

## RECENT PATENTS<sup>a</sup>

**Bio-Instrumentation Apparatus:** Robert F. Vuilleumier and David W. Moore. Relates to instrumentation for sensing physiological reactions of man and for wireless transmission of the information gained to a nearby receiver. This invention utilizes small single-channel microsensors containing suitable electrodes or transducers capable of picking up low-level signals from the human body or of converting physiological reactions to such signals. An advantage of this invention is that it provides freedom of movement for the instrumented subject. (Patent No. 3,253,588, May 31, 1966; filed Feb. 1, 1962, Serial No. 170,315; 5 claims.)

**Chair:** Florence W. Bergerson. A chair for a mentally retarded or physically handicapped person, particularly children. It provides such a person the means to sit in any of various reclining positions with adequate safeguards against injury. The backrest may be dropped in a completely horizontal position when desired, and the footrest is adjustable. The chair also has means for restraining a person from excessive movement while at the same time permitting a reasonable amount of movement. (Patent No. 3,239,271, Mar. 8, 1966; filed Nov. 9, 1964, Serial No. 410,026; 6 claims.)

**Conforming Foot Cushioning Device for Footwear:** William M. Scholl. A self-conforming foot cushioning device for insertion in footwear which may be made as a partial or full insole, heel slot, metatarsal arch lift, or in other shapes and sizes which may vary in thickness. The invention is self-conforming to intimately fit irregular or abnormal surface points on the foot such as enlarged joints, sensitive sesamoid bones, hammer or contracted toes, corns or calluses, plantar warts, depressed metatarsal heads, etc. (Patent No. 3,253,601, May 31, 1966; filed Sept. 6, 1963, Serial No. 307,250; 4 claims.)

**Folding Self-Propelled Invalid Chair:** William Rudolph Miajala. A motor-driven invalid chair equipped with a pair of independently driven endless traction belts which provide the means for propelling the chair over the ground as well as ascending or descending stairways or inclined surfaces. (Patent No. 3,259,200, July 5, 1966; filed Apr. 26, 1965, Serial No. 450,610; 3 claims.)

**Functioned Control Valves for Pneumatic Prostheses:** Edward A. Kiessling, assignor to the United States of America as represented by the Secretary of the Department of Health, Education, and Welfare, and/or the Secretary of the Army. This invention relates to one or more multiple flow control valves or functional control valves operated by an amputee-wearer of a pneumatic prosthesis to control the flow of gas into and out of the operating elements of gas-powered artificial arms. (Patent No. 3,221,769, Dec. 7, 1965; filed May 29, 1963, Serial No. 284,271; 20 claims.)

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<sup>a</sup>Patents may be ordered by number from the Commissioner of Patents, Washington, D.C. 20231, at 50 cents each.

**Invalid Elevator:** William M. Booth, assignor to Welded Products, Grand Haven, Mich. A portable, self-contained elevator for use by persons incapable of traversing stairs under their own power. The inventor claims that the unit is adaptable to almost any stairs encountered and can be used and operated by wheelchair patients while remaining in their chair. (Patent No. 3,229,788, Jan. 18, 1966; filed June 25, 1963, Serial No. 290,429; 9 claims.)

**Invalid Service Chair:** Sara M. Slimmer. An invalid's service chair wherein, according to the inventor, all necessary services may be provided for the patient without requiring him to move from the chair and which will afford the patient maximum comfort. (Patent No. 3,245,090, Apr. 12, 1966; filed Apr. 22, 1964, Serial No. 361,791; 5 claims.)

**Lift Device:** John E. Nolan, assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware. A fluid actuated apparatus for lifting an invalid, handicapped or aged person into or out of a bathtub or the like. According to the inventor, it is light weight, sturdy, durable, readily portable, and quickly disassembled without the use of tools or implements of any kind. (Patent No. 3,256,036, June 14, 1966; filed July 30, 1964, Serial No. 386,174; 4 claims.)

**Lifting and Transporting Sling for Persons:** Edwin L. Fischer. A patient-supporting sling which is bifurcated in its frontal portion with overlapping flaps of fabric. The flaps are permanently attached to the central front portion of the seat, and they also have anchoring means which enable them to be fastened in an overlapping fashion to the ends of the seat portion of the sling. (Patent No. 3,234,568, Feb. 15, 1966; filed Aug. 10, 1964, Serial No. 388,582; 8 claims.)

**Means for Aiding Hearing by Electrical Stimulation of the Facial Nerve System:** Henry K. Puharich. An invention for use in conjunction with the human body to aid in hearing. More specifically, it is directed to a novel and improved arrangement for aiding hearing by electrical stimulation of the facial nerve system. (Patent No. 3,170,993, Feb. 23, 1965; filed Jan. 8, 1962, Serial No. 164,882; 24 claims.)

**Orthopedic Inlay for Footwear:** William M. Scholl. An improved orthopedic inlay for orthopedic shoes which is made of material that is self-conforming to the foot when pressure is applied to the material. The material has a low recovery factor so that it retains its shape for a long time after pressure is removed from the inlay. (Patent No. 3,253,600, May 31, 1966; filed Sept. 6, 1963, Serial No. 307,253; 4 claims.)

**Patient Handler:** James T. Gates. A multiple purpose patient handler. Can be converted to a wheelchair, a tilting table, and a litter that will rise to a height above a hospital bed. The wheels are small enough to fit under a bed. Has adjustable footrest and detachable armrests as well as other useful features. (Patent No. 3,261,031, July 19, 1966; filed June 17, 1964, Serial No. 375,899; 12 claims.)

**Prosthetic Hand with Overload Release Means and Means for Adjusting Relative Finger and Thumb Positions:** Noel J. Brown. A prosthetic hand in which the closing position of the fingers and thumb is adjustable. (Patent No. 3,258,784, July 5, 1966; filed Aug. 5, 1963, Serial No. 299,734; 8 claims.)

**Reclining Attachment for Wheel Chairs:** William E. Mize and Edward H. Endres, assignors to Institutional Industries, Inc., Cincinnati, Ohio. A device to be mounted on a wheelchair so as to stabilize the chair when it is tipped rearwardly. According to the inventors, the device is readily attachable and detachable to the wheelchair and it is particularly safe in use. (Patent No. 3,256,040, June 14, 1966; filed Aug. 13, 1964, Serial No. 389,303; 13 claims.)

**Safety Brake Casters for Walking Aid:** Auline S. Johnson. A brake mechanism for caster wheels designed so that the brake is applied by downward force exerted on the movable support to which the caster wheels are attached. The caster wheel unit and brake are applicable to many types of existing invalid walkers and articles of furniture. (Patent No. 3,237,940, Mar. 1, 1966; filed Oct. 22, 1963, Serial No. 318,020; 8 claims.)

**Sonic Reading Device:** Theodore F. Schwartz. This device is for use by the blind for sonic recognition of conventional typewritten or printed matter. It has a scanning window with light sensing elements on both sides of a dividing partition. A converging window divides the light evenly on opposite sides of the partition so that the separated light sensing elements are sensitive to different portions of the letters. The converging window is adjustable for different vertical dimensions of typewritten or printed characters. (Patent No. 3,245,158, Apr. 12, 1966; filed May 15, 1964, Serial No. 367,798; 6 claims.)

**Stair Climbing Wheel Chair:** Waverly V. Johnson. A wheelchair intended to be manually operated by its occupant and it is constructed so that the occupant can operate the chair to ascend and descend stairs. The drive wheels are eccentrically connected to the chair frame in such a manner as to substantially lower the center of gravity of the chair. The chair is also collapsible. (Patent No. 3,253,837, May 31, 1966; filed Mar. 27, 1963, Serial No. 268,386; 11 claims.)

**Support for Removable Wheel Chair Arms:** Antony Fox. A device for support of removable wheelchair arms by placing the arms toward the rear of the wheelchair. The object of this invention is to avoid removing the arms completely when required to leave by the side of the wheelchair, and not have the problem of placing the arm somewhere external to the wheelchair. (Patent No. 3,244,453, Apr. 5, 1966; filed Oct. 29, 1964, Serial No. 407,499; 4 claims.)

**Swinging Arm Rest:** William J. Pivacek, assignor to Mobilaid, Inc., Elyria, Ohio. Armrests that move sidewise as well as backward and forward and that do not have to be removed from a wheelchair. Sidewise movement of armrests allows for ingress to and egress from the chair sidewise with assistance from the retracted arm if needed. (Patent No. 3,247,381, May 3, 1966; filed Feb. 16, 1965, Serial No. 433,041; 4 claims.)

**Truss Device:** Harry L. Thompson, assignor to Brooks Appliance Co., Inc., Marshall, Mich. A truss device that is fastened together by filamentary fastening means (Velcro) providing a wide range of adjustability and increased convenience. This means of fastening renders the device free of protruding fastening members which interfere with other articles of wear. (Patent No. 3,236,233, Feb. 22, 1966; filed Jan. 21, 1964, Serial No. 339,153; 5 claims.)

**Walking Aid for the Sightless:** Charles Ormond Croker, assignor to Margaret McCall Shepherd. Designed for use by the sightless or partially blind to provide advance information on the contour of the ground before negotiated by the user. Consists of a main member supported on a ground-engaging wheel and

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adapted to be propelled by and in advance of the user. Attached to the main member is a fixed, trailing ground-engageable member. The wheel is adapted to a glidable mounting enabling it to rise and fall in advance of the fixed, trailing ground-engageable member. (Patent No. 3,251,371, May 17, 1966; filed June 2, 1964, Serial No. 371,919, claims priority, application Australia, June 4, 1963, 31,499/63; 9 claims.)

**Wedge Connection for Attaching Foot or Leg Rests to Wheel Chairs:** Adolph C. Mommsen, assignor to Metal-Matic, Inc., Minneapolis, Minn. A footrest attachment that is firmly and readily secured to the front vertical frame member of a wheelchair. (Patent No. 3,230,010, Jan. 18, 1966; filed Feb. 8, 1965, Serial No. 430,873; 1 claim.)

**Wheel Chair:** Rodvinon I. Zamotin. A self-propelled wheelchair capable of ascending and descending steps, curbstones, etc., as well as traveling on flat ground. Inventor claims chair is light weight, inexpensive to produce, and maintains a person in an upright, stable position while traversing either level or inclined surfaces. (Patent No. 3,259,396, July 5, 1966; filed Nov. 13, 1963, Serial No. 323,328; 8 claims.)

**Wrist Support:** Frank F. Stubbs. A wrist support that can be wrapped around the wrist and extend onto the forearm and forehand to brace the wrist against movement. Consists of a band that will fit various size wrists which is tightly fastened by means of a hook and Velcro tape. Also, the band can be used on either hand. (Patent No. 3,238,939, Mar. 8, 1966; filed Feb. 23, 1965, Serial No. 434,324; 12 claims.)