REPORT *from* HEIDELBERG

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The Story of the
Army Air Forces
Aero Medical Center
in Germany

1945 — 1947

F O R E W O R D

This brief and unofficial report of the activities of the Army Air Forces Aero Medical Center has been prepared especially for the officers and men of the Army of the United States and the War Department civilian employees who were assigned to the Third Central Medical Establishment in Heidelberg.

Whatever success the Aero Medical Center attained in the accomplishment of its mission is due entirely to their faithful service and loyal performance of duty. It is hoped that this small volume will keep alive the memory of pleasant days in occupied Germany and of a job well done.

R. J. B.

Heidelberg
28 February 1947

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THE AAF AERO MEDICAL CENTER

I. 1946 IN HEIDELBERG

During the entire calendar year of 1946 the 3d Central Medical Establishment was located in Heidelberg, where it provided personnel and equipment to support the operation of the Army Air Forces Aero Medical Center. The mission of this unit as approved by Headquarters United States Forces, European Theater, in August 1945 (Exhibit 1) authorized the exploitation of certain uncompleted German aviation medical research projects. Up until 1 November 1946, approximately thirty-five such projects had been investigated and evaluated for the Army Air Forces. These have been reported in detail in the Monthly Status Report which was forwarded for distribution to the Air Surgeon, Headquarters Army Air Forces, Washington, D. C.

The organization of the Aero Medical Center (Exhibit 2) was essentially unchanged during the year. In addition to the German scientists employed in Heidelberg, active collaboration was initiated with the former Helmholtz Institute group located about forty miles south of Munich in the small town of Nussdorf. Research work accomplished by this group was also included in the Monthly Status Report.

Translation of captured German aero medical documents, the great majority of which had not been published, was continued during the year. These translations, which totalled more than 175,000 words and contained 300 illustrations, were mimeographed and also sent to the Air Surgeon for distribution to interested agencies in the United States. In June plans were initiated for compilation of all the important accomplishments in aviation medicine made by the Germans during the war years 1939-1945. Fifty-nine German scientists, all of whom are considered authorities in a particular field of aero medicine, contributed manuscripts to this project, and translation began in Heidelberg in the fall of 1946. It is estimated that the English version of this work, when published, will contain in excess of 750,000 words and approximately 600 illustrations. During the last quarter of the year this project, together with the preparation for movement to the United States of a selected group of German scientists and their equipment, comprised the principal mission of the Aero Medical Center.

At the time this report was written, unofficial information had been received at Headquarters 3d Central Medical Establishment that the organization would be deactivated on or about 1 March 1947.

II. THE WAR YEARS

On 7 April 1944 the unit, then known as the 9th Air Force Central Medical Establishment, was activated at Sunninghill Park, Ascot, Berkshire, England, per paragraph 1, General Orders No. 61, Headquarters 9th Air Force, dated 17 March 1944, with a complement of four officers and thirteen enlisted men assigned. The first commanding officer was Lt. Colonel Charles E. Walker, M. C. This unit was redesignated the 3d Central Medical Establishment on 17 August 1944 in accordance with paragraph 1, General Orders No. 202, Headquarters 9th Air Force, dated 11 August 1944, pursuant to authority contained in letter, Adjutant General's Office, 17 July 1944, file AG 322, 5 June 1944, OB-I-AFRPG-M, subject: "Reorganization of Certain AAF Units in ETO."

The 3d Central Medical Establishment performed the assigned duties of such an organization during final phases of the air war in Europe, being stationed successively at Chantilly, France (arriving 15 September 1944), Bad Kissingen, Germany (arriving 8 June 1945) and Wiesbaden, Germany (arriving 29 October 1945). The organization was moved to Heidelberg on 8 November 1945 in compliance with Letter Orders published by Headquarters United States Air Forces in Europe (Exhibit 3). Soon after, in December 1945, the unit was reorganized under a new table of organization designed more specifically for the mission ahead (Exhibit 4).

The exploitation of German aero medical scientists by means of an organization designed expressly for that purpose was conceived at the end of the war by Brig. General Malcolm C. Grow, now the Air Surgeon, while he was Surgeon of the U. S. Strategic Air Forces in Europe. At a meeting held in General Grow's office at Headquarters USSTAF, St. Germain, France, on 24 July 1945, plans were made for the establishment of such an exploitation project and the Kaiser Wilhelm Institute for Medical Research in Heidelberg was selected for its location. Two committees were appointed to implement these plans. One, charged with selecting the location and personnel, included Colonel Harry G. Armstrong, Colonel Otis B. Schreuder, Colonel Wilford F. Hall, and Lt. Colonel Woodrow B. Estes. Another group, which was given the responsibility for procurement of equipment for the new unit, consisted of Colonel Newton C. Spencer, Colonel George L. Ball, Lt. Colonel Estes, Major Howard B. Burchell, and Captain Anthony N. Domonkos. All of these officers were flight surgeons. The work of these committees was rapidly completed and Major Burchell arrived in Heidelberg with the cadre of the 3d Central Medical Establishment on 11 September 1945. On 13 September 1945 one wing of the Kaiser Wilhelm Institute was requisitioned from the local Military Government Office (Exhibit 5). Later the organization occupied more than half of the building.

Several German scientists who were well known for their work in aviation medicine had responded favorably to an invitation to come to Heidelberg to complete certain research studies in which the Army Air Forces was interested. Dr. Otto Gauer was the first to arrive, and reported at Heidelberg on 20 September. He was followed by Dr. Theodor Benzinger and Dr. Siegfried Ruff. On 16 October

Professor Hubertus Strughold, Dr. Heinrich Rose, Dr. Erich Opitz, and Dr. Aloys Kornmueller joined Major Burchell's staff. With the exception of the latter two scientists, all of these individuals remained with the project during the greater part of its activity.

The Kaiser Wilhelm Institute in Heidelberg is located on the Neckar River adjacent to the von Hindenburg Bridge, which was destroyed by the retreating Germans. The city is shown in the background.

Colonel Robert J. Benford, M. C., reported at Heidelberg and assumed command of the 3d Central Medical Establishment on 9 November 1945 (Exhibit 6). Major William F. Sheeley, M. C., formerly Chief, Aero Medical Research Section, Office of the Director of Medical Services, Headquarters USSTAF, London, had already reported to the 3d Central Medical Establishment and was assisting Major Burchell in plans for the organization of the new project.

Major Anthony N. Domonkos reported to Heidelberg on 19 November 1945 and was appointed executive officer and acting adjutant of the 3d Central Medical Establishment (Exhibit 7). At that time it was decided officially to designate the project as the AAF Aero Medical Center.

Above, main entrance of the AAF Aero Medical Center in Heidelberg. Note white paint on steps and wall, which aided Germans during war-time blackouts. The American flag was first raised on 15 December 1945. Below, first staff conference in November 1945. Left to right, Major William F. Sheeley, Colonel Robert J. Benford, and Major Howard B. Burchell. Major Burchell returned to the Mayo Clinic the following month.

The former Kaiser Wilhelm Institute was complete with machine shops, above, carpenter and electric shops, photographic and research laboratories. It was built in 1929 to house departments of chemistry and physiology. In 1936, additional wings for physics and pathology were constructed. Below, library at the Aero Medical Center contained all important German research journals. Many American and British chemical, physics and physiological periodicals were also in the stacks.

III. THE PLAN OF OPERATION

The 3d Central Medical Establishment was administratively and operationally under the jurisdiction of the U. S. Air Forces in Europe, which headquarters was located at Wiesbaden, Germany. The unit, however, was attached first to Headquarters 7th U. S. Army Special Troops for billets and supply. When the 7th Army was inactivated, the 3d Central Medical Establishment next was attached to Headquarters 3d U. S. Army (which moved into Heidelberg) pursuant to paragraph 2f, letter, Headquarters 7th U. S. Army, subject: "Assignment and Attachment Order 143," dated 23 March 1946. Later, when the Heidelberg Area Command was organized, the unit was supplied by this community headquarters.

The organization chart of the Aero Medical Center remained essentially unchanged during its period of activity (Exhibit 2). Major Sheeley was assigned Chief, Intelligence Division, and Major Sebon R. Wallace, Chief, Operations Division on 8 January 1946 (Exhibit 8). Major Sheeley was still holding this position at the end of 1946. Captain Sydney Titelbaum succeeded Major Wallace on 23 May 1946 as Chief, Operations Division (Exhibit 9) and he in turn was succeeded by Captain Ralph G. Victor on 12 November 1946 (Exhibit 10). Major William M. Downes was appointed on 2 March 1946 as the first Chief, Administration Division (Exhibit 11). Major Francis J. Nied, who held this position at the end of 1946, was appointed on 16 August 1946 (Exhibit 12).

Although the table of equipment for the 3d Central Medical Establishment had been revised (Exhibit 4), it was soon found that many special items required for operation of the laboratories, and photographic and reproduction departments were not obtainable. Accordingly, an Equipment Modification List was prepared and submitted for approval to the theater headquarters as a supplement to previously authorized supplies. This Equipment Modification List (No. 145) was approved and published by Headquarters U. S. Forces, European Theater, on 21 August 1946. A revised list (Change 1) was published on 23 October 1946 (Exhibit 13) under which the Aero Medical Center operated satisfactorily.

The German scientific staff was headed by Professor Hubertus Strughold, who is well known in the United States for his pioneer work in German aviation medicine. During the war Professor Strughold was Director of the Aviation Medical Research Institute of the Reich Air Ministry in Berlin. The German scientists assembled in Heidelberg were divided into four groups on the basis of their qualifications and aero medical experience. These groups were headed by Professor Strughold, Dr. Siegfried Ruff, former Director of the Aero Medical Division of the German Experimental Station for Aviation Medicine, Berlin, Dr. Theodor Benzinger, Department chief of the Experimental Station of the Air Force Research Center, Rechlin, and head of medical work in research department of the Technical Division of the Reich Air Ministry, and Dr. Ulrich Henschke, formerly on the staff of the Radiological Institute, Universities of Berlin and Munich, and Chief, Medical Institute of Aviation Research Establishment, Munich (1944-45).

Professor Hubertus Strughold, noted aero medical scientist, headed German staff at Aero Medical Center. He is now professor of physiology at the University of Heidelberg.

Professor Strughold, third from right, headed group of scientists concerned principally with physiology of the special senses. His staff, from left to right, included Mr. Johannes Prast, Fraulein Dr. Ingeborg Schmidt, Dr. Heinz Haber, Professor Strughold, Dr. Siegfried Gerathewohl, and Dr. Heinrich Rose.

Dr. Ruff, center, worked on the effect of high accelerative (G) forces. His staff, from left to right, included Dr. Hermann Becker-Freyseng, Ing. Karl Hausser, Dr. Ruff, Dr. Konrad Schaefer, and Dr. Otto Gauer. Drs. Ruff, Becker-Freyseng and Schaefer at the end of 1946 were on trial in Nurnberg for their alleged participation in medical war crimes.

The staff of Dr. Theodor Benzinger, center, developed new airplane oxygen equipment and special techniques for measuring respiratory gases. Left to right, Dr. Heinz Maier-Leibnitz, Fraulein Dr. Charlotte Kitzinger, Dr. Benzinger, Ing. Henry Seeler, and Dr. Helmuth Beinert.

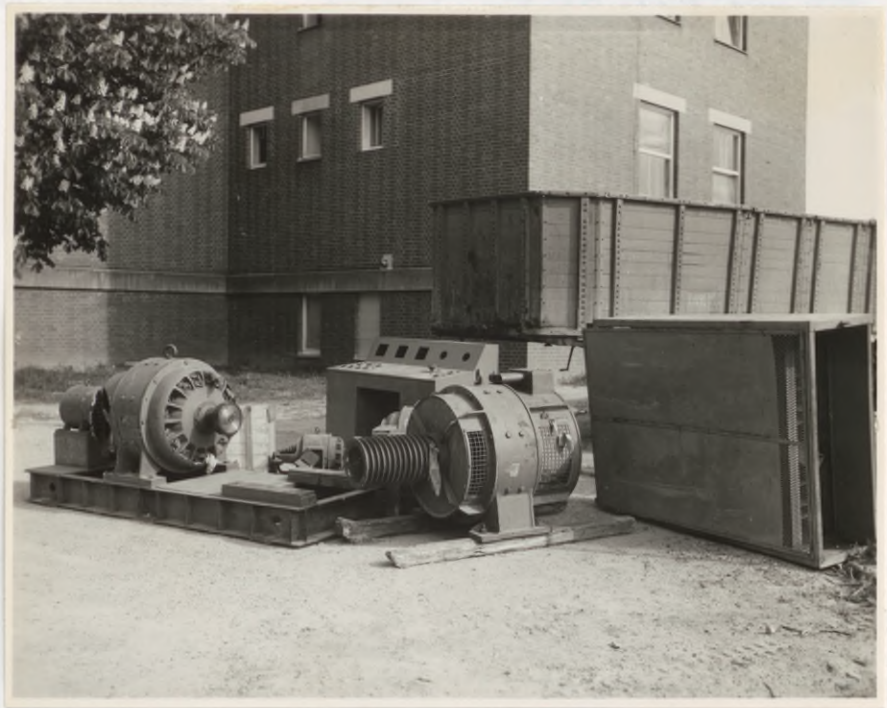
Dr. Ulrich Henschke headed a group which studied improved methods for steering aircraft, designed a new instrument panel, and proposed a system of aircraft controls eliminating the use of the feet. Left to right, Johannes Polte, Willi Buehring, Dr. Henschke, Sepp Zott, Ing. Hans Mauch and Wilhelm Schaffhauser. Henschke and Mauch also constructed an artificial leg with a controllable hydraulic knee joint.

IV. THE MISSION

In the words of the Air Surgeon, the mission of the Aero Medical Center was "to bring back from Germany everything of aero medical interest to the Army Air Forces and all information of importance to medical science in general." In order to accomplish this mission the Operations Division established complete laboratories for the various German scientists in order that they might finish various uncompleted research projects. At the same time, the Intelligence Division began the translation and publication of nearly 2,000 German aero medical documents which were on file at the Aero Medical Center. The majority of these documents were special reports for the Luftwaffe from various aero medical laboratories and accordingly had not been published in medical journals. Many had been highly classified by the Germans. Only a few of the captured documents were reprints from professional journals, such as Luftfahrtmedizin, of which Professor Strughold had been one of the editors.

The leading aero medical scientists in occupied Germany are included among the authors of the volume tentatively entitled "Survey of German Aviation Medicin 1939-45" which, it is expected, will be published in the United States in the fall of 1947. This project, which was initiated at the Aero Medical Center in June 1946, includes a vast amount of heretofore unpublished information on German medical research done in support of the Luftwaffe. The published volume

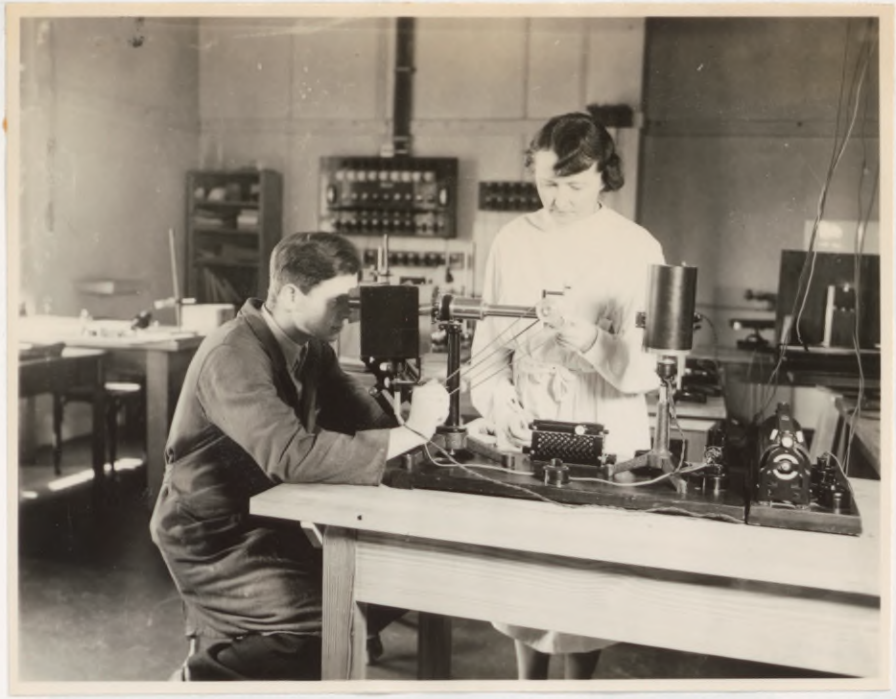
will include chapters on all phases of aviation medicine, including selection and training of flyers, altitude studies, acceleration, vision, effects of vibration and temperature, emergency survival, and air evacuation. Professor Strughold, acting as chief German editor, reviewed the German manuscripts which were received from authors located in all zones of occupied Germany. Translation of these manuscripts was under the direct supervision of Major Sheeley. It is anticipated that this volume will be of considerable interest to flight surgeons and research workers in aviation medicine in all English-speaking countries.



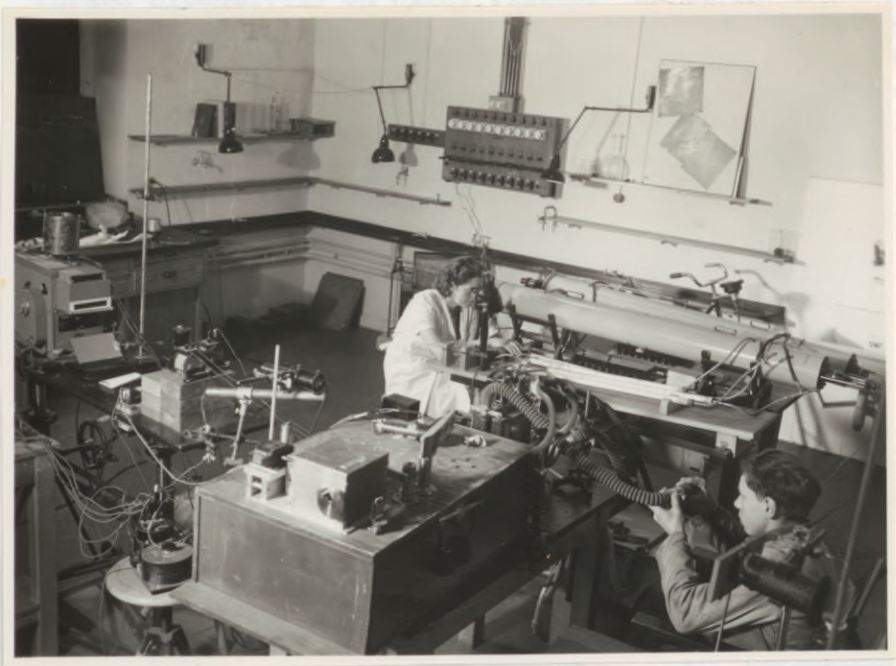
Special types of laboratory equipment and scientific apparatus were brought to the Aero Medical Center from various Luftwaffe laboratories and research institutions throughout Germany. Here is part of the shipment of more than 20 tons of equipment salvaged from the huge human centrifuge which was under construction at Tempelhof Airdrome in Berlin at the end of the war. Also at Tempelhof the Germans had built a low pressure chamber the length of two ordinary pullman cars, in which they planned to study acclimatization to altitude over long periods of time.

Laboratory models of a small light-weight oxygen mask and improved demand regulator are tested in the low pressure chamber at a simulated altitude of 12,000 meters by Dr. Benzinger, left, and Ing. Henry Seeler. The regulator, which has a diameter about the size of an ordinary pocket watch, is shown attached to Dr. Benzinger's left hand.

Dr. Helmuth Beinert, formerly an associate of chemist Richard Kuhn of the Kaiser Wilhelm Institute in Heidelberg, worked extensively on the effect of oxygen lack on the metabolism of tissues in vitro. He is shown in his laboratory with a Warburg thermostat (foreground) by which minute changes in the metabolism of tissues can be determined.

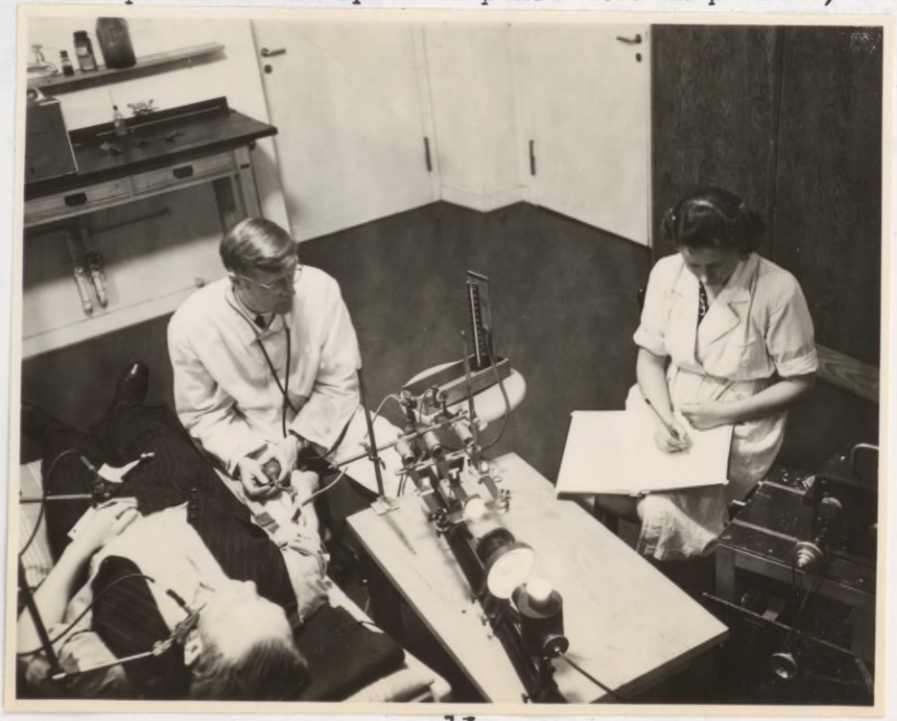


Dr. Ingeborg Schmidt, right, one of the two women scientists on the staff of the Aero Medical Center, is considered an authority on color vision. Here she is testing a subject with the Nagel Anomaloscope.

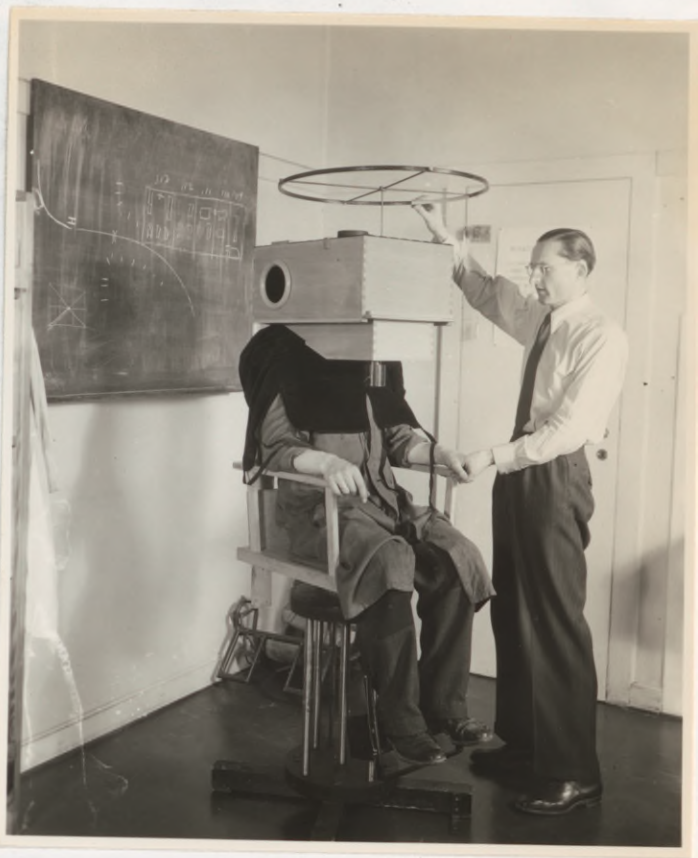


Continuous recording of the carbon dioxide content in expired air is possible by means of the Zeiss-made interferometer designed by Professor Walter Bothe, noted physicist, who is now at the University of Heidelberg. By the use of two interferometers, Dr. Kitzinger, center, records simultaneously both the carbon dioxide and oxygen in the expired air of the subject, right.

The possibility that all individuals are myopic under conditions of very low illumination was studied by Dr. Heinrich Rose, former Luftwaffe flight surgeon, who has worked extensively on night vision. He is shown above making an adjustment in the newly developed Engelking-Hartung adaptometer using the Schmidt-Haenesch photometer. The relationship between blood dynamics in arteriovenous fistulae and collapse under high accelerative forces led Dr. Otto Gauer, center, below, to study a group of patients with arteriovenous fistulae. He is shown here recording blood pressure and speed of pulse wave in patient, left.



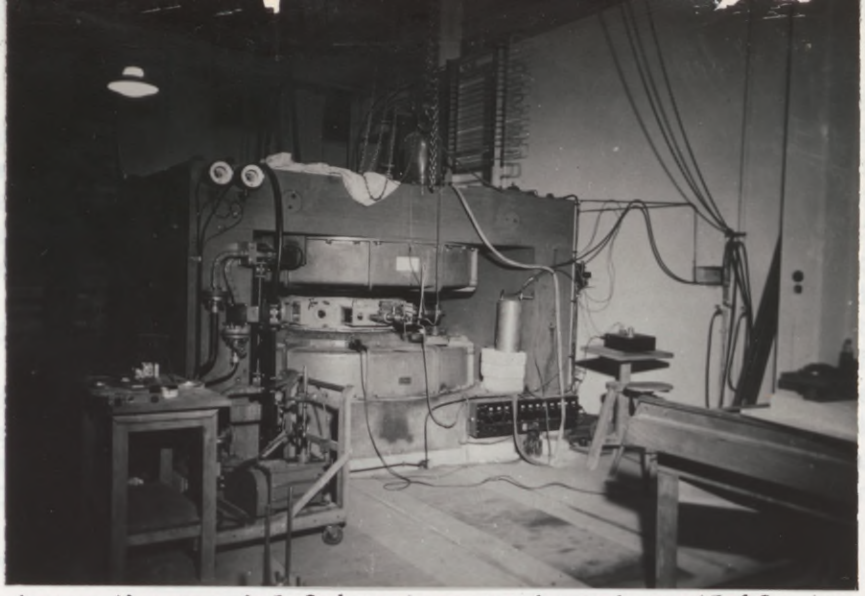
Luftwaffe psychological testing equipment of all types was studied and analyzed at the Aero Medical Center. Dr. Siegfried Gerathewohl, German psychologist, tests subject in a rotating chair which is similar to some of the psychomotor tests used by the AAF during the war.



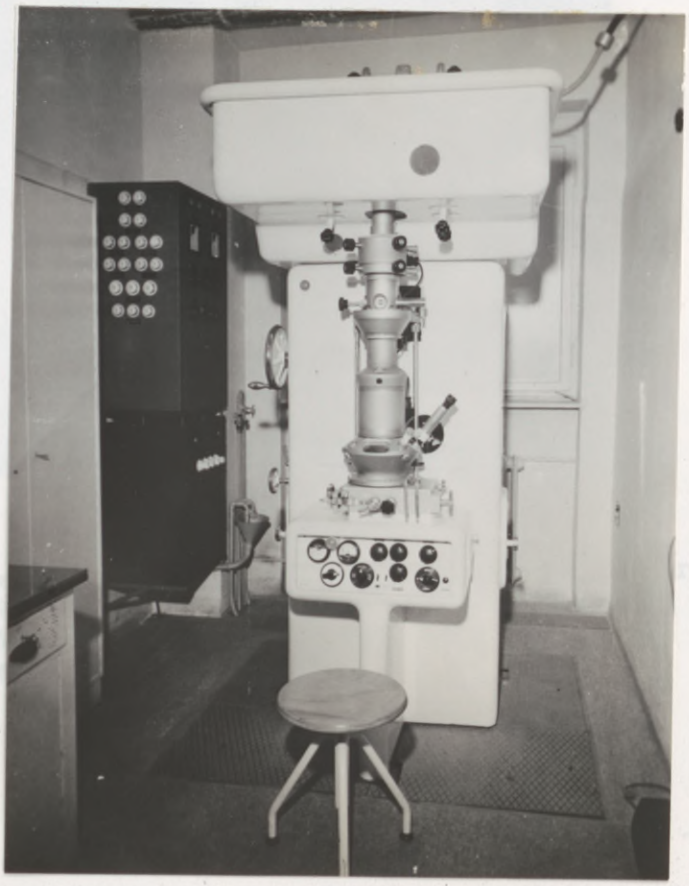
Dr. Siegfried Ruff, who has worked in nearly all phases of altitude physiology, was especially desirous of finding a prophylaxis for bends. He is shown here at the controls of the Luftwaffe low pressure chamber installed at the Aero Medical Center for use in this type of research.

Above, the low pressure chamber is shown being installed at the Aero Medical Center. It was moved to Heidelberg from the Munich Institute for Aviation Medicine at Freising.

Plans for the compilation and eventual publication of German advances in aviation medicine were first made in June 1946. At one of the first conferences on this project, Professor Strughold, left, is briefed by Drs. E. J. Baldes and E. H. Wood of the Mayo Clinic on the Air Surgeon's desire to collect manuscripts from leading German scientists.



Among the special laboratory equipment available to American scientists at the Aero Medical Center was a medium-size cyclotron, shown above, which had been constructed by Professor Bothe and his assistants and housed in a special building adjacent to the Kaiser Wilhelm Institute. The Germans always insisted that this cyclotron was used for pure medical research and had never been a real part of their effort to develop an atomic bomb. Below, this precision-built Siemens electron microscope is capable of magnification to 45,000 diameters. A similar apparatus was shipped to Wright Field by the Aero Medical Center in the spring of 1946.



Though of no immediate aero medical significance, one of the most interesting and valuable contributions made by scientists working at the Aero Medical Center was the development of an artificial leg with a hydraulic knee joint which could be controlled by the wearer. This new type of leg prosthesis, which was devised by Dr. Ulrich Henschke and Ing. Hans Mauch, was turned over by the Air Surgeon, in the summer of 1946, to the Surgeon General for further development and refinement in the United States. A 30-minute sound motion picture entitled "New Principles in Lower Extremity Prosthesis" was produced in Heidelberg by the 8th Combat Crew Camera Unit under the supervision of Major Sebon R. Wallace, former professor of psychology at Tulane University. This movie was presented to leading AAF flight surgeons at a conference in the Pentagon Building in May 1946, and thereafter was made available to the Surgeon General. The hydraulic type of artificial leg developed at the Aero Medical Center attracted considerable attention in the U. S. press (Exhibit 14) and also was the subject of an article by General Grow in the AAF Review (Exhibit 15).

Amputee, left, wearing hydraulically controlled artificial leg developed at the Aero Medical Center is shown with Dr. Ulrich Henschke, one of the designers of this new type prosthesis.

The amputee, who lost his leg while serving with a German armored unit, is shown bearing his weight on new type prosthesis. Henschke and Mauch went to Wright Field in November 1946 to continue their aero medical research work under the supervision of AAF flight surgeons.

A specialized group of scientists, headed by Dr. Wilhelm Ernsthausen, who were evacuated from the Helmholtz Institute in Berlin in 1944 to the comparative safety of a resort hotel atop Mt. Wendelstein, south of Munich, have worked closely with the staff of the Aero Medical Center from the inception of the project in Heidelberg. Known particularly for their work in acoustic physiology and investigations in the field of supersonics, Ernsthausen and his associates were scheduled to go to Wright Field early in 1947 for work at the Aero Medical Laboratory. In the spring of 1946 this group of twenty-five scientists was moved from its mountain laboratory to the former hunting lodge of the late Philipp Bouhler, located in the mountainous foothills of picturesque Bavaria in the little town of Nussdorf on the Inn River (Exhibit 16).

The Helmholtz Institute group of the Aero Medical Center was housed in this attractive Bavarian villa about forty miles south of Munich. Front of building, below, shows balcony off master's apartment where Reichsleiter Philipp Bouhler once lived. Villa was said to have been a personal gift from Hitler to Bouhler, who committed suicide shortly after his capture by 7th Army troops in the spring of 1945.

V. THE PEOPLE

The following officers have at various times served on the staff of the Aero Medical Center:

Name	Rank	ASN	Assigned	Departed
Burchell, Howard B.	Major, MC	0-435563	26 Jul 45	30 Nov 45
Clarry, Robert W.	1st Lt, MAC	0-1534941	1 Nov 45	30 Nov 45
Benford, Robert J.	Colonel, MC	0-20513	7 Nov 45	
Domonkos, Anthony	Major, MC	0-496225	19 Nov 45	16 Jan 46
Wallace, Sebon R.	Major, AC	0-325102	23 Nov 45	23 May 46
Sheeley, William F.	Major, MC	0-31254	8 Dec 45	
Shaklee, Alfred B.	1st Lt, AC	0-650042	9 Dec 45	14 June 46
Comarra-Peon, Nicholas	Captain; MC	0-496994	14 Dec 45 TDY	18 Jan 46
Titelbaum, Sydney	Captain, AC	0-523685	18 Jan 46	19 Oct 46
Nied, Francis J.	Major, MAC	0-505805.	11 Feb 46	
Downes, William M.	Major, AC	0-489440	23 Feb 46	22 Jul 46
Worth, Dan S.	Captain, MAC	0-511422	2 Jul 46	27 Aug 46
Browning, Charles D.	Captain, AC	0-1699557	1 Aug 46	10 Dec 46
Price, Teller S.	Captain, AC	0-730959	1 Aug 46	
Parrack, Horace O.	Captain, AC	0-265093	9 Aug 46 TDY	18 Sep 46
Victor, Ralph G.	Captain, MC	0-448514	14 Aug 46	
Rustigan, Aram A.	Major, MAC	0-332364	27 Nov 46	
McCollum, William	1st Lt, MC	0-1735952	19 Dec 46 TDY	
Simmang, Arthur V.	Major, MC	0-398888	3 Jan 47	24 Jan 47

Several prominent U. S. scientists were assigned for temporary duty at the Aero Medical Center as consultants for the Air Surgeon. Dr. E. J. Baldes of the Mayo Clinic, who headed the AAF acceleration program at Wright Field during the war, was twice given brief assignments in Heidelberg. Other special consultants who gave valuable advice and assisted in the completion of the various projects included Dr. F. G. Hall, Professor of Physiology, Duke University, who was a lt. colonel at Wright Field during the war; Dr. Earl H. Wood of the Mayo Aero Medical Unit; Dr. John W. Heim and Captain Horrace O. Parrack, A. C., both of the Aero Medical Laboratory at Wright Field.

Many distinguished military and civilian scientists visited the Aero Medical Center during the year, including General Grow, the Air Surgeon, accompanied by Colonel Otis O. Benson, Jr., Chief, Research Division, Office of the Air Surgeon. They spent three days in February inspecting the organization and in conference with the various German scientists. Others were Lt. General John K. Cannon, Commanding General, AAF Training Command, Major General Idwal H. Edwards, Commanding General of U. S. Air Forces in Europe, Brig. General Raymond W. Bliss, Deputy Surgeon General, Brig. General Edward A. Noyes, Theater Chief Surgeon, Dr. A. C. Ivy, University of Illinois, Professor Alexander von Muralt, University of Bern Physiological Institute, General David Lindsjo, Surgeon General of the Swedish Army, Dr. Theodor von Karman, Chairman, Scientific Advisory Board, AAF, Colonel Harry G. Armstrong, Commandant, School of Aviation Medicine, Captain A. R. Behnke,

USN, Naval Medical Research Institute, Medecin Colonel Pierre Bergeret, Chief de la Section Technique du Service de Sante de láir, Paris, Brigadier A. G. Harsant, Surgical Consultant and Brigadier F. J. O'Meara, Medical Consultant, British Army on the Rhine, Mr. W. R. Mann, Rockefeller Foundation, New York, Surgeon Lt. Colonel F. P. Ellis, Naval Secretary, Royal Naval Personnel Research Committee, Medical Research Council.

This is the American staff at the Aero Medical Center in the summer of 1946. First row, left to right: Capt. Ralph G. Victor, Capt. Charles D. Browning, Maj. Francis J. Nied, Col. Robert J. Benford, Maj. William F. Sheeley, Capt. Teller S. Price, Capt. Sydney Titelbaum. Second row, left to right, Miss Marion U. Wall, Mr. Jay M. Traynor, M/Sgt James F. Gallaher, 1st Sgt William K. Howard, S/Sgt Edward E. Lewis, Mr. Ronald H. Kay, Miss Marilynn Knowlton. Third row, left to right, Cpl Charles W. Allen, Jr., Sgt Arthur K. Perry, Sgt John T. Bloom, S/Sgt Marvin R. Marks, S/Sgt Frederick E. Baker, Sgt Carl Dietrich, Sgt Pierce J. Martin, Cpl John T. Frankey

Brig. General Malcolm C. Grow, the Air Surgeon, reads latest report on exploitation of German research at Aero Medical Center when he visited Heidelberg in February 1946.

Laboratory demonstration held at the Aero Medical Center during General Grow's visit. Left to right, Colonel Robert J. Benford, Colonel Otis O. Benson, Jr., Major Sebon R. Wallace, General Grow, and Colonel Otis B. Schreuder, Surgeon, U. S. Air Forces in Europe.

Above, General Grow inspects a captured Luftwaffe power turret which is mounted for demonstration purposes. With him are Colonel Schreuder, left, and Colonel Benford.
Lt. General John K. Cannon visited the Aero Medical Center soon after its establishment in the fall of 1945, when he was commanding general of the U. S. Air Forces in Europe. He is shown below inspecting an exhibit of Luftwaffe flotation gear. Left to right are Major William F. Sheeley, Colonel Schreuder, Colonel Benson, General Cannon, and Major Anthony N. Domonkos.

Brig. General Raymond W. Bliss, Deputy Surgeon General, visited the Aero Medical Center in December 1946 during his tour of the European theater. Shown above on his departure are, left to right, Colonel Wilford F. Hall, Deputy Surgeon, U. S; Air Forces in Europe, General Bliss, Colonel Benford, and Colonel Alvin L. Gorby, Deputy Theater Chief Surgeon.

Major General Idwal H. Edwards, Commanding General, U. S. Air Forces in Europe, is shown above signing the guest register at the Aero Medical Center in Colonel Benford's office.

Major General David Lindsjo, above right, was shown through the Aero Medical Center when he visited Heidelberg during October of 1946. He is shown with Colonel James C. Van Valin, left, Surgeon of the 3d U. S. Army, and Colonel Benford. Below, Brigadiers A. G. Harsant and F. J. O'Meara, Surgical and Medical Consultants, respectively, British Army on the Rhine, visited Heidelberg on tour of German medical schools. Left to right, Brigadier O'Meara, Colonel P. E. Duggins, Surgical Consultant, Office of Theater Chief Surgeon, Colonel Benford, Brigadier Harsant, and Colonel A. B. McKie, Office of Theater Chief Surgeon.

The enlisted men assigned to the 3d Central Medical Establishment were billetted in a wing of the building which formerly had been used as a hospital for the study of special cases. It was completely equipped with lavoratories in each room, latrines and showers, a modern kitchen, and dining rooms. The kitchens, latrines and all sleeping rooms were screened in order to maintain adequate fly control. The enlisted men were more comfortably billetted than the majority of company grade officers in the theater.

Officers and U. S. civilians at the Aero Medical Center all ate at one table in officers' dining room above. Enlisted personnel, as well as officers, were provided with excellent table service by German waiters.

A corner of the lounge in the enlisted mens' quarters of the Aero Medical Center reflects the comfortable surroundings in which the men lived.

In recognition of meritorious service performed at the Aero Medical Center, the following officers were awarded the Army Commendation Ribbon: Colonel Robert J. Benford, M. C., Major Howard B. Burchell, M. C., Major Sebon R. Wallace, A. C., Major Anthony N. Domonkos, M. C., and Captain Sydney Titelbaum, A. C.

An average of 108 German civilians were in the employ of the Aero Medical Center each month during 1946. This figure reached a high of 152 during August. The administration of all indigenous employees, as well as U. S. War Department employees, was under the jurisdiction of Miss Marion Wall (Exhibit 17). Although the majority of the German scientists spoke and understood English fairly well, many of the employees had no knowledge of English, which necessitated publication of many directives in both English and German. An example of this was AMC Memorandum No. 16 relative to duty hours (Exhibit 18). German employees of the U. S. Army, according to theater directives, were provided with one meal per day. In order to save time and increase over-all efficiency, all German employees of the Aero Medical Center were transported to a U. S. operated civilian mess in Heidelberg in 2½-ton trucks. By utilizing government vehicles, the noon lunch period could be limited to forty-five minutes.

VI. AFTER DUTY HOURS

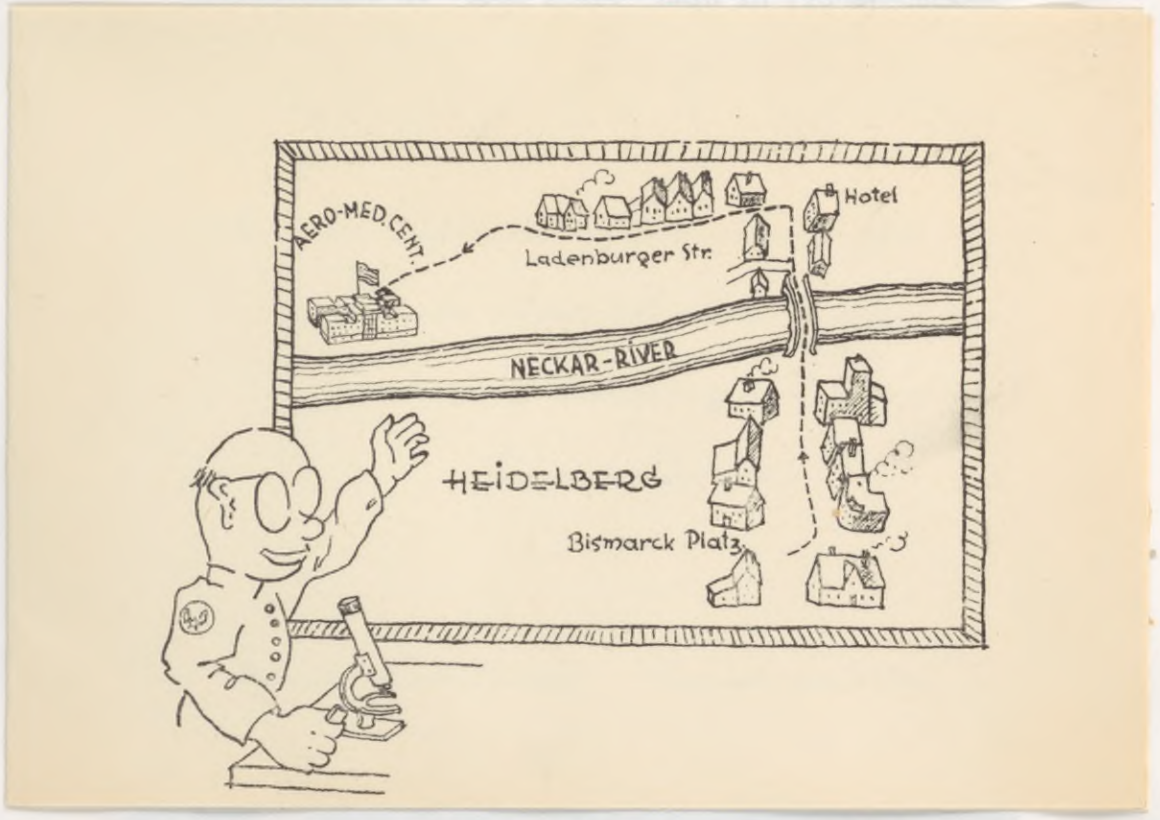
In order to assure proper recreational facilities for the enlisted men assigned to the Aero Medical Center, a laboratory which was not in use was converted into a club room for their leisure hours (Exhibit 19). Facilities were also available for volley ball and table tennis. The near-by Neckar River was popular for boating in the summer and skating during the winter months.

Former laboratory was successfully converted into club-room for enlisted men. Facilities included German beer tap, bar and phonograph. A very successful party was held here New Year's Eve.

On 21 December 1945, the officers and men of the Aero Medical Center entertained all the German staff members and employees, together with their families, at a Christmas party in the library of the institute. Following the German custom, the room was decorated with pine cones and branches, together with a huge candle-lit tree. The program, which included refreshments, music and movies, was highlighted by the surprise arrival of St. Nicholas who appropriately descended from the top balcony by parachute. More than 100 persons attended the party and all children received gifts of candy and chewing gum. The second Christmas party was held on 23 December 1946 for all employees and their families. The program included refreshments, music, and the motion picture "Gulliver's Travels."

The Aero Medical Center participated in the German Youth Activities program when the pupils of St. Raphael's convent in Heidelberg were guests for several motion pictures during their Christmas holidays in December 1946. Approximately 200 girls enjoyed the entertainment, which included "Gulliver's Travels" and "Pinocchio." The lecture room in the institute served as an excellent theater for these as well as other screenings of various training and technical films.

On 16 March 1946, the officers of the Aero Medical Center were hosts at an open house to officers from Headquarters 7th U. S. Army, then at Heidelberg. In addition, guests were invited from Headquarters USFET in Frankfurt and Headquarters USAFE in Wiesbaden. On arrival the visitors were conducted in small groups through the Aero Medical Center and shown several of the more interesting projects then in progress. Following the tour, cocktails were served in the libra



Invitations to the open house at the Aero Medical Center, like the one above, were sent to 300 officers in Heidelberg, Frankfurt and Wiesbaden.

Jimmy (center at table, above), genial host at the Europa Hotel Bar in Heidelberg, and his staff provided refreshments at "open house" held in flower-decked library of former Kaiser Wilhelm Institute. Below, guests from Heidelberg, Wiesbaden and Frankfurt enjoy AAF hospitality after tour of Aero Medical Center. Christmas parties for German employees and their families were also held in this room.

OLD HEIDELBERG

"Old Heidelberg, dear city,
With honors crowned, and rare,
O'er Rhine and Neckar rising,
None can with thee compare..."

-- Scheffel

COPY

HEADQUARTERS
UNITED STATES AIR FORCES IN EUROPE
OFFICE OF THE SURGEON

EXHIBIT 1

AAF 197, APO 633
1 August 1945

386.3P
SUBJECT: Exploitation of German Aviation Medicine Research.

TO : Commanding General, US Forces, European Theater, APO 757, US Army

1. It is requested that authority be granted for the exploitation of incompleted German Aviation Medical Research by the establishment of a temporary Research Center for the accomplishment of this purpose.

2. It is further requested that authority be granted for the establishment of this center at the Kaiser Wilhelm Institute in Heidelberg. An exhaustive survey of all feasible sites for this Center has been conducted, and the Kaiser Wilhelm Institute is the only site which deemed to be feasible and suitable for this project. "The "B" Wing of the Institute building would be suitable for this purpose and could be made readily available.

3. Aero Medical investigations in Germany disclose a considerable number of unfinished German research projects which are of immediate importance to the US Army Air Forces. Very few records of this work have been found, as might be expected, since such reports are not normally prepared until the completion of the projects. The best and most expeditious method of exploiting this research is to employ the German scientists to complete their studies under strict American guidance in a controlled Aviation Medicine Research Center in the American Zone of Occupation.

4. A number of German scientists have indicated their willingness to complete their research under American supervision.

5. An alternate proposal that these individuals and their research apparatus be returned to the United States has been considered but abandoned because of the delay involved, the lack of transportation facilities, and for reasons of security.

6. The type of research principally concerned is that which has to do with the human aspects of high-speed jet and rocket flying. This information is urgently required if our medical knowledge is to keep pace with the technical advances being achieved by American aeronautical engineers.

7. The above proposed project has been approved by the Commanding General, Army Air Forces, and has been coordinated with the Theater Surgeon, USFET; the Chief, Public Health and Welfare Branch, US Group Control Council; Policy and Liaison Section and Demobilization Branch, Air Division; Political Division, US Group Control Council; and the Chief CI Branch, G-2 of USFET.

FOR THE COMMANDING GENERAL:

s/ J.B. Gordon
t/ J.B. GORDON
Colonel, AGD
Adjutant General

AG 700 GDS-AGO 1st Ind.
Hq. US FORCES, EUROPEAN THEATER, (MAIN), APO 757, 29 August 1945

TO : Commanding General, US Air Forces in Europe.

1. Requests contained in paragraph 1 and 2, basic communication, are approved.

2. Direct contact with Commanding General, Western Military District to work out details is authorized.

BY COMMAND OF GENERAL EISENHOWER:

s/ L. Wurzel
t/ L. WURZEL
Captain, AGD
Asst Adj Gen

A TRUE COPY:

s/ Alfred B. Shaklee

t/ ALFRED B. SHAKLEE
1st Lt., Air Corps
Adjutant

EXHIBIT 2

AAF AERO MEDICAL CENTER

ORGANIZATIONAL CHART

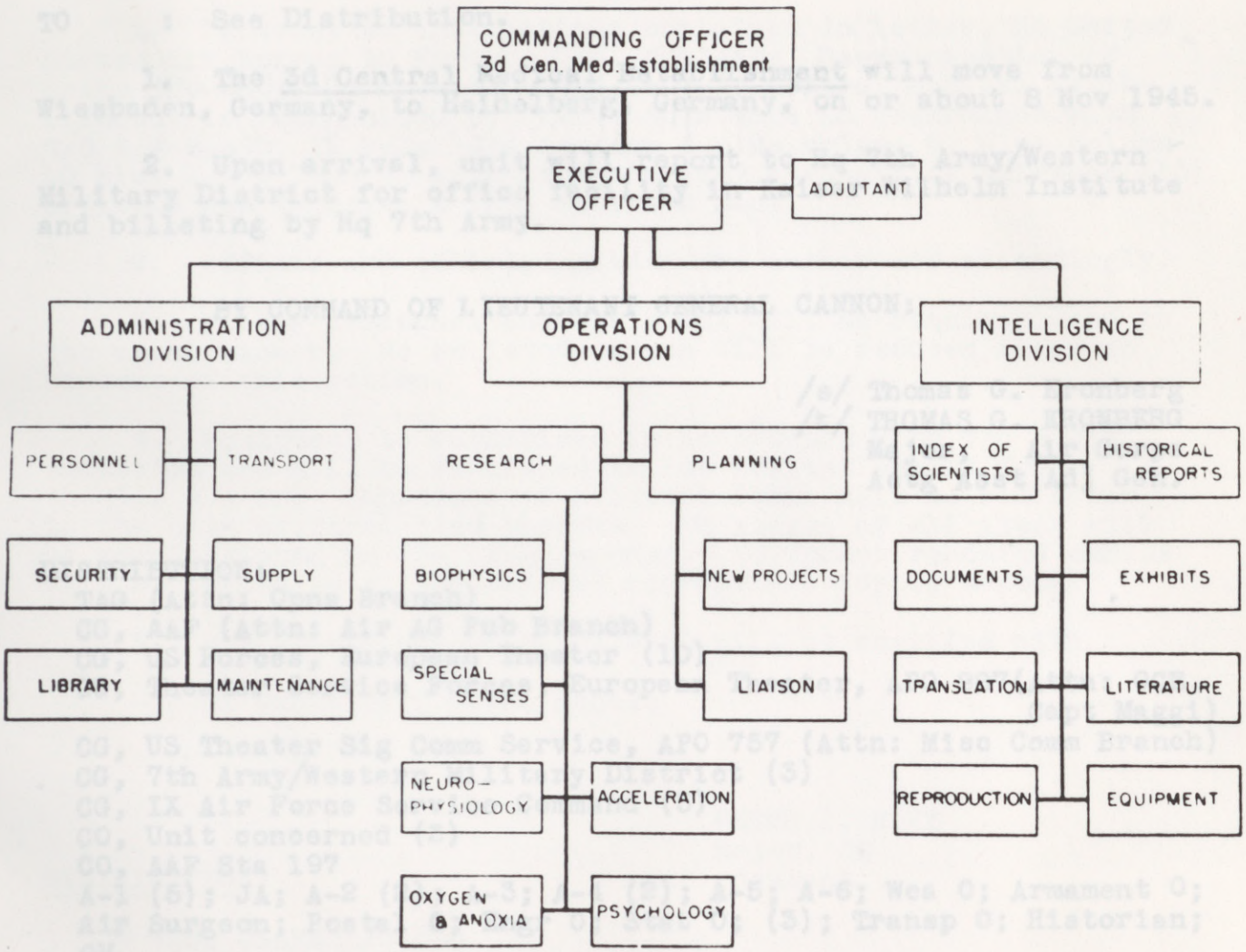


EXHIBIT 3

RESTRICTED

HEADQUARTERS
UNITED STATES AIR FORCES IN EUROPE
Office of the Commanding General

APO 633, US Army,
8 November 1945

AG 370.5 x 322

SUBJECT: Movement of Unit (No 53).

TO : See Distribution.

1. The 3d Central Medical Establishment will move from Wiesbaden, Germany, to Heidelberg, Germany, on or about 8 Nov 1945.

2. Upon arrival, unit will report to Hq 7th Army/Western Military District for office facility in Kaiser Wilhelm Institute and billeting by Hq 7th Army.

BY COMMAND OF LIEUTENANT GENERAL CANNON:

/s/ Thomas G. Kronberg
/t/ THOMAS G. KRONBERG
Major, Air Corps
Actg Asst Adj Gen.

DISTRIBUTION:
TAG (Attn: Opns Branch)
CG, AAF (Attn: Air AG Pub Branch)
CG, US Forces, European Theater (10)
CG, Theater Service Forces, European Theater, APO 887(Attn: OCE, Capt Maggi)
CG, US Theater Sig Comm Service, APO 757 (Attn: Misc Comm Branch)
CG, 7th Army/Western Military District (3)
CG, IX Air Force Service Command (5)
CO, Unit concerned (3)
CO, AAF Sta 197
A-1 (5); JA; A-2 (2); A-3; A-4 (2); A-5; A-6; Wea O; Armament O; Air Surgeon; Postal O; Engr O; Stat O; (3); Transp O; Historian; QM
AG Misc Sec, US Forces, European Theater
AG Misc Sec, US Air Forces in Europe
AG Central Files

A TRUE COPY:

William F. Sheeley
WILLIAM F. SHEELEY
Major, Medical Corps

EXHIBIT 4

HEADQUARTERS ZB/PJH/hmk
WIESBADEN AIR FORCE STATION

APO 633, US Army
322 31 December 1945

SUBJECT: Reorganization of 3d Central Medical Establishment.

TO : Commanding Officer, 3d Central Medical Establishment.

1. Pursuant to instructions contained in letter, Hq United States Air Forces in Europe, 322, subject: Reorganization of Units (No 220), 26 December 1945, the 3d Central Medical Establishment is reorganized effective this date in accordance with T/O & E 8-460, 12 July 1945, column 4 plus column 5, plus column 10 plus 2 x column 7, with an authorized strength of thirteen (13) officers and twenty-six (26) enlisted men.

2. Officer and enlisted grades are authorized accordingly.

3. Filler personnel and equipment will be requisitioned in the usual manner. No enlisted person will be reduced in grade because of this action.

4. Equipment is authorized in accordance with T/O & E's indicated and will be furnished to the fullest extent from theater stocks. Shortages of critical items will be reflected in the next critical item reports. Shortages of all items will be requisitioned in the usual manner. Equipment rendered excess will be turned in to the nearest appropriate supply depots.

5. The provisions of AR 345-400 will be complied with.

BY ORDER OF COLONEL McCOY:

PETER J. HOKE
Major, CE
Adjutant.

DISTRIBUTION:

6 - CG USAFE APO 633
10 - AAF (ATTN: AG Pub Br)
6 - The Adj Gen Washington,25,DC
(1 marked ATTN: Ops Br)
26 - CG USFET APO 757
5 - CO 3d Central Med Est APO 633
1 - Each Unit and Staff Sec, this Hq (info)
5 - File

EXHIBIT 5

REQUISITION RECORD :
Date taken or occupied 14 Sept 45
Returned
Amount of damage during use or occupancy
(For Use of Requisitioning Officer.)

REQUISITION RECEIPT
Requisierungs Empfangsbescheinigung
U.S. FORCES
AMERICANISCHE STREITKRÄFTE
EUROPEAN THEATER OF OPERATIONS

Req. No 7E18

Date 14 Sept 45

REQUISITION REPORT, pursuant to Article 53, Annex to Hague Convention No IV of 18 October 1907 is made as follows :
ANFORDERUNGSBERICHT, gemäss Artikel 53, Anhang zu der Haager Konvention No IV den 18 Okt. 1907 wird folgenderweise gemacht :

1. OWNER — BESITZER :
   (If questionable whether publicly or privately owned, owner is unknown, or cannot be ascertained with reasonable certainty, so indicate.)
   Name Kaiser Wilhelm-Institut
   Address John Strasse
   Nationality German Institut
2. LOCATION OF PROPERTY - LAGE DES BESITZES :
   (If real estate, give street number or other definite means of location by reference to standard map with area boundaries.)
   John Strasse Heidelberg
3. DESCRIPTION OF PROPERTY - BESCHREIBUNG DES BESITZES : Modern two story brick bldg one wing and top floor of another to be used - Library used jointly
   (For supplies, describe item and include quantity and condition; for real estate describe crops and resources, if any; describe buildings, including number of rooms, floor space and condition upon entry.)
4. THIS PROPERTY IS NEEDED BY U.S. FORCES, and the requisition is in proportion to the resources of the country.
   DIESES EIGENTUM WIRD VON DEN AMERIKANISCHEN STREITKRAFTEN benötigt und die Requirierung ist proportionnell zu den Gesamtbeständen des Landes.

AAF Für den
By Order of Lt Gen Keyes
(Commander in the Locality) (Truppenbefehlshaber)
[signature]
(Requisitioning officer sign here)
(Unterschrift des Requisierungsoffiziers)

PRINT : NAME H.M. Kennedy
RANK Captain
SERIAL NO O 370571
APO 758

NOTE :
Use other side for additional remarks. If real estate is requisitioned, write "REAL ESTATE" across face of this receipt. In correspondence, refer to this Requisition Receipt by the serial number in upper right-hand corner. If sent out of channels, return to General Purchasing Agent.

GPA ETO Form N° 60
(Germany)

Owner

ANNEX B DO NOT INDICATE UNIT. d'B.-7-45-500M-78,494

R E S T R I C T E D

EXHIBIT 6

THIRD CENTRAL MEDICAL ESTABLISHMENT
Army Air Forces Aero-Medical Center
APO 758, US Army

Heidelberg, Germany

9 November 1945

SPECIAL ORDERS:

NUMBER 1:

1. Under the provisions of Par. 4, AR 600-20, the undersigned hereby assumes command of the THIRD CENTRAL MEDICAL ESTABLISHMENT.

Robert L. Benford

ROBERT L. BENFORD
Colonel, Medical Corps

R E S T R I C T E D

EXHIBIT 7

AAF AERO-MEDICAL CENTER
Hq 3rd Central Medical Establishment
APO 758, US Army

Heidelberg, Germany

22 November 1945

SPECIAL ORDERS:

NUMBER 2:

1. Major ANTHONY N. DOMONKOS, O-496225, MC, is appointed executive officer and acting adjutant, 3rd CME.

Robert J. Benford

ROBERT J. BENFORD
Colonel, Medical Corps
Commanding

R E S T R I C T E D

R E S T R I C T E D

EXHIBIT 8

AAF AERO MEDICAL CENTER
Hq 3rd Central Medical Establishment
APO 758, US Army

Heidelberg, Germany

8 January 1946

SPECIAL ORDERS:
:
NUMBER 7:

1. The following asgmts are directed, eff this date:

NAME	ASGD TO
Major WILLIAM F. SHEELEY, O-478019, MC	Chief, Intelligence Div
Major SEBON R. WALLACE, O-325102, AC	Chief, Operations Div
1st Lt. ALFRED B. SHAKLEE, O-526970, AC	Adjutant

2. Major ANTHONY N. DOMONKOS, O-496225 MC is reld fr asgmt as Class "A" Agent Officer Major E. J. SKEATH, FD, and fr asgmt as acting adjutant.

By order of Colonel BENFORD:

ANTHONY N. DOMONKOS
Major, Medical Corps
Executive Officer

OFFICIAL:

Anthony N. Domonkos
ANTHONY N. DOMONKOS
Major, Medical Corps
Executive Officer

DISTRIBUTION: "A"

R E S T R I C T E D

EXHIBIT 9

AAF AERO MEDICAL CENTER
Hq 3rd Central Medical Establishment
APO 172, US Army

23 May 1946

SPECIAL ORDERS)
:
NUMBER 17)

1. Capt. Sydney Titelbaum, O-523685, AC, is appointed Chief of the Research Division, vice Maj. Sebon R. Wallace, reld effective this date.

2. Maj. Francis J. Nied, O-505805, MAC, is appointed Budget and Fiscal Officer, additional duty.

BY ORDER OF MAJOR SHEELEY:

FRANCIS J. NIED
Major, Med Adm Corps
Adjutant

OFFICIAL:

Francis J. Nied
FRANCIS J. NIED
Major, Med Adm Corps
Adjutant

DISTRIBUTION: "A"

R E S T R I C T E D EXHIBIT 10

AAF AERO MEDICAL CENTER
Hq 3d Central Medical Establishment
APO 403 US Army

12 November 1946

SPECIAL ORDERS)
:
NUMBER 32)

1. Confirming VOCO, CAPT RALPH G. VICTOR, O-448514, MC, (3100), is appointed Chief of the Operations Division, principal duty, vice CAPT SYDNEY TITELBAUM, O-523685, reld effective 20 October 1946.

2. Confirming VOCO, MAJOR WILLIAM F. SHEELEY, O-31254, MC, (3100), is appointed Security Officer, additional duty, vice CAPT RALPH G. VICTOR, 0448514, reld, effective 20 October 1946.

BY ORDER OF COLONEL BENFORD:

Francis J Nied
FRANCIS J. NIED
Major, Med Adm Corps
Adjutant

OFFICIAL:
Francis J Nied
FRANCIS J. NIED
Major, Med Adm Corps
Adjutant

DISTRIBUTION: "A"

R E S T R I C T E D

EXHIBIT 11

AAF AERO MEDICAL CENTER
Hq 3rd Central Medical Establishment
APO 758, US Army

2 March 1946

SPECIAL ORDERS:

NUMBER 12:

1. Major William M. Downes, 0489440, AC, having reported to this Hq 25 February, 1946, pursuant to Par 3, SO #52, Hq. Seventh US Army, Dated 21 February, 1946 is assigned to 3rd Central Medical Establishment.

2. Major William M. Downes, 0489440, AC, is appointed Chief, Administration Division, Principal Duty.

3. Major William M. Downes, 0489440, AC, is appointed Purchasing a nd Contracting Officer, Additional Duty.

4. Major William M. Downes, 0489440, AC, is appointed Supply Officer, Additional Duty, vice Major Sehon R. Wallace, 0325102, AC, reld.

5. Major William M. Downes, 0489440, AC, is appointed Transportation Officer, Additional Dury, vice 1st Lt. Alfred B. Shaklee, 0526970, AC, reld.

6. Having reported at this Headquarters, 11 February 1946 and the exigencies of the service being such that special orders effecting successive transfers from Hq United States Forces European Theater to Hq United States Air Forces in Europe and from United States Air Forces in Europe to the 3rd Central Medical Establishment have not been received, Major Francis J. Nied,0505805, MAC, is hereby assigned to the 3rd Central Medical Establishment.

7. Major Francis J. Nied, 0505805, MAC, is hereby appointed Adjutant, Principal Duty, vice 1st Lt Alfred B. Shaklee, 0526970, AC, reld.

8. Major Francis J. Nied, 0505805, MAC, is hereby appointed Unit Mess Officer, Additional Duty.

9. Major Francis J. Nied, 0505805, MAC, is hereby appointed Unit Personnel Officer, Additional Duty.

EXHIBIT 11 (cont'd)

10. Major Francis J. Nied, 0505805, MAC, is hereby appointed Class "A" Agent for Major E.S.Skeath, FD, for an indefinite period Additional Duty, vice Major Sebon R. Wallace, 0325102, AC, Reld.

11. 1st Lt. Alfred H. Shaklee, 0526970, AC, is hereby appointed Assistant, Chief Operations Division.

12. 1st Lt. Sydney (NMI) Titelbaum, 0523685, AC, is hereby appointed Assistant, Chief Operations Division.

BY ORDER OF COLONEL BENFORD:

FRANCIS J. NIED
Major, Med Adm O
Adjutant

OFFICIAL:

Francis J. Nied
FRANCIS J. NIED
Major, Med Adm O
Adjutant

R E S T R I C T E D

EXHIBIT 12

AAF AERO MEDICAL CENTER
Hq 3d Central Medical Establishment
APO 403, US Army

16 August 1946

SPECIAL ORDERS)
:
NUMBER 26)

1. 1ST LT RALPH G. VICTOR, 0448514, MC (3100), having reported for duty 14 August 1946, pursuant to Par 3, SO #176, Headquarters XII Tactical Air Command, dated 14 August 1946, is assigned to duty at the 3d Central Medical Establishment.

2. 1ST LT RALPH G. VICTOR, 0448514, MC is appointed Assistant Chief, Intelligence Division, Principal Duty.

3. MAJ FRANCIS J. NIED, 0505805, MAC, is appointed Chief, Administrative Division, Principal Duty, vice CAPT DAN S. WORTH, 0511422, MAC, reld, effective this date.

4. So much of Par 7, SO #12, Headquarters 3d Central Medical Establishment, dated 2 March 1946, as reads: "Major Francis J. Nied, 0505805, MAC is hereby appointed Adjutant, Principal Duty" is amended to read, "Major Francis J. Nied, 0505805, MAC, is hereby appointed Adjutant, Additional Duty", effective this date.

5. CAPT CHARLES D. BROWNING, 01699557, AC (6201) is appointed Supply Officer, Principal Duty, vice CAPT DAN S. WORTH, 0511422, MAC, reld.

BY ORDER OF COLONEL BENFORD:

Francis J. Nied
FRANCIS J. NIED
Major, Med Adm Corps
Adjutant

OFFICIAL:

/s/ Francis J. Nied
FRANCIS J. NIED
Major, Med Adm Corps
Adjutant

DISTRIBUTION: "A"

R E S T R I C T E D

/ea

EXHIBIT 13

Headquarters
US Forces
European Theater

No 148
Change 1

APO 757, US Army

23 October 1946

European Theater
Tentative
Equipment Modification List

for the

AAF AERO MEDICAL CENTER, HEADQUARTERS, THIRD CENTER MEDICAL ESTABLISHMENT

Tentative Equipment Modification List No 148, this headquarters, dated 21st Aug 1946 is rescinded and the following is substituted.

This tentative Equipment Modification List is published by this headquarters pending War Department approval of Equipment Modification List previously submitted. All letters of authority for the issue of equipment on a loan basis published by this headquarters for the above unit are rescinded.

1 Item	2 Reduction	Addition	3 Basis of Distribution and Remarks
		ARMY AIR FORCES	
Camera, ground, type 35mm, still pic, Army model F, 4.5 lens, w/click focusing steps, Cl I, spec 75-317		1	
Helmet, flying, intermediate type B-8		7	
Mask, Oxygen, type A-7A, pressure demand:			
Small		4	
Medium		4	
Large		2	
Mask, Oxygen, type A-15:			
Small		6	
Medium		6	
Large		3	
Projector:			
Microfilm, complete w/case, Recordak model A or equal		1	
Motion picture, type 2, Cl A, 16mm, silent and sound		1	

EXHIBIT 13 (cont'd)

TEML 148, C1, AAF Aero Med Cen, Hq
3rd Cen Med Establishment (contd)

1	2		3
Item	Reduction	Addition	Basis of Distribution and Remarks
ARMY AIR FORCES (contd)			
Regulator, Oxygen:			
Type A-13		5	
Type A-14		10	
Type A-15		5	
Valve, Assembly, Oxygen Check:			
Low pressure, style H		7	
Tube to tube, low pressure, style A		5	
ENGINEER			
Extinguisher, fire, carbon dioxide, permanent shutoff, 15 pd		4	
Hoist, chain differential, 1-ton (41-4692.200-100)		1	
Instrument, drawing, office set (18-4276-400-600)		3	
Jack, automobile and mtr trk, hydraulic, 5-ton, PS-GGG-J-51, type VII class 3 (41-4278.500-050)		2	
Pen, lettering Leroy, w/guides (53-7377-600-900)		3	
Photostat, 11-1/2" x 14" maximum size, single sheet w/Engineer board, Photostat Corp. model 1 (18-4630-800-400)		1	
Set, printing and developing, Ammonia process w/chute and cabinet mercury vaper tube, 90-130V, 60 cycles, 42" capacity, Oxalid mod. E (18-4630-900-500)		1	
Sign painting equipment, set No 1 (00-0830-000-010)		1	
Table, drawing, w/drafting machine		3	

TEML 148 61, AAF Aero Med Cen, Hq, 3rd Cent Med Establishment (contd)

1 Item	2 Reduction	Addition	3 Basis of Distribution and Remarks
MEDICAL			
Apron, rubberized (7701000)		5	
Burner, bunsen (4103000)		19	
Gown, operating (7160010)		5	
Kit, first aid, mtr		6	1 per fcmv auth
Sterilizer, instrument, small 110V, AC-DC (7917003)		3	
ORDNANCE			
Weapons and Miscellaneous			
Pistol, automatic, cal. .45, M1911A1		2	SNL B-6
Vehicles			
Truck:			
¼-ton, 4x4		3	SNL G-503
2-½-ton, 6x6, cargo, w/winch		2	SNL G-508
Ambulance, 3/4-ton, 4x4		1	SNL G-27
Motor Transport Equipment			
Axe, handled, chopping, single bit, standard grade, 5-lb		6	1 per trk auth (SNL J-6)
Mattock, handled, pick, type II, class F, 5-lb		6	1 per trk, ambulance 3/4-ton auth (SNL J-6)
Rope, tow, 20' long, 1" diam		6	1 per trk auth (SNL H-9)
Shovel, gen purp, D-handled, strap-back, round point, No 2		6	1 per trk auth(SNL J-6)
Tool set, carburetor mechanics FS No 41-T-3535-75		1	SNL G-27
Tool set, gen mechanics FS No 41-T-3534-75		2	SNL G-27
Tool set, ignition mechanics		1	SNL G-27
Tool set, 2d ech set No 3		1	SNL G-27
Tool set, 2d ech set No 4 FS No 41-T-3845-13		1	SNL G-27

1 Item	2 Reduction	2 Addition	3 Basis of Distribution and Remarks
QUARTERMASTER			
Organizational Equipment			
Bucket, canvas, water, 18-qt		6	1 per trk auth
Clock, wall		4	
Dictionary:			
English		4	
German-English, technical		4	
German-English, unabridged		4	
Drum, gas, 5-gal		9	1 per trk ¼-ton; 2 per trk over ¼-ton
Goggles, M-1944		12	1 per fcmv
Machine, computing, non-listing, (calculating), mtr driven		1	
Stand, dictionary, metal frame wooden leaves, oak		3	
Stencil outfit, complete w/figures and letters, ½" and 1"		1	
Trimmer, paper, 18" knife		2	
Tube, flexible-nozzle		6	1 per trk; 1 add per 5 fcmv or maj fraction
Typewriter, non-portable, 11" carriage		11	
SIGNAL			
Camera, PH-S64/GF camera microfile, 35mm, non-portable, for making reproduction of documents up to 25" x 30" (8A328)		1	
Camera equipment, PH-104-A, speed graphic (8A404-A)		1	
Camera, motion picture, 16mm EKCo Cine Special (8A430-A)		1	
Development equipment, PH-253, for 35mm; includes 100' reel, 3 corrosive resistant tanks, 200' drying rack (8A942)		1	

1 Item	2 Reduction	Addition	3 Basis of Distribution and Remarks
SIGNAL (contd)			
Enlarger, automatic focus w/lens accommodating film or plat negatives 5" x 7" or smaller (8A1051)		1	
Flashlight TL-122- ( )		6	1 per fcmv auth
Hanger, PE-71, film developing 4" x 5" (8A1601)		24	
Lamp, PH-207, darkroom 5" x 7", indirect (8A2107)		3	
Printer, PH-192, (5" x 7" Pako Jr.) (8A3119-192)		1	
Thermometer, PH-28-20°-120°F (8A3828)		2	
Timer:			
PH-29, minute & second (8A3829)		1	
PH-109, cluter vae timer (8A3830)		2	
Tray, developing:			
PH-166, steel, 16" x 20" (8A3916)		2	
PH-185-A, steel 16" x 20" (8A3908A)		6	
Trimmer, photographic, PH-210, 10" (8A4010)		1	
Washer, print, PH-249, rotary print (8A4510)		1	

BY COMMAND OF GENERAL McNARNEY:

C.R. HUEBNER
Maj General, GSC,
Chief of Stall.

OFFICIAL: (SEAL HQ USFET)

GEORGE F. HERBERT
Colonel AGD,
Adjutant General.

DISTRIBUTION: C
10 - USAFE
10 - AAF Aero Med Cen, Hqs Third Cen Med Establishment

EXHIBIT 14

rtificial Legs From Germany
May Prove Boon to Amputees

Post Staff photo

ARTIFICIAL LEG—Lieut. John M. McKee (left) and Lieut. James A. Broadbeck examine a model for the hydraulic limb invented by two Germans. The invention permits nearly normal use of the artificial knee. McKee holds a hydraulic pist...

STAR, Washington, D. C.
APRIL 23, 1946.

New Artificial Leg Developed By Two Germans for U. S. Army

By Elie Abel
North American Newspaper Alliance

HEIDELBERG, Germany, April 23.—A revolutionary artificial leg developed by two German scientists at the United States Army Air Forces aeromedical center here will bring new hope to thousands of American and Allied amputees and to an even greater number of victims of automobile accidents. Operated by a fine system of hydraulics, the new prosthetic device can be easily produced ... legless veterans through the Veterans' Administration within a ma... ter of months.

The limb was perfected by ... Ulrich Henschke and Engin... Hans Mauch, who, in their ... words, "work as one man."

Dr. Henschke was a Luftwaffe ... searcher in aviation medicine ... at 31, is a doctor of both medi... and physics. He operated his ... clinic at Garmisch-Partenkir...

Germans Planned Artificial Limbs Worked by Brain

WRIGHT FIELD, Ohio, Oct. 7 (INS)—When V-E Day ended their work, German scientists were attempting to perfect an artificial leg that could be controlled by impulses from the human brain.

This ambitious goal of German experimenters was disclosed here by an Air Material Command technical intelligence team, which learned of the work by questioning the scientists.

The German efforts were concentrated on use of electro-mechanical devices wired to the severed endings of the nerve fibers. They were based on the theory that galvanic electricity flows along the nerves and that thus the wearer's brain could convey impulses and cont... leg.

The AMC announcement said ... scientists were endeavoring ... to prove the existen... electricity as to perf... controlled artificial li... experimental work ... one of many physio... projects worked ... Medical Research ... The Institute, ... University of Muni... was moved ... Garmisch-P... scientists had ... work on ... ended.

ABDOMEN SETS HYDRAULIC GAIT, GIVING AMPUTEE VET A LEG UP

HYDRAULIC knee controlled by abdominal muscles.

AP Newsfeatures

Heidelberg, Nov. 7 — An artificial leg that holds new hope for ... who have suffered amputation ... by two young ... produced by walking motions. Hydraulic mechanism in the artificial limb is controlled by a belt, containing a small rubber bladder and wrapped around the waist.

On walking up and down stairs ... expansion of the abdomi...

Hydraulic Artificial Leg Perfected At Heidelberg

BERLIN, May 6 (UP)—The "hydraulic leg" which American doctors believe will answer the prayers of thousands of legless war veterans, was being tested with gratifying results in Germany today.

In the experiments, war veterans with one leg walked up and down stairs with such ease and comfort that the casual ... scarcely distin... from the ...

... question was how to stop the half knee bend and how to lock the joints when the subject was ascending or descending stairs so as to prevent collapse. ... decided to control the leg's ... mechanism by means of ... waist which con...

U. S. Plans to Adapt European Discoveries In Amputation Cases

So impressed was Secretary Patterson with a report on European developments in artificial limbs and surgical techniques for amputation cases, it was announced today, that he has directed the War Department to continue every possible assistance in research for the benefit of the Army's amputees.

While a group of scientists recently sent to England ...

... the elimination of the hea... cumbersome harness ... waist or over the ... improvement ... The device ... knee jo... putees. ... be made ... This is d... valve act... the abdom... special belt ... amputee can ... and walk ... over rough ... scientists rep... come ...

June 28, 1946

The Air Surgeon announces the development of a hydraulic artificial leg at the Army Air Forces Aero Medical Laboratory in Heidelberg, Germany. Two German scientists, Ulrich K. Henschke and Hans A. Mauch, working in this Laboratory, have invented a device consisting of a small cylinder filled with hydraulic fluid and a piston connected with the upper leg. The movement of the piston is controlled by a ... be opened or closed at will with the ... ingenious belt.

'Hydraulic' Leg Being Tested by U. S. Doctors in Germany for Amputees

Before deciding to publish the following article, PM consulted Dr. Walter Bura, in charge of prosthesis of the Veterans Administration. It is printed with the reservations he makes. Dr. Bura says that, technically, the ...

... leg" which U. S. doctors believe will answer the prayers of thousands of legless war veterans is being tested with gratifying results in Germany today.

Air Forces Aero Medical Center in Heidelberg.

The original research was done by two German scientists, Dr. Ul... rich Henschke ...

... kled the problem of controlling these movements. The question was how to stop the half-knee bend, and how to lock ...

... and down stairs, a slight expansion of the waist muscles causes the piston ...

From AAF Review, July 1946

EXHIBIT 15

HYDRAULIC LEG

A new development in artificial legs permits simultaneous flexion of ankle and knee and is bringing new hope to amputees.

By Brig. Gen. Malcolm C. Grow
Air Surgeon

Many a man came home from the war without an arm or a leg—an amputee—struggling with a difficult task of readjustment to life.

As doctors we are dedicated to the task of rehabilitating these who gave so much. Our goal is to enable them to walk naturally and work naturally.

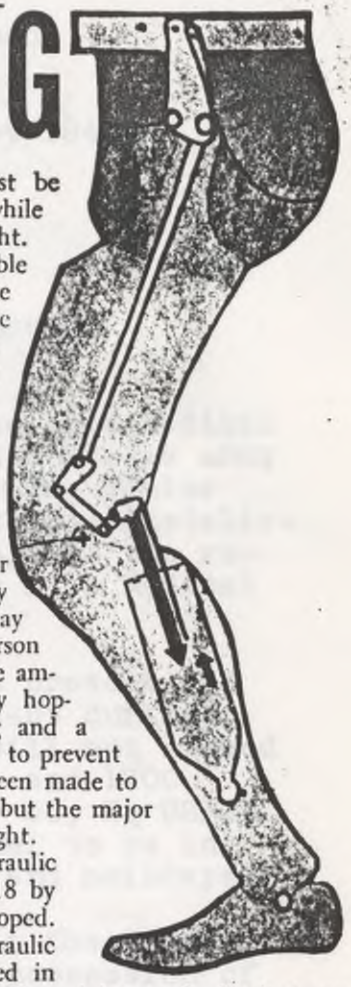
Their plight lends urgency to the search for perfect prostheses (artificial legs and arms). To the man hobbling along on crutches sympathy is not enough. What he wants is a leg the equivalent of the lost one! We are aware of the limitations of present prostheses which have been little improved since the models developed after the last war, and we are constantly seeking new ideas.

After V-E Day, while investigating the German research in aviation medicine, I came across two scientists, Ulrich K. Henschke and Hans A. Mauch, who had conceived the idea of using the hydraulic principle in artificial legs. Employed by the AAF at Heidelberg, they were encouraged to put aside their other research to concentrate on this new apparatus.

Henschke and Mauch successfully developed two devices: A small hydraulic system which can be installed in present-day artificial legs to control knee action, and a pair of rods to correlate the flexion of knee and ankle into one smooth stepping motion.

The normal human knee can do wonderful and varied things. The most important and frequent movements are in slow and rapid walking, hill climbing, and going up and down stairs. In normal walking the legs must be flexed and *fixed in flexion* in any one of a continuous series of angles. This is exemplified in ascending and descending stairs and in climbing hills. A second function of the normal leg is a slow and gradual flexion when it is bearing the body's weight. Thirdly, the normal knee is capable of extension, as in kicking a football, and it can be held in extension.

For standing on a leg with safety or walking with a natural stride and for ascending and descending stairs and inclines, the knee joint must be held at various angles while bearing the body's weight. This has so far been impossible with conventional legs. The present artificial leg must be held in a straight position while the amputee steps up to the next step, using his good leg.



Moreover, an amputee must beware even small ground obstacles because, if his foot accidently strikes a stone in walking, the older types of artificial legs may buckle under him. This may seem a trivial thing to a person with two good legs, but the amputee must arrest a fall by hopping on his one good leg and a double amputee has no way to prevent a tumble. Attempts have been made to use mechanical knee brakes but the major limitations are size and weight.

The idea of using a hydraulic system was suggested in 1918 by Windler but was not developed. With a light weight hydraulic system that can be installed in present hollow prostheses the knee joint can be fixed at any angle and, more important, the rate of flexion (as in a deep knee bend) can be controlled, even when the weight of the body is being borne by the artificial leg alone.

The advantages are obvious. The amputee can walk down stairs placing the artificial leg on a lower step while bearing his weight on the artificial leg; he can advance the normal leg to the next step instead of using the present clumsy and awkward one-legged method. Similarly, with the piston arrangement to lock his knee the amputee can climb stairs using alternate legs.

An obvious defect of present day artificial legs is the inability to control the ankle. As the artificial leg is swung back and forth in walking, the ankle remains at a 90° angle to the lower leg. To avoid scraping his toes the amputee raises his hip, creating a gait which is characteristic. It is highly desirable to combine knee flexion with ankle flexion.

Henschke and Mauch connected the knee and ankle by means of rods attached to the inner part of the lower leg, allowing a simultaneous flexion of ankle and knee. This simple device improves walking because it allows the toes to be lifted clear as the knee is bent with each step forward, obviating the necessity for raising the whole hip.

This "hydraulic leg" is on its way from Germany. It will be subjected to further tests and refinements by The Surgeon General, Major General Norman T. Kirk, at the Prosthetic Research Laboratory, Walter Reed General Hospital. I am sure our own American inventiveness will be stimulated by this new device, and, while the final form is as yet undetermined, better prostheses are coming. If they do not serve almost as well as a normal limb, they are not good enough. ☆

AAF AERO MEDICAL CENTER
Hq 3rd Central Medical Establishment
APO 403 US Army

EXHIBIT 16 19 August 1946

AMC MEMORANDUM:

Number 12

Regulations for Helmholtz Institute Branch

1. The Helmholtz Institute Branch of the Aero Medical Center is a military installation of the United States Army under the jurisdiction of this headquarters. The senior non-commissioned officer on temporary duty at this installation, in the absence of a commissioned officer, is the representative of the Commanding Officer of the Aero Medical Center.

2. One non-commissioned officer will be present and available for necessary duty at all times except duringauthorized absences for meals. Such absences will not exceed one hour beginning at 0600 hours, 1200 hours, and 1700 hours. Attention is also invited to Circular 58, Hq USFET dated 30 April 46, requiring enlisted personnel to be in their billets after 2300 hours (0100 Sundays and holidays).

3. The motor vehicle assigned for use at the Helmholtz Institute Branch will be either in the possession of the non-commissioned officer on duty or available to him by telephone or messenger.

4. The principal duties of non-commissioned officers at the Helmholtz Institute Branch are to safeguard United States Government property and to assist the scientific staff in the accomplishment of its mission. In performance of these duties, all non-commissioned officers will:

a. Make a daily inspection of the building and grounds, noting and correcting any discrepancies.

b. Keep a record of the arrival and departure of individual employees.

c. Maintain a register of all military and civilian visitors including name, rank or position, organization, date and purpose of visit.

d. Refuse admission to the grounds or any part of the building to all individuals not on official business, except families of those scientists living in the institute. This specifically prohibits enlisted men from having guests anywhere on the premises.

e. Communicate frequently by telephone (at least twice each week) with the Commanding Officer of the Aero Medical Center or one of his commissioned assistants.

f. Conduct themselves at all times in a manner which will reflect favorably on the Army Air Forces.

g. This directive supersedes all previous instructions to non-commissioned officers on temporary duty at the Helmholtz Institute Branch and will be permanently posted in the billets occupied by such non-commissioned officers.

BY ORDER OF COLONEL PENFORD:

Francis J. Niel

FRANCIS J. NIEL
Major, Med Adm Corps
Adjutant

EXHIBIT 17

RESTRICTED

AAF AERO MEDICAL CENTER
Hq 3d Central Medical Establishment
APO 403 US Army

18 December 1946

SPECIAL ORDERS)
:
NUMBER 35)

1. Captain Ralph G. Victor, O-448514, MC, (3100) is hereby appointed Librarian Accountable Officer for Library Books, additional duty, and will act in accordance with the provisions of AR35-6800.

2. Under the provisions of AR 615-5, dated 23 Sept 1946, as amended, the following named EM are promoted to the grade indicated to fill existing vacancies, effective this date.

TO BE SGT (TEMPORARY)

Cpl Yeu Fu Chun RA 10731527
Cpl Arthur K. Perry RA 35622603

3. Miss Marion U. Wall, CAF-5, is appointed Chief of Civilian Personnel, U.S. and indigenous, effective this date.

BY ORDER OF COLONEL BENFORD:

Francis J. Nied
FRANCIS J. NIED
Major, Med Adm Corps
Adjutant

OFFICIAL

Francis J. Nied
FRANCIS J. NIED
Major, Med Adm Corps
Adjutant

DISTRIBUTION: "A"

RESTRICTED

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EXHIBIT 18

AAF AERO MEDICAL CENTER
Hq 3d Central Medical Establishment
APO 403 US Army

4 January 1947

AMC MEMORANDUM)
:
NUMBER 16)

DUTY HOURS.

(This Memorandum supersedes AMC Memorandum No.3, dated 11 October 1946)

1. MILITARY PERSONNEL. Duty hours for all military personnel are from 0830 daily, except Sunday, to 1715 hours, and Saturday from 0830 until 1230 hours. The lunch period will be limited to forty-five minutes.

2. CIVILIAN EMPLOYEES (US). Civilian employees (US) will observe the same hours of duty as prescribed for military personnel. Appropriate deductions will be entered on the time sheet of persons found in violation of this directive.

3. GERMAN EMPLOYEES. German employees will be required to conform to hours noted in par.1 above. For excepted personnel, namely, kitchen help, telephone operators, and charwomen, duty hours will remain in effect as indicated in other directives. Employees mentioned in this paragraph who report for work late, will not be paid for such time lost. Habitual tardiness will be cause for dismissal.

BY ORDER OF COLONEL BENFORD:

Francis J. Nied
FRANCIS J. NIED
Major, Med Adm Corps
Adjutant

DIENSTSTUNDEN.

1. OFFIZIERE UND SOLDATEN. Ausgenommen Sonntags, betragen die taeglichen Dienststunden fuer Offiziere und Soldaten von 0830 bis 1715 Uhr, Samstags von 0830 bis 1230 Uhr. Die Mittagspause wird auf 45 Min. gekuerzt.

2. US ZIVILANGESTELLTE. Fuer diese gelten die gleichen Dienststunden wie fuer das Militaerpersonal. Bei Verstoessen gegen die festgesetzten Zeiten werden Gehaltskuerzungen auf den Zeitkarten verzeichnet werden.

3. DEUTSCHE ANGESTELLTE. Auch fuer deutsche Angestellte gelten die in Abschnitt 1 genannten Zeiten. Nur fuer Kuechenpersonal, Telefonistinnen und Putzfrauen bleiben jene Arbeitstunden gueltig, die bisher angesetzt waren. Fuer durch Verspaetung verloren gegangene Arbeitszeit werden Abzuege auf den Zeitkarten gemacht werden. Wiederholtes Zuspaetkommen kann zur Entlassung aus dem Dienst fuehren.

EXHIBIT 19

AAF AERO MEDICAL CENTER
Hq 3d Central Medical Establishment
APO 403, US Army

20 August 1946

AMC MEMORANDUM

NUMBER 9

ENLISTED MEN'S CLUB ROOM

(This directive supersedes AMC Memorandum No. 9, 5 April 1946)

1. The following regulations will govern the Club Room for enlisted men of this organization:

a. Escorted female guests of enlisted personnel assigned to the Aero Medical Center may be entertained in the Club Room after regular duty until 1030 hours, except on Saturday night until 2400 hours. Guests will not be permitted in any other part of the Aero Medical Center at any time.

b. Civilians, other than escorted female guests, will not be admitted in the Club Room.

c. Ungentlemanly conduct, intoxication or other actions prejudicial to the best interests of the service are prohibited.

d. The Club Room will be closed daily not later than 2300 hours except on Saturday nights when it will be closed not later than 0100 hours Sunday. The Charge of Quarters will be directly responsible for the general security of the Club Room.

2. Any violations of these regulations will be cause for the individual concerned to be denied the privileges of the Club Room.

3. AMC Memorandum No. 5, Current Series, is rescinded.

BY ORDER OF COLONEL BENFORD:

Francis J. Nied
FRANCIS J. NIED
Major, Med Adm C
Adjutant

Text photocopied onto acid free paper. Photographs re-mounted in original positions. Leaves joined & sewed. Book bound in full cloth with un-bleached linen hinges & acid free end signatures. Original sides reused.

Sky Meadow Bindery
April 1990