

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

**Alignment Devices for Use With Protheses:** John B. Waggott and Albert J. S. Dadson, assignors to Vissa Ltd., Alton, Hampshire, England. An alignment device for leg protheses which achieves angular adjustment of end plates by the use of ball and socket joints that are maintained by solid spacers made up from a plurality of rotatable and lockable wedge-shaped disks embracing a locking rod extending from the ball of the joint. (Patent No. 3,414,908, Dec. 10, 1968; filed Aug. 6, 1965, Serial No. 477,811; 2 claims.)

**Apparatus for Copying Body Contour:** Kai Martin Edvard Setälä. An apparatus for copying the cross-sectional contour of a patient's body and recording the outline onto a copying base. (Patent No. 3,398,455, Aug. 27, 1968; filed June 30, 1965, Serial No. 468,329; 13 claims.)

**Artificial Arm Having a Single Pull Cord for Unlocking the Elbow Joint and Effecting Relative Angular Motion of the Forearm:** Dennis William Collins and Charles P. Steeper. An invention that precludes the use of a separate control to release a latch from its locking engagement in the elbow mechanism of an artificial arm. With this invention, as soon as a pull cord is operated, and before sufficient force is exerted to move the forearm, the latch is withdrawn from the toothed member. (Patent No. 3,382,506, May 14, 1968; filed Oct. 21, 1965, Serial No. 499,425; 5 claims.)

**Artificial Limb Joint:** John H. Archdale and Carl H. Schmidgall. An improved knee joint that will not accidentally work loose, that is comparatively thin, and that is provided with bearings whereby the action of the joint is rendered easy. (Patent No. 3,397,903, Aug. 20, 1968; filed June 13, 1966, Serial No. 557,176; 4 claims.)

**Artificial Limbs of Expanded Polyamides:** Karl Dachs, Hans Wilhelm, Kurt Wick, Wolfgang Schwenke, and Max Naeder, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Rhineland, Pfalz, Germany. This invention relates to molded prosthetic limbs, hands, and feet having a body of fine pored, foamed polylactam. The inventors claim that this material is characterized by toughness, wear resistance, surface smoothness, high impact strength, and thermal suitability. (Patent No. 3,440,668, Apr. 29, 1969; filed Sept. 1, 1965, Serial No. 484,447; 3 claims.)

**Character Recognition System Using Selectively Positioned Light Conducting Rods and Including Conversion to Excess Three Binary Code:** Edward L. Krieger, assignor to Sperry Rand Corp., New York, N.Y. A set of numeric characters, identifiable by the presence or absence of a portion of the character in each of eight specific areas contained in a space defined for the characters, and a fiber-optic character reader to decode an optical image into a binary form and immediately transform it into an appropriate code for use in a computer. (Patent No. 3,412,255, Nov. 19, 1968; filed Dec. 22, 1964, Serial No. 420,327; 14 claims.)

---

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

**Hearing Aid Coupling:** Arthur O. Crosby, assignor to The Telex Corp., Tulsa, Okla. A hearing-aid ear mold device having a relatively soft socket for coupling compressional wave energy from an external source to an ear mold disposed in the ear of a user of a hearing-aid apparatus. (Patent No. 3,431,370, Mar. 4, 1969; filed Nov. 29, 1965, Serial No. 510,186; 6 claims.)

**Implantable Electrode for Nerve Stimulation:** Seymour I. Schwartz, Robert C. Wingrove, and James A. Anderson, assignors to Medtronic, Inc., Minneapolis, Minn. An electrode apparatus implanted in the body of an animal for stimulation of a single nerve. The electrodes are almost entirely imbedded within a substance which is substantially inert to body fluids and tissue. (Patent No. 3,421,511, Jan. 14, 1969; filed Dec. 10, 1965, Serial No. 512,981; 2 claims.)

**Knitted Protective Article for Wearing in a Prosthesis or Orthopedic Appliance and Method of Making the Same:** David Belzidsky. A method of making a protective article to be worn with a prosthesis or orthopedic appliance. The article, made of plated knitting, uses at least two different kinds of thread material and forms two surfaces—a soft inner surface, and a rough outer surface. (Patent No. 3,451,232, June 24, 1969; filed Apr. 5, 1967, Serial No. 628,688; 8 claims.)

**Mode of Signal Responsive Hearing Aid Apparatus:** Dean W. Flygstad, assignor to The Telex Corp., Tulsa, Okla. An improved hearing-aid instrument for use in a normal mode of operation and in a telephone signal receiving mode of operation with automatic switching means for each operation of use. This is accomplished merely by placing the telephone receiver near the hearing aid and the hearing aid adjusts for telephone use. Upon removal of the telephone receiver, the hearing aid readjusts for normal use. (Patent No. 3,396,245, Aug. 6, 1968; filed Dec. 9, 1964, Serial No. 417,173; 8 claims.)

**Orbital Implant of Fused Acrylic Plastic and Process of Implanting:** Albert T. Milauskas. This invention relates to an orbital implant formed from an acrylic resin which can be easily and permanently attached to and positioned within the muscular structure of the human eye. (Patent No. 3,436,763, Apr. 8, 1969; filed Mar. 28, 1966, Serial No. 538,096; 8 claims.)

**Prosthetic Device With Electronic Proportional Control Grips:** Lloyd L. Salisbury, Jr., assignor to the United States of America as represented by the Secretary of the Army. An externally powered prosthetic hand which, when in operation, contains automatic device for controlling its grip on an object. The amputee upon activating a switch moves the fingers of the prosthetic device to grasp an object. Upon lifting the object, if slippage occurs, a signal is sent to the terminal device closure activator and the terminal device closes just tight enough to prevent slippage. The activator automatically shuts off and the prosthesis remains locked on the object. Activation of the initial switch causes release of the object. (Patent No. 3,423,765, Jan. 28, 1969; filed Aug. 11, 1966, Serial No. 572,170; 8 claims.)

**Prosthetic Hand With Improved Control System for Activation by Electromyogram Signals:** Alastair Howard Bottomley, Peter Robert Dennis Styles, Phillip Harvey Jilbert, John William Birtill, and John Raymond Truscott, assignors to National Research Development Corp., London, England. A prosthetic hand and control system, operated by electromyogram or EMG signals, which has an improved performance over a previously designed device particularly with respect to unnecessary power consumption. (Patent No. 3,418,662, Dec. 31, 1968; filed Mar. 29, 1966, Serial No. 538,387; 8 claims.)

**Prosthetic Leg Having Adjustable Alignment Means:** Alan R. Finnieston. A prosthetic apparatus which is adjustable angularly, laterally, and axially to provide im-

## **Bulletin of Prosthetics Research—Fall 1969**

proved dynamic alignment in the fitting of an above- or below-knee prosthesis. (Patent No. 3,422,462, Jan. 21, 1969; filed Sept. 7, 1966, Serial No. 577,684; 5 claims.)

**Shock Absorber for Persons:** Rudolph Michel. A shock absorber device mounted on the bottom of a shoe, at the heel, and having relatively movable upper and lower members with a ratchet-like locking means therebetween. A spring means is between the upper and lower members and the ratchet locking means prevents rebounding of the members after they have moved to absorb a predetermined shock. (Patent No. 3,429,545, Feb. 25, 1969; filed Oct. 26, 1966, Serial No. 590,138; 10 claims.)