

# Notes and News

The Bulletin of Prosthetics Research welcomes contributions to this department. Receipt of clippings, meeting programs listing speakers and titles, or other material that calls our attention to a newsworthy event, will be appreciated. Announcements of future meetings are also valued.

## LEIGH WILSON SECOND ANNUAL TEAGUE AWARD WINNER

Representatives from veterans groups and the House Veterans Affairs Committee staff joined VA Administrator Max Cleland and former Rep. Olin E. (Tiger) Teague in presenting prosthetics expert Leigh Wilson with the second annual Olin E. Teague Award.

Wilson received the honor from Representative Teague, who was one of the most decorated combat-disabled soldiers of WWII, and whose leadership while in Congress as Member and Chairman of the House Veterans Affairs Committee gave major support to the VA.

The award was established in 1978 by Administrator Cleland to honor a VA employee or team whose achievement has been extraordinarily beneficial to the rehabilitation of war-injured veterans.

The first annual Olin E. Teague Award was presented in 1979 (See BPR 10-32, p. 505).

Wilson, chief of the Orthotic Laboratory at San Francisco VAMC, is internationally known for achievements as a research prosthetist. He came to the VA at the San Francisco medical center in January 1971, after serving for 25 years on the prosthetic-orthotic staff of the University of

California Biomechanics Laboratory.

An amputee himself, Wilson was both a research subject and full-time research assistant, helping to accumulate and analyze data on human locomotion and to prepare classic reports on artificial limbs.

He was a contributor to the design, fabrication, fitting and evaluation of above-knee sockets for lower extremity prostheses, using a wide selection of materials and techniques. Results appeared in the "Manual of Above-Knee Prosthetics," published in 1957 and still used extensively.

Later, as a research prosthetist, Wilson developed significant means of designing, constructing, and fitting lower extremity prostheses, foot prostheses, and other aids for both adults and children. For example, he was lead author of a paper on the Air-Cushion PTB Socket (BPR 10-10, pp. 5-34).

He helped prepare texts and teaching aids on prostheses and gave courses and lectures for physicians and prosthetists, medical, nursing, and paramedical students, and hospital interns and residents. At San Francisco VAMC and the University of California hospitals he gave operating room and clinic demonstrations, showing procedures for immediate postoperative casting for early walking for

Second annual Olin E. Teague Award went to Leigh Wilson, shown here with Mrs. Wilson. Former Representative Olin E. (Tiger) Teague (left) congratulates the winner as VA Administrator Max Cleland enjoys the occasion.



lower-extremity amputees. After he came to the VA, Wilson was a member of a team which won an American Medical Association honor award for an exhibit on that procedure.

He has also designed a more comfortable postoperative waist belt, a special shoe for diabetic and arthritic patients with foot problems, and a special collar that improves intensity of the esophageal voice. Other research involved evaluation of durability of an above-knee prosthesis with an experimental knee mechanism.

Administrator Cleland helped present the award and also delivered a personal note to Wilson from Sen. Alan Cranston of California, who had planned to participate but was unable to attend.

Mr. Cleland said Wilson had professional expertise and also has "his heart in the business of devoting his life to the war injured."

Chief Medical Director Donald Custis commended Wilson for excellence "in so many composite roles—as a practitioner, researcher, author and scholar."

A World War II veteran, Wilson has been awarded the Purple Heart, two Air Medals, and several citations for his military service.

#### **GIANNINI TO HEAD NATIONAL INSTITUTE OF HANDICAPPED RESEARCH**

The President has announced that he will nominate Margaret Joan Giannini, of Pelham Manor, New York, to be director of the National Institute of Handicapped Research, a new position.

Dr. Giannini is a professor in the Department of Pediatrics and director of the Mental Retardation Institute at New York Medical College.

She was born May 27, 1921, in Camden, New Jersey. She graduated from Boston University and Temple University and received an M.D. from Hahnemann Medical College in 1945. She did her internship at New York Medical College in 1945-46 and was a resident in pathology in 1946-47 and in pediatrics in 1947-48.

From 1948 to 1950 Giannini was a practicing pediatrician. She has been a professor of pediatrics at New York Medical College since 1950 and director of the Mental Retardation Institute since 1956.

Dr. Giannini has also served as attending pediatrician at Metropolitan Hospital Medical Center and as a pediatric consultant for the City of New York's Bureau for Handicapped Children. She was inter-regional advisor in mental retardation to the United Nations Department of World Technical Cooperation in 1978. She has served as president of the American Association on Mental Deficiency.

#### **DAN E. GARNER HEADS VA BLIND REHABILITATION**

A 44-year old Navy veteran, Mr. Garner, who lost his vision as a result of service during the Korean conflict, is the new chief of Blind Rehabilitation in the Veterans Administration's Department of Medicine and Surgery, succeeding George M. Gillispie, who retired. Mr. Garner will be responsible for the operation of VA's three blind

rehabilitation centers, three blind rehabilitation clinics, and 74 visual impairment services teams that function out of VA medical centers.

Prior to assuming his new position, Mr. Garner was chief of the Eastern Blind Rehabilitation Center at the VA Hospital, West Haven, Connecticut, a position he had held since 1976.

After leaving the service in 1953, Mr. Garner worked in several fields including aircraft assembly, ranching, and cabinet making. In August 1960, he entered Henderson State University, Arkadelphia, Arkansas, and received a bachelor of arts degree four years later. He then worked for two years in the field of psychology before starting graduate studies at the university of Arkansas, where he earned a master of education degree with emphasis on rehabilitation counseling in 1969.

Mr. Garner became the northeastern field service representative for the Blinded Veterans Association (BVA) in 1973. Working out of Philadelphia, he covered a 16-state area from Maine to Wisconsin. In 1975, he became national field service director of BVA, based at its headquarters in Washington, D.C., and went to work for VA the next year.

#### **GEORGE A. MAGERS AND THE HON. CRISS COLE 1979 WINNERS OF MIGEL MEDAL**

The Migel Medal, presented annually by the American Foundation for the Blind for outstanding service in work for the blind, was awarded for 1979 to George A. Magers, who retired in October 1979 as Director, Division of Rehabilitation, Bureau for Blind and Visually Handicapped, Rehabilitation Services Administration, Department of Health, Education, and Welfare, and to the Honorable Criss Cole, presiding judge of the 315th District Court of Harris County, Texas.

The awards were presented on Foundation Day, October 25, 1979, at AFB headquarters at 15 West 16th Street, New York, N.Y. 10011. Foundation Day is also the date of the AFB Board of Trustees fall meeting.

The medal, established in 1937 to honor the late M.C. Migel, first president of the Foundation, is given annually in recognition of outstanding contributions in education, rehabilitation, and social welfare concerned with blind persons. Medals are presented both to professionals directly active in the field of blindness and to laymen outside of the blindness system.

Mr. Magers, who is blind, received the professional award and Judge Cole, also blind, received the layman award.

"Mr. Magers has had a distinguished career in the field of blindness at both the Federal and state level for more than thirty years," Mr. John S. Crowley, president of the AFB Board of Trustees said, in announcing the award. "Thanks to him, thousands of blind persons nationwide have received the services they needed to become independent members of our society." Among the many honors Mr. Magers has received over the years is a presidential citation for work with the handicapped, which he was awarded in 1972, and the Douglas C. McFarland award for Outstanding Work in Job Development and

Placement of Blind and Visually Handicapped Persons, awarded in 1979.

"Judge Cole, during his many years in the Texas Legislature, was a tireless advocate for the improvement of services to handicapped persons," Mr. Crowley said. "His legislative record stands as a testament to the success of his efforts."

Judge Cole was appointed presiding judge of the 315th District Court of Harris County, Texas in January 1971. He served in the Texas Legislature for 16 years and was elected President Pro Tempore of the Texas Senate in 1969, the same year the Legislature named the new rehabilitation center for the blind in his honor.

Judge Cole is a member of the board of directors of the Texas Lighthouse for the Blind and State General Chairman for the Texas Society for the Prevention of Blindness.

#### **DONALD L. CUSTIS, M.D., NEW CHIEF MEDICAL DIRECTOR**

Donald L. Custis, M.D., has been appointed Chief Medical Director of the VA, replacing James C. Crutcher, M.D., who retired from government service on Jan. 2, 1980.

A former Surgeon General of the U.S. Navy, Dr. Custis holds the Distinguished Service Medal and the Legion of Merit with Combat V for military service in Vietnam.

Following retirement from the Navy in 1976 with the rank of vice-admiral, Dr. Custis served in the VA's staff office for academic affairs until October 1978, when he was appointed VA Deputy Chief Medical Director. Born in Goshen, Ind., in 1917, he was graduated from Wabash College and Northwestern University Medical School.

He joined the Navy in 1944, after completing his internship at Presbyterian Hospital in Chicago. His wartime service was as medical officer on a Navy attack transport.

During a 10-year break from the Navy from 1946 to 1956, Dr. Custis was a surgical resident at Virginia Mason Hospital in Seattle, a surgical fellow at the Mason Clinic, a surgeon in private practice and a clinical associate in surgery at the University of Washington Medical School. He is certified by the American Board of Surgery.

In 1956, Dr. Custis joined the staff of the American Medical Association Council on Medical Education. During that same year, he returned to the Navy as a staff surgeon at the Portsmouth, Va., Naval Hospital.

Subsequent assignments saw the level of his responsibilities grow as he became executive officer at the Philadelphia Naval Hospital for two years, served a year in Vietnam as commanding officer of the Naval Hospital in Danang, and commanded Bethesda Naval Hospital for three years. He was named Surgeon General of the Navy in 1973.

Dr. Custis is on the board of trustees of the American Hospital Association and a member of the House of Delegates of the American Medical Association. He has written and lectured in the U.S. and abroad on graduate

medical education and American health care delivery systems.

#### **THOMAS J. CANTY, M.D., 1906 — 1979**



Captain Thomas J. Canty, M.C., U.S.N., Ret., former commanding officer of the Navy Prosthetic Research Laboratory, Oakland, California, and nationally and internationally known figure in prosthetics research, died July 15, 1979. He had had a heart condition since 1969. During his long career he received numerous awards, medals, and commendations, including the Legion of Merit, from the American and foreign governments.

Born April 19, 1906 in Milwaukee, Wisconsin, he received his B.S. in 1933 and his M.D. degree in 1936, both from Marquette University, Milwaukee, Wisconsin. He later received specialized training at University of Pennsylvania and at the Mayo Clinic. He specialized in surgery of trauma, particularly fractures and amputations, and was a member of the American Fracture Association. Commissioned in 1937, most of his career was spent at sea or ashore as a naval medical officer, with exceptionally long tours of duty in amputation surgery, rehabilitation of amputees, and development of prosthetic devices at Mare Island and Oakland. His next assignment was as Commanding Officer and chief of rehabilitation at the Naval

Hospital, serving the Marine base at Camp Pendleton, California. His final assignment before retirement in 1968 was at Great Lakes, where he was credited with bringing into the Navy more doctors than any other single officer.

Coming to Mare Island Naval Hospital at Vallejo, California, in the summer of 1945, when it still was heavily loaded with major casualties from the war in the Pacific, he succeeded Captain Henry H. Kessler [see BPR 10-29 (189-194)] after the latter retired. He served as Chief of Orthopedic Surgery, Officer in charge of the center and Director of Prosthetic Research.

The frontispiece of the Terminal Research Report of the National Research Council's Committee on Artificial Limbs has a photograph of participants in a conference sponsored by the Committee at the University of California in July 1946. Dr. Canty, then a Commander, is pictured among that group of pioneers. For many years thereafter the Navy, Army, and Veterans Administration operated laboratories cooperating with each other and with universities and industrial contractors, all coordinated by the NRC advisory structure.

At Mare Island, starting under Dr. Douglas Toffelmeir and Dr. Kessler during the war years and continuing under Dr. Canty thereafter, there was a successful multidisciplinary program for rehabilitation of amputees. Only a few years ago some 400 grateful "alumni" held a reunion which all three surgeons attended. There also was pioneering prosthetics research and development on early plastic laminate shanks, a "functional" ankle allowing more degrees of freedom than the customary single plane of substantial plantar flexion and very limited dorsiflexion, and various forms of casting techniques and "soft" liners for below-knee sockets. Later, Mare Island was one of eight sites for the first round of suction socket schools for surgeons and limb fitters early in December, 1947, under the sponsorship of the National Research Council, the trade association of the limb industry, and the Veterans Administration.

In 1950, the amputation service was moved to Oakland Naval Hospital. In addition to hospital wards and rehabilitation facilities, a two-story building was assigned to what became the Navy Prosthetic Research Laboratory. For some years, in the fifties, the University of California's Biomechanics Laboratory shared space on the "second deck," and numerous conferences of NRC working groups were held there — on both levels, plus lunches or receptions which Dr. Canty arranged at the Officers' Club. Both the substantial case loads of the Naval Hospital and the lower-extremity amputees seen as outpatients by the UC Case Study Group (Artificial Limbs, 1957) benefitted from research programs, yet provided challenges and spurs to focus and accelerate diffuse or purely academic efforts.

A conference on below-knee prosthetics at Oakland in April, 1957 was an example. Each participant who wished to do so had opportunities to prepare a cast of the stump of a Navy amputee patient by the "dip impression" in dental stone which Dr. Canty advocated, then prepare a closed-end soft socket over a plaster model without the modifications — or reliefs over sensitive areas and shaving of plaster from fleshy area — which prosthetists conventionally considered essential. The resulting sockets

seemed to fit. I was reminded of the surprise of an expert VA prosthetist who went about five years before to study the Navy method. Initially convinced that someone secretly modified the models, he returned to report with surprise and respect that sockets from unmodified models were indeed wearable. One hypothesis is that before the dense dental stone hardened, its hydrostatic — or "plasterstatic" — pressure, exceeding that of edema or blood, squeezed sufficient fluids from the stump to accomplish substantial (though unrecognized) modification and that the precise fit plus the soft liner reduced the pressures on bony prominences or sensitive areas which conventionally seemed to require relief in sockets which fitted the stump less precisely.

Dr. Canty was imaginative in development. Credited with having performed over 7,000 amputations without a single fatality, he normally thought as a clinician devoted to solving the immediate problems of his numerous patients rather than as a systematic laboratory research worker. For example, the early "soft" below-knee sockets were made with open, noncontact distal ends. The walls were supposed to continue downward tangent to the curving bottom end of the stump, but his observations on hundreds of cases over some years forced recognition of the great variety of shapes. Some research workers might have attempted systematic, statistically controlled experiments to determine an optimum angle or to define principles for prescription for an angle for each individual. Instead, Dr. Canty switched to the unpopular and unorthodox closed end, pursued that cause vigorously for years against many critics, and eventually saw it incorporated with many other ideas in the highly successful PTB socket which the University of California developed within a year after the conference noted above.

Dr. Canty was active in international programs in prosthetics. While attending in 1951 the first postwar congress at Stockholm of the International Society for Welfare of Cripples (now Rehabilitation International), he was made a member of the original Committee on Prostheses, Braces, and Technical Aids. He spoke there and at later congresses at The Hague in 1954 and London in 1957. He was a lecturer at the first two international prosthetics courses in Copenhagen and at regional courses in Mexico City. Tom and Mabel Canty were genial and charming participants in many international gatherings.

During a long and distinguished career he received numerous decorations, distinctions, and honors from this and foreign governments, and other organizations. Among these were the Legion of Merit, an award from the President of Colombia, a medal and a citation from Mexico, a citation from the Chinese Nationalist Navy, and citations from the President's Committee on Employment of the Physically Handicapped and from the American Academy of Orthopaedic Surgeons.

Persistent—sometimes stubborn—, dedicated to the welfare of his individual patients, constantly searching for improvements in techniques and devices, a contributor to world-wide rehabilitation as well as a staunch Navy officer and patriot, Dr. Canty had a lasting influence on thousands of amputee patients and on prosthetics generally.

EUGENE F. MURPHY

## VERNE T. INMAN, M.D., PH. D., 1905 - 1980



Dr. Verne T. Inman, anatomist, professor emeritus of orthopedic surgery and former chairman of that Department at University of California, San Francisco, died February 5, 1980 after a brief illness. A pioneer in research on many aspects of human locomotion, biomechanics, and prosthetics, he was a founder of the UC Biomechanics Laboratory and for many years Chairman of the Biomechanics Board guiding its internationally recognized efforts. Even after his nominal retirement from the University of California Medical School, he remained active with the Biomechanics Laboratory, taught anatomy to dental students, completed the several chapters he had undertaken for a long-awaited monograph on the UC research on lower-limb prosthetics and human gait, and published a book, *The Joints of the Ankle* (BPR 10-27, 201-202), based on two decades of study of the anatomy of the ankle, its functions in locomotion, and the problems in matching it in orthotics or replacing it in prosthetics.

Born in 1905 in San Jose of a pioneer California family, Dr. Inman was associated with the Berkeley and San Francisco campuses of UC as a student or faculty member since 1928. He received his M.A. degree in anatomy in 1929, his M.D. in 1932, and a Ph.D. in anatomy in 1934. He served his internship and residency at UCSF from 1936 to 1939, followed by a number of faculty appointments in orthopaedic surgery and anatomy. He was appointed professor of Orthopaedic Surgery in 1952. He served as department chairman from 1957-70. In 1973 he was named professor emeritus.

Early in 1944 Dr. Inman was working with two of his

former teachers, Dr. LeRoy Abbott, the distinguished orthopedic surgeon, and Dr. John B. deC. M. Saunders, anatomist, later Dean of the Medical School, and now Chancellor Emeritus of the University of California at San Francisco, to analyze the forces in the muscles surrounding the shoulder joint. In addition to theoretical anatomical interest, there were important clinical problems during tendon transfer in patients severely disabled by polio. Dr. Inman began to cooperate with Prof. Howard D. Eberhart, of the Division of Civil Engineering at Berkeley, who applied the type of analysis engineers use for guy wires surrounding masts.

Professor Eberhart also was studying the stresses likely to be imposed on aircraft landing strips by the B-19 bomber, which was about to become operational. As a result of an accident during experiments at an air base in August 1944, Professor Eberhart's left leg was crushed by a weighted trailer representing a B-19 landing gear. Dr. Inman had the unhappy task of amputating at the level of the tourniquet applied by Army doctors. Though this coincidence was a tragic way to solidify the pioneering biomedical engineering team of Inman, Eberhart, and later many other colleagues, fortunately it led to a generation of distinguished accomplishments in interdisciplinary basic research, development, clinical trials, and dissemination of information. When the National Research Council's Committee on Prosthetic Devices, formed in 1945 to improve artificial limbs, learned of the first efforts to measure the loads in Professor Eberhart's artificial leg, it promptly began to negotiate for a project. The first contract became effective September 1, 1945. Under contracts or grants from many government sponsors, particularly the Veterans Administration, and with shifting priorities, this broad program on lower-limb problems has continued ever since. Dr. Inman had a major influence even after his retirement.

The University of California group, functioning under various university departments, organizational structures, and names, was interdisciplinary from its start. When it began at the College of Engineering in Berkeley, for example, it included Prof. Theodore McCown of Anthropology, who gathered anthropometric data on dimensions of several thousands of people as a basis for sizing of prefabricated components for artificial arms and legs. Medical doctors, therapists, and soon limb fitters were involved both in fundamental studies of locomotion and in applications to artificial legs.

By 1946 one task was the refinement, clinical trial, and wide-scale launching of the suction socket for above-knee amputees. That concept was not used in the United States, though the basic idea was patented in 1863 by Parmelee of New York. The U.S. Army Surgeon General's commission sent to Germany in March, 1946 estimated it had seen 200 suction socket users in a few regions there. Nevertheless, there was little logical basis for prescription, fitting and alignment of this type (nor, indeed, of the conventional sockets suspended and guided by pelvic belt and mechanical hip joint).

The UC group took over followup of cases in Chicago, Minneapolis, and elsewhere initiated by the staff of the NRC Committee on Prosthetic Devices, developed rational

anatomical and biomechanical principles for fitting and alignment, investigated causes and prevention of edema and other medical complications, and successively rewrote and expanded a manual. By November, 1947, UC was host for a master training seminar to prepare the faculties for eight courses held simultaneously in widely scattered cities early in December, again in January, 1948, and at various times and places thereafter.

The School of Medicine at San Francisco soon became more formally involved as cosponsor of the organization which became known as the Biomechanics Laboratory, the site for numerous studies. Dr. Inman and an increasing number of associates from many fields studied fundamental properties, then applied their findings to important clinical problems. As Chancellor Saunders has said in tribute, "Dr. Inman did not pursue science and scientific principles for science's sake, but for the amelioration of the ills of man."

For instance, Dr. Inman, Dr. Robert Close, an orthopedist, and Dr. Henry Ralston, a physiologist, studied the physiology of voluntary muscle in German arm amputees who had had cineplastic operations. In addition to contributions to fundamental physiology and to upper-limb prosthetics through a series of classic reports, papers, and eventual chapters in *Human Limbs and their Substitutes*, they worked with their engineering colleagues, notably Charles W. Radcliffe, on studies of alignment of the socket and entire artificial leg. Thereby the muscles about the hip joint were used most effectively, thus increasing safety against knee buckling, improving gait, and reducing fatigue.

Based on his own searching intellectual curiosity, broad background in basic sciences, and clinical practice, Dr. Inman systematically analyzed and attacked the medical problems of amputees. In May, 1944, he had already published with Dr. Saunders a paper on referred pain from skeletal structures. He developed a group which contributed to basic knowledge of neuroanatomy and neurophysiology while investigating the numerous causes of pain, whether in the stump or in the phantom limb. (He wryly commented, though, that one amputee who had been treated extensively for pain radiating down his phantom leg would have been recognized much earlier as having a disc problem if he had not been an amputee offering fascinating but distracting hypotheses like a neuroma, a psychotic condition, or poor fit, length, or alignment of his prosthesis!) The chapter in *Human Limbs and their Substitutes* by Drs. Feinstein, Luce, and Langton, all members of the UC group, on "The Influence of Phantom Limb" was considered a classic.

Dr. Inman also recruited dermatologists to study the many skin problems of amputees. Drs. Barnes and Levy won a gold medal for their exhibit on the topic, and a UC pamphlet on skin problems of the amputee was widely distributed in thousands of copies in several languages. Their papers in the magazine *Artificial Limbs* were influential.

Though Dr. Inman is probably best known for his work on locomotion and on lower limb prostheses, he personally and the group he inspired worked also on lower-limb and spinal orthotics. He and his colleagues published in this Bulletin (BPR 10-11) several papers on the UC-BL foot-ankle orthosis and foot plate, and there have been a paper

and progress reports in that and other issues related to the UC-BL spinal orthosis.

In both prosthetics and orthotics, Dr. Inman's interests were broad. He recognized the need for fundamental work, not only on his own favorite area, the joints of the ankle, but on such topics as the pressures in spinal discs, or the role of pressure in the abdominal cavity in reducing load on the spine. Characteristically, he was equally interested in engineering cooperation to analyze motions, to design laboratory instruments, to develop shop tools, and to invent new aids for patients. He respected the roles of the skilled orthotist and prosthetist and helped to upgrade their professional training and standing.

An excellent teacher, Dr. Inman inspired medical students and residents at San Francisco. He also was a lecturer at medical and prosthetics meetings and at international prosthetics courses, and he and Professor Eberhart held simultaneous Fulbright Lectureships in their respective specialties for a year in Egypt. The consolidated bibliography of the UC-BL shows that he was author or coauthor of 5 technical reports and of 45 book chapters and scientific papers based on its work. He also had earlier publications and some in other fields. He served at various times as member of or consultant to numerous NRC committees, on the editorial board of *Artificial Limbs*, and on merit review groups.

As teacher, clinician, pioneer in biomechanics research, and a leading spirit in fostering an excellent interdisciplinary group, Verne Inman greatly contributed to medicine, to science, and to the orthopedically disabled of the world. Those who knew him will miss a thoughtful, considerate friend.

EUGENE F. MURPHY