

NOTES AND NEWS

ORIENTATION PROGRAM FOR VIETNAMESE MEDICAL AND PARAMEDICAL PERSONNEL

Described in the VAPC Semiannual Report of this issue are some of the Vietnamese military personnel who received paralyzing wounds in their home country and who were transported to the U.S. Veterans Administration Hospital at Castle Point, New York for treatment. The Veterans Administration has assumed responsibility for the rehabilitation of these people. Moreover, the Veterans Administration has undertaken training programs for the Vietnamese military medical and paramedical personnel who accompanied these patients to the United States.

Among these programs of training is a fourteen-session orientation on prosthetics and orthotics planned and conducted by professional personnel of the Research and Development Division of the Prosthetic and Sensory Aids Service and the VA Prosthetics Center. Vietnamese physicians, nurses, and technicians at Castle Point are receiving weekly lectures and demonstrations on principles of prosthetic and orthotic restoration, prosthetic socket design and fabrication requirements, alignment considerations, orthotic appliance construction and fitting procedures, component selection, shoe fabrication and modification, performance evaluation, training, and checkout. It is expected that more detailed educational programs will be developed later for some of these people, either here in the United States or in Vietnam on their return there.

RENATO CONTINI OF NYU RECEIVES HUMAN FACTORS AWARD

Mr. Renato Contini of New York University was awarded the first Outstanding Service award offered by the Human Factors Division of the American Society for Mechanical Engineers. The award was presented at the Human Factors Division's first annual conference in Washington, D.C., March 28-29, 1966. Commander M. Scott Carpenter, famed astronaut and aquanaut, was the featured speaker.

Mr. Contini is one of the founders of the Human Factors Division, ASME, and has served the division over the years as secretary, chairman, and member of its Executive Committee. Since its inception the activities of an NYU prosthetics project under contract with the VA have been coordinated by Mr. Contini. In addition, he has served as the first president of the Human Factors Society, chairman of the Second Engineering Founda-

tion Conference on Engineering in Medicine, cochairman of the First Engineering Foundation Conference on Engineering in Medicine, chairman of the American Society for Engineering Education Committee on Biomedical Engineering, and chairman of the Subcommittee on Engineering Interactions with Behavioral Sciences for the Engineers Joint Council Committee on Engineering Interactions with Medicine and Biology.

On the second day of the conference, Dr. E. F. Murphy, Chief, Research and Development Division of PSAS, chaired a session on government activities in biomechanics and described the VA's role in that area.

TRAINING COURSE FOR PROSTHETIC REPRESENTATIVES

The second of a series of intensive training courses for Prosthetic Representatives was conducted by the Prosthetic and Sensory Aids Service in its New York Offices from April 18 through April 29, 1966. Eighteen Prosthetic Representatives participated in this course.

The course emphasized principles and techniques to be used in the inspection and evaluation of artificial limbs. With this additional training the Prosthetic Representatives, who serve as Chiefs of Prosthetics Services, should be of even greater assistance to clinical personnel engaged in prosthetics restorations activities.

Similar courses are to be conducted in the Chicago area from June 6-17, 1966 and in San Francisco, October 24-November 4, 1966.

OPTICAL SOCIETY SESSION ON READING MACHINES FOR BLIND

At the Fiftieth Anniversary meeting of the Optical Society of America held in Washington, D.C., March 15-18, 1966, Dr. Eugene F. Murphy described the multiple approaches being undertaken to enable the blind to read independently. He pointed out that although a few blind persons are successfully using experimental portable models with limited capabilities, commercial production of reading machines is several years away. More sophisticated models using computers are foreseen within the next few years.

Many tasks of everyday life at home or on the job require deciphering only a few words, as on a label or address list, so high speed is not as important as ability of the blind person to do the job independently. The VA research program has developed several prototypes of portable machines to translate shapes of letters into audible or tactile signals which a blind person can learn to recognize slowly after long training.

For longer passages, higher speeds are necessary, so a much more complicated and expensive machine must recognize the individual letters. Commercial machines now can read credit card vouchers or checks, but most of these handle only "cooperative" numerals or letters printed in known locations and special type styles. To aid a blind person, a reading machine



FIGURE 1. Participants in training course for Prosthetic Representatives held in New York, April 18–29, 1966. Kneeling (left to right): Karl B. Pfirmann, VAH, Cincinnati, Ohio; William J. Gosselin, VAH, Manchester, New Hamp.; James D. Johnson, VAH, Louisville, Ky.; Kenneth A. Weyrauch, VAH, Buffalo, N.Y.; Bartolome Lopategui, VAC, San Juan, P.R. Standing (left to right): James A. Donovan, VAH, Atlanta, Ga.; James Cohen, VA Prosthetics Center, N.Y.; James B. King, VAH, Wilmington, Del.; Griffith C. Blair, VARO, St. Petersburg, Fla.; Hugh T. Smyth, VARO, Pittsburgh, Penn.; Henry C. Bass, VARO, Baltimore, Md.; Joseph R. Mirabella, VAH, Newington, Conn.; Frank Lombano, VAH, Batavia, N.Y.; Edward P. Tomashewski, VAH (West Side), Chicago, Ill.; Terrence Kolpackoff, Jr., VAOPC, Brooklyn, N.Y.; Edward Whiteside, VAH, Syracuse, N.Y.; Michael MacDonagh, VAH, Wilkes-Barre, Penn.; Blaine H. Whorton, VARO, Columbia, So. Car.; Julius Feig, VARO, New York, N.Y.

must recognize many of the common type fonts used in books, magazines, newspapers, and typewriters.

The problems of transmitting the recognized letters to the brain of the blind person probably are even more serious, Dr. Murphy explained. Though the computer industry is making progress on multifont character recognizers able to cope with misaligned print and to communicate with other machines, there is relatively little commercial interest in spoken output, of long messages.

Braille or other tactile outputs, so necessary for the severely handicapped deaf-blind, are even less likely to be developed commercially.

The Veterans Administration has convened a series of six conferences on reading machines since 1954. These have brought together engineers,

psychologists, linguists, and rehabilitation experts, a majority from outside the Veterans Administration program.

The research program in reading devices aims at a broad spectrum. Designs range from simple translators placing great demands on the blind user to translate slowly the non-speechlike code output through various compromises, to far more complex and expensive machinery with output pronounced as words allowing greater speed with negligible training. The first category should be portable and suitable for individual ownership, while the large machines will only be practicable for libraries. Research toward a potentially useful compromise using a special "spelled-speech" output was described to the Optical Society of America during the same session by Glendon C. Smith of Mauch Laboratories, Dayton, Ohio, one of the VA contractors.

VAPC DIRECTOR TO PARTICIPATE IN INTERNATIONAL 10th WORLD CONGRESS

Mr. Anthony Staros, Director of the VA Prosthetics Center in New York City, will participate in the Tenth World Congress of the International Society for the Rehabilitation of the Disabled to be held in Wiesbaden, Germany, September 11-17, 1966. In addition to presenting a paper at the conference, Mr. Staros will instruct at the seminar planned in conjunction with and immediately preceding the World Congress.

At the seminar, which will be held in Münster, September 5-10, 1966, Mr. Staros is scheduled to lecture on *Modelling and Fitting Techniques for AK Stumps* and *Hydraulic and Pneumatic Gait Control*, under the main topic of "Prosthetic Care for the Lower Extremity." Other topics to be covered in Münster are: The Amputee and His Stump, Prosthesis Technique for the Upper Extremity, Orthotic Technique and Dysmelia Care, and Orthopedic-Technical Research.

The Wiesbaden conference will include some of the following topics: Rehabilitation and Social Legislation; Opening the Doors to Education-Prosthetics, Orthotics, and Technical Aids; Basic Requirements for the Supply of Prosthetics in Emerging Countries; The Role of Different Professional Groups in Promoting Rehabilitation in the Emerging Countries, etc.

ORIENTATION DAY FOR RESIDENTS

As reported in the BPR 10-3 Spring 1965 issue, the Prosthetic and Sensory Aids Service is continuing its policy of conducting an annual orientation day in prosthetics and orthotics for residents in the Metropolitan New York area. Admittedly no substitute for the more intensive courses offered by New York University, UCLA, and Northwestern University, the one-day orientation session nevertheless has apparently been enthusiastically received by residents in orthopedics and in physical medicine and rehabilitation.

For the orientation program planned for May 4, 1966, some 40 residents have already enrolled.

We again commend this medium to VA field stations as an effective means of covering the highlights of prosthetics and orthotics for residents, both in VA and in community hospitals.

AWARD FOR DR. FRED LEONARD

We are pleased to report that Dr. Fred Leonard of the U.S. Army Medical Biomechanical Research Laboratory recently received the Exceptional Civilian Service Award. Dr. Leonard has long been associated with this laboratory and its predecessor, the Army Prosthetics Research Laboratory.

Brig. Gen. Colin F. Vorder Bruegge, MC Commanding General of the Army Medical R & D Command, conferred the award on behalf of the Secretary of the Army. He praised Dr. Leonard's outstanding contributions to medical science, noting in particular his development of tissue adhesives for non-suture closure of wounds which resulted in more tissue-receptive adhesives.

Dr. Leonard has been the recipient of many awards and decorations for his work in the prosthetics field. His present award cited his exceptional service in the broad planning and supervision of research programs under his direction. The citation read in part: "Dr. Leonard's personal drive and leadership resulted in the recent organization of physicians and physical scientists of the Walter Reed Committee on Surgical Implants. His contributions to, and his status in, the scientific world have earned him international recognition as an authority on the application of polymers to surgical implants."

"SIGHT SWITCH" AS AID FOR HANDICAPPED

The sight switch, which enables an individual to control various mechanical devices without the use of his hands or limbs, is seen as a possible aid for the severely handicapped.

Developed by Spaco Inc. while doing research for NASA's Marshall Space Flight Center, the switch was initially intended for use by astronauts during space flights. Realizing the vast potential uses of this device, NASA is encouraging its adoption by industry and for the handicapped. Along these lines, the developers have produced a motorized wheelchair employing these switches which allows the occupant to move forward or back or turn to either side by using his eye motions only. A wheelchair of this kind could give some paraplegics or stroke victims a degree of independence they could not otherwise attain.

Other uses of the sight switch that are being developed for the incapacitated are controlling a mechanical page turner, switching room lights on and off, controlling a TV or radio, adjusting room temperatures, raising or lowering a bed, and signaling for a nurse. Industry has plans for operating

industrial machines, control panels, and typewriter keyboards. Many more possibilities have yet to be explored.

The operation of the switch is accomplished by cylinder units mounted on each earpiece of eyeglass frames, and activation of the switch is governed by looking to the left or to the right. Each cylinder contains an infrared light source, transistor amplifier, sensitivity control, and an infrared sensor. Hearing aid-type wires lead from the rear of the cylinders to a belt-mounted or pocket battery pack and control relay. The key to the concept of activating the switch is the white of the eyeball which is a better reflector of infrared light than is the iris.

An absorbing film depicting the use of the switch with a wheelchair and other devices has been produced by the developers. The film is available for professional use and may be obtained by writing to the National Aeronautics and Space Administration, George C. Marshall Space Flight Center, Huntsville, Alabama 35812.

HERTZ RENT-A-CAR FOR THE HANDICAPPED

In compliance with the President's Committee on Employment of the Handicapped, Hertz Rent-A-Car has made specially equipped cars available for rental to the handicapped. Outfitted with hand controls, at no additional charge, these cars can now be used by handicapped persons who drive for business or pleasure. To allow time for the installation and testing of the hand controls, a minimum of two days reservation is required when requesting a car. In addition, a valid driver's license must be presented at the time of rental. At the present time, these cars are obtainable in the following cities: Boston, Chicago, Dallas, Los Angeles, Miami, New York, San Francisco, and Washington, D.C. All cars must be returned to one of these cities.

MAUCH VISOTONER AND COLINEATOR DEMONSTRATED

On April 29, 1966, at the annual meeting of the President's Committee on Employment of the Handicapped in Washington, Mr. Harvey Lauer, a blind Braille Therapist at VA Hospital, Hines, Illinois, demonstrated his ability to use, at a rewarding reading rate, the Mauch Visotoner and Colineator (Fig. 2) for a variety of tasks including proofreading material which a secretary had deliberately mistyped.

Dr. E. F. Murphy described the research activities on aids for the blind which are supported by the Prosthetic and Sensory Aids Service.

Other participants, most of whom have been informally cooperating with the Prosthetic and Sensory Aids Service or with the NAS-NRC program, demonstrated other new devices which potentially may aid in employment of the handicapped.



FIGURE 2. Harvey Lauer operates Mauch Visotoner and Colineator at annual meeting of the President's Committee on Employment of the Handicapped, as Dr. E. F. Murphy of PSAS, Veterans Administration, assists in the demonstration.

LOYAL E. APPLE HONORED

Mr. Loyal E. Apple, Chief of the Rehabilitation Center at Veterans Administration Hospital, Hines, Illinois, was chosen as the Outstanding Federal Supervisory Employee of the Year among 60,000 Federal employees in the Chicago Metropolitan area. Mr. Apple was selected for this honor at the Tenth Annual Federal Employee of the Year Awards Program on May 12, sponsored by the Chicago Federal Executive Board and The Federal Personnel Council of Chicago.

In 11 years he has achieved national recognition as an authority on rehabilitation of the blind, been hailed as one of 1960's ten top young men by the National Junior Chamber of Commerce, and become a living symbol of the ability of a blind person to develop initiative, independence, and self-reliance. He supervises 28 other instructors and therapists, has increased the regular patient load of his center from 28 to 34, trains additional specialists—including the staff of a new center for the west coast—and is making improvements in the familiar long cane.

Mr. Apple was blinded in a training accident at Fort Lewis, Washington, in 1955 while serving in the Army. He has a B.A. degree from William Jewell College, Liberty, Missouri, where he was graduated from in 1952. He took his rehabilitation training at Hines VA Hospital in 1956, then went on to become an expert in this work.