

NOTES AND NEWS

MEETING ON DEPLOYMENT OF VISOTONER

A meeting on "Deployment of the Visotoner Reading Machine for the Blind" sponsored by the Prosthetic and Sensory Aids Service was held, September 30, 1969, at the Veterans Administration Central Office, Washington, D.C. Nineteen persons attended coming from the American Center for Research in Blindness and Rehabilitation (ACRIBAR), The Columbia Lighthouse for the Blind, The Hadley School for the Blind, Mauch Laboratories, Inc., The National Academy of Sciences (NAS-CPRD), Social and Rehabilitation Services Administration (SRS), and the Veterans Administration (VA). The VA reading-machine program to date was presented with actual demonstrations of reading with the Visotoner by Mr. H. L. Lauer and Miss M. Butow. Deployment plans for introducing this device to a wider circle of blind people were also discussed.

ENGINEERING FOUNDATION CONFERENCE ON PROSTHETIC AND SENSORY AIDS

To present to industries, laboratories, and engineering graduate schools a realistic view of important problems, background achievements, state-of-the-art, relevant literature, potential market, and sources of funding for research, the Engineering Foundation will hold a research conference entitled Introduction to Prosthetic and Sensory Aids. It will be conducted at Proctor Academy, Andover, N.H., August 17-21, 1970. Chairmen are Dr. Eugene F. Murphy, Chief, Research and Development Division, Prosthetic and Sensory Aids Service, Veterans Administration, and Mr. A. Bennett Wilson, Jr., Executive Director, Committee on Prosthetics Research and Development, National Research Council.

The conference, in the tradition of the Engineering Foundation series, will be conducted rather informally with numerous opportunities for questions and frank discussion.

Further details may be obtained from The Engineering Foundation, United Engineering Center, 345 E. 47th Street, New York, N.Y. 10017.

DR. HOOVER RECEIVES AWARD

Dr. Richard E. Hoover, presently an ophthalmologist in Baltimore, received the first Lawrence E. Blaha Award during a meeting of the Mobility Interest Group of the American Association of Workers for the Blind during the AAWB convention in Chicago, July 19-23, 1969. Dr. Hoover developed

the "long cane" mobility technique for the blind while he was stationed at Valley Forge Army Hospital during World War II. He has frequently served as consultant to the Veterans Administration and other agencies on both clinical and research aspects of blindness and visual handicaps. He recently became chairman of the Subcommittee on Sensory Aids, Committee on Prosthetics Research and Development, National Research Council.

FIFTY YEARS OF A CLASSIC TEXT

One of the most important books in prosthetics was published 50 years ago. "Erzatzglieder und Arbeitshilfen" ("Substitute Limbs and Work Aids") by 30 authors under a distinguished group of editors was published by Springer in Germany in 1919 based on experience of surgeons, engineers, orthopedic mechanics and others in the Central Powers related to amputations, prostheses, and related topics—physiology, locomotion, arm and hand motions, stump care, special problems of bilaterals, etc. Retraining and placement of amputees include industry, agriculture, and even a series of pictures (p. 928) of the activities of a one-armed paper hanger!

In this volume of 1,121 pages about the central third is a single monumental chapter by Prof. Georg Schlesinger on "The Mechanical Construction of Artificial Limbs." (He also wrote a brief chapter on work adaptations and tools for the handicapped, analyzing tasks like hammering and operation of machine tools, and he was one of the six editors of the entire book.)

Professor Schlesinger was professor of machine tool engineering at the Technische Hochschule or Technical University of Berlin at Berlin-Charlottenburg. During World War I, he operated a central testing laboratory for artificial limbs; copies of many of the theses related to prosthetics by students under his supervision at the time eventually entered the collection of the John Crerar Library in Chicago. A review of his own publications as listed in available indices shows that the proportion devoted to prosthetics rose sharply in World War I but unfortunately dwindled rapidly after the war. (Ironically, Hans Mauch, now so active in research in prosthetic and sensory aids in this country, had been a graduate student under Professor Schlesinger at Berlin between the wars without exposure to prosthetics.)

The major Schlesinger chapter includes mechanical analyses of body motions and a vast array of excellent drawings (536 illustrations total) and descriptions of complete limbs and components, control methods, and arm harnesses. Many "inventions" of the last 25 years are innocent repetitions of these older ideas, often almost identical but sometimes benefitting from later materials or technology. Schlesinger describes and illustrates, for example, not only numerous body harnesses with as many as five tendons to the hand but also externally powered hands to be operated by compressed air

or electricity. There are mechanical hands with finger forces equalized in various ways (cords and pulleys, horse-harness whiffletrees, or equal cylinders exposed to a single driving pressure) to allow differential finger motion to surround balls or irregular objects. Knee locks for above-knee amputees abound with numerous operating principles and control means. Feet, ankles, tubular shanks with various cosmetic coverings (another reinvention currently gaining favor), crustacean shanks, and various thighs and hip joints are described in great detail. Considerable attention is given to mechanical tests of strength or frictional clamping of adjustments and to standards and tolerances of mass-produced parts—current topics today.

Probably, the great weakness of those times—aside from the general diversion of interest from prosthetics after the war ended and inflation became serious—as well as of that great book is the relatively scant attention to the problems of fitting, training, and managing the individual amputee. Only two of the authors were orthopedic mechanics or prosthetists, but both Schlesinger and some of the doctors wrote of socket making. There is some mention of plaster casts, of marking bony landmarks, and of methods for preparing leather, fiber, or synthetic (e.g., celluloid—or shellac—impregnated tricot) sockets over the plaster model from a cast or of cutting a wooden socket on a duplicating lathe, and there are brief discussions of aluminum, feet, and other materials. Unfortunately there is nothing on fitting or alignment processes approaching the meticulous attention and beautiful drawings devoted to anatomical, surgical, and mechanical subjects.

It is also unfortunate that clinical experience and results are given little or no attention, so the reader generally cannot tell whether one design was a highly successful model used by hundreds of thousands of amputees or merely an ingenious idea which had been presented to the laboratory. (In contrast, Florent Martin's book "Artificial Limbs," published by the International Labour Office in 1924, describes each design with similar objectivity but then appraises it in the light of his extensive clinical experience in Belgium during World War I.)

"Ersatzglieder und Arbeitshilfen," well described by the English authority Muirhead Little as "a complete and encyclopaedic work on the subject," has had a great and continuing impact for half a century. It has portrayed and suggested numerous ideas, prevented wasteful duplication, and served as a valuable, frequently quoted reference. Even without knowledge of German, one can gain a great deal by study of the illustrations. It is unfortunate that copies are so scarce. Some few private individuals, some great reference libraries, and a few of the prosthetics research laboratories in the United States own copies, and a few have microfilms; serious inventors in this field would do well to study a copy periodically.

EUGENE F. MURPHY

**1969 BIOMECHANICAL AND HUMAN FACTORS CONFERENCE
HELD AT THE UNIVERSITY OF MICHIGAN, JUNE 12-13, 1969**

The 1969 Biomechanical and Human Factors Conference was held June 12-13, 1969, at the Chrysler Center for Continuing Engineering Education, University of Michigan, Ann Arbor.

Sponsored by the Biomechanical and Human Factors Division of The American Society of Mechanical Engineers and the University of Michigan, the conference featured four sessions of wide interest to engineers, physicians, life scientists, and dentists. Papers covered mathematical studies of the human body, the physical properties of biological tissues, fluid flow phenomena, and automotive safety. As a special feature, tutorial papers were presented by Prof. Y. C. Fung, The University of California, San Diego, and Prof. L. M. Patrick of Wayne State University in Detroit.

Individual papers spanned an extremely wide gamut covering such diverse topics as dynamic mechanical properties of human brain tissue and the engineering problem of ski safety. Among the specific areas discussed were a mathematical model for head injury, dynamic properties of the human leg, a computerized model for use in studying body actions, and a mathematical model for the mechanics of arteries. In addition, a number of papers were presented relating to automobile safety design, including the design of child restraints, and a discussion of the steering wheel—chest impact tolerance, from laboratory to highway.

**ALLIANCE FOR ENGINEERING IN MEDICINE AND BIOLOGY
ELECTS OFFICERS**

At its first annual administrative meeting at the United Engineering Center, New York City, November 10, 1969, the Alliance for Engineering in Medicine and Biology adopted constitution and bylaws, formed committees, and elected Dr. Lester Goodman, a bioengineer at National Institutes of Health, its first President. He is Chief, Biomedical Engineering and Instrumentation Branch, Division of Research Services. Other officers elected were Dr. Arthur C. Beall, Jr., Thoracic Surgeon at Baylor University, vice president; Dr. John Busser, Executive Secretary, Bioinstrumentation Advisory Council, secretary; and Dr. Robert D. Allison, of the Scott and White Clinic, Temple, Tex., treasurer.

The new Alliance for Engineering in Medicine and Biology (AEMB) will stimulate interdisciplinary scientific, technical, and educational programs related to health care. It will take over from the Joint Committee on Engineering in Medicine and Biology the conduct of annual conferences in biomedical engineering. The next meeting is scheduled for Washington, November 15-19, 1970, with Dr. Gerald G. Vurek of National Institutes of Health as chairman. The deadline for receipt of abstracts is June 1, 1970. In addition to major sessions on Health Care Systems, Clinical Science,

Models, Basic Science, Artificial Organs, Image Processing, and Safety, there will be simultaneous sessions for selected papers and evening workshops or discussion groups. Extensive scientific and commercial exhibits are features of each such conference.

The Alliance already includes 17 constituent associations in various fields of medicine as well as engineering, thus broadening sponsorship beyond the five predominantly engineering societies in the Joint Committee on Engineering in Medicine and Biology.

Dr. Eugene F. Murphy of the Veterans Administration is a member of the AEMB Council as Principal Delegate of the American Society for Testing and Materials.

NEW AIDS FOR HANDICAPPED

The Rehabilitation Engineering Institute, Pompton Lakes, N.J., has developed a family of speech aids which help speech-impaired handicapped people.

The speaking aids are built in either of two forms. One model, designed for personal and small group speaking only, is worn on the body. A tiny microphone is supported near the mouth from an eyeglass frame. The wire runs through the thin support tube, down behind the ear, through the clothing to another larger unit which is worn in the shirt pocket or clipped to the belt. The person's voice, amplified and loudly reproduced, emanates from the reproducer unit. In some cases, only amplification is provided. In others, such as people with cerebral palsy or Parkinson's disease, the voice is amplified and filtered, and special feedback signals are introduced, to improve the quality and intelligibility.

The second model is wireless and utilizes radio transmission. A larger microphone is supported from the eyeglass frame near a corner of the mouth. This transmits an FM radio signal which can be picked up by one or more special receivers.

A small receiver is worn clipped to the user's belt, under his jacket where it cannot be seen. This receives, amplifies (corrects, if necessary), and reproduces the user's voice loudly enough for personal conversations and small group talks.

Also developed by The Rehabilitation Engineering Institute is a warm and attractive looking "simulated" overcoat for people in wheelchairs who must be taken indoors and outdoors frequently in cold or rainy weather. The purpose of the new coat is to avoid the difficult, tedious, and often painful procedure of putting a regular overcoat or raincoat on the person, and then removing it when going indoors, on a too-frequent basis.

The coat, after alteration, is applied as a blanket, quickly and without having to lift the wheelchair occupant. Snaps keep the coat securely in place and ensure that it gives the appearance of a regular coat, not a blanket.

NEW BOOK ON THE BRAILLE SYSTEM

A new monograph, based on several years of study of the braille system as a communication process, has been published by the American Foundation for the Blind.

The new publication, "Perceptual Factors in Braille Word Recognition," is the work of Carson Y. Nolan, director, and Cleves J. Kederis, research associate, Department of Educational Research, American Printing House for the Blind, Louisville, Ky.

The primary finding of the study, according to M. Robert Barnett, executive director of the American Foundation for the Blind, is that the braille code is perceived one character, or cell, at a time—a subject which has often been debated.

The 178-page monograph details and summarizes nine research studies. The researchers believe that the data will be valuable in assessing the efficiency of the braille system, in developing remedial reading programs, and in guiding instruction of braille reading.

The monograph may be obtained from the American Foundation for the Blind, 15 West 16th Street, New York, N.Y. 10011. Price: \$3.

**NEW IMMEDIATE POSTSURGICAL PROSTHETICS MANUAL
AVAILABLE SOON**

A new manual "The Management of Lower-Extremity Amputations—Surgery, Immediate Postsurgical Prosthetic Fitting, Patient Care" is now available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price: \$1.50.

The new manual, designated as TR 10-6, is far more comprehensive and detailed than its predecessor "Immediate Postsurgical Prosthetics in the Management of Lower Extremity Amputees, TR 10-5."

The book describes the techniques employed by the Prosthetics Research Study group in Seattle, Wash., in a detailed, step-by-step form. The complete surgical procedure is covered with numerous illustrations, and the application of a rigid dressing with a temporary prosthesis is described and illustrated in every detail. Postoperative management including nursing and therapy is given equal treatment. Separate chapters independently cover each major level of lower-extremity amputation, and special attention is given to geriatric amputees and to the determination of amputation site.

"PERMOBIL" FILM AVAILABLE ON NO-CHARGE LOAN BASIS

The National Institute for Rehabilitation Engineering announced that it has in its possession one copy of a 20 minute, 16 mm. sound film in color entitled: "Permobil—OO La La."

The film was made in Sweden (English language) and shows the Swedish "Permobil" curb-climbing electric wheelchair in action.

The film which shows the chair being used in activities not normally engaged in by most handicapped people, is highly informative and very amusing. It is suggested for all adult audiences, professional and non-professional.

To borrow the film, without charge, for no longer than 2 weeks, write to:

The National Institute for Rehabilitation Engineering
744 Hamburg Turnpike
Pompton Lakes, N.J. 07442

telling them when you would like to have the film. Give a primary date, and two later alternate dates in case the film is not available on the first date of your choice. The film will be mailed only within the continental United States.

MEDICAL REVIEW BOARD SET UP BY PLASTICS SOCIETY

The nation's plastics industry now offers an informal clearing house for technical data for physicians wishing to obtain information about a particular medical application of plastics.

A Medical Review Board, comprised of representatives of 28 companies in the plastics industry, has been established by The Society of the Plastics Industry, Inc.

Physicians who wish to have inquiries on plastics answered by the Medical Review Board are requested to submit fully detailed questions so that members of the Board will be able to provide comprehensive answers.

Questions on all areas of plastics in medicine are welcomed, including the various uses of prosthetics and implants as well as applications involving disposable plastics.

Inquiries may be submitted to C. L. Condit, Senior Division Administrator, The Society of the Plastics Industry, Inc., 250 Park Avenue, New York, N.Y. 10017.

PROSTHETICS AND ORTHOTICS SEMINAR AT EMORY UNIVERSITY SCHOOL OF MEDICINE

The Emory University School of Medicine and the Georgia Orthotist and Prosthetist Association with the assistance of an anonymous sponsor presented a seminar on prosthetics and orthotics in Atlanta, Ga., on September 12-13, 1969. Attending the seminar were a number of physicians and surgeons, prosthetists and orthotists, and physical therapists.

The seminar used two simultaneous sessions to cover the subjects of "Post-operative Care of Amputation" and "Bracing of Fractures." Techniques involved in immediate or early fitting of upper- and lower-extremity amputees were highlighted in one series of lectures. In the bracing session, em-

phasis was given to some of the recent fracture bracing programs at the University of Miami and at Rancho Los Amigos.

The seminar was organized by Robert P. Kelly, M.D., of the Division of Orthopedics at Emory University, and Mr. Howard Thranhardt of the Georgia Orthotist and Prosthetist Association, Inc. A number of persons from Georgia were used as faculty. Presentations were also made by Frank W. Clippinger, Jr., of Durham, N.C.; Vert Mooney of Los Angeles, Calif.; Edward Peizer of New York; Augusto Sarmiento of Miami, Fla.; Anthony Staros of New York; and A. B. Wilson, Jr., of Washington, D.C.

The seminar sponsors hope to make it an annual event to facilitate the transfer of information to practicing physicians, surgeons, orthotists, prosthetists, and therapists. Emphasis as in the 1969 seminar will be given to new methods and components in orthotics and prosthetics.

11TH WORLD CONGRESS—DUBLIN, IRELAND

The 11th World Congress of the International Society for Rehabilitation of the Disabled opened in Dublin, Ireland, on September 14 and continued through September 19, 1969.

Venue was the Royal Dublin Society, Ballsbridge, Dublin, and the official opening was attended by Eamonn de Valera, President of Ireland.

The Congress included a 72-stand international exhibition indicating the work and services of the voluntary bodies in rehabilitation and exhibiting the latest commercial aids and appliances for the disabled. North America presented an integrated exhibit involving the efforts of the Veterans Administration, Social and Rehabilitation Service, commercial industry, and the prosthetics educational centers.

There was also an International Film Theatre. The theme of the Congress was "Community Responsibility for Rehabilitation."

A CORRECTION

In BPR 10-10 Fall 1968, the article "A Preliminary Report of Basic Studies From the Prosthetics Research Study," by Schrock et al., had part of the Summary omitted in error (p. 105).

The following is the complete Summary that should have appeared with this article:

SUMMARY

This preliminary report from the Seattle Prosthetics Research Study describes the methods presently being used in its basic studies on the application of the immediate postsurgical prosthesis in amputation surgery. The following preliminary findings are presented:

1. Initial pressures on the end of the stump obtained by the application of the immediate postsurgical prosthesis are in the range of

- 10–20 mm. Hg, if the elasticity of the elastic plaster bandage is not exceeded.
2. In the immediate postoperative period pressure on the end of the stump does not rise above 100 mm. Hg.
 3. In the immediate postoperative period, limited weight bearing on the stump tends to lower the resting pressure on the stump when weight bearing is released.
 4. With ambulation, pressure on the end of the stump does not rise above 100 mm. Hg with axial loads on the prosthetic foot under 22 lb.
 5. As the cast becomes loose after 5 to 10 days, axial loads of 30 lb. can produce end pressures of 150 to 200 mm. Hg.
 6. In a definitive prosthesis, end pressure during walking reached 825 mm. Hg.
 7. Skin temperature is not a satisfactory measure of stump flap circulation in the immediate postoperative period.
 8. Stump muscles are active phasically during gait.

The preliminary nature of this report is emphasized and plans for further investigation are discussed.

COMMITTEE ON PROSTHETICS RESEARCH AND DEVELOPMENT OF THE DIVISION OF ENGINEERING—CHAIRMAN'S NEWSLETTER

OCTOBER 24, 1969.

Although the main purpose of CPRD is to act as an adviser to Government agencies regarding the sponsorship of research programs in prosthetics and orthotics, an equally important role is the coordination of existing projects by the interchange of information and workshop type of meetings. The workshops continue to be an effective method for bringing together today's brains and generating new approaches to specific problems. Workshops in the traditional areas of upper- and lower-extremity prosthetics—devices and fitting methods—operate on a more or less continual basis, with emphasis on “work” in “shops.”

A typical example is the workshop on externally powered terminal devices for upper-extremity prostheses conducted recently at UCLA and Santa Monica by Dr. Edward Peizer. Each available type of powered terminal device was fitted to a different patient who, after a battery of tests, continued to wear the device for several months at which time the panel reconvened to discuss the results.

It is hoped that this form of active panel participation will be extended to other areas—particularly to orthotics which is an area of increasing interest to the Committee. The workshops on spina bifida and cerebral palsy bracing recently held at the University of Virginia are initial attempts

to promote practical solutions to known problems in children, but in the overall field it is painfully evident that more basic information is needed if we are to make significant advances. Basic information needed includes not only the mechanics of locomotion but the physical properties of human tissues under various types and rates of loading. This increased interest in tissue is further intensified by the growing possibilities for transcutaneous connections, electrical or mechanical, from within the body to external appliances. Thus, the work of Esslinger on skeletal attachments is becoming more plausible and the need for more data on implants as structures or for monitoring is becoming more acute. The forthcoming meeting on "skeletal attachments and implants" exemplifies the Committee's interest in these matters and we hope it will foster more intensive investigation into related fundamental studies.

The Subcommittee on Sensory Aids will continue their activities under the leadership of Dr. Richard E. Hoover. It is patently obvious that the problems of relaying visual information to the blind is very similar to the problems of relaying tactile and position information to the amputee or paraplegic, and it is hoped that the search for solutions for these common problems can benefit from a cooperating program.

The increased staffing of CPRD has made possible the monitoring of clinical information from various centers on several new experimental devices and techniques. This, together with the results of laboratory tests, will form the basis of an evaluation program.

COLIN A. McLaurin,
Chairman, CPRD.

FIRST NATIONAL TASK FORCE CONFERENCE ON GERIATRIC BLINDNESS

The newly formed National Task Force on Geriatric Blindness held its first meetings in New York on May 4, 5, and 6, 1969.

Leading the discussions were cochairmen Garson Meyer, president emeritus of the National Council on Aging, and Dr. Robert Morris, Professor of Social Planning, Florence Heller Graduate School for Advanced Studies in Social Welfare, Brandeis University.

Dr. Morris and Mr. Meyer announced that the task force they have enlisted includes leading authorities in the fields of geriatrics, blindness, rehabilitation, and social welfare.

Members of the group, who attended the New York meetings were Nathaniel B. Brooks, Consultant to the Community Services and Retired Workers Department, United Auto Workers; John W. Ferree, M.D., executive director of the National Society for the Prevention of Blindness; Howard H. Hanson, president of the American Association of Workers for the Blind; Richard Edwin Hoover, M.D., Chief of Ophthalmology, Greater

Baltimore Medical Center; Lowell Iberg, Executive Secretary, New York State Association of Councils and Chests; Hobart C. Jackson, Administrator, Stephen Smith Home for the Aged, Philadelphia, and chairman of the National Urban League Committee on Aging; K. O. Knudson, President, Southern Nevada Sightless; Dr. David L. Levine, Associate Dean, School of Social Work, Syracuse University; Miss Margaret Anne McGuire, Consultant in Social Administration, Waynesville, N.C.

Also present were Peter G. Meek, Executive Director, National Health Council; John Guy Miller, Minority Staff Director, U.S. Senate Special Committee on Aging; James C. O'Brien, Political Action Director, U.S. Steel Workers of America; Dr. Otto Pollak, Professor of Sociology, University of Pennsylvania; Miss Ollie A. Randall, Consultant, Ford Foundation; Mrs. A. M. G. Russell, chairman of the California Commission on Aging; Fred Swartz, M.D., American Medical Association; and Edward H. Van Ness, Executive Director, New York State Health Planning Commission.

The specific aims of the task force are to analyze and assess available information on geriatric blindness and to determine a course of action to be implemented and coordinated at national and local levels.

The task force was formed as the result of a research conference convened by the American Foundation for the Blind in cooperation with the Administration on Aging of the Department of Health, Education and Welfare. Research showed that more than half of the nation's blind people are over age 65, but that services for the aged blind are inadequate.

SPEED OF SPEECH IS DOUBLED BY NEW ELECTRONIC COMPRESSOR

An electronic device that permits "speed hearing" of recorded speech at word rates comparable to speed reading has been produced by the American Foundation for the Blind.

The device, called a harmonic compressor, makes it possible to reproduce the human voice at double speed without distortion of the normal voice pitch. It eliminates the "Donald Duck" babble that results from speeding up an ordinary record.

The Foundation designed and built the harmonic compressor, using information supplied by the Bell Telephone Laboratories. The faster word rate approximates the speed at which many persons speed-read printed matter (300 to 400 words per minute).

M. Robert Barnett, executive director of the American Foundation for the Blind, said the compressor will be used in the Foundation's program of tape and disk recordings for blind persons. It will be of special importance to blind students, researchers, and executives, Barnett said, since it will halve the time they now spend in getting information from recordings.

HEARING AID TEST RESULTS

The VA's publication, "Hearing Aid Performance Measurement Data and Hearing Aid Selection Procedures—Contract Year 1970," is now available for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price: \$2.50.

PHILIP DUNCAN WILSON—1886—1969

P. D. Wilson, famed orthopedic surgeon, died on May 6, 1969, in New York City. He was 84 years old. Many of his contributions to orthopedics were in the field of amputation and prosthetics. When he attended what proved to be his last meeting of the American Academy of Orthopaedic Surgeons, in New York in January 1969, the reprint edition of the 1954 book "Human Limbs and Their Substitutes" by Klopsteg and Wilson had just been announced; its popularity was demonstrated by the fact that the publishers received some 60 orders before copies were available for distribution, and within a few months over 600 were sold. Dr. Wilson had been a member of the pioneering Committee on Prosthetic Devices of the National Research Council from its organization in 1945 and of its successor organizations for more than a decade. The last surgical gathering he was to attend was the meeting of the American Surgical Association in Cincinnati on April 30–May 2, 1969, where he had been invited to speak at a panel discussion on amputations.

Philip Wilson was born in Columbus, Ohio, on April 3, 1886, the son of Dr. Edward Wilson, a much respected family physician who was also a professor of obstetrics. Philip received his A.B. from Harvard College. He was President of his class at Harvard Medical School where he received the M.D. cum laude in 1912. He was a surgical intern at the Massachusetts General Hospital for 2 years. At that time the residency system had yet to come at Massachusetts General Hospital. After leaving Massachusetts General Hospital, Dr. Wilson returned to Columbus ready to embark on surgical practice. With the outbreak of World War I, however, it was not long before he was invited to join the Harvard Unit then assembling under Harvey Cushing. While in France with the American Ambulance, Dr. Wilson met and married a Red Cross nursing aide, Miss Germaine Parfouru-Porel. After the United States entered the war, Dr. Wilson returned to France as an officer in the United States Army Medical Corps. He served in this capacity from July 1917 to August 1919, latterly as Consultant in charge of amputations to the whole of the American Expeditionary Force. (The Prosthetics Exhibit at the Research and Development Division of the Prosthetic and Sensory Aids Service in New York City contains a prosthesis made in 1918 for a C. S. Basset of the American Expeditionary Forces, Base #9, Chateauroux, France, by the then Captain Wilson.) He was the author of

"Principles of Design and Construction of Artificial Legs," 1918, analyzing his wartime observations.

In 1919 he returned to Boston to join the group headed by Dr. Joel E. Goldthwait and to be appointed to the visiting staff of the Orthopaedic Department of the Massachusetts General Hospital. He was also appointed to the staff of the Robert Brigham Hospital where in the next few years he perfected two important operative procedures in the surgery of arthritis. In 1921 he became a recognized clinical teacher at Harvard Medical School. In 1925 a monograph on Fractures and Dislocations appeared under the joint authorship of Philip Wilson and W. A. Cochrane.

In 1934 he was invited to become Surgeon-in-Chief at the Hospital for the Ruptured and Crippled, later the Hospital for Special Surgery, in New York. His 21 years as Surgeon-in-Chief included remarkable achievements. He reorganized the staff, persuaded the trustees to build a new building adjacent to Cornell Medical School, negotiated teaching connections with Cornell, and stimulated construction of a research building.

In September 1940, Dr. Wilson arrived in the United Kingdom with the vanguard of the American Hospital in Britain. He returned in December 1941 for a further term. For his contribution to the British wartime hospital services Philip Wilson was awarded an Hon. C.B.E. in 1948. The year before, France had made him a Chevalier of the Legion of Honour.

He was one of the founding fathers of The American Academy of Orthopaedic Surgeons and was President of this body in 1934. He served a term on the Board of Regents of the American College of Surgeons. Over the years he became an honorary member of almost every existing foreign orthopedic association and of many societies representing surgery as a whole. The degree of Docteur Honoris Causa was conferred on him at the Sorbonne in November 1966. The year before (1965) he had been made an Honorary Fellow of the Royal College of Surgeons of Edinburgh, an appropriate distinction for one who in part at least came of Scottish ancestry.

EDITORIAL NOTE: *An extensive obituary appears in the October 1969, Vol. 51-A, No. 7, issue of "The Journal of Bone and Joint Surgery," where some of the background material for the above was obtained.*