

Recent Patents^a

Arm and Wrist Exerciser: Bradford W. Wilson. Comprising inner and outer tubes, the device, which is extendable and rotatable, employs a prestressed rubber element in the tubes to furnish a high initial pulling force. The device is relatively short and the user need not make wide arm movements. A handgrip is fitted to each end. (Patent No. 4,193,593, Mar., 18, 1980; filed Jun. 27, 1977; Appl. No. 809,977; 7 claims.)

Bed for Stimulating Circulation: Thomas L. Donnelly, Jr. The invention employs an electrically-driven, L-shaped mattress frame mounted on an L-shaped, supporting frame. The up-rights of the frames are connected pivotally to permit the mattress frame to move up and down. Vibrationless, quiet, and steady operation is claimed which is undisturbing to the patient, whose head remains relatively stationary. The degree and rate of motion, and the rest period between cycles, may be preselected according to the physician's requirements. (Patent No. 4,194,499, Mar. 25, 1980; filed Mar. 5, 1979; Appl. No. 17,125; 12 claims.)

Blood Vessel Tester: Toshio Watanabe and Yoshinori Tanimoto. An accurate means is claimed for measuring the clearness of a blood vessel and the flow of blood therein, particularly in a transplanted bypass blood vessel. Two thermocouples, connected to an electronic measuring instrument, are placed at separate points on the blood vessel. By introducing a cooling liquid into the blood stream (e.g., grape sugar solution at 0° C.) a measurable thermoelectromotive force is recorded at each thermocouple. The time interval between recordings from each thermocouple is used to determine the interior condition of the blood vessel. (Patent No. 4,191,194, Mar. 4, 1980; filed Feb. 8, 1978; Appl. No. 876,138; 4 claims.)

Bone Plate Clamp: Robert S. Watanabe. The device is described as lightweight and readily taken apart for sterilizing. It is functionally reliable and has no protrusions which could damage tissue and blood vessels. Being usable in small areas as simply as a wrench, it enables the surgeon to accelerate his procedures. (Patent No. 4,187,840, Feb. 12, 1980; filed Aug. 14; Appl. No. 933,285; 8 claims.)

Disposable Cosmetic Glove: Phyllis H. Stager. The glove provides an outer shell of lotion-impervious material and an inner lining of lotion-absorbent material. The lining may be impregnated with a cosmetic lotion, or with a cosmetic lotion personally preferred by the user to be injected into the lining. (Patent No. 4,186,445, Feb. 5, 1980; filed Mar. 3, 1978; Appl. No. 882,432; 7 claims.)

Elevated Mattress: Arthur Vineberg. The invention relates to the problem of undesirable blood flow from the upper part of the body to the legs of a bed patient. Placed on a conventional mattress, the wedge-shaped, elevated mattress, preferably of a specific "synthetic resin foam material", achieves non-slip elevation and support of the patient's head and thorax while allowing the legs to remain horizontal to the bed. (Patent No. 4,193,150, Mar. 18, 1980; filed Jul. 21, 1978; Appl. No. 926,634; 3 claims.)

Hemorrhage Alarms: John J. Ziccardi. An electrical signal device is claimed which is placed in a surgical dressing over a body lesion. The device contains desiccated sponge or desiccated gelatin. A pre-determined amount of blood or body fluid, when released into the dressing, swells the sponge or gelatin a multiple of normal thickness, closing the normally open circuit and energizing an alarm. (Patent No. 4,193,068, Mar. 11, 1980; filed Apr. 4, 1977; Appl. No. 784,147; 5 claims.)

Load-Stabilizing Prosthetic Joint and Connecting Component Thereof: Peter S. Walker, assignor to Codman & Schurtleff, Inc., Randolph, Massachusetts. A novel prosthetic joint is referred to which comprises a first component having a ball member, a second component having a cavity, and a third component into which the first two fit. The design incorporates internal locking means to eliminate axle pinning and reduce breakage caused by unexpected lateral forces. The design also features ease of assembly and implantation. (Patent No. 4,194,250, Mar. 25, 1980; filed Mar. 8, 1978; Appl. No. 884,777; 11 claims.)

Low-Cost Multi-Channel Recorder and Display System for Medical and Other Application: Bohumir Sramek. The system described displays physiological phenomena as multiple wave forms, and enables an observer to photograph the display at any preferred time, along with a label showing such information as the date, patient's name, and photograph number. The device is highly accurate with increased bandwidth and saves considerable operator time. (Patent No. 4,191,962, Mar. 4, 1980; filed Sept. 20, 1978; Appl. No. 943,777; 11 claims.)

Personal Alarm System: Raymond Doell. A hand-held, push-button transmitter which enables an individual to sound a remote alarm electronically in case of criminal attack. Designed primarily for crime deterrence, the device is constructed of off-the-shelf components and is easily adaptable to other uses. (Patent No. 4,189,721, Feb. 19, 1980; filed Feb. 21, 1978; Appl. No. 879,787; 4 claims.)

Removable Cast for Intermediate Phase Orthopedic Rehabilitation: William A. Gruber. The invention provides an orthopedic cast comprised of an outer layer of reinforced, thermoplastic casting material, and an inner cotton stockinette adhering to a layer of closed cell elastic sheet foam. The cast may be thermoformed *in situ*, and is particularly suited for monovalve fabrications. The cast is said to be especially useful in, but not limited to, the intermediate phase of orthopedic rehabilitation. (Patent No. 4,193,395, Mar. 18, 1980; filed Aug. 24, 1978; Appl. No. 936,620; 21 claims.)

Semi-Scleral Contact Lens: Wayne E. Trombley, assignor to Dow Corning Corporation, Midland, Michigan. The invention claims several advances in the art, including: improved shaping of the inner surface of a semi-scleral lens to the topography of an individual's eyeball so that there is central and edge contact, tearfilm clearance, and tear exchange with blinking, and better centering of the lens. (Patent No. 4,194,815, Mar. 25, 1980; filed June 28, 1978; Appl. No. 919,651; 12 claims.)

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

Tactile Indicating Device: Martin R. Hannen and David V. Charlesworth. An electromechanical means for presenting and erasing information in Braille is referred to. Standard Braille characters are used. Each dot is represented by a pin raised above the reading surface by a solenoid. Each raised pin is locked (latched) by a novel ball arrangement beneath each pin shaft. All raised pins may be erased (unlatched) simultaneously. (Patent No. 4,191,945, Mar. 4, 1980; filed Jan. 16, 1978; Appl. No. 869,506; 6 claims.)

Ultrasonic Toothbrush: Arthur Kuris, assignor to Ultrasonic Plaque Control Laboratories, Inc., New York, New York. The bristles vibrate at an ultrasonic rate as the brush is moved manually over tooth and gingival surfaces, or dentures, under relatively light pressure. The brush is detachable from the handle and water and the usual dentifrices may be used. Greatly improved cleaning results are claimed. (Patent No. 4,192,035, Mar. 11, 1980; filed Nov. 8, 1978; Appl. No. 958,663; 28 claims.)

Wheelchair with Shock Absorber: Samuel T. Powers, assignor to Albuquerque Patents, Ltd., Albuquerque, N. Mex. A lever-and-spring device that is attachable to the rear wheels of a conventional wheelchair, using household tools, to provide a smoother ride for the wheelchair occupant. It is inexpensive to manufacture, durable, and offers high shock-absorbing capability. (Patent No. 4,190,263, Feb. 26, 1980; filed May 22, 1978; Appl. No. 908,245; 7 claims.)