

RECENT PATENTS^a

Actuator Device for Artificial Leg: John L. Burch, assignor to the United States of America as represented by NASA, Washington, D.C.: A hip-disarticulation type prosthesis is powered by energy drawn from the natural leg, through hydraulic means. It is claimed that the resulting gait will be superior. (Patent No. 3,995,324, Dec. 7, 1976; filed Sept. 12, 1975, Appl. No. 612,965; 12 claims.)

Articulated Master Slave Manipulator: Carl R. Flatau. A manipulator equipped with a number of balance and counter balance concepts. All of a mechanical nature. (Patent No. 3,976,206, Aug. 24, 1976; filed July 16, 1975, Appl. No. 596,228; 9 claims.)

Artificial Foot with Ankle Joint: Werner Haupt, assignor to Otto Bock Orthopadische Industries KG, Duderstadt, Germany. The conventional single-axis ankle/foot has been improved with plastic parts bonded to wood. It is claimed that the plastic strengthens and stabilizes the wood. Component resiliency permits some motion in all planes, thus reproducing the functions of a double axis or SACH unit. (Patent 4,007,497, Feb. 15, 1977; filed Sept. 3, 1975, Appl. No. 609,995; 2 claims.)

Body Support Means: Reginald Dyson, assignor to G.D. Searle and Co., High Wycombe, England. A combined gel and bead cushion is claimed to provide a favorable pressure distribution. (Patent No. 3,968,530, July 13, 1976; filed Feb. 19, 1974, Appl. No. 443,606 7 claims.)

Check Writing Guide: John E. Keitzer and Betty J. Keitzer, assignors to Betty J. Keitzer. A slotted template permits a blind person to write a check. The template apertures match the appropriate spaces on a standard blank check. (Patent No. 4,003,143, Jan. 18, 1977; filed Dec. 15, 1975, Appl. No. 640,462; 2 claims.)

Compression Sheath for Below-Knee Amputated Limbs: Jan Prahl, assignor to IPOS Gelleschaft Fur Integrierte Prothesen-Entwicklung und Orthopadietechnischen Service mbH & Co., KG, Luneberg, Germany. This sheath develops an increasing squeeze force towards the end of the stump by means of yarn and knit pattern variations. It is claimed that superior blood circulation results. (Patent No. 3,991,424, Nov. 16, 1976; filed June 9, 1975, Appl. No. 584,915; 7 claims.)

Electrically Driven Hand Orthosis Device for Providing Finger Prehension: John P. Ryan, James W. Cowan, Paul K. Sharp, et al.: assignors to Indiana University Foundation, Bloomington, Ill. Quadraplegic patients in powered wheelchairs are able to operate a device providing prehension of the thumb and finger. A touch sensitive switch energizes a motor that drives the splint through a cable. (Patent No. 3,967,321, July 26, 1976; filed Feb. 5, 1975, Appl. No. 547,272; 20 claims.)

Electric Elbow: Carl P. Mason, assignor to Sidney Samole and Myron M. Samole. Harmonic drive gear concepts are used to produce a light and efficient motorized elbow.

^a Patents may be ordered by number from the Commissioner of Patents, Washington, D.C. 20231, at 50¢ each.

It is also claimed that the design is sturdy and quiet. (Patent No. 3,987,498, Oct. 26, 1976; filed July 1, 1974, Appl. No. 484,948; 21 claims.)

Invalid Lifting and Walking Device: Dale H. Thomas. A power-operated lifting and walking device which is operated by a handicapped person. After lifting himself to a standing position with a power hoist, the subject can propel the device along a floor using his own muscle power. (Patent No. 3,999,228, Dec. 28, 1976; filed Oct. 10, 1975, Appl. No. 621,423; 5 claims.)

Massaging Support Apparatus: Michael Kosiak. A means of combatting decubiti formation in seated individuals by means of powered rollers. The endless chain of moving rollers within a special seat continuously alters the pressure on the buttocks. It is claimed that blood circulation is thereby improved. (Patent No. 4,011,862, Mar. 15, 1977; filed Nov. 17, 1975, Appl. No. 632,179; 25 claims.)

Myoelectrically Controlled Prosthesis: Charles H. Hoshall, Woodrow Seamone, and Robert L. Konigsbert, assignors to The United States of America as represented by the Secretary of the Navy, Washington, D.C. A myoelectric control system that will provide terminal opening in direct proportion to control signal amplitude. A single site closed-loop servo system is used. (Patent No. 3,735,425, May 29, 1973; filed Feb. 10, 1971, Appl. No. 114,262; 22 claims.)

Orthocasting System: Dennis N. Brown. A means of casting impressions of the bottoms of feet. The cast is then used to construct a rigid foot support. (Patent No. 3,995,002, Nov. 30, 1976; filed Nov. 7, 1974, Appl. No. 521,889; 4 claims.)

Orthopaedic Appliances: Pierre Rabischong and Jean Pierre Louis Bel, Montpellier, France. Assignors to Institut National de la Sante et de la Recherche Medicale, Paris, France. An inflatable prosthesis to enable paralytics to stand, differing from other versions of this concept in its smaller use of compressed gas and greater use of mechanical locking features. (Patent No. 3,993,056, Nov. 23, 1976; filed Jan. 21, 1976, Appl. No. 651,033; 17 claims.)

Orthopedic Brace (Orthosis): Walter Kuehnegger, assignor to Otto Bock Orthopedic Industry, Inc., Minneapolis, Minn. A brace aimed to correct difficulties in the higher thoracic region. The device is similar to a Milwaukee brace with the addition of more members in the anterior-posterior direction. (Patent No. 3,945,376, Mar. 23, 1976; filed Dec. 12, 1974; Appl. No. 532,067; 10 claims.)

Paper Money Identifier: Frank J. Marchak. Photocells are arranged to examine currency. Audible signals indicate the denomination of paper currency to blind persons. It is claimed that the position of the bill within the apparatus is unimportant to the process. (Patent No. 3,906,449, Sept. 16, 1975; filed Sept. 11, 1974, Appl. No. 504,931, 16 claims.)

Pressure Distribution Pad Assembly for Wheelchairs: Matthew Hall, assignor to Everest and Jennings, Inc., Los Angeles, Calif. A sandwich type of cushion involving three pads of which the center is the most dense. Cutouts in the center pad are placed in zones of maximum pressure. Both stability and pressure characteristics are claimed superior with this device. (Patent No. 3,987,507, Oct. 26, 1976; filed Aug. 25, 1975, Appl. No. 607,360; 3 claims.)

Prosthetic Device for Holding Golf Clubs: William K. Frenzel. An attachment to a prosthetic arm device permits the handle of a club to be gripped in a secure and controllable

manner. A wide range of clubs may be readily grasped without alterations to the club handle. (Patent No. 3,965,491, June 29, 1976; filed Jan. 7, 1976, Appl. No. 647,058; 8 claims.)

Prosthetic Guitar Pick: Evan P. Gallagher. A guitar pick is strapped to the lower arm with a belt arrangement. (Patent No. 3,992,975, Nov. 23, 1976; filed Oct. 8, 1975, Appl. No. 620,848; 6 claims.)

Polysensory Mobility Aid: Larry S. Moricca and Ronald H. Stroer, assignors to Zipcor Inc., Fort Wayne, Ind. A device resembling a pair of glasses yields a combination of auditory and tactile stimulation signals signifying the location, distance, and brightness of a visible object with respect to the viewer. Photosensitive devices serve as sensors. Stimulus frequency is tied to brightness. Distance is obtained through triangulation. (Patent No. 3,993,407, Nov. 23, 1976; filed Sept. 19, 1975, Appl. No. 615,060; 15 claims.)

Wheelchair-Mounted Control Apparatus: Alden C. Simmons, James T. McFadden, and Robert S. Bennett, assignors to Whittaker Corp., L.A., Calif. A wheelchair control system using a skin pickup to control drive motor speed, reclineability, and external devices such as a TV tuner. (Patent No. 3,993,154, Nov. 23, 1976; filed Nov. 5, 1975, Appl. No. 629,033; 14 claims.)