Recent Patents [a]

Back Brace: Jack Gold. Described as an improved version of the Milwaukee brace, it has metal uprights attached to the pelvic girdle, one in front and two in back, which support an upper bust or chest ring that extends around the patient's trunk, under the armpits and just below the clavicles. The brace can be used to treat scoliosis, including particularly "high curve" backs, as effectively as the Milwaukee brace, offers much more comfort, is completely hidden by the patient's clothing, and may be worn almost 24 hours a day. (Patent No. 4,230,101, Oct. 28, 1980; filed Aug. 28, 1978, Appl. No. 937,611; 1 claim.)

Biological Electrode: Ray L. Hauser and John F. Harris, assignors to Hauser Laboratories, Boulder, Colorado. The device dispenses with conducting fluids, such as gels, pastes, and electrolytes. A pressure-sensitive or solvent-activated, non-conducting adhesive is used which flows away from the conducting element (high-conducting fibers), when the electrode is applied, allowing the element to make direct contact with the skin. The device is lightweight, remains securely in place, and is quickly applied and removed. (Patent No. 4,226,247, Oct. 7, 1980; filed Aug. 21, 1978, Appl. No. 935,480; 4 claims.)

Car Door Transfer Seat for Handicapped Persons: Gabriel Wellett. The folding seat and support frame hook on the sill when the car window is down. The handicapped person can transfer from the car seat to the folding seat, or vice versa, when the folding seat abuts the car seat on closing the door. The seat, folded, may be stored elsewhere in the car. If left folded on the sill, a door handle safety extension is used. (Patent No. 4,226,462, Oct. 7, 1980; filed Aug. 31, 1978, Appl. No. 938,464; 6 claims.)

Hyperbaric Treatment Apparatus: Oscar G. Stivala. The device is disposable and consists basically of a pliable base pad and an inflatable bag. The base pad has a central opening which frames the treatment area and an adhesive backing to make gas-tight contact with the skin. The bag, fitted with inlet and outlet ports, is connected by a collar to the periphery of the base pad central opening. Prescribed gas inflates the bag and exerts sealing pressure on the collar. The device is described as inexpensive, safe, and simple to apply. (Patent No. 4,224,941, Sep. 30, 1980; filed Nov. 15, 1978, Appl. No. 960,962; 11 claims.)

Method of Implanting Hair: Paul W. Miller, assignor to Hairegenics, Inc., Atlanta, Georgia. A loop formed on the end of a strand of natural or artificial hair is inserted into skin tissue with a special, notched needle. When the needle is withdrawn, the strand remains implanted in the tissue. (Patent No. 4,221,212, Sep. 9, 1980; filed Mar. 26, 1979, Appl. No. 23,614; 3 claims.)

Molded Syme Foot with Attached Stump Socket: Ian W. Cochrane and Frederick R. Tucker, deceased; by Mary Tucker, co-executrix, by George Ackerman, co-executor, by Canada Permanent Trust Co., co-executor. A precast foot, providing flexibility at the toe break and controllable compressibility at the heel, is mechanically-chemically bonded to a custom made, semi-flexible socket. The design eliminates metal connections, and is described as reducing clothing wear, and improving cosmesis in the ankle region. (Patent No. 4,225,982, Oct. 7, 1980; filed Dec. 4, 1978, Appl. No. 966,362; 18 claims.)

Ortho-Turn Bed: George B. Cary and Noelie B. Pfisterer. The invention rolls a bed patient over, or raises his head or knees, or both head and knees, to facilitate bedsore prevention measures, or changing sheets or bandages, or to allow the patient to sit up safely and securely. The mechanism may be manual or powered, and is operable by a single attendant with minimal help from and less stress on the patient. (Patent No. 4,225,988, Oct. 7, 1980; filed Jan. 30, 1979, Appl. No. 7,824; 13 claims.)

Prosthetic Teeth and Bones: Tsuneo Hidaka, Masahide Inoue, and Masatomi Ebihara, assignors to Asahi Kogaku Kogyo Kabushiki Kaisha, Tokyo, Japan. A composite for fashioning prosthetic teeth and bones is claimed having superior affinity for the living body and high mechanical strength. The composite is made up of hydroxy-apatite, or a percentage thereof and one or more compounds from a selected group, and one or more of a range of suitable fibrous material (glass fibers, filaments of silicon carbide, alumina, etc.). (Patent No. 4,230,455, Oct. 28, 1980; filed Dec. 4, 1978, Appl. No. 966,233; 8 claims.)

Prosthetic Terminal Device: Robert Radocy and Ronald E. Dick. The design, of laminated construction, features an internal hook, three cooperating gripping surfaces, two manual locking devices, and optimized cable movement. The cable-actuated thumb member is rotatable and spring-biased to return to open. Greater gripping strength is claimed, a broader range of usefulness, innate biofeedback characteristics, and easy conversion to existing prosthetic models with minimal functional re-education time. (Patent No. 4,225,983, Oct. 7, 1980; filed Nov. 2, 1978, Appl. No. 957,338; 10 claims.)

Protective Crutch Nut: Johnnie W. Thompson. As a fastener for the bolts of crutch legs, which are adjustable in their length with respect to crutch Y-frames, the design as disclosed distributes the torque evenly during fastening so that the nut does not dig into and gradually weaken the crutch. The design also eliminates protruding parts or edges capable of snagging in or tearing clothing, seat covers, and other fabrics. (Patent No. 4,219,037, Aug. 26, 1980; filed May 9, 1978; Appl. No. 904,200; 4 claims.)

Sensory Aid for Visually Handicapped People: David A. Warner, assignor to The Charles Stark Draper Laboratory, Inc., Cambridge, Massachusetts. The system, using components well-known in the art, magnifies and displays conventional black-on-white reading material for the visually handicapped in bright red on a black or dark background. The colors can be varied according to the pathology or requirements of the reader, e.g., by using LCD (liquid crystal display) elements, appropriate color filters, and additional illumination of the reading material. Magnification is highly adjustable and the text scanner may be hand-held. (Patent No. 4,227,209, Oct. 7, 1980; filed Aug. 9, 1978, Appl. No. 932,271; 24 claims.)

Step-Climbing Wheelchair: Jack M. Feliz. The vehicle described enables the user to drive over curbs, enter and leave an automobile, and negotiate inclined surfaces without assistance. It employs built-in, manually-operated ramps aligned with the front and rear wheels, a powered self-leveling chair seat, and a transmission with high-speed drive for flat terrain and low-speed drive with high torque for ascending terrain. The low-speed, high-torque drive also exerts restraint on the vehicle during descending travel. (Patent No. 4,222,449, Sep. 16, 1980; filed Jun. 8, 1978; Appl. No. 913,549; 6 claims.)

Therapeutic Apparatus: James M. Cummins and Gilbert E. Pierfelice. The invention gently lifts and lowers the head of a conventional bed alternately, to shift or slightly move the outer

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

skin of the bed patient in relation to his skeleton, for bedsore prevention. In some cases, the action relieves stiffness and soreness of joints and induces sleep. (Patent No. 4,220,143, Sep. 2, 1980; filed Mar. 31, 1978; Appl. No. 892,393; 11 claims.)

Toothbrush for the Whole Mouth: Terry S. Solow. A mechanically-driven assembly brushes both sides of the teeth and the sulcus area at the same time. Other versions clean the biting surfaces and both sides of the teeth, or one-half, an entire dental arch, or both dental arches, in one operation. Brushes may also be detachable in sections to adjust to significant numbers of missing teeth. (Patent No. 4,224,710, Sep. 30, 1980; filed Nov. 30, 1978, Appl. No. 965,055; 13 claims.)

Wheel-Mounted Walker with Foot Pedal Brake: Wilma J. Daugherty. The walker has a wheel on each side, and a centered lead wheel with a braking mechanism which the patient can operate with the toe of one foot without lifting his heel. Brake force does not tend to turn the walker or cause instability. The walker is height-adjustable and can be disassembled for carrying or storage. It may also be fitted with various hand grips and harnesses, or padded uprights to support the patient under the arms. (Patent No. 4,226,413, Oct. 7, 1980; filed Nov. 8, 1978; Appl. No. 958,782; 5 claims.)