

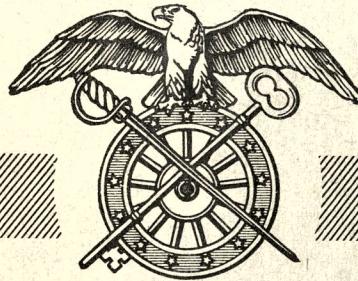
**RESTRICTED**

**QUARTERMASTER  
CORPS MANUAL**

**QMC 16-2**

**POSTWAR  
GRAVES REGISTRATION ACTIVITIES  
IN AN OVERSEA THEATER**

**August 1947**



**WAR DEPARTMENT  
OFFICE OF THE QUARTERMASTER GENERAL**

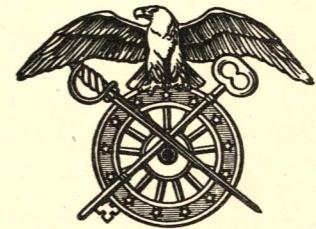
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IN AN OVERSEA THEATER**

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AUGUST 1947



**WAR DEPARTMENT**

**OFFICE OF THE QUARTERMASTER GENERAL**

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## FOREWORD

In the verdant jungles of Burma, high in the Vosges mountains of eastern France, along the flat salt marshes of Holland, through the stones and sand of the North African deserts, men of the American Graves Registration Service are searching for the bodies of American servicemen who died during World War II. On every continent, in every climate, in all kinds of terrain, the search goes on. Because World War II was a global war in a sense no previous war has ever been, the mission of searching its battle grounds for the bodies of American war dead is truly world wide in scope. But if care and painstaking thoroughness will do it, men of the American Graves Registration Service are resolved that no American servicemen will be neglected--that the bodies of all men that can be reached will be returned to the custody of a United States military cemetery. Since V-J Day and before, the search has been going on; it will not be completed until the American Graves Registration Service is certain beyond a reasonable doubt that all American servicemen whose bodies can be recovered are resting in American graves.

But search and recovery of the remains of the American servicemen is only one detail of the problem involved in this immense operation. Restoring these bodies to United States cemeteries and placing markers over each grave is only part of the operation; names must be placed on these white crosses and stars of David. All the resources of American science have been employed to reduce the number of grave markers that bear the unadorned legend "Unknown American Soldier."

This manual is a description of AGRS activities in one area---the European theater. It will describe the methods used in search and recovery operations and, in greater detail, the operations set up for identification of American war dead. AGRS operations in Europe are both simpler and more complex than operations in the Pacific area---simpler, because search operations can be confined to the relatively restricted land mass area of Europe rather than the vast, inaccessible reaches of the Pacific; more complex because of the greater number of dead in the European area. It is a good place to study AGRS operations, however, because of those very reasons; because of the greater number of cases that must be handled in the smaller geographic area, operations can be more standardized, better controlled and made more uniform.

Operations of the American Graves Registration Command, European Area, are conducted in four principal phases: search, in which isolated graves of American soldiers are located and pin-pointed on the map; recovery, in which the remains are carefully disinterred and evacuated to a collecting point or other United States Army agency; identification, in which every effort is made to determine the name of the soldier whose remains have been recovered; and finally, interment, which is accomplished in a United States military cemetery after all other operations have been completed.

This manual will describe and illustrate each of these phases of AGRS operations in Europe. Actual photographs, taken in Europe, have been used as illustrations to the text. Forms and charts used by AGRS, European Area, have been incorporated as appendices to this publication. Reference

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has been made in the text to these charts and forms, whenever appropriate.

Comments, questions, and recommendations concerning the procedures described throughout this manual are invited. They should be addressed to the Office of The Quartermaster General, Washington 25, D. C., Attention: Memorial Division.

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## SEARCH

The eyes and the ears of the American Graves Registration Service in Europe is the organization established to coordinate search operations. Army officers who direct this activity depend upon a number of sources for the compilation of their information. Especially helpful are battle maps that show troop locations during engagements that had been fought in the area of search jurisdiction. Also useful are records such as captured German burial reports, casualty records, missing air crew casualty reports and governmental reports of liberated countries. In the last analysis, however, most important is the information secured by the search team that actually goes out into the area of jurisdiction, confirming informational leads of isolated burials and, by actually interviewing civilians in the area assigned to them securing new information of isolated burials hitherto unreported. Information secured from the local population is always an important source of intelligence; sometimes it is the only source. For this reason, a publicity campaign advising the local population of the pending search operation is usually conducted prior to the dispatch of the first search teams.

Typical of most of these publicity campaigns, was the informational program that was planned for the French community of Bouches-des-Rhone.

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#### ENLISTMENT OF HELP OF LOCAL OFFICIALS

"Service des Sépultures Américaines"--that is how the name, American Graves Registration Service sounds in French. And it is a phrase that became increasingly familiar to members of the French community of Bouches-des-Rhone, before that district was searched for isolated graves by personnel of a field agency of the AGRS in Europe.

First, American Army representatives enlisted the help of the local French government. A meeting was arranged with the Maire of the region who enthusiastically agreed to put the entire resources of the local regional government at the disposal of the United States Army. A handbill was posted on the wall of the local Hotel de Ville--the city hall.

## RADIO

Every possible source of public information was utilized. The local radio station volunteered its assistance:

"Il est fait savoir quí un groupe du personnel Américaine du Service des Sépultures, fait des reserches systématiques dans cette Commune et alentour pour retrouve les dépouilles des soldats américains ou alliés tués pendant la libération de la France."

Soon the message reached into every French home that had a radio receiver:

"It is announced that a group of American personnel of the Graves Registration Service are making a systematic search in this commune and its vicinity to find the graves or bodies of American soldiers or allies killed during the liberation of France."



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## PRESS

The help of the local newspapers was also offered and accepted. The civilian newspapers gave the notice a generous amount of space:

"Les parents et amis de ces hommes courageux qui sacrifient leur vie pour une si grande et juste cause ont le plus cher désir de savoir que ces soldats ont été entérres avec les honneurs militaires et reposent à côté de leurs frère d'armes."

"The parents and friends of these courageous men who sacrificed their lives for this great and just cause, hope earnestly to know that these soldiers have been buried with military honors and rest side by side with their brothers in arms."

It was a message well designed to appeal to the French citizen who not only has a strong sense of family solidarity but also shares with the rest of his countrymen a pride in the military achievements of his country and a reverence toward the military dead.

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## REACHING THE LOCAL CITIZEN

In this way, the news of the impending operations reached every home in the area. All of that part of France knew what was to happen and how they could help:

"Toute les personnes ayant connaissance de tombes isolées ou pouvant donner renseignements concernant des soldats américains ou alliés décédés sont priées de se mettre immédiatement en rapport avec les représentants de l'Armée Américaine ou avec le Maire de leur Commune."

"Anyone having any knowledge of isolated graves or able to give any information concerning deceased American or Allied soldiers is asked to get in touch immediately with representatives of the American Army or with the Maire of his Commune."



## RESPONSE OF LOCAL CITIZENS

Thus, before formal searching operations were begun by the AGRS field agency, many local farmers and townspeople had already informed local civilian officials about isolated burials whose location they knew of, and other information that would prove invaluable to AGRS searching personnel.



#### DEPARTURE FROM HEADQUARTERS

After the area to be searched has been alerted concerning impending operations and after appropriate arrangements have been made with local civilian officials, area search units are dispatched from the headquarters of the AGRS field agency. Prior to leaving, these units have been given all available information on the area to be searched. They are furnished with battle maps that show troop locations by divisions on any given day of the war and the number of casualties suffered by each unit in the area. In addition, they carry with them such records as captured German burial records, casualty records, missing air crew casualty reports and government reports of liberated countries. This information has been correlated and set up into cases.

#### SETTING UP BIVOUAC

When the search unit has reached a locality that is central to the area to be searched it halts and sets up in bivouac. If possible, a site is selected where telephone, electricity, water and sanitary facilities are available. Searching teams are then sent out. These searching teams consist of one United States investigator, one interpreter and a driver. Each team is equipped with a  $\frac{1}{4}$ -ton truck.



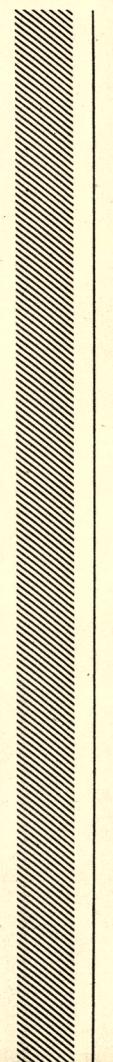


## INTERVIEW

In questioning civilians, searching teams are careful to establish a friendly attitude and avoid creating antagonism. Investigators must have tenacious, analytical and inquiring minds. If evasive or incomplete answers to questions are given, the skilled investigator tries another method of asking the same question until he has the information he wants. The AGRS investigator is trained not to take "no" for an answer if it is at all possible to secure an affirmative answer. Negative reports by one individual are followed up by interviews with other civilians who may have information. Through persistence and by following each clue to its ultimate degree of usefulness, the investigator carefully works up his files of information.

## INTERVIEW

The searching team attempts to pinpoint on the map all isolated burials and unburied remains of United States military personnel. Initial inquiries are made of the local authorities. After all information possible has been secured from these sources, civilians in all walks of life are questioned. Investigators talk to the clergy, merchants (restaurants, hotels, bars), school teachers, communal cemetery caretakers, civilian hospital superintendents, and military officials. Every possible clue is followed up to the maximum extent possible.



## DISCOVERY OF ISOLATED GRAVE

A check on the accuracy of the information secured through interviews is made by actually visiting the site of the isolated grave. The precise location of the grave is recorded on a map and all other possible information is secured.



## CONSOLIDATION OF INFORMATION

As information from the search units flows into the headquarters of the field agency, it is analyzed and consolidated. Here, a lieutenant of the staff of the field agency headquarters is shown posting on the master map reports of another isolated burial and preparing to send a disinterment team to the scene of operations. All pertinent information is posted on the control map. Legend in the upper right hand corner of the map reads:

"Red markers - bodies discovered  
Blue markers - bodies disinterred  
White markers - Number of bodies there  
Name plates - Men disinterring"

When all information secured by the searching teams is consolidated and coordinated by the field agency headquarters, the search phase of AGRS operations is completed.

## RECOVERY

After the searching teams have done their work, the disinterment teams take over, actually recovering the remains and returning them to United States Army control. Their job is a tough, exacting and disagreeable one --and sometimes a dangerous one as well.

There was the team that was ordered to recover the bodies of six crewmen of a missing B-17 bomber that had crashed high in the inaccessible reaches of the Hochvogel Mountains near Kempten, Bavaria. The team, reinforced with seven professional German mountaineers, began to scale the 9,000 foot ascent through snowfields and tricky ravines. Thirteen hours later they reached the scene of the main wreckage. There, three bodies were recovered. The bodies were wrapped and lashed to a crude sled. An on-the-spot search was conducted for the bodies of the other missing crewmen through the ice and snow and treacherous terrain. Two more bodies were discovered more than half a mile away. The disinterment team then picked its way down the steep sides of the mountain drawing behind them the sled carrying the remains of the five recovered airmen.

Some jobs that AGRS disinterment teams have been assigned to in Europe have required a great deal of on-the-spot ingenuity and resourcefulness. Consider, for example, the case of the plane that crashed in a lake about 20 miles east of Harkenbleck in Germany. The only practical method of reaching the plane in the lake (which, fortunately, was a small one) was to pump the lake dry. The pumping equipment of the German Fire Department at Hannover was drafted for the job, and five days later the plane (and the bodies in the plane) was recovered.

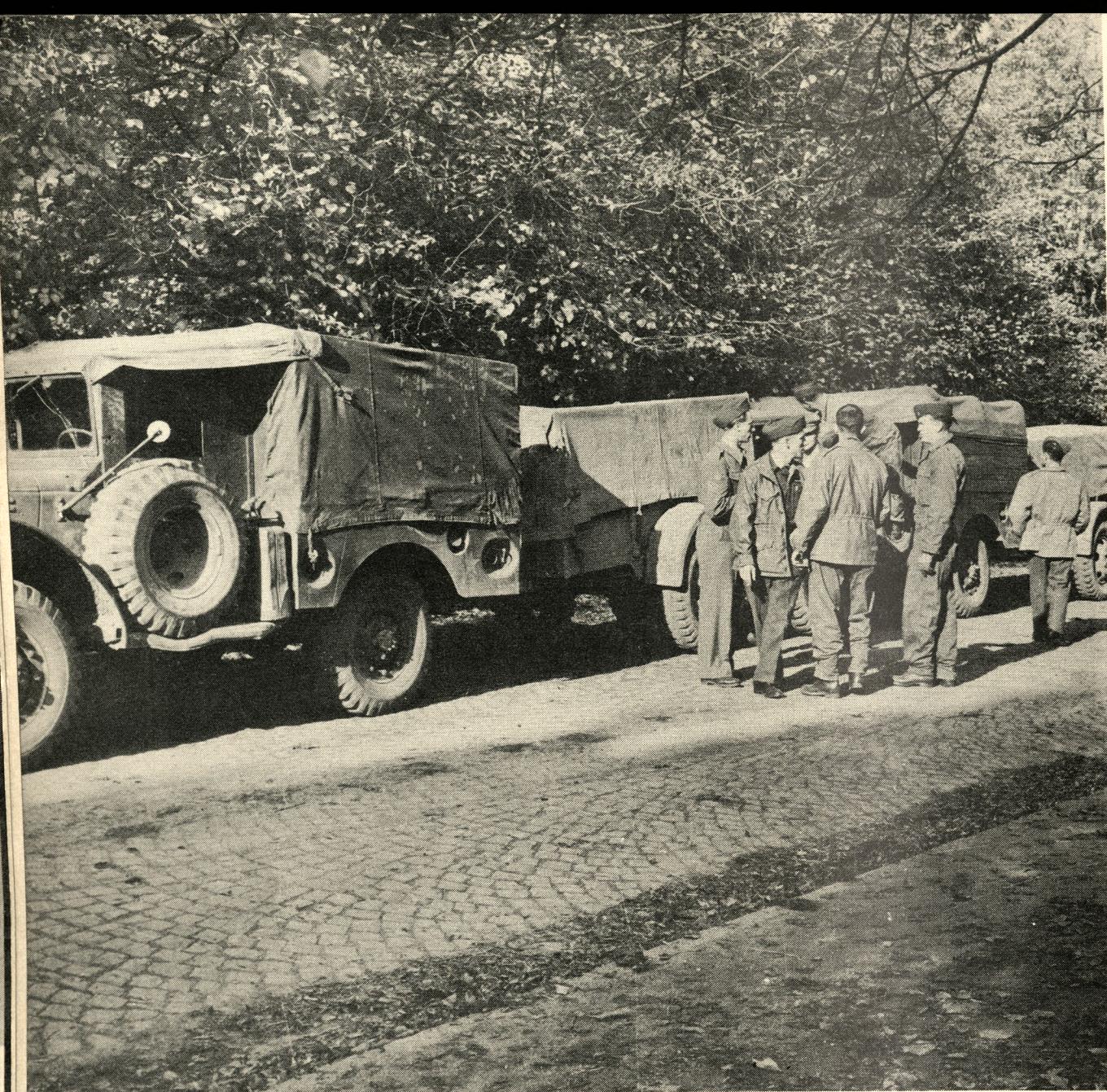
In most cases, however, the recovery job of the AGRS disinterment teams are routine, tiring and disagreeable. The fact that this mission is accomplished efficiently and with constant respect for the dead whose bodies are being recovered is a tribute to the tenacity of purpose and integrity of the personnel assigned to AGRS disinterment teams in the European Theater.

The pictures that follow show AGRS disinterment teams in action--from the time that they are sent out from field agency headquarters until they return the recovered remains to United States Army control.



#### BRIEFING THE DISINTERMENT TEAM

Here, an operations officer at field agency headquarters is shown briefing the lieutenant in command of a disinterment team concerning the mission he is to perform. A map overlay of the area to be worked has been prepared and a complete record of all information available on the cases to be disinterred has been provided to the team commander.



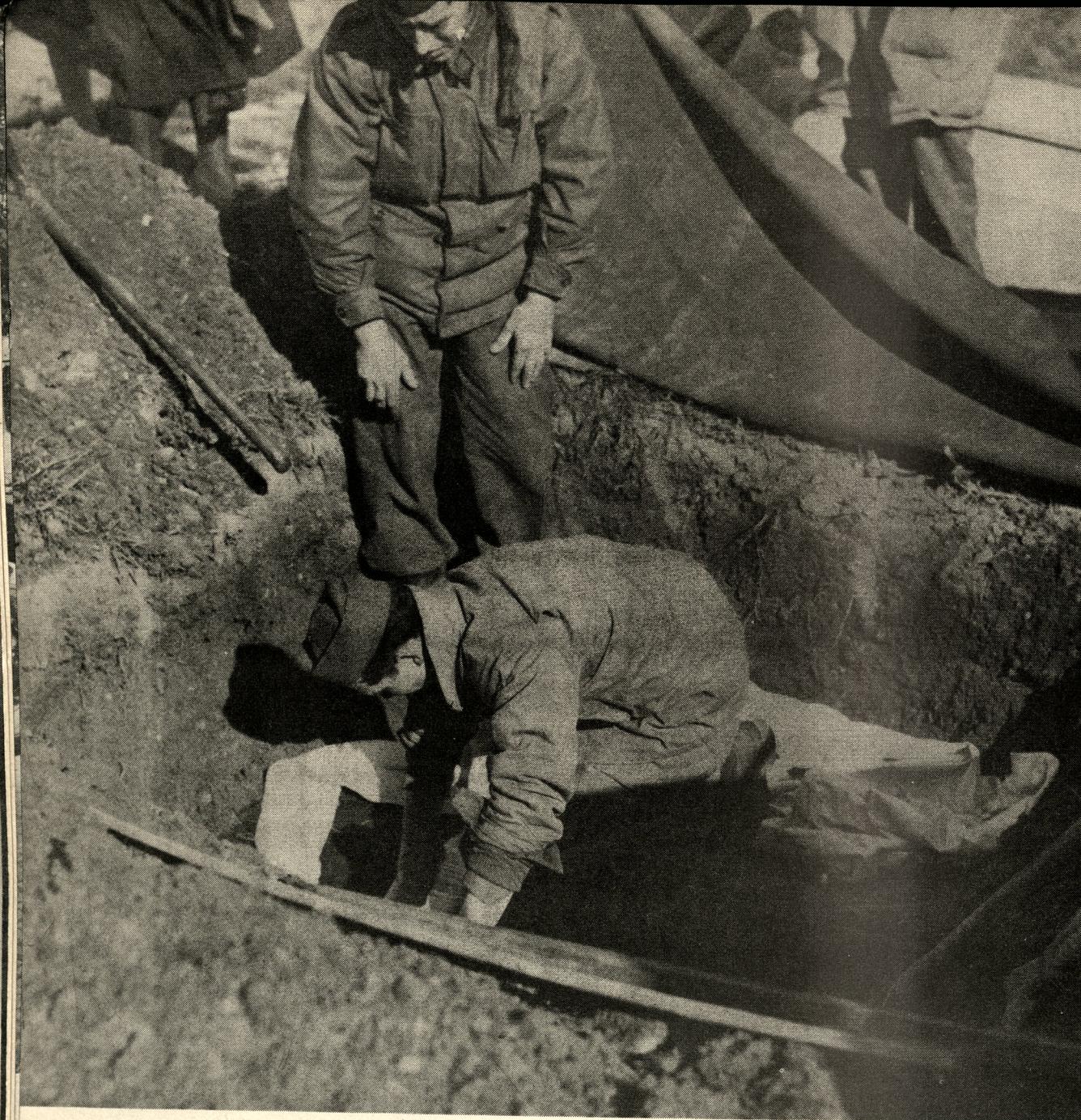
#### DISPATCH OF THE TEAM

The disinterment team convoy mounts up preparatory to departure on the mission. Note that British RAF personnel are present as well as United States Army officers and men. In certain cases where the nationality of the deceased is uncertain, representatives of the British Graves Service go out into the field with AGRS personnel in a joint disinterment operation.

#### OPENING THE GRAVE

The disinterment team, having arrived at the site of the isolated graves commences opening the grave. Note the grave marker in the foreground that bears the legend, "Ici reposent 4 Aviateurs Americaine tombes 20 Aout 1944 POUR LA LIBERATION" ("Here lie four American aviators who crashed on 20 August 1944 for the liberation"). Ordinarily, civilians are not permitted to witness disinterment operations and exhumation teams screen off from public view the area in which they are working. The civilian woman in the right background, however, buried these men when the plane crashed and is present to give any necessary information to United States Army authorities.





#### INSPECTING THE GRAVE

A member of the disinterment team steps into the open grave to check the condition of the remains prior to lifting the burial box to the surface. This grave held the remains of four American Air Force personnel buried in separate burial boxes.



#### LIFTING THE BODY TO THE SURFACE

Upon bringing the body to the surface, it is laid on a clean mattress cover. A careful check is made of the open grave to assure that no personal effects or other items that could assist in the identification of the remains have been left behind.

## PREPARING THE BODY

The body is sprayed with liquid deodorant, wrapped and placed on a litter prior to being evacuated.



## CHECKING FOR IDENTIFICATION

In the meantime, a member of the team checks serial numbers of the machine guns found amongst the wreckage of the plane. These numbers will be checked against Air Forces records so that the identity of the plane can be firmly established.



#### PERSONAL EFFECTS

All personal effects found in the grave are carefully checked, placed in a personal effects bag for examination by the AGRS agency responsible for identification of the remains. Only those personal effects exposed to view are checked at this time, and the exact location in relation to the remains is recorded for the files of each case. The clothing of the deceased is not searched for personal effects until the remains are processed at an identification point.

#### USE OF MINE DETECTOR

When remains are being recovered from mined areas, extreme care must be taken before actual recovery operations are begun. Here a German prisoner of war is operating a mine detector to de-mine an area before the recovery team starts to work.





#### MINE FIELDS

Bodies found in mine fields have generally not been buried. To recover all bodies in a mined area, the entire field must be cleared. On one occasion when it was necessary to recover the body of an American soldier found hanging in a tree, over two hundred German shoe mines had to be removed before a path to the body could be cleared. As shoe mines are made of wood and plastic, they cannot be located easily by means of mechanical detectors and must be probed for by hand; this made the clearing of the field immeasurably more complicated. Here, German prisoners are clearing the area in the immediate vicinity of the unburied body of an American soldier. While prisoners of war are used for this job and for opening and closing graves, they are not permitted to handle the remains of American war dead.

#### WINTER OPERATIONS

In winter, disinterment operations are complicated by the fact that in certain areas of northern Europe the ground is frozen. Disinterment operations go on, however; here two German prisoners of war are shown using pneumatic drills to open a frozen grave.





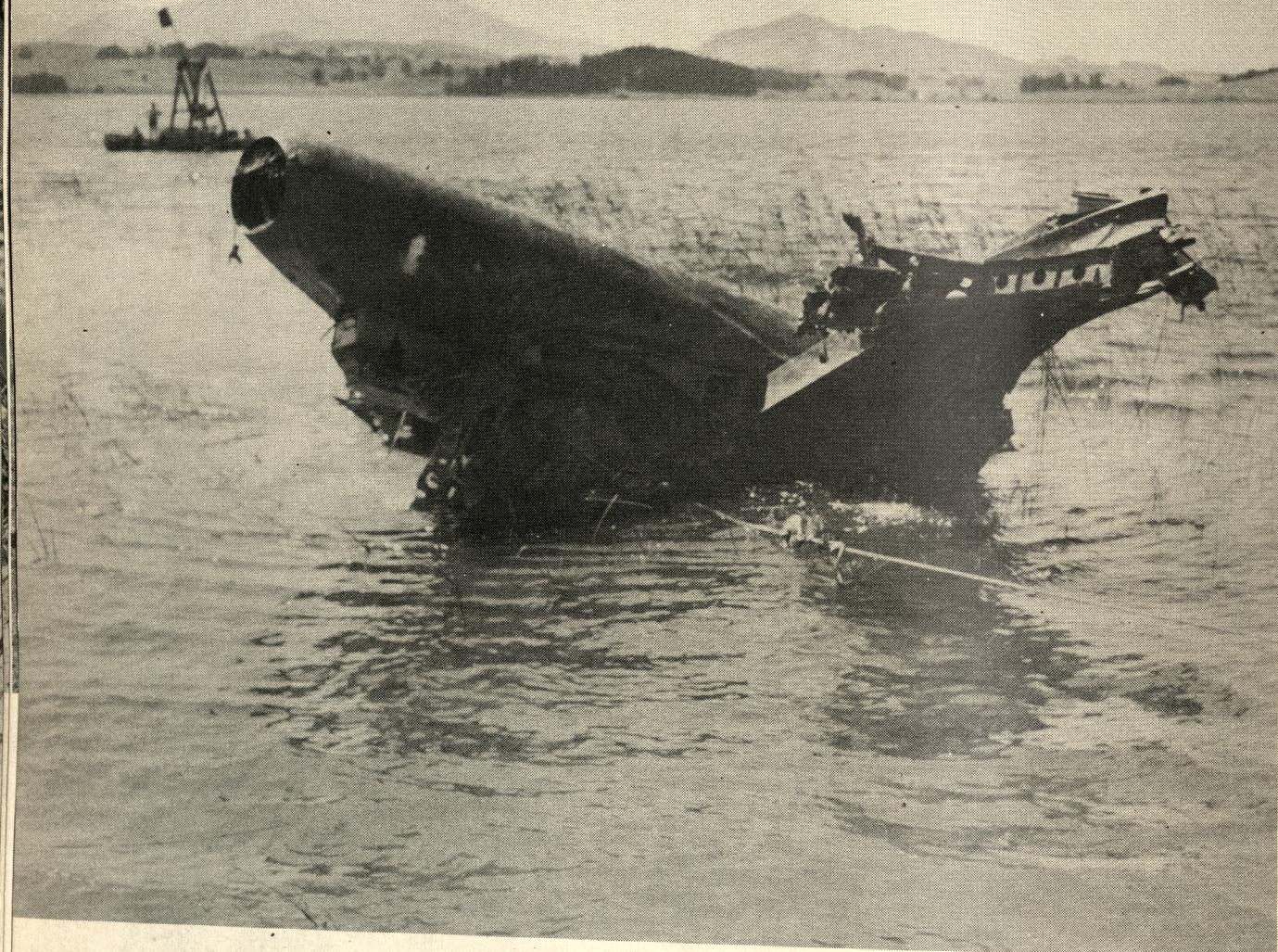
#### PREPARING TO RAISE A WRECKED AIRPLANE

Specialized recovery operations are required in a case such as is shown here where a United States Army airplane crashed into a lake near Fuessen, Germany. A D-17 caterpillar and diving raft are used to bring the wrecked plane to the surface.

#### DIVING FOR WRECKAGE

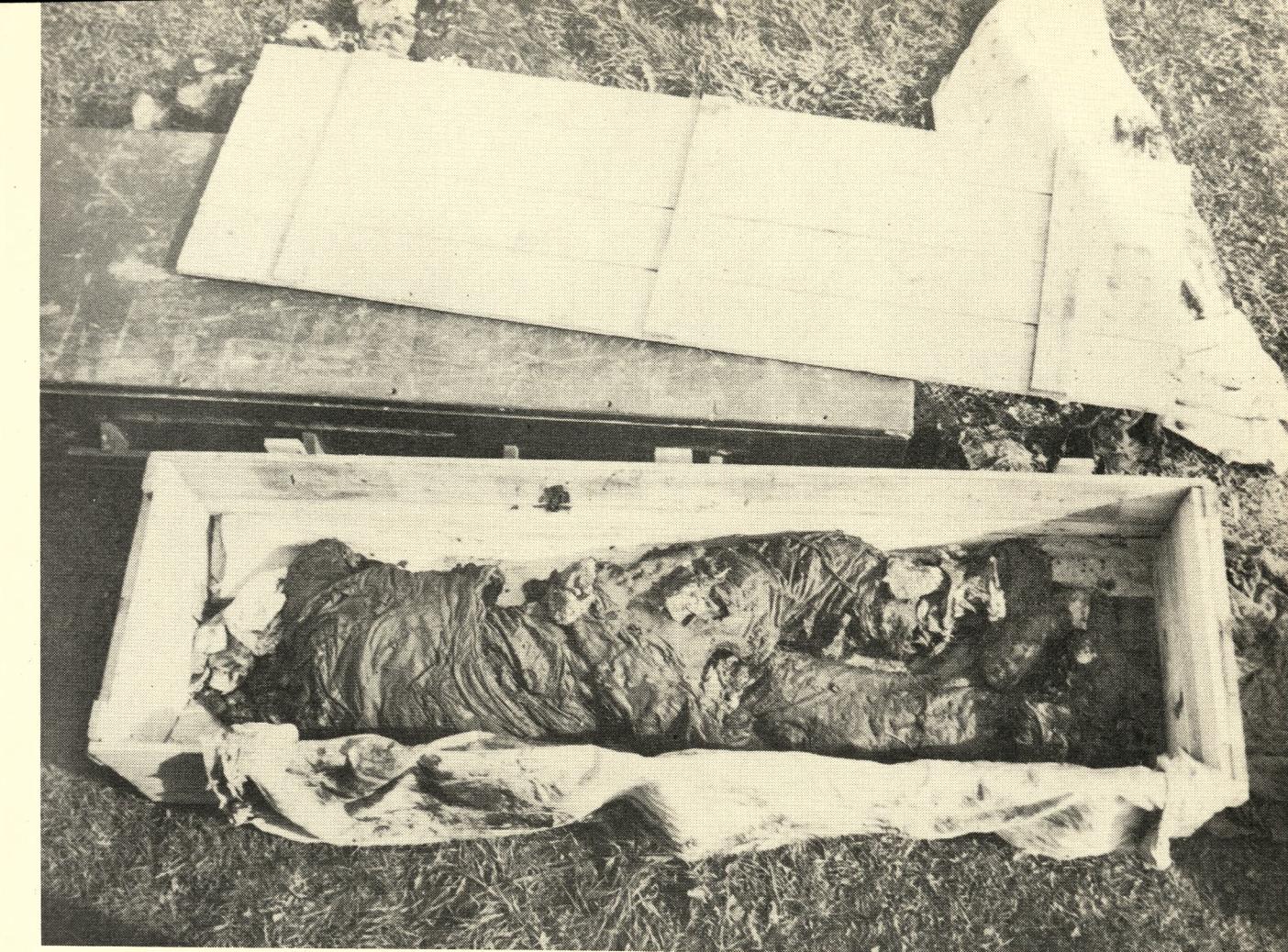
An officer from an aviation engineer outfit prepares to dive for the wreckage of the plane.





#### CLEARING THE WRECKAGE

Part of the wreckage having been located, it is dragged from the bottom of the lake. Disinterment team members will now search the plane for the bodies of the men who were killed in it.



#### USE OF REBURIAL BOX

After bodies have been removed from the graves and wrapped in clean mattress covers they are placed in a reburial box for evacuation to a central collecting or identification point.



#### THE AIR LIFT BOX

The "air lift box," a reburial box developed in the European Theater, was designed primarily for the transport of remains by air. It is delivered to the site of disinterment operations knocked down in bundles of two.

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#### ASSEMBLING THE AIR LIFT BOX

It can be readily assembled at the graveside or at a central collecting point where remains are brought in on litters. Constructed from 5/8" tongue and groove lumber, the box's dimensions when assembled are 21-1/2" wide, 11-1/2" high, 75-1/2" long. Its weight is 75 pounds.



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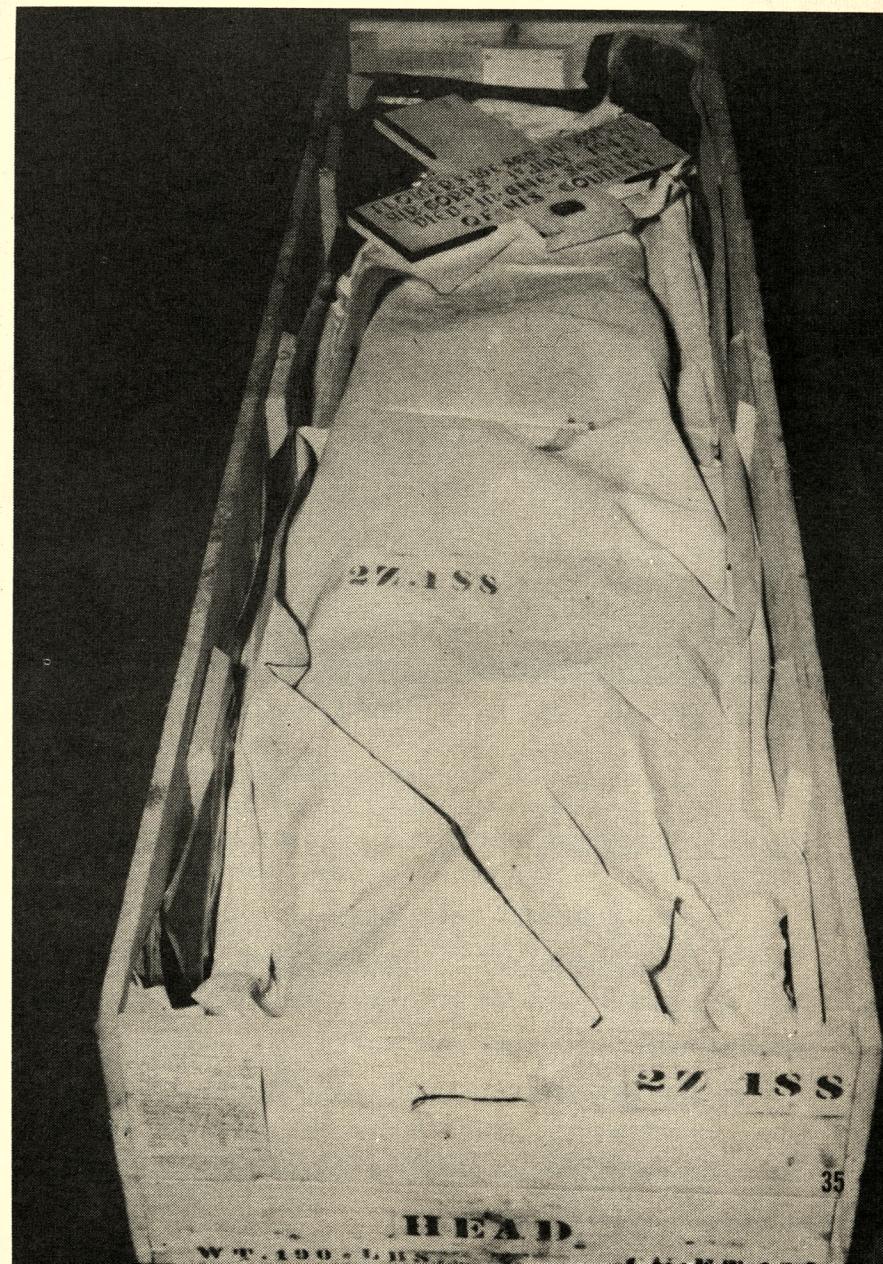


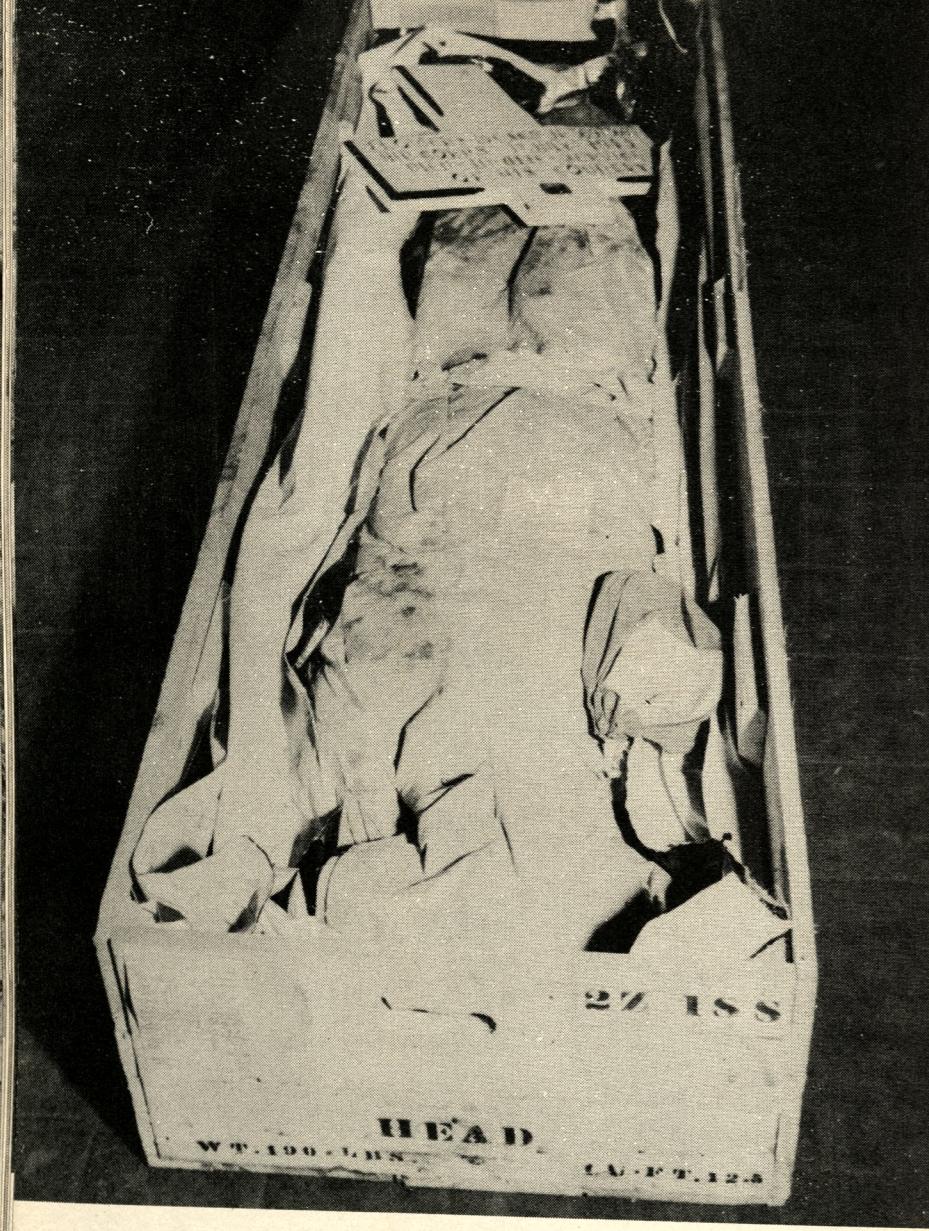
#### CONTAINER FOR REMAINS

To control odors and seepage during transportation an air-tight and waterproof container was developed in the European Theater. Made of cloth backed barrier foil, the dimensions of the container are 88 $\frac{1}{2}$ " long and 40" wide. The remains are sprayed with a liquid deodorant, wrapped in a clean mattress cover, tied with cordage and placed in the container. The metallic liner is then carefully sealed with liquid butyl tent patching cement. Care must be taken in sealing the liner that all air is forced out before the seal is completed.

#### ARRANGEMENT OF CONTAINER IN AIR LIFT BOX

After the seams of the liner have been folded upward and inward over the remains in order to prevent seepage from a damaged or broken seal, the liner containing the remains is carefully placed in a clean, dry air-lift box. The interior of the box is just examined carefully for any projecting nails or splinters that might tear the liner in transit.



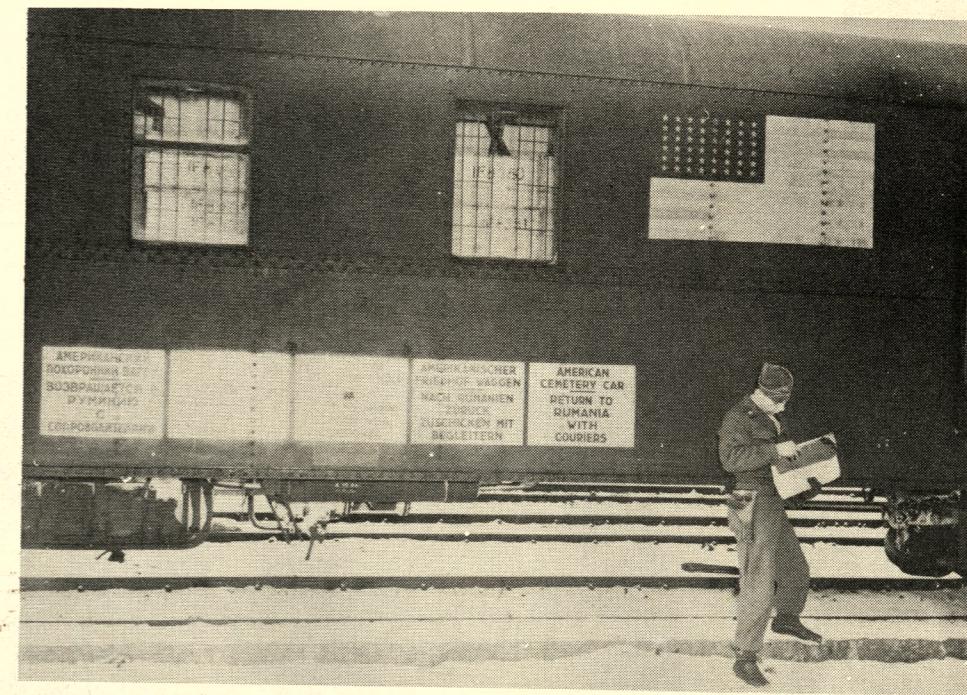


#### COMPLETE CONTENTS OF AN AIR LIFT BOX

Here, the same air box is shown with the metallic liner opened in order to demonstrate the complete contents of the air lift box. Notice the personal effects bag in the right foreground, the grave marker in the background, and that an emergency medical tag (MD Form 52B) has been attached to both the outside of the box and on the body itself. Note, too, that exact weight and cubage are clearly indicated on the end of the box. This information is used in planning plane loads.

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Having disinterred the remains, wrapped and sprayed them, and packed them in burial boxes, the disinterment team is ready to move the remains forward to the AGRS agency that will make final and positive identification.

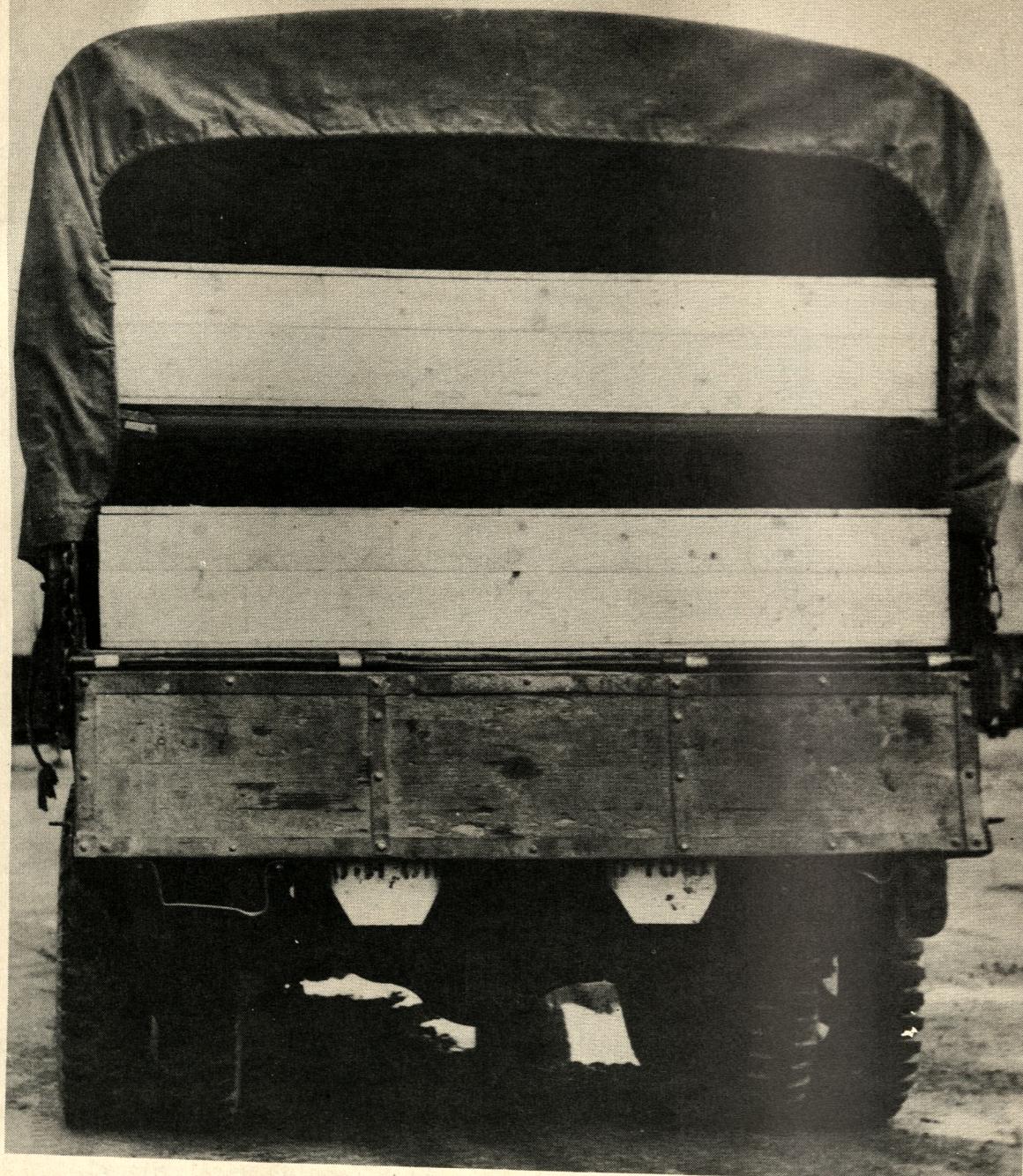


#### BY RAIL

One method of transporting the remains is by rail. Here, a train guard is checking the case papers that accompany each shipment of remains. These papers, (which are prepared in the same manner no matter what type of transportation is used) include:

- a. Report of investigation, area search (AGRC Form 10, see Appendix A). This form is sent forward in duplicate.
- b. Sketch of area of cemetery from which remains were removed.
- c. Notice of disinterment (original copy) (AGRC Form 8).
- d. Emergency Medical Tag (MD Form 52B). This form is executed in triplicate. One copy is attached to the remains, one to the air lift or reburial box, one to the case papers.
- e. Convoy list. (This form is executed in duplicate. The original is received by receiving officer at Central Identification Point and returned to the convoyer. The duplicate is retained for the files of the Central Identification Point.)
- f. Personal effects bag (when applicable).
- g. Complete case file containing all statements and correspondence pertaining to the case.
- h. A narrative of the case containing all data and information not included in the above listed documents.

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#### BY TRUCK

Remains may be transported by truck. Here, a 2½ ton truck is shown loaded with ten reburial boxes. Notice that the truck is equipped with a rack so the stacking of boxes on top of each other is not required. Normally, a tarpaulin is used on the rear of the truck to screen the cargo from public view; it has been removed here only for purposes of illustration.

#### BY AIR

Air transport is also frequently used when remains are to be moved long distances. Here the crew of a C-47 type aircraft are shown securing air lift boxes for the trip to the Central Identification Point.



## IDENTIFICATION

The work of the search and recovery units have assured that the bodies of the American soldiers that they have discovered will rest under a white marker in a United States military cemetery instead of some isolated grave or abandoned battlefield. The job of the next agency concerned with AGRS operation is to put a name on that cross or star of David. In Europe, this work is done by an AGRS agency known as the Central Identification Point.

The Central Identification Point and its subordinate agencies operate under direct control of Headquarters, American Graves Registration Command, European Area. Its mission is to identify positively (when possible) the remains of all unknown soldiers presently interred in United States military cemeteries in Europe (approximately 7,000) and the bodies of all other United States military personnel as they are recovered from isolated interment (estimated at 12,000).

In connection with its responsibility for identifying unknown soldiers presently interred in military cemeteries, the CIP performs another important function--the segregation and reinterment of all mass burials. It is the mission of the CIP to disinter the remains of all these men buried in mass graves and to segregate their remains in separate graves, whether or not the establishment of individual identities is possible.

Of those bodies recovered from isolated interments only nine out of every 25 processed by field disinterment teams can be identified immediately at the graveside. The remaining sixteen can often be identified by skilled scientific techniques employed by the Central Identification Point or its subordinate agencies. For this reason, Headquarters, AGRC, has directed that all recovered remains be shipped to the Central Identification Point, formerly located at Strasbourg, France, for identification processing prior to burial. At the Central Identification Point are established laboratories for such modern scientific techniques as fingerprinting, fluoroscopic examination, dental examination, special-type photography and anthropological research. If the distance from the site of recovery to the CIP makes shipment of remains impractical, remains may be shipped to subordinate field agencies of the CIP established at the largest grave population centers. In addition, mobile laboratories can be dispatched from the central agency for special field operations.

CIP personnel, by examining identification evidence, classify remains into one of four categories:

- a. Positively identified: those remains which are identified beyond any reasonable doubt.
- b. Believed to be identified: those cases where evidence supports a strong probability of identification but is not sufficient to permit positive identification without further support.
- c. Possibly identified: those cases where the evidence gives some indication of possible identity and there is no evidence found contradictory to that possibility.
- d. Identification impossible: those cases where no clue has been

found which offers any possibility of placing the case in one of the above categories.

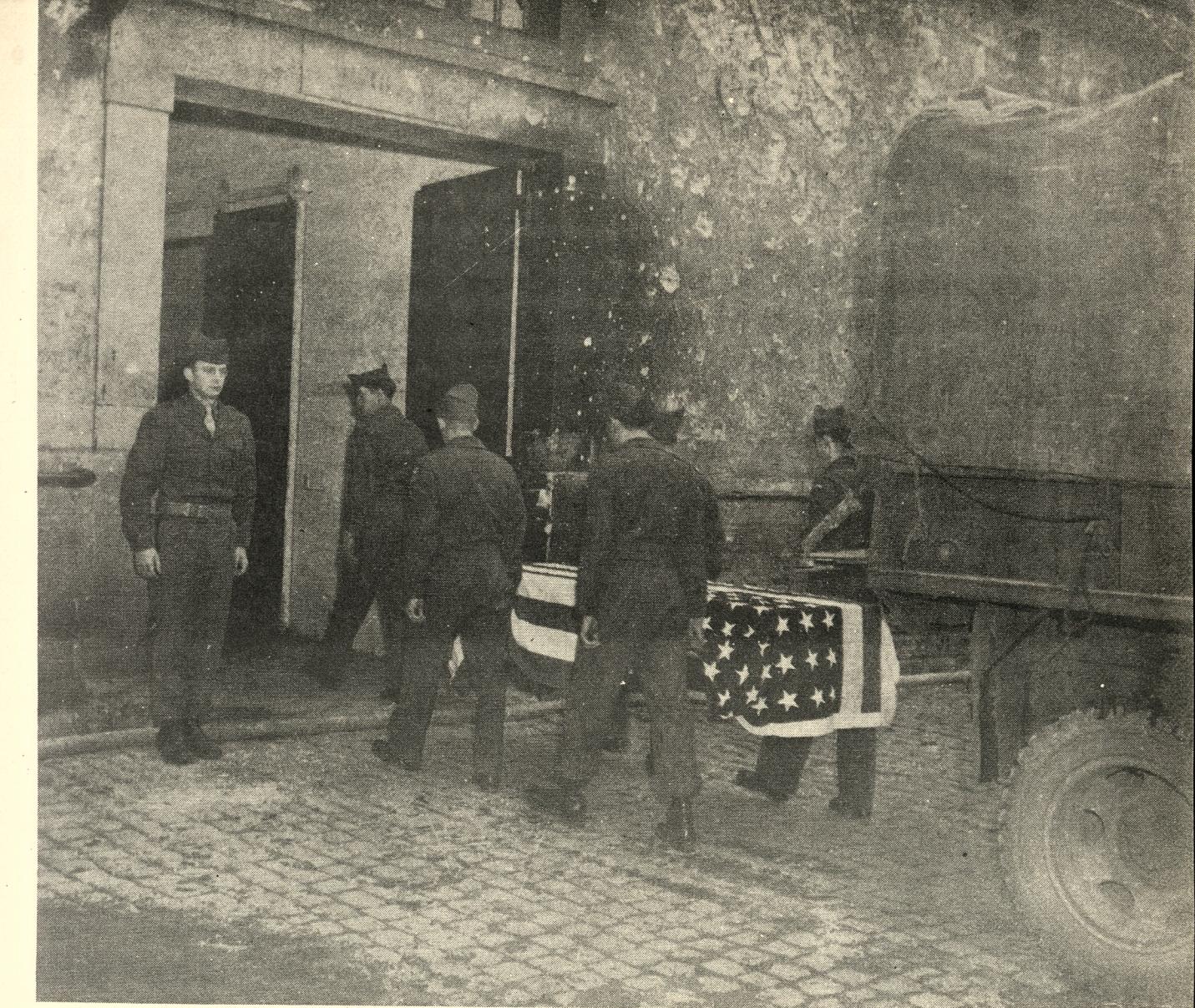
Only certain types of evidence are considered to be proof of positive identity. Examples of these types of evidence are:

- a. Identification tags about the neck.
- b. Paybook in the clothing.
- c. Emergency Medical Tag, signed by a medical officer, fastened to the body.
- d. Identification bracelet on wrist.
- e. Fingerprint comparison.

Other types of evidence that are considered to be sources of potential identification are:

- a. Identification tags elsewhere than around the neck.
- b. Motor vehicle permit.
- c. Personal papers.
- d. Engraved jewelry.
- e. Tooth chart comparisons.

The methods used by the CIP and its subordinate agencies to secure this and other identification evidence is the subject of this section of this manual.



#### ARRIVAL AT THE CENTRAL IDENTIFICATION POINT

The flag draped burial box of an unknown American soldier is carried into the Central Identification Point at Strasbourg by military casket-bearers escorted by an honor guard.



#### INSPECTION OF REMAINS

Remains are inspected upon arrival by an officer of the CIP. Here, the inspecting officer is shown opening the metallic liner as an assistant stands by ready to spray the remains with liquid deodorant.

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#### STORAGE IN THE MORGUE

After remains have been inspected they are carried to the CIP morgue to be stored awaiting processing.



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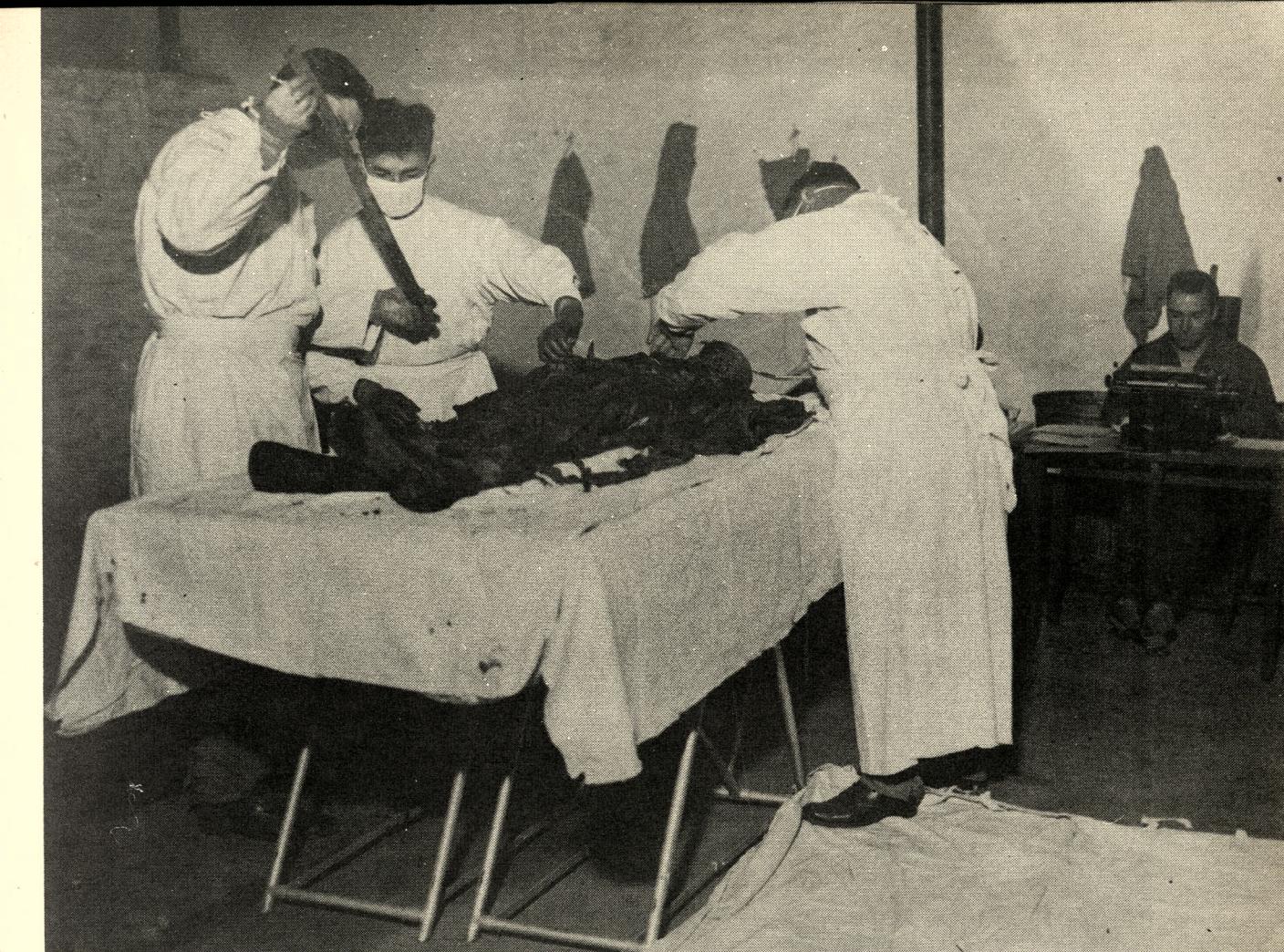
## ASSIGNMENT OF IDENTIFICATION TEAM

After all case forms and records pertaining to a particular body have been checked by CIP headquarters, they are delivered to the morgue supervisor. The supervisor reviews each case and assigns an identification team to it for processing. A team consists of a table supervisor and two assistants one of whom is a recorder. These men are all either United States military or civilian personnel. They are usually skilled embalmers with a knowledge of anatomy, bone structure, dental structure and the techniques of fingerprinting.



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IDENTIFICATION



## PRELIMINARY SEARCH

The remains are placed on an operating table. First, the team makes a careful search for identification tags or any other conclusive means of identity. Recorder in the background records all pertinent information.

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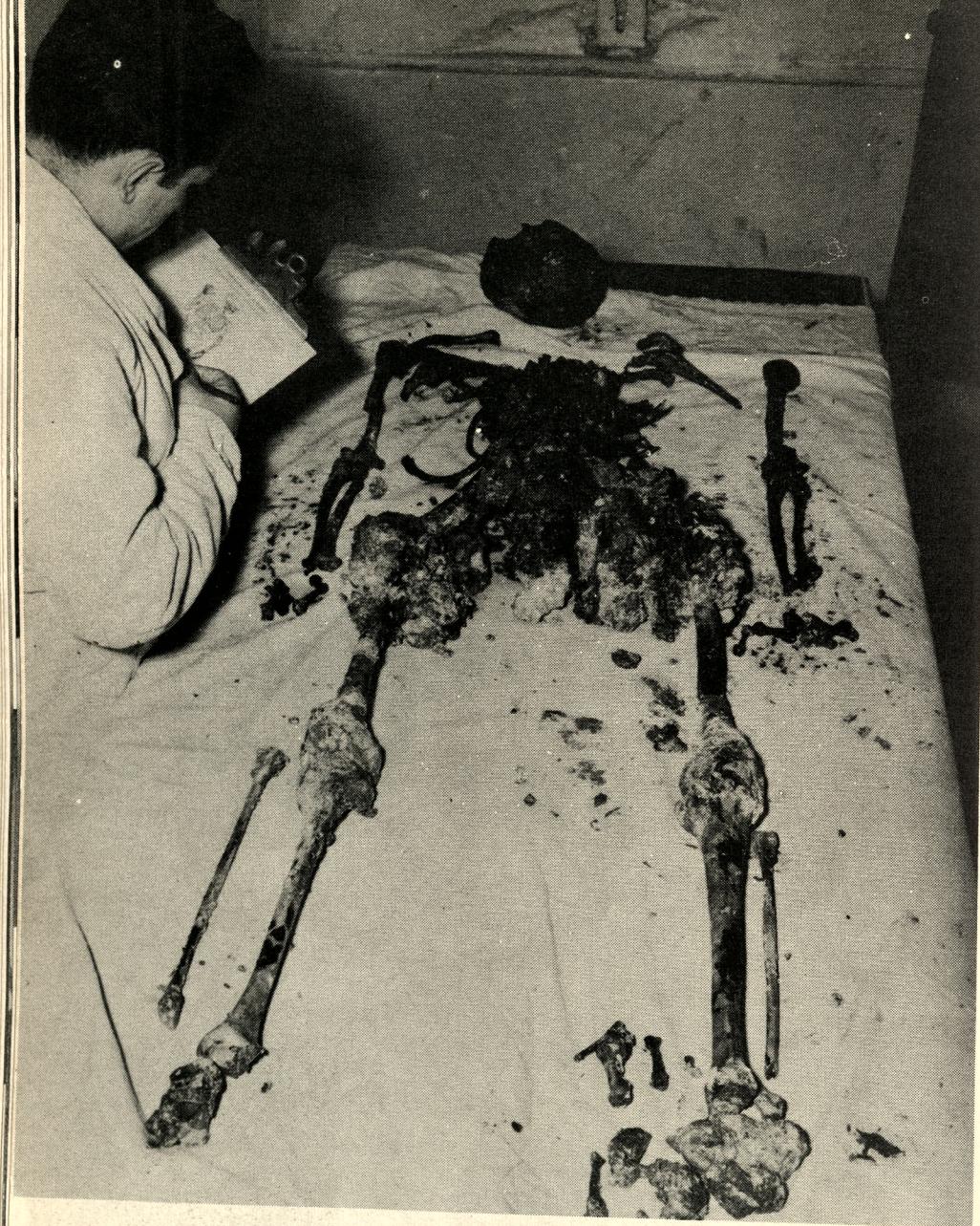
#### REMOVAL OF CLOTHING

Clothing and web equipment is carefully removed, clothing being cut at the seams and removed intact. Each piece of clothing and equipment is carefully examined for clues and sizes.

#### SEARCHING REMAINS

When the clothing has been removed, the remains are carefully examined and searched by hand processing (instruments are not used). Even in the case of extremely decomposed remains such as those shown, care is taken not to unnecessarily mutilate the body. Note that clothing (in right foreground) has been retained for further processing later.





#### ARRANGEMENT OF REMAINS

After all clothing has been removed and remains have been examined for identification clues, the body is properly arranged. The skeletal chart (Annex A of the Identification Check List, see Appendix C) is prepared by blacking out all missing parts of the body. Measurements are taken of the height, circumference of the head and an estimate of the weight is calculated. If the remains consist of only a few bones they are listed and peculiar characteristics of bone structure are noted.

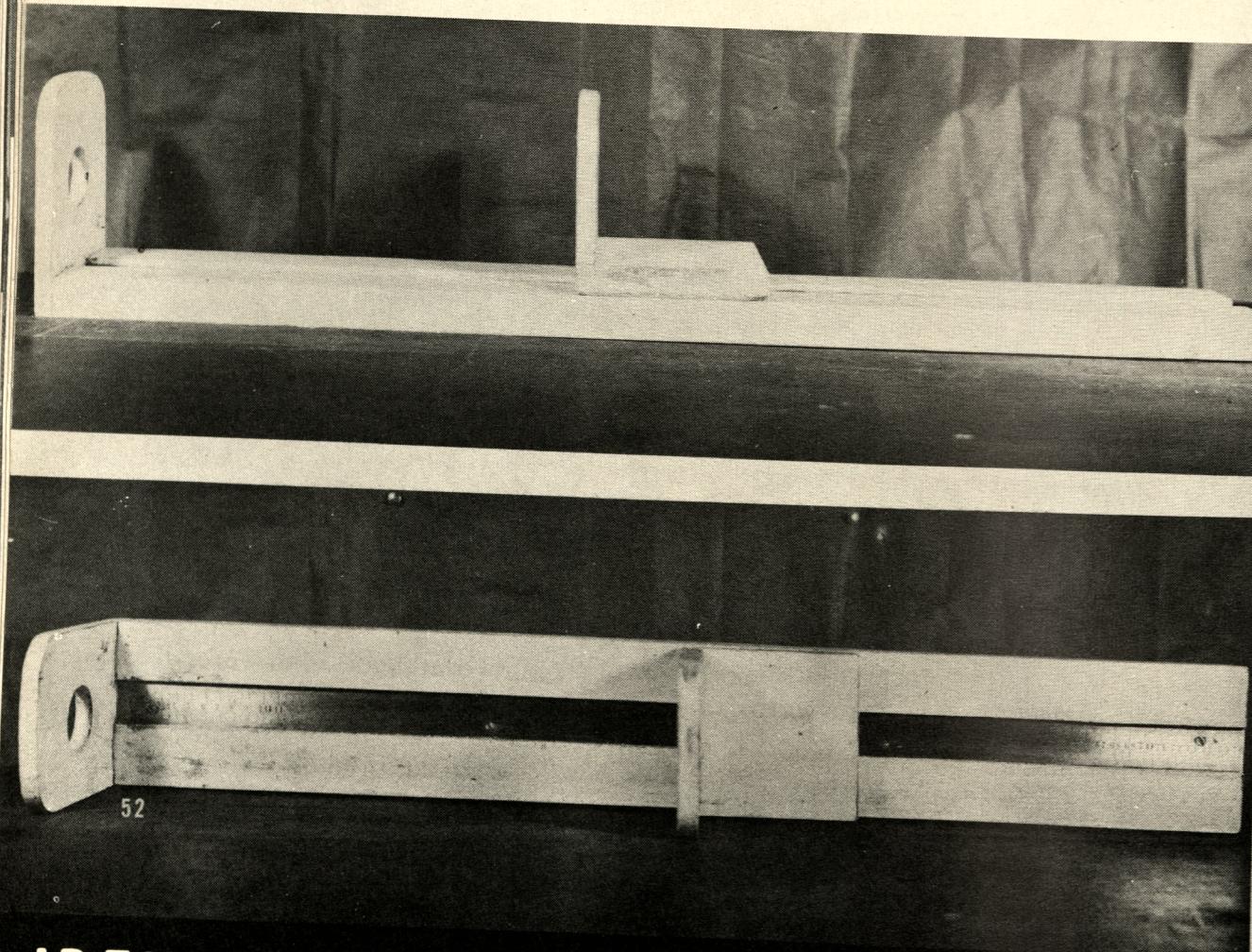
#### MEASURING THE BODY

When the skeletal frame is complete, the height of the body is measured from the top of the head to the heel of the foot, and two cm. are subtracted from the calculated value in order to estimate the height of the individual while standing.



## BROCA'S SCALE

Even when a complete skeleton is not available, the height of the body can be determined by measuring as many as possible of the long bones of the body such as the femur, tibia, fibula, humerus, radius and ulna on a device known as Broca's scale. The Broca scale is a simple measuring device consisting of a rectangular base board with an inlaid steel rule 76 cm. long, a running slide 12 cm. long that can be adjusted to the length of the bone, and a backboard similar in size to the running slide.



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## THE ROLLET TABLES

The calibration noted from the scale is then applied to a table of measurement known as the Rollet Tables. (See Appendix D.) From these tables, the height of a man or woman can be estimated from the length of one of the long bones of the body. Naturally, the more long bones of the body that are measured, the more accurate the estimate will be. In this picture, a technician is shown measuring the right femur bone with Broca's scale. (See Appendix D for a method of determining whether two long bones found together in the same grave belong to the same body.)



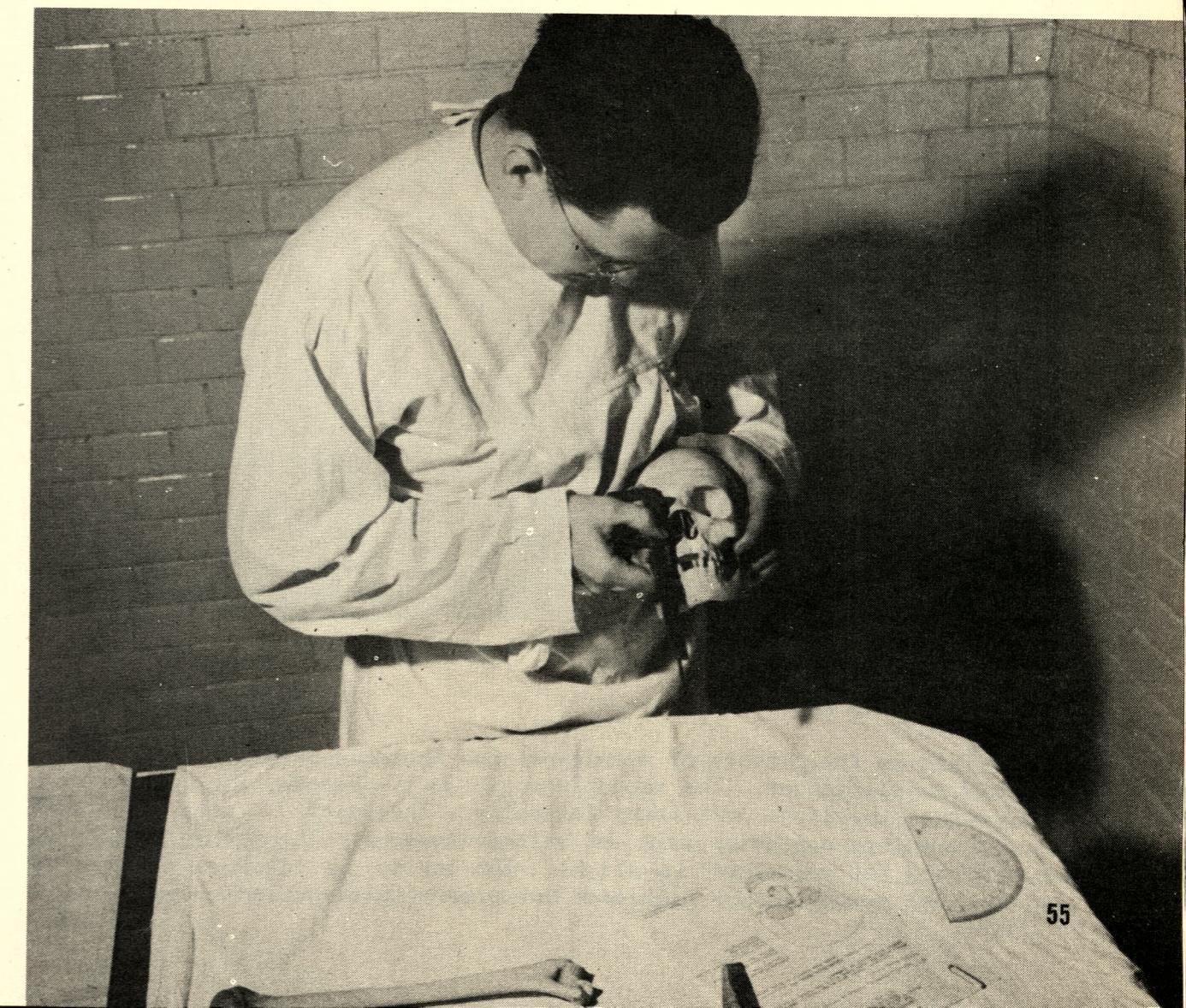
#### DETERMINING CIRCUMFERENCE OF THE SKULL

The skull is measured with great care and the dimension entered on the Identification Check List.

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#### DETERMINATION OF RACE

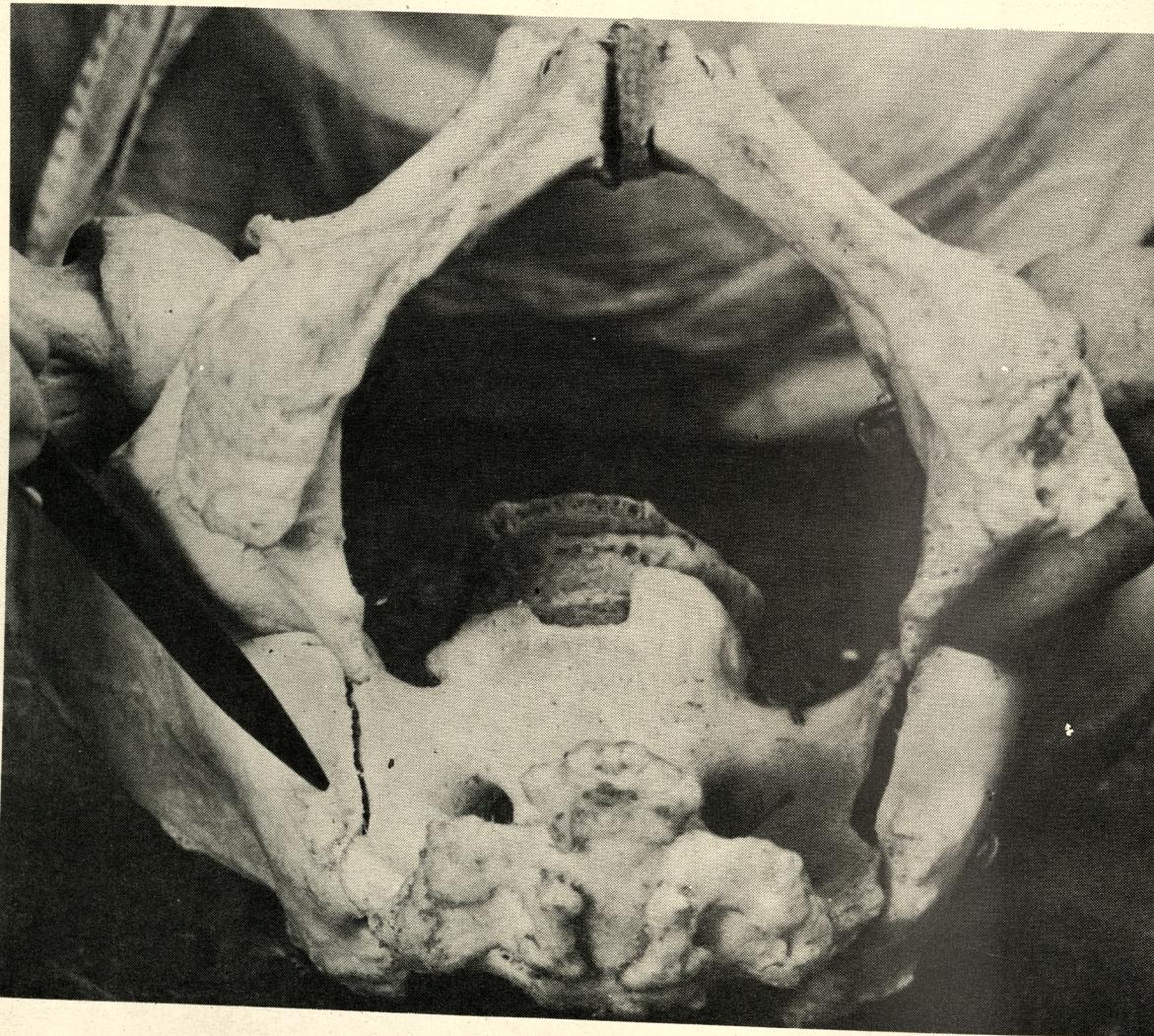
Although race may sometimes be determined by examining cranial, pubic or axillary hair (if any is found), determination of race by the color of the skin is usually impossible since all flesh turns black as it decomposes. However, if not otherwise ascertainable race can sometimes be determined by a study of the skull. The exact measurement of the nasal index (which is the length of the widest nasal width divided by the length from the glabella to the spine, multiplied by 100) when compared to a nasal index table will sometimes determine to which race the individual belonged.



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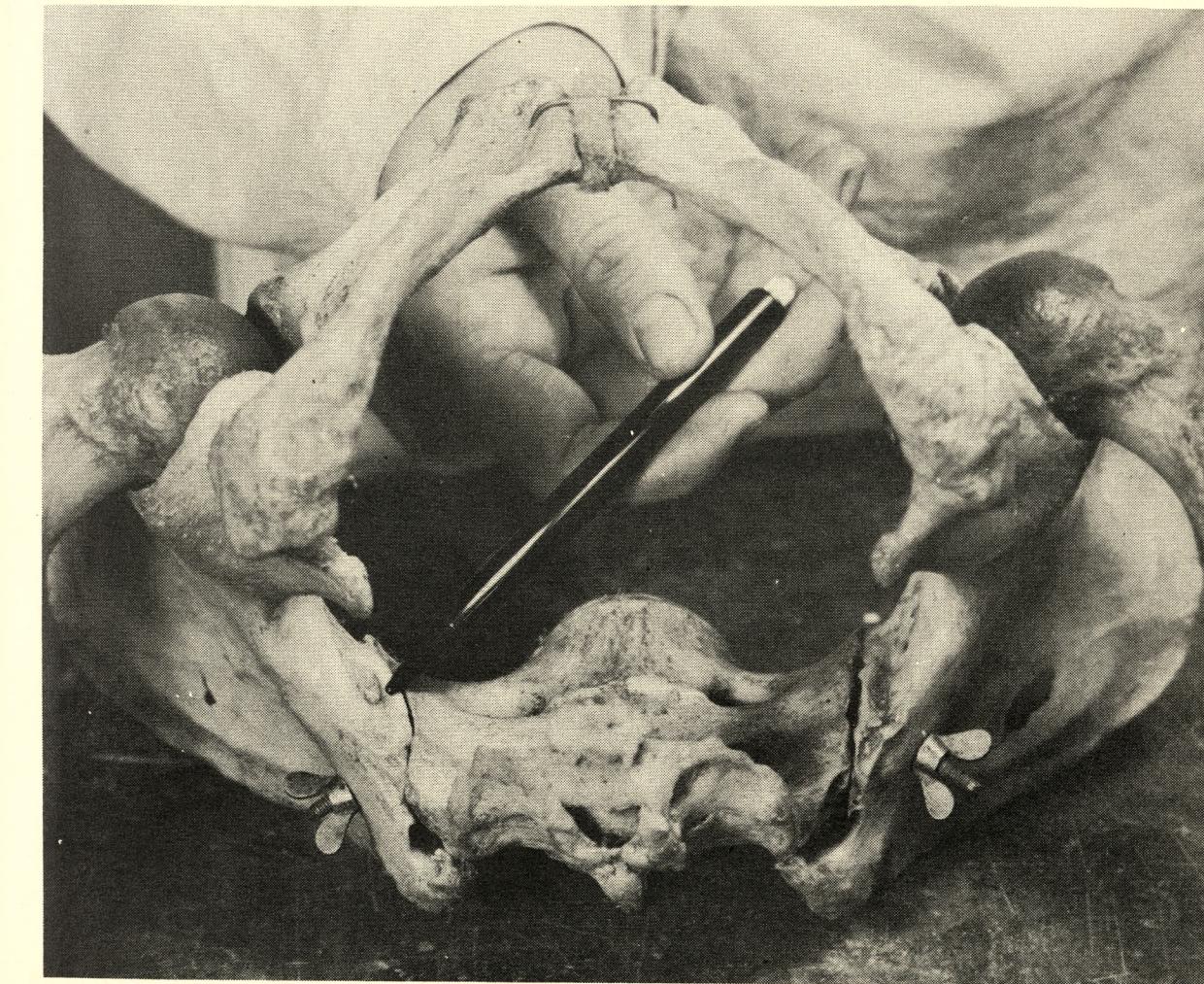
## DETERMINATION OF SEX

Occasionally, due to the disinterment of remains that were believed to have been recovered in error, it is necessary to determine the sex of the remains. This can be determined by an examination of the pelvis bones.



THE MALE PELVIS

This is the picture of a male pelvis. The male pelvis is massive with marked muscle ridges. The subpubic angle is V-shaped. The acetabulum or hip socket is large and looks laterally. The inlet is relatively small and the antero-posterior axis is relatively long. The sacrum is long and narrow and the curvature is slight. The cavity is relatively narrow and deep, the symphysis is high and the preauricular sulcus is missing or slight.



THE FEMALE PELVIS

This is the picture of a female pelvis. This pelvis is more slender, smaller and smoother than the male pelvis. The subpubic angle is U-shaped. The acetabulum or hip socket is small and inclines more antero-laterally. The inlet is relatively large and the transverse angle is absolute and relatively long. The sacrum is short and broad, the cavity relatively wide and shallow and the symphysis is low. The preauricular sulcus is deep and pronounced.

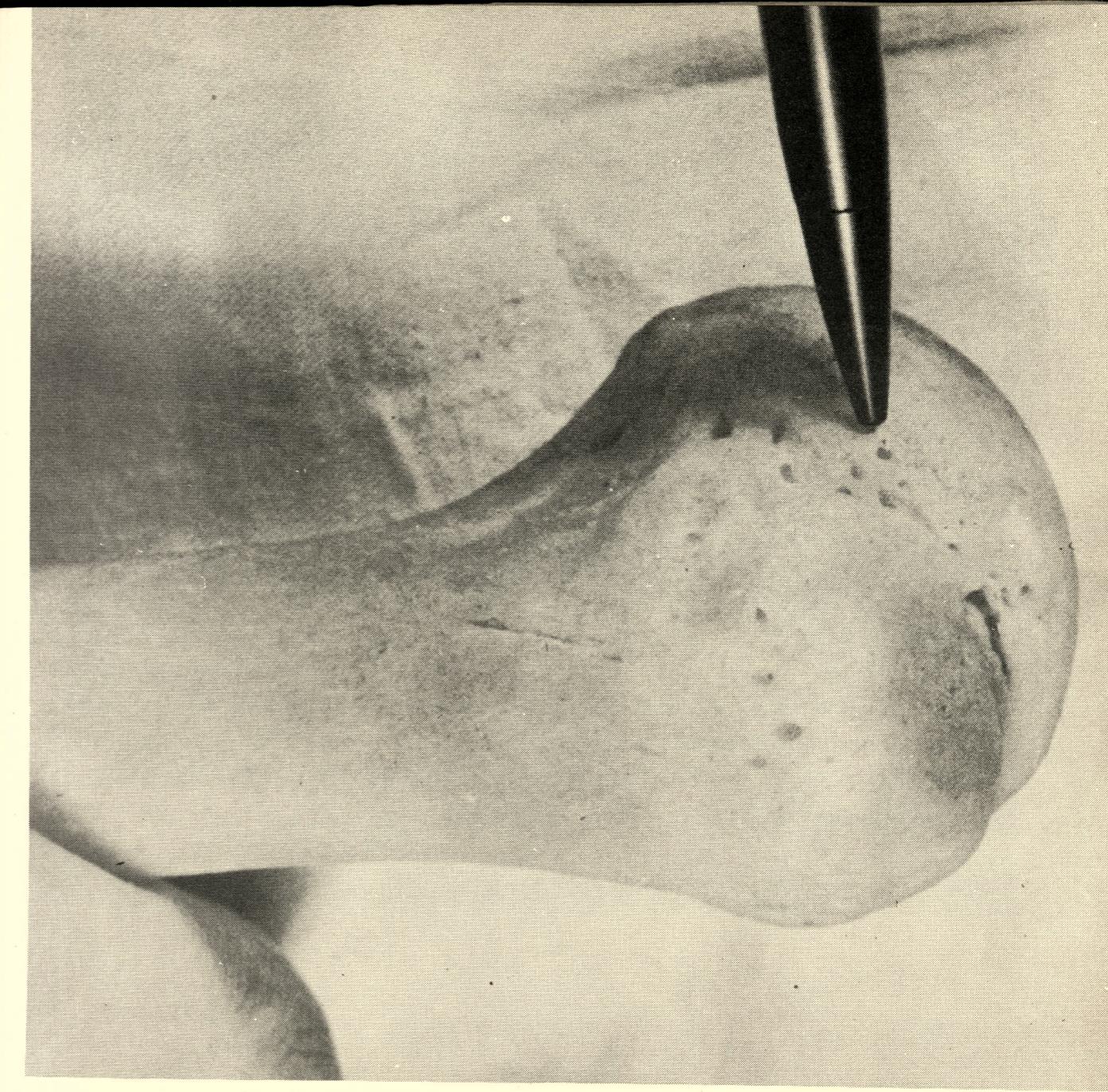
## DETERMINATION OF AGE

In special cases where no positive clues are available, the determination of the age of the remains is a great help in making the identification. The factors for determining age that are most frequently used by CIP personnel are tooth eruption, appearance and union of centers of ossification, pubic symphysis and suture closure. Some of these methods are shown in this section.



THE LAMBOIDAL SUTURE

This is the cutaway picture of a skull (endocranial view) showing the lambdoidal suture. Tables are available that show age in years for varying degrees of suture closure. The skull shown in this picture was cut open by a pathologist in connection with an autopsy. CIP technicians do not perform such cutaways for examination of sutures.

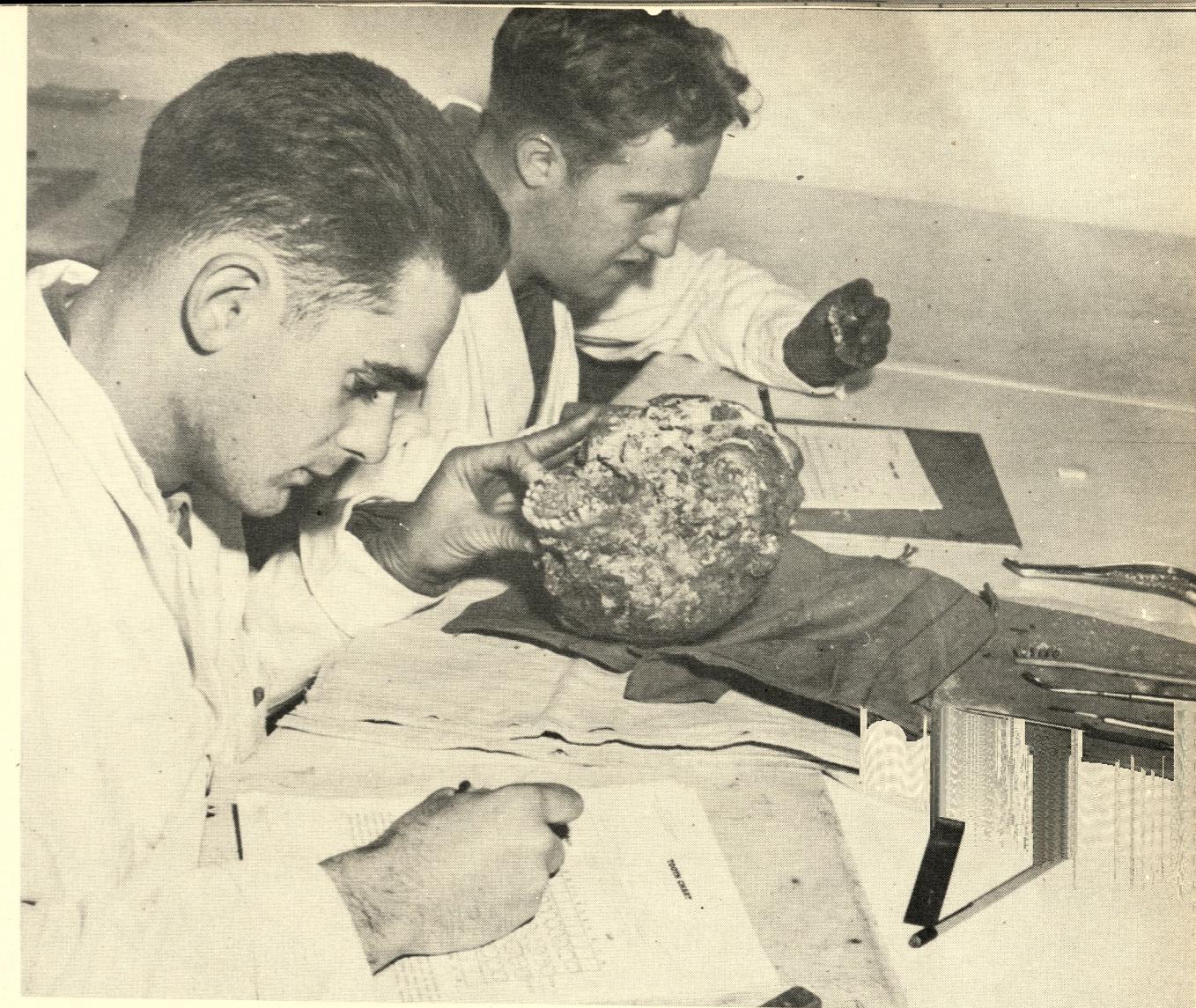


THE HUMERUS BONE

This is a picture of the head of a humerus bone. Approximate age of remains at time of death can be established based on the presence or absence of the ossification centers pointed out in this picture.

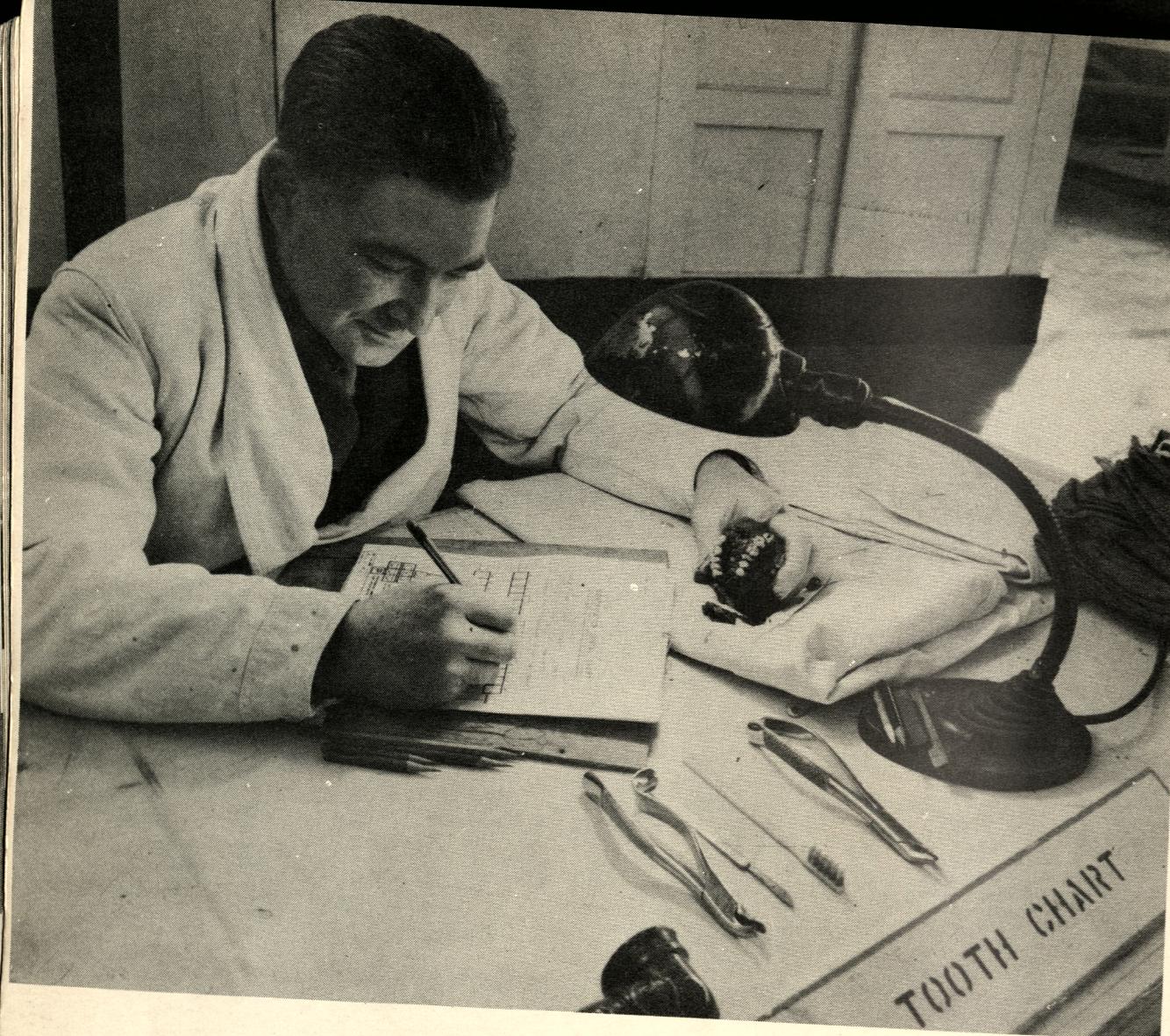
## DENTAL EXAMINATION TECHNIQUES

Accurately prepared tooth charts have proved their value as aids in identification. In cases where remains have been interred for a long time, CIP personnel have often found that tooth charts are the only means of identification. If the tooth chart is accurately prepared and is a complete record and description of the condition of the deceased soldier's teeth, it can be compared with the Army's medical records for the man whom CIP technicians have reason to believe is the man whose remains are being processed. If the two records tally, an important identification criterion has been established.



## PREPARATION OF TOOTH CHART

Two technicians prepare tooth charts. They are recording data on a locally devised form, similar to QMC Form 1045, revised 1 April 1947 (See Appendix E.) At the time this photograph was made, QMC Form 1045 differed considerably from the local form illustrated. At present, however, the 1 April 1947 revision is prescribed universally.

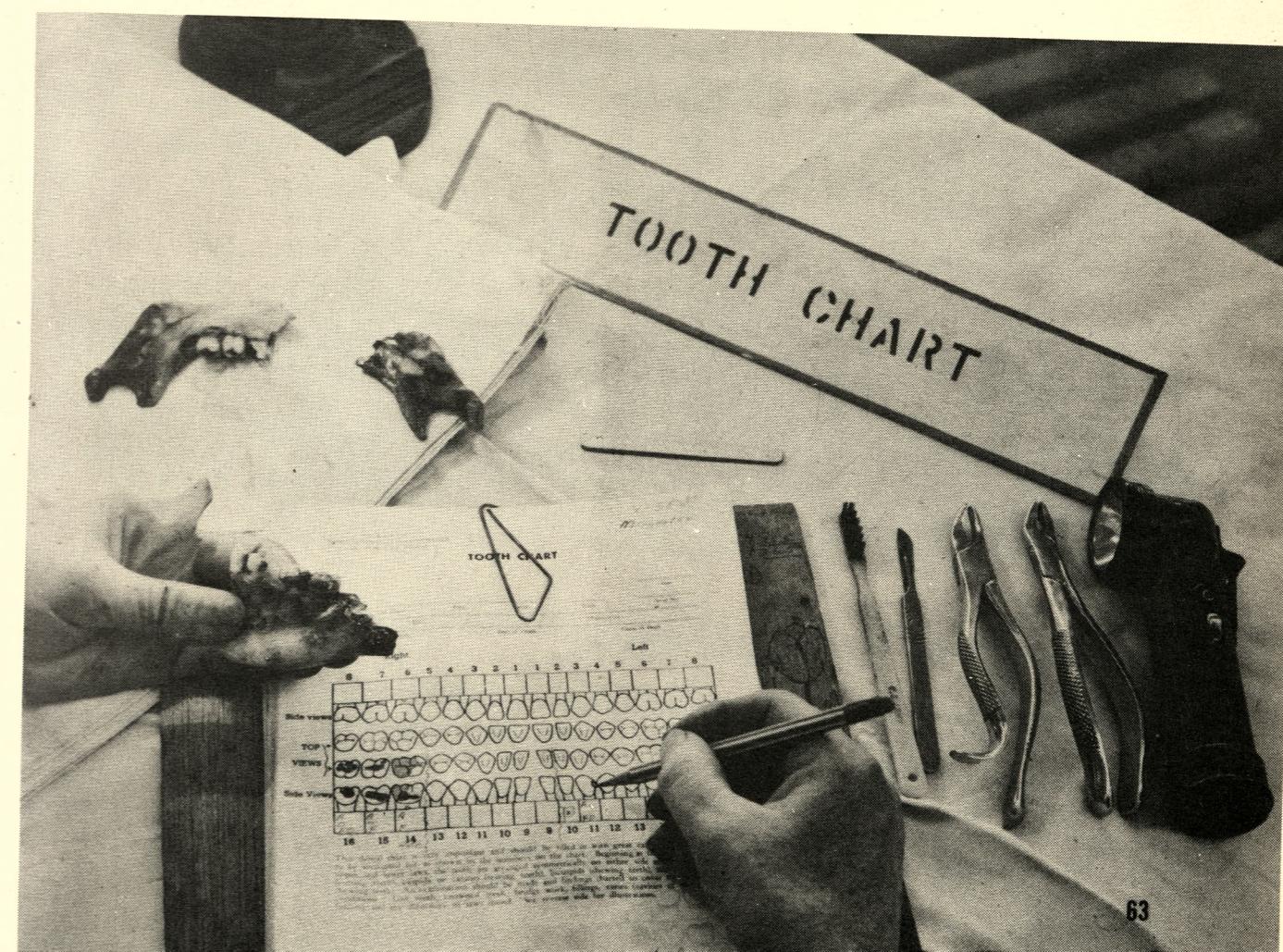


#### FRACTURED JAWS

Tooth charts are prepared even when there are only a few teeth found in a fractured jaw, as shown in this picture. Note that in this case, the technician is preparing the chart on the old QMC Form 1045.

#### PREPARATION OF FORM

This technician is preparing a chart for unknown soldier X-355, Mar graten Cemetery. Area shaded indicates decayed portion of tooth; black areas indicate fillings. Symbol  $\frac{A}{FO}$  in box in lower right hand corner of the box indicates that the filling was an amalgam or silver filling ex tending over both the facial and occlusal surfaces of the particular tooth.



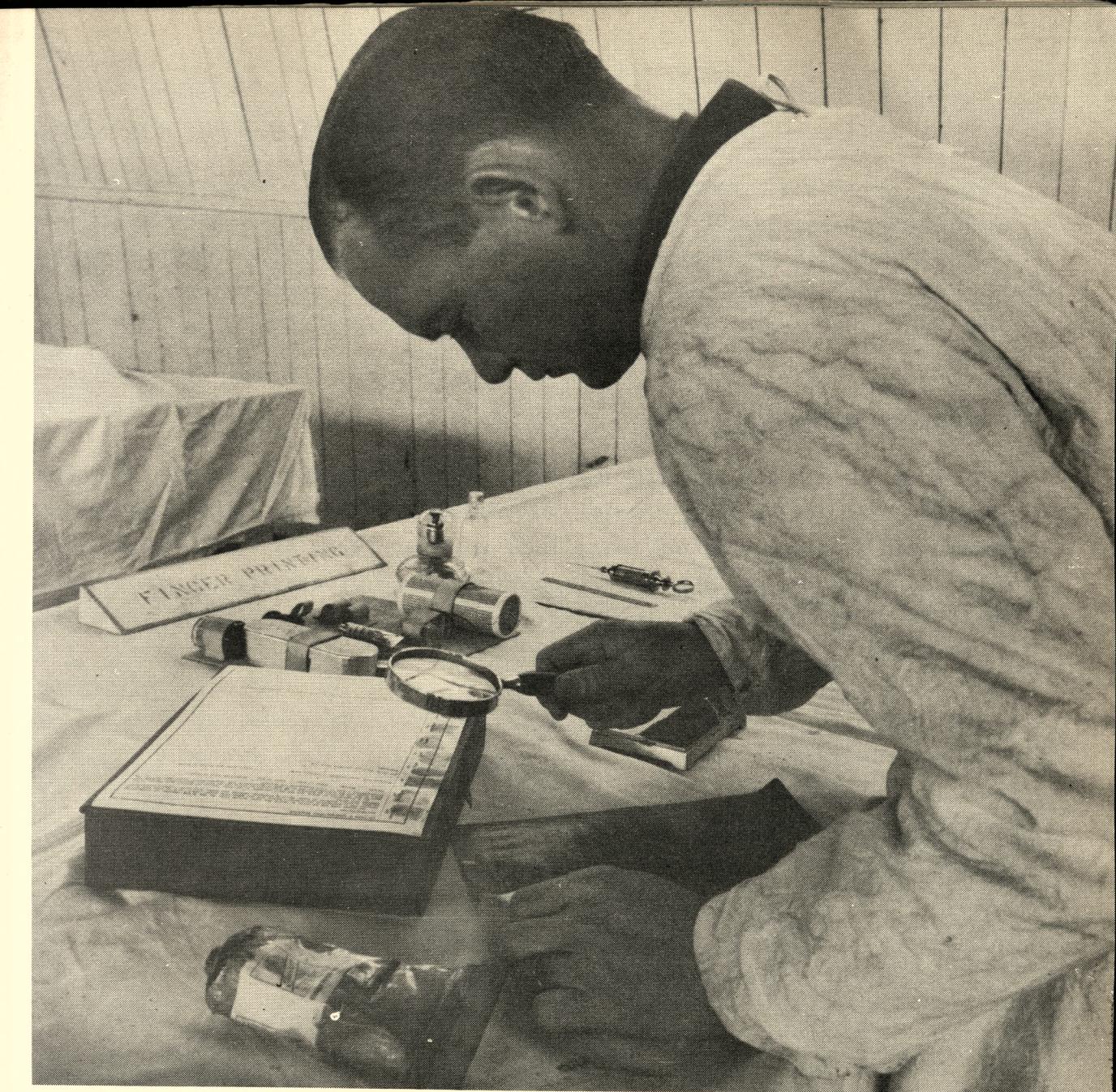
## FINGERPRINTING

A complete set of fingerprints is final, complete and scientific proof of identity. Unfortunately, however, fingerprints of disinterred remains are very difficult to obtain, the flesh of the hand decomposing more quickly than that of the rest of the body. In some cases, fingerprints are obtainable, when, for example, the hands of the corpse are encased in gloves, or when, at burial, they were folded under his armpits. Obtaining fingerprints under these conditions, however, is a very difficult and delicate operation.



### FINGERPRINTS OF DECOMPOSED REMAINS

Here, a fingerprint technician is shown taking a fingerprint by placing the epidermis over his own gloved finger and printing it on the space provided in the Report of Burial, AGRC Form 1042. Another method is to inject the subcutaneous tissue with glycerine or liquid paraffin, clean the epidermis with alcohol or gasoline, and then dry the epidermis with heat to the proper degree that it can be inked and printed. When the epidermis is badly dried and shrivelled, hot water will usually soften it sufficiently for printing.



### INSPECTION OF FINGERPRINTS

A laboratory officer inspects the fingerprints taken to determine which set is best for the original copy, which will be sent to Washington for processing.

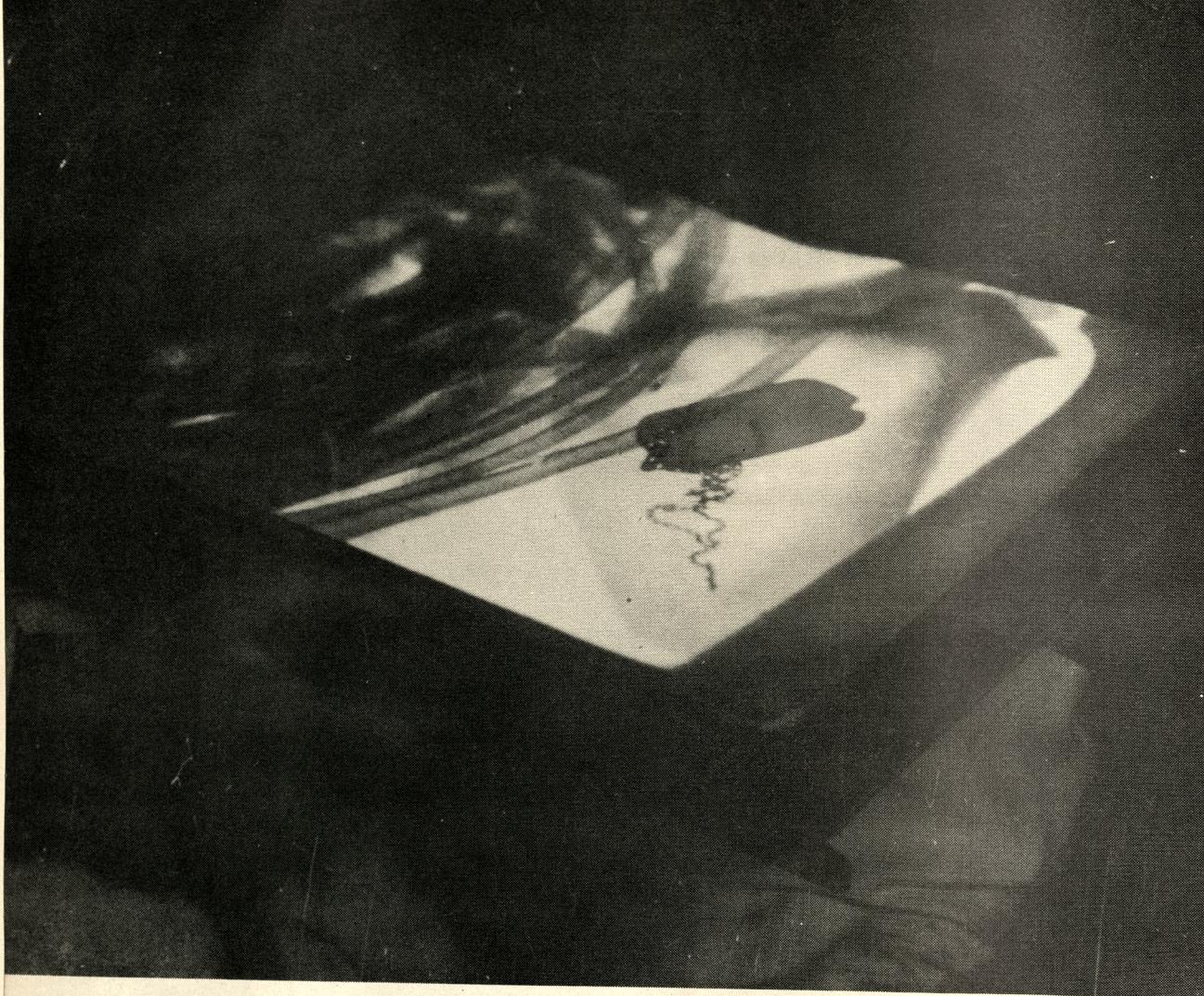
## OPERATION OF THE FLUROSCOPIC UNIT

In this picture a fluoroscope technician prepares to examine a case through the fluoroscope, while a clerk prepares the fluoroscopic report. The equipment used is United States Army X-ray Field Unit, Fluoroscopic, foreign body localization, Stock No. 962215. Small and compact, the unit can be packed in three separate trunks which together weigh less than 400 pounds.

## FLUROSCOPIC EXAMINATION

Many of the disinterred remains that are brought into the CIP for identification processing consist of exceedingly heavy, tangled masses of decomposed tissue, clothing, clay loam or other types of earth, stones and other such material, all mixed together. Hand processing of such cases would be time consuming and difficult. A fluoroscope is used to detect quickly any foreign articles such as identification tags or personal effects that might be used to identify the remains. It is also used to check on the work of the identification team, when hand processing of remains has failed to divulge any identification data. The fluoroscope is also used to examine the clothing of the deceased and other grave debris for possible identification clues. Use of the fluoroscope at the CIP and its subordinate agencies has resulted in many remains being identified that otherwise would have remained unknown soldiers.



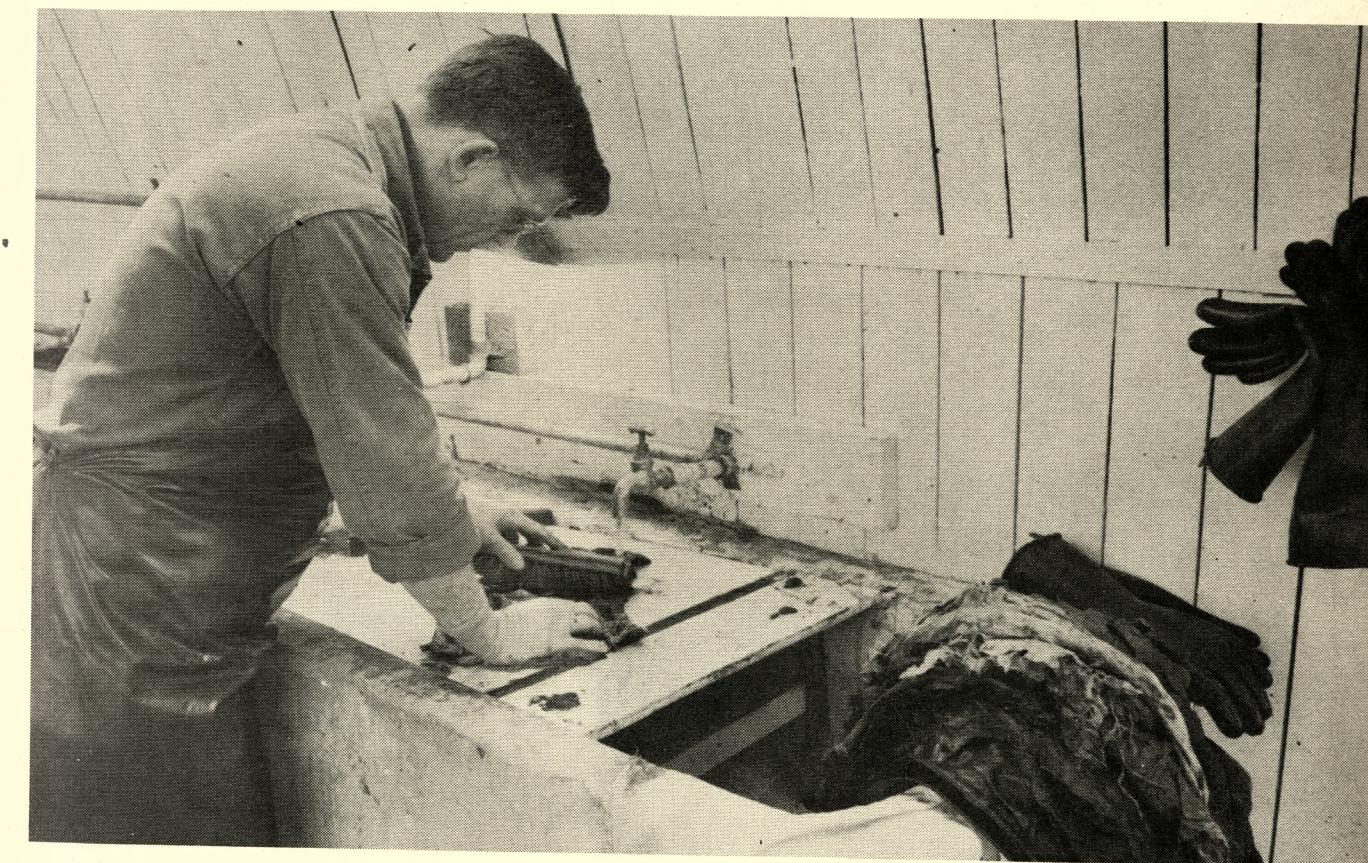


#### THE FLUROSCOPE IN OPERATION

This picture shows the fluoroscope in operation. The silhouette of an identification tag is readily recognizable. The deeper any object lies embedded in the remains, the larger it is magnified on the screen of the fluoroscope.

#### EXAMINATION OF CLOTHING

After clothing has been removed from the remains, it is cleaned and examined in order to obtain any clues that will help in making an identification. Each scrap of clothing, no matter how small, is thoroughly washed and carefully examined for laundry marks, labels, lettering (initials, nick-names, etc.), sizes of clothing, unusual designs, type of fabric, patches, color and type of clothing. Faded markings are cut away and sent to the chemical laboratory for special treatment.



#### CLEANING CLOTHING

Here, an identification technician is shown cleaning small parts of clothing found with the remains. Some of the clothing has turned black, because of decomposition and is so frail that careful handling is required. Good natural lighting or very strong artificial lighting is required for this operation. Because of the importance of this work, local civilians hired by the CIP may perform this operation only when under the close supervision of identification technicians.

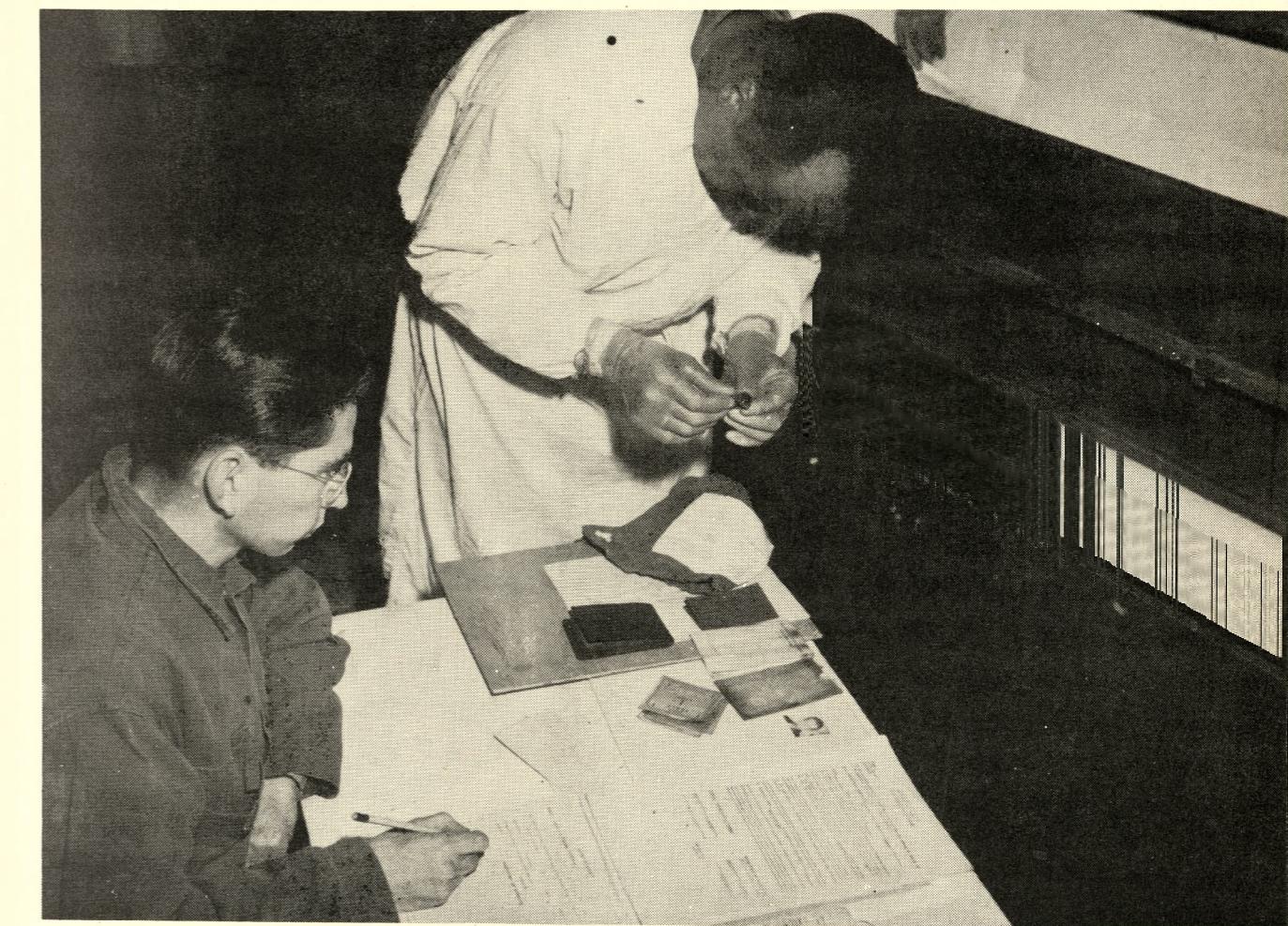


#### DISCOVERING OF LAUNDRY MARK

Plenty of GI soap and hot water together with careful application of a scrubbing brush has divulged this laundry mark on a pair of Army drawers. Although, laundry marks are not considered a positive means of identification, there have been many cases where a faded marking has furnished the necessary clue leading to an identification.

#### EXAMINATION OF PERSONAL EFFECTS

As remains are processed in the morgue laboratory, all personal effects are carefully removed, inventoried and placed in a personal effects bag. After remains have been processed, personal effects are processed by the chemical and photographic laboratory in order that all clues will be obtained and made a part of the permanent record. The effects are then delivered to the personal effects officer of the CIP for final disposition (See Appendix F).



#### INVENTORY OF PERSONAL EFFECTS

Recorder lists personal effects found on a body as they are examined by the table supervisor of a processing team. Effects are then placed in a special bag.

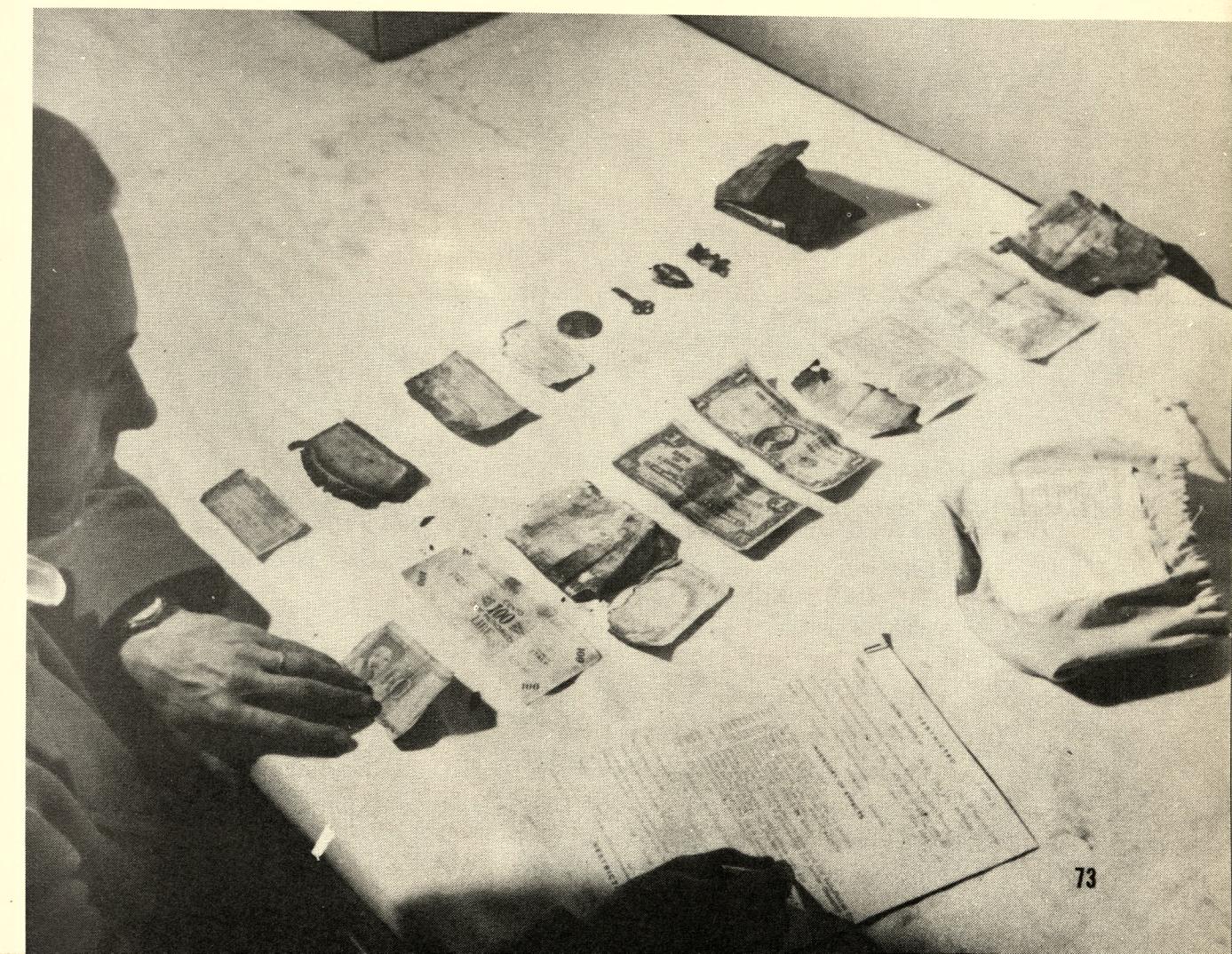


#### ASSIGNING THE CASE NUMBER

An administrative agency of the CIP rechecks the inventory made in the morgue, verifies the case number assigned to the complete set of personal effects and forwards them to the chemical and/or photographic laboratory for analysis.

#### WITHDRAWAL OF CURRENCY

Currencies are withdrawn from the effects and entered on the appropriate transmittal schedule and forwarded to the Central Disbursing Officer, United States Army.

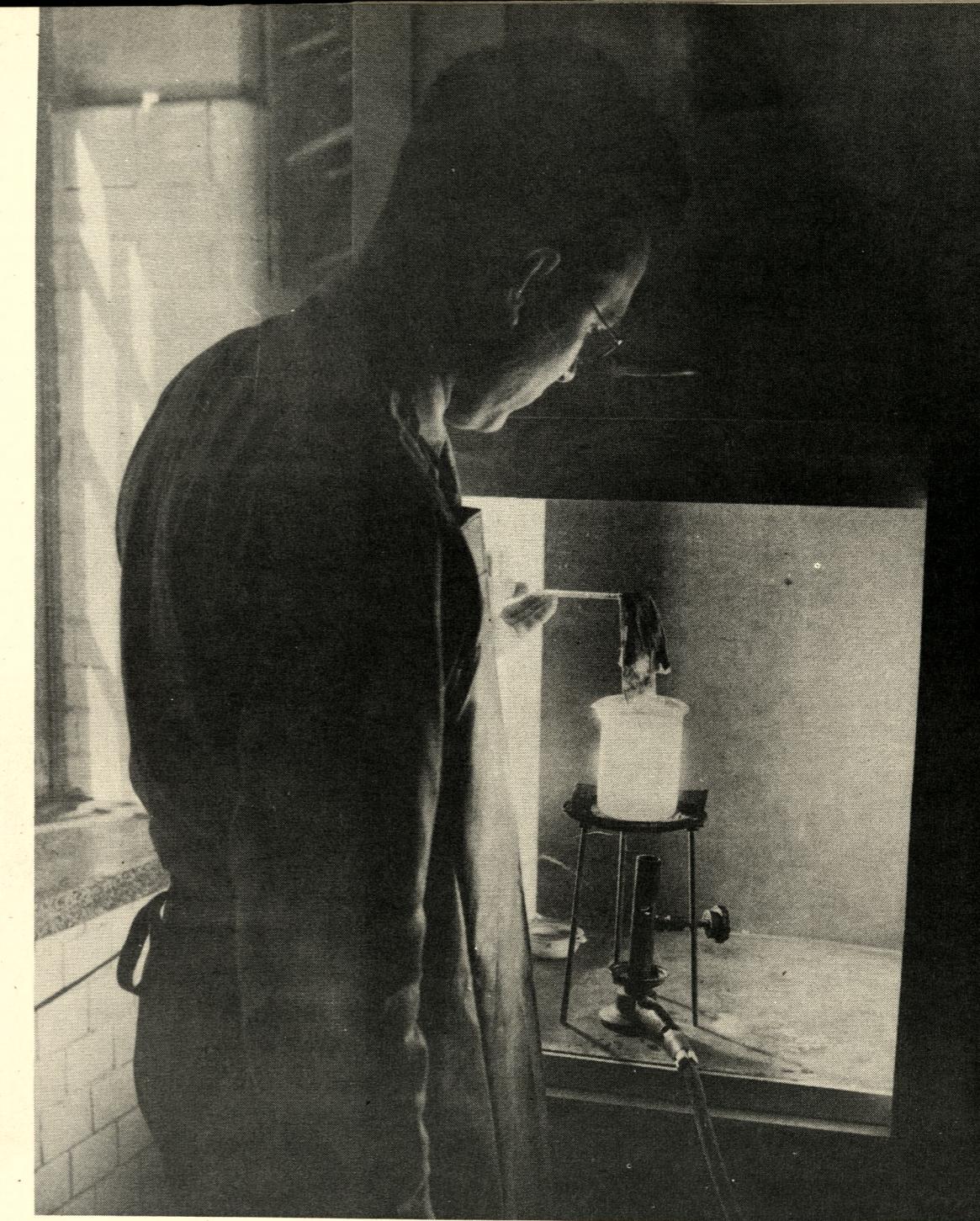


## REMOVAL OF RUST

In the chemical laboratory, each item is examined carefully for clues. Prior to examination, it is necessary to remove rust from metal articles. This key has been submerged in a solution of diluted hydrochloric acid. By contrast, observe the condition of the two penknives in the foreground which were recovered from the same body.



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## CLEANING OF CLOTHING

Clothing must also be cleaned prior to examination. Here, a piece of clothing, bearing evidence of a faded laundry mark is boiled in a solution of sodium hydroxide to remove body fats before means of restoration are attempted.

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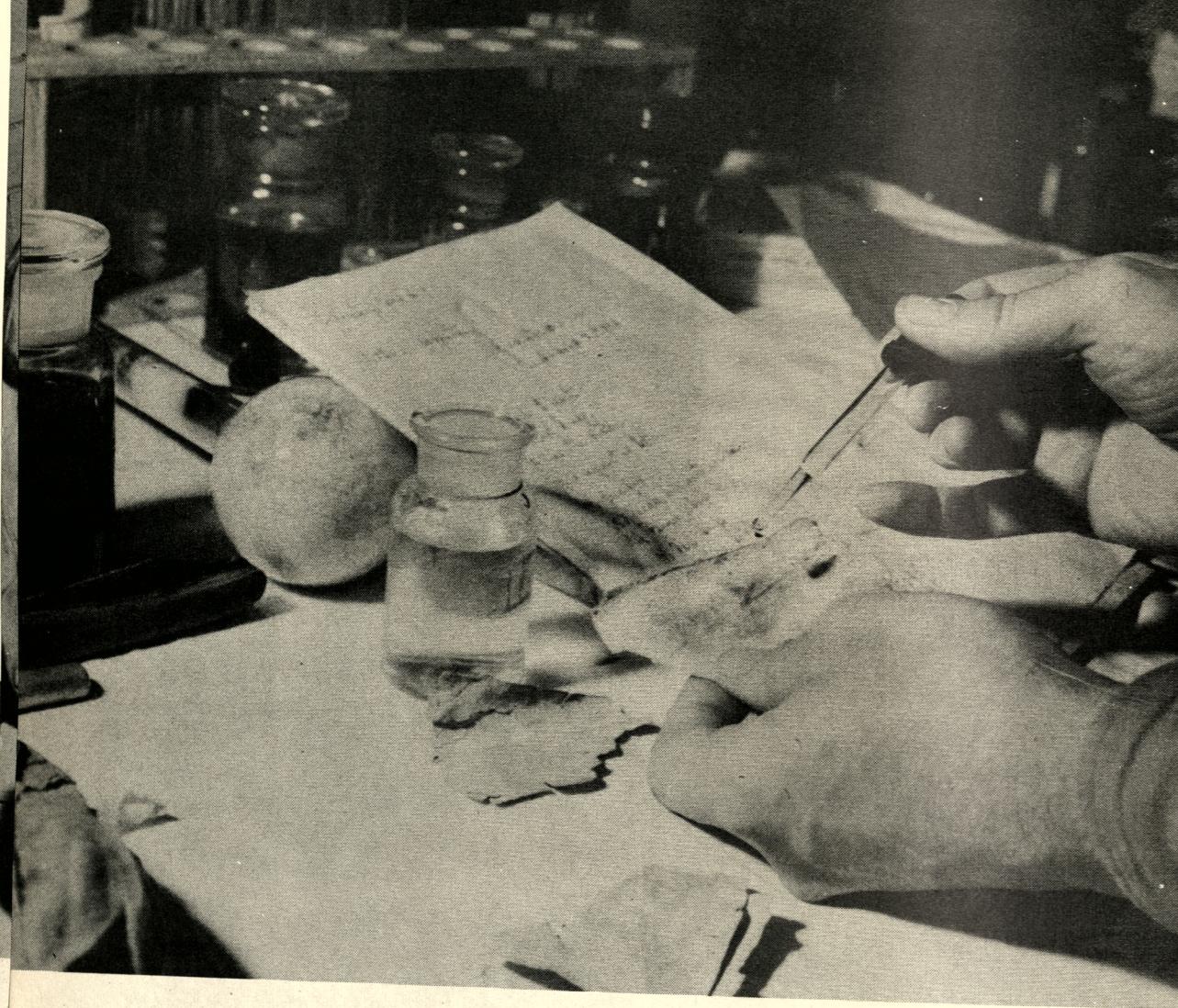
### RESTORATION OF FADED WRITING

Restoration of faded writing on papers found on the bodies of the deceased is an important technique in obtaining clues. Here, a technician is conducting a color reaction test to determine the nature of the ink type. Once this has been determined, restoration of the faded writing will begin.

### FUMING

Here, a technician is shown restoring faded writing by the technique of fuming. The fumes of either ammonium sulfide or iodine can be used in this operation.





#### USE OF AMMONIUM SULFIDE

Here, a solution of ammonium sulfide is used to restore faded writing on a scrap of paper found on an unknown soldier.

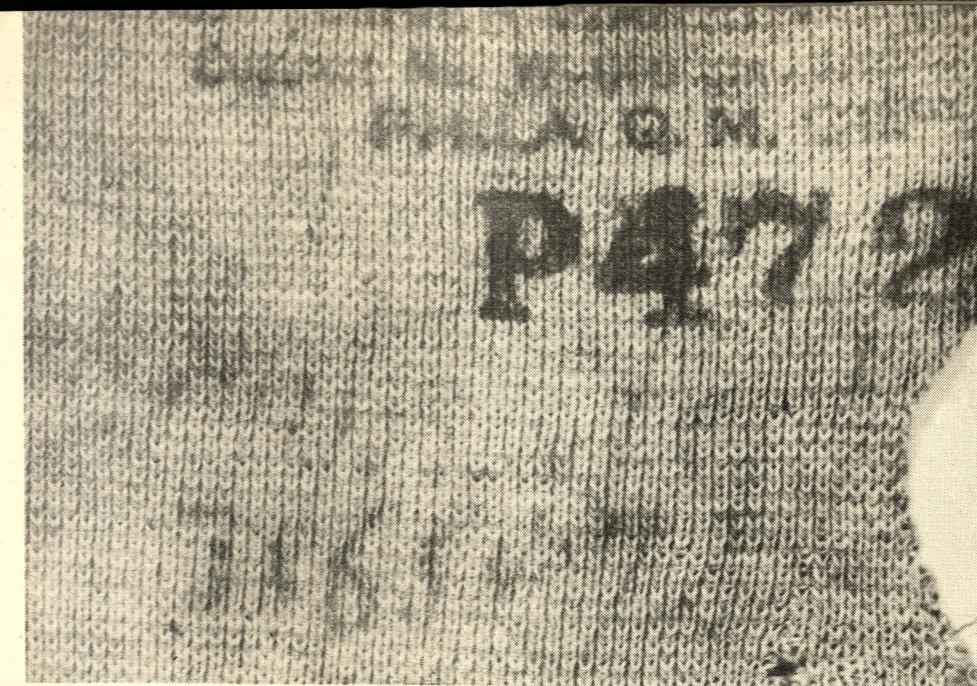


#### FADED WRITING RESTORED

This is the same scrap of paper after treatment. Notice that several letters have been made visible by use of modern scientific methods.

## PHOTOGRAPHIC TECHNIQUES

The photographic laboratory at the CIP is used as a recording agency, preserving in photographic form, evidence that has already been established by body processing teams in the morgue and by technicians in the chemical laboratory, and as an evidence producing agency in itself. Many identity clues are brought to light by the use of such modern photographic techniques as infra-red and ultra-violet photography, toning and contrast. A complete set of file prints are carefully stored in the photo laboratory for future reference. Negatives are filed in the photographic files of Headquarters, American Graves Registration Command.

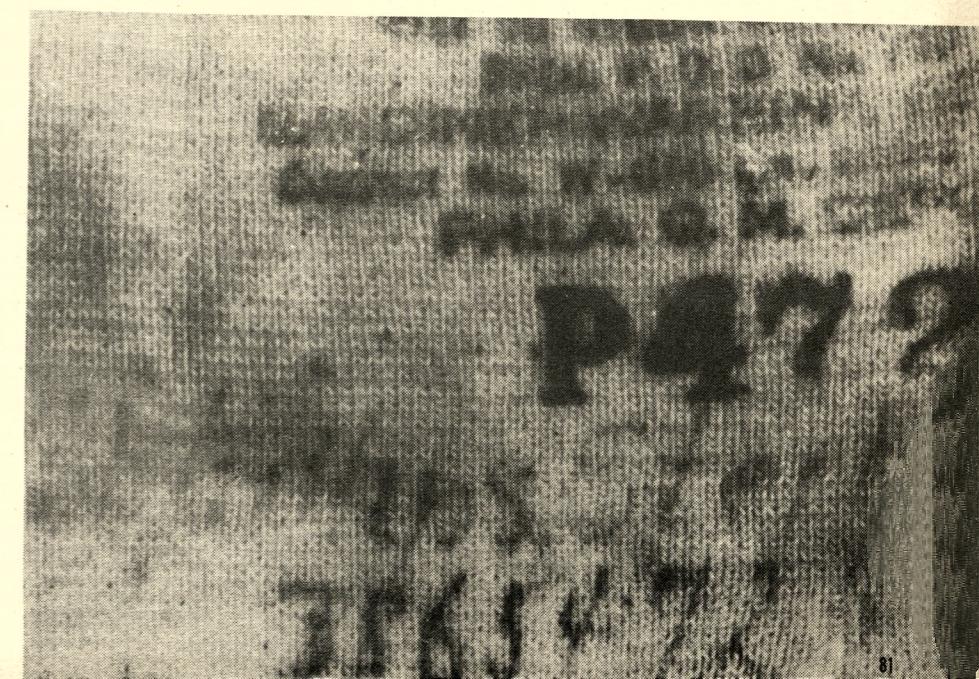


### LAUNDRY MARKS - ORDINARY PHOTOGRAPHY

This is a piece of clothing removed from the body of an unknown soldier. It has been photographed by ordinary methods. Notice that the laundry marking is barely decipherable.

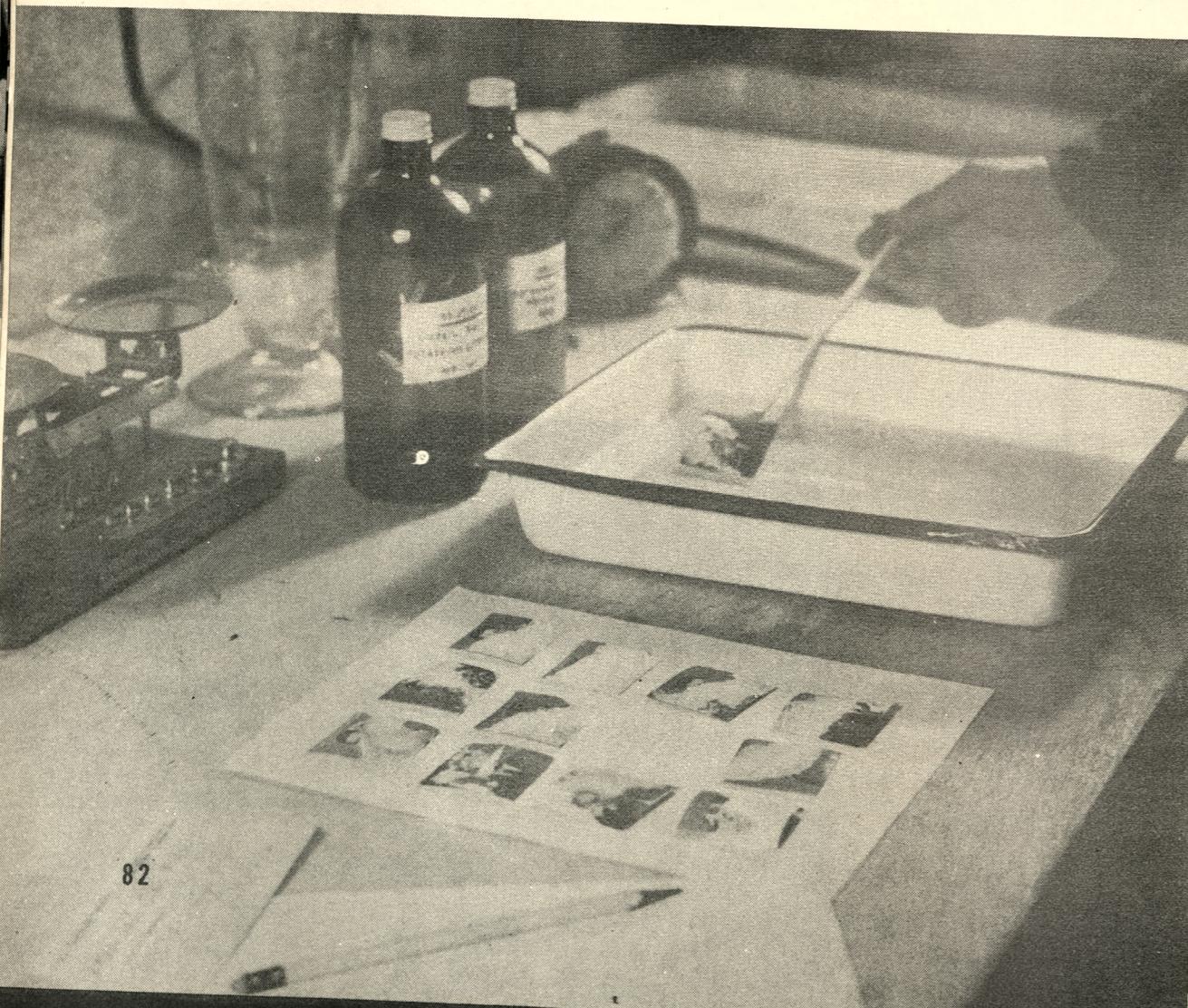
### LAUNDRY MARKS - INFRA-RED PHOTOGRAPHY

This is the same article of clothing photographed by the use of infra-red photography. Laundry marks are now much clearer.

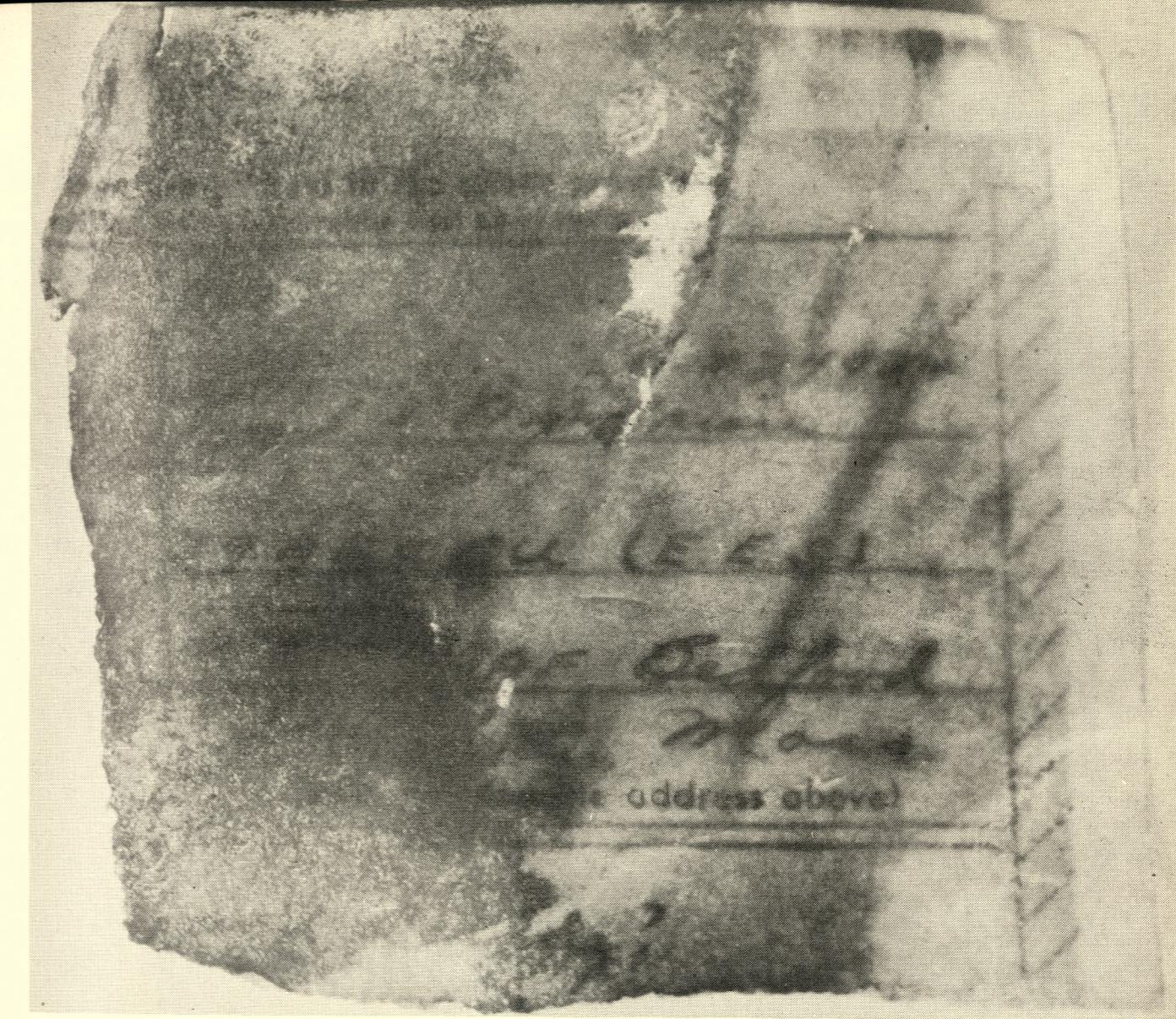


## TONING

Toning is another photographic process that is exceptionally valuable in tracking down certain types of identification clues. By this process, visible metallic compounds are superimposed to the original silver emulsion image of a photograph. Successful use of this method depends upon the amount of image or emulsion remaining on the photos and its sensitivity to the chemicals used. The rephotography of the result, if sufficient restoration can be made, makes possible the identification of the remains by recognition. Here, a photographic technician is processing a group of photographs found with the remains of an unknown American soldier.



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## EXAMPLE OF TONING

This close-up of a V-mail form shows an outstanding example of partial restoration by means of toning. Since the V-mail letters that soldiers received were merely reduced photographic facsimiles of the letters their families and friends mailed them, the use of the photographic technique of toning is often invaluable in deciphering the marking on V-mail letters found on the disinterred bodies of unknown American soldiers.

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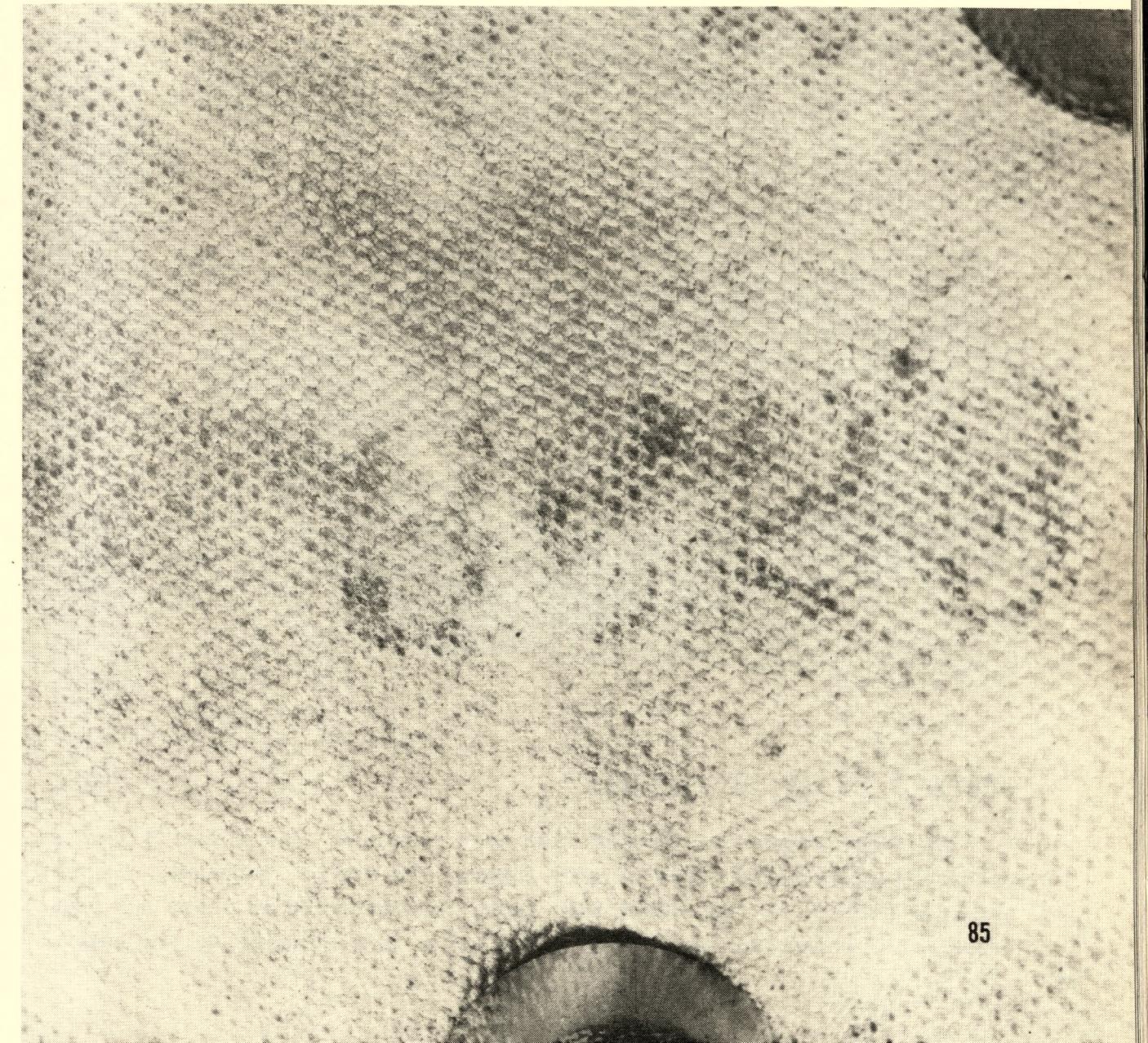


#### CONTRAST

The photographic technique of contrast is also valuable in the deciphering of faded marking and writing. Here, a photographic technician is preparing to photograph part of a canteen cover under water. It is being photographed under water to achieve the necessary contrast to bring out an obliterated marking.

#### EXAMPLE OF CONTRAST

This is a close-up of the canteen cover. Notice that the marking on the webbing is now discernible.





#### CONTRAST BY USE OF FILTERS

The photographer at the CIP also uses standard lens color filters to make semi-obliterated marks clearer through the use of contrast. In this enlarged picture of two combat boot tops, the lettering is sharp and clear because the photograph was taken with a color lens attached to the camera.

#### RECORDS PROCESSING

The last cycle of the operations of the CIP before the processed remains are shipped out to be interred in a United States military cemetery is the processing and preparation of complete records for each case. All the data that painstaking scientific research has collected will be valueless unless it is organized into a meaningful, accurate report.

A complete case history is compiled by the Records Section of the CIP for each body that has been processed. Each case consists of the following forms and records:

- a. Check list of unknowns - AGRC Form 11; this is prepared for both known and unknown dead. (See Appendix C.)
- b. Identification Dental chart (QMC Form 1045, 1 April 1947). (See Appendix E.)
- c. Report of Interment - WD QMC Form 1042; this form is initially prepared by the CIP and completed by the cemetery when remains are finally interred.
- d. Emergency Medical Tag - MD Form 52B.
- e. Convoy list (for shipment to cemetery).
- f. Personal effects inventory (when applicable).
- g. Case narrative (when applicable).

All these forms and records are consolidated under one cover as a complete history. Distribution of individual forms is not made piecemeal but as a complete case.



#### REPRODUCING THE SKELETAL CHART

Here, a reproduction clerk is shown making the required number of copies of the skeletal chart, a part of the Identification Check List (AGRC Form 11) (See Appendix C.) These copies are made in ink with the aid of an under-lighted copy desk to insure accuracy. All necessary copies of all forms and records are made at this time.

#### REVIEW BY CASE WRITERS

Case writers then study all records and reports carefully. Findings of the CIP for each remains are now compiled.



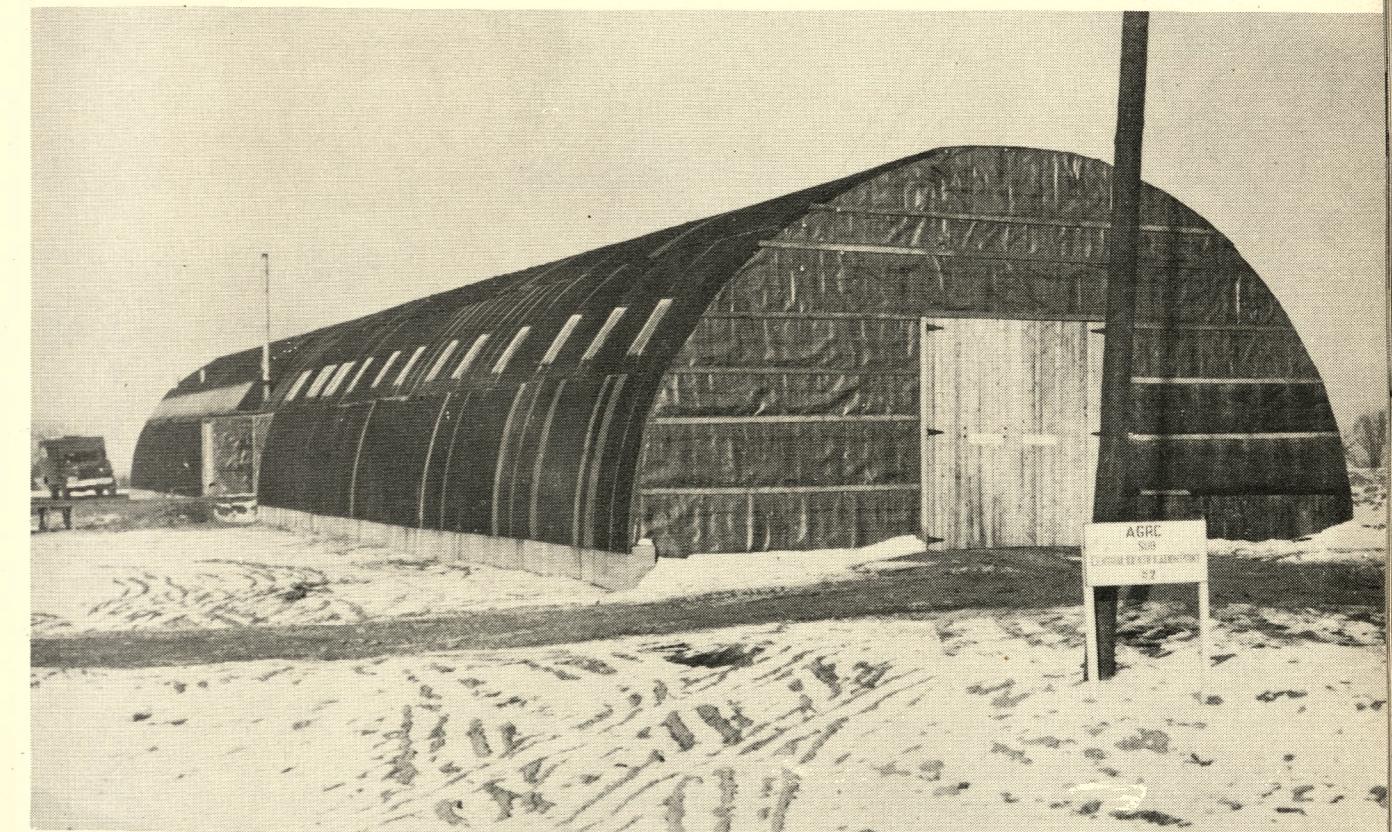


#### CERTIFICATION OF REPORTS

Record offices carefully review each case to see that all facts are properly recorded, before the reports are signed.

#### FIELD AGENCIES FOR IDENTIFICATION

The Central Identification Point is the central clearing house of information for the identification of all unknown dead in the European Theater. Because of the vast distances across Europe where American soldiers are buried, however, the CIP has set up subordinate field agencies to accomplish identification work close to the site of disinterment. Three subordinate Identification Points have been established at Carentan, France, at Margraten, Holland, and at Neuville-en-Condroz in Belgium. These agencies are staffed with the same type of highly skilled personnel as are employed by the CIP and are equipped to perform most of the technical operations that are performed at the central agency. In addition, for use on special cases, the CIP operates mobile laboratories that are able to go directly out to the site of a grave and conduct identification operations on the spot.



#### MARGRATEN SUBORDINATE IDENTIFICATION POINT

This is the Subordinate Identification Point at Margraten, Holland. It is constructed from two Romney huts, laid end to end.



#### INTERIOR VIEW OF SUBORDINATE IDENTIFICATION POINT

An interior view of the Subordinate Identification Point. Note the work tables that were especially developed for this type of operation.

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IDENTIFICATION

#### THE MOBILE LABORATORY

A mobile laboratory preparing to move off for operations in the field. The specially selected team consists of an identification technician, two technical assistants, a tooth chart technician, and one enlisted man who will act as recorder and driver.



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#### INTERIOR OF MOBILE LABORATORY

This is a close-up view of the interior of a mobile laboratory. Notice that fluoroscopic equipment has been installed.

#### OPERATION OF MOBILE LABORATORY PERSONNEL IN THE FIELD

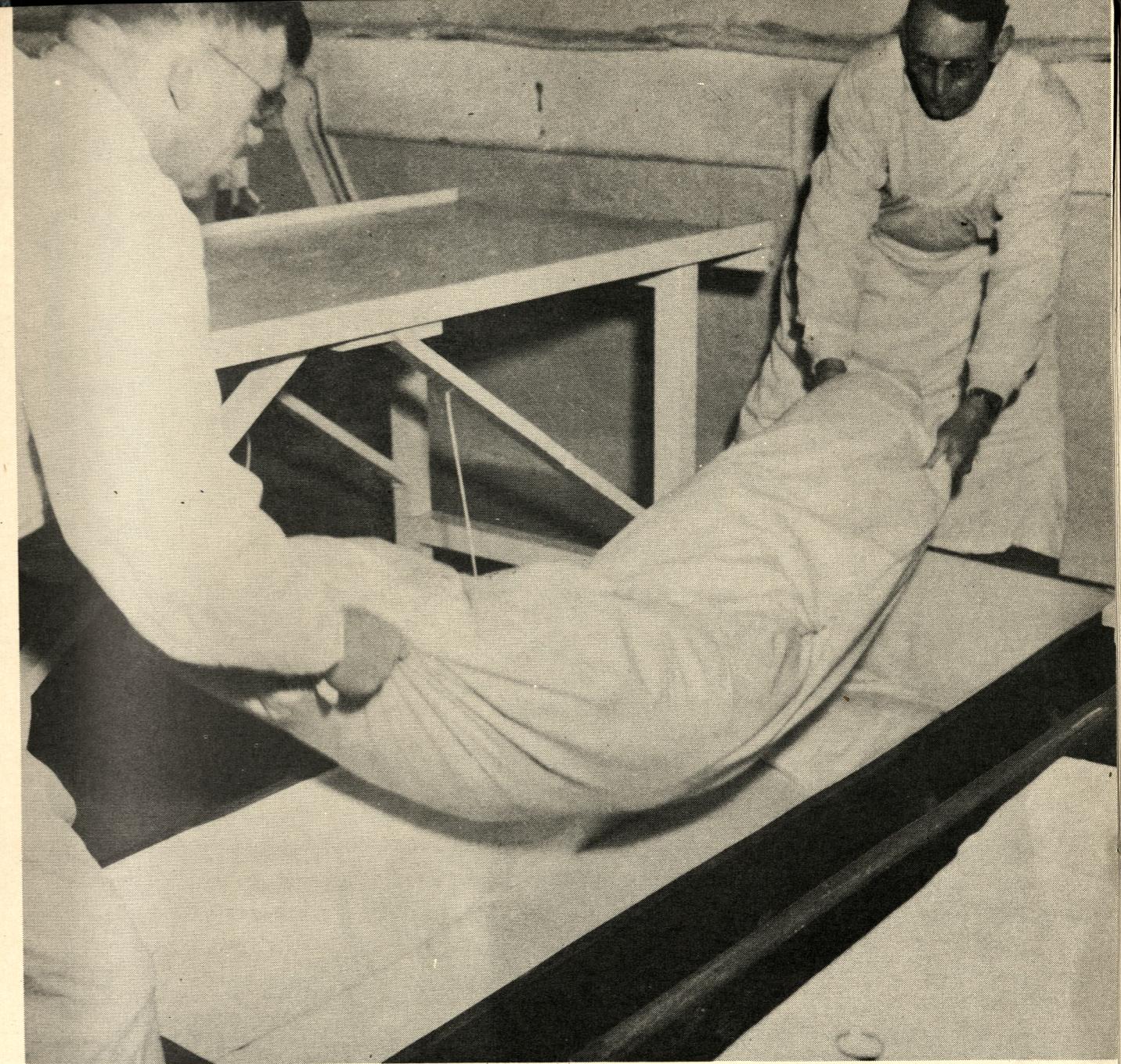
At a United States military cemetery, identification technicians gather up the remains of an unknown American soldier for processing in the mobile laboratory. Mobile laboratories are equipped to operate at the actual site of temporary United States cemeteries.



## INTERMENT

Reburial of the remains is the final step in the phase of Graves Registration activities discussed in this manual. All the preliminary operations of search, recovery and identification have had this end as their object - the burial of the remains in a United States military cemetery and the erection of a grave marker bearing the name of the serviceman. In this respect, it is the most important step in the entire process.

The pictures that follow show how this final operation of the Graves Registration Service is accomplished.



#### PREPARING REMAINS FOR REBURIAL

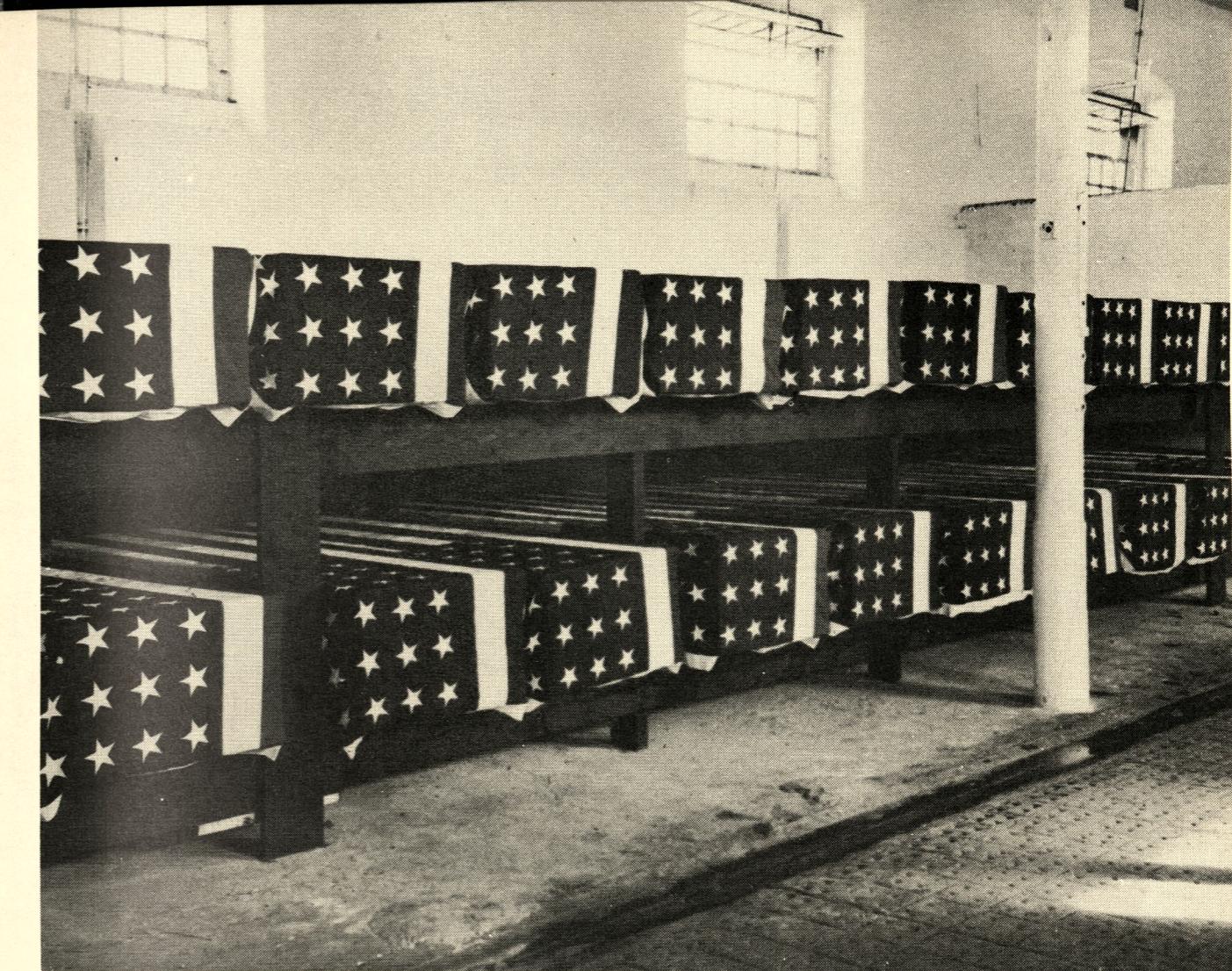
When the remains have been completely processed for identification, they are prepared for reburial. First they are sprayed with liquid deodorant. They are then wrapped and placed face up in a burial box.

## TAGGING THE REMAINS

Embossed metal strips are cut for use in addition to and/or in lieu of identification tags. If no tags were found, one embossed strip is pinned to the mattress cover over the chest of the remains; one is tacked to the head of the burial box on the outside upper right corner; and a third is fastened to the grave marker. If only one identification tag is found, it, rather than the embossed strip, is pinned to the mattress cover. If two tags are found, one is pinned to the mattress cover and the other is fastened to the grave marker, and only the head of the burial box is marked with the embossed strip.



INTERMENT



## STORAGE PRIOR TO BURIAL

Remains are then stored in the morgue, ready for evacuation to the cemetery.

## PREPARATION OF GRAVES

In the meantime, the cemetery has prepared the necessary number of graves to receive the remains. Cemetery personnel are also responsible for preparation of grave markers for all remains to be reinterred.



## BURIAL OF REMAINS

Finally, the remains are buried, a chaplain of the appropriate religious faith conducting graveside services. For unknown soldiers, non-sectarian services are conducted. When the graves are closed, the final step in this phase of graves registration activities overseas is completed.

But while the recovery and burial of the remains of the last soldier found in an isolated grave overseas will mark the end of this phase of the mission of the American Graves Registration Service, the completion of this objective will mark the beginning of an even larger, more difficult program. Poll letters to the next of kin of the men who lie in these temporary military cemeteries overseas are even now being mailed from the Office of The Quartermaster General. The answers to these poll letters will determine which of these men will remain overseas in permanent United States cemeteries and which will be brought back for burial in this country. The mission of American Graves Registration Service overseas will not be completed until this immense operation has been accomplished.

In the meantime, however, the preliminary work goes forward. The personnel overseas engaged in the business of search, recovery and identification will do their utmost to assure that there is a grave marker for every man who died in Europe and that there is a name on every marker.

- A** REPORT OF INVESTIGATION
- B** EVACUATION OF REMAINS
- C** IDENTIFICATION CHECK LIST
- D** ROLLET TABLES
- E** IDENTIFICATION DENTAL CHART
- F** DISPOSITION OF PERSONAL EFFECTS

**REPORT OF INVESTIGATION**  
**AREA SEARCH**

(Date)

Case Number.....

Name ..... Rank ..... ASN .....

Means of Identification .....

**SECTION A — GENERAL**  
(To be completed by investigators in all cases)

1. Was positive identity acquired for the deceased through the surface investigation? .....

If so, state the following information:

a. NAME ..... RANK ..... ASN .....

b. ORGANIZATION .....

2. Was partial identification established? .....

If so, state the facts as to whom you believe the deceased to be:

a. NAME ..... RANK ..... ASN .....

b. ORGANIZATION .....

3. Names of other deceased buried in immediate vicinity .....

(Use reverse side for listing of crew members from MACR)

a. Date of above burials ..... Common graves? .....

4. Name and type of Cemetery .....  
(Military or civilian)

5. Map Coordinates of the Cemetery .....

a. Town ..... Country .....

6. Give exact location in cemetery of the remains:

a. Section ..... Row ..... Grave .....

b. Is sketch attached? .....

7. If remains are not located in a cemetery, give exact location.  
 a. Town \_\_\_\_\_  
 Coordinates \_\_\_\_\_  
 b. Is sketch attached? \_\_\_\_\_  
 c. Is area mined? \_\_\_\_\_

8. How is grave marked? \_\_\_\_\_

9. If grave is marked with cross, give exact markings thereon  
 \_\_\_\_\_  
 a. From what source was this information obtained?  
 (Identification Tags, Personal effects, etc.) \_\_\_\_\_

10. Where are the cemetery records?  
 (Town Hall, Cemetery, Burgomasters Office)  
 a. What information was contained thereon?  
 \_\_\_\_\_

11. What is the date of death?  
 a. Give basis \_\_\_\_\_

12. What is the cause of death?  
 a. Give basis \_\_\_\_\_

13. What is the date of burial?  
 a. Give basis \_\_\_\_\_

14. What was the place of death?  
 Coordinates \_\_\_\_\_

15. Where were the remains found?  
 Coordinates \_\_\_\_\_

16. Was casket used? \_\_\_\_\_ Who furnished the casket?  
 \_\_\_\_\_

17. Who made the burial?  
 (Civilians, American military, German military, etc.)  
 a. What are the names and addresses?  
 \_\_\_\_\_  
 b. Are certificates and statements attached?  
 \_\_\_\_\_

— 2 —

SECTION B — AIR CORPS DECEASED  
 (To be completed only if deceased is believed to be a member of the A.A.F.)

18. Were remains found in the plane wreckage?  
 a. Give location in plane from which the bodies were removed  
 (Tail gunner, pilot, radio, turret, etc., or front side of plane)  
 Near wreckage?  
 \_\_\_\_\_

19. Scene of crash must be investigated. Give complete results of investigation (if removed, state when and by whom).  
 a. Type of plane \_\_\_\_\_  
 b. Markings and/or name of plane \_\_\_\_\_  
 c. Give numbers on motors, machine guns, instruments, radios or other equipment:  
 \_\_\_\_\_

20. How did crash occur? Anti-Aircraft?  
 Enemy Planes? Collision?  
 \_\_\_\_\_

21. Did plane explode in the air? On ground?  
 \_\_\_\_\_

22. Did plane burn in the air? On ground?  
 \_\_\_\_\_

23. What was the direction of the flight?  
 \_\_\_\_\_

24. What was the civilian opinion regarding destination of plane?  
 \_\_\_\_\_

25. Had bombs been released prior to the crash?  
 \_\_\_\_\_

26. Does specific time and date of crash correspond with the date of death of above-named deceased?  
 \_\_\_\_\_

27. Number of planes in formation prior to the crash?  
 \_\_\_\_\_

28. State precise time and date of plane crash  
 (Night? Day?)  
 \_\_\_\_\_

29. Were parachutists seen? How many?  
 Escaped? Prisoners?  
 \_\_\_\_\_

— 3 —

**SECTION C — ARMORED CORPS DECEASED**

(To be completed only if deceased is believed to have been a member of the Armored Corps)

30. Were remains found in wreckage of a tank? \_\_\_\_\_  
 a. Give specific position in tank from which deceased was removed: \_\_\_\_\_  
 (Radio man, driver, assistant driver or ..... front, side or back)  
 b. Near wreckage? \_\_\_\_\_

31. Location of destroyed tank must be investigated. Give complete results of investigation. (If removed, state when and by whom)  
 a. Type of tank \_\_\_\_\_  
 b. Markings and/or name of tank \_\_\_\_\_  
 c. Numbers on motors, machine guns, ammunition, instruments, etc. \_\_\_\_\_

32. What was the type of enemy action that resulted in the tank's disablement? \_\_\_\_\_

33. Did tank explode? \_\_\_\_\_ Burn? \_\_\_\_\_

34. Numbers of tanks in immediate vicinity at time of disablement? \_\_\_\_\_

35. Does specific time and date of disablement correspond with date of death of above-named deceased? \_\_\_\_\_

36. Precise time and date of destruction of tank \_\_\_\_\_  
 (Night? Day?)

37. Did any of the crew members escape? \_\_\_\_\_ Prisoners? \_\_\_\_\_

**SECTION D — OTHER BRANCH**

(To be filled out if B &amp; C are not applicable)

38. Did death occur from any other means? (Truck, jeep, mines, or small arms fire) \_\_\_\_\_  
 If so, give complete and thorough results of the investigation  
 a. Are all certificates and statements of people who possessed knowledge of the case attached? \_\_\_\_\_

39. State the specific clues and evidence that were obtained in securing the name and facts regarding the above listed deceased \_\_\_\_\_

— 4 —

**SECTION E — GENERAL**

(To be completed by investigation in all cases)

40. Were personal effects recovered by the investigation team? \_\_\_\_\_  
 If not, state reason \_\_\_\_\_  
 a. Were Identification Tags found at the time of death? \_\_\_\_\_  
 Where? \_\_\_\_\_ By whom? \_\_\_\_\_  
 Present disposition? \_\_\_\_\_  
 b. Were personal effects found at the time of death? \_\_\_\_\_  
 Where? \_\_\_\_\_ By whom? \_\_\_\_\_  
 Present disposition? \_\_\_\_\_  
 c. Was deceased identified by living members of the crew at the time of death? \_\_\_\_\_  
 d. Did cemetery register or cross indicate the immunization shot? \_\_\_\_\_

41. Was deceased given first aid? \_\_\_\_\_ If so, where? \_\_\_\_\_  
 By whom? \_\_\_\_\_ Are statements from the medical people attached? \_\_\_\_\_

42. Was deceased evacuated to a German civilian hospital? \_\_\_\_\_  
 Where? \_\_\_\_\_ Names of people concerned \_\_\_\_\_

43. Is it possible on surface investigation to obtain from civilian sources a physical description of the deceased? \_\_\_\_\_

44. Is it possible on surface investigation to obtain from civilian sources the condition of the remains? \_\_\_\_\_  
 (Burnt, decapitated, etc.)

45. Do facts surrounding death show any evidence that it might be an atrocity case? \_\_\_\_\_  
 a. If so, give basis for positive assumption \_\_\_\_\_  
 b. If so, has higher Headquarters been notified? \_\_\_\_\_

46. Was case previously investigated? \_\_\_\_\_ By whom? \_\_\_\_\_  
 When? \_\_\_\_\_

— 5 —

47. Give full names, addresses, and information obtained from each person interviewed: \_\_\_\_\_

\_\_\_\_\_

48. Are all positive statements regarding identification and particulars surrounding death attached? \_\_\_\_\_

\_\_\_\_\_

49. Has any information been given concerning isolated burials in the area outside the immediate vicinity? \_\_\_\_\_

\_\_\_\_\_

50. Was investigation preceded by advance publicity? \_\_\_\_\_  
(If special investigation, give case number) \_\_\_\_\_

\_\_\_\_\_

51. Give brief narrative \_\_\_\_\_

(Use attached sheets if necessary)

(Signature of Interpreter)

(Signature of Investigator)

Rank ASN

Rank ASN

(Organization)

(Organization)

- 6 -

HEADQUARTERS  
AMERICAN GRAVES REGISTRATION COMMAND  
EUROPEAN THEATER AREA  
APO 887 U S ARMY

RFS 518

4 October 1946

SUBJECT: The Evacuation of Remains.

TO: See Distribution

1. Field tests have proved that all remains can be evacuated odor free.

2. Effective immediately, the following procedure will be employed in the evacuation of all remains:

a. Immediately upon disinterring of remains or the removal of remains found on the surface, the remains will be sprayed (normally two (2) ounces of spray is sufficient), with one of the following approved disinfectants: Necrosan, Necasco or San Veino Spray.

b. Remains will be carefully wrapped in a clean mattress cover. Mattress cover will be tied in place with cordage. Safety pins will not be used to hold the mattress cover in place.

c. The mattress cover containing the remains will be placed in a metallic liner. There are two types of metallic liners issued for this purpose.

- (1) Cloth metallic liners.
- (2) Paper metallic liners.

Use of the cloth metallic liner will be restricted for use only within the First Field Command and will not be used by Zones for evacuation without prior specific approval of this headquarters. The paper metallic liner will be used by Zones in evacuating remains to the Central Identification Point and in the transfer of all German remains.

d. The metallic liner will be carefully sealed by using cement, liquid butyl tent patching; or cement, rubber waterproof. Care must be exercised in sealing the liner, to be absolutely sure that all the air is forced out prior to completing the sealing of the metallic liner.

e. The liner containing remains will be carefully placed in a clean dry airlift or reburial box. The seams of the liner will be parallel to top and bottom of the box and not perpendicular. The seams of the liner will be folded upward and over the remains, to prevent seepage from damaging or breaking the seal. (See Exhibit A).

f. Upon receipt of remains at the unit collecting point, boxes will be opened and liners containing remains removed and thoroughly inspected, to insure that liners have not been damaged in transit.

g. Liners showing signs of leakage or damage will be replaced with a new liner prior to evacuating to the Central Identification Point.

h. When a box becomes soiled by seepage, the box will be replaced prior to evacuation.

i. All boxes containing remains will be lightly sprayed with one of the approved disinfectants prior to resealing for evacuation.

3. Commanders of all echelons will insure that every member of their command is familiar with the above procedures and are personally responsible that the instructions are carefully followed by all concerned.

FOR THE COMMANDING OFFICER:

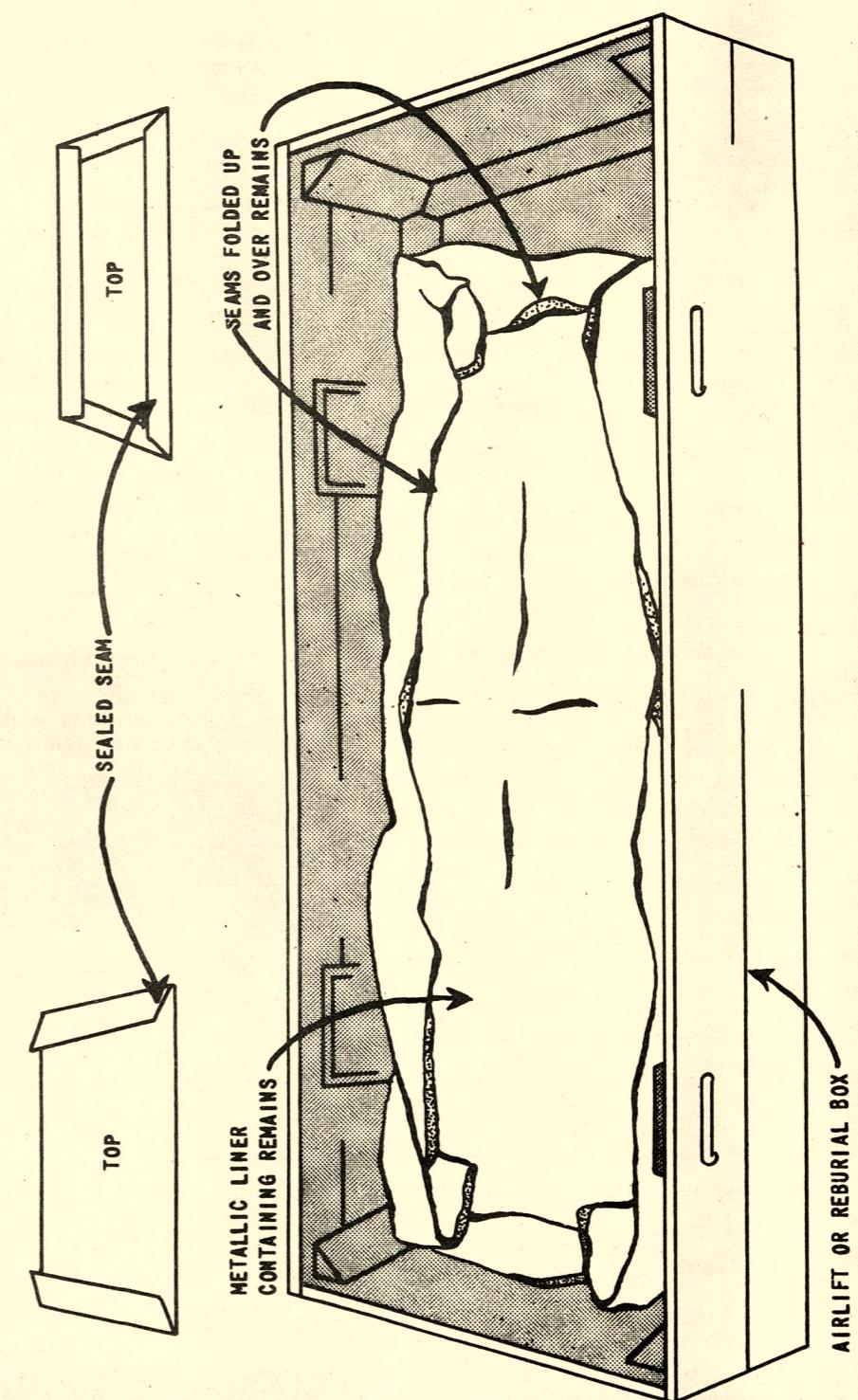


1 Incl.  
Exhibit "A"

A. J. MAXWELL  
Lt Col, AGD  
Adjutant General

DISTRIBUTION: A & C

PLACING SEALED METALLIC LINER CONTAINING  
REMAINS IN AIRLIFT OR REBURIAL BOX



## IDENTIFICATION CHECK LIST

(To be completely filled out and attached to each copy  
of Report of Interment WD QMC Form 1042)

Unknown X \_\_\_\_\_

Cemetery \_\_\_\_\_

Plot \_\_\_\_\_ Row \_\_\_\_\_ Grave \_\_\_\_\_

1. Arrived at cemetery \_\_\_\_\_  
(Hour) \_\_\_\_\_ (Date) \_\_\_\_\_

2. Place of death \_\_\_\_\_  
(Name of closest town) \_\_\_\_\_  
(Coordinates and letter Prefix, maps)  
(Sheet, scale and serials used) \_\_\_\_\_

3. Remains recovered or disinterred by \_\_\_\_\_  
(Name and organization)

4. Evacuated to Cemetery by \_\_\_\_\_  
(Name and organization)

5. Description of clothing and equipment: (if clothes do not fit, obtain size from body measurements)

Item	Clothing Markings	Sizes	Indicate unusual markings color, wear, tear, repairs, etc.
* Headgear			
Raincoat			
Overcoat			
Jacket, Field			
Jacket, Combat			
Mackinaw			
Sweater			
Jacket, HBT			
* Shirt, Wool OD			
Undershirt, Wool			
Undershirt, Cotton			
Trousers, HBT			
* Trousers, Wool OD			

- 1 -

Belt, web \_\_\_\_\_

Drawers, wool \_\_\_\_\_

Drawers, cotton \_\_\_\_\_

Leggings, wool \_\_\_\_\_

Socks, cotton \_\_\_\_\_

\* Shoes \_\_\_\_\_ (type) \_\_\_\_\_

Overshoes \_\_\_\_\_

Web Equipment \_\_\_\_\_ (type) \_\_\_\_\_

(Other item) \_\_\_\_\_

(Other item) \_\_\_\_\_

\* If body is nude, sizes of these items should be computed by measuring the remains

Chevrons or  
Insignia \_\_\_\_\_  
(Type & location; shirt, jacket, coat, helmet)

Shoulder Patch \_\_\_\_\_

Does clothing indicate that deceased was a member of the Air, Ground or Naval Force?

### 6. Description of Remains:

Age \_\_\_\_\_ Height \_\_\_\_\_ Weight \_\_\_\_\_ Description of wounds \_\_\_\_\_

Bandages or dressings \_\_\_\_\_ Scars \_\_\_\_\_  
(Length, width, location)

Tattoos \_\_\_\_\_  
(Number, location — illustrate on separate page)

Outstanding moles, warts or birthmarks \_\_\_\_\_  
(Yes-no; description, location)

Sunburn or tan, other than hand and face \_\_\_\_\_

Complexion \_\_\_\_\_  
(Light, medium, dark, clear, pimplies, pocks, freckles)

Build \_\_\_\_\_  
(Large, fat, thin, muscular)

Hair \_\_\_\_\_  
(Color, length, quantity, curly, wavy, straight, whorls, or definite parting)

Hair \_\_\_\_\_  
(Baldness, widow's peak, distinctive cutting or other characteristics)

Sideburns \_\_\_\_\_ Mustache \_\_\_\_\_ Beard or \_\_\_\_\_  
(Color, setting, shape) (Color, size, shape) (Length, heavy)

- 2 -

Goatee .....  
 (Light, color, extent)  
 Eyes .....  
 (Color, setting, shape)      Eyebrows .....  
 (Color, bushiness, extent across nose)  
 Nose .....  
 (Size, shape, straight)      Ears .....  
 (Size, set close to or far from head)  
 Mouth .....  
 (Large, medium, small)      Lips .....  
 (Small, large, full)  
 Teeth .....  
 (White, size, unevenness, spacing, noticeable crowns, fillings, extracts)  
 Chin .....  
 (Prominent, receding, pointed, dimples, double)  
 Jaw .....  
 (Large, small, normal)      Circumference of head in inches .....  
 (Hat band)  
 Neck .....  
 (Size, length, short, normal, wrinkled)      Larynx .....  
 (Prominent, normal)  
 Shoulders .....  
 (Broad, straight, small, rounded)      Arms .....  
 (Length, muscular, color, extent and quantity of hair)  
 Hands .....  
 Fingers .....  
 (Short, thick, long, slender, size of knuckles, missing fingers or joints)  
 (Unusual characteristics of fingernails)  
 Chest .....  
 (Size of nipples, color, quantity and extent of hair, large, small, normal)  
 Waist .....  
 (Size of navel, appendectomy, amount, quantity, and color of hair)  
 Back .....  
 (Quantity and extent of hair)      Circumcision .....  
 (Yes-no)      Pubic Hair .....  
 (Color)  
 Hernioplasty .....  
 (Yes-no; location)  
 Legs .....  
 (Inseam, muscular, knock-kneed, bowed, normal, quantity, color and extent of hair)  
 Feet .....  
 (Size, corns, callouses, flat)      Toes .....  
 (Slender, straight, crooked, overlap)  
 Evidence of healed fractures .....  
 (Nose, arms, legs, etc.)

NOTE: Use attached charts "A" and "B" to indicate parts not received.

- 3 -

## SKELETAL CHART

(BLACK OUT PARTS OF BODY NOT RECEIVED AT CEMETERY)

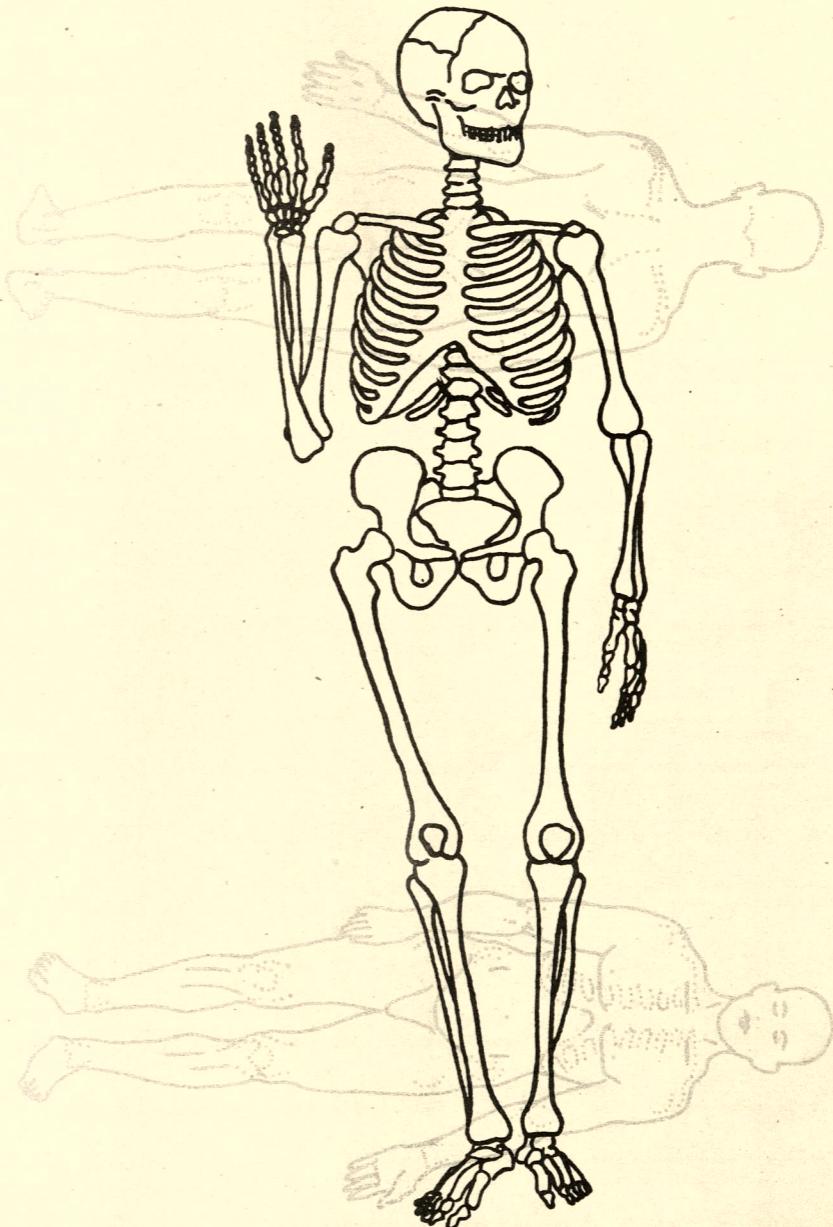


CHART "A"

(BLACK OUT PARTS OF BODY NOT RECEIVED AT CEMETERY)

ANATOMICAL CHART

## ANATOMICAL CHART

(BLACK OUT PARTS OF BODY NOT RECEIVED AT CEMETERY)

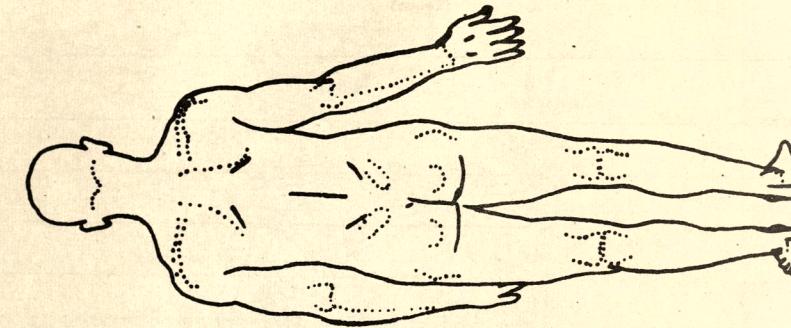
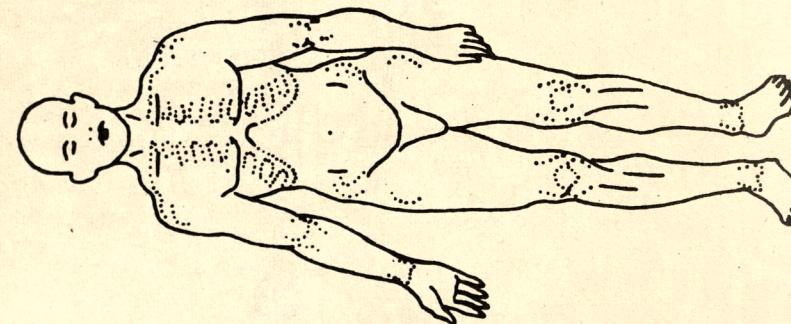


CHART "B"

7. Have finger prints been placed on Report of Interment? \_\_\_\_\_  
(Yes-no)

If not, explain \_\_\_\_\_

8. Has tooth chart been prepared? \_\_\_\_\_ If not, explain \_\_\_\_\_  
(Yes-no)

9. Remarks \_\_\_\_\_

I certify that I have personally viewed the remains of subject deceased and all resulting information has been recorded to the best of my knowledge.

.....  
(Officer's Name)

Rank \_\_\_\_\_ Service \_\_\_\_\_

.....  
(Organization)

### DETERMINATION OF HEIGHT

These tables of Rollet should be used with a measuring device as the Broca Scales. The tables give the measurement of fresh bones with articular cartilage. If dry bones were measured 2mm. should be added to the measured lengths.

Measure as many of the long bones of the lower and upper extremities as possible, so that a more accurate estimation of height can be made.

The bones generally should be measured for the longest length excepting the tibia and femur. The spine of the tibia or medial malleolus should be placed in the hole of the backboard of the Broca scales, or if some other measuring device was used, the spine should not be considered. The femur should be measured with both condyles touching the backboard.

#### Table of Measurements by Rollet

##### MEN

Height CM	Lower Appendages			Upper Appendages		
	Femur CM	Tibia CM	Fibula CM	Humerus CM	Radius CM	Ulna CM
152	41.5	33.4	32.9	29.8	22.3	23.3
154	42.1	33.8	33.5	30.2	22.6	23.7
156	42.6	34.3	33.8	30.7	22.8	24.0
158	43.1	34.8	34.3	31.1	23.1	24.4
160	43.7	35.2	34.8	31.5	23.4	24.8
162	44.2	35.7	35.2	31.9	23.6	25.2
164	44.8	36.1	35.7	32.4	23.9	25.5
166	45.3	36.6	36.2	32.8	24.2	25.9
168	45.8	36.9	36.8	33.1	24.4	26.1
170	46.2	37.3	36.9	33.5	24.6	26.4
172	46.7	37.6	37.3	33.8	24.9	26.6
174	47.2	38.0	37.7	34.2	25.1	26.9
176	47.7	38.3	38.0	34.5	25.3	27.1
178	48.1	38.6	38.4	34.8	25.5	27.3
180	48.6	39.0	38.8	35.2	25.8	27.6
182	49.7	40.1	39.7	35.9	26.5	28.4
184	50.2	40.6	40.1	36.3	26.8	28.7
186	50.8	41.0	40.6	36.7	27.1	29.0
188	51.3	41.5	41.0	37.1	27.4	29.3
190	51.9	41.9	41.5	37.5	27.7	29.6
192	52.5	42.4	41.9	37.9	28.0	29.9
194	53.0	42.8	42.3	38.3	28.3	30.2
196	53.5	43.2	42.8	38.7	28.6	30.6
198	54.1	43.7	43.2	39.1	28.9	30.9
200	54.6	44.1	43.7	39.5	29.2	31.2

##### WOMEN

	37.3	29.9	29.4	27.1	20.0	21.4
140	37.7	30.4	29.9	27.5	20.2	21.7
142	38.5	30.9	30.5	27.8	20.4	21.9
144	39.1	31.4	31.0	28.1	20.6	22.1
146	39.7	31.9	31.5	28.5	20.8	22.4
148	40.3	32.4	32.0	28.8	21.1	22.6
150	40.9	32.9	32.5	29.2	21.3	22.9
152	41.5	33.4	33.0	29.5	21.5	23.1
154	42.0	33.8	33.4	29.9	21.7	23.4
156	42.4	34.3	33.9	30.3	21.9	23.6

### WOMEN (Continued)

160	42.9	34.7	34.3	30.7	22.2	23.9
162	43.4	35.2	34.8	31.1	22.4	24.2
164	43.9	35.6	35.2	31.5	22.6	24.4
166	44.4	36.0	35.7	31.9	22.8	24.7
168	44.8	36.5	36.1	32.3	23.0	25.0
170	45.3	36.8	36.5	32.7	23.2	25.3
172	45.8	37.4	37.0	33.1	23.5	25.6

### COEFFICIENTS

	Lower Appendages		Upper Appendages			
	Femur CM	Tibia CM	Fibula CM	Humerus CM	Radius CM	Ulna CM
Men	3.66	4.53	4.58	5.06	6.86	6.41
Women	3.71	4.61	4.66	5.22	7.16	6.66

The above coefficients should be used with bone lengths which are smaller or greater than those given in the table. The coefficients multiplied by the bone length will give the approximate height in centimeters.

### ROLLET'S TABLES CONVERTED TO THE ENGLISH SYSTEM

CM	Inches	Feet - Inches
152	59.84	4 - 11 3/4
154	60.63	5 - 5/8
156	61.43	5 - 1 3/8
158	62.21	5 - 2 1/8
160	63.00	5 - 3
162	63.78	6 - 3 3/4
164	64.57	5 - 4 1/2
166	65.36	5 - 5 3/8
168	66.14	5 - 6 1/8
170	66.93	5 - 6 7/8
172	67.71	5 - 7 5/8
174	68.51	5 - 8 1/2
176	69.29	5 - 9 1/4
178	70.08	5 - 10
180	70.87	5 - 10 3/4
182	71.65	5 - 11 5/8
184	72.44	6 - 3/8
186	73.23	6 - 1 1/8
188	74.02	6 - 2
190	74.80	6 - 2 3/4
192	75.59	6 - 3 1/2
194	76.36	6 - 4 3/8
196	77.16	6 - 5 1/8
198	77.95	6 - 5 7/8
200	78.74	6 - 6 5/8
202	79.53	6 - 7 1/2
204	80.32	6 - 8 1/4
206	81.10	6 - 9
208	81.89	6 - 9 7/8
210	82.68	6 - 10 5/8
212	83.47	6 - 11 3/8
214	84.25	7 - 1/4

IDENTIFICATION DENTAL CHART				DATE															
NAME (Last, First, Middle Initial)		RANK	SERIAL NUMBER																
UNIT	ORGANIZATION	CAUSE OF DEATH	DATE OF DEATH																
PLACE OF DEATH	PLACE OF BURIAL		PLOT	ROW	GRAVE														
MISSING TEETH: ALL TEETH MISSING THROUGH EXTRACTION (NOT THOSE FRACTURED OR DISPLACED BY RECENT WOUNDS) SHOULD BE "X"'D OUT AND LABELED THUS:				TOP VIEW	SIDE VIEW														
CROWNED TEETH: BLOCK IN SOLID AND CROWN OF TOOTH (LABEL GOLD, PORCELAIN, SILVER OR GOLD AND PORCELAIN), THUS:																			
BRIDGE WORK: BLOCK IN SOLID AND CROWN OF TOOTH (LABEL GOLD BRIDGE, GOLD AND PORCELAIN BRIDGE), THUS:																			
FILLINGS: DRAW FILLING ON TOOTH AS ACCURATELY AS POSSIBLE (BLOCK IN AND LABEL GOLD, SILVER, CEMENT), THUS:																			
CARIES: (Cavities): OUTLINE LOCATION AND SIZE OF CAVITY, SHADE IN THUS:																			
				RIGHT	LEFT														
				8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8														
Side Views									Side Views										
Top Views									UPPER										
Side Views									LOWER										
DENTURES (Plates): DRAW DIAGRAM OF RELATIVE SIZE AND SHAPE OF PLATE, BLOCK IN TEETH ATTACHED AND INDICATE RETAINING CLASPS ON NATURAL TEETH WITH THE WORD, "CLASP."																			
SIGNATURE OF OFFICER OR OTHER PERSON WHO PREPARED DENTAL CHART								VERIFIED BY GRS OFFICER											
GMC FORM 1045 REV 1 APR 47				PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.															

HEADQUARTERS  
AMERICAN GRAVES REGISTRATION COMMAND  
EUROPEAN THEATER AREA  
APO 887 U S ARMY

OPERATIONS INSTRUCTIONS  
NUMBER 14

22 January 1947

DISPOSITION OF PERSONAL EFFECTS

1. REFERENCES:

- a. Article of War 112, subject: Effects of Deceased Persons; Disposition.
- b. Cir 285, War Dept, 20 Sept 45, subject: Customs Clearance of Effects of Deceased, Missing, Missing in Action, Captured, or Interned Personnel.
- c. Cir 6, Hq US Forces, European Theater, 9 Jan 46, subject: Disposition of Effects.

2. SHIPMENT OF EFFECTS:

- a. Effects of all remains will accompany remains to the Central Identification Point.
- b. Effects of "Knowns" will be processed by the Central Identification Point and delivered to the nearest Quartermaster Class II and IV Depot for shipment to the Army Effects Bureau, Kansas City, Missouri.
- c. Effects of "Unknowns and Presumed To Be" cases will be retained by the Central Identification Point pending receipt of instructions from this headquarters. Instructions from this headquarters will state that the "Unknown" or "Presumed To Be" case is identified, or that the effects are to be shipped as those of an "Unknown."

3. INVENTORIES OF EFFECTS:

- a. Inventories of effects shipped to the Central Identification Point will be prepared in duplicate as follows:
  - (1) Original will be placed in parcel of effects.
  - (2) Duplicate will be retained by unit preparing inventory.
- b. Inventories of effects being shipped by the Central Identification Point to a Quartermaster Class II and IV Depot will be prepared in quadruplicate as follows:
  - (1) Original will be placed in parcel of effects.
  - (2) Duplicate will be forwarded by separate mail to the Army Effects Bureau, Kansas City, Missouri. This copy will indicate the Quartermaster Depot to which effects are being delivered for shipment to the Army Effects Bureau.

# RESTRICTED

(3) Triplicate to be forwarded to the Quartermaster Depot receiving shipment.

(4) Quadruplicate to be retained by the Central Identification Point. This copy will be received by the Quartermaster depot receiving effects.

#### 4. PROCESSING OF UNIDENTIFIED EFFECTS BY THE CENTRAL IDENTIFICATION POINT

a. Contents of parcels will be verified with inventory submitted by field unit.

b. Currencies will be withdrawn for separate processing and the inventory marked accordingly.

c. Effects will be kept in locked storage at all times.

#### 5. DISPOSITION OF CURRENCIES:

a. Currencies withdrawn from effects of "Unknowns" will be entered on appropriate transmittal schedule. Mutilated currencies will be so identified. The conversion column will not be filled in.

b. Transmittal schedules will be prepared in triplicate and serially numbered, prefixed by the letters CIP.

c. Currencies accompanied by transmittal schedule will be forwarded to the Central Disbursing Officer, U S Army, through the local Finance Officer, this headquarters, who will issue a bulk receipt subject to confirmation by the Central Disbursing Officer.

d. A transmittal letter with appropriate certificates will accompany each transmittal of currency to the Central Disbursing Office.

e. Transmittal schedule when returned from the Central Disbursing Office with check will show the conversion column filled in at the appropriate rate of exchange used in preparing check. The Central Identification Point will copy the conversion column date on quadruples being filed and on triplicates being forwarded to the Army Effects Bureau.

f. Distribution of the transmittal schedule will be as follows:

(1) Original and duplicate to the Central Disbursing Office.

(2) Triplicate will be sent by mail to Army Effects Bureau, Kansas City, Missouri.

(3) Quadruplicate will be retained by the Central Identification Point.

#### 6. CURRENT DECEASED:

a. Current Deceased are the responsibility of the unit commanding officer, and will be handled in conformity with current Theater and War Department directives.

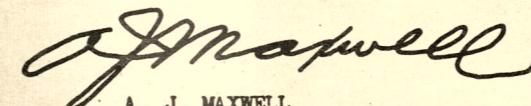
(Operations Instructions #14 (Cont'd)

b. Effects of current deceased are not the responsibility of the American Graves Registration Command.

BY ORDER OF COLONEL ODELL:

ALFRED B. DENNISTON  
Colonel, QMC  
Chief of Staff

OFFICIAL



A. J. MAXWELL  
Lt Col, AGD  
Adjutant General



