster Laundry Company served Huy. Both companies devoted excess capacity to the laundry of troops in their areas. The 633d Quartermaster Laundry Company served Verdun. Its excess capacity, in the form of an entire platoon, was lent to the Third United States Army for attachment to a medical depot.

Between 25 October 1944 and 6 April 1945 ADSEC had headquarters in Namur, Belgium. During this period it served 17 general hospitals, to each of which 2 quartermaster laundry sections were assigned. Its weekly work load averaged 500,000 pounds, which consisted of hospital, salvage, and troop laundry. The large amount of work was made possible by the use of civilian static facilities: the Belgian military laundry in Namur, with a weekly capacity of 90,000 pounds; and the Belgian military laundry in Liege, with a weekly capacity of 100,000 pounds. Plans were drawn up and equipment was obtained for 3 static hospital laundries in Liege, which were turned over to the Channel Base Section before ADSEC assumed control. In the Liege and Namur areas ADSEC made use of commercial dry-cleaning facilities. In March 1945 all available dry-cleaning and laun-

dry firms in both areas entered into contracts with the United States forces. After the defeat of Germany the Third and Seventh United States Armies absorbed all quartermaster laundry operations.[85]

The facilities found to be available on the Continent obviated the necessity for the construction of all the static laundries for which plans had been made. The Engineer Service constructed only three 10,000-man laundries: one at Le Havre and two in the assembly area at Reims. Only ten 1,000-bed hospital laundries were constructed: one at Cherbourg, one at Nancy, and eight in the assembly area at Reims.[86]

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FIGURE 100.—Laundry Unit Operating in Sarrebourg Area, France.

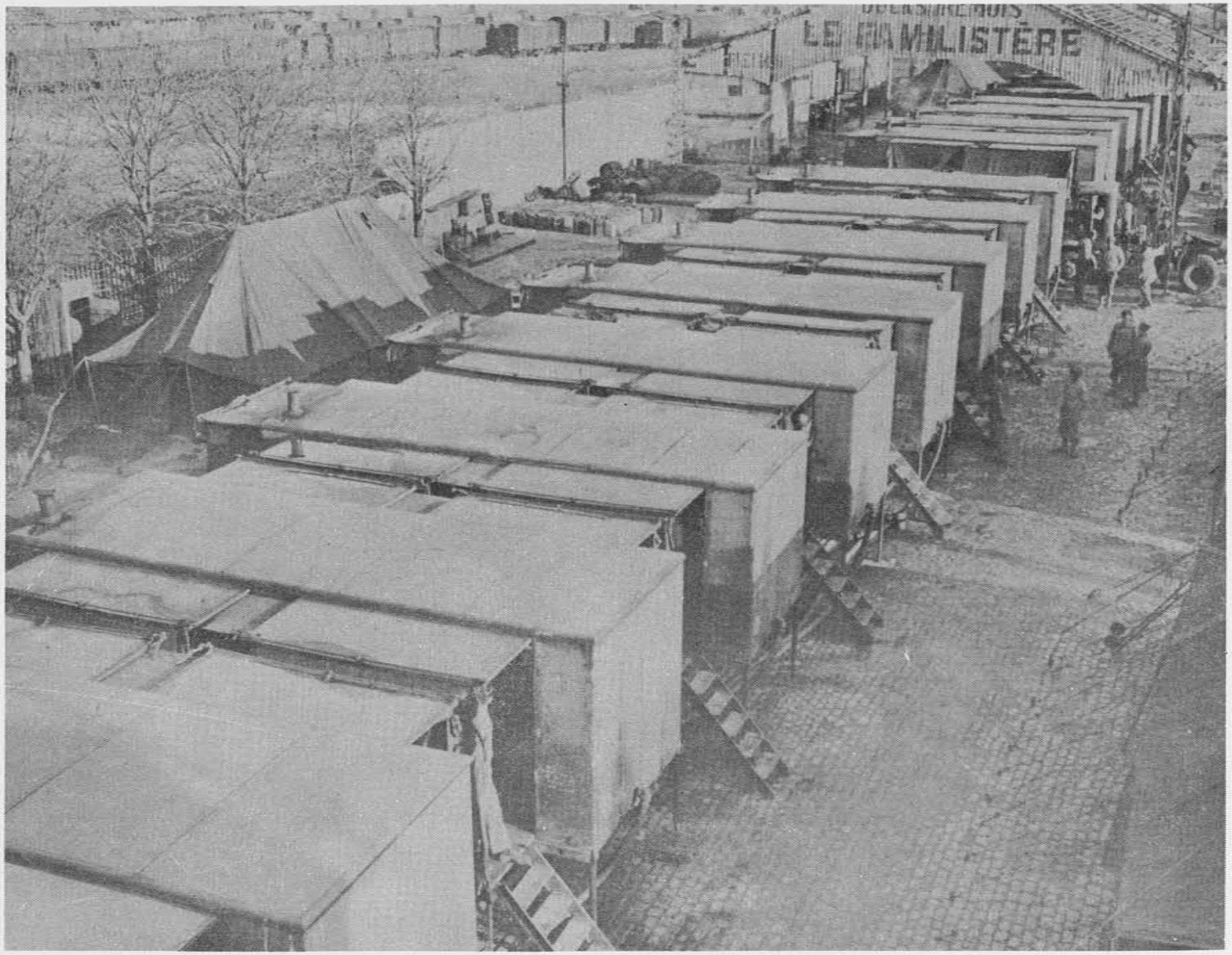


FIGURE 101.—Laundry Trailers at the Reims Depot.

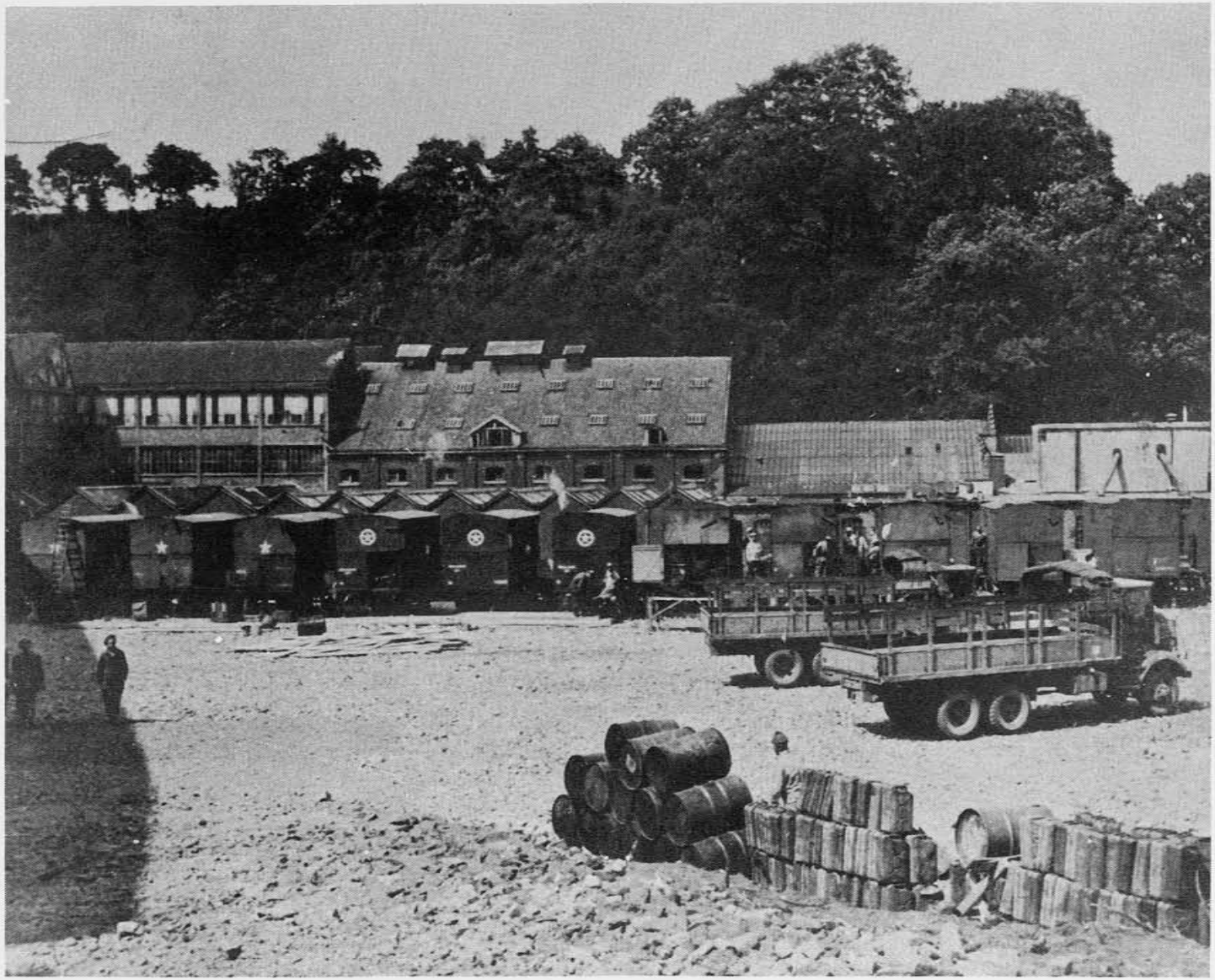


FIGURE 102.—Quartermaster Laundry Operating in Germany.

CHAPTER 9

GARDENING SERVICE

Army gardening was by no means an innovation of World War II. In 1918 the Chief Quartermaster of the American Expeditionary Forces developed a systematic cultivation program. The World War I headquarters of a United States Army gardening service was in Versailles, where the officers in charge of the project could work with the Director General of the French Army Agricultural Service. The United States Army distributed for its gardens at the front approximately 15,000,000 seedlings, chiefly cabbage and onion. The French Motor Tractor Service was used to prepare the ground for planting. In April 1918, the United States Army acquired some 200 acres of land at Versailles. Here, the gardening service operated an experimental farm, using American implements and equipment. The work was done by French farmers and laborers and United States soldiers physically disqualified for action. The success of the farm, however, was due to a group of American women who had arrived in France in January 1918. They were part of an agricultural unit that had volunteered its services to the American Committee for Devastated France.[1]

BEFORE D-DAY

Plans for American gardens in England during World War II had their beginning a month after the establishment of the European Theater of Operations. Though a small number of troops had been stationed in Northern Ireland since January 1942, the first large contingent reached the United Kingdom the following summer and was stationed in southern England. Gardens had already been planted in and around the British camps where United States troops were quartered. Because no potential food supply could be overlooked, the British Director of Quartering requested Major General John C. H. Lee, Commanding General, SOS, ETOUSA, to have gardening continued. The gardens under way, which were for the most part small plots near troop concentrations, would supply enough fresh vegetables for nine divisions if they were properly tended through the harvest season. The work was of such a nature that it could be done by a small number of troops without interfering with the training program. The Director of Quartering thought that the United States Services of Supply should detail an officer to supervise agricultural projects. Major General Lee forwarded the suggestion to Lieutenant General Eisenhower on 8 July 1942 and recommended approval.[2]

The Commanding General of the II Army Corps, when queried by Lieutenant General Eisenhower, replied at once that his troops would care for the crops planted by the British troops in the Southern Command except in cases where planting was not close to a bivouac and that they would plant winter crops. He would also appoint an agricultural officer to supervise the gardens. He was of the opinion that an agricultural officer should be on the staff of ETOUSA headquarters, since ground forces, air forces, and service forces would be engaged in the project.[3] Lieutenant General Eisenhower gave immediate approval to the proposed gardening program and requested the Commanding General, SOS, ETOUSA, to designate an agricultural officer, who would be charged with coordinating the program and furnishing information and advice. The agricultural officer would immediately establish contact with the appropriate British officers.[4] On 11 August Major General Lee appointed Brigadier General Robert M. Littlejohn agricultural officer to carry out the policy outlined in Lieutenant General Eisenhower's letter.[5]

Brigadier General Littlejohn set up in the Salvage, Laundry, and Fuels Division the Agricultural Branch charged with the following responsibilities: formulating general Theater policies for the use of land in cooperation with the British; supervising all agricultural activities; furnishing advice and assistance; inspecting field installations for the purpose of promoting the joint program; maintaining proper liaison with the British military and civilian agencies engaged in agriculture; issuing administrative and technical information on agricultural operations; and maintaining statistics for planning purposes.[6] The Agricultural Branch became part of the Service Installations Division, which in December 1942 replaced the Salvage, Laundry, and Fuels Division. When the Service Installations Division was designated the Salvage and Laundry Division in June 1943, the Agricultural Branch was transferred to the Executive Division. (See ch. 1.)

Early Program

Major Henry H. Hutchinson was appointed to set the program in motion. After making a careful study of agriculture as practiced by the British Army, he wrote enthusiastically to the

Chief Quartermaster, saying that full cooperation with the British was highly desirable. Records in the British agricultural office indicated that 50,000,000 vegetable rations would be produced in 1944. Stated in terms of weight and ship tonnage, the rations would amount to 59,000,000 pounds and 50,000 ship tons. Major Hutchinson believed, therefore, that the program would result in worth-while saving of money and shipping space. It would provide food that the men not only needed but liked far better than dehydrated vegetables. Variety of diet also would be made possible. Fresh lettuce, young radishes, and spring onions could be served, and fruits could be gathered from English orchards, which would come into the agricultural scheme. United States troops had been found to resist some of the foods grown in Great Britain. In their gardens vegetables that they liked could be planted rather than those that they merely tolerated or flatly refused to eat.[7] Brigadier General Littlejohn forwarded Major Hutchinson's letter to G-4 and requested that a circular be published establishing a uniform policy for agriculture in the European Theater. He pointed out that it was important to reduce the amount of shipping space then used for vegetables. The publication of a Theater circular would assure the necessary staff and labor for continuing an agricultural program that would make possible greater variety of vegetables for United States troops.[8]

The proposed circular was published on 6 December 1942. It established a fairly simple procedure for carrying out the joint program. The commanding officer of each post, camp, or station would appoint a post agricultural officer, who would add the supervision of gardens to his other duties. If practicable, he should be either a mess or supply officer. The Agricultural Officer, OCQM, would assist each post agricultural officer in working out a plan suited to local conditions. The cultivation of areas already planted would be continued. Enlargement of areas would be determined by the British and American post agricultural officers and post commanders. The local British assistant agricultural officer would assign British laborers, if they were available and if the British and American agricultural officers thought that they were needed. Commanders of posts, camps, or stations would furnish casual labor for planting, cultivating, and harvesting the crops. Agricultural duties, however, should not interfere with regular training activities. United States troops would draw tools and supplies from the British assistant agricultural officers. The post, camp, or station commanders would provide transportation for the delivery of supplies or produce.

By agreement between the British and American post agricultural officers produce might be disposed of in several ways. Troops on the British-American ration might use the produce and draw correspondingly fewer supplies from the Navy, Army, and Air Force Institute, (NAAFI), the British counterpart of the United States Army Exchange Service. If troops were on the American ration, receipts would be given to the British assistant agricultural officer for produce furnished from the gardens. Produce might also be sold outright to NAAFI. Profits from agricultural operations would be credited to post, camp, or station funds and would be disbursed for recreation and the improvement of living conditions. United States and British troops would have equal shares of all profits.[9]

A Theater circular published in March 1943 changed procedure governing payment for produce. It provided that, in accordance with current reciprocal-aid procedure, each post agricultural officer would forward to the Agricultural Branch, OCQM, reports of all produce received by United States forces and reports of all man-hours and transportation-hours furnished by United States forces in the agricultural program. At the end of each calendar year post agricultural officers would ascertain from British authorities the amount of the profits derived from agricultural operations. The amount of the profits would be treated as a deduction from reciprocal-aid credit.[10]

Air Force Units Want Gardens

In December 1942 Major Hutchinson opened correspondence with the British Air Ministry in an effort to work out a joint arrangement similar to the one that had been made with the British Army.[11] The resultant agreement provided that air force stations would procure necessary tools and supplies from local civilian concerns. Upon receipt of certified invoices, the Air Ministry would make payment. Hand tools and certain other equipment would be provided from Royal Air Force stocks. The air force stations would furnish as much casual labor and transportation as possible and would have first call on all produce grown. If furnished fresh fruits and vegetables from gardens, they would draw correspondingly less from subsistence depots. A consolidated report of the amount of produce consumed would be forwarded monthly to the Air Ministry for credit to the unit account. Profits from crops produced at American installations would be divided equally between the United States Treasury and the Air Ministry and entered under reciprocal-aid credit.[12]

British Cooperation

The principal task of the Agricultural Branch consisted in obtaining technical information and disseminating it. From the beginning the British lent a helping hand whenever possible. Local farmers offered their services to the oftentimes inexperienced gardeners who were their neighbors, and the Advisory Service of the Ministry of Agriculture was an endless source of technical advice and assistance. Seed lists, acreage requirements, types of vegetables for the small gardens, articles on weed control, insect control, and surveys that contrasted types of soil in the United States and the United Kingdom found their way to the Agricultural Branch.

County War Agricultural Executive Committees provided advice and assistance and furnished names and addresses of local farmers who could help with such mechanical cultivation as plowing, ridging, and harrowing. County agricultural organizers and the Advisory Service furnished advice on technical problems. The Agricultural Branch compiled the information, which was published periodically in technical bulletins.[13]

Results

In the fall of 1942, when the program got its start, there were 7,952 acres under cultivation.[14] By the next summer, the acreage having been greatly increased, OCQM anticipated that there would be 15,000 acres under cultivation before the end of the year. The plots ranged in size from a few square yards around billets to 40-acre fields.[15]

Benhall Farm, the Cheltenham home of OCQM, had gardens that were among the most productive in England. When United States forces first moved there, approximately 3 acres was being cultivated by civilians in the employ of the British Army. To this plot was added 15½ acres.[16]

The continuity of the program was interrupted by frequent changes in the occupancy of airfields, camps, posts, and stations. A garden would be planted by British troops and cultivated by United States troops or vice versa. Nevertheless, foodstuffs were produced that otherwise would have had to be shipped to the United Kingdom for the armies, and food grown by the armies enabled other food to be released to civilians.[17]

AFTER D-DAY

In the summer of 1944 there was little time for gardening even in the United Kingdom. The Chief Quartermaster, realizing that a food shortage was likely to exist, issued a new series of agricultural bulletins addressed to installations in the United Kingdom. In these he pointed out the importance of food as ammunition. Because food would become more critical as the military situation changed, he suggested that agricultural officers take advantage of the long summer daylight and that they urge units to work gardens after normal duty hours.

The solution of the labor problem could be achieved only through the ingenuity of American officers. The British, who had retained supervisory responsibility, had endeavored to adopt American methods of cultivation and to plant the food that suited American tastes. Therefore, OCQM urged that they be given whole-hearted cooperation. All posts, camps, and stations that had gardens were required to make monthly reports whether the land was cultivated by British or American personnel or by both.[18]

On 27 September 1944 Colonel A. M. Brumbaugh, Quartermaster of the United Kingdom Base, forwarded to the agricultural officer of the British Home Forces, Southern Command, a draft of a circular proposing that gardens at United States installations revert to British control. Colonel Brumbaugh desired that the gardens be operated by the British War Office and the British Air Ministry but that the cooperation of United States forces be continued. All tools and equipment on loan and all that had been purchased under reciprocal aid would be turned over to British Agricultural officers.[19] Colonel Brumbaugh's proposal was accepted on 29 December 1944. The gardens then reverted to the British.[20]

In January 1943, when OVERLORD plans began to take shape, tentative plans were being made for carrying on a Continental gardening program. As soon as possible after D-day, gardens would be begun on the Continent at permanent and semipermanent installations. It was realized that gardening on the Continent would present many problems that had not been encountered in the United Kingdom. Though trained personnel would be on hand, machinery, tools, and supplies would be available in limited quantities unless they were requisitioned from the United States or the United Kingdom; and only a small number of troops could be spared for the gardening program. Full use would be made of salvaged equipment and tools, and Continental supplies would be exhausted before requisitions would be placed. The laborers would be for the most part prisoners of war and civilians of occupied countries.[21]

Gardening got under way on the Continent in the spring of 1945. Seeds, which had been requisitioned much earlier, began to arrive in March. Colonel Robert T. Willkie, Chief of the Subsistence Division, directed that base-section commanders be informed that seeds were available. It was not his thought that men would be taken from other work to cultivate gardens but that the labor would be done by prisoners of war. If camps were moved, the French could harvest the crops. "With this world-wide shortage of food," he said, "any garden that is planted is an advantage."[22] The seeds included not only varieties that are universally popular but also varieties that are sectionally popular. For instance, pumpkins were planted for New Englanders; and okra, black-eyed peas, and turnips for men from the Deep South.[23]

The garden at the 200th General Hospital in Soissons, France, will serve to illustrate both procedure and results. On 20 April 1945 Major Emmit Schields, a member of the hospital staff, completed arrangements for the use of 43 acres on the outskirts of the city. Having checked with Civil Affairs to determine what land would not be tilled by French farmers, he had chosen three plots of unused land. He drew seeds from the Quartermaster Service and called upon the Engineer Service to sweep the land for mines and live shells. The ground was broken by a tractor-towed plow, but the rest of the work was done by hand. Corporal Rufus H. Swinson, a dirt farmer from North Carolina, was appointed farm supervisor. Potatoes, beets, onions, carrots, beans, cucumbers, and lettuce, which were sown in April, yielded crops that added variety to the patients' diets and provided a surplus for troops stationed in the area of Soissons.[24]

REFERENCES

1 Manuscript, Historical Report of the Chief Quartermaster, American Expeditionary Forces, 1917-1919, Office of the Chief Quartermaster, Tours, France, 1919, pp. 491-95.

2 Memorandum, CG, SOS, ETOUSA, to CG, ETOUSA, 8 July 1942.

3 Letter, AG 370-D, CG, ETOUSA, to CG, II Army Corps, and CG, SOS, ETOUSA, (undated); and 1st ind., CG, II Army Corps, to CG, ETOUSA, 11 July 1942.

4 *Ibid.*, 2d ind., CG, ETOUSA, to CG, SOS, ETOUSA, and CG, II Army Corps, 23 July 1942.

5 *Ibid.*, 3d ind., CG, SOS, ETOUSA, to CG, ETOUSA, 7 August 1942.

6 Memorandum, Agricultural Section, Executive Division, to Executive Division, 12 May 1944.

7 Memorandum, Chief, Agricultural Branch, to CQM, 10 October 1942.

8 Memorandum, CQM to G-4, 10 October 1942.

9 Circular No. 81, ETOUSA, 6 December 1942.

10 Circular No. 32, ETOUSA, 23 March 1943.

11 Letter, Representative, British Air Ministry, to Chief, Agricultural Branch, 24 December 1942; and letter, Chief, Agricultural Branch, to British Air Ministry, 7 January 1943.

12 Memorandum, Agricultural Branch, Executive Division, to Executive Division, 12 May 1944.

13 Agricultural bulletins, 1943 and 1944.

14 Memorandum, Service Installations Division to Operations Division, 13 March 1943.

15 Memorandum, CQM to QMG, 5 August 1943.

16 Memorandum, Service Installations Division to Operations Division, 13 March 1943.

17 Memorandum, CQM to QMG, 5 August 1943.

18 Agricultural Bulletin No. 2, OCQM, 22 June 1944.

19 Letter, QM, UK Base, to Agricultural Officer, Southern Command, British Home Forces, 27 September 1944.

20 Memorandum, DCQM to GPA, 13 March 1945.

21 Memorandum, Chief, Agricultural Branch, to QM, UK Base, 9 January 1943.

22 Memorandum, Chief, Subsistence Division, to Acting Assistant Chief, Subsistence Division, 21 March 1945.

23 Press Release, PRO, OCQM, (undated).

24 *Ibid.*

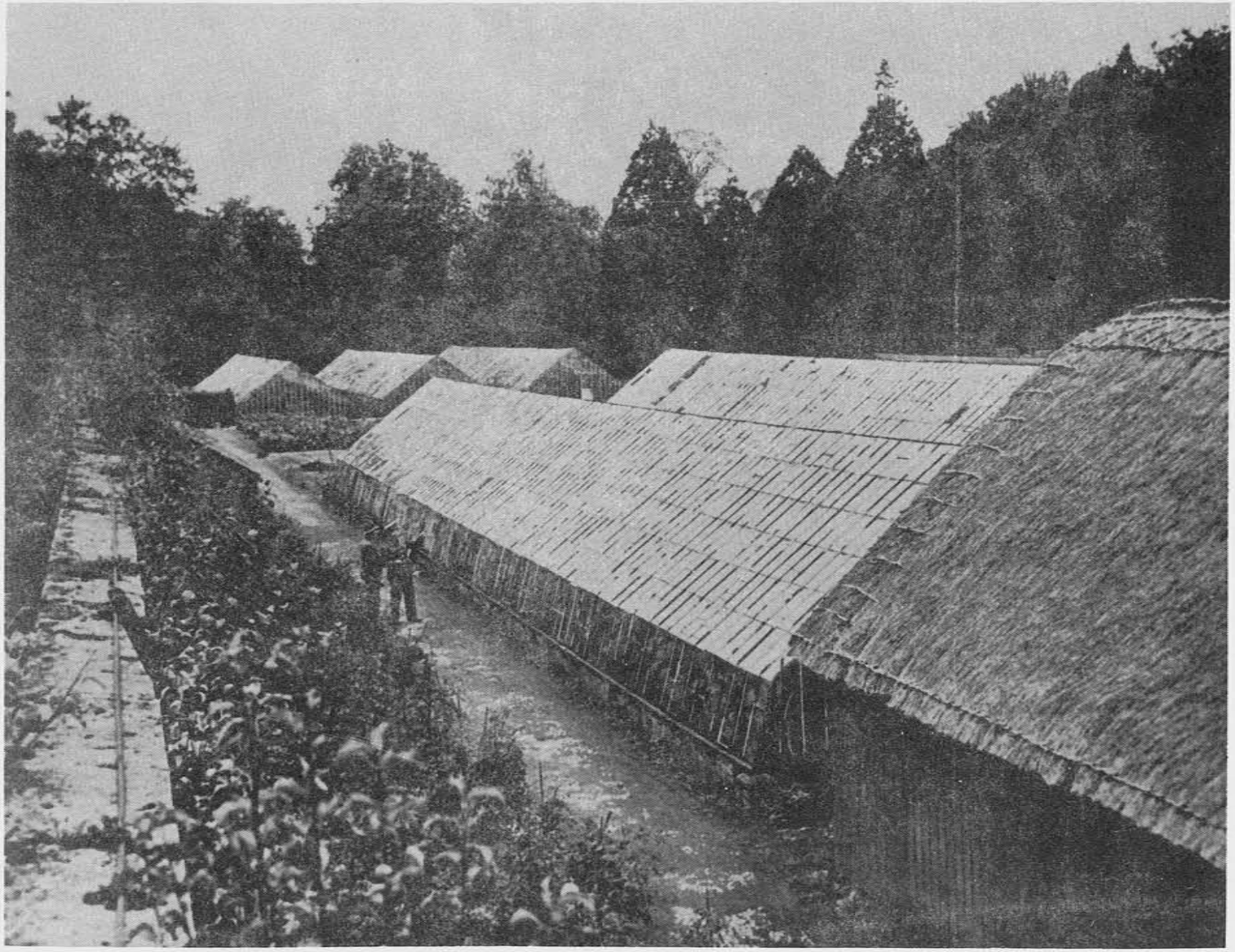


FIGURE 103.—Greenhouses of an English Estate Used by the Anglo-American Gardening Service.

FIGURE 104.—A Member of the British Gardening Service Examines Corn Grown by United States Forces.

FIGURE 105.—Gathering Beans in a United States Army Garden.

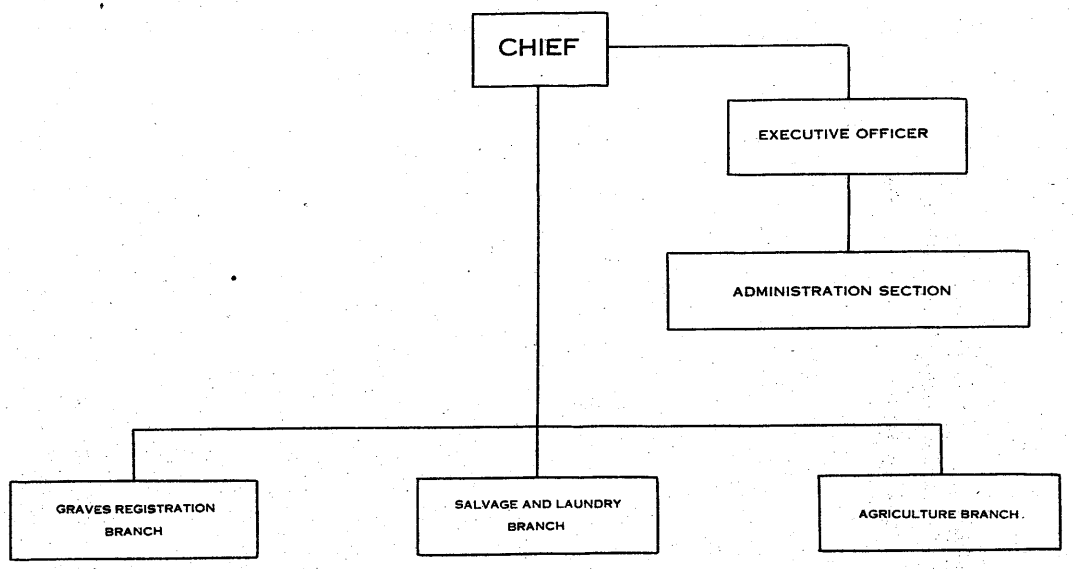
FIGURE 106.—Potatoes Grown in a United States Army Garden in England.

APPENDIX I

ORGANIZATION CHART

SERVICE INSTALLATIONS DIVISION*

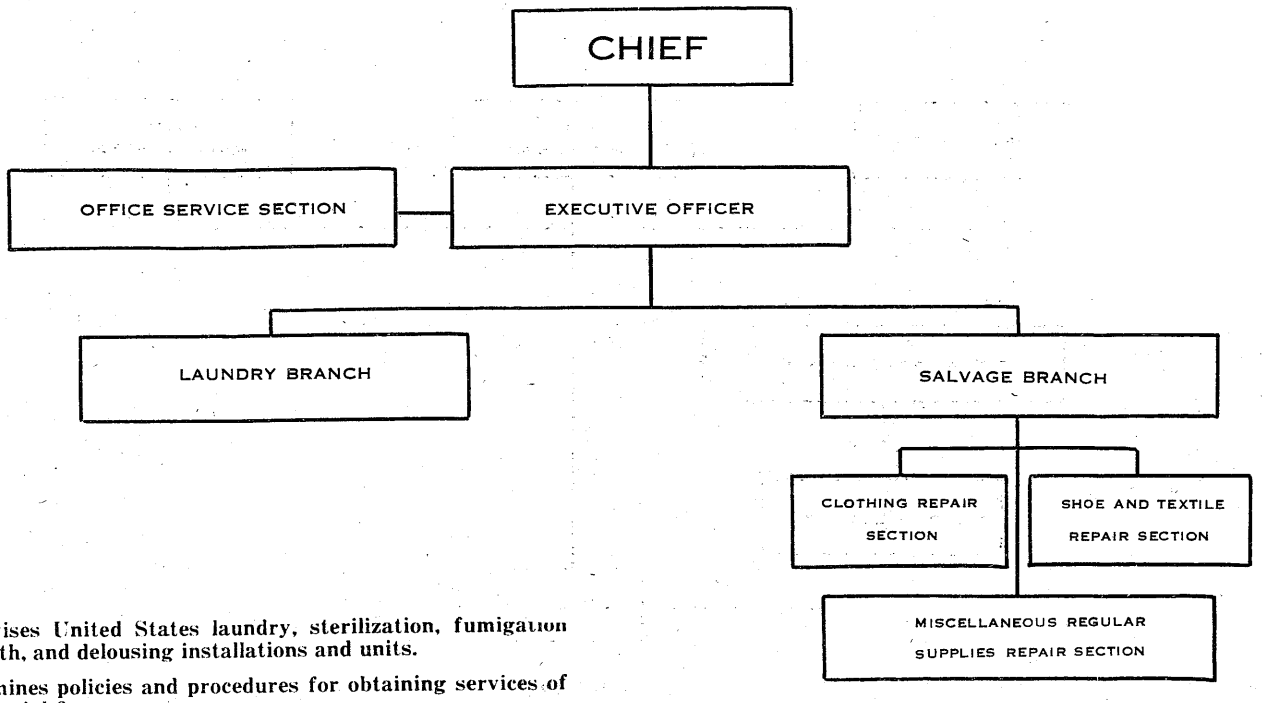
MAY 1943



*ORGANIZATION CHART. OCQM. MAY 1943.

APPENDIX II

ORGANIZATION CHART
SALVAGE AND LAUNDRY DIVISION*
21 JULY 1943

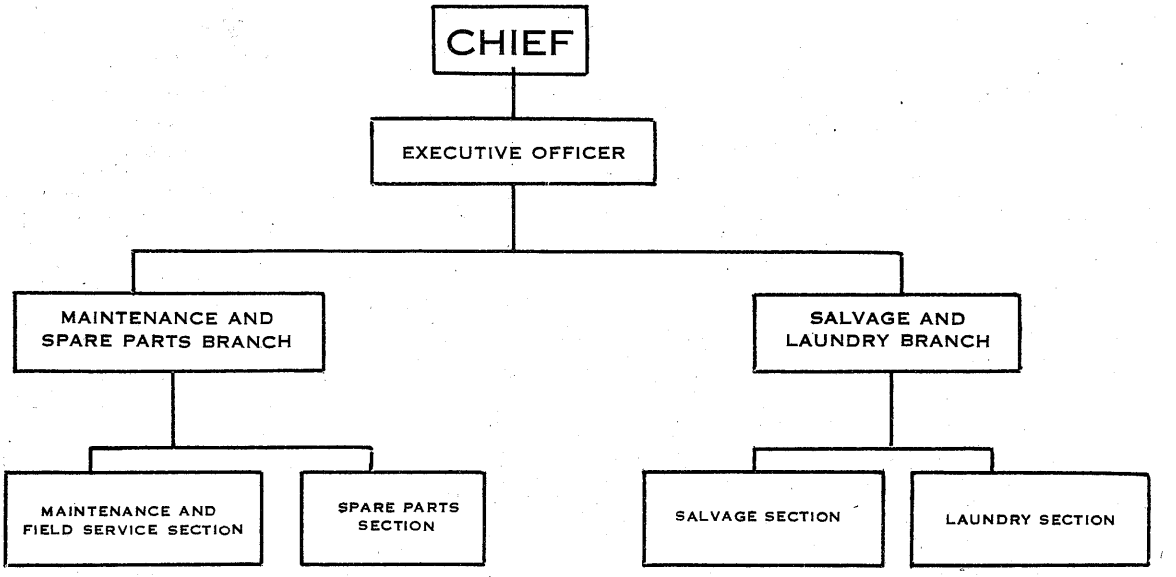


1. Supervises United States laundry, sterilization, fumigation and bath, and delousing installations and units.
2. Determines policies and procedures for obtaining services of commercial firms.
3. Arranges for delousing plants in coordination with the Medical Service.
4. Arranges for the decontamination of clothing by laundries in coordination with the Chemical Warfare Service.
5. Formulates plans for employment of laundry, sterilization, fumigation and bath units.

1. Supervises salvage units and installations.
2. Determines policies and procedures for obtaining services of commercial firms.
3. Formulates plans and policies for salvage activities.
4. Supervises the conservation and reclamation of all quartermaster property.

*Salvage and Laundry Division, 21 July 1943.

APPENDIX III
ORGANIZATION CHART, INSTALLATIONS DIVISION*
1 SEPTEMBER 1944



1. Computes requirements, initiates procurement, prepares requisitions, and controls distribution and issue of spare parts for all quartermaster equipment.

2. Maintains necessary records to carry out its functions and prepares required reports and statistical data.

3. Establishes spare parts list and spare parts maintenance factors for all quartermaster equipment.

4. Supervises maintenance of quartermaster equipment in the field.

5. Supervises the training of personnel in the mechanical operation and maintenance of quartermaster equipment.

6. Organizes and supervises schools for the training of personnel in maintenance and installation of spare parts.

1. Computes requirements, initiates procurement, prepares requisitions, and controls distribution and issue of all supplies and equipment required for operation of salvage, laundry, dry cleaning, sterilization, fumigation, bath, and decontamination facilities.

2. Maintains necessary records to carry out its functions and prepares required reports and statistical data.

3. Establishes procedure for obtaining laundry, dry cleaning services, clothing, tentage, and shoe repair facilities from civilian contractors.

4. Supervises the training of personnel for salvage work.

5. Recommends maintenance and use factors to Maintenance and Spare Parts Branch.

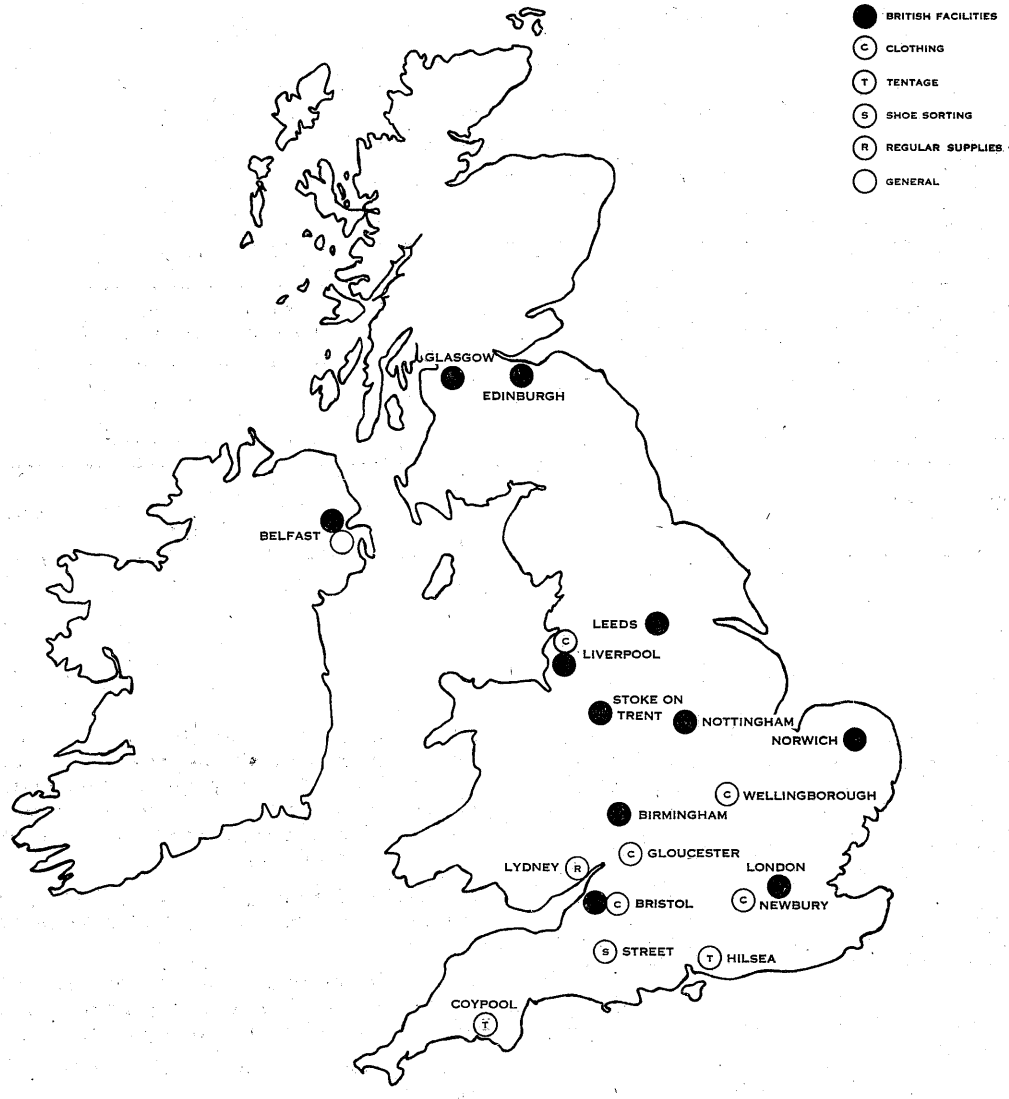
6. Organizes and supervises schools for the training of personnel in salvage and laundry operations.

*Organization Chart, OCQM, 1 September 1944.

APPENDIX IV

PLAN FOR SALVAGE REPAIR FACILITIES IN UNITED KINGDOM*

17 SEPTEMBER 1943



* SALVAGE REPAIR PLAN, PLANS AND TRAINING DIVISION, 17 SEPTEMBER 1943

APPENDIX V

SALVAGE AND RECLAMATION DEPOTS*

18 January 1944

Depot	Salvage and Reclamation Space (Square feet)	Machines in Operation	Repair Capacity (Troops)	Future Repair Capacity (Troops)
Repair of All QM Items				
Belfast N. I. (Q-161)	32,880	9(1)	125,000	150,000(2)
Clothing Repair				
Liverpool (G-14)	11,742	30	160,000	160,000
Bristol (G-35)	17,000	120	225,000	225,000
Thatcham (G-45)	10,080	10	75,000	75,000
Wellingborough and Finedon (Q-101)	18,187	295	500,000	550,000
Gloucester (Q-152)	19,800	32	100,000	325,000
Canvas and Webbing Repair				
Hilsea (G-65)	35,750	29	500,000	550,000
Coypool (G-75)	10,475	24	225,000	250,000
Lydney (Q-140)	81,200(3)	12		200,000
Regular Supplies Repair				
Lydney (Q-140)	81,200	Hand tools and welding equipment	Unlimited	Unlimited
Footwear—Sorting and Classification				
Street (Q-160)	14,376(4)		Unlimited	Unlimited
Shepton Mallet		16		

(U. S. Army prisoners are being trained in the repair of enlisted men's service shoes. Weekly production 1,500 to 1,800 pairs. Orthopedic adjustments made at this camp on Medical prescription orders. Approximately 125 made to date. Plans now under way to utilize the prisoners of this camp to repair cots and mess-gear equipment.)

(1) There are 40 additional sewing machines on order with the British and will be available by 1 February 1944.

(2) Unlimited by use of civilian contractors.

(3) Only a portion of this space is being used at the present time. The greater portion of this space is used by the Reclamation Section for the repair of regular supplies. The 12 machines now being used were shipped to the United Kingdom from Iceland. Additional machines on order from the British.

(4) Of the 14,376 square feet listed hereon, only 4,200 square feet is presently being used. The balance will be available within the next week or 10 days. Necessary repairs will be completed by that time.

*Salvage and Laundry Division, 18 January 1944.

APPENDIX VI

MONTHLY SUMMARY OF SALVAGE ITEMS—USA—UK*

16 September 1943

Type of Salvage	Number of Items				
	Returned to Stock		Non-repairable Disposed of	In Depots**	In Hands of Contractors
	Class B	Class X			
1942 (all months)					
Clothing	93,041	0	25,814	108,910	102,968
Equipage	29,765	0	74	27,343	25,850
Regular Supplies	1,675	0	0	2,986	0
Footwear	8,470	0	0	15,099	0
Total	132,951	0	25,888	154,338	128,818
January 1943					
Clothing	45,472	0	12,887	247,146	42,210
Equipage	14,307	0	36	61,862	10,374
Regular Supplies	663	0	0	3,866	0
Footwear	4,149	0	0	20,607	0
Total	64,591	0	12,923	333,481	52,584
February 1943					
Clothing	36,715	0	10,659	306,544	29,087
Equipage	11,558	0	30	76,440	7,115
Regular Supplies	524	0	0	4,378	0
Footwear	3,348	0	0	23,877	0
Total	52,145	0	10,689	411,239	36,202
March 1943					
Clothing	41,641	29,839	65,631	247,234	21,061
Equipage	13,648	1,078	82	74,008	2,275
Regular Supplies	244	0	0	4,258	0
Footwear	2,962	2,216	0	21,334	0
Total	58,495	33,133	65,713	346,834	23,336
April 1943					
Clothing	80,050	33,734	53,537	143,245	17,676
Equipage	35,674	1,318	30	48,614	3,911
Regular Supplies	302	0	0	4,064	0
Footwear	2,095	0	0	19,990	0
Total	118,121	35,052	53,567	215,913	21,587
May 1943					
Clothing	22,283	7,108	21,839	140,713	16,978
Equipage	4,763	337	808	50,195	1,958
Regular Supplies	8	0	0	4,063	0
Footwear	12,079	120	0	19,221	0
Total	39,133	7,565	22,647	214,192	18,936

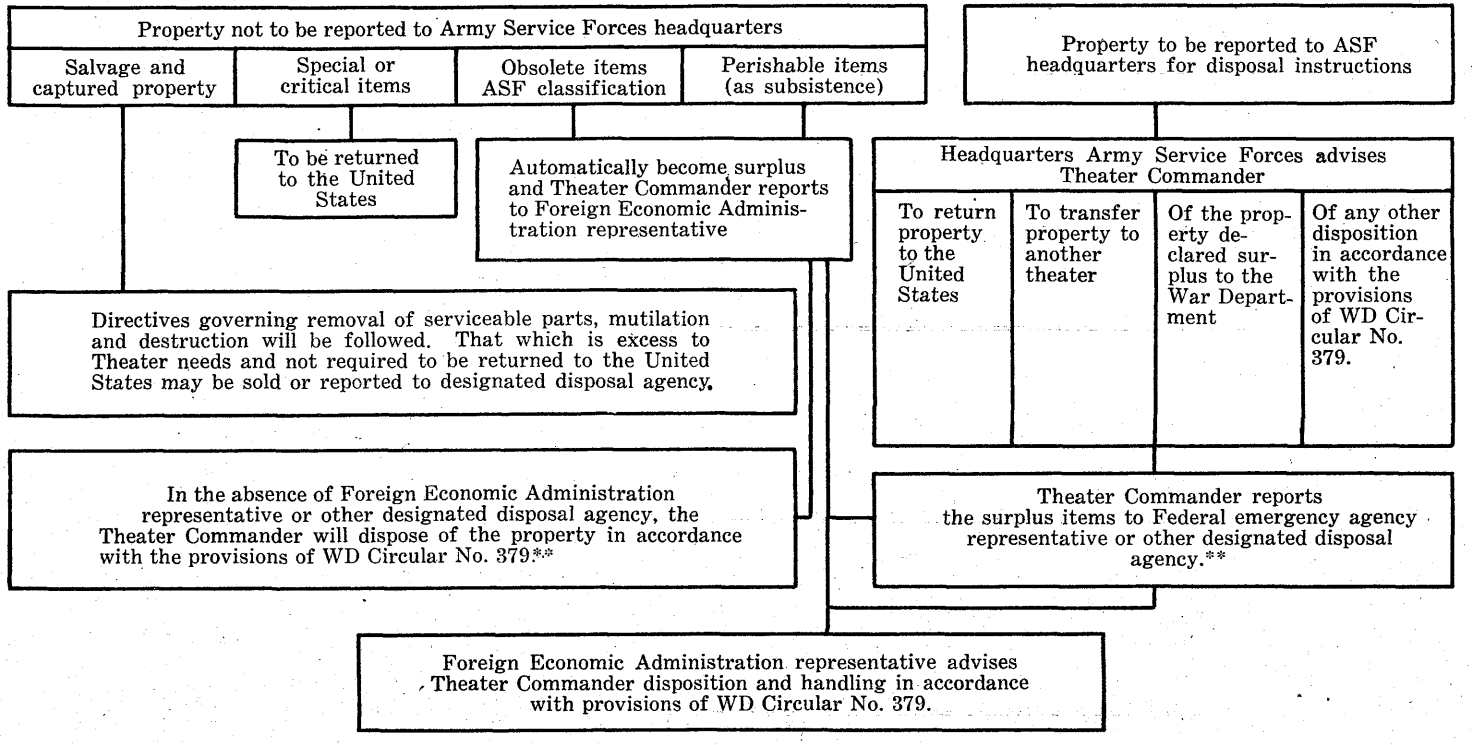
Type of Salvage	Number of Items				
	Returned to Stock		Non-repairable Disposed of	In Depots**	In Hands of Contractors
	Class B	Class X			
June 1943					
Clothing	37,227	18,921	178,107	9,296	38,687
Equipage	53,738	661	40,403	1,099	6,656
Regular Supplies	5,207	0	458	1,410	0
Footwear	3,744	7,150	5,086	11,737	0
Total	99,916	26,732	224,054	23,542	45,343
July 1943					
Clothing	29,493	15,793	65,243	59,969	58,567
Equipage	33,062	70	23,289	4,874	38,896
Regular Supplies	663	0	94	1,893	0
Footwear	10,001	5,394	2,167	22,947	0
Total	73,219	21,257	90,793	89,683	97,463
August 1943					
Clothing	221,737	92,322	305,329	206,488	126,622
Equipage	209,027	10,235	70,565	84,926	59,249
Regular Supplies	4,648	0	3,027	4,552	0
Footwear	19,740	5,560	38,250	44,962	0
Total	455,152	108,117	417,171	340,928	185,871
Grand Total	1,093,723	231,856	923,445	2,130,150	610,140

*Report, Salvage and Laundry Division, 16 September 1943.

**Not returned to stock or disposed of as non-repairable.

APPENDIX VII

FLOW CHART FOR DISPOSITION OF ASF PROPERTY IN OVERSEA THEATERS DETERMINED TO BE IN EXCESS OF THEATER NEEDS* 21 NOVEMBER 1944



**Pending establishment of designated disposal agency and procedures for handling disposal of surplus property and in the absence of specific instructions for disposition: (a) Theater Commanders will sell surplus property or make other disposition within their discretionary authority. (b) Surplus property having only military value or usefulness or of such special military significance that in the opinion of the Theater Commander it is desirable that it be so treated will be dealt with as salvage.

*AG 400 (17 Nov 44) OB-S-SPRCS-N, 21 November 1944.

APPENDIX VIII
SALVAGE SHIPPING FORM*

SALVAGE SHIPPED

Date _____

Shipped by _____ Shipped via Car No. _____

Section _____ Shipped via Truck No. _____

Platoon _____ Received by _____

Company _____ Shipped to _____

Location _____ Location _____

Article	Number	Article	Number

*Handbook for Salvage Activities in the Combat Zone, OCQM, 1 March 1944.

APPENDIX IX

DIVISION OF RESPONSIBILITY FOR MAINTENANCE OF SPARE PARTS*

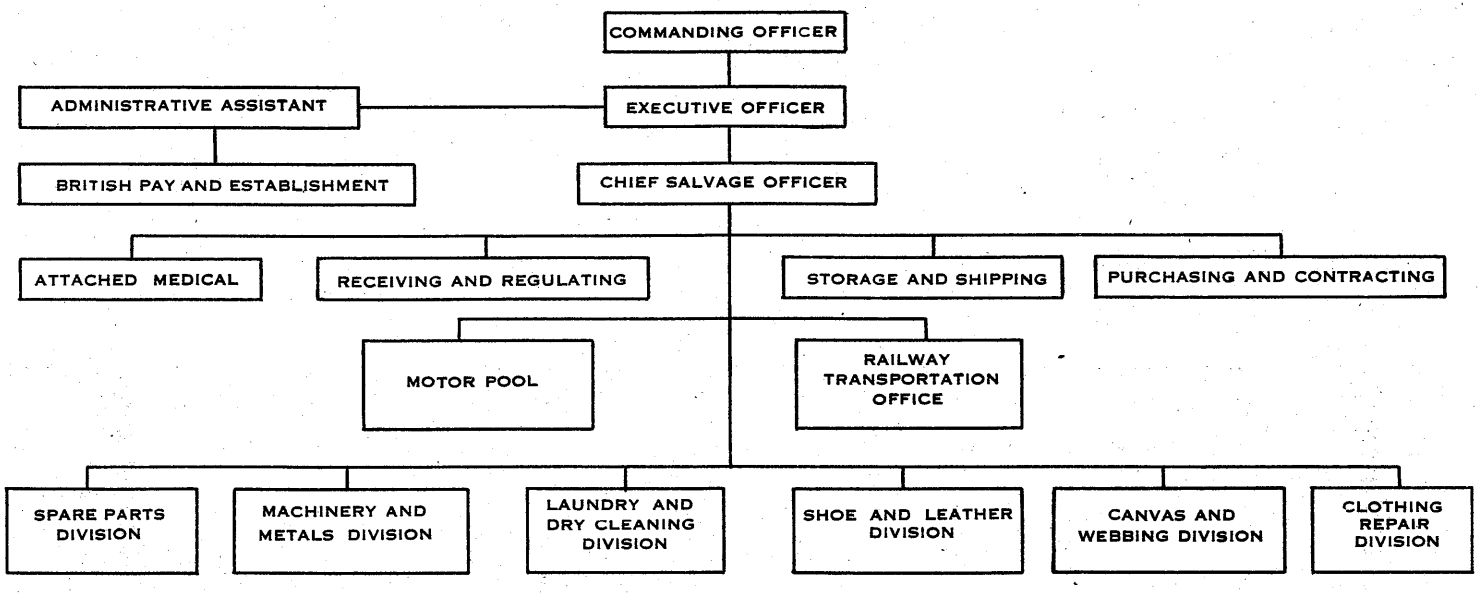
Type of Equipment	Procurement Responsibility	Stock Level	Storage and Issue				Initial Issue with Unit (maintenance parts)	Responsibility for Repair			Responsibility for Replenishing Maintenance Parts		
			United Kingdom		Continent			1st and 2d echelon	3d echelon	4th echelon and above	Using Unit	Division QM	Depots
			Equipment	Maintenance Parts	Equipment	Maintenance Parts							
Bakery, British	QM	One year	Field ranges by Supply Division. Bakery, coffee-roasting, and refrigeration trailers by Subsistence Division. All other special-purpose equipment by Salvage and Laundry Division.	For all equipment at Q-140. For field ranges at all Class II depots	Quartermaster base depots	Quartermaster base depots	10 months	By using organization	By using organization, salvage depots, and ordnance	By salvage depots and ordnance	By requisition on division quartermaster or similar supply officer	By requisition on base depots	By requisition on the United States or the United Kingdom
Coffee roasters	QM						3 months						
Field ranges	QM						3 months						
Fumigation and bath	QM						3 months						
Laundry, British	QM						3 months						
Laundry, semimobile	QM						3 months						
Laundry, fixed	QM						12 months						
Laundry, hospital	QM						12 months						
Refrigeration, fixed	ENGR												
Refrigeration, mobile	QM						3 months						
Salvage, fixed	QM						3 months						
Salvage, semimobile	QM						3 months						
Sterilization and bath	QM						3 months						
Typewriter and duplicator	QM						NONE						
Warehouse handling equipment	ORD												
Body and chassis	ORD												

*Circular No. 13, ETOUSA, 7 February 1944.

APPENDIX X

FUNCTIONAL CHART FOR SALVAGE DEPOT Q-140*

4 MAY 1944



* REPAIR AND SALVAGE PLAN FOR Q-140, INSTALLATIONS DIVISION, 4 MAY 1944.

APPENDIX XI
SALVAGE PROCEDURE*

1. RESPONSIBILITY OF QM SERVICE

The Quartermaster Service is responsible for all salvage activities not assigned to other Services. This consists of: the receipt of items from Army Service Areas and from Communication Units; the collection of salvage abandoned or discarded in the communication zone; the segregation by service and turnover to appropriate service representatives; the sorting, processing for repairs, and return to stock of useable Quartermaster items; and the salvage/scrap of all unuseable Quartermaster items, and the processing of those items received from other services as scrap.

2. GENERAL

a. **Importance.** The importance of salvage operations, and the importance of using and reusing all materials, equipment and residue cannot be over emphasized.

It is incumbent upon each commander and each echelon to assure the maximum conservation of all supplies and materials, and the maximum use of all salvage.

b. **Sources.** Items for salvage are receiving from the following sources:

(1) Army Service areas.

(2) Units and installations in the Comm Zone.

(3) Collection by Communications Zone troops of material abandoned or discarded.

(4) Items of other services received as scrap.

c. **Prompt Return to Stock of Useable Items.**

(1) Constant inspection will be maintained in order to avoid any unnecessary processing or handling. For example, obviously clean items will not be sent to laundry merely because they are in salvage channels.

(2) Sufficient repairs will be made only to allow for combat serviceability during extended field use. Unnecessary refinements will be eliminated.

(3) In order to speed up and expedite the classification of unserviceable property received in depots, depot commanders will provide warehousing equipment, such as sorting tables, bins or boxes and warehouse trucks. In the field, tables and boxes can be improvised from salvage lumber and warehousing trucks to be furnished from regular stocks. This is absolutely essential to efficient operation.

3. SALVAGE OFFICER

a. Commanding officers at depots will appoint a salvage officer to handle all Quartermaster salvage and reclamation functions.

b. The salvage officer will be charged with receiving, inspecting, sorting and processing all unserviceable Quartermaster property turned in for salvage or reclamation, and the salvage/scrap of all items turned in by other services turned in as scrap (other than those items charged to the Ordnance Service).

4. DEFINITIONS

a. **Salvage.** The term salvage as used herein includes all property which falls into the hands of the salvage organizations. This applies to new, serviceable, unserviceable, condemned, discarded or abandoned property.

b. **Unserviceable Property** is that property which cannot be used in its present condition by the Army for which it was intended.

c. **Class A** property is: (1) that which is new, (2) that which is slightly used and not distinguished from new.

d. **Class B** property is that which though not new has combat serviceability for extended field use.

e. **Class X** clothing is that which has been used and is still usable but not for combat serviceability for field use.

5. SORTING

a. Items pertaining to other services will be segregated from QM items and turned over to the services concerned as soon as practicable. No effort will be made to classify this property beyond its segregation as to the service to which it belongs.

b. All QM items will be segregated in the following groups:

(1) Clothing & Textiles except Canvas & Web Equipment.

(2) Canvas & Web Equipment.

(3) Footwear.

(4) Regular Supplies and other miscellaneous equipment.

c. **Classification of Clothing and Textiles.** Clothing and Textile items will be classified for sorting only as follows:

(1) Class A.1. Brand new. Return immediately to stock as Class A.

(2) Class A.2. New clothing or practically new clothing which required only a button or resewing of a seam. This clothing is as good as Class A clothing except for very minor defects, and can be returned direct to depot stocks as Class A when defects are eliminated.

(3) Class B.1. Clothing which needs slight repairs or slight cleaning. It can be touched up by hand and repaired on the spot and returned direct to depot stocks as Class B.

(4) Class B.2. Clothing which required either laundry or dry cleaning and repairs and after such processing becomes Class B.

(5) Class X.1. Clothing which cannot be reclaimed for use by troops, but which is suitable without repairs for P.O.W. or Civil Affairs and becomes Class X.

(6) Class X.2. Clothing which cannot be reclaimed for use by troops, but which after repairs is suitable for P.O.W. or Civil Affairs and becomes Class X.

6. PRIORITIES

The Office of the Chief Quartermaster from time to time will set up priorities of repair or shipment of certain items in order to relieve acute supply problems. Base Section Quartermasters will take the action necessary to insure that all installations are fully informed of priority schedules to expedite processing.

7. LAUNDRY, DRY CLEANING AND REPAIR FACILITIES

a. Q.M. Salvage Repair Units and Q.M. Laundry, Sterilization, and Fumigation Units may be allocated to base sections by O.C.Q.M. for the processing of salvage.

b. Civilian repair, laundry, and dry cleaning facilities to be used by depots will be designated by the O.C.Q.M. thru Base Section Quartermasters. Receipts will be obtained for all property turned over to civilian contractors for repairs or for laundry or dry cleaning. Items returned from civilian facilities to the original shipping depot will be carefully checked to assure complete return. A claim will be entered for any unwarranted discrepancies in accordance with the para on Claims, Section IX.

8. CLOTHING & TEXTILES

a. General.

(1) All obviously new items and those in original packages will be returned immediately to depot stocks.

(2) Serviceable items which do not require laundering or dry cleaning will be sized, baled or packed in suitable containers and returned to stock at the depot.

(3) Serviceable items which require laundering or dry cleaning will be sent to laundries or dry cleaners. When these items are returned they will be sized, baled or packed in suitable containers and returned to stock at the depot.

(4) Items in need of repair will be reported to the Base Section Quartermaster who will direct shipments to designated Salvage repair organizations. Reports to the Base Section Quartermaster will include the approximate number of items to be shipped and an estimate of the number of truck loads involved. This will enable the Base Section Quartermaster to expedite shipping instructions.

b. Blankets

(1) Blankets will be segregated into (a) U. S. blankets and (b) all other blankets. This classification will be followed in all receipts, processing and shipments back to depot stock and separate stock-record cards will be maintained.

(2) A small percentage of blankets will be dirty and will need to be laundered. The balance or greater percentage will not require laundering. Whenever possible blankets will be sterilized rather than laundered, for quick return to depot stocks.

c. Divisional or other insignia will be carefully removed, renovated if necessary, packed by division, corps, army or other unit designation and returned to stock.

d. Cotton underclothing when new and in original packages will be returned to depot stocks. All other cotton underclothing will be laundered and after laundering will be classified as to whether it retains combat serviceability, is wearable but not suitable for re-issue to troops, or is unwearable.

(1) Cotton underclothing which retains combat serviceability will be sized by the depot and returned to stock as Class B or Class X as determined by Hq. OCQM Hq. Comm. Z.

(2) Cotton underclothing which is wearable, but not suitable for re-issue to troops will be sized by the depot and packed as Class X. Each package will be marked to show the contents and with the letter "X" to distinguish it from other stock. Class X wearable cotton underwear will be shipped to depots designated by the OCQM, Hq. Comm. Zone.

(3) Cotton underclothing which is unwearable will be used as cleaning rags after all

buttons have been removed. Rags in excess of the amount required in the depot will be baled and held for disposition to units on approved requisitions.

e. (1) Woolen underclothing not requiring repairs will be laundered and returned to depot stock in the same manner as all other Class B clothing.

(2) Woolen underclothing not suitable for further use as Class B clothing but which does not require repairs and which can still be used for P.O.W. will be sized and packaged. Each package will be clearly marked to show the contents and with the letter "X" to distinguish it from other stock. Class X woolen underclothing will be shipped to depots designated by the OCQM Hq. Comm. Zone.

f. Raincoats and oilskin gas capes will be handled in the following manner:

(1) All raincoats in a serviceable condition will be returned to depot stocks immediately.

(2) Raincoats in an unserviceable condition will be shipped to the repair facilities designated by OCQM. Care will be taken to see that these items are carefully packed to prevent deterioration.

(3) Instructions for disposition of Oilskin Gas Capes (British) will be issued separately.

g. **Impregnated Clothing.**

(1) Impregnated clothing which does not require laundering will be inspected by CWS processing companies, re-impregnated if necessary, and returned to stock.

(2) Impregnated clothing which requires laundering will be laundered, and returned to the depot, where arrangements will be made thru the Base Section Quartermaster with the Chemical Warfare Service officer to have it inspected.

(3) After inspection, serviceable impregnated clothing will be sized, packed and returned to stock for re-issue. If re-impregnation is necessary garments will be turned over to Chemical Warfare Service Processing Companies who will accomplish re-impregnation and return to depot stocks.

(4) Unserviceable impregnated clothing will be sorted into three (3) categories:

(a) That which has value for use as Class X clothing after the removal of impregnite. Such items will consist primarily of gloves; coats and trousers (or suits one piece) HBT; socks, shirts, and possibly some items of underwear.

(b) That which has no value as an item of clothing, but which can be used as rags after the removal of impregnite. Such items will consist primarily of underwear.

(c) That which has no value as rags or clothing and which should be disposed of as scrap.

(5) The Salvage officer in each depot will determine the proper category of each item during the sorting process. No item will be disposed of as having **no value** which can be used for Class X clothing or for rags.

(6) Items of condemned impregnated clothing which have no value as listed in paragraph (4) (c) will be disposed of in accordance with instructions from the OCQM.

(7) Items of condemned impregnated clothing which may be used as Class X or rags as indicated in paragraphs (4) (a) and (b) which can be used as Class X clothing or rags after the removal of the impregnite will be baled or packed in suitable containers and will be reported to the Base Section Quartermaster. Arrangements will be made by the Base Section Quartermaster to have these items forwarded to a Chemical Warfare Service plant or laundry where the impregnite will be removed. Items will then be returned to stock as Class X clothing or for use as rags.

h. **Gassed Clothing** will be kept separate from all other clothing. Arrangements for decontamination and disposal of such clothing will be made thru Base Section Quartermasters. Personnel handling gassed clothing will be furnished impregnated clothing and such other protective equipment as is necessary to avoid casualties. C.W.S. personnel will supervise the handling of gassed items.

i. **Oily or Greasy Clothing.** Under no circumstances will oily or greasy clothing be reclaimed. Such clothes or textiles saturated with grease and oil thereby constituting a serious fire hazard will be burnt or disposed of at the depots.

j. **Sizing of Clothing.**

(1) **Serviceable Clothing.** All **serviceable** items of clothing will be sized in accordance with Section I, sizing chart, issued by OCQM (see Appendix 8-8).

(2) **Class X & P.O.W.** All Class X clothing will be sized in accordance with Section II, sizing chart for Class X and POW clothing, issued by OCQM. (See Appendix 8-8).

9. CANVAS & WEBBING EQUIPMENT

a. **Serviceable Items.** All serviceable items of Canvas & Web equipment will be placed back in depot stock immediately.

b. **Unserviceable Items.** Unserviceable items will be shipped to repair facilities designated by the OCQM thru Base Section Quartermasters. Reports to the Base Section Quartermaster of items requiring repair will include the approximate number of items to be shipped and the estimated number of truck loads or car loads involved.

10. FOOTWEAR

a. **Shoes.** New shoes will be returned to depot stocks. All used shoes turned in for salvage will be cleaned, tied in pairs, packed in salvage barrack bags, or suitable containers, and shipped to repair facilities designated by OCQM.

b. **Arctics & Rubber Boots** will be sorted and those in serviceable condition will be cleaned, packed together in pairs and placed back into depot stocks immediately. Those in need of repair will be packed in suitable containers to withstand handling and shipped to repair facilities designated by OCQM.

11. REGULAR SUPPLIES

a. **Serviceable items.** Serviceable items will be placed back in depot stocks immediately.

b. **Unserviceable items** will be shipped to salvage repair facilities designated by OCQM.

12. DAMAGED OR DETERIORATED SUBSISTENCE

Damaged or deteriorated subsistence which is turned over to the salvage section of a depot will be taken up on the salvage account and reported immediately to the OCQM by the most expeditious means available. Damaged or deteriorated subsistence will be disposed of as per instructions from the OCQM to be published separately.

13. SPECIAL ITEMS

a. **Musical Instruments.** All unserviceable musical instruments that are turned in to salvage receiving depots will be held pending receipt of instructions from OCQM. Each salvage receiving depot will notify OCQM, as to the quantity and type of musical instrument turned in for salvage.

b. **National Colors and Regimental Standards** which have become unfit for further display will be shipped by organizations directly to installations designated by OCQM. Commanding officers of installations receiving National Colors and Regimental Standards will:

(1) Determine whether the colors and standards are repairable.

(2) Return all irreparable colors or standards to the proper organizations accompanied by a certificate of the commanding officer to the effect that they are irreparable.

(3) Repair all reparable colors and standards as expeditiously as possible and return them to the proper organization.

(4) Use only new materials for repairs. Under no condition remove parts of one color or standard for the repair of another.

(5) Keep colors and standards under lock and key while in storage.

c. **Repair of Typewriters and Office Machinery.**

(1) Minor adjustments and such repairs as can be made with spare parts available will be performed by maintenance units attached to Class II depots.

(2) Typewriter and office machines which need other than minor repairs or which are turned in as salvage will be shipped to designated repair facilities. Typewriters and office machines so shipped will be properly packed to withstand handling. They will be packed in wooden boxes, one typewriter or one office machine to a box. The carriage of each typewriter will be securely tied to prevent sliding back and forth. Each typewriter will be screwed to the bottom of the wooden box to prevent breakage in transit.

(3) Under no circumstances will typewriters and office machines be cannibalized by using units.

d. **Empty Gas & Oxygen Cylinders** will be turned in to Engineer Supply points.

e. **Unserviceable Tires and Rubber Scrap** will be turned over to Ordnance Depots or Dumps.

f. **Field Ranges.**

(1) Field Ranges in serviceable condition will be placed in depot stock for re-issue.

(2) Field Ranges requiring repairs will be sent to repair facilities designated by OCQM.

(3) When practicable, arrangements for repair of Field Ranges by Ordnance Repair Cos. may be made by Base Section Quartermasters. Necessary spare parts will be furnished Ordnance Repair Cos. by Class II depots.

g. **P.O.L. Containers & Jerri-Cans**

(1) Serviceable P.O.L. containers and Jerri-Cans will be returned to P.O.L. depots.

(2) P.O.L. containers and Jerri-Cans requiring minor repairs will be turned over to designated QM Gasoline Supply Cos. which are

responsible for repairs of gaskets, market tags, hinge pins, cotter pins and such other minor repairs within the capability of the units.

(3) Those requiring major repairs such as seam welding replacement of Jerri-cans necks and other repairs beyond facilities of Gasoline Supply Companies will be repaired by facilities designated by OCQM.

h. **Container Recovery.**

(1) **General.**

(a) In view of the acute shortage of sacks, potato, flour, etc. and baskets, boxes, carbon tetrachloride drums, glass bottle containers of nonpoisonous fluids and containers of all types, every effort will be made by each Quartermaster depot to conserve these items to the fullest extent.

(b) Individual units will be instructed to carefully open all containers and return them to the depot from which they were originally drawn.

(c) Each depot will carefully preserve and store all containers for future use by the individual depot. Should an excess quantity of containers accumulate in the depot, a request for shipping instructions will be made to the OCQM giving the quantity and type of containers on hand. Shipping instructions will then be forwarded to the depot concerned by the OCQM.

(2) **Subsistence Containers.**

(a) Cases, boxes, and crates containing subsistence will be carefully opened to avoid unnecessary damage and breakage and will be kept clean and dry. They will be used and reused as containers and under no circumstances will they be broken up or used for any other purpose.

(b) The opening of all burlap, cloth and paper bags will be done by unlacing or untying; they will be protected from the weather and returned to the depot from which the subsistence is drawn.

(3) **Containers other than subsistence.** All other cases, crates and cardboard containers, (including those from Army Exchanges) the disposition of which is not specifically prescribed elsewhere, will be carefully opened to prevent unnecessary damage (unless breakdown instructions have been issued) and will be re-used as long as suitable.

14. **ACTION BY SALVAGE REPAIR FACILITIES**

a. **QM Facilities.**

(1) Quartermaster repair facilities will repair QM items to the fullest extent possible, and every effort will be made to return items to depot stock at the earliest possible moment. Unnecessary refinements which does not affect combat serviceability will be eliminated. Requests will be made to the Supply Division, OCQM, for shipping instructions by the most expeditious means available whenever sufficient quantities of repaired items are ready for shipment. Requests will indicate whether the items are Class B or Class X giving the quantity of items repaired, and breakdown of sizes by Class.

(2) All tally-outs of items to depot stocks will bear letters A, B, or X, approximately ½" high so that these tally-outs may be clearly distinguishable from normal shipments.

(3) All bales and containers will be clearly lettered B or X in letters approximately 5" high either by stencil or free hand in red or in paint that is clearly distinguishable. Each bale or container will be so marked on one end and one side.

b. **Civilian Facilities.** Items repaired by civilian facilities will be shipped to depots designated by OCQM.

c. Badges of qualification, medals, insignia, and uniform buttons will be properly packed, marked and shipped to depots designated by OCQM unless required for use by salvage repair facilities.

15. **SALVAGE/SCRAP**

a. **Disposition.** Except as noted herein, disposition of all Salvage/Scrap for which the Army has no further use, will be as directed by theater directives.

b. **Classification.** Every effort will be made to place waste in receptacles or bins which will tend to automatically classify it into the basic materials, so that the waste will not be difficult to classify. Waste paper will be properly segregated; rags, glass, scrap, leather, rubber, etc., will be placed in separate bins respectively.

c. **Paper.**

(1) **Top Secret papers** will be destroyed by burning.

(2) Waste paper classified secret and confidential, will be destroyed thru pulping facilities if available. Requirements of AR 380-5 as amended must be complied with. Proper officer supervision will be employed from collection to destruction and destruction will be complete. When pulping facilities are not available all sceret and confidential papers will be burned.

(3) Other scrap paper will be segregated into the following categories:

(a) Bitumen free containers and board

(b) Bitumenized containers and board

(c) Bitumen free heavy wrappings and sacks

(d) Bitumenized heavy wrappings and sacks

(e) Books, pamphlets, maps, flat paper, news and magazines.

(f) Mixed waste (unsorted and miscellaneous)

(4) The Bitumenistic (tar/asphalt) content of Bitumenized paper and containers is not easy to detect, and it will be necessary to scrutinize the paper and containers carefully to determine the presence of this preparation. This will be done by tearing a corner of the paper or carton.

(5) Paper will be protected from the weather. Paper which is soiled by contact with food will be destroyed.

d. **Glass** will be rinsed of all food particles. Bottles which have contained poison, disinfectant or oil will be broken and buried. Under no conditions will they be placed in bins containing broken glass or rinsed bottles.

e. **Tins** will be rinsed of all food particles and flattened.

f. **Leather** will be kept dry.

g. **Rope and String** will be tied in bundles and kept dry.

h. **Rags** will be kept dry. Cotton and burlap meat wrappers will be washed and dried. Oily rags will be burned.

i. Metal Scrap will be collected in bins with ferrous metals separated from non-ferrous metals. Scrap from Signal and Medical equipment, including dry batteries, will be kept in separate containers and so labelled. Adequate in-expensive receptacles (clean used tin cans, sacks, etc.) for razor blades, waste paper, empty toothpaste and shaving cream tubes and all items, the major proportion of which are composed of rubber, will be placed in washroom, barracks and other suitable locations. Such articles will be made available for collection and disposed of as prescribed by theater directives.

j. **Oil and Lubricants and Solid Fuel.**

(1) Used crank case oil and gear lubricant turned in as salvage will be collected in separate containers, and reported to P & F Divn, OCQM, for disposition.

(2) Solid Fuel turned in as salvage will be reported to P & F Division, OCQM for disposition.

k. **Lumber.**

(1) Salvage lumber may be utilized as required within depots for packing, crating and construction of shelves, bins, etc. Salvage lumber accumulations in excess of requirements will be reported to Base Section Quartermasters for disposition.

(2) Damaged lumber which is suitable only for firewood will be turned in to designated Quartermaster Solid Fuel Dumps.

l. **Kitchen Waste.**

(1) **Garbage.** Garbage suitable for animal food, except grease and bones, will be sold. The sale of garbage will be accomplished by informal contracts which will be entered into between the Base Section Salvage Officer and civilian contractors. (AR 30-2175)

(2) **Grease and Bones.** Grease and bones will be collected in separate containers. All meat and fat will be removed from the bones. Disposal will be by sale in the same manner as in (1) above.

(3) **Inedible garbage.** Other garbage which is unfit for animal food, such as coffee grounds, tea leaves, egg shells, citrus rinds, fish heads and scales and similar waste will be placed in separate containers and disposed of as directed by Base Section Commanders.

(4) **Funds.** Funds received from the sale of garbage etc., will be turned over to the Finance Officer for deposit to the credit of the U. S. in accordance with the provisions of paragraph 1.a (2) AR 35-780.

m. **Disposal of Valueless Salvage/Scrap.** When theater directives require incineration or burial, a disinterested officer will certify that he has witnessed its final disposal. It is necessary in this type of disposition that all Health Laws or other Legal restrictions of allied governments concerned are fully complied with in every respect.

16. AMMUNITION AND EXPLOSIVES IN SALVAGE

Ammunition and explosives of all types will be removed from clothing and salvage prior to shipment. Each salvage officer will certify on all tally-outs that he has inspected or caused to be inspected the salvage shipment concerned and that it is free from explosives. Copy of tally-out bearing the above certificate will accompany the salvage shipment.

17. ALLIED EQUIPMENT TURNED IN FOR SALVAGE

a. Allied material turned in to receiving depots or salvage repair organizations for salvage will be forwarded to the Allied Collecting Agencies concerned. If, however, the Allied Collecting Agency is unknown, a report will be submitted to the OCQM, giving a description and the quantity of the Allied material in question. The OCQM, will contact the Allied Agency concerned and a distribution directive will be forwarded to the depot.

b. A report will be submitted to the OCQM, showing the type and quantities of Allied material turned over to the proper Allied Collecting Agency.

18. CAPTURED WAR MATERIALS

a. **New or unused types for research.** Captured enemy equipment of new types or design will ordinarily be selected by enemy equipment Intelligence Service Teams for technical examination and research study. This equipment will be specially marked to distinguish it from other captured equipment. Any such equipment falling into hands of salvage organizations will be expedited to its designation.

b. Captured material required for immediate use by friendly forces will be processed thru normal service maintenance echelons for repair using the facilities of the service to which the material pertains.

c. (1) No captured enemy P.O.L. products will be used in any vehicles until they have been tested and approved for use by QM Petroleum Laboratory Units or by Engineer Laboratory facilities, or by such other testing facilities which may be authorized.

(2) Captured enemy P.O.L. products which are unsuitable for use will be disposed of in accordance with instructions from G-4 thru OCQM.

(3) Captured charcoal, wood blocks, and pea coal will be reported to Installations Division, OCQM, for disposition.

d. Captured subsistence will be reported to Base Section Quartermasters for disposition.

e. **Scrap Materials.** Scrap materials resulting from captured war materials will be disposed of in the same manner as outlined in paragraph 8-15.

f. **Reports.** Reports of captured war material will be submitted in accordance with theater directives.

19. EVACUATION

a. General

(1) Evacuation of materials to the U. K. or U. S. will be in accordance with directives issued by the theater. These directives will set forth items which are desired for use in another theater.

(2) Material collected for evacuation will be segregated at the Base Scrap Dumps to facilitate evacuation in order of priority as follows:

(a) Unserviceable equipment for which repair and reclamation facilities are not available.

(b) Enemy equipment required for study and experimentation by agencies in another theater.

(c) Enemy equipment required by our armed forces in other theater.

(d) Scrap material for which a critical shortage exists in other theaters.

b. **Liaison with ports.** Liaison will be established with ports regarding packing of salvage for shipment overseas. Steps will be taken to eliminate from shipments all ammunitions and explosives. A certificate signed by the Salvage Officer that Salvage material delivered to the Transportation Corps for shipment to other theaters if free of all explosives, will be furnished to Transportation Corps.

20. SALVAGE ACCOUNTING

a. **Records of Receipt.** Salvage property received at a depot will be tallied-in in the same manner as all other property. The signed tally-in will be used as a debit voucher to the separate account in the same manner as the regular depot stock account. Debit and credit vouchers will be numbered serially in sequence, maintained on one register and filed apart from the vouchers of the regular account. The salvage account is subject to check by the Quartermaster Service and Inspector General's Department. From the records available, the inspecting officer should be able to trace salvage property from the date it was received to the date and manner of final disposition.

b. **Depot Salvage.** Salvage supplies and equipment will be dropped from the regular account and picked up on the salvage account upon a certificate of the commanding officer of a depot to the effect that he has inspected or caused to be inspected, the supplies or equipment, and that in his opinion the supplies or equipment are unserviceable. The salvage activity will maintain a separate account which will consist of a record of all receipts and the

disposition of all salvage articles, by class and item. This record must be duly supported by acceptable debit and credit vouchers similar to those employed in connection with the regular stock account.

c. **Records of Disposal.** Salvage property will be removed from the salvage account by use of acceptable credit vouchers similar to those employed in connection with the regular stock account. The officer in charge of the salvage activity is expected to use sound judgment in the preparation and certification of these papers. A few types of transactions are as indicated below:

(1) Items which are reclaimed will be dropped from the salvage account and returned to the regular stock account as Class B property or Class X clothing, whichever the case may be, on Tally-out.

(2) Salvage items used in making repairs will be dropped from the salvage account as having lost their activity thru becoming part of a whole unit, on a tally-out.

(3) Items may be dropped from the salvage account when they are made into rags and issued to troops as authorized for cleaning and preserving purposes on a tally-out.

(4) Damaged or deteriorated subsistence supplies dropped from the regular account should immediately be taken up on the salvage account on copy of tally-out from regular account to salvage.

(5) Items may be dropped from the salvage account when ordered to be destroyed. In such cases the order directing destruction will bear the certificate of the officer ordered to witness the destruction and thus it will act as a credit voucher to the account.

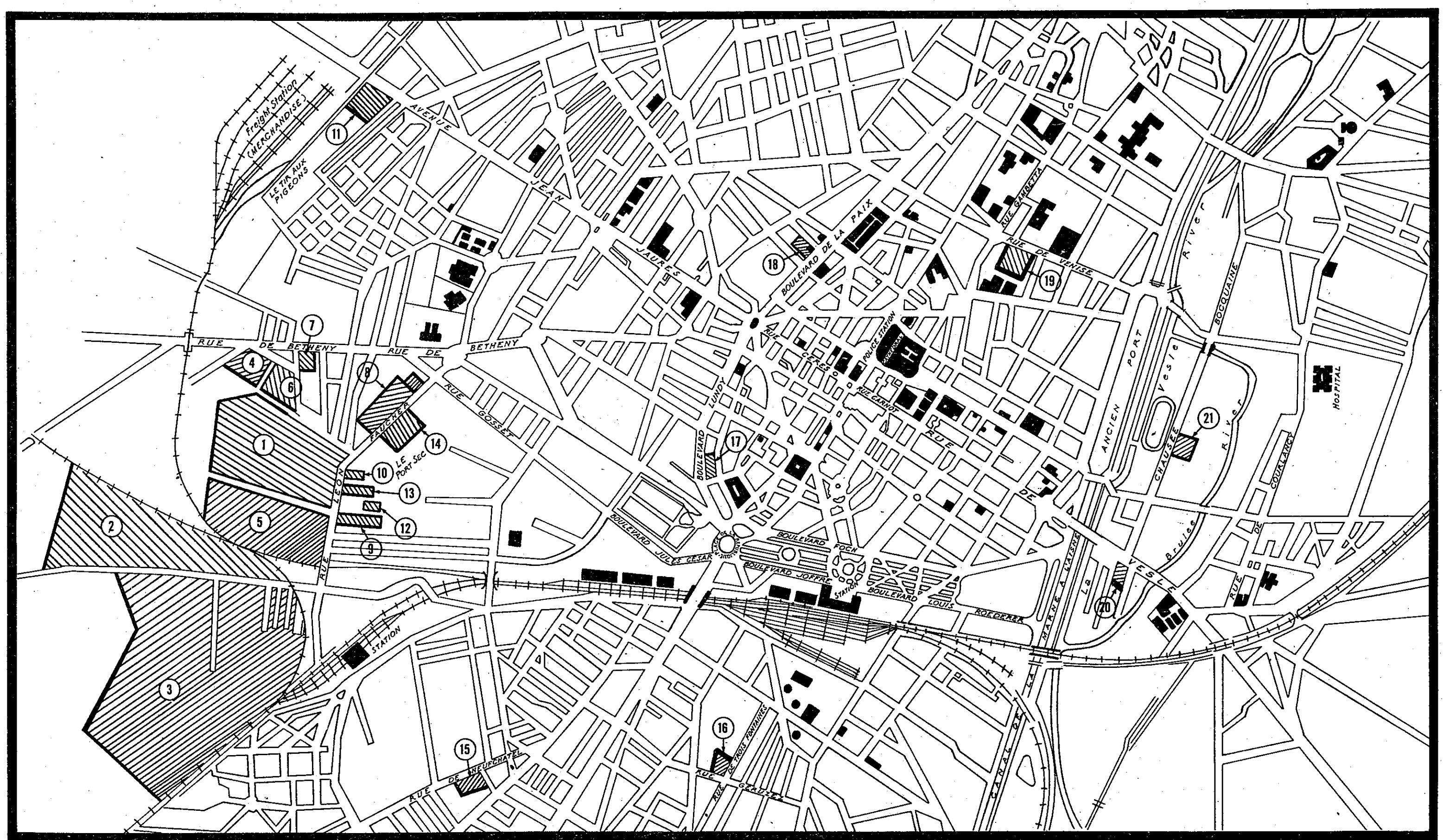
(6) In any case, where salvage supplies are authorized for transfer, complete records will be maintained for such actions and signed tally-outs will be used to support transfers.

21. REPORTS

Reports will be submitted as directed by the SOP's covering salvage procedure.

*Depot Operations Manual, Section VIII, OCQM, 1 August 1944.

APPENDIX XII
MAP OF REIMS

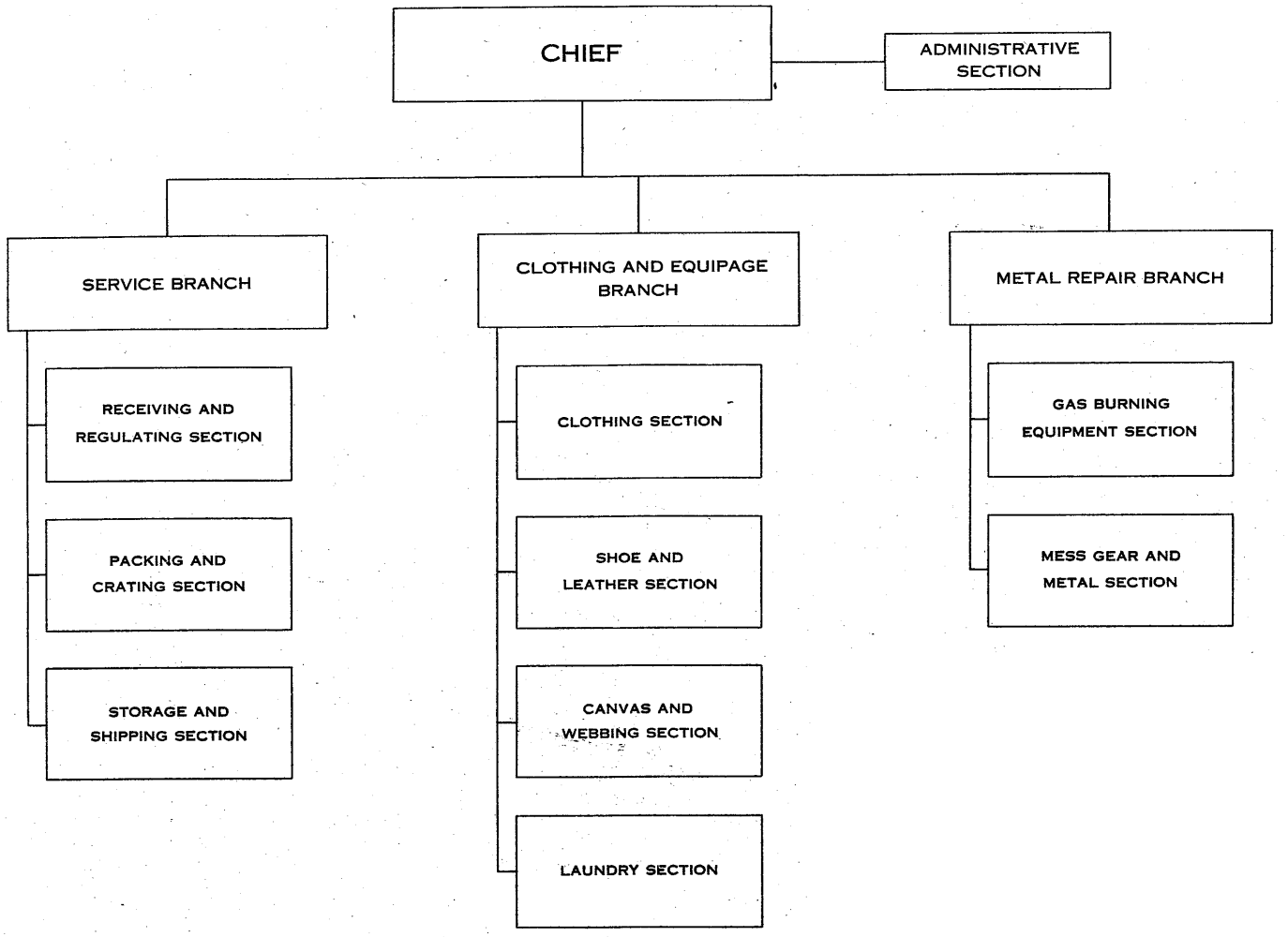


DRAWN BY 64TH QM BASE DEPOT (UNDATED).

LEGEND

1 DEPOT Q-256 DOCKS REMOIS
2 POW STOCKADE NO. 3
3 & RUSSIAN CAMPS
4 RUSSIAN GUARD CAMP (CAMP RED STAR)
5 SALVAGE RECEIVING AREA (PORT SECTION)
6 POW STOCKADE NO. 2
7 DRY-CLEANING SITE (CHEESE FACTORY)
8 POW STOCKADE NO. 1
9 SUPPLY DIVISION STORAGE AREA - MOBILE TRAILERS
10 CIVILIAN LABOR OFFICE
11 SUPPLY DIVISION STORAGE AREA - PIGEON YARD
12 CONSOLIDATED MESS (NEGRO)
13 LAUNDRY OPERATING SITE
14 LAUNDRY OPERATING SITE
15 MOTOR POOL
16 SUPPLY DIVISION - MAINTENANCE (COALYARD)
17 MACHINE SHOP & DEPOT SERVICE BRANCH (CHAMPAGNE FACTORY)
18 CONSOLIDATED MESS (WHITE)
19 SPARE PARTS WAREHOUSE
20 SUPPLY DIVISION - MAINTENANCE (RENAULT PLANT)
21 TENT AND RAG FACTORY - SALVAGE DIVISION

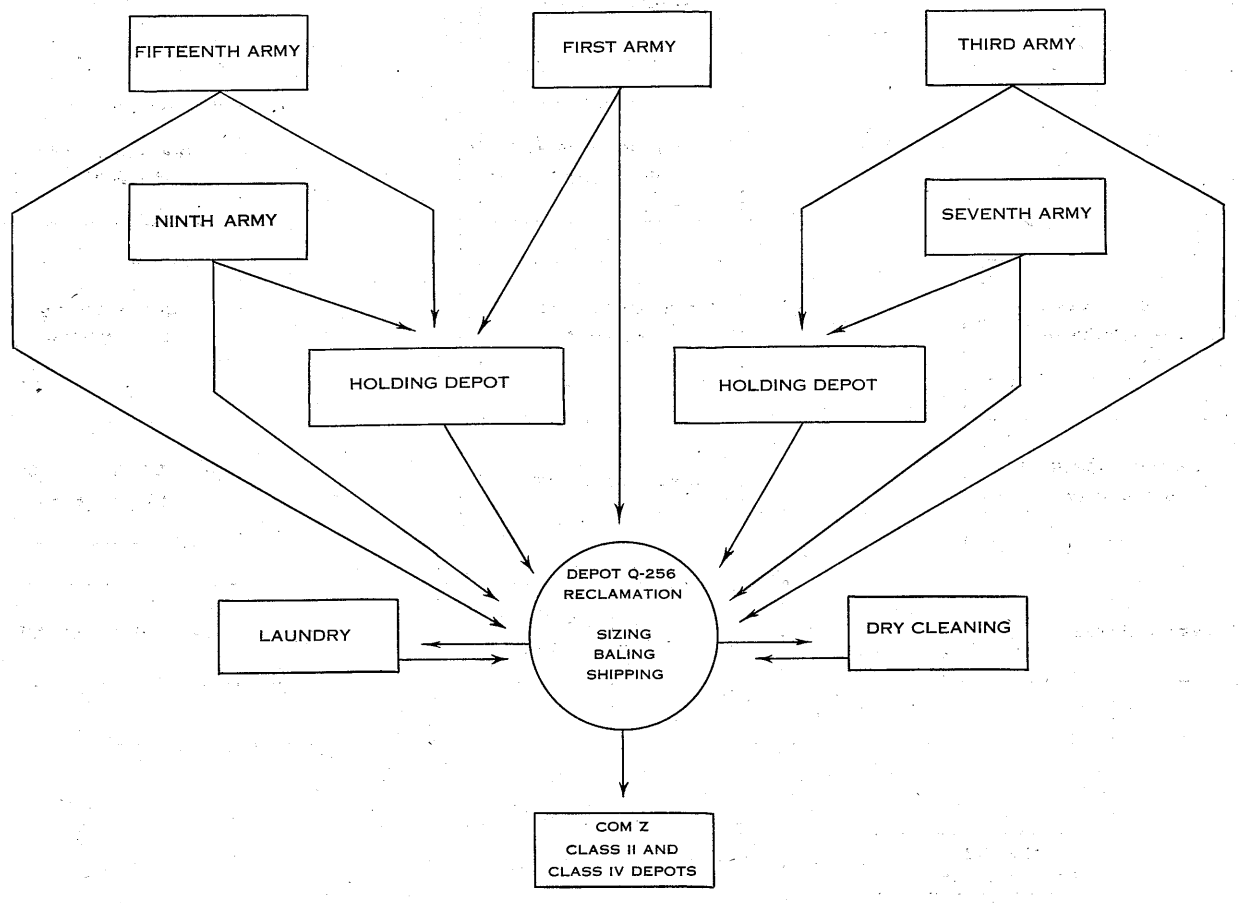
APPENDIX XIII
ORGANIZATION CHART, SALVAGE DIVISION, DEPOT Q-256*



* ACTIVITY REPORT, 64TH QM BASE DEPOT, MARCH 1945.

APPENDIX XIV

FLOW OF SALVAGE *



* ACTIVITY REPORT, 64TH QM BASE DEPOT, MARCH 1945.

APPENDIX XV

STATUS OF FIELD RANGES ON ORDER FROM THE BRITISH*

29 March 1944

Item	Total on Order	Total Delivered to 25 March 1944
Contained in Pack B		
Cabinet, range, field	5,195	1,281
Cover, bake and roasting pan	5,735	705
Cover, heavy, 15-gallon cook pot	7,372	
Cover, light, 10-gallon insert	4,917	
Cradle, cook pot	5,457	1,268
Dipper, 1-quart	5,326	749
Fork, cook's, flesh, 15"	6,636	
Fork, cook's, flesh, 21"	6,636	
Insert, 10-gallon, (for 15-gallon cook pot)	5,891	
Knife, butcher's, 10" blade	10,403	
Knife, paring	37,100	
Ladle, 8-ounce, 21" overall	5,301	
Pan, bake and roasting	5,735	705
Pan, cake	9,011	988
Plate, splash, for cook pot	6,554	
Pot, cook, heavy, 15-gallon	5,735	
Skimmer, 5" x 15"	6,554	1,839
Spoon, basting, 15"	10,239	
Spoon, basting, 21"	10,239	
Turner, cake, 15" or 21"	5,423	
Contained in Pack A		
Blade, 14", (for saw, butcher's)	13,105	
Book, instruction	1,341	
Box, tool, metal, empty	6,276	
Brush, wire	39,917	
Can, safety, steel, 5-gallon	7,643	
Cleaver, butcher's	5,326	
Container, empty, (for small parts)	39,917	
Container, tin, w/graphite grease	59,449	
Disk, filter, can	3,584,950	
Extinguisher, fire, 1-quart	39,917	3,827
Funnel, tin, w/wire strainer	39,917	2,013
Gasket, filter-case-cap-screw	19,668	
Hook, hay	11,193	
Jet, fuel, fire unit	19,668	
Kit, canvas, utensil	7,635	
Knob, valve-stem, air	4,917	
Knob, valve-stem, flame	4,917	
Knob, valve-stem, fuel	4,917	
Packing, valve-stem	19,668	
Pump, air-pressure	39,917	2,176
Saw, butcher's, 14" blade	5,319	
Screw driver, 3" blade	39,917	
Screw, filter-case-cap	19,668	
Steel, butcher's, 10" blade	5,572	
Tube, fuel or air, long	9,834	
Tube, fuel, short	9,834	

Item	Total on Order	Total Delivered to 25 March 1944
Contained in Pack A		
Tube, manifold	9,834	
Valve, flame, w/o knob	9,834	
Whip, wire, 16"	4,917	
Wrench, open end, 9/16"	39,917	200
Wrench, open end, 5/8"	39,917	
Items not in Pack A or Pack B		
Cap, fuel-tank	5,000	
Case, water-heater	6,276	
Grate, wood-burning	5,457	
Shield, water-heater	6,276	
Washer, leather, (for fuel tank cap)	15,000	
Additional Items on Order		
Shelves (for baking)	100	
Wire, steel, (24-yard spool)	35,000	
Wrench, adjustable to 1" jaw	35,000	

*Report, Supply Division, OCQM, 29 March 1944.

APPENDIX XVI

FIELD RANGE M-1937

FIRE-UNIT MAINTENANCE-KIT ACCESSORIES

FOR 90 DAYS*

17 May 1943

Tools	No.
Book, instruction	1
Brush, wire, w/handle	1
Chain, tie-in, left	1
Chain, tie-in, right	1
Cleaner, burner-slot, fire-unit	1
Cleaner, generator, fire-unit	1
Container, tin, (for valve grinding)	1
Container, tin, w/graphite grease	1
Disk, filter, fire-unit, in filter disk cans	300
Extinguisher, fire, carbon-tetrachloride, 1-qt., pump-style	1
Funnel, tin, 1/2-quart, w/wire strainer	1
Protector, arm, long	1
Protector, arm, short	1
Pump, air	1
Reamers, fuel-jet, fire-unit	1
Screw driver, common, type-III, normal-duty, class C, single-grip, (length of blade 3")	1
Wrench, engineer's, carbon-steel, unfinished, 15° angle, single-head, (milled opening 9/16")	1
Wrench, engineer's, carbon-steel, unfinished, 15° angle, single-head, (milled opening 5/8")	1
Wrench, fire unit, (for filter-case cap screw)	1
Wrench, 22 1/2°, carbon-steel, unfinished, single-head, (for 5/16" setscrew)	1
Spare Parts	
Burner, fire-unit	1
Cap, fuel-tank, complete, w/plug	1
Gasket, filter-case, screw cap, fire-unit	4
Generator, complete	1
Jets, fuel, fire-unit	4
Knob, valve-stem, fire-unit w/1-pin cotter, (beveled points, 3/32" x 1", bright finish)	
Air	1
Flame	1
Fuel	1
Nut, burner	1
Packing, valve-stem, fire-unit, 3/8" x 17/32" x 9/32", (braided and molded asbestos ring)	4
Screw, filter-case-cap, fire-unit	4
Shutter, air	2
Tube, fuel, short, fire-unit, (complete)	2
Tube, fuel or air, long, fire-unit, (complete)	2
Tube, manifold, fire-unit, (complete)	2
Valves, flame, fire-unit, w/o knobs	2

*Memorandum, Chief, Subsistence Division, to Chief, Supply Division, 17 May 1943.

APPENDIX XVII

REPLACEMENT PARTS REQUIRED TO MAINTAIN 1,000 FIRE UNITS, FIELD RANGE, M-1937, FOR OVERSEA FIELD SERVICE FOR 30 DAYS*

15 July 1943

Item	ETOUSA Figure	NATOUSA Figure
Fire-unit assembly	7	12
Strap, anchor, outer fire-unit tank	3	3
Rivet, outer anchor-strap	3	9
Strap, anchor, inner fire-unit tank	3	3
Rivet, inner anchor-strap	3	9
Screw, fire-unit anchor-strap	3	35
Panel, front	13	36
Rivet, front-panel-hinge	13	144
Mirror, front panel	7	15
Screw, front-panel-mirror	7	250
Screw, set, front-panel, 5/16" x 5/8"	17	42
Tank, fuel	3	20
Shield, fuel-tank	3	4
Screw, fuel- and air-tank shield	10	
Cap, fuel-tank-filler, tube, old-type	13	
Cap, fuel-tank-filler, tube, new-type	7	166
Valve, fuel-tank-filler, tube, cap	10	25
Valve, fuel-output, assembly	10	17
Tube, uptake, fuel-output-valve	7	8
Check, safety, fuel-output-valve	17	36
Tank, air	10	8
Shield, air-tank	3	5
Elbow, air-output	10	17
Manifold, assembly	17	80
Tube, fuel, short	13	40
Tube, fuel and air, long	13	250
Valve, air-input, assembly	17	16
Stem, air-input-valve	17	20
Check, air-input-valve	17	40
Retainer, check, air-input-valve	17	40
Elbow, gage-fitting	10	25
Gage, air-pressure	17	40
Glass, air-pressure-gage	33	20
Valve, air and fuel, assembly	17	17
Stem, air- and fuel-valve	10	30
Gland, packing, air-, fuel-, and flame-valve	10	16
Packing, air-, fuel-, and flame-valve	167	300
Knob, air-, fuel-, and flame-valve	85	120
Pin, cotter, air-, fuel-, and flame-valve-knob	167	500
Valve, flame, assembly	33	170
Body, flame-valve	17	17
Stem, flame-valve	33	50
Jet, fuel, flame-valve	167	1,000
Nut, flame-valve	27	25
Shutter, air	17	50
Chamber, mixing	33	17
Screw, mixing-chamber	40	40

Item	ETOUSA Figure	NATOUSA Figure
Burner	33	250
Rod, burner-control	17	17
Nut, burner	17	50
Generator, assembly	167	500
Cap, generator	33	80
Disk, filter	60,000	90,000
Can, filter-disk	3,600	0
Screw, cap, filter-case	17	80
Gasket, filter-case-cap-screw	333	1,000
Yoke, generator	17	17
Pin, cotter, generator-yoke	40	40
Screw, generator-yoke	40	20
Box, tool, w/tools	10	25
Cover, manifold-compartment	17	0
Pump, air-assembly	27	62
Cup, leather air-pump	167	300
Hose, air-pump, w/thumb lock and fitting	40	125
Wrench, filter-case-cap-screw	10	41
Wrench, engineer's, single-head, 5/8" opening	27	33
Wrench, engineer's, single-head, 9/16" opening	27	33
Screw driver	27	33
Reamer, fuel-jet	83	83
Cleaner, burner-slot	40	83
Cleaner, wire-generator	40	183
Brush, steel-wire	40	125
Funnel	44	83
Chain, tie-in, right	3	3
Chain, tie-in, left	3	3
Container w/graphite grease	333	333
Container for small parts	40	40
Protector, arm, long	17	83
Protector, arm, short	17	83
Can, gasoline	17	0
Hook, hay	10	33
Grate, wood-burning	3	0
Case, water-heater, assembly	10	0
Can, water-heater	10	0
Cover, can, water-heater	17	
Shield, can, water-heater	10	
Cabinet, assembly	3	0
Cradle, cook-pot	3	5
Pot, cook	7	50
Plate, splash	10	50
Cover, cook-pot, heavy	7	10
Insert	10	50
Cover, cook-pot, light	10	50
Pan, roasting	7	50
Cover, roasting-pan	7	50
Pan, cake	27	200

*Memorandum, Chief, Subsistence Division, to Chief, Executive Division, 15 July 1943.

APPENDIX XVIII

REPORT OF COMMODITIES PROCURED FROM CONTINENTAL SOURCES*
(Spare Parts for Field Range)

30 September 1945

Item	Total on Demand	Cumulative Deliveries to Date
Jet, fuel	200,000	201,062
Jet, metering valve	50,000	57,525
Mixing chambers	5,000	5,008
Pipe, black iron, 1/4"	5,000	2,879
Rivet, steel, flat-head	50,000	49,130
Set screw	100,000	66,650
Stem, air-input	21,000	21,022
Stem, packing-valve	250,000	191,071
Tube, fuel	10,000	10,341
Tube, fuel and air, long	70,000	69,312
Tube, fuel, short	30,000	29,937
Tube, manifold, complete	50,000	45,112

*Report of Deliveries, Commodities procured from Continental Sources, Procurement Division, OCQM, 6 October 1945.

APPENDIX XIX

SPARE PARTS FOR SPECIAL-PURPOSE EQUIPMENT*

13 May 1944

Item	In United Kingdom May 1944	Total Due United Kingdom 31 August 1944	90-day Spare Parts on Hand May 1944	90-day Spare Parts Due 31 August 1944	1-year Spare Parts on Hand May 1944	1-year Spare Parts Due 31 August 1944
Bath units	43	82	43	—	43	—
Coffee roasters, mobile	56	69	56	—	69	—
Fumigation chambers	124	130	124	—	30	94
Trailers, dough	104	144	104	—	144	—
Trailers, generator	104	144	104	—	144	—
Trailers, laundry (American)	213	294	112	101	64	144
Trailers, machine	52	72	52	—	72	—
Trailers, oven	156	216	156	—	156	60
Trailers, refrigeration	201	231	171	30	90	135
Trailers, salvage repair (clothing)	23	23	8	15	4	19
Trailers, salvage repair (shoes)	23	25	8	15	4	19
Trailers, salvage repair (textile)	23	23	8	15	4	19
Trailers, sterilization	50	51	48	—	16	32

*Report, Installations Branch to Plans and Training Division, 13 May 1944.

APPENDIX XX
CLOTHING OF COMBAT TROOPS
EUROPEAN THEATER OF OPERATIONS*

Winter 1944-1945
(Principal Items Only)

United States	British and Canadian	French	German	Russian
Underwear and shirts Drawers, wool Shirts, flannel Undershirts, wool	**Underwear and shirts** Underdrawers, all-wool Undershirts, all-wool Shirt, wool	**Underwear and shirts** Drawers, wool Undershirts, wool Shirts, flannel	**Underwear and shirts** Drawers, wool Undershirts, wool Shirt, wool, collarless	**Underwear and shirts** Drawers, wool or cotton flannel Undershirts, wool or cotton flannel
Headgear Cap, wool, knit Helmet and liner Cap, field, cotton, (limited)	**Headgear** Helmet Muffler used as toque Beret (limited issue to Canadians)	**Headgear** Cap, wool, knit Helmet and liner	**Headgear** Helmet Muffler-toque Cap, wool, service, with ear-flaps Hood (limited)	**Headgear** Helmet Cap, service, cotton, wool-trimmed Cap, winter, pile
Handgear Gloves, wool, od, with leather palm Gloves, leather, heavy, (limited) Mittens, shell, with liners (limited)	**Handgear** Gloves, wool, knit Gloves, leather, (limited) Mittens, wool	**Handgear** Gloves, wool, od, with leather palm Gloves, leather, heavy, (limited)	**Handgear** Gloves, wool Mittens of various types to fit over gloves (limited) Wristlets (limited)	**Handgear** Mittens, trigger-finger
Footgear Boots, combat, or shoes, type III, with leggings Overshoes Shoepacs with innersoles and ski socks (limited) Socks, wool, light; US, wool, heavy; British, wool, heavy; and cushion sole	**Footgear** Shoes, leather Leggings, cuff Boots, knee, rubber (limited) Socks, wool, heavy	**Footgear** Shoes, type III Leggings Socks, wool, light; wool, heavy; and cushion sole	**Footgear** Shoes, leather, or boots, leather Boots, cold-weather, (limited) Socks, wool Foot-wraps	**Footgear** Shoes, leather, or boots, leather Socks, wool, heavy Wrap puttees Foot-wraps

United States	British and Canadian	French	German	Russian
Jackets Jacket, field, cotton, od, or Jacket, field, M-1943, or Jacket, combat, winter, or Jacket, field, od, arctic Sweater, high-neck	**Jackets** Jacket, battle, wool Jerkin, leather, wool-lined, (all combat troops) Sweater (pull-over type)	**Jackets** Jacket, field, cotton, od, (old style) Coat, wool-serge, (used frequently for combat wear)	**Jackets** Coat, wool Extensive issue of windproof jackets both lined and unlined of varying types	**Jackets** Blouse, wool Padded jacket (limited) Sweater (limited)
Trousers Trousers, field, wool, od, or Trousers, wool, or Trousers, combat, winter Trousers, field, cotton, od, (limited)	**Trousers** Trousers, battle, wool Coveralls (Armored Force)	**Trousers** Trousers, wool	**Trousers** Trousers, wool Extensive issue of windproof trousers both lined and unlined	**Trousers** Trousers, wool
Overcoats Mackinaw Overcoat, wool, Melton	**Overcoats** Overcoat, wool	**Overcoats** Overcoat, wool, Melton	**Overcoats** Overcoat, wool	**Overcoats** Overcoat, heavy, ankle-length
Raingear Raincoat, dismounted Poncho, US or British type (limited)	**Raingear** Raincoat, oilskin Ground sheet (may be used as a cape)	**Raingear** Raincoat, dismounted	**Raingear** Shelterhalf, triangular, used as poncho Raincoat (limited)	**Raingear** Not known
Snow camouflage Miscellaneous assortment of three types: Parka and trousers Nightshirt type Poncho type	**Snow camouflage** Parka, trousers, and mittens (limited issue)	**Snow camouflage** Miscellaneous assortment of three types: Parka and trousers Nightshirt type Poncho type	**Snow camouflage** Parka, trousers, and mittens, lined and unlined (limited)	**Snow Camauflage** Parka, trousers, and mittens, (limited)
Mufflers Muffler, wool, od, (limited) Muffler, British (limited)	**Mufflers** Muffler, short British type	**Mufflers** No issue	**Mufflers** Muffler-toque	**Mufflers** None authorized
Sleeping gear Four blankets, or Bag, sleeping, wool, with water-repellent cases, and two blankets	**Sleeping gear** Four blankets	**Sleeping gear** Four blankets	**Sleeping gear** Two blankets	**Sleeping Gear** Blankets

*Report, Conferences on Winter Clothing, Winter 1944-1945.

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.

OQMG. 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 Alliees. 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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