

Recent Patents^a

Adjustable Arch Support for Shoes: Charles A. Herbig. The arch support in the shoe is adjusted by a cam on the shaft of a screw. Turning the screw, with a screw driver or hex key, brings the distal edge of the cam into contact with the underside of the arch support. The screw head is located outside the shoe, between the insole and sole. (Patent No. 4,166,329, Sept. 4, 1979; filed Oct. 10, 1978; Appl. No. 949,994; 2 claims.)

Apparatus for Supporting the Body of a Person in an Upright Position, In Particular for Therapeutic Walking Exercises: August-Eden Zeijdel and Rudolf B. Teunissen, assignors to N. V. Verenigde, Instrumentenfabrieken Enraf-Nonius, Delft, Netherlands. Suspended by a cable from a trolley movable on an overhead rack, a tubular frame supports a person upright while relieving the load on his legs, in particular for therapeutic walking. The frame incorporates a seat ring which engages below the occupant's tuber ischii and an adjustable pressure pad which applies against the symphysis of the pubic bones. Shoulder-level handgrips and a safety belt are provided. (Patent No. 4,164,350, Aug. 14, 1979; filed Apr. 20, 1978; Appl. No. 898,117; 12 claims.)

Apparatus and Method for Non-Invasive Detection of Strictures in Conductive Fluid Conduits: Eugene Findle and Robert J. Kurtz, assignors to Howmedica Inc., New York, New York. The apparatus consists of two electrodes, mounted on a hand-held housing, coupled to standard measurement and display equipment and/or a continuous data charting instrument. The method described is simple and accurate. For example, to locate a stricture in a live human artery the operator senses the skin over the artery with the electrodes for electrical potentials generated by arterial blood flow. The stricture creates turbulence in the blood flow which generates larger potentials than those sensed in unimpeded parts of the artery. Consequently, the site of the stricture can be fixed when the equipment registers the highest electrical potentials in the artery. The apparatus is small, portable, and operable by paramedical personnel. The method may take as little as 15 minutes and causes no significant patient trauma. (Patent No. 4,166,455, Sept. 4, 1979; filed Jan. 25, 1978; Appl. No. 872,035; 12 claims.)

Body Electrodes: Brian McClelland, assignor to Cardio Technology Limited, Dublin, Ireland. An electrode for conducting electrical signals from the skin of a living animal is described which provides a physical barrier to low off-set potential and more electrical stability during use than known electrodes. It has a minimum number of parts and is said to be inexpensive and simple to manufacture. (Patent No. 4,166,453, September 4, 1979; filed January 17, 1978; Appl. No. 870,251; 5 claims.)

Chassis for Stair-Climbing Vehicle: Gunnar O. V. Rasmussen, assignor to Karl-Heinz Werner Toosbuy, Bredebro, Denmark. An improvement to the chassis of a wheelchair with road and stair-climbing wheels locks the stair-climbing wheels on each stair step and unlocks them as each stair step is traversed. Very reliable drive on stairs made slippery by, for example, ice or soapy water, is claimed. (Patent No. 4,154,315, May 15, 1979; filed Jan. 19, 1977; Appl. No. 760,483; 10 claims.)

Coordination Practice Device: Charles Wressell. A steering wheel and foot pedals control rotation and tilt of a flat surface. An operator of the device develops or practices eye-hand-foot

coordination by guiding the movement of a ball, or model car, on the flat surface. The device may easily be converted to a game. (Patent No. 4,166,327, Sept. 4, 1979; filed Oct. 28, 1977; Appl. No. 846,531; 9 claims.)

Instrument Holder for Use on Disabled Hands: Alvin W. Hunt. The device described comprises a rigid band fitting over the upper portions of the fingers, or the area of the palm, a holding device into which instruments such as pens or toothbrushes automatically latch, and an expansible portion of the band to accommodate varying hand sizes. The holding device allows the instrument to be rotated with respect to the hand, and the user can exert considerable force on the instrument through the rigid band. (Patent No. 4,165,896, Aug. 28, 1979; filed Dec. 2, 1977; Appl. No. 856,917; 12 claims.)

Invalid Feeding Device: Patrick Stapleton, Hubbard P. Browne, and D. Weatherholt. Two chin-actuated switches enable an invalid to feed himself several items of hot food. One switch loads a spoon from pressurized containers on a turntable. The other moves the turntable so that the invalid can choose among different containers of food. (Patent No. 4,162,868, July 31, 1979; filed Dec. 20, 1977; Appl. No. 862,655; 1 claim.)

Occupant-Operated Mobile Work Vehicle for Paraplegics: Donald L. Ausmus. A motorized vehicle is described incorporating means to hold a paraplegic erect while an upper body support, lockable at any angle, allows him to work with his hands and to reach everything necessary to perform the work, such as tools, assembly parts, and storage shelves. The paraplegic controls vehicle motion, speed, and braking. The vehicle is stable and maneuverable around objects, through doors, and in narrow spaces. (Patent No. 4,155,416, May 22, 1979; filed Jan. 26, 1977; Appl. No. 762,445; 25 claims.)

Seat Back with Adjustable Lumbar Supporter: Hiroshi Tsuda and Hideoki Matsuoka, assignors to Nissan Motor Co., Ltd., Yokohama, Japan. The invention enables the occupant of a vehicle seat to electrically adjust a lumbar support in the seat backrest up and down and forward and backward, and which can also act as a massager of the seat occupant's lumbar area. (Patent No. 4,155,592, May 22, 1979; filed Jun. 29, 1978; Appl. No. 920,246; 7 claims.)

Support for Maintaining Head in Upright Position: Lance E. Zuesse. A support is claimed which engages the forehead, nape of the neck, and chest to hold a person's head upright while he is resting or sleeping upright in a seat with a backrest. Support embodiments resist forward, lateral, and backward movement of the head and transfer pressure to the relatively unmoving nape of the neck and the chest, while allowing as much jaw movement as possible. The device is adjustable for different wearers and collapsible for carrying or storage. (Patent No. 4,161,946, July 24, 1979; filed Feb. 2, 1978; Appl. No. 874,580; 18 claims.)

Universal Hospital Chair: Henry Classen. A hospital chair of safe and unique construction is described with back, seat, and leg portions easily adjustable to almost any conceivable useful position, within seconds, and equipped with detachable leg and

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foot rests, adjustable table, and toilet seat. (Patent No. 4,155,126, May 22, 1979; filed Feb. 13, 1978; Appl. No. 877,493; 13 claims.)

Vehicle-Mounted Access Ramp Assembly for Wheelchair Users: Robert E. Royce, deceased, late of Englewood, Colorado, by Sandra A. Royce, administratrix, assignor to The Robert E. Royce Revocable Trust, Denver, Colorado. A lightweight ramp assembly enables a wheelchair user to enter and leave a van-type vehicle easily and without aid. The standard double doors of the vehicle, bound together and hinged at the vehicle floor, form the ramp which is fitted with a backstop to prevent wheelchair rolloff, and a stair for able-bodied persons. The assembly provides inside and outside ramp controls, inside warning lights to alert the driver to ramp position, and outside lights, including a flasher, to warn of ramp lowering. (Patent No. 4,155,468, May 22, 1979; filed May 31, 1977; Appl. No. 802,024,13 claims.)

Walker for Invalid Persons: John E. McCague, Sr. and Elinor M. McCague. A walker with a spring-loaded drop seat is disclosed. The seat is attached to the inner side of the walker center frame and has lugs which rest on bars in the walker side frames for added support. The seat is normally upright against the center frame and does not obstruct the inner area of the walker. Dropping the seat, by hand, extends two coil springs. When a user leaves the seat, the springs contract and automatically raise the seat to the normal position. (Patent No. 4,162,101, July 24, 1979; filed Sept. 8, 1977; Appl. No. 831,373; 1 claim.)

Wheelchair: Uzi Danziger and Reuven Danziger. An improved wheelchair is referred to which enables an occupant to propel at least one of the rear wheels and arm rests backward so that he can slide from the wheelchair to another surface, such as a car seat or bed, on hinged plates which unfold across the interval. (Patent No. 4,155,588, May 22, 1979; filed May 3, 1976; Appl. No. 682,407; 6 claims.)