

NOTES AND NEWS

REPRINT EDITION OF HUMAN LIMBS AND THEIR SUBSTITUTES

The reprint edition of *Human Limbs and Their Substitutes* by Klopsteg, Wilson, et al., published by the Hafner Publishing Company, is now available. The price is \$17.50 less a 10 percent discount if ordered directly from the publisher's distributor, Stechert-Hafner, Inc., 31 East 10th Street, New York, N.Y. 10003.

A bibliography of selected references covering the years 1954-1967 is included as is an introductory statement by Dr. Herbert Elftman, Chairman, Committee on Prosthetics Research and Development of the National Academy of Sciences-National Research Council.

This book has been exceedingly popular since its publication in 1954. We are grateful to the Hafner Publishing Company for undertaking the reprinting and to the McGraw-Hill Book Company, the original publishers, for agreeing to the reprint edition.

GOVERNOR'S AWARD TO RODDY CHUPURDIA

Roddy Chupurdia, Chief of Prosthetics Service at the Los Angeles Veterans Administration Center, has been awarded the Governor's Citation for Meritorious Service.

The award, in recognition of his contributions to the disabled of California, was presented at a meeting of the Governor's Committee for employment of the handicapped in Santa Monica on August 16, 1968.

Chupurdia, a veteran of World War II is paralyzed from the hips down due to polio contracted while serving as a chief of a gun battery during the invasion of Luzon. He holds the Bronze Star.

A nationally known authority, Mr. Chupurdia has lectured at many VA seminars and training programs. He is an instructor on the staff of UCLA's Prosthetics Education Program.

The award will place him in line to be considered for the Governor's Trophy and possible nomination in Washington for the President's Trophy.

He is also a special advisor to the medical staff of Veteran Administration Hospitals and training institutions throughout the West and is responsible for directing the VA's Prosthetic and Sensory Aids programs at the Los Angeles Center.

UNITED NATIONS INTER-REGIONAL SEMINAR ON STANDARDS FOR THE TRAINING OF PROSTHETISTS

A Seminar organized by the United Nations and the Government of Denmark with the cooperation of the International Committee on Prosthetics and Orthotics of the International Society for Rehabilitation of the Disabled was held at the Rural Development College, Holte, Denmark, from July 1 to July 19, 1968. Thirty-two countries were represented among the forty-four participants and selected international resource people who presented most of the lectures. One of the main purposes of the Seminar was to define the roles of the prosthetist/orthotist and the prosthetic-orthotic technician in providing prosthetic services in various parts of the world, particularly where such services are presently limited. The Seminar also established curricula standards for the training of these specialists. Other subjects related to these main objectives were also discussed.

Each day of the seminar started with the presentation of papers on related subjects. Following these presentations, groups of the participants with resource people assisting met to discuss individual papers and make recommendations to the Seminar about the applicability of the lecturers' presentations in various regions of the world. For this purpose the Seminar group was split into three working elements: the Afro-Asian, the European, and the American-Pacific groups. During the Seminar other groups, inter-regional in constituency, were also formed to discuss special problems.

In addition to defining the role of the prosthetist-orthotist and the supporting technician as well as specifying the minimum requirements for training curricula, the Seminar treated the following problems in relation to these main purposes:

1. Standards for the location, the staffing, and the facilities of prosthetic-orthotic services.
2. The development of a program for international standards covering prefabricated components.
3. Development of an ethical code for the prosthetist-orthotist.
4. Discussions of standards for terminology to assist in international communications in prosthetics and orthotics.
5. The development of methods of teaching and the requirements for training of instructors in prosthetic-orthotic curricula.
6. Formulation of the frameworks of (a) an international training center to be established in Denmark and (b) regional prosthetic-orthotic training centers, such as the ones already established in Teheran, Iran, and Buenos Aires, Argentina.
7. Standards for location, size, layout, and staff of prosthetic-orthotic training centers.
8. Development of other types of training programs such as short courses and special expert consultations throughout the world.

9. Definition of the needs for future research and development in prosthetics-orthotics.
10. Development of mechanisms to improve the professional status of the prosthetist-orthotist throughout the world.

Among those involved in the entire Seminar from the United States were Dr. Miles H. Anderson, Director, Allied Health Occupations, Curriculum Programs, University of California at Los Angeles, 825 S. Barrington Avenue, Los Angeles, California 90049; Anthony Staros, Director, Veterans Administration Prosthetics Center, 252 7th Avenue, New York, N.Y. 10001; William A. Tosberg, formerly Technical Director of Prosthetic Service (now retired), Institute of Rehabilitation Medicine, New York University Medical Center, 400 East 34th Street, New York, N.Y. 10016; and Joseph Traub, Consultant, Prosthetic-Orthotic Research and Training, Social and Rehabilitation Service, Room 3315, N. HEW Building, Washington, D. C. 20201. In addition, Dr. Sidney Fishman of New York University, Dr. Milo Brooks recently of the University of California at Los Angeles, and Dr. Cameron Hall of the University of California at Los Angeles attended the Seminar for brief periods (Fig. 1).

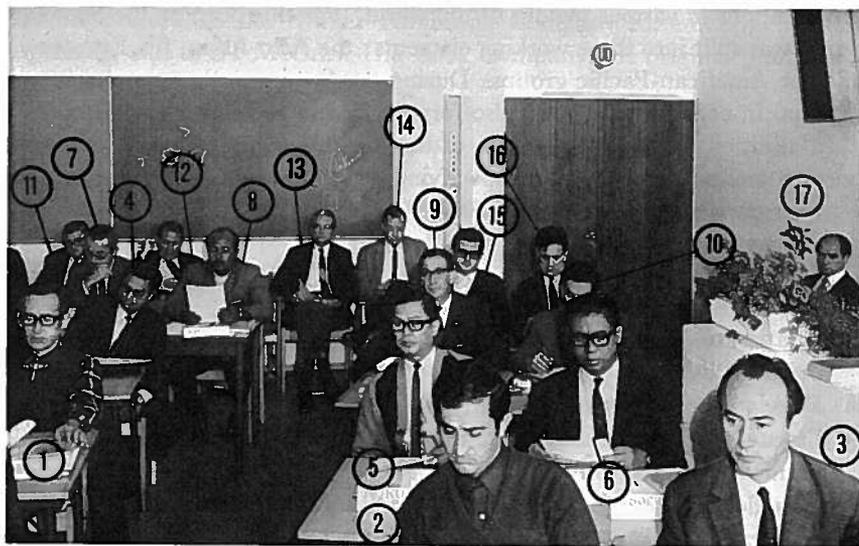


FIGURE 1.—Shown above are some of the participants at the UN Seminar in Denmark. Their names are as follows: (1) Turkyilmaz Ozel, Turkey; (2) Martik Der Hovanessian, Iran; (3) Aurel Denischi, Romania; (4) S. R. Kirmani, Pakistan; (5) Damrong Kijkusol, Thailand; (6) R. Soeroto, Indonesia; (7) Pedro Prim, Spain; (8) Errol B. de Gourville, Trinidad and Tobago; (9) Fernando Serrano Serrano, Columbia; (10) Jaime Rolando Barriga Arias, Bolivia; (11) D. S. McKenzie, England; (12) Sidney Fishman, U.S.A.; (13) Miles H. Anderson, U.S.A.; (14) Joseph Traub, U.S.A.; (15) Otto M. da Silva, Brazil; (16) Alexander Hulek, Poland; (17) Esko Kosunen, UN, Finland.

The Seminar was successful in defining the role of the prosthetist-orthotist in clinical services and brought forth standards for professional practice and training to which all countries should aspire. Many recommendations of the Seminar such as the development of a functional international terminology and international monitoring of hardware standards will become major concerns of the International Committee on Prosthetics and Orthotics.

A full report on the results of the Seminar will be published by the United Nations in the very near future.

The following lists UN officers, lecturers, and instructors and participants:

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VISIT OF SWISS ASSOCIATION ON PROSTHETICS AND ORTHOTICS

Dr. Jules Rippstein of Lausanne, and Dr. Rene Baumgarten of Geneva, led a delegation of prosthetists, orthotists, and physicians and surgeons from Switzerland during a visit to the Prosthetics Center on October 14, 1968. Staff members of the Research and Development Division of the Prosthetic and Sensory Aids Service and the VA Prosthetics Center devoted a considerable amount of time with the Swiss delegation in an effort to make their visit a very fruitful one.

A tour of the Center was arranged which stimulated a great deal of interest. Lectures and demonstrations were given which described the VA and National Research and Educational Programs. The research and evaluation conducted by the VA Prosthetics Center was covered, with demonstrations, in some detail. The lectures given were on the most recent developments throughout the National Research Program with emphasis on artificial limbs and orthopedic braces. At the end of this successful visit, a question and answer period covering items not previously handled was held, resulting in many stimulating discussions.

PROSTHETICS SEMINARS

A new series of five seminars on "Prosthetics" for physicians and surgeons, conducted by Dr. Lawrence W. Friedmann, Medical Director of the Institute for the Crippled and Disabled, started November 6, 1968.

The seminars, sponsored free of charge by the Institute, were conducted on successive Wednesdays from 1:00 to 4:00 p.m. in Room 229 of ICD's building at 400 First Avenue, corner of 23rd Street, New York City.

This will be the fifth time the Institute is offering the series. In the past, Dr. Friedmann's seminars have covered both Prosthetics and Orthotics. A separate Orthotics seminar will be offered next Spring.

Topics that were covered:

November 6, 1968—Biomechanics of Gait, Crutch Walking, Amputation Surgery, and Immediate Prosthetic Fitting.

November 13, 1968—Postoperative and Preprosthetic Care and Below-Knee Prostheses.

November 20, 1968—Above-Knee Prostheses, Hip-Disarticulation Prosthesis, and Gait Training followed by demonstration by a patient.

December 4, 1968—Upper Limb Prosthetic Armamentarium.

December 11, 1968—Artificial Arm Prescription and Training followed by demonstration.

For further information, write Medical Department, Institute for the Crippled and Disabled, 400 First Avenue, New York, N.Y. 10010.

SYMPOSIUM ON PROSTHETICS; ROME, ITALY; NOVEMBER 19-23, 1968

Mr. Anthony Staros, Director; Dr. Edward Peizer, Assistant Director; Mr. Henry Gardner, Research Prosthetist-Orthotist; and Mr. Thomas Pirrello, Jr.; Research Prosthetist-Orthotist, all of the VA Prosthetics Center in New York participated as faculty in a special Symposium on Recent Advances in Amputations and Prosthetics Rehabilitation that took place in Rome, Italy, between November 19 and 23, 1968. Dr. Ernest Burgess and Mr. Joseph Zettl of the VA's Seattle Prosthetics Research Study were also faculty participants.

This Symposium was sponsored jointly by the New York Society of Physical Medicine and Rehabilitation and the University of Rome. Dr. Arthur S. Abramson of the Albert Einstein College of Medicine of Yeshiva University coordinated the participation of the International faculty.

Major topics covered include immediate postsurgical fitting of prostheses and external power applications in prosthetic and orthotic appliances.

SYMPOSIUM ON PLASTICS AND HUMAN BODY

A Symposium on "Plastics and the Human Body" brought together several of the nation's leading authorities on implants and prosthetics when the 1968 National Plastics Conference convened at the Conrad Hilton Hotel, Chicago, November 12 to 15, 1968. The Conference is sponsored every 2½ years by The Society of the Plastics Industry, Inc.

"The plastics industry is adding this major symposium for the first time because of the growing interest in plastics among members of the medical profession," said Dr. Willem J. Kolff, who served as co-moderator of the session, in announcing the meeting. "Our program will bring together the foremost medical authorities qualified to discuss the progress being made, and the needs and problems being encountered, in repairing the human anatomy with plastics implants and prosthetics," he continued. Dr. Kolff is Professor of Surgery, Division of Artificial Organs, University of Utah, Salt Lake City.

“Recent years have seen remarkable scientific and sometimes sensational professional and lay interest in these developments, of which plastic hearts and heart valves are but two examples. The meeting will reveal the latest work throughout the medical field, as well as provide an opportunity to appraise the various techniques and developments,” said Dr. Kolff.

Dr. Kolff made the introductory remarks and was co-moderator of the session, together with Silas Braley, director of the Dow Corning Center for Aid to Medical Research, Midland, Mich.

Leading off the program was Thomas A. Garrett, M.D., vice president, medical affairs, Travenol Laboratories, Inc., Morton Grove, Ill.

John W. Stanford, Ph.D., who is secretary of the American Dental Association's Council on Dental Materials and Devices, discussed “Plastics in Dentistry” in another talk.

The application of plastics for the repair of war casualties was presented by Col. Lawrence R. Rose, Chief, Surgical Research Branch, U.S. Army Medical Research and Development Command, Washington, D. C.

The four succeeding papers dealt with plastic parts for the human body: *Plastics in the Artificial Kidney* by John F. Lontz, Ph.D., executive director of the Jay Hughes Memorial Medical Research Foundation, Wilmington, Del.

Plastic Blood Vessels by Sigmund A. Wesolowski, M.D., Director, LGH Laboratories, Mercy Hospital, Rockville Centre, N.Y.

Plastics for Assisting the Failing Heart by Adrian Kantrowitz, M.D., director of surgical services, Maimonides Hospital, Brooklyn, N.Y.

Plastic Hearts and Heart Valves by Willem J. Kolff, M.D.

Discussion on Cardiovascular Uses of Plastics by C. William Hall, M.D., assistant professor of surgery, College of Medicine, Baylor University, Houston, Texas.

In connection with the medical session on November 15, there was a week-long exhibit of medical applications of plastics in a special area of the International Amphitheatre in Chicago, site of the 12th National Plastics Exposition which is held concurrently with the National Plastics Conference.

The 1968 Conference was the largest ever held by SPI. It presented sessions on 15 separate industries over a four-day period.

The Exposition at the International Amphitheatre featured some 350 exhibitors. More than 40,000 visitors from the United States, Canada, and overseas attended the combined attractions, the highlight events of the 100th anniversary of the plastics industry in the U.S.

The Exposition, which is the showcase for the whole range of the plastics industry from raw materials and machinery manufacturers to customers for end products, is now the nation's second largest industrial show.

NEW DIRECTOR OF M.I.T. CENTER FOR SENSORY AIDS

On June 4, 1968, Mr. Vito A. Proscia assumed responsibility as Director of the Center for Sensory Aids Evaluation and Development at M.I.T.

Mr. Proscia succeeds Mr. John Kenneth Dupress, the Inaugural Director of the Center, who died on December 29, 1967.

Mr. Proscia is a native of New York. He was blinded while in elementary school and completed his preparatory education at the New York Institute for the Blind in the Bronx. He completed his B.S. in Physics at City College of the New York and his Master's in Electrical Engineering at Columbia University, during which time he was employed by Columbia University's Electronics Research Laboratory as a Research Engineer on weapon systems and radar analyses. Between 1960 and 1962 he pursued Doctoral level studies at the Brooklyn Polytechnic Institute. He was subsequently employed by the Fairchild-Stratos Corporation and then Grumman Aircraft Engineering Corporation, both on Long Island, as System Analyst and in Advanced Systems Engineering.

In 1967 he came to the New England area as a staff member of the MITRE Corporation. Mr. and Mrs. Proscia and their five children reside in Concord, Massachusetts.

A few remarks on the recruitment of the new Director may be appropriate. Shortly after Mr. Dupress' death a rather extensive list of possible candidates for the Directorship was assembled by direct and telephone discussions with members of the Steering and Advisory Committees, Federal and foundation sponsors of the Center's work, researchers in work for the blind, and other interested and informed parties. Follow-ups from this list narrowed the serious candidates to somewhat over half-a-dozen. Resumés of these candidates were considered by an ad hoc committee, including two meetings in the New York area and three in Cambridge, the last including the administrative officers at M.I.T. responsible for the appointment, the Dean of Engineering, and Head of the Mechanical Engineering Department.

In the interests of accelerating Mr. Proscia's availability to the Center while providing an equitable transition of his responsibilities to MITRE, and to continue the long established and cordial relationships between MITRE and M.I.T., Mr. Proscia will be on leave of absence from MITRE.

AIDS FOR BLIND DEMONSTRATED AT BVA CONVENTION

The Twenty Third Annual Convention of the Blinded Veterans Association (BVA) was held July 24-27, 1968, at the Jack Tar Hotel, San Francisco, California. The BVA has headquarters at 2430 Pennsylvania Avenue, N.W., Washington, D. C. 20037, and publishes a serial, The BVA Bulletin, which often prominently proclaims the organization's credo, . . . that the blinded veteran may take his rightful place in the community of

his fellows and work with them toward the creation of a peaceful world. . . .

Miss Margaret Butow, Assistant to the Director of The Hadley School for the Blind, Winnetka, Illinois, presented a paper July 25, 1968, to the BVA Convention entitled, "The Visotoner: A Portable Reading Machine for Blind People." Miss Butow also demonstrated the device to all interested inquirers throughout the duration of the meeting. The Hadley School for the Blind is associated with the VA reading machine program through their course development efforts.

Mr. Russell Williams, Chief, Blind Rehabilitation, Extended Care Service, Department of Medicine and Surgery, Veterans Administration, Washington, D. C., demonstrated the Laser cane to interested persons in attendance. He also gave a brief indoctrination to the staff at the Western Blind Rehabilitation Center, and they in turn demonstrated the cane to additional blind veterans during his visit. The Laser cane was developed by Bionics Instruments, Inc., for the VA under the VA's aids for the blind program.

NEW AIDS AND APPLIANCES CATALOG AVAILABLE FROM AMERICAN FOUNDATION FOR THE BLIND

A new 39-page catalog that lists more than 300 special aids and appliances designed for use by blind persons throughout the world is now available without cost in either print or braille from the American Foundation for the Blind, it was recently announced.

Among the commercial, adapted, or special devices listed in the catalog are the following:

Gold wristwatches with braille dials and crystals that spring open.

Pressure cookers with bouncing weights that indicate the desired pressure.

Collapsible pocket canes.

Scrabble games that can be played with a sighted person.

Slide rules with braille numerals.

Chess boards with raised and lowered squares.

Insulin syringes that permit proper measuring of insulin without sight.

Tellatouch machines that make it easier to communicate with deaf-blind persons.

An audible scout compass and a carpenter's level.

Pocket braille calendars.

A copy of the catalog may be obtained by writing to the Sales Division, American Foundation for the Blind, 15 West 16th Street, New York, New York 10011.

FULL MEDICAL DICTIONARY IN BRAILLE

Remembering the meaning and the correct spelling of the hundreds of complicated medical terms that constantly must be dealt with, has long been a vexing problem for blind medical secretaries and transcribers. However, that problem is on the verge of solution with the issuance this summer of the nation's first full medical dictionary in braille.

The 45-volume dictionary, prepared under an SRS research grant, is an adaptation of a standard reference work—Dorland's *Illustrated Medical Dictionary*. The Hadley School for the Blind in Winnetka, Ill., began the project by translating the visual parts of the dictionary into verbal descriptions. The entire book was then set up by three stereotypists, two blind proofreaders, and a sighted copyholder. The plates are being embossed at the American Printing House in Louisville, Ky.

The 45-volume set will sell for something like \$200. It will be purchased by organizations which train blind medical transcribers, by the Library of Congress, and by hospitals and individual physicians who employ blind people in their offices.

REHABILITATION SUBJECTS DOCUMENTED BY INFORMATION RETRIEVAL SYSTEMS

Three Bibliographic Tools, which are printouts from IBM computer procedures, have presently been issued by the Regional Rehabilitation Research Institute, College of Health Related Professions, University of Florida at Gainesville. These are:

Research and Demonstration Projects: A Bibliography, 1968, edited by John P. Bailey, Jr. and John E. Muthard. Since 1954 over 1,400 grants have been approved by the U.S. Social and Rehabilitation Service, with about 1,000 completed. This bibliography lists about 900 final reports and over 1,500 published articles.

Selected Rehabilitation Counseling Literature; a Kwic-Keyword in Context Index, by John E. Muthard, Neil S. Dumas, and John P. Bailey, Jr., indexes a substantial portion of the literature relevant to rehabilitation that has been published in the last eight years.

Management and Personnel Abstracts; a Guide to Recent Operations Research, Computer, Management, Business and Other Technical Literature for Rehabilitation Personnel, edited by Neil S. Dumas. The 1,000 abstracts indexed by keywords in this compilation were selected from the 1964-1967 issues of 51 periodicals identified with management science, econometrics, industrial engineering, and business and computer science.

Publication of these three indexes was funded in part by a research grant (RD-1127) of the U.S. Social and Rehabilitation Service. Single copies of these are available as long as the supply lasts. Inquiries may be directed to John E. Muthard, Head, Regional Rehabilitation Research Institute,

College of Health Related Professions, University of Florida, Gainesville, Fla. 32603. Enclose 18¢ in postage stamps for each index requested.

The Document Center, of the International Research Information Service (IRIS) at the American Foundation for the Blind, has been collecting and codifying since 1962 references in technological and psychosocial research pertaining to the blind. An index to these documents is now offered in looseleaf form. An updating service is provided by the issuance of quarterly supplements on a subscription basis.

The purpose of the *AFB Research Index* is to supply needed information to researchers, whether they be sociologists, neuro-physiologists, or electrical engineers, and to professionals directly engaged in service to blind persons. The basic three volumes now available are *Vol. 1, Introduction, Dictionary of Descriptors*; *Vol. 2, Scan-Column Index*; *Vol. 3, Bibliography*.

The three volumes may be ordered for \$10 and the one-year subscription to the *Research Index Supplement* is \$6. Address orders to: Director of Publications, American Foundation for the Blind, 15 W. 16th St., New York, N.Y. 10011.

AUTOBIOGRAPHY BY DR. KESSLER

Though this Bulletin has not customarily carried book reviews, it seems appropriate to note the publication of *The Knife is Not Enough*, by Henry H. Kessler, M.D., W. W. Norton & Co., Inc., New York (1968). In this chatty, warm autobiography, Dr. Kessler reminisces about his education, medical training, additional graduate work leading to a Ph.D., and experiences as an orthopedic surgeon and vigorous pioneering salesman of rehabilitation. Though he himself overcame tuberculosis, he had already been working for a year and a half in a rehabilitation clinic opened by New Jersey's Commissioner of Labor and Dr. Fred H. Albee, a famous orthopedic surgeon of World War I.

With numerous anecdotes and human-interest stories, Dr. Kessler recalls his early work on cineplasty, his work as a naval surgeon in World War II, and his post-war activities not only in setting up the Kessler Institute for Rehabilitation, but also in promoting rehabilitation in many countries around the world. In 1948 he was elected President of the International Society for the Welfare of Cripples (now International Society for Rehabilitation of the Disabled).

The Knife is Not Enough is a highly personal account, written from the heart. It is a fascinating story of half a century of medical practice, spreading of new concepts, and meetings with the great leaders of public life as well as of rehabilitation. Dr. Kessler's many medals and honors and the Institute named for him are tributes to his work.

E. F. M.

SLIDES AVAILABLE ON ADVANCED TECHNICAL AIDS FOR HANDICAPPED

Illustrating all types of highly sophisticated environmental aids for the physically handicapped, as developed in the U.S. and Western Europe, a new 35 mm. color slide set is now available together with descriptive captions and data to institutions interested in this field. The slides are obtainable from the Rehabilitation Engineering Institute, 744 Hamburg Turnpike, Pompton Lakes, N. J. 07442.

One hundred slides show how the highly sophisticated technical aids are constructed and used.

Made recently during a research survey trip by REI personnel, the slides are available in cardboard mounts which will fit any slide magazine a projector may use.

The complete set can be obtained by sending a purchase order for \$129.50, plus postage charges. Please specify air mail or surface mail. Arrangements may be made to rent the slides for a nominal fee.

NEW "CAREERS IN REHABILITATION" LITERATURE

Two new publications on professional career opportunities in the rehabilitation field have been published by the National Easter Seal Society for Crippled Children and Adults as part of a continuing program to encourage young people to work with the physically handicapped.

Want to Help Make the World Better? is a recruitment brochure which briefly defines nine of the rehabilitation careers and encourages young people to seek more specific information by contacting appropriate professional associations or their nearest Easter Seal Society.

The Most Important Thing in the World is an illustrated booklet which describes the contributions to the rehabilitation process of a physical and an occupational therapist, speech pathologist, audiologist, special education teacher, rehabilitation counselor, medical social worker, recreation therapist, rehabilitation nurse, and psychologist. It defines "rehabilitation" as "the restoration through personal health services of handicapped individuals to the fullest physical, mental, social, and economic usefulness of which they are capable," and points out the opportunities and rewards in each profession.

The booklet is intended for distribution to camp counselors, student volunteers, and other young people in junior and senior high school and college. It is also an effective piece for guidance personnel.

The brochure is available for \$15 per thousand and the booklet for 25¢ a copy from the National Easter Seal Society, 2023 W. Ogden Avenue, Chicago, Illinois 60612.

DEAF COMMUNICATE BY TELEPHONE

Even a profoundly deaf person can communicate over telephone lines with another person, deaf or hearing, when tele-typewriters are connected to a telephone. Both parties must have the same equipment, and there are no special rates to pay beyond the cost of normal telephone service, once installation has been made.

This arrangement for using teletypewriters with the telephone was developed by Robert Weitbrecht, a research physicist and long-time radio "ham," who is himself totally deaf. Mr. Weitbrecht became interested in the problem of telephone communication for the deaf after being appointed chairman of the Communications Committee of the Oral Deaf Adults Section of the Alexander Graham Bell Association for the Deaf.

The distribution of teletypewriters for the deaf in the United States is being coordinated by the Teletypewriters for the Deaf Distribution Committee (TDDC), headed by two deaf businessmen: H. Latham Breunig and Jess Smith. Dr. Breunig, who is a statistician and chemist, is also national chairman of the Alexander Graham Bell Association's Oral Deaf Adults Section. Mr. Smith is editor of *The Deaf American*. The TDDC address for information is P.O. Box 622, Indianapolis, Ind. 46206.

SWEDEN'S UNIQUE WHEELCHAIR—THE PERMOBIL

New York, N. Y.—The Rehabilitation Engineering Institute for the Handicapped in Pompton Lakes, N. J., has taken delivery of the only Permobil in the United States.

The Permobil is a unique wheelchair that is driven and controlled electrically by a sophisticated system of electronics. Invented and developed by Per Udden, a doctor in Sweden, the chair can drive across the country, up and down curbs, turn a full 180 deg. and go forwards or backwards, and is controlled by a disabled person who only has the ability to breathe.

There are a full range of controls to serve the person who has virtually complete use of their arms and hands or those who can only move one finger, their neck, or their mouth. With this control over the brakes, movement, and steering, the handicapped can become self-sufficient and go where they want and *when* they want.

Pictured with the wheelchair (Fig. 2) is Countess Marianne Bernadotte, the wife of the eldest son of King Gustav VI of Sweden. She is the president of the Technical Aids Foundation in Timra, Sweden, the organization that donated the wheelchair to the United States for research.

The Permobil is being produced in Sweden by SAAB, the company famous for its aircraft and automobiles. The chairs will be manufactured in Sweden by the thousands, but it may be some time before any will be

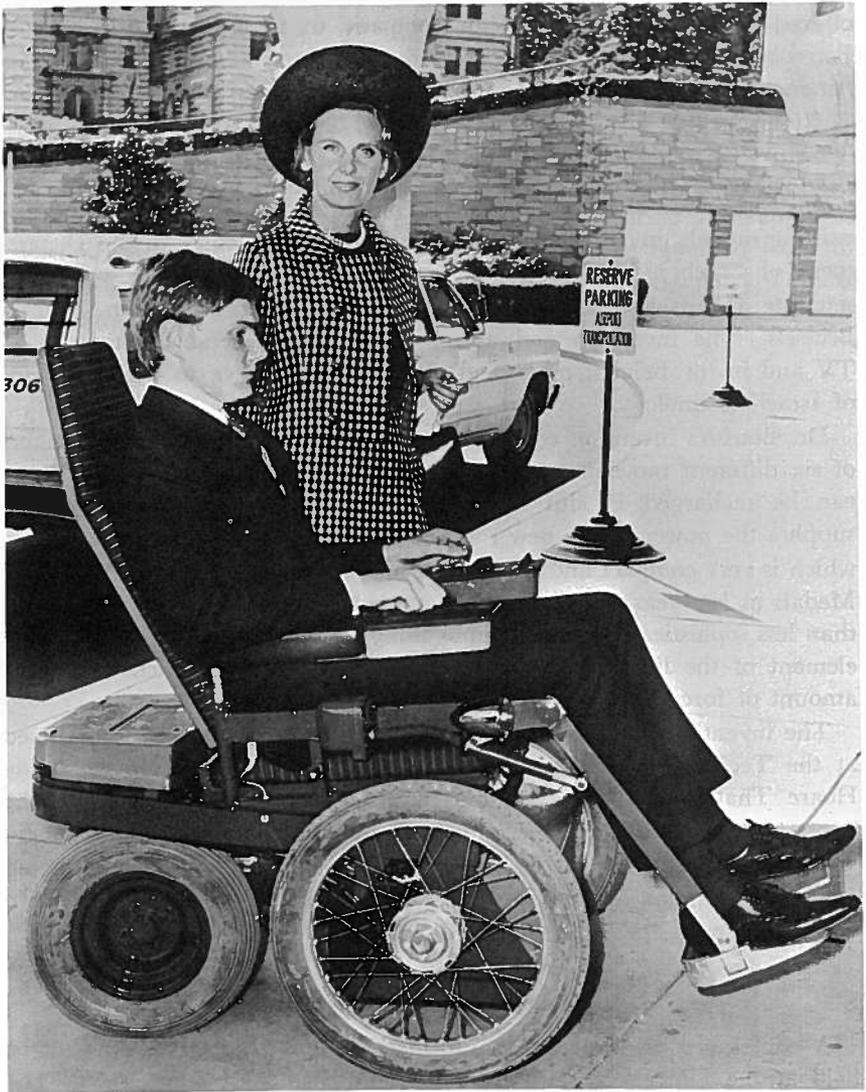


FIGURE 2.—Countess Marianne Bernadotte, the president of the Technical Aids Foundation in Timra, Sweden, at the presentation in Washington, D.C., of a Permobil to the Rehabilitation Engineering Institute for the Handicapped.

imported to the U.S. because of the long waiting list in Sweden. A few chairs will be available on an individual basis through the Rehabilitation Engineering Institute.

The developers in Sweden are keen to see the Permobil available in the U.S. so that the handicapped may benefit from its use, and Sweden has

offered to permit any American company to manufacture up to 200 Permobils, if made and dispensed on a non-profit basis. As yet, no American company has availed itself of this offer.

ARTIFICIAL ARM WINS INTERNATIONAL PRIZES

A gas-powered artificial upper limb, one-third lighter than conventional existing models, invented by Dino Bousso, Senior Lecturer in the Department of Mechanics at the Technion, Haifa, Israel, has received three separate awards at the 17th International Inventors Exhibition, held in Brussels. The invention and awards aroused considerable comment on TV and in the Belgian press, and attention was drawn to the high level of Israeli technology.

Dr. Bousso's invention consists of a gas-powered artificial limb capable of six different movements. The gas is contained in the limb itself and can be recharged in situ from a supply cylinder. This arrangement supplies the power to the new rotary actuator, developed by the inventor, which is very compact and light and which won for its inventor two Gold Medals at last year's exhibition. As a result the limb is one-third lighter than less sophisticated existing limbs using piston actuators. The gripping element of the limb is equipped with an optical gage which shows the amount of force exerted.

The invention is the outcome of work begun at Oxford and continued at the Technion in Haifa under an IL. 150,000 grant from the Lady Hoare Thalidomide Appeal Fund and the Goudie Trust, through the Technion Research and Development Foundation Ltd.

Dr. Bousso, 35, born in Egypt, came to Israel in 1951. He graduated from the Technion in 1958 and received his doctorate in the Department of Mechanics of the Technion in 1963.

DUNDEE CONFERENCE

A conference on priorities in Prosthetic and Orthotic Practice will be held at the University of Dundee from 16th to 20th June, 1969. The Conference will outline and review the various locomotor and functional disabilities including amputation which may require prescription of prosthetic or orthotic devices.

The available devices will be examined and evaluated on a biomechanical basis with contributions on production engineering and commercial aspects.

Emphasis will be placed on description and prescription in functional terms.

Contributors from Continental Europe, North America, and the United Kingdom will represent both medical and engineering aspects of the program. An open session will enable additional papers on related topics

to be given and all contributors will be considered for inclusion in the program.

The Conference is intended for general and orthopedic surgeons, physical medicine specialists, prosthetists, orthotists or orthopedic technicians, therapists and remedial gymnasts, biomedical engineers, and others working in the field including those concerned with manufacturing and supply.

Hotel accommodation is available. Details may be obtained from the Dundee Limb Fitting Centre, 133 Queen Street, Broughty Ferry, Dundee, Scotland.