

Title (en)

Exercise apparatus using weight and pneumatic resistances

Title (de)

Leibesübungsgerät unter Verwendung von Gewichten und pneumatischem Widerstand

Title (fr)

Appareil d'exercice physique comprenant des systèmes de résistance à poid et pneumatique

Publication

EP 1648571 B1 20180808 (EN)

Application

EP 04756309 A 20040628

Priority

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- US 48357303 P 20030627
- US 55557704 P 20040322
- US 55572304 P 20040323

Abstract (en)

[origin: WO2005002678A2] An exercise apparatus combines weight and pneumatic resistance to provide a user with options to work against either or both type of the resistances. In one mode, the exercise apparatus includes a user interface, such as, for example, a weight-lifting bar, that a user can move either toward or away from stationary portion of the user's body. A weight (e.g., a free weight plate) can be selectively coupled to the user interface. A pneumatic resistance device can also be selectively coupled to the user interface independent of whether the user interface is also coupled to the weight. The pneumatic resistance device includes at least one valve to regulate the amount of the resistance that the pneumatic resistance device applies to oppose movement of the user interface in at least one direction. At least one actuator may be provided for controlling the at least one valve, the actuator being configured to be manipulated by the user while the user is in an exercise position. The apparatus can also include a trolley that moves relative to a track. The trolley can move with the user interface so as to permit various positions of the user interface relative to the pneumatic resistance device. An adjustable bench adapted to support the user during exercise and capable of engaging an auxiliary rack assembly may also be provided. The bench includes a seat and a backrest that are interconnected and moveable relative to a frame. The bench is adjustable from a generally flat configuration to one or more inclined configurations. In the flat configurations, the bench is particularly suitable for pressing exercise such as the bench press. In the fully inclined position, the bench is suitable for upright exercise such as the military press and the shoulder press. The shoulder of the human body remain generally at the same horizontal location along the bench as the backrest is inclined. The bench thus does not need to be repositioned relative to a bar as the inclination of the bench is changed.

IPC 8 full level

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