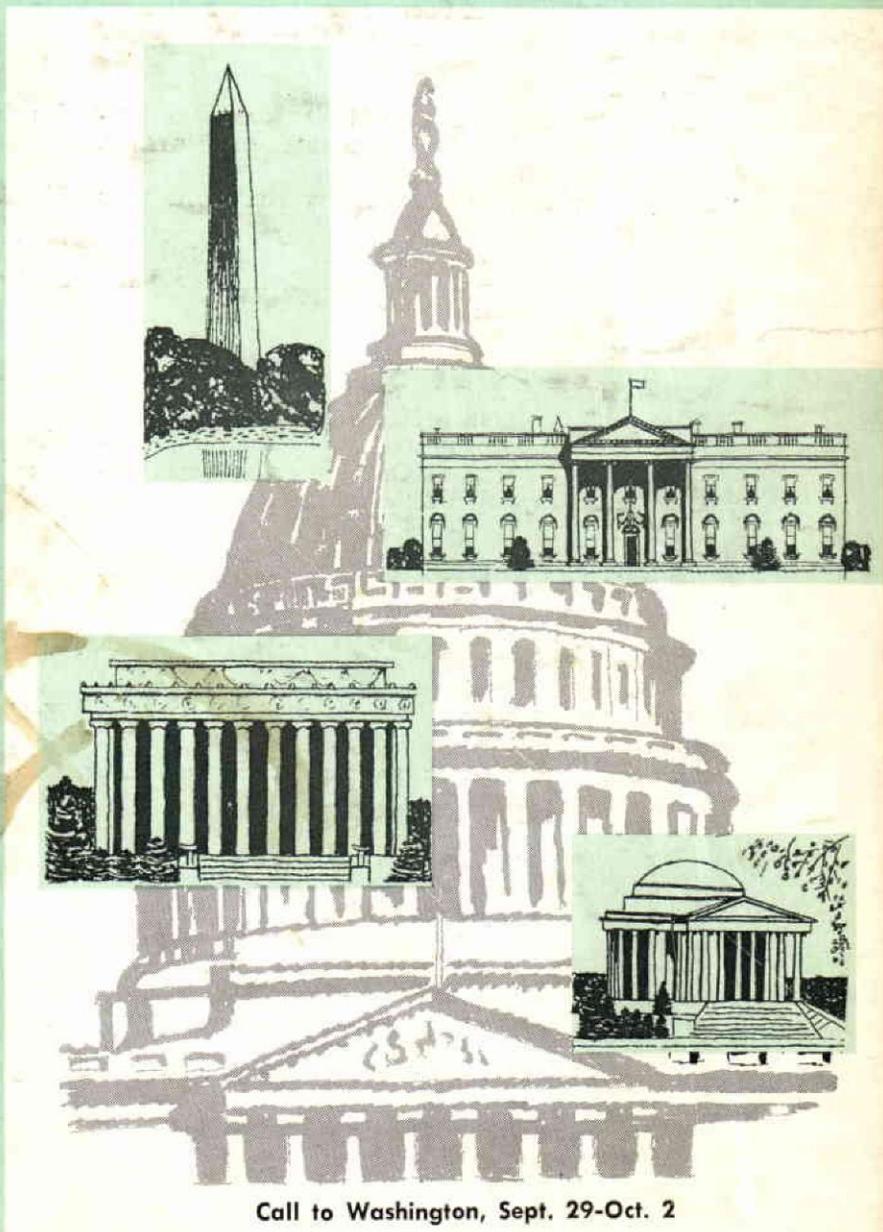


E 1957

ORTHOPEDIC & PROSTHETIC APPLIANCE

*Journal of the
Limb and Brace Profession*

JOURNAL



Call to Washington, Sept. 29-Oct. 2

publishers: Orthopedic Appliance & Limb Mfrs. Assn. and American Board for Certification

DATES TO REMEMBER

1957

What • When • Where

JULY

- 22-27 INTERNATIONAL SOCIETY FOR THE WELFARE OF
CRIPPLES—Seventh World Congress *London, England*

SEPTEMBER

- 8-13 CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION—AMERICAN ACADEMY OF PHYSICAL MEDICINE *Los Angeles, Calif.*
- 27-28 CERTIFICATION EXAMINATION FOR ORTHOTISTS AND PROSTHETISTS *Washington, D. C.*
- 29 NATIONAL ASSEMBLY OF THE LIMB AND BRACE PROFESSION—OALMA and Certification Meetings conclude October 2. *Washington, D. C. Statler Hotel*

OCTOBER

- 1-2 NATIONAL ASSEMBLY—Sponsored by OALMA and Certification Board *Washington, D. C. Statler Hotel*
- 2-4 NATIONAL REHABILITATION ASSOCIATION MEETING—(Session on Orthopedic Appliances presented by OALMA the morning of October 4th) *Minneapolis, Minn. Nicollet Hotel*

DECEMBER

- 3-6 AMERICAN MEDICAL ASSOCIATION — Clinical Meeting *Philadelphia, Pa.*

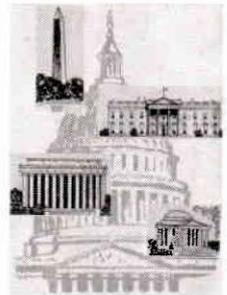
1958

FEBRUARY

- 1-6 ACADEMY OF ORTHOPAEDIC SURGEONS MEETING *New York City Waldorf-Astoria Hotel*

COVER DRAWING

The Capitol dome, as depicted on our cover by Hank Black, Washington, is a reminder that the National Assembly will be meeting in our Nation's Capital September 29 to October 2. The artist also shows the Washington Monument, the White House, the Lincoln Memorial and the Jefferson Memorial, all beautiful parts of our heritage as American citizens. The Assembly program will be a full one, but there will be time to visit these historic spots. For permission to use this fine art work we are indebted to the artist and to the magazine, *Audio-Visual Instruction*, published by the Department of Audio-Visual Instruction of the National Education Association.



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CODE OF ETHICS FOR THE ARTIFICIAL LIMB AND BRACE PROFESSION

The Federal Trade Commission has approved fair trade practices for the field of artificial limbs and for orthopedic appliances. Both codes have been adopted in their entirety by the American Board for Certification as a guide for the Certified Prosthetist and Orthotist. The full text of the Codes may be obtained by application to the American Board for Certification Headquarters.

The following digest of the rules is printed for ready reference.

It is an unfair trade practice:

- (1) To deceive purchasers or prospective purchasers as to any of the qualities of a prosthetic or orthopedic appliance, or to mislead purchasers or prospective purchasers in respect to the service of such appliances.
- (2) To infer an artificial limb is equivalent or nearly equivalent to the human limb, complies with any government specifications, or has the approval of a government agency unless such be wholly true or non-deceptive.
- (3) To fail to disclose to a purchaser, prior to his purchase of a prosthetic appliance, that the degree of usefulness and benefit will be substantially dependent upon many factors, such as the character of the amputation, condition of the stump, state of health, and diligence in accustoming oneself to its use.
- (4) To promise that any industry product will be made to fit unless such promise is made in good faith and industry member is possessed of the ability to fulfill such guarantee. A prosthetic device or an orthopedic appliance is not to be considered as fitting unless properly shaped for the body member to which it is applied, and in proper alignment and conformity with the physique of the person to wear such a product, and affords the optimum of comfort and use on the part of the wearer.
- (5) To deceive anyone as to his authority to represent and make commitments in behalf of an industry member unless such be fully true.
- (6) To use any testimonial or use any picture which is misleading or deceptive in any respect.
- (7) To demonstrate any appliance in a manner having the tendency or effect of creating a false impression as to the actual benefits that may be reasonably expected from it.
- (8) To use any guarantee which is false or misleading.
- (9) To represent that any appliance conforms to a standard when such is not the fact.
- (10) To publish any false statements as to financial conditions relative to contracts for purchase of appliances.
- (11) To engage in any defamation of competitors or in any way to disparage competitors' products, prices, or services.
- (12) To use the term "free" to describe or refer to any industry product which is not actually given to the purchaser without cost.
- (13) To wilfully entice away employees of competitors, with the purpose of injuring, destroying or preventing competition.
- (14) To take part in any concerted action with other members of the industry to wilfully fix prices.
- (15) To promote the sale of any appliance to any person who can not be expected to obtain reasonable benefit from such appliance.
- (16) To refrain from giving every assistance to doctors before and after amputation or crippling condition, or to fail to do everything possible to promote mutual trust and confidence between the industry and the members of the medical profession.
- (17) To undertake to supply an artificial limb by mail-order specifications without personal fitting thereof unless conditions are such which make an exception desirable, and in any case, no misrepresentation shall be made as to fit.
- (18) To unduly exploit features of appliances less important than proper fit and alignment.
- (19) To fail to recognize that the interest of the amputee and the handicapped is the first concern of this craft and therefore any failure to make available to all of its members and the general public any improved technique that may be used as to making, fitting, aligning or servicing of industry products shall be an unfair trade practice.
- (20) To pay anything of value to any doctor for the purpose of obtaining a referral of a patient by the doctor to the industry member.

Further, the industry desires to be an active and cooperative factor in all progressive developments of improved techniques that will contribute to the welfare and comfort of all who wear its products.

Orthopedic and Prosthetic

Appliance Journal

(Title registered U. U. Patent Office)

VOLUME 11

JUNE, 1957

NO. 2

Application for second-class mail privileges is pending at Washington, D. C.

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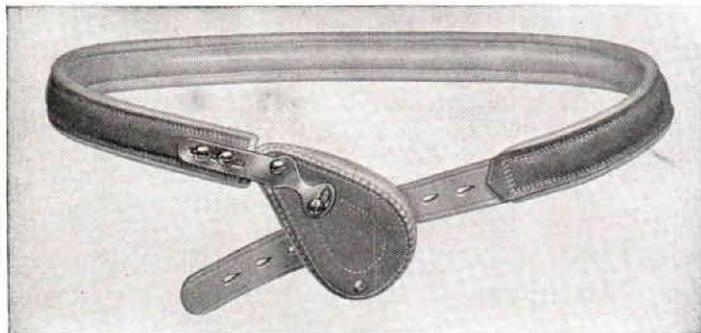
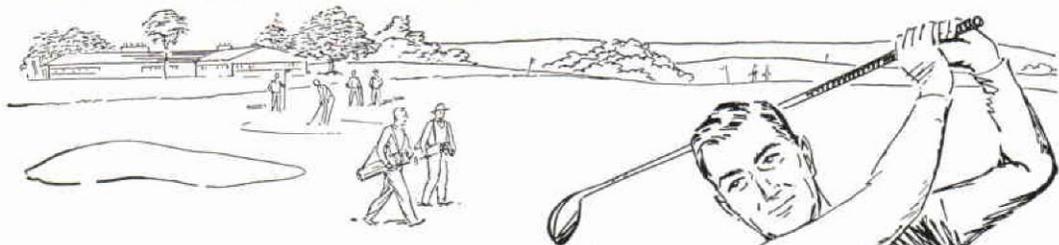
Ralph Storrs

Leo Waller

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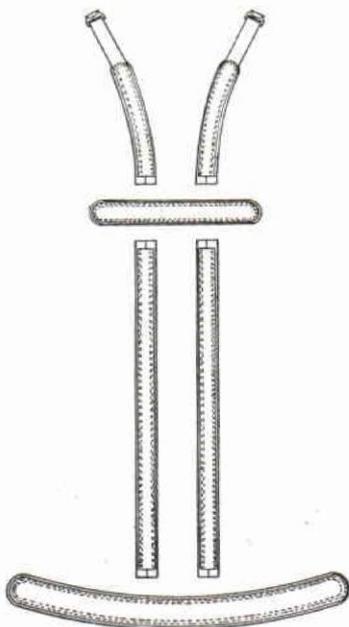
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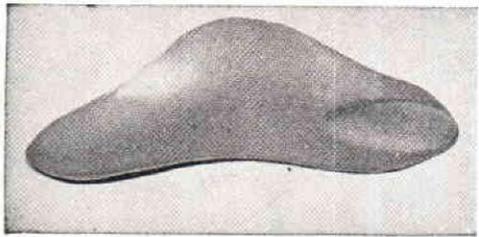
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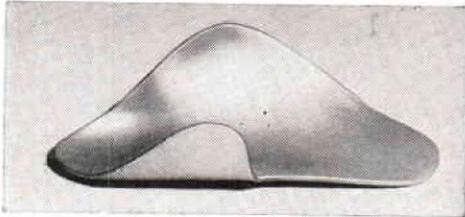
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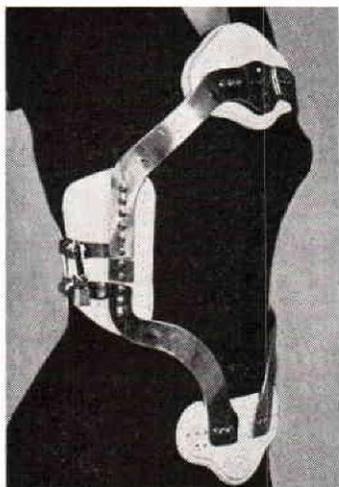
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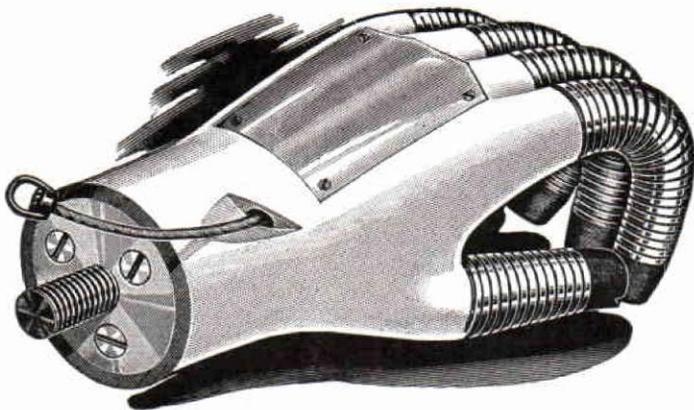
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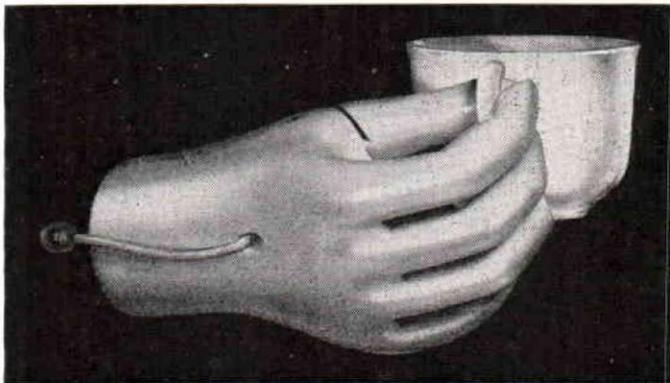


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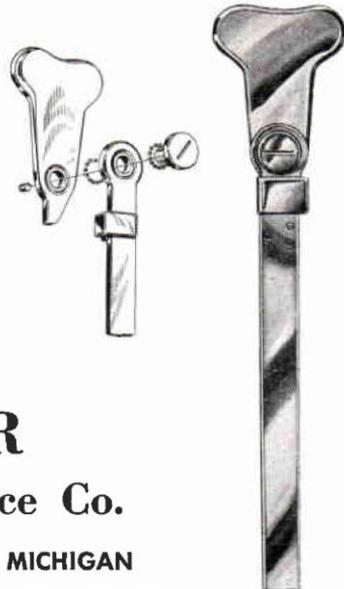
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Washington, D. C. — Our Assembly City

By **ROBERT C. GRUMAN, C.P.**

Program Chairman

Washington, D. C., the capital of our country, will be the scene of the 1957 National Assembly this fall. Long considered one of the three most important cities in the world from a political and history-making standpoint, Washington is winning recognition as a rehabilitation planning center. Here are located the planning agencies and the headquarters which have made America "Rehabilitation-conscious" in the last few years.

As the Federal Government accepts more responsibility for the welfare of the handicapped, such agencies as the Department of Health, Education and Welfare with its offices on Vocational Rehabilitation, the Social Security Administration, the Children's Bureau, the Public Health Service and the National Institutes of Health, have expanded their programs.

Here in Washington are located such important agencies as the National Library of Medicine, the largest in the world, the Veterans Administration, which conducts the most comprehensive service any nation has ever offered its returning soldiers; and the National Academy of Sciences, which through the Prosthetics Research Board has made such a notable contribution to prosthetic development.

The resources of these great agencies in personnel, publications and exhibits will be drawn on to make the 1957 Assembly a valuable and inspiring resource to the orthotist and prosthetist.

The Army Prosthetic Research Laboratory at Forest Glen, Md., a suburb of Washington, will contribute to the program. Colonel Maurice J. Fletcher, its Director, is to present a session on "What's New in Upper Extremity Prosthetics."

Washington is headquarters city for the National Rehabilitation Association which serves as a united voice for workers in all fields for the handicapped (delegates to the 1955 OALMA Assembly at New Orleans will remember the inspiring address of NRA's Director, E. B. Whitten). Two historic medical schools in Washington have Departments of Orthopedic Surgery: the George Washington University founded in 1821 and Georgetown University founded in 1789.

A HISTORIC CITY

Visitors to Washington, D. C. will find much to see and admire. In addition to the professional benefits to be derived from the Assembly, there will be opportunity to visit the city's historic spots and famous museums.

Washington, D. C. is said to be the first carefully planned capital in the world. Its history began in 1790, when Congress directed the selection of a new capital site, ten miles square along the Potomac. When the site was determined, it included thirty and three-quarters square miles on the Virginia side of the river. In 1846, however, Congress returned the area to Virginia.

President Washington had commissioned Major Pierre L'Enfant a French engineer who had fought in the Revolution, to plan the new capital and in 1800 the government moved in. In 1814, during the war of 1812, a British force fired the capital and it was from the white paint applied to cover the fire damage that the President's home came to be called the White House.

ASSEMBLY FEATURES NOTED TECHNICIANS

Robert Gruman, Program Chairman for the 1957 Assembly, reports that the *registration blanks* and *Preliminary Programs* will be mailed in the near future to every limb and brace establishment on the OALMA Headquarters mailing list and to every Certified orthotist and prosthetist. Among the many "headliners" listed on the Assembly Program he cited the following as examples of the resources and talents being marshalled together for the benefits of the Assembly-goer:

Charles W. Radcliffe, Assistant Professor of Prosthetic Design, University of California, will give a session on the SACH Foot, assisted by Mr. James Foort also of Berkeley and Mr. Colin McLaurin of Chicago, a pioneer in this field (note the article in this issue by Mr. Anthony Staros).

Alfons Glaubitz, CO of Elizabethtown, Pa., will be in charge of a session on Brace Construction and Design.

Washington's skyline is dominated by the Capitol and the Washington Monument, towering 555 feet. The city is laid out in rectangular blocks, created by streets intersecting at right angles. In addition, diagonal arteries fan out from various centers. Pennsylvania Avenue is the most famous of them, with the White House at Number 1600.

Washington has many other famous buildings and monuments—the Library of Congress, Jefferson Memorial, Lincoln Memorial, Grant Memorial, Tomb of the Unknown Soldier (Arlington Cemetery), Treasury Building, the Pentagon, Peterson House (where Lincoln died) and scores of others.

Herbert Hart, OALMA Region X Director, reminds members of the city's fame as a tourist center. He urges Assembly visitors to plan their trips to take advantage of the cultural and vocational attractions of Washington and the East. Many visitors, he pointed out, will be able to arrange their trip to include New York City, at no extra travel cost. The round trip's provisions offered by the railroads and the "family travel plans" by the air lines make it possible to combine Assembly attendance and a vacation with relatively little added expense.

LIMB AND BRACE ESTABLISHMENTS

Three OALMA members maintain facilities in Washington. Visiting members will be interested in seeing their fine establishments.

1. *R & G Orthopedic Appliances* at 2033 K Street, N.W. This Certified brace facility was founded by Charles Ross after completing a tour of duty in the Army Prosthetics Research Laboratory. It is centrally located between the George Washington University Hospital and Doctors Hospital.

2. *Universal Artificial Limb Company* at 617 F Street, N.W. in the heart of Washington's downtown business district. This company was founded by Louis Caron, pioneer prosthetist, and is now operated by his son, Victor.

3. *J. E. Hanger, Inc.*, 221-223 G Street, N.W. This Washington facility, located just a few blocks from the United States Capital building, is also headquarters center for the branches in North Carolina, Virginia, Eastern Pennsylvania, New York and the New England States. M. P. Cestaro is President of the company and Henry Feller, Raymond Beales, Harry Montgomery and Thomas E. Griffith, Jr., are on its staff.

OALMA headquarters are located at 1145 19th Street, N.W., in the same block as Custom Brace and Appliance Co. Certified facility.

**COLONEL
MAURICE J. FLETCHER**

APRL Director

Colonel Fletcher is one of the many noted
Authorities Who Will Take Part in
the 1957 Assembly



Technical Exhibits

The Scientific and Technical Exhibits of the Assembly will attract the eye of the Assembly visitor immediately after he has registered. The flow of traffic from the Registration desk leads directly past the display of leading suppliers in the artificial limb and brace field. These are located in the Congressional Room and its entrance passageway, which form a natural channel to the famous Presidential Ballroom where the meetings will be held.

Chairman Ralph Storrs reports that the first booth to be assigned was reserved by the M. J. Markell Shoe Company of Yonkers, N. Y. The Markell Company's line of modern corrective shoes for every orthopedic need are well known to the orthopedic surgeon through the company's exhibits at the annual Academy meetings. Dr. Markell has been assigned Booth No. 10 for his display. The largest single booth (No. 5) has been reserved by Truform Anatomical Supports. Among other early space reservations received were those of Hersco Arch Products Co., Sierra Engineering Co., the John J. McCann Co., Florida Brace Co., Pope Brace Division, Dorrance-Hosmer, Becker Orthopedic Co., Kingsley Manufacturing Company, American Rawhide Manufacturing Company and S. H. Camp and Company. The names of all exhibitors and brief descriptions of their displays will be carried in the September issue of the *Journal* and in the final Assembly program.

The new exhibit of the Prosthetics Research Board, which will have its first showing at the World Congress in London in July, will be on display.

Chairman Storrs advises that persons and companies interested in displaying should wire or telephone OALMA Headquarters. The Master Assignment Chart is being kept by OALMA Assistant Director Lester Smith, and he will be able to assign booths as long as the supply permits.

Mr. Storrs announced that the United Convention Services, Inc., of Washington, D. C. has been selected as the official decorator for the scientific and technical supply booths. This company, with offices in Philadelphia, Atlantic City, Cleveland, New York, and Pittsburgh, has had wide experience in planning medical and scientific exhibits.



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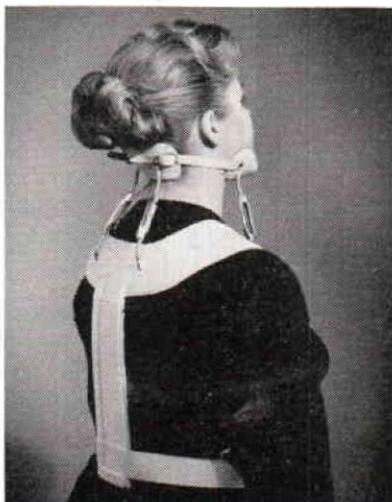
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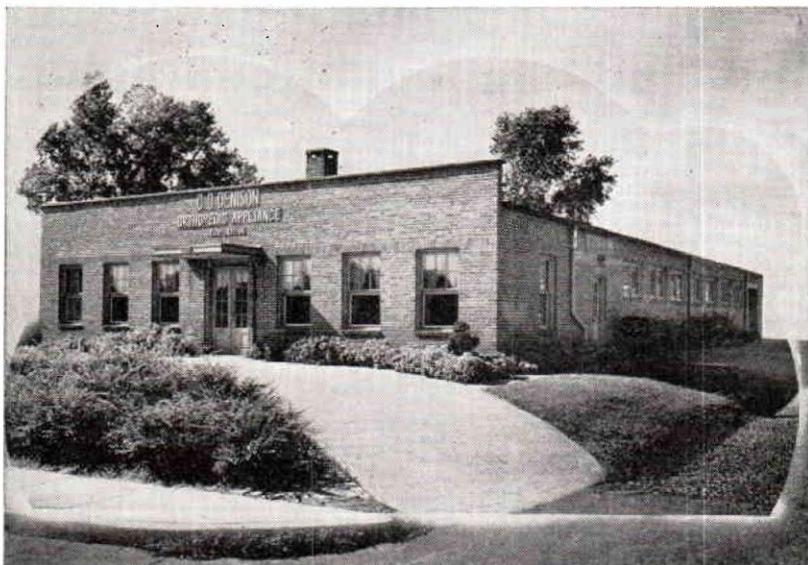


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THE COMPLEXION OF MISFORTUNE:

Psychological Observations on the Meaning of Loss to the Disabled*

by **BERNARD J. SOMERS, Staff Psychologist**

Institute for the Crippled and Disabled, New York City

I would like to talk with you about misfortune, a word that we know covers a lot of ground. All of us here deal with persons who are on the receiving end of misfortune. We make an attempt through our sciences and our arts to help these people overcome their misfortunes. One of the purposes of your conference is to help perfect your techniques and clinical know-how so that you better serve these people.

For the moment let us define misfortune as a permanent loss of natural body function or body part. *The patient impresses upon us the fact that his physical loss is only the beginning of his misfortune.* Instead of dwelling at length on the many facets of loss, let us run through the list quickly. Let us take a patient, such as an amputee, who has told us about his losses in no uncertain terms. Physical loss has been mentioned. We also hear of the patient's loss in esthetic appearance to himself and others—the loss of work, income, and the prestige that is involved in working, or the loss in one's capacity to do as good a job of homemaking as before—the loss that he feels in social status—the patient says to himself: "People may think differently of me"—there is his loss in play and recreation. Finally, and probably most important of all, is the fact that the patient thinks and feels differently about himself.

Up to this point we have discussed only some of the ingredients of the patient's misfortune. That may sound strange to you, and perhaps you are thinking, "Haven't you said enough already?" But to complete the picture *we have to consider his life and personality before his disability, his attempts to deal with his misfortune, and, how others around him deal with the patient as a disabled person.* Now our stage is set—our play is only partially written—the prepared part is the patient's pre-injury style of life and set of values which will help determine how he reacts to his disability. The rest of our drama, which proceeds from the time that the person becomes disabled, is still only partly prepared. The rest of the play is mostly an impromptu, ad-libbing type. Why?—because we have to wait and see what happens to our hero or heroine as he or she becomes part of different scenes where people react to the disability, where people act according to their own interests and values; we watch our patient use his resources to handle new problems, new experiences with others and new frustrations.

First, the patient. Before his disability he had a fairly intact body. His estimate of himself always included his body. He may have taken this body for granted, or, he may have prized it or placed considerable importance on it because of the satisfactions and prestige it gave him. This person had a way of life which included friends, work, activities, and, certain feelings and attitudes toward himself. In this pre-injury, pre-handicapped condition he was placed among the non-handicapped. When he looked at a handicapped person with a visible injury, he noticed the difference—more about this later.

* Speech delivered at the Prosthetic and Orthopedic Conference of the Metropolitan Orthopedic and Limb Manufacturers Association, New York City, May 3, 1957.

Now that this person is disabled, he still looks at himself the way he looked at disabled people before he became handicapped. He has the same outlook about physical disability that he had when he was a non-handicapped person. Our disabled patient is a house divided. This is a necessary phase of life for every disabled person. Some patients feel this much more keenly than others. This may be called psychological or emotional inertia—we can't shift our point of view, our emotions, in the same way that we turn the ignition on in our car.

Next, we consider the actual emotional reactions to misfortune. Your own experiences with patients and others will support these observations. The most common initial reaction is what I call emotional anesthesia. The person says to himself or others, "This isn't real—I must be mistaken—this couldn't happen to me—it's only a bad dream from which I will awaken." This emotional anesthesia is particularly true in the case of traumatic loss. But it is also relevant where a person has been prepared for his loss by the anticipation of surgery or by the fact that he is aware that there may be after-effects of his disease which is still in its acute phase. This anesthesia is clearly a protective device. You have experienced it in the loss of a loved one, perhaps in the loss of a job, a home. Quickly following this we have the classical period of "mourning the loss," the period in which the person grieves his loss.

From here the patient is on his own, so to speak. He can be angry about many things, some unrelated to his disability—he can withdraw into isolation—by his actions he may be saying, "let's pretend nothing happened, my loss doesn't make any difference to me." He may expect the world to do for him what he could do for himself; he may even demand this from us—he may become confused, bizarre and quite sick emotionally. Some people find it necessary to deny any mourning, any bereavement—perhaps to such a person mourning would mean that he is trying to face his loss and understand what it means to him. Frequently it is reported that a single patient shows most of the above reactions in a short span of time—even in a day. In other words, he may be testing out all of his emotions and is still in a fluid state emotionally. As each patient is observed in his behavior following his loss, we can make some appraisal of the style of life he led before the loss.

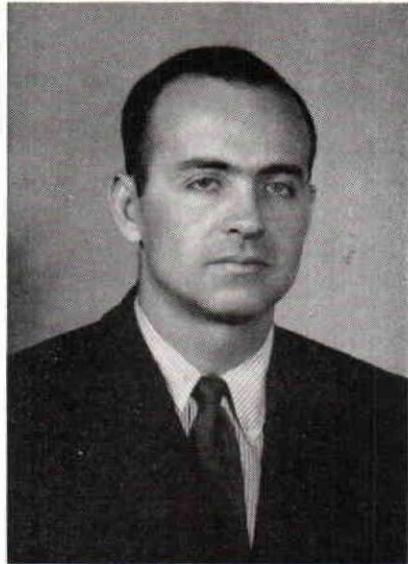
Finally, I think *most patients come to a more stable, or at least, more predictable way of dealing with their handicap, and they begin to overcome many of its limitations.* You have to marvel—I marvel—at how a person who seems so depressed, bitter, resentful and upset, can, in say six months or a year, recover much of his old self and life activity, and even feel stronger in handling the usual daily frustrations and obstacles.

At this point I would like to go back to our patient—back further—back to when he was not disabled. I said a little while ago: "When he (the patient) looked at a handicapped person with a visible injury, he noticed the difference." He felt better off—or perhaps pity—or even frank irritation, or perhaps genuine sympathy—sympathy without those subtle overtones of feeling, something that he's supposed to feel. My reason for trying to recapture our patient's pre-handicap attitudes is this: *when he becomes physically disabled, he still retains the values about his body that he had when he was not disabled.*

We are indebted to a group of social psychologists, Dembo, Leviton and Wright, for this emphasis on values. Inevitably, *our patient continues to look at himself with the eyes of his non-handicapped fellow citizens.* He compares his loss with the lack of it among the non-handicapped. In making the com-

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parison he gives himself the short end of the stick. The patient's chain of thinking and feeling is of this order: the absence of my leg is to me the absence of part of me; I am not as good a person without my leg; I'm not as good as that fellow there who has both his legs.

Now if this is a person who had too much good feeling about his body before his disability, he will have greater difficulty shifting his values away from his lost leg. The misfortune here is that he may have had too much of a good thing—the good thing being his excess satisfaction with his body and the excess importance placed on this satisfaction with his body. Everywhere this patient turns, he finds the world of the non-handicapped about him. Our patient feels like he is in the minority because the majority have whole bodies.

The rehabilitation of the complexion I have described is up to the patient and society. When our disabled individual begins to enlarge his scale of values he sees that his emotional estimate of himself can be just as worthwhile without having to include in this estimate the presence of his lost function. It would be an asset to have his lost arm, but, and this is very important, he has other assets, maybe even new ones.

A veteran, wounded in North Africa, really realizes after two years of recuperation and physical rehabilitation, that he could have been killed on that night patrol, that he wasn't and now, two years later, he has a lot to be thankful for: the thought of this occurred to him right after he was wounded but there was a lot of work ahead for him before this thought grew into a lasting feeling that was part of his new scale of values. How did he progress to this point of view? *This is an outlook—a point of view—in which he actually chose to live because at several points in his convalescence he had thought about suicide and finally rejected it.* This man showed such splendid growth because he had people around him who understood his problem—they didn't try to talk him out of his depression, his irritability, his impatience with his prosthesis—at the same time they encouraged him to talk,

to say what was on his mind, to complain, to talk about his hatred for himself and so on. By the way, he met other patients who razzed him out of his lethargy at times. He was mature emotionally before he was wounded. However, he met people after he became disabled, whose scale of values were large enough to help him think of himself as a person. These people he met were generous in the sense that they shifted their own values away from physique to people. At the same time they let this man set the pace. This veteran felt sympathy instead of pity, acceptance instead of tolerance.

Up to now, I have been emphasizing the patient, before and after the onset of his disability. But the complexion of misfortune would not be adequately covered if we did not touch upon the non-disabled. Society represented by you and me, the patient's family, his friends, his co-workers, and the professional workers who serve him—this society plays an important role in the patient's progress through the way that it reacts to the disabled person. The increasing size of your professional organization and mine is one sign of society's greater willingness to work with the disabled individual. *We all share the patient's misfortune.* In a sense we need to enlarge our scale of values just as we hope the patient will enlarge his.

If so much importance was not placed on physical achievement and appearance, the patient's lot would be a little easier. A word of caution here . . . because we may look at a disability and its emotional meaning in a more objective, detached manner we should be careful about imposing our point of view on the patient. We may feel that a disabled patient is as worthwhile a human being disabled or not; that he should place less importance on his loss; look to his other assets and so on. But how can he shift his point of view so easily when all around him he sees the TV ads, the glamour movies and the cult of beauty? He is as susceptible, if not more so, to these values about his body, as the rest of us are. Knowing this, we have a more complete appreciation of what our patient goes through as he feels his loss and its meaning in our society. *If we can communicate to our patient some understanding of what he feels, how he looks at the world, we are closer to him and helping him some.*

Lastly, I am interested in a kind of preventive mental hygiene in which we might try to instill in our children and friends not only the blessings of a healthy body but also the values of friendship and intellect which can rank as high as those of an intact body. So often a person who becomes disabled is catapulted into the position of feeling like a concert violinist who has lost the "pinkie" of his left hand. By *trying to teach others to prepare for misfortune*, be it handicap, death or loss of income, we shift the emphasis in life from external values to a focus on the human person; if we are lucky, we may render a service to them.

READING LIST:

1. "Psychological Aspects of Physical Disability." Office of Vocational Rehabilitation, U. S. Government Printing Office, Washington 25, D. C.
2. "Psychology of Personality," by Ross Stagner, New York: McGraw-Hill.

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The SACH (Solid-Ankle Cushion-Heel) Foot

by ANTHONY STAROS

Chief, VA Prosthetics Center

Summary

On May 24, 1957, the Committee on Prosthetics Research and Development of the Prosthetics Research Board, National Academy of Sciences—National Research Council, recommended approval of the production models of the SACH* Foot for adult male amputees. Plate A shows one of these newly accepted prosthetic components whose design obviates a prosthetic ankle joint.

Concurrent with acceptance was the release of tentative manufacturing specifications as well as finalized instructions for installation and adjustment of the SACH Foot in the prosthetics shop. A pre-shaped oversize foot is now being manufactured under control of detailed specifications. Sizing and ordering criteria, final shaping, and assembly of the SACH Foot to prostheses are described in the installation and adjustment instructions which are part of this article.

Introduction

The basic functional principles of the SACH Foot are not new to the prosthetic technology. Many foot designs of similar types have existed for some time. However, concerted development and evaluation performed within the Federal Government's Artificial Limb Program between 1954 and 1957 have transformed diverse predecessors into one generally acceptable and standard manufactured design. The SACH Foot for adult male amputees**, although superficially simply in design, provides many of the foot and ankle functions required of prostheses. It is not a complex device, yet faulty construction, shaping, and prosthetic installation may very easily result, limiting function and causing early structural failure. Therefore, the Artificial Limb Program has recommended the release of tentative manufacturing specifications and precise installation and adjustment instructions. Adherence to the specifications by manufacturers and to the instructions by prosthetists will assure to all, limb dealers and patients alike, that the SACH Foot will always be the same valuable product which was carefully developed and evaluated in the Artificial Limb Program.

Development of the SACH Foot

A. A. Marks, in 1880, patented (1) an artificial foot for direct attachment to a prosthetic shank; no ankle joint was to be employed. The patent describes layers of rubber used to provide "sufficient elasticity" for toe action, particularly at toe-off. Although not *specifically* claimed in the patent, the heel portion of the foot had rubber of sufficient thickness to provide some degree of plantar flexion during walking. A core made from wood, or "any other suitable material" was shaped to provide, in a manner rather similar to the SACH Foot, a smooth roll-over or "rocker" action at the terminus of the stance phase.

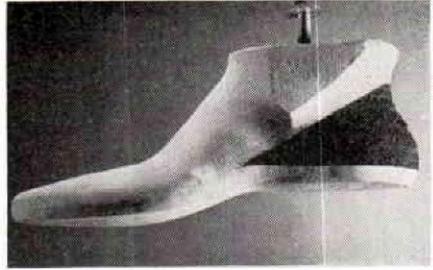
In a patent (2) of 1895, G. E. and W. L. Marks describe a similar artificial foot having an internal, inelastic core, but also specifying a rubber heel portion which contained a spring "being free to yield *with* the rubber."

*Pronounced to rhyme with "latch."

**Research efforts are already underway to develop SACH Feet for female and child amputees.

Plate A

Production Model
of the SACH Foot



The patentees describe the foot as having "actions when under heel or toe pressure, as during the act of walking, which greatly enhance the value of the foot and facilitate its use by and add comfort to the wearer. . . . The foot may be made of sponge rubber for softness, lightness, noiselessness, and comfort . . . (to) insure the desired resiliency under heel and toe pressure."

During the years following the times of these early patents, limb-shops in the United States, as well as in Germany and Austria, have used feet of designs similar to the basic SACH Foot: an internal, rigid core or keel of proper shape and length with resilient materials provided at the heel and toe. In Canada, the design of a lightweight but durable Syme's prostheses with necessary foot-ankle function was facilitated by the use of SACH Foot principles.

J. Foort and C. W. Radcliffe of the Prosthetic Devices Research Project, Institute of Engineering Research, University of California (Berkeley) developed the first prototypes of the present version of the SACH Foot. Since the weight of a prosthetic foot is particularly critical, being located at the greatest distance from the lower extremity stump, developmental efforts were concentrated on the selection of lightweight yet durable materials. Previously, commercial feet of similar principle had been quite heavy and had exhibited structural limitations. The crepe shoe sole material successfully used by the Canadians in the Syme's foot construction was adopted to minimize weight and maximize durability. Development efforts at the University of California defined the shape and length of the wood keel and the proper shape of the foot exterior, particularly the heel cushion, a cemented sponge rubber laminate. The SACH Foot development was facilitated by the earlier work done by the UC-Berkeley project on fundamental studies of human locomotion(7).

Initial evaluations(3) of the UC-Berkeley SACH Foot yielded extremely favorable amputee reactions, particularly to the shock absorption of the heel and the "smooth transition of weight from heel to toe during the stance phase." However, the testing agency* questioned the effectiveness of the cement bonds in the heel cushion layers. A change in the specified adhesive was made by the UC-Berkeley development group. This change noticeably overcame the difficulties had with the laminate bonds. In June, 1956, it was recommended(5) that the SACH Foot be manufactured in small quantities so that production versions could be tested. Problems were then encountered in getting a consistently satisfactory product; these problems were noticed in the course of evaluation and were solved by the effective "feedback" of findings to the manufacturer. In the spring of 1957 production models were found to be acceptable to the testing agency(4) resulting in a May 24, 1957, approval by the Committee on Prosthetics Research and Development, PRB(6)

* Prosthetics Devices Study, Research Division, College of Engineering, N. Y. University.

Some Advantages of the SACH Foot

Absence of mechanical articulation in the prosthetic foot-ankle region eliminates maintenance problems due to frictional wear, manifested by objectionable noises, joint looseness, and thus, some instability and inconsistent function. Also, design and construction defects of the "conventional" foot's rubber bumpers and their housings have often resulted in repeated limbshop maintenance and patient inconvenience. The direct assembly of the SACH Foot to the prosthetic shank overcomes these difficulties while furnishing necessary prosthetic foot-ankle function.

The heel cushion provides, at heel contact, a shock absorption more than equivalent to the plantar flexion of a conventional ankle. As the amputee walks over his prosthetic foot following compression of the heel cushion, the foot begins to simulate ankle dorsiflexion. The toe approaches the floor, the prosthetic shank rotates forward over the foot, and the heel cushion decompresses. Weight is gradually taken on the ball of the SACH Foot. Directly above the ball is the anterior end of the internal, rigid keel. Weight is now borne at two points, the ball of the foot and the partially compressed heel cushion. Finally, full weight is transferred to the forward end of the wood core, or keel. The length and shape of the keel are designed to provide a smooth roll-over or "rocker" action just prior to push-off. The location of this "toe-break" or roll-over line (the anterior end of the keel) is somewhat closer to the vertical center line of the prosthetic shank than is found in conventional feet with ankle joints. Since in the SACH Foot there is no ankle joint to provide dorsiflexion, it was necessary to reduce the "toe-break" distance. Nevertheless, the University of California (Berkeley) has found this reduced distance as being quite desirable, reducing energy consumption during walking, particularly up inclines.

Specifications of the SACH Foot

Tentative specifications(8) have been developed to cover the manufacture of the SACH Foot. These specifications *require* the feet to be preshaped oversize by a manufacturer. Since the SACH Foot is to be fitted to the amputee's shoe, it must be shaped carefully so as not to affect function adversely by limitations imposed by the shoe itself. It is necessary, for example, to be particularly scrutinizing in shaping the heel cushion, the toe section, and the arch area for proper fit within the shoe. Prosthetists will be able to purchase SACH Feet from manufacturers who have performed initial shaping in accordance with *specified* templates and patterns. The contours of the preshaped foot will guide the prosthetist in performing his final shaping for shoe fit. Thus, prosthetists should not, under ordinary circumstances, deviate grossly from the contouring provided by the manufacturers; material will be removed with care by following the detailed instruction (below) but, more importantly, by maintaining the proportions provided by the manufacturers.

The manufacturing specifications also detail heel cushion compression properties, as well as all-around dimensioning of the product. Tests performed by the Standards Laboratory* are specified as checks for both structural and functional characteristics. For example, the heel cushion delamination problem noted in the early development of the present SACH Foot would be observed during routine sampling and testing of manufacturers' products. Corrective steps could be taken by the Standards Laboratory

* Testing and Development Laboratory, VA Prosthetics Center, 252 7th Ave., N. Y., N. Y.

early enough to avoid generalized amputee inconvenience. Copies of the tentative specifications will soon be made available through the Office of the Executive Director, Prosthetics Research Board, National Research Council, 2101 Constitution Avenue, Washington, D. C.

Installation and Adjustment Instructions

The following instructions,** *Installation and Adjustment of the Solid Ankle Cushion Heel (SACH) Feet For Adult Male Amputees*, will be made available to prosthetists in the form of reprints of this article, which may be ordered from the headquarters of OALMA, 411 Associations Bldg., Washington 6, D. C. It is important that these instructions be carefully followed by limb-fitters so that they and their patients may avoid inconvenience and difficulty.

I. Functional Characteristics

The Solid Ankle-Cushion Heel Foot, i.e., SACH Foot, has been designed to provide shock absorption and ankle action characteristics equivalent to the normal ankle without the use of an articulated ankle joint. The action of the SACH Foot is accomplished by the use of two functional elements: a properly shaped wedge of cushioning material built into the heel, and an internal structural core or keel shaped at the ball of the foot so as to provide a rocker action. The cushion heel provides an action which not only cushions the heel impact efficiently, but also simulates normal plantar flexion very closely. This action is indicated in Figure 1. As shown in the drawings the foot is designed to be worn without any additional covering material.

The action of the foot is very smooth and the amputee is not conscious of sudden changes in resistance as is typically experienced in a conventional foot with an articulated ankle joint which includes a soft plantar-flexion bumper and a firm dorsi-flexion stop. At heel contact the heel cushion compresses approximately $\frac{3}{8}$ " allowing the forefoot to rotate toward the floor. This action, in combination with the additional forward inclination of the shank and foot as a whole, results in normal appearance during the first part of the stance phase. During the mid-stance, or roll-over phase, the body weight is divided between the heel and ball of the foot and there is a gradual transfer of weight forward. The shape of the structural core or keel under the ball of the foot provides support and a smooth rocker action at push-off. The distance from the ankle center forward to the toe break is shorter than in many conventional feet. This has been found desirable as one means of reducing the energy cost of walking, especially up inclines.

II. Sizing and Ordering Specifications

SACH Feet may be purchased in a rough-shaped oversize blank in three shoe-size ranges, 6-8, 8-10, and 10-12. Each size range has a common keel size, there being $\frac{1}{4}$ " difference in toe break-ankle distance between size ranges. In addition, the heel cushions are fabricated in three stiffnesses: soft, medium, and hard. The medium heel cushion will be found suitable for most applications. If, however, after trial or on the basis of experience it appears that the soft or hard heel cushion is more suitable for a particular amputee, the appropriate type should be ordered. However, in many cases where heel cushion stiffness is suspected of being the cause of poor function, the difficulty may be traced to improper installation, alignment or adjustment.

The apparent overlap in the sizes of SACH foot blanks can be used to advantage in order to compensate for differences in height between amputees.

** Reproduced from Reference 4, pp. 9-18.

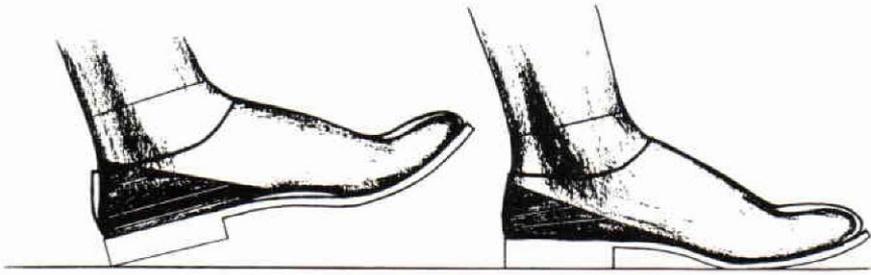


Figure 1—Simulation of plantar flexion by heel cushion compression.

Table I suggests a procedure for ordering of borderline-size foot blanks based on amputee height. Observations of this procedure will result in the keel length of the foot being more nearly compatible with the length of the prosthesis.

TABLE I—FOOT BLANK SIZE FOR BORDERLINE SIZES

Borderline Shoe Size	Recommended Blank Size	
	Below 5' 9"	Above 5' 9"
8	6-8	8-10
10	8-10	10-12

In ordering foot blanks, the following should be specified: (1) Size range; (2) Right or Left; (3) Heel Stiffness Desired; e.g. 8-10 R Medium.

III. Shaping

Do not shape the ankle portion of the foot above the shoe level until after final installation of the foot on the shank with proper toe out. Leave the ankle area rough shaped for walking trials.

The shaping of the SACH Foot is very important since both its function and appearance are influenced by its shape. There are three areas, as indicated in Figure 3, where particular care is required; these are:

1. the heel cushion.
2. the upper and lower surfaces of the arch of the foot.
3. the toe section.

The general foot contours necessary for the proper functional shaping have been preshaped into the oversize foot blank. Only minor changes in contour as necessary to reduce oversize dimensions are required. In particular no change should be made in the lower third of the posterior heel contour since this contour has been preshaped so as to provide the proper distance from heel to a line through the attachment bolt.

When inserting the foot into the shoe during fitting, always use a thin sock on the foot. Contouring the foot, as described below, can best be accomplished by sanding parallel to the laminations, using a cone or drum sander with a spindle speed of at least 1750 rpm.

The heel of the SACH Foot must be shaped so as to fit the shoe in both the relaxed and compressed conditions. The heel is shaped so as to fit the shoe tightly near the sole of the heel yet with considerable clearance near the brim of the heel counter. Approximately $\frac{1}{8}$ " clearance should be allowed at the brim of the counter between the posterior, medial, and lateral

Figure 2—Cross-section of the Solid Ankle Cushion Heel (SACH) Foot.

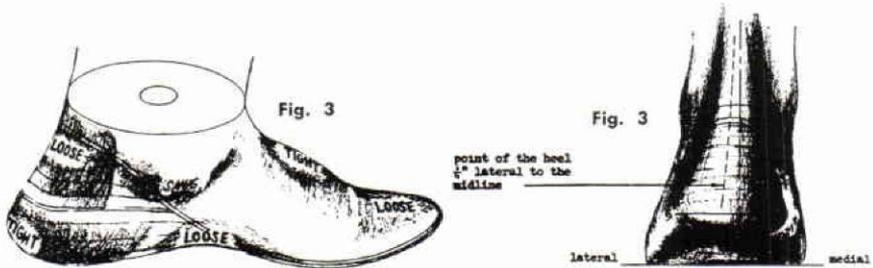
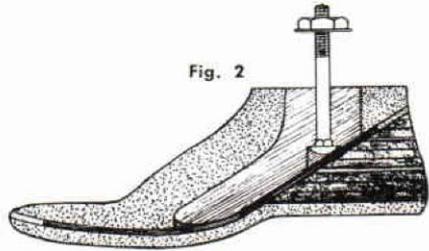


Figure 3—Shaping of the SACH Foot.

surfaces of the heel of the foot and the heel counter of the shoe. This clearance should decrease gradually and extend downward approximately two-thirds of the depth of the heel counter of the shoe. The lower third of the heel of the SACH Foot is fitted snugly into the heel counter of the shoe. The clearance near the brim of the shoe allows the heel cushion to expand as it compresses under load without interference between the shoe and foot. This clearance is also extremely important in preventing wear of hose.

In shaping the heel the point of the heel should be displaced approximately $\frac{1}{4}$ " to the lateral side with the foot oriented straight ahead. As the toe of the foot is rotated laterally to give the proper toe out, the point of the heel will rotate back toward the mid-line and the point of initial heel contact will again be through the geometric center of the foot. If this is not done, weight will be transferred through the lateral side of the heel cushion at the time of heel contact.

The bottom surface of the arch of the foot must be shaped to provide a minimum of $\frac{1}{8}$ " clearance between the foot and the inner sole of the shoe. If clearance is not provided, the arch of the foot will contact the sole of the shoe as the heel compresses, resulting in restriction of motion, shoe damage, and wear of hose in this area.

The upper surface of the arch of the foot is shaped so as to hold the heel cushion against the counter of the shoe and to match the shoe-lacing gap on the natural side. The toe-break of the forefoot must be shaped so as to provide a looser fit than is typical with wooden feet. The flexible material of the forefoot expands with compression as the toe bends and this expansion must be allowed for in shaping the foot. Failure to provide sufficient clearance will restrict the toe motion and cause shoe damage.

IV. Installation

The SACH Foot is attached to a conventional wooden shank by means of a $\frac{3}{8}$ " steel carriage bolt. During manufacture the carriage bolt is inverted and its head is imbedded firmly into the lower surface of the hardwood keel. A solid section of wood in the end of the shank between $1\frac{1}{2}$ " and 2" in depth is required for installation.

Due to the soft nature of the materials used in the construction of the SACH Foot, an allowance for extra shank length is necessary in order to compensate for the compression of the foot under load. The average amputee requires an increase in length of $\frac{1}{4}$ " for this purpose. Amputees weighing less than approximately 140 lbs., or where the hard heel cushion is used, may not require the full one-quarter inch.

After adjustment of toe out and walking trials, the foot is glued in position.

The step-by-step procedure for installation of a SACH Foot as a replacement for a conventional foot on a wooden shank is as follows:

1. Fit the foot to the shoe in accordance with instructions under Section III, Shaping.

2. Measure the distance from the knee center to the bottom of the heel of the conventional foot with shoe off.

3. Measure the distance from the hardwood attachment surface on the top of the keel to the bottom of the heel of the SACH Foot.

4. Subtract the second measurement from the first. This will give the distance from the knee center down to a point where a cut through the ankle would give an attachment surface for the SACH Foot which would result in exactly the same length of shank as with the conventional foot.

5. Increase the shank length by the amount of the $\frac{1}{4}$ " compression allowance. A $\frac{1}{4}$ " allowance is made by making a mark $\frac{1}{4}$ " below the mark made in Step 4.

6. Extend this line around the shank parallel to the upper surface of the existing hardwood ankle base so that the attachment surface for the SACH Foot will be parallel to the floor when the amputee is standing on the prosthesis.

7. Sever the shank at this line.

8. Check to see there is a solid section of wood $1\frac{1}{2}$ " to 2" in depth at the lower end of the shank, then plug all existing holes in ankle block with doweling. If less than $1\frac{1}{2}$ " of wood is present, add wood or a mixture of thermo-setting resin and coarse sawdust inside the shank.

9. Layout position of a $\frac{3}{8}$ " hole which will accommodate the $\frac{3}{8}$ " foot-attachment bolt. The hole should be located approximately at the geometric center of the cut section at the ankle and bored at right angles to the cut section of the shank. Where any question exists, locate the hole to match the posterior surface of the shank and the Achilles tendon area of the SACH Foot.

10. Bolt foot in place without dowels and assemble the leg. Recheck fit of shoe and whether the upper attachment surface of the foot is parallel to the floor with the body weight carried on the foot. In a standing position the heel cushion should be compressed slightly.

11. After toe-out adjustment and walking trials, and before final delivery, the foot should be glued (or glued and doweled) in place and the attachment nut with lock washer securely tightened to prevent twisting.

Note: While gluing alone may be adequate, it is recommended that for maximum security the foot be both glued and doweled. The procedures for doweling are:

Place reference marks on shank and top of foot to indicate the toe-out alignment for later assembly. Remove SACH Foot from shank. Drill $\frac{1}{4}$ " holes $\frac{1}{2}$ " deep into exposed surface of the wood keel anterior and posterior to the attachment bolt and parallel to it. Cut two lengths of 1" doweling $1\frac{1}{4}$ " long. Trim one end of each piece to a point. Glue the dowels into the holes pointed end up. Place shank on attachment bolt and sighting to see that the alignment marks are in line, press down firmly until the sharpened dowels make an impression in the bottom of the shank. Using these marks as centers, drill $\frac{1}{4}$ " holes 1" deep into the shank, perpendicular to the cut section. Apply glue to the protruding dowels, top of the foot and bottom of the shank and press together firmly. Install lock washer and attachment nut on the attachment bolt. Tighten securely. Use "Woodlock" or similar water resistant adhesive.

12. Finish shaping by sanding foot above shoe-top level to simulate the malleoli of the sound foot.

V. Adjustments

There are two types of adjustment possible with the SACH Foot: (1) change in heel cushion stiffness and (2) change in heel cushion thickness.

The heel elevation of the foot sometimes requires adjustment due to differences in shoe lasts. The SACH Foot is presently manufactured with an $11/16$ " heel elevation, i.e., the bottom of the heel is $11/16$ " above the level of the ball of the foot with the attachment surface parallel to the floor. Before any adjustment of heel elevation is attempted, it is important to recheck the clearance between the arch of the foot and the shoe (Section III, Shaping). The wedge angle of the heel cushion should not be changed.

An increase in heel elevation (decrease in heel cushion thickness) is indicated if there is excessive heel cushion compression when the amputee stands on the prosthesis with the top of the foot parallel to the floor. A limitation in plantar flexion in walking and/or a decrease in knee stability in both walking and standing may accompany this condition. The heel elevation may be increased up to $3/16$ " by sanding foam crepe sole material from the bottom of the heel. If an increase in heel elevation greater than $3/16$ " is indicated, improper sawing of the shank should be suspected. This should be corrected at the junction of the shank and foot by rechecking alignment; and resawing, sanding or wedging as necessary.

A decrease in heel elevation (increase in heel cushion thickness) is indicated where there is insufficient or no compression of the heel cushion in the standing position. This condition will be reflected in gait by excessive knee stability and a feeling of "walking over a hill." The condition is corrected by cementing shims of crepe sole material, leather or other firm flexible material to the bottom of the heel area using Stabond T-161 or equivalent until the desired heel cushion compression is achieved.

A change in heel cushion stiffness is indicated where a check of heel cushion compression in the standing position shows proper adjustment of heel elevation, yet observations indicate too soft or too hard an action while walking.

The step-by-step procedure for exchange of heel cushion in the SACH Foot is as follows:

1. Work on a smooth, level bench top.
2. Remove shoe from foot and stand shank on the bench with an 11/16" block under the heel.
3. Using carpenter's square, draw a vertical reference line on the medial or lateral aspect of the shank in approximate mid-line.
4. Mark edge of sole on medial and lateral sides to indicate the anterior point of the heel cushion.
5. Place the shank in a wood vise with *heel* up.
6. Use a sharp knife and cut out the heel cushion. Cut along the sole glue line first, bending the sole outward as the knife cuts; then bending the wedge out, cut along the inner glue line.
7. Remove irregularities in the cut surfaces of the foot with a fine rasp or coarse file.
8. Insert the new wedge, without adhesive, so that the point comes to the same location as the one removed (indicated by the marks made on the sole). Be sure the longest lamination is next to the sole.
9. Remove shank from vise and replace on bench with 11/16" block under the heel.
10. Check the line drawn on the shank to see that it is in alignment with the vertical arm of the square. Make any necessary corrections by forcing the wedge anteriorly or slipping it posteriorly until proper alignment is obtained.
11. Install the new wedge at the point selected, using Stabond T-161 or equivalent on the mating surfaces.
12. Shape the heel in accordance with instructions under Section III, Shaping.

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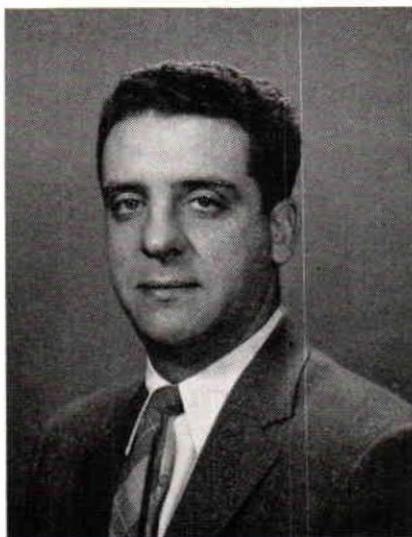
ANTHONY STAROS

Anthony Staros has been Chief of the Veterans Administration Prosthetics Center in New York since early in 1956. Formerly, he had served as Chief of the Prosthetic Testing and Development Laboratory, now a part of the Prosthetics Center.

The Prosthetics Center is a centralized VA field activity with responsibility for providing artificial limbs, orthopedic braces, and orthopedic shoes to eligible VA beneficiaries, particular problem cases from all over the nation. The Center's Orthopedic Shoe Section is responsible for the procurement of orthopedic shoes and shoe repairs for entitled veterans throughout the United States. The Testing and Development Laboratory serves in research as one of the several laboratories cooperating in the Artificial Limb Program. The Limb and Brace Section of the Center, besides routinely servicing veterans requesting its services, conducts studies of prosthetic fabrication techniques as part of its responsibility to the Program.

Mr. Staros is a licensed professional engineer with a B.S. in Mechanical Engineering from Cornell University and an M.S. in Mechanical Engineering from Stanford University. He has had a broad background in research and engineering, formerly being a research engineer at the Franklin Institute Laboratories for Research and Development, Philadelphia, Pa. He is a member of the Prosthetics Research Board's Committee on Prosthetics Research and Development.

Mr. Staros is the author of numerous technical reports and articles including: "Orthopedic Leg Braces: Analyses of Fabrication Methods" published in this *Journal*, Sept. 1954, p. 23-26. At the 1954 National Assembly of OALMA, he presented a report on



Leg Braces: "Fabrication, Materials, Time and Cost Studies."

REVIEWS

HANDBOOK FOR ONE-HANDERS By Aaron L. Danzig

Published by the Federation of the Handicapped, 211 West 14th St., New York 11, N. Y., 1957, 55 pages.

Reviewed by Lester A. Smith.

This is an enlarged edition of a valuable booklet published in 1952. The first edition was so successful it was sold out. Mr. Danzig has revised and enlarged this edition in response to many requests.

This is a practical Handbook which every upper extremity amputee should read. It will assist him to lead a normal life, at work and at home. The new edition has a special section to help women who have the use of only one hand and who must face the problem of keeping house, sewing, cooking, etc. Facilities specializing in Upper Extremity Prosthetics will be interested to know that orders of ten copies or more will be filled at a special price of 40 cents each.

THE KINGSLEY SACH FOOT

(See pages 23-32)

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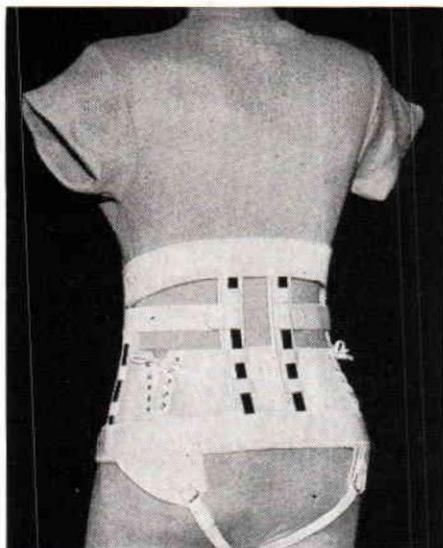
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Chair Back Brace

A Modified Spine Brace

by **ROBERT C. CORNELL, M.D.**

Bangor, Maine

Editor's Note: This article first appeared in the Journal of the American Medical Association, December 29, 1956 issue and is reprinted here by permission. For this reprinting Dr. Cornell has provided an additional section entitled "Fabrication."

The medical literature of the past two decades is well endowed with descriptions of various types of spine braces. The majority of these are quite adequate and are as comfortable as an appliance of this type is expected to be. The brace to be described is the result of modifications of previously described braces; thus I claim little originality. In 1937, Arnold(1) described an efficient back brace. Using Arnold's brace as a pattern, I have made a number of modifications designed to increase the range of usefulness of the appliance and to increase patient comfort. In 1942, Baker(2) described a brace that he used on patients with arthritis of the spine, and Williams(3) described a brace for use in flexion management of low back conditions. Some of the ideas embodied in these two braces have been incorporated in the apparatus herein described.

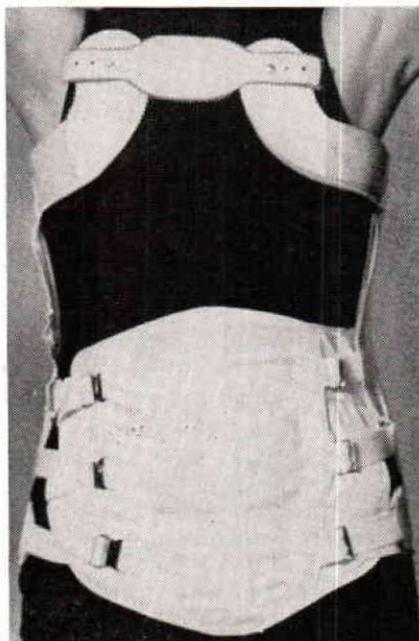
Uses

As do most orthopedic appliances, this brace has its limitations, and it is not intended for the treatment of all conditions involving the spine. It is designed primarily for immobilization or stabilization of the spine from the sacrum to the seventh thoracic vertebra and is not intended for the support of the cervical and first seven thoracic vertebrae. Lumbosacral fusions can be adequately supported by shorter braces, and consequently this apparatus is not intended for that purpose. I have used this brace for the treatment of fractures of the thoracic spine distal to the seventh thoracic vertebra, thoracic kyphosis caused by juvenile epiphysitis, rheumatoid spondylitis, and incorrect posture. It has been an excellent brace for the treatment of fractures of the thoracic and upper part of the lumbar spine and has been successfully used post-operatively for fusions of the thoracic and lumbar spines. It has been used to support the spine during recovery of patients from poliomyelitis and is particularly useful in those instances in which the respiratory musculature is involved, as in bulbar poliomyelitis.

Advantages

This brace has a number of distinct advantages from the point of view of patient comfort. The apparatus is constructed from measurements taken on a flexible jig, and all components are built to conform to the contours of the patient's body. Accurate measurements can be taken in the hospital or in the doctor's office, and rarely are more than minor adjustments necessary after the brace is completed. The brace is lightweight, easily adjusted, and may be put on in the operating room and adjusted to meet individual

Fig. 1. (A) Anterior view: Chest pieces may be made lower and transverse strap may be removed.



requirements at any given moment (see figure A). The axillary portion of the brace does not extend high enough into the axillas to be uncomfortable and allows freedom of movement of the upper extremities (see figure B). The lower or pelvic band is form-fitted and grips the pelvis in such a manner that the brace does not ride up or down when the patient moves. The posterior longitudinal bars (see figure C) are placed 4 inches apart, 2 inches on either side of the spinous processes, to allow for a surgical dressing in the event that the brace is being used after a spinal fusion. Furthermore, placing the longitudinal bars in this way decreases pressure over the spine itself and adds considerably to the patient's comfort. The lack of constricting bands about the lower part of the chest makes the brace a useful appliance both in injuries in which there has been damage to the chest wall and in conditions in which there is concomitant respiratory embarrassment without injury to the patient. For instance, the brace has been used on a 6-year-old boy recovering from bulbar poliomyelitis; it supported the spine and shoulders without respiratory interference. The absence of over-the-shoulder straps makes this brace useful in instances in which there is an injury to the shoulders with concomitant injuries to the spine.

Description

The brace is a singularly uncomplicated appliance. It consists of a pelvic band molded to the contours of the sacrum and ending immediately beneath the anterior superior iliac spine. Thus, the pelvic band fits well, does not slide around when the patient moves, and becomes a well-stabilized point of fixation for the lower portion of the brace. The upper circumferential band fits snugly against the upper portion of the back and varies considerably in its contours depending upon the degree of immobilization



Fig. 2. (B) Lateral view.

Fig. 3. (C) Posterior view: Note space between upright bars.

required. It extends anteriorly beneath the axillas on each side and then curves upward to end in a wide flare that conforms to the anterior chest wall in the pectoral region. There are four longitudinal or upright bars; two are placed posteriorly 4 inches apart and the remaining two lie in the mid-axillary line, one on each side. A light leather strap connects the two anterior chest pieces to prevent separation.

Fabrication

The construction of this brace is quite simple, but its usefulness is dependent upon careful and exact fitting. Therefore, I have found it best to take measurements with a flexible jig. The flexible jig is made to conform to the patient's body and then taken to the brace shop where component

parts of the brace are made to conform to the configurations and measurements of the jig. This jig is similar to or the same as those found in many brace shops, and requires no particular talent to either construct or to use.

I believe the pelvic band to be the most important part of the brace. This takes a little more time and care than the upper circumferential band or the upright pieces. The pelvic band is made of 18-gauge, 24 S. T. Dural. It is $1\frac{3}{4}$ inches in width and must be made to fit snugly over the sacrum and to terminate beneath the anterior superior iliac spines. At this point, it must flare slightly to conform to the soft tissues.

The upper circumferential band is made of 24-gauge Dural and also is $1\frac{3}{4}$ inches in width. It is cut from a sheet of metal and molded to conform to the specifications required. The final shaping of the anterior chest portion of the upper circumferential band is left to the final fitting.

The upright bars are made of 24-gauge Dural, one half inch in width. All parts are polished and drilled and the upright part is padded with either felt or foam rubber and covered with elk hide prior to assembly of the brace. It has been our practice to sew only one side of the brace covering since this is less time consuming and there is only one half as much sewed area to break out. The upright bars are then riveted to the pelvic band and the upper circumferential band with stainless steel rivets, two at each point of contact. The upper and lower circumferential bands are then padded and covered with elk hide. It must be noted that the axillary portion of the upper circumferential band is heavily padded with sponge rubber prior to its covering with elk hide. It has been our practice to cut the sewed edge of the elk hide with pinking shears which appeals to the ladies and helps to eliminate rolling and tearing.

The posterior longitudinal bars are placed four inches apart with the medial edge two inches from the center line of the brace. The lateral upright bars are placed in the midaxillary line. The placement of the upright bars is very important since placing the posterior bars too close together will produce pressure on the spine particularly if the brace is being used following a spine fusion. Placing of the lateral upright bars too far forward or too far back will result in both inadequate support and marked discomfort as far as the patient is concerned.

The abdominal apron is made in the usual manner with three adjustable straps on each side. I have found it more comfortable not to put stays in the apron but to make it of sufficiently heavy material to prevent rolling and wrinkling. The transverse chest strap is made of elk hide or other suitable leather and lined either with flannel or mole skin. It is attached on each side by means of a stud set into the chest portion of the upper circumferential band.

Summary

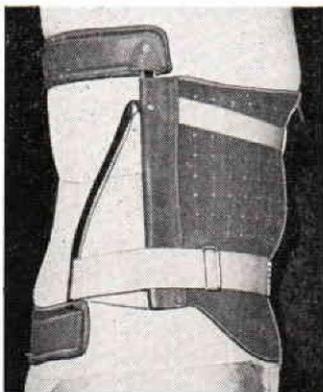
A simple but useful spine brace has been developed that has a wide range of usefulness and is more comfortable to the patient than previously described braces.

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3. Williams, P. C.: Lesions of Lumbosacral Spine, J. Bone & Joint Surg. 19: 690-702 (July) 1937.

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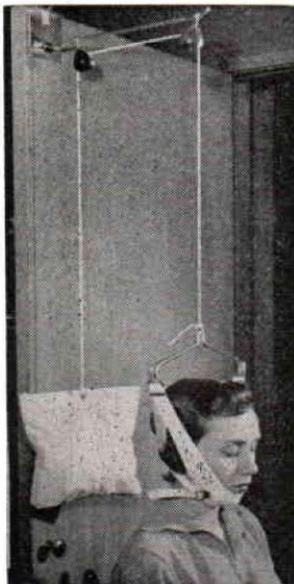
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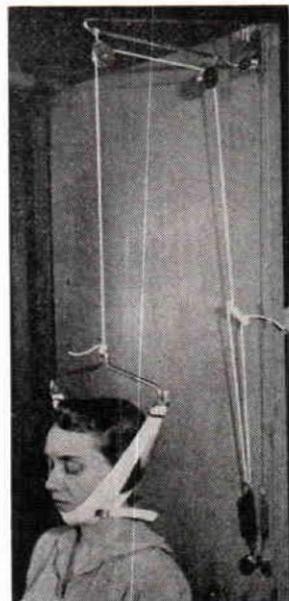
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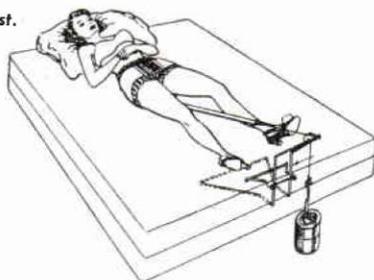
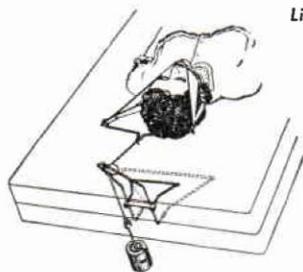
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A MODIFIED LOW BACK BRACE

by **ROBERT C. LONERGAN, M.D.** and **CLYDE BOWEN, C.O.**

St. Petersburg, Fla.

Editor's Note: One of OALMA's current projects is the compiling of a Brace Dictionary, listing both new designs and modifications of older braces, such as this article describes. Readers are asked to forward photographs, drawings and descriptions to OALMA's Headquarters, 411 Associations Bldg., Washington 6, D. C.

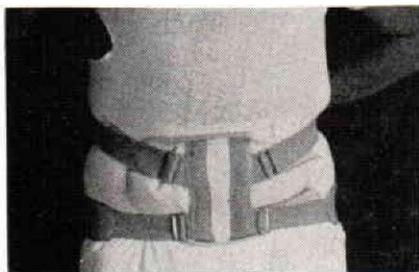
The idea behind the construction of this simple low back brace may be traced to the annoyance caused by objectionable features of the commonly used chair back brace, which was worn by one of the authors.

The chair back type, while providing more stability and immobilization of the lumbar spine, often fails to conform easily to the different postural variations found in affections of the low back region. In one case there may be a list of the spine to the right (or the left); and in another a loss of the normal lordotic curve or conversely an exaggerated lordosis. The latter positions are more easily compensated by shaping the posterior uprights of the brace. However, it is much more difficult to accommodate lateral listing or shift of the spine.

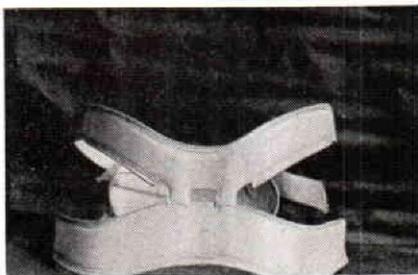
Practical clinical experience over many years has proven that patients will often refuse to wear a rigid support. This reaction is not for whimsical reasons, rather it seems that the brace does not add enough to the patient's comfort to make the wearing worthwhile.

One common objection is the pressure on the rib cage from the top band and the side bars. It is a fact that with each step forward the weight of the body is shifted to the opposite leg and the top band and side bar press firmly and unforgettably against the side of the body. This same pressure is then exerted against the opposite as the other leg is lifted. One is constantly aware with walking of the uncomfortable shifting pressure, first on one side and then the other. Even more objectionable is the attempt to make the body conform to a fixed brace position when muscle spasm is constantly shifting the spine in another direction.

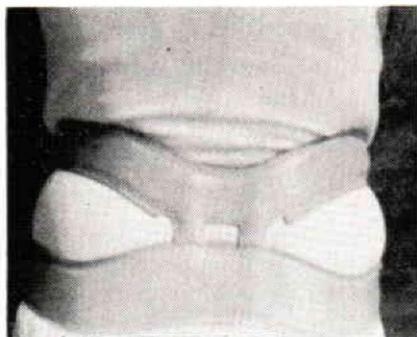
Many low back cases are able to do light work while wearing a brace, but the height and confinement of the chair back brings a constant request for a type that will permit more comfortable activity. Thus, it was the demand for this change which resulted in the experimental use of several variations. From these was evolved the present illustrated model. The brace which is shown may not secure the absolute rigidity of the chair back or similar types, but does at least obey the basic fundamental of a low back support that it grip the pelvis. With its light, pliable structure, it does not need the very uncomfortable perineal strap to hold it down.



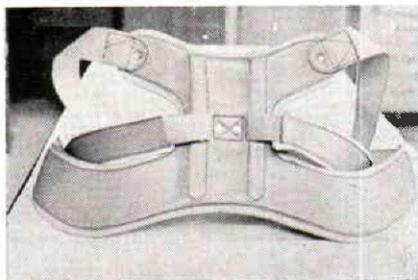
Front Apron



Back View



Brace on Patient's Back

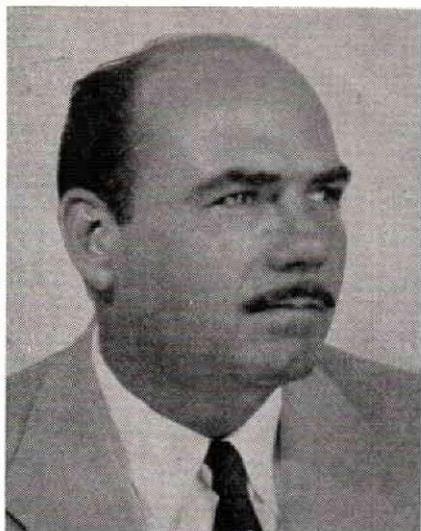


Back View of Brace

The authors have used the present model for the last five years. They do not feel that it presents an original design. It is, in fact, merely a modification of old existing forms but from a practical standpoint, the support has proved to be useful. Moreover, patients will wear this support and complain less than they do with any other type of low back brace. In male patients the support is worn as shown. In female subjects, it can be used similarly or in the form of a framework attached to a corset.

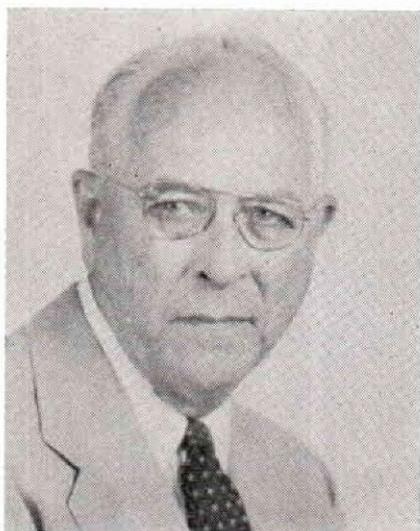
This low back brace is constructed with aluminum bands and light gauge spring steel uprights. We use .064 aluminum sheeting for the pelvic band, cut in a butterfly shape to fit snugly around the pelvis. The upper band is made from .062 or even lighter material, depending on the case. The two spring steel uprights $\frac{1}{2}'' \times 1/16''$ vary from 5" to 8" in length. The brace framework is held in place by 3 straps attached from each side to an apron front, or it can be used alone by fastening to a corset with snaps. This method permits easy removal of the corset for laundering.

Light weight felt is used to pad the frame and the covering inside and out is a plastic material, which eliminates odor and is easy to clean.



CLYDE BOWEN

Clyde R. Bowen is a native of Florida and was educated in the public schools of that state and began his training under Arthur Finnieston in Miami. After completing his training under the supervision of Wilmore Bremer, he opened his own establishment in July, 1945 in Tampa. Mr. Bowen removed his facility to St. Petersburg in 1950. His professional association include clinic work with the Florida Crippled Children's Commission, the Sarasota Clinic and the American Legion Hospital for Crippled Children. Mr. Bowen is a Certified Orthotist and was a delegate to the New Orleans Assembly.



ROBERT C. LONERGAN, M.D.

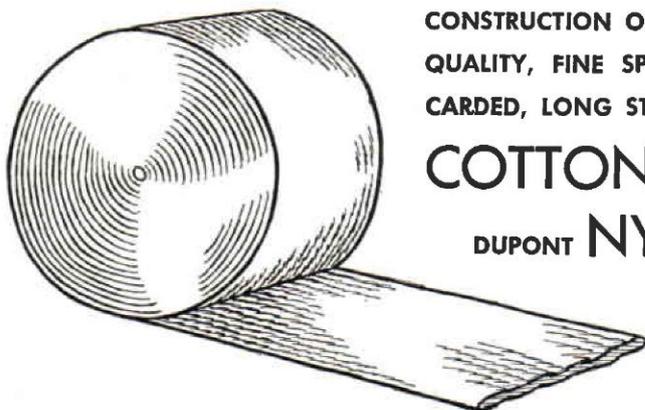
Robert C. Lonergan received his medical degree from Johns Hopkins University in 1922 and completed his residency in orthopedic surgery at St. Lukes Hospital in Chicago and the Children's Hospital of Harvard Medical School. He was engaged in private practice in Evanston, Ill., before going to St. Petersburg, Fla., in 1943. Dr. Lonergan has been a faculty member in the Department of Orthopedic Surgery for the medical schools of Johns Hopkins, Harvard and Northwestern Universities. He is a Charter Member—Diplomate of the American Board of Orthopedic Surgery, a member of the Academy of Orthopaedic Surgery and other medical organizations.

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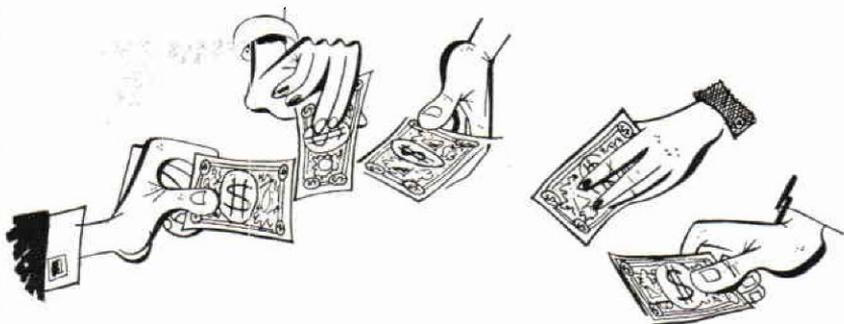
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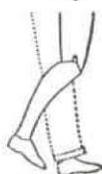
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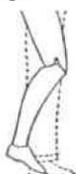
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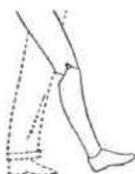
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Use of the Temporary Prosthesis and Adjustable Walking Jig*

by C. F. MUELLER, M.D.

Chief, Prosthetic Appliances and Accessories Section, Prosthetic and Sensory Aids Service, Veterans Administration

A review of the article by Dr. Lewis A. Leavitt, titled "Rehabilitative Techniques—Adapted," appearing in the Information Bulletin (Dept. of Medicine and Surgery, VA), 10-87, October 30, 1956, in which the frame of reference is to the severely disabled, long-term chronic or geriatric patient, has prompted me to attempt to clarify the definitions of the pylon and other artificial limbs. Also I have added certain comments on the use of the walking jig and temporary prostheses for the younger patients. It is hoped that these comments will clarify the patient area in which the excellent suggestions made by Dr. Leavitt's article pertaining to prosthetic devices for the amputee have most appropriate application.

Dr. Leavitt's reference to a "pylon" can cause a misunderstanding. It may be suitable at this point to define some of the terms used to designate general types of artificial limbs so that a more uniform terminology will result.

The Prosthetic and Sensory Aids Service is urging that the following definitions be used:

Permanent Prosthesis—A completely finished artificial leg that has been fitted to the amputee with the intent to provide efficient and continuous service. The prosthesis must embody all accepted principles of prosthetic fitting that will best compensate for the existing disability with due regard to the economic, vocational and psychiatric facets of the wearer.

Temporary Prosthesis—An appliance worn by a recent amputee pending the procurement of a permanent artificial leg or the contradiction of a prosthesis. Due to the inherent purpose of this appliance, perfection in fit, alignment and function is usually not sought. The prime purpose of the device is to obtain early attempts at ambulation at the possible expense of prosthetic perfection.

Pylon Prosthesis—An artificial leg, either temporary or permanent, which does not incorporate a knee and/or ankle joint in its construction. The body weight of the wearer is transmitted to the ground by means of a hingeless support (peg leg).

Stubbies—Artificial legs, either temporary or permanent, used by bilateral above knee amputees. They consist basically of a socket, whose distal end is so modified to bear the body weight when walking.

It must be appreciated that all artificial legs cannot arbitrarily be classed into one or the other of the above definitions; variants to meet existing disabilities and other factors will, at times, nullify the attempts to formally catalogue an artificial leg. The greater majority of all fabricated legs will readily lend themselves for this classification, and an accepted nomenclature will materially assist in the interchange of thoughts.

*Reprinted by Permission from the April 12, 1957 Issue of the *Information Bulletin*, Veterans Administration, Department of Medicine and Surgery.

Returning now to the article of Dr. Leavitt, it is the opinion of the Prosthetic and Sensory Aids Service that *temporary limbs should be issued to amputees very cautiously*. Fitting a prosthesis is not a simple task. The alignment of the limb, the selection of component parts, and the fit and construction of the socket is a serious problem that the VA is delegating primarily to physicians who have been specially trained in prosthetics and to prosthetists who have taken graduate courses on the subject.

When temporary limbs are used to provide a *quick and inexpensive* substitute for an amputated limb the components of the limb are necessarily of a lower quality and workmanship than those that will be provided in the permanent limb. It is natural that the temporary limb will not afford the fit and function that the permanent limb will offer, and the wearer must acclimate himself to a limb that *nearly* fits and functions. He will obtain his first prosthetic impressions from this poorly fitting limb and may be psychologically conditioned against all limbs in the future. At a minimum, he must bear with the poor limb for a period of time and later must readjust himself to his permanent prosthesis. It is entirely conceivable that he may develop bad walking habits with the temporary limb which he will never be able to overcome when he receives his permanent limb. We would much prefer to see the physician prescribe a standard type of permanent prosthesis *having a replaceable socket* which can be changed after the patient's stump has undergone its usual changes. For below-knee amputations, this limb could be a standard wood, metal, or fiber leg with a replaceable insert socket; and for above-knee amputations, a standard wood leg could be provided, since the socket can easily be cut off just above the knee block and a new socket can be installed, without affecting the alignment or stability of the prosthesis.

In the instance of the older amputee, where there is considerable doubt as to whether he will ever be able to fully handle a prosthesis and where walking habits are of lesser importance, a temporary limb presents a slightly altered picture. However, even this older amputee should not be fitted with a temporary limb made from remnants of discarded limbs and by a technician who has the ability to assemble parts but many not have the knowledge of fabricating a dynamically acceptable limb. The components of a temporary limb, even with these older amputees, should approximate those that will eventually be incorporated in the permanent limb, and the technician making the temporary prosthesis should be fully qualified in his trade.

Turning to the question of the adjustable walking jig, the most recent course on A/K prosthetics given at New York University does not favor the long and unsupervised use of the jig by the amputee. The patient can easily change the set screws and other controls in the knee while he is unsupervised and thereby throw the original alignment out of plumb. This would defeat the time and effort expended in the attempt to align the limb properly when the jig was set originally. Its use should be limited to the supervised shop under the direction of a trained prosthetist for such periods of time as it is necessary to determine the optimum alignment that can be provided in an artificial limb.

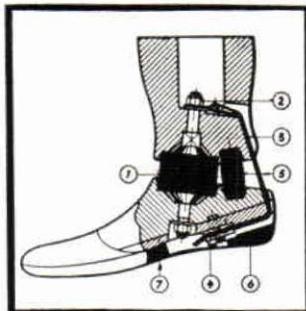
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How To Bandage An A. K. Amputation Stump

Compiled by **LORRAINE OGG, R.P.T.,**

Chief Physical Therapist, UCLA Medical Center

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Physical Therapist Supervisor, Respiratory Center at Rancho Los Amigos Hospital Hondo, Calif.

I. Importance

One of the most important procedures in the pre-prosthetic care of an amputee is the bandaging of the stump. Proper bandaging shapes and shrinks the stump so that the amputee can more successfully be fitted to a prosthesis. If a stump has not been bandaged, or has been improperly bandaged, the amputee will have to have many adjustments made to his socket as shrinkage occurs. The inconvenience caused by such a procedure may well discourage the new amputee from using a prosthesis.

II. Purpose

The purpose for bandaging a stump is to shrink and shape the stump. Proper bandaging will reduce the excessive adipose tissue and will lessen the tendency of development of an adduction roll. In addition, bandaging supports the soft tissues in the early healing phase following amputation. It is during this phase that the efficiency of the vascular system is greatly impaired causing an accumulation of fluid in the stump. Ambulation with the stump in a dependent position causes further accumulation of fluid. Therefore, external support is essential to minimize and reduce edema.

III. Use

Initially, the therapist or nurse should wrap the patient's stump. Later the patient should be taught to do this for himself either with assistance from a member of his family or without. However, if the patient is not proficient in bandaging techniques, it may be necessary to use other methods of shrinkage. Improper bandaging may result in constriction of the stump, delayed healing, skin abrasions, the formation of creases at the distal end of the stump or bulging rolls of fat.

IV. Relationship of Job to Therapist and Patient

It is extremely important for the person who bandages stumps to be proficient because bandaging greatly affects the patient's future as a limb wearer.

V. Materials Used

A. The materials used are 2" or 3", 4", or 5" ace bandages or elasticized bandages sewn together end to end.

B. Number and width of bandages varies according to the size and length of the stump.

VI. Application and Pressure

A. When patient is ambulatory, the bandage is applied before he gets out of bed following recumbency.

B. Ideally, the bandage is left on for four hours, or more, providing that it feels comfortable and is secure.

C. The bandage should be maintained continuously and reapplied when tension is lost.

D. Pressure should be applied under moderate tension to the entire stump, guarding against any tourniquet-like action at the proximal portion of the stump.

VIII. Procedure

A. The amputee stands or lies on the unaffected side. The stump should be kept in hyperextension throughout the procedure.



Fig. 1

B. Recurrents

1. Begin recurrents, vertical turns, on the anterior surface of the stump just inferior to the level of the inguinal ligament. Fig. 1.

2. The bandage is passed over the distal end of the stump posteriorly to the gluteal crease.

3. The amputee assists by holding recurrents in place.

4. Two additional recurrents are made passing over the medial and lateral aspects of the end of the stump in that order.

Anchoring Recurrents

Fig. II



C. Anchoring Recurrents

1. The recurrents are then anchored by several horizontal circular turns of the bandage. Fig. II.

2. When anchoring the recurrents, the circular turns begin at the lateral side and run posteriorally to the medial side. This is important later when the hip spica is made—the bandage must run from medial to lateral on the anterior surface.



Fig. III



Fig. IV

D. Oblique (circular) Turns

1. When the recurrents are finally secured, the bandage is brought down and around the stump and up again using oblique turns or a modified figure eight. Fig. III.

2. Pressure must always be up and out at the distal portion of the stump. This eliminates dog ears and the formation of creases, Fig. IV.

3. Never use circular turns which are not oblique as they tend to constrict circulation.

Hip Spica



Fig. V



Fig. VI



Fig. VII

E. Hip Spica

1. The hip spica serves the dual purpose of anchoring the bandage and covering the tissue high in the groin and the lateral surface of the hip. This eliminates any possibility of formation of bulges in this area, which occur frequently when a hip spica is not used.

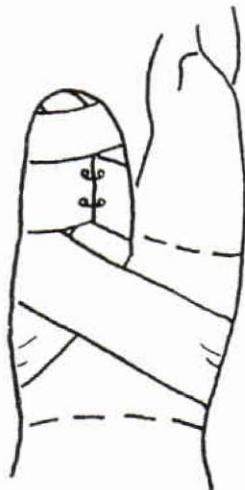
2. The spica should generally be started from the anterior medial aspect of the stump and run laterally across the anterior surface of the stump in the inguinal region. (left above) Fig. V.

3. The bandage is carried around the body on a level with the iliac crest. (center above) Fig. VI.

4. Return to the stump, making a figure eight and again around the pelvis. Finish the bandage by making oblique turns on the stump. (right above) Fig. VII.

Anchoring Bandage

Fig. VIII



F. Anchoring Bandage

1. When anchoring the bandage use safety pins. It should be fastened where bandage ends and at crossing of the spica at the hip. Fig. VIII

2. CAUTION—Don't use clips. Friction against clothing or bed loosens them. Always pin the end of the bandage at lateral or anterior surface of stump.

WHAT'S NEW(S)

The National Amputation Foundation recently acquired by purchase the entire premises at 12-45 150th St., Whitestone, Queens, N. Y. According to Paul Ramaglia, president of the Foundation, the purchase fulfills a long-time need for permanent headquarters.

From these quarters the Foundation will intensify its program of at-the-hospital guidance and aid to unfortunates facing emergency amputation, as well as to survivors of outright loss of limb.

Ultimate aim of the hospital program is rehabilitation of new amputees of every race, color and creed. Other services extended without fee or obligation include advice on legal, personal and physical problems, group therapy, psychological counsel, job placement, and orientation on the use of a "new" limb, to name but a few.

Amputee veterans of World War I and II and the Korean conflict constitute the membership.



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The Surgical Support and Corset Department

by MRS. LORAIN ISLE DILLARD

The W. E. Isle Co., Kansas City, Mo.

A surgical support department is a logical expansion of the service which an orthopedic and prosthetic appliance facility may offer to physicians and their patients. A successful appliance firm develops good working relations with members of the medical profession in its community. Adding surgical supports broadens the service offered to this professional clientele. The new department may be the means of attracting referrals from physicians who are not regularly sending patients to the facility. It then follows that knowing and serving more doctors will reflect an increased sales in all departments.

This conclusion is based on our own experience in operating a surgical support and corset department since 1929. Some orthopedic doctor friends requested that we establish this department and advised us about the type of supports that they would prescribe. We bought an initial stock of garments, built a stockroom, and at first used the fitting rooms which were also used for prosthetic and orthopedic appliance fittings. In the early days many fittings were made in the doctors' treatment rooms. The doctor would telephone, giving us the patient's waist and hip measurement, and ask our fitter to bring a selection of supports to his office to make the fitting. We profited by rendering this extra service, for in this way we soon learned the kind of support and fitting which respective doctors would approve.

Most fittings are made in our shop now, but we always ask the customers fitted on referrals to return to the physician to have the garment and the fitting checked. When requested by physicians, we send fitters to hospitals to take care of patients who are unable to come in to our shop.

We have always recognized that success depends in large part on capable, tactful corsetieres. Applicants with experience are rare. We try to select those who have a genuine interest in learning this work and then provide initial training in the shop under an experienced fitter. Excellent courses are offered each year by manufacturers of surgical supports. We have found that the cost of sending fitters to these courses is a worthwhile investment. Our fitters have also taken special courses in Gross Anatomy and Kinesiology offered by the University of Kansas Extension Bureau.

In our operation various forms of advertising have been used to promote sales of surgical supports . . . direct mailings to doctors, *Medical Journal* advertising, consumer ads in the local newspaper and the yellow section of the telephone directory. Probably the best advertisement has been satisfied customers who tell their friends about Isle service.



Interior View—Fixtures and Layout were designed by an architect.

Originally we confined our work to surgical support fittings and elastic hose. Later many customers who no longer required surgical supports requested that we sell style foundations. Responding to this demand, we added lines of style merchandise.

The time came when we had outgrown the space allotted to the support and corset shop on the second floor. So when a shop in our building on the street level floor was vacated we decided to open a modern foundation and surgical support store for ladies exclusively.

The layout and fixtures were designed by a professional store architect who worked closely with us so that the store when finished would be completely functional as well as beautifully fresh and attractive.

A self-service bar for packaged merchandise is located near the front of the store with bandeau bras, soft girdles and pantie girdles next on display. Two counters with pull up chairs provide a convenient place to show merchandise. The cozy customers' lounge is provided with a drinking fountain and adjoining powder room.

There are six private fitting rooms . . . two equipped with specially designed fitting tables . . . all with full length mirrors and carpeted floors. The stockroom directly back of the fitting rooms is well lighted and the alteration corner is located here.

A full time receptionist-cashier greets each customer and schedules fitting assignments. The color scheme of the shop is a soothing blend of



Street View—Effective Window Displays benefit from the maximum use of plate glass.

gray and white with accents of Mecca yellow and turquoise. It is air conditioned for year 'round comfort and music is piped in throughout the customer area.

In moving to the street level in the heart of downtown Kansas City we expected to substantially increase sales of style garments. In addition to realizing this gain in the few months we have operated the new shop, we find that prescription sales have increased as well.

While this article deals primarily with surgical supports for women, the men's department has also shown a healthy growth through the years and continues to meet a need in our community. Surgical supports for men are fitted on the second floor, as are all prosthetic and orthopedic appliances.

It is our opinion that a surgical support department is closely allied to the orthopedic appliance department and that by employing the same principles of operating you can be assured of successfully promoting a profitable surgical support department.

Before venturing into this new field we suggest that you ask doctor friends if there is a store in your community which now offers a first-class surgical support service. Try to obtain a commitment that they will send patients to you if you should open such a department. Inquire also about the type, and brand name of the supports they prefer. The answers to this modest market research will guide your decision as to the profit potential of expanding your service to include surgical supports.



Mrs. Dillard

Lorraine Isle Dillard has been called the "stay-at-home partner" who with Ted Smith and Lee Fawver form the active partnership team operating the W. E. Isle and Knit-Rite Companies.

Daughter of the late "Billy" and Anna Isle, she grew up with this business, beginning her career in 1926. From the time the surgical support department was started it has been her special interest and responsibility. This article is drawn from her extensive experience in working with doctors, fitting patients, and managing this department.

WHAT'S NEW(S)

The Easter Seal Research Foundation of the National Society for Crippled Children and Adults provides grants-in-aid for investigations concerned with the prevention and treatment of physical and associated disabilities, and the rehabilitation of the physically handicapped. Disabilities may be congenital or may result from accident or illness.

Funds for research grants are derived from a fixed percentage of the gross returns of the annual Easter Seal campaign conducted by the National Society and its state and local affiliates.

The Foundation is concerned with investigations of (1) the causes of crippling, (2) the prevention of physical disabilities, (3) methods for improving impaired functions or for mitigating the results of dysfunction, and (4) measures for enhancing the effectiveness of the rehabilitation process. Research projects may involve basic or clinical research or both.

The Foundation invites applications for grants-in-aid. Applications filed between September 1 and March 31 are reviewed in June. Applications filed between April 1 and August 31 are reviewed in November. Awards are announced during the months of June and November. Inquiries should be addressed to William Gellman, Director of the Easter Seal Research Foundation, National Society for Crippled Children and Adults, 11 South La Salle St., Chicago 3, Ill.

Dr. R. Plato Schwartz, internationally known orthopedic surgeon who has been a member of the University of Rochester Medical School faculty since 1926, will become emeritus professor of orthopedic surgery on July 1.

Dr. Schwartz, whose pioneering studies on human locomotion have won medals from the American Medical Association, the American Academy of Orthopaedic Surgery and the American Congress of Physical Therapy, will continue to direct the Medical School Gait Laboratory's broad program of research in normal and abnormal walking, neuromuscular dysfunction and proper adjustment of foot gear for corrective purposes.

Dr. Schwartz initiated the investigation of human locomotion in 1926 and is credited with devising and perfecting the oscillographic (electrical impulse) method of recording gait.

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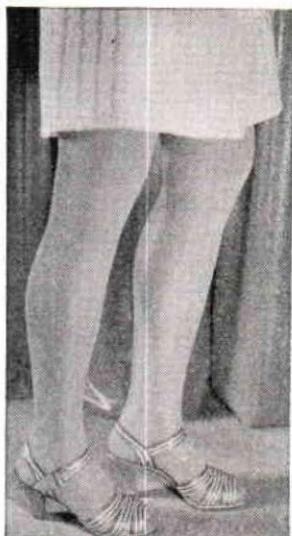
Realastic offers cosmetic correction for all types of body deformity. One of the most spectacular is the copolymer buildup and leg cover for atrophied leg. The patient in this series of pictures suffered polio as a girl leaving her right leg in a shriveled condition.



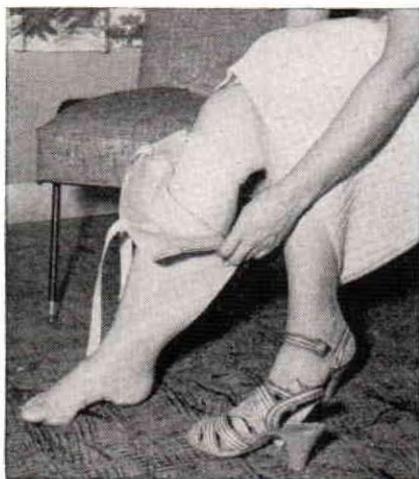
Above picture shows "before" condition of the atrophied leg in relation to normal one.



Patient has donned copolymer buildup of pink tinted sponged rubber latex and plastic.



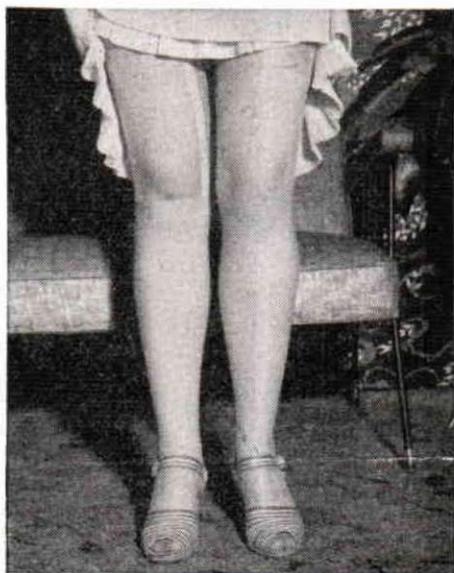
A covering of surgical elastic stocking and matching nylon stocking are shown above.



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The flexible plastic leg cover is seen at left and below. Use this in place of the surgical elastic stocking. Elastic straps at the sole, zipper closure placed to coincide with nylon seam, above knee straps combine to give the proper tension and stability. Sheer hosiery may be worn, with two legs giving an identical appearance.

A "copolymer buildup" is a very strong and durable type of rubber-plastic sponge. It is obtained by foaming directly into a specially prepared mold which represents the patient's calf sculptured to normalcy. Two buildups are invariably supplied to allow alternating for laundering purposes. Buildups can be worn either with surgical elastic stockings as shown at left (better for low heels) or with *Realastic* leg cover as at right (better for high heels and sheer hosiery).



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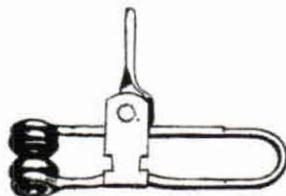
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Prosthetic Research Board Meets in Washington; Approves SACH Foot—Demonstrates Modern Appliances to Congress

The National Academy of Sciences Building in Washington was the scene of a conference on research in artificial limbs May 20-24. This was the annual meeting conference of the Prosthetics Research Board headed by Gen. F. S. Strong, Jr. Several members and officers of OALMA were in attendance together with prominent scientists and engineers and physicians, who are joining their efforts to develop better appliances for America's handicapped people.

The conference reviewed the current status and devoted many hours to a survey of the various appliances which are going through various stages of testing before being released for use. One important decision made was final approval of the SACH Foot (see the important article by Anthony Staros in this *Journal*).

This year's meeting was of special interest to orthotists because the Board through its Executive Committee, has voted to extend its work to orthopedic appliances. This is a decision of major interest to the millions of Americans who at one time or another require braces.

The Conference included two special sessions open to the public: (1) a demonstration of devices before the U. S. Senate Committee on Labor and Public Welfare and (2) the Scientific session held on May 23.

The demonstration of prosthetic devices has received high praise from the Honorable Lister Hill, Chairman of the Committee and United States Senator from Alabama. Seated with him at various times were Congresswoman Edith Nourse Rogers of Massachusetts, Senator William A. Purtell of Connecticut and Senator Charles E. Potter of Michigan (Senator Potter is a bi-lateral amputee—the result of battle injuries).

Gen. F. S. Strong introduced the research workers who appeared before the U. S. Senate Committee on May 24. This was in the historic old Senate Chamber of the Capitol building.

Dr. Cameron B. Hall, clinical professor of orthopedic surgery at UCLA, was in charge of the demonstration of patients wearing lower extremity prostheses. He was assisted by OALMA President Hennessy and Miss Irene Waters, PT, of the New York University's Institute of Physical Medicine and Rehabilitation. Mr. Herbert Kramer demonstrated an above-knee prosthesis. Mr. Kramer, who is joint author of the article on "Checkout Procedures" which appeared in the March issue of the *Journal*, is well known in medical and scientific audiences for his demonstrations of various types of limbs. Other cases demonstrated included a below-knee and a hip-disarticulation case.

Dr. George T. Aitken and First Lt. Sheila McDonnell, PT, U. S. Army, had charge of the Child Amputee Section. Under Dr. Aitken's encouragement, several children who have been rehabilitated by the Michigan Crippled Children Commission demonstrated their skill with prosthetic appliances.

These cases included a below-knee amputee, a bi-lateral knee disarticulation amputee and an elbow disarticulation. Dr. Charles O. Bechtol, Associate Professor of Orthopedic Surgery, was in charge of the demonstration of Upper Extremity Prosthetics. He was assisted by William E. Hitchcock prosthetics instructor of the post graduate Medical School, New York University.

The report on Vocational Rehabilitation and Prosthetics presented by Miss Mary E. Switzer, Director of the U. S. Office of Vocational Rehabilitation, concluded the session. Miss Switzer presented James J. Segars for a report on Restoration Cases in the State of Georgia. Dr. Harriet E. Gillette concluded with a most moving account of an actual case where a tragic life, has been restored to happy and efficient living through the teamwork approach to rehabilitation.

Scientific Session

A report on current projects and goals in prosthetic research featured the scientific session May 23. Gen. F. S. Strong, Jr., opened the session by analyzing the set-up for the organization of research for amputees. Dr. Verne T. Inman, Professor of Orthopedic Surgery at the University of California reviewed research in the medical problems of the amputee (Dr. Inman is Professor of Orthopedic Surgery at the University of California Medical School).

An expert panel gave some helpful answers to the question: "How to get the results of research to the professions concerned with amputees." This panel included Dr. Charles O. Bechtol of Yale; Jack L. Caldwell of the Hanger Facility at Tampa; Dr. Miles H. Anderson, UCLA; Dr. Sidney Fishman of New York University; Dr. Harriet E. Gillette of Atlanta; and Dr. Eugene F. Murphy of the Veterans Administration.

The status of child prosthetics was reviewed by Dr. George T. Aitken of Grand Rapids. The meeting concluded with a report on Experimental Design Study of an Upper Extremity Prosthesis by Gerald E. Gwynne.

VA Offers In-Service Training Program

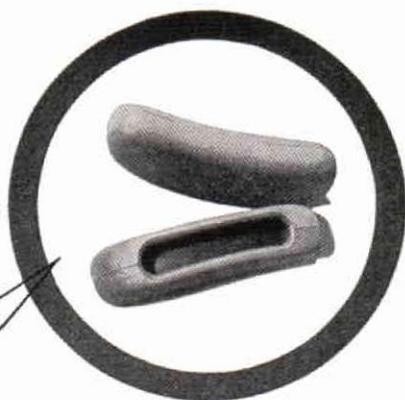
The Veterans Administration began a training program for personnel of the VA Prosthetics Center in New York City on April 19. Members of OALMA and their employees in the New York City Metropolitan Area were invited to join in attending this training program.

The course was developed along the lines of the Apprenticeship Program recommended by OALMA and the American Board for Certification. The first sessions dealt with anatomy. It is planned to hold 144 hours on the study of anatomy. All sessions are held after working hours, from 5:00 P.M. to 6:00 P.M. on Fridays. It is expected that the entire program will be completed in two years.

Persons interested in additional information about the training course should get in touch with Mr. William Bernstock of the Veterans Administration Office in New York City (WATkins 4-5000, Ext. 671).

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FURTHER INFORMATION**

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New York University Continues Prosthetic Courses — 500 Prosthetists, Therapists and Physicians Trained



William Hitchcock, CP, lecturing in the Prosthetics Class at NYU.

The eighth in the series of courses in Above-Knee Prosthetics at New York University began on Monday, June 3rd, with the following prosthetists in attendance: Robert Bennington, James Brazelton, Walter Caleson, Hung Tong Chun, Helmuth Fliess, Gunter Gehl, Stanley Hedges, Milton Hinnant, Anton Leins, Nick Pechota, Alfred Sulima, William Vansant, Richard Walker, George Ward, and Robert Williams.

The fifteen prosthetists at this session brought the total number who have attended since March 1, 1956 to 132. Of this number, 109 students were in the Above-Knee courses and 23 were in the Upper Extremity courses.

To date, a total of 483 students, including prosthetists, therapists and physicians have attended the various courses. In addition, 16 therapists and 18 physicians are scheduled to attend the current series. The students came from a wide geographical area including 31 states; the District of Columbia; Burma; Canada; Columbia, S. A.; Korea, Puerto Rico; and Portugal.

With the completion of the June session in Above-Knee Prosthetics, preparations will begin for the courses that will be offered in the fall. These preparations will include the making of films, slides, manuals and other instructional material.

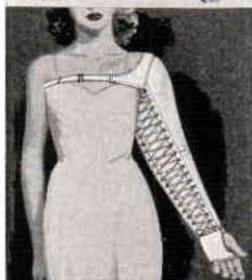
During the 1957-58 academic year, it is anticipated that three or four courses will be offered in Above-Knee Prosthetics and two in Upper Extremity Prosthetics. In addition, a seminar in prosthetics will be presented to supervisors of physical restoration, followed by several courses for field workers in vocational rehabilitation. As soon as arrangements for these courses have been completed, the University will announce the dates for each session.

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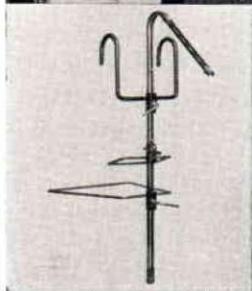
ABDUCTION PILLOW

This new Camp pillow splint provides a practical method for reducing congenital hip dislocations at home. Especially designed to fit the contour of the legs, the firm cotton pillow is covered with washable, water resistant Naugahite. Two bibs made of soft gray Dorene cotton material are included with each pillow. Gripper snap fasteners are used to assure ease of application. Available in three sizes — Small 6", Medium 9" and Large 12".



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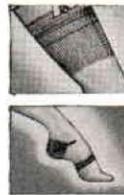


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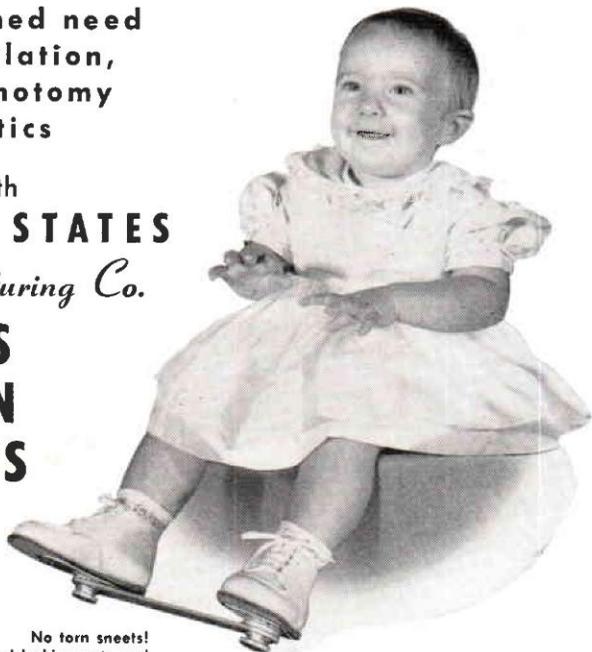
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Certification Board Meets — Approves Practical Test Changes

— Agrees to Publish Names of All Applicants

The annual summer meeting of the American Board for Certification was held in Washington, D. C., May 23. This report on their deliberations and on developments since their meeting is printed here for the information of all Certificatees and others interested.

Members of the Board present included President Carlton E. Fillauer; Vice President Edward C. Holscher, M.D.; McCarthy Hanger, Jr.; Edward W. Snygg; Col. A. W. Spittler and W. Frank Harmon. (Dr. Roy M. Hoover was absent in Europe.) OALMA President Hennessy was also present.

Others present included: Past Presidents Chester C. Haddan and D. A. McKeever; the Board Consultant on examination techniques, Dr. Miles Anderson of the University of California, Los Angeles; Secretary-Treasurer M. P. Cestaro; Executive Director Jackson and Assistant Director Lester Smith.

The Practical Tests

One hundred and seven applications for the 1957 examinations are on file in the Board's Headquarters in Washington. This is the largest total list in the history of Certification (see the list of names at the end of this article).

The Board discussed plans for the practical examination in the light of this large class and past experience at the San Francisco and New Orleans examinations. There was agreement that the practical examination was an important part of the Certification procedure and should be strengthened whenever possible. The Board by motion of Mr. Hanger, seconded by Col. Spittler, unanimously agreed that its Examinations Committee should work out a procedure whereby the student applicant would bring with him to the examination scene, some physical evidence of his work, sometimes referred to as a "Masterwork." This appliance, whether it be a brace or an artificial limb, would be discussed in the oral interview. The details of the procedure would be worked out by the Examinations Committee.

Sales Solicitation Rule

The Board strengthened its provision against the solicitation of new amputees without the prior approval of the physician, so that it shall apply hereafter to all cases "under the doctor's care." Publicity is to be given this requirement and after January 1, 1958, there will be a spot checking of Certified facilities to see whether this provision is being followed. Where the provision is being violated, the Executive Director is authorized to remove Certification.

No "Part Time" Facilities

The Board re-affirmed its long standing policy that no "part time" facility may be Certified and a facility must have a "full time" Certified person. In a word, Certification means available service on all normal working days.

Certificatees' Advisory Group to Nominate Director

Members of the Board—The Board approved a change in the nominating procedure whereby members of the Board are selected (Three members of the Board are now nominated by the Academy of Orthopaedic Surgeons; four members have been nominated by the OALMA National Assembly Board of Directors).

It was decided that the National Advisory Council is to be given the privilege of nominating a person for election to the Certification Board. This nomination is to be made beginning in 1958. The person elected will serve a term of three years. This means that beginning in 1958 one of the seven members of the Board will have been chosen by the individual Certifees acting through their National Advisory Council. Thus, the National Advisory Council becomes an important part of the trinity of three organizations that determine the make-up of the Board, to-wit: the Academy of Orthopaedic Surgeons, the OALMA and now the National Advisory Council.

Other Actions

The Board voted unanimously that it would look with favor upon applicants for Certification completing the Prosthetics Training Course at New York University or the University of California, Los Angeles, or other institutions approved by the Board. The question of requiring completion of such course as condition of Certification was left for later study. It was agreed that the taking of such course would certainly help any applicant in his preparation for the examination so that preferably he should take it in the third or fourth year of his training.

Apprentice Training

The Board considered a revision of its requirements on apprenticeship registration. Part of the new plan is a recommendation that OALMA consider a program of training technicians who are not as yet related responsibly to the fitting of patients. When such persons have completed this training they might then pursue a course leading to Certification. Definite announcement of plans for this new procedure must await further formal action by the two organizations involved. However, the prior requirement that an applicant for Certification must have enrolled and completed the OALMA Apprenticeship Training Program on or after January 1, 1959, has been rescinded and is no longer in effect.

Research Needed

For some time, there has been a growing conviction there should be more research on the kinds of training and education which are essential for the prosthetic-orthotic profession. The Board's Headquarters office was authorized to explore the possibilities of such research project.

Applicants for the 1957 Examinations

The American Board for Certification has directed that the names of applicants for Certification shall be published in the *Orthopedic and Prosthetic Appliance Journal*, at least thirty days prior to the date of the examinations. Listed below are the names of persons who have made application and whose credentials are currently under investigation. Comments as to their qualifications should be sent to the American Board for Certification, 411 Associations Bldg., Washington 6, D. C., on or before September 1, 1957.

As Orthotists

Henry J. Avink, Jr.,
Grand Rapids, Mich.
Edward W. Beauchemin,
Manchester, N. H.
Joe L. Bowman, Oklahoma City,
Okla.

Hartwell P. Bremer, Hawthorne, Fla.
Darwin J. Buck, Lawton, Okla.
Kenneth O. Burgess, Memphis, Tenn.
William Chadwick, S. Lincoln, Mass.
Frank N. Cocco, Philadelphia, Pa.

Applicants as Orthotists (Continued)

- Edgar E. Doerschler,
Englewood, Colo.
Marion R. Dunn, Jr.
Warm Springs, Ga.
Jack B. Faatz, Kingsport, Tenn.
Wilson Fowler, Greenville, Ga.
George L. Farmer, Jr.,
Asheville, N. C.
George Federov, Philadelphia, Pa.
Josephine M. Fessler, Roseville, Mich.
John J. Glancy, Providence, R. I.
Joseph M. Goodside, Queens, N. Y.
Simon Grassl, New York, N. Y.
Walter B. Graydon, Mobile, Ala.
Rocco Grillo, Bronx, N. Y.
Arthur W. Guilford, Jr.,
Cleveland, Ohio
Arthur W. Guilford, Sr.,
Cleveland, Ohio
Paul N. Guimond, Manchester, N. H.
Anthony Hajek, Traverse City, Mich.
Robert E. Hall, Detroit, Mich.
Maron A. Harper, Monroe, La.
Edward Hild, Jr., Philadelphia, Pa.
Sol Houtkin, New York, N. Y.
Bernard F. Johnson,
Marquette, Mich.
Richard H. Johnson, Evansville, Ind.
Richard J. Jibert, Green Bay, Wis.
Thomas M. Junk, Elizabethtown, Pa.
Ludwig Kalb, New York, N. Y.
Robert F. Killian, Cambridge, Mass.
James C. Luna, Memphis, Tenn.
George G. Madarasz,
Jackson Heights, N. Y.
Joe Marshall, Toledo, Ohio
Fred C. Moore, Warm Springs, Ga.
Thomas Norris, Sykesville, Md.
William J. Murphy, W. Quincy, Mass.
Herman B. Ordning, Columbus, Ohio
George M. Parsley,
Charleston, W. Va.
Kyle H. Parsley,
Albuquerque, N. Mex.
Vernon T. Pate, Memphis, Tenn.
John G. Pirie, Cuyahoga Falls, Ohio
Anton J. Reichenberger,
Brooklyn, N. Y.
Armand L. Roy, Winooski, Vt.
James C. Russ, Warm Springs, Ga.
James M. Sanders, Delaware, Ohio
Hiram A. Sharpe, Jacksonville, Fla.
Osborne H. Shepherd,
Philadelphia, Pa.
Kozys Sileikis, Chicago, Ill.
L. Eugene Snyder, Elizabethtown, Pa.
Paul R. Stafford, Jackson, Miss.
Ralph A. Storrs, Kankakee, Ill.
William V. Stubbs,
Chattanooga, Tenn.
James E. Sweigert, Elizabethtown, Pa.
Edward P. Van Hanswyck,
New York, N. Y.
Clifford Wilson, Jackson, Miss.
Thomas S. Wilson, Jackson, Miss.
Wesley J. Wilson, Jackson, Miss.
George I. Zetts, Washington, D. C.

As Prosthetists

- Wilfred J. Anair, Sr.,
New Britain, Conn.
Milton E. Bostwick, Baton Rouge, La.
Herbert Brewer, St. John's, NFLD.
Walter Caleson, New York, N. Y.
Hung Tong Chun, Pusan, Korea
Allen J. Clark, Charleston, S. C.
Anthony R. Cocco, Philadelphia, Pa.
Camille Corriveau, Montreal, Canada
Kenneth A. Dinkins, Shreveport, La.
Helmuth Fleiss, Chicago, Ill.
Gunter H. Gehl, Chicago, Ill.
Fulton Gray, Huntsville, Ala.
Wm. B. Gray, Memphis, Tenn.
James S. Greenwell, St. Louis, Mo.
Ludwig Greilinger,
Glendale, L. I., N. Y.
Raymond E. Gustin, Green Bay, Wis.
Warrén F. Imwold, Baltimore, Md.
Roy M. Keimig, Wichita, Kan.
Marion F. Kessler, Hyde Park, Mass.
Herbert E. Kramer, Little Neck, N. Y.
Joe J. May, Omaha, Neb.
Vance C. Meadows, Marne, Mich.
Joseph M. Moran,
Far Rockaway, N. Y.
Dock W. Neal, Charleston, W. Va.

Applicants as Prosthetists (Continued)

Junior Odom, Nashville, Tenn.
E. Ray Ousley, Baton Rouge, La.
William Sampson, Astoria, N. Y.
Herbert W. Schulze, Chicago, Ill.
Henry E. Scheytt, Homer, Mich.
Alex G. Session, Elizabeth, Pa.

Floyd D. Simmons, Memphis, Tenn.
Ralph R. Snell, Nashville, Tenn.
Leonard A. Svez, Dravosburg, Pa.
A. G. Talley, Jr., Raleigh, N. C.
Lewis G. Tankersley, Columbia, S. C.
Gene E. Watters, Harrisburg, Pa.

WHAT'S NEW(S)



The United States Manufacturing Company is now located at 623 S. Central Avenue, Glendale 4, Calif. The company now occupies a new building especially designed for its particular needs. J. Morgan Greene, President of the company, reports that additional machinery and equipment have been installed. He extends a warm invitation to all customers and friends to visit the new establishment.

William E. Brownfield of Boise, Idaho, reports that the State Crippled Children's Services has recently completed a statewide series of orthopedic clinics which he attended.

He also reports that he will be exhibiting at this year's meeting of the Idaho State Medical Association. The Medical Association meets each year at Sun Valley. Prosthetic Services of San Francisco, the U. S. Manufacturing Co. and Dorrance-Hosmer have made available some of their exhibit material to Mr. Brownfield for his exhibit at the medical convention.

Basil Peters, President of the B. Peters Company of Philadelphia, served as an instructor in prosthetics for the A/K Prosthetics course at New York University. Mr. Peters is a graduate of that course and the upper extremity courses of the University of California, Los Angeles. He is currently serving as President of the Pennsylvania Orthopedic-Prosthetic Society and as Regional Director for the Middle Atlantic States, OALMA.

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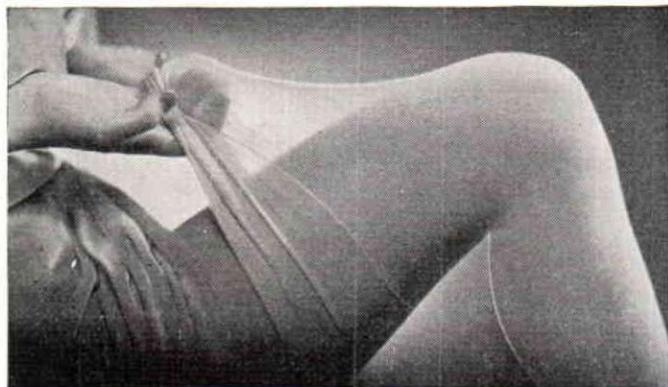
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Certification Report

by

CARLTON FILLAUER

President, American
Board for Certification.



The American Board for Certification held its mid-year conference May 23rd amidst the top committee meetings of the Artificial Limb Research Program. Perhaps one may have contributed to the accomplishments of the other for in many ways the goals of each are in common. The Research program certainly has put much of its resources to educational courses and the development of teaching manuals. Just as it is the Board's obligation to ascertain the degree of knowledge a certifee has of current techniques some of which came from the research program, so in turn the Research group has taken on the responsibility of disseminating its findings. Because there is such widespread acceptance of this new knowledge e.g. Upper Extremity and AK prosthetics as taught in the University courses, it is highly desirable that certifees be thoroughly versed in all that is taught there. Furthermore, the Board officially *recommends* these Prosthetic courses as a prerequisite for taking the certification exams in Prosthetics. It urges those trainees in their fourth year to make a serious effort to attend all that are currently available. It indeed is fortunate that the two organizations can support each others' aims with a resultant benefit to the amputee and the handicapped.

More Attention to Orthotics

Orthetic problems and new developments appear to be avoided from the point of view of research, University courses, etc., but if this has been true in the past there is growing evidence that a change is in the making. The Prosthetic Research program has indicated its efforts are soon to be expanded into this field. Also a course in upper extremity splinting and bracing is in the making at UCLA with a pilot run scheduled for this fall. It is reasonable to expect that others will follow thus bringing new and deserved emphasis to Orthotics.

One of the perplexing problems facing the Board in its yearly appraisal of current examination procedures is the development of that part of the examination spoken of as the "practical." This is the phase related to craftsmanship and ability to perform fitting operations, to a degree of

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unquestionable value. Many suggestions have been offered, many having merit but presenting insurmountable problems similar to those experienced over the past few years. This year what is believed to be a positive forward step will be inaugurated. Work projects in the way of complete braces and artificial limbs will be assigned to candidate certificatees to carry out in their home facility prior to appearing for the formal examination. This "do it yourself" practical phase will enable the oral examiners to concentrate on specific construction and design details. It is incumbent upon Owners and Managers of Facilities to cooperate with these candidates in not only permitting them to carry out their assignment but also in assuring that all instructions are followed.

Other action by the Board dealt with the enforcement of the regulation against the malpractice of solicitation of patients under the care of the Doctor. All effort should be exerted by Certified Facilities to seek and cultivate the cooperation of the medical profession in their area. We must build our own status and it will never be of much worth without their respect and support.

Assembly plans are in the final stage and are being developed for your pleasure and participation. The Certification Luncheon and Business Session will give you much food for thought—you must not miss this occasion. There you will be presented a recommendation permitting the National Advisory Council to nominate a member of the Board. It is felt that all aspects of our two professions will be equally represented. Plan to have Assembly Week free to be in Washington September 29th to October 2nd.

Carlton Fillauer

Chester Haddan Names Assistant Manager

A retired Army captain who lost his right leg during the bloody Yalu River action in Korea has joined the staff of Gaines Orthopedic Appliances, Inc., in Denver where his own experience will be applied toward the rehabilitation of other amputees and physically handicapped persons.

Appointment of Bernard C. Simons, 36, as assistant manager of the firm was announced this week by Chester C. Haddan, Gaines president and internationally recognized authority on artificial limbs and vocational rehabilitation.

Simons, a former resident of Minneapolis, Minn., and Fargo, N. D., was recently retired from the Army after serving as post signal officer at Rocky Mountain Arsenal near Denver. During World War II, he was an infantry officer in the Pacific Theater of Operations, and was assigned to the Signal Corps when injured in the Korean fighting.

NEW SIERRA MODEL 44 APRL HAND FEATURING EASIER, POSITIVE OPERATION

As a result of 6 years of continuing research and development of prosthetic equipment, Sierra has produced the Model 44 positive locking hand. A fine product made better by smoother action, precision control and more natural appearance when used with the cosmetic glove. The new advanced design of the Model 44 hand provides positive grasp . . . easily controlled . . . and more reliable in performance.

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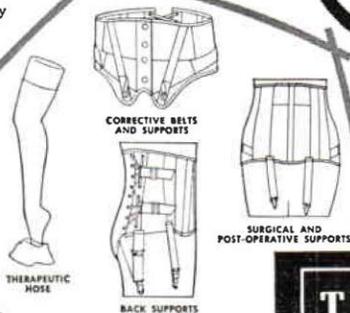
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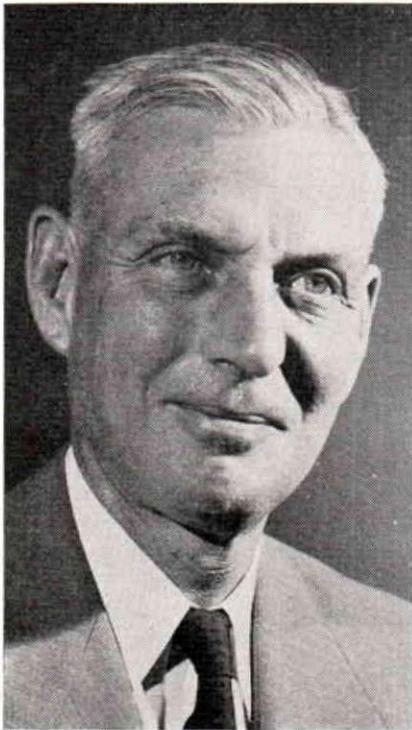


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Shall We Have a Master Fitter?

An Editorial by

DR. ROBERT MAZET, JR.

Member, 1953-1956, The American Board for
Certification (President 1955-1956)

Since its inception in 1948 the American Board for Certification has done much to institute improved practices, designed to produce better braces and prostheses for those who need them. It has sponsored a training program for orthotists and prosthetists which has resulted in the influx of a new group of competent craftsmen into the industry. It has broken down the barriers which encumbered intershop relations. Suspicion and jealousy of "trade secrets" have been replaced by cooperation and a free interchange of ideas, thus increasing the knowledge of all personnel, and enabling them to fabricate better devices. It has established a procedure for the examination of men who have completed the required training, and certifies those who successfully complete this examination as competent brace or limb makers in whom the public may place its confidence. Educational standards have been raised. The required training program encompasses a variety of subjects beside the purely mechanical aspects of fabricating devices.

It has embarked, with considerable and growing success, on a program to educate doctors and the public to the significance of certification. Awareness of the trust now reposed in certified men and facilities is reflected in the insistence by many State Rehabilitation groups and the desire by the Veterans Administration that appliances for their charges be furnished only by certified firms.

From the training program for apprentices several evening schools have emerged where the novice can be instructed in the various subjects contained in the recommended curriculum. These were organized by local branches of the Orthopedic Appliance and Limb Manufacturers Association (OALMA), to further the desire of the younger men for better educational opportunities. At least one is now conducted as a University Extension

course. A text book of anatomy for orthotists and prosthetists is half completed, and should be ready before too long.

You are aware that requirements for certification have gradually become a little more difficult to meet, and that the examinations have become more comprehensive. All of this has meant that the calibre of orthotists and prosthetists has notably risen. Today the individual who meets the requirements can feel justifiably proud of his certification. He must be a *good* limb or brace maker.

Certification is the second step up the ladder of attainment. The certifiee has qualified as a technician. He has had considerable experience as a fitter, but is not necessarily a master of that exacting art. He may not be qualified to handle people tactfully, be a master of all the technical and scientific aspects of his vocation, nor be able to analyze problems and make decisions of supervisory nature. Lastly, he may be quite incapable of teaching others the fundamentals and niceties of his calling.

The master craftsman must possess all the abilities enumerated above. In addition, he should probably be cognizant of the fundamentals of book-keeping and business practices. Such a man is one who maintains a friendly and successful facility in which teaching and service are combined to a high degree. We have a number of such outstanding individuals in this field. We need more of them.

I wish to call your attention to the necessity for developing such persons, and to urge upon you the formulation of plans to produce them. This will necessitate the introduction of a third step in the ladder of attainment. It presupposes a period of practice such as most of the surgical specialties require prior to certification. I suggest that two or three years of practice be required, in which the individual may build on the foundation of knowledge acquired while he was undergoing his four years of training prior to certification. During this time he will perfect himself in the arts of fabrication, fitting, teaching, etc. It presupposes an additional examination in the practice of these arts, and conferring of some type of advanced certification. This procedure could be patterned after the German practice of similar nature.

If we adopt this suggestion a considerable additional burden will be placed on the ABC to formulate and administer the machinery incumbent in its adequate functioning, but such is the purpose of the Board. A "grandfather" clause, admitting individuals to automatic membership in this proposed body of master craftsmen simply because they have been in business for a stated number of years, must be avoided.

We would have to select a small committee of elder statesmen from among the practicing orthotists and prosthetists who have proven themselves true masters, in whose integrity and professional competence we have the utmost confidence. This committee could in turn select a limited number of men whom they believe to be outstanding artisans, and by examination admit them into the new order. Such a cadre could then propound a procedural system for the selection and examination of additions to their distinguished group.

It will entail much thought, and expenditure of effort and time, to evolve a practicable method of choosing our master fitters. If we commence now it should be possible to produce a small functioning organization in five years. I am convinced that it would be worth such effort. The proposal deserves your most serious consideration.

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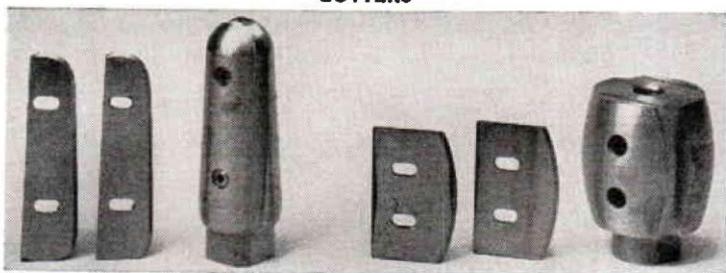


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"Don't fail to read the inspiring message of Dr. Evans."—CHARLES A.

HENNESSY,

President of OALMA

The OALMA Regional Meetings this spring have been truly fine examples of cooperative thinking and effort to advance our profession and better serve the handicapped. I've been fortunate as your President to attend five of these sessions and later this month will take part in two more on the West Coast. (I regret that the New York and Philadelphia meetings came the same weekend at a time when teaching duties at UCLA made it impossible for me to attend.)

One feature of Region VII's meeting at Minneapolis was so outstanding that I am turning over this issue's Presidential Column to bring it the wide coverage it deserves. I refer to the address by Dr. Edward Evans which follows. Every prosthetist and orthotist should read it and absorb its message of encouragement and inspiration.

—CHARLES A. HENNESSY, President of OALMA

An Orthopaedic Surgeon's Version of a Modern Prosthetist

EDWARD T. EVANS, M.D.

Associate Professor of Orthopaedic Surgery, The University of Minnesota

Members of Region VII:

When I was asked to appear before you, I spent considerable time in thought as to what my subject might be on this occasion.

I might have chosen a research subject, bored you with statistics—I might have added a lengthy tome on a subject only remotely connected with your problems, I might have reminisced on personal experiences of the past.

Rather, I chose to be somewhat philosophical, to reflect on the changes I have seen in the relationships between your group and ours.

I have been chief of Orthopaedics at the Veterans Hospital for 30 years, and have faced many problems in that time regarding brace supply and prosthetic application. My one goal as yours was the satisfaction of the patient. Not always was I successful.

Some of you older men may recall a factual survey I made in 1936-37 as a thesis project on the lower leg amputee. My conclusions were critical but expressed a dissatisfaction on the part of the amputee as well as my

own conclusions. My conclusions were seriously questioned by your group. My solution was in error (that I now freely admit) but the statistics were correct and today by another solution of the problem, we all have better results and happier patients.

The tragedies of war were under my supervision for four years—16,000 in 16 months overseas—a service of 2,200 compound fractures state side. In my last six months of service, I learned and taught salvage methods. I also learned the fallacy of sentimental judgment as contrasted with realistic sympathetic evaluation.

I saw that situation in which the medical profession by past training was unable to cope with amputation problem and saw the inadequacy of procurement of prostheses for the amputee who was all too anxious to complete his rehabilitation and return home. I saw repeated by tens and twenties, the experience I had had at the Veterans Hospital in the years 1927-42.

And yet, while some of us in orthopaedics witnessed this debacle, there was at our beck and call, a group for whom we had had far too little appreciation—faced with reality and dire necessity, we sought and got your help.

This was a great forward step—why? Because our profession has always shied away from the commercial. We saw you as commercial outfits seeking, on your own, the patient we cared for as a potential client of yours, after which we were no longer the physician in charge. And, alas, all too often we welcomed this as a solution to our problem if not that of the patient.

But this forward step brought us to a realization that you also held that spark—that vocational attribute of the true artisan, which seeks to help his fellowman, and that you were better prepared than we to provide for the amputee.

At this point I wish to pay tribute to those of our profession who realized the impasse in which we found ourselves and to their broad-minded approach to the problem, cutting across the lines of prejudice engendered in the past and accepting the aid of your group so magnificently given.

Many of the medical profession fail to realize that the amputee population of World War II is only a small percentage of the total and that your group has for many years past borne the brunt of prosthetic replacement.

However, out of this meeting of the minds, in a solution of immediate, perhaps more dramatic needs, two groups of dedicated people did meet on common ground.

True, in the past, there have been tremendous cooperative efforts between individuals; true that in some countries the problems have been approached as cooperative efforts under state or government supervision, but here two groups met and resolved their problems in a coordinated effort preserving the very essence of our American tradition.

Recognizing the fact that your group had an opportunity for coordinated efforts with our profession, your old trade association was formed into a working organization, in 1946, under your president, Chester C. Haddan. You employed Mr. Jackson as your secretary to develop and foster a service organization. True, your first years were difficult but your ideals were high. Within two years you developed your own American Board of Certification and a code of ethics, and started cooperative efforts with the research projects of the V. A., the National Research Council, the Prosthetic Teaching programs and the Pilot Clinics, now being all too slowly established.

Some, for a time withstood the pressure of what to them might be more idealistic than practical, but only for a time because the practical is after all in its best definition, ideal. The very existence of your organization soon pointed up the laggard, the opportunist, the unwanted in your groups.

And further, your organization has taken into itself any worthy artisan who by his own effort has qualified himself. You have laid out a code of ethics, you have set standards, but you have not been so sanctimonious that you have failed to encourage progress or to recognize ability.

In ten years you have proven how well groups, with similar ideals, similar aspirations, similar vocations may work together for the good of all and most of all for the betterment of our patient's welfare.

For this, I, as an orthopaedic surgeon, for many years concerned with the amputee problem, salute you and thank you.

And now, may I beg one more moment of your time—so conduct yourself that you may continue to attract to yourselves the artisan of the future—the young man with a vocation for the help of his fellowman—who may fill your shoes and carry on your work, keep your ideals, encourage him along the hard road of training. Encourage him to attend research and training schools, both teacher and pupil profit thereby. Make him realize that his ability, his aptitudes and his enthusiasm will have their full reward in a job well done and sincerely appreciated by his patient, and his confreres of whom I am proud to call myself one.”

NEW MEMBERS

New members of OALMA elected since March (see page 109, *March Journal*), are listed below. The addresses, telephone numbers and executive officers of these firms are given here for the convenience of other members.

Ace Orthopedic Appliance Co., Frank V. Cudemo, Manager; 305 George Street, New Brunswick, N. J. Telephone: Kilmer 5-8770. This firm was established in 1932 under the name of New Brunswick Surgical Supply Company. It handles artificial limbs, braces, canes, crutches and wheelchairs.

Acme Surgical Appliance Co., George A. Schultz, President; 1116 S. 16th St., Milwaukee 4, Wis. Telephone: Evergreen 4-0660. This firm has been in operation for seven years in the field of braces, surgical supplies, canes, crutches and wheelchairs. Mr. Schultz is a Certified Orthotist.

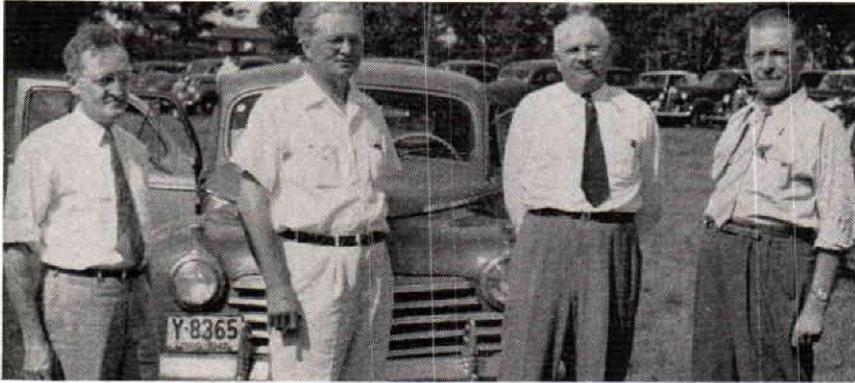
Brand Orthopedic Appliances, Carlos M. Brand, Owner; 36 Delaware Avenue, Albany 2, N. Y. Telephone: 5-4842. This firm is also a member of the Metropolitan Orthopedic Appliance and Limb Manufacturers Association. Mr. Brand, who has had many years of experience in the field, established his firm some six years ago.

DeBender & Company, John A. DeBender, President; 1029 West Irving Park Road, Chicago 13, Ill. Telephone: Wellington 5-6344. This firm was founded in 1947 and specializes in braces. Mr. DeBender is a Certified Orthotist and his facility is Certified.

Mansfield Orthopedic Appliances, John M. Hoy, owner; 154 Carpenter Road, Mansfield, Ohio. Telephone: Lafayette 2-4171. Mr. Hoy is a Certified Orthotist.

Orthopedic Appliance Center of Akron, Morris Gimán, Joe Yanke and David Preisler, partners, 391 South Maple Street, Akron 2, Ohio. Telephone: Portage 2-8211. This firm was nominated for OALMA membership by Otto Becker.

“From Our Family Album — 1942”



A FAMOUS FOURSOME

The amputee picnics sponsored by OALMA Past President Joe Spievak of Youngstown, Ohio, have long been famous. The picture above taken from Our Family Album shows four noted members of the limb and brace profession—two of them unhappily are no longer with us.

Reading left to right in this picture at the 1942 picnic we see: *John A. McCann*, now OALMA Vice President and head of the company at Burlington, N. J., which his father founded; *Joseph Spievak* of Youngstown, originator of these picnics; the late *William E. Arbogast* of Mt. Sterling, Ohio, and the late *McCarthy Hanger, Sr.*, a founder-member, former President and Secretary of the Association.

John A. McCann, the first figure in our album picture, is now serving as Chairman of the OALMA Membership Committee, Regional Director for New York and New Jersey and as First Vice President of OALMA.

The third man in the picnic scene is the late *William E. Arbogast* of Mt. Sterling, Ohio, whose passing is reported in the *In Memoriam* section of this issue. *William Arbogast* was the founder, in 1907, of the Ohio Willow Wood Company which has become one of the leading suppliers to the prosthetic field. The company is now managed by his sons, Edwin and John.

Operations of the company were started on the father's farm, which is located seven miles south of the present location in Mt. Sterling, Ohio. In the beginning only one person was employed in the preparation of willow wood for the facilities which make artificial limbs. As years went by and success crowned the efforts of the founder, various additional lines were added. Today the firm employs forty-five persons and occupies over 13,000 square feet of floor space. All supplies for the manufacturer of artificial limbs are carried in stock. Shipments are made all over the world to established limb manufacturers.

McCarthy Hanger, Sr., (at the far right) had a notable career in prosthetics. Son of the Civil War veteran who founded the firm of *J. E. Hanger, Inc.*, he took an active interest in the development of OALMA, serving first as Secretary and later as President. He founded and developed branches of the Hanger organization in the Middle West. The organization under this name is now headed by his son, *McCarthy Hanger, Jr.* Mrs. *McCarthy Hanger, Sr.*, who survives, was an honored guest of OALMA at the 1955 National Assembly in New Orleans.

OALMA'S WHO'S WHO

NEW MEMBERS



Paul N. Guimond



Carlos M. Brand

Paul N. Guimond is now completing his fifteenth year in the field of orthopedic appliances. His company, the "New England Brace Company" operates establishments at 1011 Hooksett Road, Manchester, N. H., and at 810 Congress Street, Portland, Me.

Mr. Guimond's interest in this field grew out of a personal misfortune: a case of acute osteomyelitis which went unchecked for lack of an available appliance resulting in amputation of a limb when he was 26 years old. With the encouragement of the New Hampshire Society for Crippled Children, he trained at the Buschenfeldt Company in Stoughton, Mass. He completed his training there and remained with the Buschenfeldt organization for two more years.

He then turned to New Hampshire to establish an orthopedic facility for the New Hampshire Society for Crippled Children which he purchased in 1947. In a message to OALMA Mr. Guimond paid tribute to his "very able instructor, Mr. Karl Buschenfeldt" for the success that he has attained in this field.

Carlos M. Brand is now celebrating his fortieth year in the limb and brace field. He began his training in orthopedic appliances in 1917 at the University of Frankfort in Germany. Possessed of an inquiring mind and a strong desire to learn, he went far beyond the ordinary "Wanderjahre" and spent nine years travelling the world over. In Europe he had the privilege of working personally with some of the most famous orthopedic surgeons of that time.

Arriving in the United States in 1926 Mr. Brand found a wide variance in orthopedic practice. Again he took up his travels, visiting most of the

48 states and working in many leading hospitals and orthopedic appliance establishments. Shortly before the second World War he was connected with the University of Tennessee Football Association doing research on braces to prevent foot and knee injury to athletes. He began his World War II Army Service and was assigned to the East Army Football Team at Yale University for three months, making appliances for injured players. Another tour of duty saw him at the Percy Jones Hospital in Battle Creek, Mich. in charge of the orthopedic workshop and training men for orthopedic mechanics. There he stayed until 1945 when he returned to the University of Tennessee at Knoxville. Since 1952 he has been located in Albany managing his own establishment at 36 Delaware Avenue. Mr. Brand retains the energy and curiosity of his youth. He has a special interest in the unusual type of special appliance.

REVIEWS

MODERN ORTHOPEDIC MANAGEMENT: THE SURGICAL CLINICS OF NORTH AMERICA (CHICAGO NUMBER)

*Edited by Edward L. Compere, M.D.
Published by the W. B. Saunders
Company, Philadelphia, February,
1957. 288 pages. illus.*

*Reviewed by Michael M. Amrich,
C.P., Liberty Mutual Rehabilita-
tion Center, Chicago.*

This publication is a collection of articles by prominent Orthopedic Surgeons in the Chicago area. Many of the chapters are quite technical in nature and would be of most interest to the surgeons.

The chapters dealing with treatment of fractures of the upper and lower extremities would be worthwhile reading for the Orthotist. The authors explain the proper techniques and methods of fixation of fractures, the selection of proper metals and appliances and the appropriate techniques of fixation. Excellent roentgenographic photos are utilized to demonstrate the proper methods of fixation and also to show the results of poor or improper fixation. Knowledge of surgical treatment of fractures will enable the Orthotist to better understand and fill the prescription of the Orthopedist for the supporting or assistive brace.

Also of special interest to the Orthotist are the chapters on "Low

Back Pain" and "Rehabilitation of the Infantile Paralysis Patient." Here again, the authors deal with the surgical or acute phase of treatment for these patients prior to their need for orthopedic appliances.

The two chapters on "Amputations and Modern Prosthetics" and "Amputations and Amputees—Adult and Juvenile" deal with surgical amputations, treatment of the stump, post-operative care, and prosthetic replacement for the various levels of amputations. Correct surgical techniques and proper care of the amputation stump is valuable reading for the Prosthetist.

Each chapter explains in detail the prosthetic replacement for the various levels of amputation. Both chapters on Amputations are similar in content with the addition of a section on juvenile amputees, in the second chapter.

Of special interest to both the Prosthetist and the Orthotist are the chapters on "Problems of Hand Surgery" and "Fractures and Dislocations About the Wrist."

A knowledge of the problems related to partial hand amputations will benefit the Prosthetist in fitting a cosmetic or utility prosthesis to such an amputee. Similarly, the Orthotist who works on dynamic or static splints will benefit from the chapter on fractures and dislocations about the wrist.



TRUFORM GRADUATING CLASS: Shown above is the graduating class of surgical fitters held in Cincinnati, May 6-10, 1957. These schools are sponsored by Truform Anatomical Supports (a division of Surgical Appliances Industries). Russell E. Johnson of the Truform organization is shown standing in the back row at the right. Dr. H. L. Boyland, Medical Director of the company and teacher of the classes, is in the front row center. Others in the picture include: Richard Alban, Dankmeyer's Prosthetic Center, Baltimore, Md.; Mrs. Fay Beauchot, Wayne Pharmacal Supply, Ft. Wayne, Ind.; Mrs. Elizabeth Breese, Clyde Edwards Orthopedic Shop, Muncie, Ind.; Mrs. Bertha Dankmeyer, Dankmeyer's Prosthetic Center, Baltimore, Md.; Clyde Edwards, Edwards Orthopedic Shop, Muncie, Ind.; Cyrus M. Harris and Mrs. Della L. Harris, CyDell Surgical Supplies, Sarasota, Fla.; Warren F. Inwold, Dankmeyer's Prosthetic Center, Baltimore, Md.; Robert L. Jones, Bowman Bros., Inc., Lima Ohio; Raymond W. Marvin, Union Artificial Limb Co., Pittsburgh, Pa.; P. D. Miller, Thomas G. Powell Co., Richmond, Va.; William F. Pochardt, Kreiser's, Inc., Sioux Falls, S. Dak.; Thomas G. Power, Jr., Thomas G. Powell Co., William J. Sheehan, New Mexico Chemical Surgical Co., Albuquerque, N. Mex.; Mrs. Elizabeth Swindell, Cincinnati, Ohio; John L. Weldon, House of Bidwell, Inc., Madison, Wis.; Miss Martha E. Willhoff, Max Woche Co., Cincinnati, Ohio; I. M. Pease, Truform Sales Manager and Miss Hazel Angst, Truform, staff member.

Two Schools This Fall

Truform Anatomical Supports are now announcing the dates of their fall schools for Surgical Fitters:

A one-week school will be held from Monday, October 14 through Friday, October 18, 1957, at Cincinnati, Ohio.

Another one-week school will be held from Monday, October 28 through Friday, November 1, 1957, at Cincinnati, Ohio.

Dr. H. L. Boyland, Medical Director of the company, will be in charge of both classes.

Registration will of necessity be limited but will be accepted on a priority basis. For registration blanks, please address:

Truform Anatomical Supports, 3960 Rosslyn Drive, Cincinnati 9, Ohio.

THE GERMAN ORTHOPEDIC TECHNICIAN: An Important Element in the Rehabilitation Family.

Abstract of an article by Fritz Pueschel of Berlin

Editor's Note: German orthopedic technicians have long held high rank in the United States, and there has been much interest in recruiting skilled personnel from Germany. Because of this interest we are publishing here an abstract of an article "Can the German Orthopedic Craft Export Their Products?" by Fritz Pueschel of Berlin. We are indebted to Carlton E. Fillauer, C. P. & O., and Hans R. Lehneis, C. P., both of Chattanooga, Tenn., for this excellent summary of the original article, which appeared in the German magazine, "Orthopaedie Technik."

"It can be taken for granted that all manufacturers of all varieties of goods are not only interested in successfully selling quantity and quality-wise in Germany but also in foreign countries. This too applies to the orthopedic craft and its industry.

"The governments of foreign countries are most interested in supplying their handicapped with the best possible prostheses and in the most advanced method. In Germany, manufacturers of orthopedic parts—that is, the orthopedic industry—have developed valuable and new designs with which they can compete with foreign markets. It is not surprising then that these countries are starting to use German precision craftsmanship in their own manufacturing, so we have experienced for a number of years a steady improvement in our relationship with other countries. This is different with finished or completed orthopedic and prosthetic products since they are made individually and have to fit specific measurements. Although the demand for specially made appliances is growing more and more we cannot speak of any organized exportation in this respect. In any case, whether it is the orthopedic industry or the orthopedic craft, one can say that they are very well qualified for the exportation of their products. We must remember that our skilled technicians have a very important part in these accomplishments. Not only personal, but also professional reasons have inspired orthopedic technicians to emigrate to foreign countries in answer to the demand for trained workers."

The author then quotes from a letter by a German who first went to Switzerland and Austria and then to France where he is well satisfied with his present living standards. This letter includes a cost list of food, clothes, etc., for his area in France.

Similar statements were made by other colleagues who emigrated to different European countries. "To be able to speak the country's language is the most important prerequisite besides an excellent knowledge of orthopedic techniques in order to be successful in a foreign country.

"The United States is the favorite country for emigrants because it affords especially good possibilities. From a number of younger colleagues in America I was assured that, as in other foreign countries, speaking the language and excellent professional knowledge are of the utmost importance. The U. S. has a considerable demand for trained technicians.

"As a result of the demands of the victims of war, traffic, and industry, the training of our American colleagues now is, in many respects, comparable to the German program. The American training program requires a four-

year practical apprenticeship while the theoretical knowledge has to be obtained in evening courses at universities. For his certification as an orthopedic technician he has to pass a special examination."

Now Mr. Pueschel reprints a letter from a German who immigrated to the United States in 1954. The writer of this letter explains how he prepared to come to the States and about his present job, working hours, earnings, etc. He also tells about the pleasant relationship between himself and his employer and the excellent living conditions. The immigrant ends his letter saying that the best preparation for an immigrant is excellent theoretical and practical knowledge of the art.

Mr. Pueschel concludes his article saying: "Although we appreciate the research work and development by our foreign friends, we can proudly say that our method of training is another quality product of the German orthopedic craft. Therefore we are very well able to export not only partial or semi-finished products but also personnel."

NEW ADDRESSES

Robin-Aids Manufacturing Company is now in its new building at 3353 Broadway, Vallejo, Calif. This is some twelve blocks from the old address (please correct all mailing lists and the Registry of Certified Facilities).

Mail for Becker Orthopedic

To more efficiently serve their customers, the *Becker Orthopedic Appliance Company* has consolidated all of its operations at the Birmingham, Mich. address. The branch located at Crozet, Va., has been closed.

All mail should be sent to the Becker Orthopedic Company, 639 Elm Street, Birmingham, Mich. Otto K. Becker, President of the company, reports that a complete line of the cerebral palsy brace joints is available and will be on display at the OALMA National Meeting in Washington.

The American Limb and Orthopedic Company of Chicago announces the opening of a branch office. The new branch is located at 32 East Chester Street in Champaign. Samuel J. Boyd, C.O.&P., is the manager of this new branch, according to word received from Sheldon Brown, President of the company.

Joseph E. Traub, C.P. and *Cecil Brand* announce the opening of a new artificial limb and brace establishment at San Bernardino, Calif. The new firm is known as the "Arrowhead Orthopaedic Company" and is located at 631 "D" Street. The telephone number is Turner 6-2131.

J. A. Pentland, who was certified as a prosthetist as a result of the 1956 examinations, is operating his own prosthetic and orthopedic establishment at Vancouver, British Columbia. The firm is located at 2963 Sambie Street, Vancouver.

As of March 1, the *Evansville Indiana Branch of J. E. Hanger, Inc.*, was moved to new enlarged quarters at 923 Main Street.

MOALMA Honors the Tenenbaums



FOR OUTSTANDING SERVICE: David E. Stolpe, acting for MOALMA presents a citation of appreciation and recognition to Milton and Adele Tenenbaum of New York City. Mr. Tenenbaum is current President of MOALMA and Mrs. Tenenbaum is the former Chairman of their Educational Committee.

Remarks by David E. Stolpe in Presenting the Citation at the MOALMA Conference May 3, 1957

Milton and Adele Tenenbaum are graduates of the National Academy of Design, where they first met. Outstanding in their achievements, they are one of the most devoted husband and wife teams in the Prosthetic Field in the country.

Besides sculpturing and painting, the Tenenbaums are known for the design and construction of life-like mechanical figures which were used for exhibits and displays. Both did work for the New York World's Fair.

The first Cosmetic Hand was developed from animated figures used in motion pictures, and was mentioned in the literature through one of their patents applied for December 30, 1937.

Another patent applied for April 7, 1945 made possible Cosmetic Gloves having real fingerprints, for use with mechanical hands. In this connection they did experimental work with the F.B.I.

Some of their original developments for Upper Extremity Amputees were:

1941—Partial hand with interchangeable skin-like gloves and air-foam construction.

1942—The first suction sleeve which eliminated side-joints and biceps-lacers.

The first time a Cosmetic Hand, as it is known today, was exhibited at Convention of the American Medical Association.

1943—The first Veterans Administration contract for Cosmetic Gloves and Hands.

1944—Air-foam Hands which were exceedingly light in weight.

1945—The first all-plastic Cosmetic Glove.

At the beginning it was extremely difficult to gain acceptance for their work. They persevered, however, and today Cosmetic Gloves have become a necessary factor in the mental rehabilitation and public acceptance of Upper Extremity Amputees.

The Metropolitan Family of Prosthetists and Orthotists is proud of its Tenenbaum members—and for their important contribution in Cosmetic Prosthetics awards the following Citation:

“We, the members of the Prosthetic and Orthopedic Profession, through this symbol, express our recognition to Milton and Adele Tenenbaum for your achievements in enabling so many of the handicapped to rehabilitate their lives through the invention and development of Cosmetic Prostheses.

“Presented this third day of May 1957 at the Prosthetic and Orthopedic Conference, Hotel Biltmore, New York City.”

MOALMA Conference Hears Wilson and Somers

The twenty-first anniversary of the Metropolitan Orthopedic Appliance and Limb Manufacturers Association inspired officers and members to put on the largest prosthetic and orthopedic conference in the history of the Region. This was held at the Hotel Biltmore, New York, May 3 and 4, under the direction of Charles R. Goldstine, Program Chairman.

Over 150 persons were in attendance, including vocational counsellors, representatives of insurance companies, nurses, occupational therapists, physical therapists, physicians, social workers and suppliers in addition to orthotists and prosthetists. Twelve states, Puerto Rico and five foreign countries were included in the registration.

At the opening session May 3, the conference heard Donald V. Wilson report on *Prosthetics World-Wide* (Mr. Wilson is Secretary-General of the International Society for the Welfare of Cripples).

The Complexion of Misfortune was the challenging topic of Bernard J. Somers, staff psychologist for the Institute for Crippled and Disabled. Mr. Somers' address is printed in this issue of the *Journal*.

New Developments in Lower Extremity Socket Techniques came under the skilled scrutiny and careful discussion of this panel of experts: Fred Eschen, CP&O, Moderator; Martin Durec, CP; Jerome Kessler, CP and William Spiro, CP&O.

Reference Aids on Orthopedic Appliances were reviewed by Lester A. Smith, Assistant Director of OALMA and Editor of the *Journal* (copies of the Reading List are available upon request to OALMA headquarters).



HEAD TABLE AT THE MOALMA BANQUET: Above left to right are: Karl Buschenfeldt, Vice President of OALMA; A. A. Margoe, Vice President of MOALMA, Lester Smith, Editor of the Journal and Assistant Director of OALMA, Dr. Donald A. Covalt, Don Wilson of the International Society for the Welfare of Cripples, MOALMA President Milton Tenenbaum, Gen. Harold W. Glatty, Executive Director of the Prosthetics Research Board, OALMA Director Glenn Jackson, Mr. Louis Salzman, Assistant District Supervisor of the New York State Department of Vocational Rehabilitation, OALMA Vice President John McCann, Jerome Kessler, Secretary and Treasurer Richard C. Gottheimer of MOALMA.

Other features of the New York meeting included:

(1) A panel discussion of problems of the *older age group*. Taking part in this presentation which was moderated by Herbert B. Hanger were: Mary S. Dorsch, CP&O, Walter J. Henzel, CP&O, Adolph Margoe, CP&O, Charles R. Goldstine, CP&O, Donald A. Covalt, M.D., Michael Dacso, M.D., Allen Russek, M.D., Jacob Schmukler, M.D., and Samuel Sverdlik, M.D.

(2) A presentation of cases moderated by Charles R. Goldstine included contributions by: Frank Entwistle, M.D., Allen Russek, M.D., Shyh-Jong Yue, M.D., M. Hrousanov, M.D., Jerome Lawrence, M.D., Earl Hoerner, M.D., George Dorian, M.D., Julius C. Fellicetti, M.D., Howard Eli Finkelstein, M.D., Lillian Bettinger, Mary S. Dorsch, CP&O, Edmund J. Gernannt, CP&O, George R. Hartmann, CP&O, Konrad Hoehler, CP&O, Jerome S. Kessler, CP, Robert J. Mitchell, CP, William Spiro, CP&O, Albert St. George, CO.

(3) A report on *New Devices and Techniques* was moderated by William Spiro of the Conference Committee.

WHAT'S NEW(S)

Mr. and Mrs. Jerome Kessler of Newark, N. J., announce the birth of a son, Richard, on May 14. Mother and son are both doing fine. Father is preoccupied with his duties as head of Kessler Associates and as Secretary of the Metropolitan Orthopedic Appliance and Limb Manufacturers Association.

Nineteen fifty-seven is an important anniversary year for the *House of Pomeroy*. It is the ninetieth anniversary of its founding. This famous establishment in the field of surgical and orthopedic appliances has its headquarters at 16 E. 42nd St., New York City, and maintains branches at Brooklyn, Boston, Springfield, Mass., and Wilkes-Barre, Pa.

Joseph H. Martino, C.P., head of the United Limb and Brace Company of Boston, has recently completed lectures to students of Wheelock College on the subject of Modern Prosthetics. Students visited the facility of the United Limb & Brace Co. at 15 Berkeley St., Boston, in order to see for themselves the development in this field.

CROSS COUNTRY REPORT

What's New in the Brace and Artificial Limb Field Meetings - OALMA - Suppliers - Certifees

Spring and early summer are the traditional meeting season for the eleven OALMA Regions in which the United States and Canada are divided. These sessions are "grass-roots seminars" in which individual members of the limb and brace profession discuss their common problems.

This year, something new has been added. That is a substitution of "free discussion" for the formal type of program which has predominated in the past.

There has been a feeling that the formal type of program fell short somehow of its maximum potential for the solving of problems. So this year, Region IV, the Southeast, meeting at Tampa in February, decided to go on wholeheartedly to a new type of meeting. The entire time of the session is devoted to free discussion—noted authorities are present, but they are on hand not to deliver long formal addresses but rather to take part in the discussions and to contribute from their wisdom and experience to the solving of common problems.

OALMA Executive Director Glenn Jackson has for some time experimented with this type of "freewheeling" conference, and with his encouragement, Region IV under the leadership of Jack Caldwell, gave it "the old college try." It is safe to say that the experiment succeeded beyond all expectations. Word of its success went out to other Regions and it has been widely tried and successful as detailed below.

Fortunately for the experiment was the fact that OALMA President Hennessy was able to be present at Regional Meetings and to take part in the "buzz sessions" at Tampa, at Houston, Tex. (Region VIII), at Minneapolis (Region VII), at Chicago (Region VI), and at Cleveland (Region V).

It is anticipated that the same method will be used at the meetings on the West Coast the end of June—at Tacoma June 22, at San Francisco June 26, and at Los Angeles June 28.

How It's Done

At Tampa and at later meetings this year, the meeting room was especially arranged for the convenience of those present. Delegates, visiting officials, authorities and beginners alike sat at tables heading into the head table where the moderator stood. Large blackboards were used to list the questions. The moderator selected the questions on the basis of the presence of the experts, the timing conditions, and the needs of the audience as voiced in their reports.

The basis of this new program lies in the simple proposition that a group when assembled can be trusted to identify the most important questions which are bothering them. It is believed that better solutions come out of give-and-take discussions than from formal speeches which often leave unanswered the problems that are bothering the audience. As a further advantage,

Region VII Meets



C. O. ANDERSON GIVES DEMONSTRATION: A demonstration of cosmetic devices by C. O. Anderson of San Francisco, was a feature of the Region VII, at Minneapolis. Shown above, left to right are: Regional Director Erich Hanicke; Everett Haines, new Regional Council President; Walter H. Erickson, Regional and Program Chairman; C. O. Anderson, head of Prosthetic Services of San Francisco; OALMA President Hennessy; Lorrin M. Madsen, Council Secretary. The 1958 Regional Meeting will be held at Des Moines, Iowa under the chairmanship of Everett Haines.

the "experts" instead of being restricted to one set speech, were encouraged to "put in their say" at any time—and they did.

As a beginning the audience is broken into small "buzz groups." For a few minutes, these buzz groups work on the question "What problems are of concern to us today?" Then the call to order as buzz groups report the results. At a typical meeting a score of problems might be listed. They run the gamut of "What needs research in braces?"—"What are the plans for the 1958 VA contract?"—to "What about these new courses at NYU and UCLA?"

REGIONAL MEETINGS CONTINUE

Other sessions at which the "Problem Clinic" technique was used with great success include:

The meeting of Region VII at Minneapolis on April 26 and 27 (the presentation by Dr. Edward Evans entitled, "An Orthopedic Surgeon's Version of a Modern Prosthetist" was one of the features of this meeting. It is quoted in full in the column by President Hennessy in this issue).

The meeting of Region VI at Chicago, May 25 and 26, under the Chairmanship of Ralph Storrs. A report on this session and some of the



PRESIDENT HENNESSY EXPLAINS A POINT AT THE MINNEAPOLIS MEETING—Left to right: OALMA Director Glenn Jackson; Dr. F. J. Kottke, Head of Physical Medicine and Rehabilitation Department, University of Minnesota; W. H. Erickson, Regional President; OALMA President Hennessy and Program Director Bob Gruman.

excellent pictures taken by Hank Bates, *Truform* representative in the Middle West, will appear in the September issue of this *Journal*.

The Southwest Holds Problem Clinic

Reported by F. L. LAKE

Over 100 members of OALMA and guests assembled at the Shamrock Hilton Hotel in Houston, Tex., March 16 and 17, to hold a unique type of meeting. For the first time the annual meeting was arranged as a Problem Clinic, with Glenn Jackson, Executive Director of OALMA, serving as moderator. The meeting was carefully planned by Director Al Muilenburg, Sam Dobyanski and Richard Terry to avoid "canned" speeches, enabling everyone to "get into the act." Everyone present was allowed and encouraged to submit any question on which he desired information, whether it covered the field of research, psychology, geriatrics, rehabilitation, kinesiology, prosthetic education or any other phase of the limb and brace field.

On hand to help solve these problems were such notable authorities as Lt. Colonel Maurice J. Fletcher, Director of the Army Prosthetics Research Laboratory; A. Bennett Wilson, Jr., Staff Engineer with the Prosthetics Research Board; Dr. Robert E. Stewart, Director of the VA Prosthetic and Sensory Aids Service; Dr. Miles A. Anderson, Director of Prosthetics Education, University of California, Los Angeles; Charles A. Hennessy, National



THE EXPERTS CONSIDER A VETERAN'S PROBLEM: Voigt W. Baker, VA Area Chief for the Prosthetic and Sensory Aids Service chats with Dr. Einar C. Andreassen, VA Area Medical Director; OALMA President Hennessy and William H. Talley, Assistant Director, P&SA Service, Washington.

President of OALMA; John Bray, prosthetic instructor at the University of California; Howard Thranhardt, Atlanta, Ga.

Noted authorities from the Houston area included: Dr. Edward T. Smith of the Arabia Temple Crippled Childrens Clinic; Dr. James A. Carroll, psychiatrist at the VA Hospital; Dr. Frederick G. Dorsey of Baylor Medical School; Dr. Lewis A. Leavitt, Chief, Physical Medicine at the VA Hospital.

MINUTES OF REGION No. V

The annual meeting of Region V of OALMA was held May 18th and 19th at the Cleveland Hotel, Cleveland, Ohio. Registration commenced at 5:00 P.M. E.S.T., followed by a social hour until seven P.M. There were forty-six registrations.

The banquet was served shortly after seven, featuring the hotel's famous roast beef. Mr. Lou Barghausen opened the meeting with a warm word of welcome and turned it over to Mr. Paul Leimkuehler, the regional director who introduced the panel of guest speakers. They were Les Smith, the assistant director of OALMA; Dr. Sidney Fishman, PhD., project director, prosthetic education, New York University; Dr. Miles Anderson, prosthetic education program, University of California; William H. Talley, chief of plans and polices division, prosthetic and sensory aids devices, Veterans' Administration, Washington, D. C.; Dr. R. P. Rizzo, MD, V. A. Clinic Chief, Cleveland, Ohio; and Ed Moriarty, District Supervisor, Bureau of Vocational Rehabilitation, Cleveland, Ohio.



PANEL MEMBERS FOR REGION V: Dr. R. P. Rizzo, orthopedic surgeon and VA Clinic Chief at Cleveland; Paul Leimkuehler, CP, Regional Director; Dr. Sidney Fishman, Head of Prosthetics Education at New York University and L. B. Barghausen, CP, Regional President. This and other pictures taken at the Cleveland meeting of OALMA Region V, are the work of Robert O. Nitschke, Leimkuehler Limb Co.



CHECKING THE REGISTRY: Left to Right—Dr. Roswell L. Lowry, H. P. Barghausen of Pittsburgh; OALMA President Charles Hennessy and Albert Zuidema, VA Area Chief.

Les introduced each panelist as to the part they play in rehabilitation and assisting the handicapped. The audience was then divided into small groups to formulate further questions than those previously submitted. Each panelist had a chance, through the questions to offer a good bit of his advice and knowledge to phases of specific interest to those present. Due to the enthusiasm shown by all, the hour soon grew late and the meeting was recessed until 10:30 A.M., Sunday.



WHAT WAS THAT QUESTION? Four of the panel members at the Cleveland session review a discussion point. Left to right: Ralph Storrs, OALMA Regional Director, Region VI; Charles Rosenquist, Secretary of Region V, CO of Columbus; Roy A. Wing, Chief of the Prosthetic and Sensory Aids Unit in the VA Regional Office at Cleveland; Dr. Miles Anderson, Director of Prosthetics Education, UCLA.

Mr. Leimkuehler opened the business meeting with the reading of the secretary's and treasurer's reports. The new by-laws, that were previously drawn up, were discussed and recommended for further study by the membership. After an opportunity for corrections was made available, the copies were to be sent to Mr. Kloene of Toledo. He, as chairman of the by-laws committee was to introduced the revised proposed by-laws for membership vote at the next annual meeting.

The passing of Mr. William E. Arbogast of Mt. Sterling, Ohio was announced and tribute paid to his contribution to helping the handicapped.

The nominating committee proposed the following slate of officers for the coming year. Mr. A. E. Kloene as president, Mr. C. W. Rosenquist as vice president, Mr. D. R. Coon, as secretary and treasurer. Mr. Wood moved the nominations be closed and a unanimous vote to be cast for the slate, seconded by Mr. Corbin. The vote carried.

Mr. Hennessey, the president of OALMA gave an interesting talk on the prospect of achieving a better professional recognition through education, training, and becoming recognized as a society of fitters rather than an association of manufacturers. He extended the best wishes of the parent organization to our region and gave us a lot of encouragement to work harder towards a more active and well organized group.

It was moved by Mr. Workman and seconded by Mr. Hoy that the next meeting be held in Toledo in March, 1958. Mr. Kloene of Toledo, the new president, accepted the responsibility of the arrangements and the setting of the exact date. The motion carried.

The meeting adjourned and the panel discussion continued until noon. At that time the members and guests left to visit the Leimkuehler Limb Company at 1426 West Third Street, a short walk from the hotel. Here again with good fellowship and the exchange of ideas and experiences the full meaning of our meeting became a reality.

With reluctance the group returned to the hotel and then said fond farewells.—Charles W. Rosenquist, Secretary.

The OALMA Prexy Travelled Far and Wide to Be With Members



Mrs. Betty Hanicke of Kansas City and Mrs. Alice Crowell, Tru-form representative in the Northwest, welcome President Hennessy to the Region VII conference. Regional Director Erich Hanicke is shown at the right.

NEW ENGLAND STATES

The New England Regional Council of OALMA met on May 27, at the Medical Library in Boston. In addition to members, an invited audience of physicians, physiotherapists and other guests heard three staff members of New York University's Prosthetic Courses:

1. Edward Ford on "Experimental Devices Still in the Research Phase."
2. William Hitchcock on "Biomechanical Considerations of Lower Extremity Prostheses." It was a homecoming for Mr. Hitchcock, who was formerly a member of the Council as Head of the Boston Artificial Limb Company.
3. Warren Springer, therapist-instructor, covered the subject of "Check-out Procedures and Gait Abnormalities."

The meeting re-assembled the following morning at the facility of the United Limb & Brace Co. in Boston to hear Mr. Hitchcock present a problem case.

The New England Council ordinarily meets during the year, on the second Monday of each month. Visiting prosthetists are cordially invited to attend the meetings, which are usually held at the Rehabilitation Center, 691 Boylston Street, Boston, through the courtesy of the Liberty Mutual Insurance Company.



OFFICERS OF THE PENNSYLVANIA ORTHOPEDIC-PROSTHETIC SOCIETY

Left to right: Eugene Teufel of Elizabethtown and Andrew Pope of Pittsburgh, both members of the Executive Committee; Lt. J. Rogers, U. S. Naval Reserve; Secretary-Treasurer Moritz Apitzsch of Pittsburgh; OALMA Director Glenn Jackson; President Basil Peters, President of the Pennsylvania Orthopedic Prosthetic Society; E. H. Warnick, member of the Executive Committee; Vice President Nunzio Pulizzi of Williamstown and Anthony Cocco of Philadelphia, new member of the Executive Committee.

The Pennsylvania Orthopedic and Prosthetic Society at its meeting in Philadelphia May 3-5, paid tribute to and awarded testimonial gavels to Past Presidents K. B. Nelson and Walter McCarty. Members paid tribute to recently deceased Past President, John Cocco, and presented a testimonial gavel to his widow.

Lt. Theodore Y. Rogers, III (MC USNR) spoke on *Bracing and Prosthetics from the Orthopedist's Viewpoint*.

Dr. Constantine Psaki and Dr. Robert Doman presented certificates to the prosthetists and orthotists who had successfully completed the fifteen-hour course in anatomy. This was given at the Rehabilitation Center at Philadelphia under the auspices of Region III of OALMA, Basil Peters, Director.

Among technical discussions presented were: (1) the Ilfeld Splint and Celluloid Jacket by Walter McCarty; (2) the Above Knee Metal Suction Socket Prosthesis by Arthur Birdsey, (3) A Case History of a Bi-lateral AK and BK from age 6 to 15 years, by Basil Peters; (4) Plaster Techniques by K. B. Nelson.

For Your Calendar:

Two OALMA Regions have already selected the dates for their 1958 meetings. They are given here for the convenience of other regions which want to avoid conflicts in dates:

Region IV, OALMA meets February 14, 15 and 16 at the Fort Sumter Hotel in Charles-

ton, S. C. W. L. Floyd is in charge of arrangements.

Region VIII of OALMA meets at the Gonzales Warm Springs Foundation for Crippled Children, Gonzales, Tex., on Saturday, March 8, 1958. R. N. Witt, Director of the Institution's brace shop, is in charge of arrangements.

With Our Friends in California

A Visit by OALMA Assistant Director Les Smith

"A Visit to the Other Man's Place"—A Chance to Talk Over Problems and See How He's Doing"—that's almost a universal desire among members of OALMA. And if there is a universal complaint it is that the obligations of the profession keep them "tied to home base" and don't allow time to see other artificial limb and brace establishments.

This universal desire was very much in my thoughts last April, when suddenly it became possible for me to attend the UCLA prosthetics course as an observer. President Hennessy and Director Glenn encouraged me to make the trip by way of San Francisco. And they also allowed me sufficient time to do some visiting with OALMA member firms in the Bay Area and in Southern California.

This then is a report on that trip. I hope it will interest and encourage Eastern members to take a "busman's holiday" when they next visit California. I can testify they will receive a royal welcome from our California colleagues.

My flight from Washington was a non-stop trip via United Airlines. As we flew high over this wonderful country of ours headed toward San Francisco, I remembered a similar trip in October of '56. Then Miss Rhys and I were headed towards our National Assembly at San Francisco.

Memories of last year's Assembly were much in my mind when I landed in San Francisco. And the first man I saw in the lobby of the Sheraton-Palace Hotel in San Francisco was *OALMA President Hennessy*. He and a number of other prosthetists were spending the week at Oak Knoll, studying problems of below-knee fitting and alignment. The conference had been underway all week at Oak Knoll, he told me. He had spent long hours around a roundtable in the shop with such noted prosthetists as Howard Thranhardt of Atlanta, Carlton Fillauer of Chattanooga, William Hitchcock of NYU, Henry Gardner of the VA, John Galdik of San Francisco, and Frank Moos of San Jose. Dr. Miles Anderson and Ray Sollars of UCLA

were on hand to guide the conference and to record all this accumulated knowledge. The procedures they use in fitting BK cases were evaluated and written down that week. Out of it, it is believed will come a useful *Manual* on the subject and possibly some schools similar to the ones on AK Fitting which are now being held at UCLA and New York University.

That evening I not only got a steak dinner out of our National President, but also much valuable information about the Regional Meetings at Tampa and Houston which he had attended. President Hennessy is a strong believer in Regional Meetings of the Association. He is convinced that they lend strength to the National organization and help us in solving problems.

Next morning I didn't stay long in the hotel. It didn't seem right not to see OALMA members coming around the corner of the lobby. I've had this same feeling when I've gone to other hotels in other cities which have been the scene of past OALMA Assemblies. You go in the Jung Hotel in New Orleans or the Drake in Chicago or Haddon Hall, Chalfonte in Atlantic City, and you keep wondering to yourself, "Who are all these strange people? Why don't I see an OALMA member?" You begin to feel like you're a ghost and you want to get out of the hotel which once was crowded with OALMA members and their ladies rushing from session to session.

"Around San Francisco"

A phone call to Vallejo up the Bay brought word that *George Robinson* of Robin-Aids was in San Francisco that morning taking his wife to a hospital (happily, for she has recovered from the illness). But I had the pleasure of talking to *George Gage*, his partner, who reported that the company was moving into fine new quarters. I had seen their older building in 1954.

My first call that morning was to *Dan Muth*, who has his own prosthetic facility at 1093 Mission Street. Dan is an old friend and it was good to talk with him again. Our conversation, however, had to be spaced in between visits of clients, who kept coming in to see Dan. It was gratifying to see the fine professional relationship he had with his patients and the very evident respect in which they held him and his services. Mr. Muth is a native of Kansas. He has been active in the prosthetic field since World War I, first in Portland and Seattle (with the Lundberg Company) and has had his own establishment in San Francisco since 1932. His shop is small but very efficiently arranged. A feature of the decorations are a series of beautiful charts of anatomy, which are framed on the wall of the waiting room.

Taking leave of Dan regretfully because his conversation and observations on life in prosthetics make you want to stay and be a good listener—our next port of call was the R. E. Huck Company at 2058 Market Street. This is the establishment of *Edward W. Snygg*, who is serving with distinction on the Certification Board. He, as you know, is Chairman of the Examinations Committee for the Certification examinations in Washington this fall, and held a similar post for the San Francisco Assembly in 1956. Ed came into our prosthetics field from the dental technology field. He has expanded considerably operations for the Huck Company, and does some very detailed and exacting work in cerebral palsy bracing. This morning, I found him busy with a shoulder disarticulation case. Before long the patient voiced his grateful thanks and went on his way. Then we had a chance to talk and to go through the facility. Ed is not too busy to have time for civic responsibilities. He is currently a lieutenant colonel in the U. S. Air Force Reserve, serving as one of their specialists in civil defense problems.



(*Photograph courtesy of Warren Sturgeon, Laurence Orthopedic Appliance Co.*)

NORTHERN CALIFORNIA MEETING: Over three centuries of service to the handicapped is represented in the careers of these Bay area members and their guests. Seated, left to right: OALMA Assistant Director Lester Smith, Dr. Robert E. Stewart, Director of the VA's P and S Service, Howard Thranhardt of Atlanta, Ga., Past President McCarthy Hanger and OALMA President Hennessy. Standing first row, left to right: Dan Muth, Ray P. Benjamin of Vallejo, William S. Cicone, Frank Moos of San Jose, Certification Board member Edward Snygg, A. D. Craig of Modesto, Matt Laurence, host for the evening, Herman Hittenberger of San Francisco and Warren S. Miller of San Jose. Standing at the back: Herbert Hart of Oakland, now Regional Director, C. O. Anderson, Professor Howard Eberhart of the University of California, John S. Galdik and Dr. Miles Anderson, UCLA.

After luncheon at Fisherman's Wharf, we headed out to San Leandro to see Paul Spracklen. The story of the Spracklen Joints is a fabulous one. Everywhere I've gone OALMA members have paid tribute to the strength of the joints made by Paul Spracklen. We found him in San Leandro in a small building crowded to the walls with valuable machines. Here one man produces the famous joints, which are made with no compromise whatever on quality standards. They are practically "custom-made" operations. We talked about his production problems—his inability to locate skilled assistance. Paul told us the story of how the man who had trained him had announced his plan to retire—"One day he threw his hammer in a corner of the shop and said, 'that's it, I've retired!'" We got the feeling that Paul Spracklen would make the same announcement some day, and that it will be a major loss to our field. Certainly, any member coming to California will profit from a visit and talk with this man in San Leandro.

That evening found us at dinner on Fisherman's Wharf with Certification President Carlton Fillauer, OALMA President Hennessy and our good friend Howard Thranhardt of Atlanta. All were full of enthusiasm about their week's conference on BK Fitting Problems. But they took time to say nice things about the March issue of this *Journal*, which was very good for the morale of the editor.

A VISIT TO MATTS

Next day found us in Oakland, Calif., visiting the Laurence Orthopedic Appliance Company. We had been here before; in fact, I have happy memories of a Regional Meeting and party there given by Matt for all members of Region XI. On page 113 of this *Journal* there is a picture taken of yet another meeting at Matt Laurence's facility. This was in June of 1956.

Those who know Matt Laurence—know the truth of the comment "he never leaves you in doubt where he stands." I spent the next hour trying to extract biographical data from Matt for an article that I have in mind doing. But he was more interested in expounding vigorously his philosophy of prosthetic service than in "blowing his own horn."

Matt operates his establishment strictly on a prescription basis. He has had some very interesting and difficult cases—one I recall was a young Mexican boy who had lost both arms as a result of an encounter with a savage bear in the Mexican mountains. The pictures of this boy wearing the prostheses made for him by Matt are striking evidences of what prosthetic care can do for a handicapped human being.

The facility itself on Telegraph Road is roomy and well-arranged. There are attractive murals in the waiting room. The shop rooms to the rear are crowded with expensive machinery. A sideline of this facility which is winning national recognition is the affiliate firm making low pressure hydraulic cylinders. These are marketed under the firm name "Orthopneumatic."

We stayed on most of the afternoon and enjoyed coffee with the employees and associates of this firm. Some of these are old friends. It was good to see *Warren Sturgeon*, who is an excellent amateur photographer.

Hittenberger's

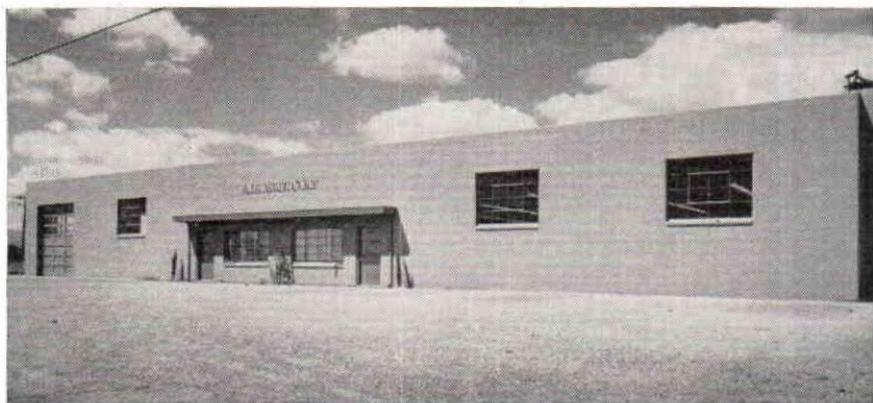
One San Francisco firm—C. H. Hittenberger—has an international reputation. This is due primarily to the integrity, skill and personality of its founder, the famous C. H. Hittenberger. This firm has branches in several California cities in addition to the establishments located in San Francisco. A phone call to the Main Office gave me an opportunity of talking for a few minutes with the founder, C. H. Hittenberger (an article by Chester C. Had-dan in the March, 1954, issue will be interesting both to those who know "C. H." and those who have not yet had that pleasure).

Another phone call put me in touch with *Lloyd Brown* of the Dorrance-Hosmer Company at San Jose. Lloyd, who was Exhibits Chairman for last year's Assembly, was interested in plans for the Washington Assembly. So also is his wife, Mrs. Ruth Brown, who is President of the Ladies' Auxiliary. Both the Dorrance and Hosmer Companies are expanding operations. A picture of the new Hosmer building appears in this issue of the *Journal*.

Herbert Hart

A side trip to Oakland, Calif., gave me an opportunity of visiting with Herbert Hart, our Regional Director for Northern California and Nevada. Herb Hart was Program Director for the 1956 Assembly. That experience has given him strong convictions about the type of program we should hold. We went over plans for the Washington Assembly and possible sites for future conventions.

Mr. Hart has been associated with the Hittenberger Company since 1930. A native San Franciscan, he has been in charge of the Oakland office since 1935. Visitors to the San Francisco Assembly will remember the hospitality of Herbert and his wife, Harriette. They have a son, Barry, and a daughter,



Pictured above is the new home of the A. J. HOSMER CORPORATION. The new mailing address is P. O. Box 152, Santa Clara, Calif. Telephone number is now CHerry 3-9200. The new building is located at 2362 De La Cruz Blvd., which is directly across the street from the planned extension of the San Jose Municipal Airport. With the arrival of jet airliners, this airport is expected to become an important San Francisco Bay Area terminal with major East, West, South Pacific and Far East connections. Future visitors arriving by air will be pleased to find that they are landing in full view and within a few steps of Hosmer's front door. The building measures 50 x 120 feet and is of masonry and reinforced cement construction incorporating laminated wood beam type roof. This type of beam is new to the West and must be custom made and freighted to the job from the East Coast. It is of interest that this type of beam is rated by the fire underwriters at a lower rate than the standard steel beams used formerly in this type building. With the building set well back on a corner lot, very adequate off-street parking is provided for all employees and visitors. Additional ground space is available for future expansion.

Joyce, both in their teens—and so far not committed to the limb and brace field!

Los Angeles Bound

We left San Francisco at noon Sunday, headed for Los Angeles and UCLA. Monday morning found us having breakfast with Mr. Hennessy and Earl Cummings of Sacramento, who was one of the eleven students beginning the AK course that morning. With them we went to the University of California campus and the Medical School and hospital building.

The prosthetic training courses at UCLA are fortunately situated in the Medical School and hospital—a beautiful building with the best in modern facilities. Here we saw Dr. Miles Anderson with his associates, Ray Sollars and Leroy Nattress, welcoming the eleven students in the prosthetics course. We had a little struggle over the possibility of enrolling me as a student, and finally agreed that the prosthetic profession should be spared me at least!

The eleven students in the course may have been a little nervous at the beginning but they cheered up noticeably as Miles Anderson and his associates explained procedures and went out of their way to rid the students of any "buck fever." At the coffee breaks in the days thereafter I talked with the students and found them all very much impressed with the teaching, with their instructors and with the magnificent \$12 million medical school hospital building in which they were taking the courses.

Almost the first students I saw was *Leo Marcotte* (Hanger Facility at New Orleans) whom I had last seen with Tom Maples. Then there was *W. H. Stauffer*, new OALMA member from Edmonton, Canada, who had looked in on us in Washington, on his way north from Warm Springs Foundation. *George Newton* of Honolulu had come the longest distance to the

school. For *Fred Lucas* of Lubbock, Tex., UCLA was home territory. He was formerly active in Los Angeles prosthetic circles where his brother, Roy, is head of the *Daly Artificial Limb Company*.

Victor Touluk, Lanham Company Manager at San Diego, was the California member of the class. We enjoyed talking to Messrs. Long (from *Scott Surgical* of Denver) and *Jim Baker* of Fort Worth.

Talking It Over With Kenny and Ish

Kenneth Dodd of Santa Monica is our OALMA Regional Director for Southern California and Arizona. He and his partners, *Tashi Ishibashi*, widely and popularly known as "Ish," gave me an excellent briefing on the limb and brace field in Southern California. We went over the list of firms in that area. Since previous visits had been mostly devoted to downtown Los Angeles, we determined this time to try and cover establishments in the outlying sections.

I shall always be grateful to *Kenny* for the time and help he gave me on this trip. His partners encouraged him to take an entire day out of the office to take me around. On other days, they loaned me one of the office cars, a veteran "Studebaker," with which I navigated the Los Angeles freeways!

Abbott Orthopedic Supply at 1287 Crenshaw Boulevard, was our first port of call. Here *Robin Saemann* showed us through his new attractive shop. This is the place where he produces those set-up kits for the *Williams* and *hyperextension* braces which represent such a saving in time for the individual brace establishment. Visitors to the *San Francisco Assembly* will remember this exhibit. Leaving *Abbott*, we drove to *Harvey Lanham's* establishment at *Long Beach*. Unfortunately, we missed seeing *Harvey*, but *Jack Trice* showed us around, before he left to deliver a lecture to a group of physical therapists.

Just two blocks away we stopped at the fine new facility of the *John A. Metzger Company* at 849 Pine Avenue. *John* showed us over his new establishment. He also gave us helpful leads on advertisements for the *Journal*. The *Metzger Company* does some very effective direct mail advertising to California physicians. *John* is now serving as Vice President of the *Society of Orthotists and Prosthetists, Inc.* of Southern California.

Our next call was the *M. H. Nanney Company* in Los Angeles. Here we saw an old friend, *John Kolman*, manager and owner. And as an extra dividend met *Mrs. Kolman* for the first time. *John* trained in *Detroit, Mich.* and talked about old times in *Michigan* with us. In addition to his artificial limb activities, *John Kolman* has developed quite a business supplying his "Never Slip Bench Vise Jaws" and rubber soles to artificial limb establishments in other states.

That evening found us back at *UCLA* for the course "Basic Principles of Orthotics." This is taught by *Roy Snelson* and *Kenneth Dodd*. The subject this evening was "Introduction to Leather." *Tashi Ishibashi* was instructor in charge of that evening and showed me some excellent examples of leather work by the students.

On the Road with Mr. Benjamin

The next day *M. J. Benjamin* picked me up at the *UCLA School* where I'd just heard a first-class lecture by *John Bray* of the faculty. *Mr. Benjamin* was taking time off from his busy orthopedic appliance practice in *Los Angeles* to drive me around some of the suburbs. Our first stop was at *Sherman Oaks, Calif.* where the *Vogue Orthopedic Appliance Center* is located. Here



LOS ANGELES HONORS NEW OFFICERS: The officers and members of the Society of Orthotists, Inc. of Los Angeles and Southern California. Standing above, left to right: Al Junghans; Second Vice President John Metzger of Long Beach; First Vice President Roy Snelson of Rancho Los Amigos; President Leroy E. Noble; Secretary Jack Vollmer; Treasurer F. O. Peterson; Parliamentarian Edward S. Taylor. Members of the Society and their guests shown seated include left to right: Fred Quisenberry, Jack E. Conry, William Peralta, Al Johnson, C. E. Morehouse, Ferdinand Karg, Richard Fadeley, Charles Neal, M. J. Benjamin, E. John Ericson, OALMA Director Kenneth Dodd, Robert Bush, Al Mulenburg of Houston, Tex. and OALMA President Charles Hennessy.

we found the proprietors, Rudy Curinga and Stan Carlton supervising redecoration of their busy establishment. This facility is well-located in the Medical Center Building with convenient parking. Both partners are young men who have built up a considerable following among orthopedic surgeons. They asked about their former associate, Simon Shea, who is now in the Canal Zone Brace Shop.

From Sherman Oaks we drove to Whittier, Calif., to call on *Leroy Noble*, who is the President of the local Society of Orthotists and Prosthetists. We found Leroy and his wife busy planning the expansion of their facility into the adjoining building. This will give them double the space. We also met their assistant, William T. Newman, CO.

Our next call was on *Mr. and Mrs. Frank O. Peterson* at their home. Their names are important in the history of OALMA, and I was glad to talk with them and see their beautiful garden. Mrs. Peterson is a founder-President for many years of the Ladies' Auxiliary. Mr. Peterson and she moved to Los Angeles from Michigan, where they were owner-mangers of the Rowley Company. He is a former Treasurer of OALMA and keeps his hand in as West Coast representative of the Ohio Willow Company and as Treasurer of the local Society of Orthotists and Prosthetists.

A side trip to North Hollywood allowed me to visit the *Orthopedic Laboratory of Morris Jacobs*. Morris has an attractive establishment in a location which is steadily improving.

Back in Los Angeles I visited Mr. Benjamin's own establishment and met his mother, who is still active in the operation of the establishment. A brief stop to pick up Mrs. Benjamin and then to dinner.

Rancho Los Amigos

Kenny Dodd's Studebaker took me some 30 miles in the country to Rancho Los Amigos, one of the outstanding respiratory disease treatment centers in this country. This is a fabulous establishment with many hundreds of patients recovering from the after effects of polio. We walked through ward after ward of patients using iron lungs. We saw others painfully working their way through the wheelchair-and-crutch-bracing stage back to caring for themselves.

The brace establishment of Rancho Los Amigos is managed by Roy Snelson, CO. Roy has long been active in local orthopedic circles and was formerly associated with his uncle at Logan and Company.

Jack Conry and *Richard Young* showed some of the very difficult types of functional bracing, which is a specialty of Rancho Los Amigos. This hospital fitted 296 cases in its Upper Extremity Bracing Research Program of last year. We had the pleasure of meeting Mr. Perkins, the civilian administrator, Dr. John E. Affeldt, Medical Director and Dr. Vernon Nickel, head of the Orthopedic Surgery Department.

Later in the morning we attended a meeting of orthopedic surgeons held at the hospital at which some interesting results of research were shown. Old friends and familiar faces were in the audience — Dr. Robert Mazet, Dr. Verne Inman of Berkeley, and Dr. Vernon Luck. We had an opportunity to speak again to Dr. Charles L. Lowman, author of the article on "Trunk Control" in the March issue of our *Journal*. In his remarks before the Assembly Dr. Vernon Nickel referred to the development of the "Flexor Hinge Hand." We were impressed with his mention of the work by Dr. Schottstaedt and George Robinson of Robin-Aids. And one quotation of his lingers in our mind, "One hand is worth a thousand legs."

Evening Class in Prosthetics

This evening we again looked in on the UCLA Medical Center where a group of Los Angeles prosthetists are taking the evening course on "Principles and Fitting of the AK Prosthesis." Instructors for this course are *John Bray* and *Donald Colwell* of the U. S. Manufacturing Company staff in addition to President Hennessy. The course coordinator is *Leroy Nattress, Jr.*, assistant to Dr. Miles Anderson. Lee first became acquainted with our field in the Bay area, where he knew Edward Snygg.

Leaving Rancho I headed again for Los Angeles, and 208 South Western Avenue where *Jack Vollmer* has his Certified facility. Here Jack and I went over some plans for the OALMA Assembly and the educational program underway in prosthetics. Jack introduced me to his stepson, who is active in the firm and to one of his older employees, *Mr. W. A. Wolfe*. Mr. Wolfe produced two treasures which I would like very much to have taken back with me: an old Jepson-Winkley Catalog of 1906 and an equally old artificial limb catalog from Oakland, Calif. Both are valuable items in the history of prosthetics.

PRESIDENT HENNESSY CHARTS A POINT:
OALMA President Hennessy takes to the drawing board to explain technical points of the UCLA Prosthetics course. Shown with him are Edward Strong of the U. S. Manufacturing Co., Donald F. Colwell, UCLA Prosthetics course instructor, and OALMA Assistant Director Les Smith.



From Jack's establishment I went to the *California Orthopedic Company*, but missed Elmer Nelson, who had gone to a neighboring city to take a measurement. At the *Carl Woodall Artificial Limb Company*, I heard news, Mr. Woodall was out of the city on his honeymoon (Congratulations and good wishes, Carl). However, I had the opportunity of talking with his representative, Lloyd B. Everett and Mrs. Everett who was in the office that day.

Next stop was the *Adroit Prosthetics* facility on West Seventh Street. Here I found *Charles Neal* doing an exacting piece of fitting on an attractive little patient, a girl of some three years of age. She was being fitted with an upper extremity prosthesis and was having a fine time teasing Charles and playing with a gaily decorated cane he had given her. At Adroit I saw for the first time the hydra-cadence prosthesis made by the Jack Stewart Company of San Clemente. Charles Neal wears one himself and reports that it is greatly appreciated by amputees. We were sorry to miss *Bob Bush*, but had the opportunity of talking to him on the telephone later.

On our way back to the hotel we stopped at the *Ace Orthopedic Co.*, at 8374 Beverly Boulevard. Here the manager, *Mr. Hy Christensen*, makes the Ilfeld Splint, which was the subject of an article by Dr. Frederick W. Ilfeld in the March issue of our *Journal*. Among the orders Hy had on hand were several from Eastern brace establishments. And at Ace Orthopedic we met an old friend, *Ralph DeKate*, Southwestern representative of the Truform Company. We had last seen him a year ago in Fort Smith, Tulsa, Okla. and Little Rock. Mr. DeKate gets around, for he has one of the largest territories to cover, from the Mississippi River west to the Pacific Ocean along the southern half of the country.

A visit to *Alpha Orthopedic Appliance* on West Pico Boulevard completed our afternoon. Here we met *Fred Quisenberry* and his partner, *Woodrow Yamaka*. "Woodie" has forgiven us now for shortchanging him in the time allowed for the seminar on harnessing at the San Francisco Assembly—at least I think he has. We enjoyed talking to him and Fred, who has some excellent ideas on the economics of the prosthetic field.

Evening found us at dinner with Mr. and Mrs. Kenneth Dodd, and Mr. and Mrs. Richard Fadely. *Dick Fadely* is a partner with Kenny in Modern Prosthetic Appliances at Santa Monica. He is well known throughout the United States because of his work with the suction socket program. Now happily situated in Santa Monica he and Kenny after some years of struggle

can boast of a very attractive business. We talked "shop," reminisced about Washington and OALMA, etc. It was a very pleasant evening and I found myself regretting that another day would find me headed back to Washington. I had enjoyed myself tremendously, and Regional Director K. Dodd assured me that the visiting of individual establishments would do much to strengthen the OALMA program. It is not often in this world that you can combine work and pleasure in such a satisfactory measure!

WHAT'S NEW(S)

Dr. Charles Lowman of Los Angeles was guest of honor at the celebration in Los Angeles June 8, of his fiftieth anniversary as an orthopedic surgeon. The various winners of the *Lowman Achievement Award* which he established in 1937 joined many other friends in paying tribute to his outstanding service. Dr. Lowman was the recipient of a television set from the winners of the Award (OALMA President Hennessy won the award some years ago).

The Society of Orthotists and Prosthetists, Inc., held a special "UCLA Night" on June 10. Dr. Miles Anderson and five of his associates were Guests of Honor. The occasion celebrated also the beginning of the course, "Clinical Prosthetics: Upper Extremity Amputation," which ran from June 10 to June 28.

The Society has issued its new 1957 Membership Directory. This gives useful information about the 42 members in Southern California.

JAMES LAWLER has been appointed the new Pacific Coast representative for *James R. Kendrick Company, Inc.*, Philadelphia, designers and manufacturers of surgical appliances and garments.

Mr. Lawler joins the 103-year-old Kendrick firm after working many years in similar fields. His experience as a fitter, inside and outside salesman for Western Surgical and C. H. Hittenberger of San Francisco as well as Bischoff of San Jose, will be of great help to his new clients.

Mr. Lawler succeeds Mrs. May Hanley who is retiring after 30 years of service in this territory. His base office will be at 3213 Gleneeden Way, San Jose, California.

Mrs. D. E. Hedgecock of Dallas have given the OALMA Headquarters Library a copy of the rare April, 1940 "The Almanac," publication of the Association of Limb Manufacturers at that time. A quick glance through this issue reveals that Jack Vollmer now of Los Angeles, was serving as Secretary-Editor from his headquarters in Pittsburgh. The President of the Association then was Chester C. Haddan of Denver, while F. O. Peterson, now of Los Angeles, was Treasurer. These early publications are a valuable source of material for the history of our Association. OALMA Headquarters is grateful to Mrs. Hedgecock and to other friends who have contributed to the Archives of the Association.



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TO THE LADIES:

from

OALMA's Woman's Auxiliary

Our Program Chairman, Margaret Peters, is very busy working on three days of wonderful and varied entertainment for us in Washington, D. C. for September 29th to October 2nd.

The White House has been written but so far we have not been able to work out a meeting with Mrs. Eisenhower. We are still working on this problem. It is definite that we shall tour the White House. It will be of considerable interest to be able to see the rooms which were remodeled during President Truman's Administration. Many other ideas are being considered.

September is not far away: Mark the date !!!
Let's all plan to be in Washington for our annual assembly.

Sincerely,

Ruth Brown,
President

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AROUND OUR NATIONAL ASSEMBLY**

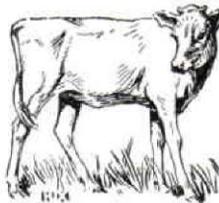
**VISIT HISTORIC WASHINGTON
SEPTEMBER 29-OCTOBER 2**



KENTUCKY FLOODS REACH LIMB FACILITY: The spring floods this year caused heavy damage to the Reynolds Artificial Limb facility at Hazard, Ky. In the picture shown above arrow indicates the Reynolds Facility. The waters reached the roof in the back of the main building. Mr. Reynolds, however, was undaunted by the flood, and spent a busy 60 days rebuilding and securing new equipment. He reports that he is now better equipped than ever before to serve his patients.

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SUPPLIERS INDEX



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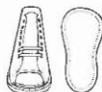


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REVIEWS

ORTHOPEDIC SURGERY IN INFANCY AND CHILDHOOD

By Albert Barnett Ferguson, Jr., M.D.
Published by the Williams and Wilkins Company; Baltimore, 2, Md.
1957; 508 pages, 504 illus.; \$15.

Reviewed by H. P. Barghausen, C.P.,
J. E. Hanger Co., Pittsburgh, Pa.

By scanning the table of contents, you immediately realize the author has made it his objective to compile in one volume, the many volumes and text references of orthopedic surgery, dealing with the practice of orthopedic surgery in infancy and childhood. The author has also included several detailed chapters by eminent specialists.

To be very frank, the contents of this book could best be understood by the physician and surgeon. There are however, many references and illustrations that would prove very interesting reading and viewing for the experienced Orthotist and Prosthetist.

Chapters 8 and 9, which deal with "Affections of Muscle" and "Cerebral Palsy," elaborate and illustrate bracing which as indicated above, would be of interest to the experienced Orthotist.

Then too, in Chapter 6, page 232, there are several references to amputations made necessary by congenital absence of both forearms and lower leg at the ages of 3 and 4 years. It was noted that the author approved of the fitting of a prosthesis and that the patient was able to walk with the aid of crutches at the age of 3 years.

The position taken by the author on the fitting of a prosthesis at such an early age, has been proven practical many times by the experienced Prosthetist and has certainly made life more pleasant for the physically limited child.

As indicated in the earlier paragraphs, this book was written primarily for physicians and surgeons. There is, however, a wealth of references and background material in it

In Memoriam



WILLIAM E. ARBOGAST, founder of the Ohio Willow Wood Company, died May 14 at the age of 76. A native of Coshocton, Ohio, Mr. Arbogast lost both limbs while serving as a brakeman on the Pennsylvania Railroad. He then entered the Prosthetics Supply field, founding the Ohio Willow Company in 1907. He served as its President and General Manager until his death. Mr. Arbogast was a senior member of OALMA and for many years worked untiringly to advance its program of service to the artificial limb field. Mr. Arbogast took an active role in the annual meetings of the Association for many years. (See the story "From Our Family Album" in this issue.)

Vice President John A. McCann represented OALMA at the funeral services, which were also attended by McCarthy Hanger, Jr. of the Certification Board.

of value to the Orthotist and Prosthetist.

After reading this book, it is very obvious the author has reached his objective of covering in detail, all facts pertinent to the subject.

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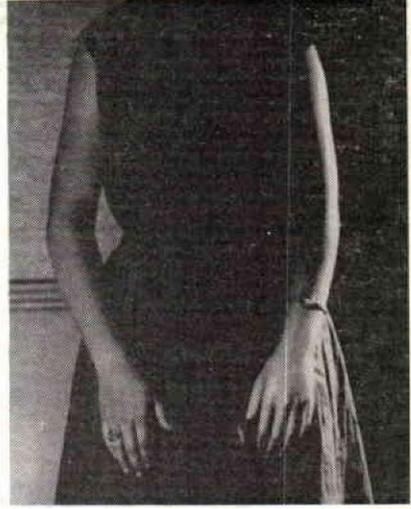
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