



(11)

**EP 1 623 742 A2**

(12)

**EUROPEAN PATENT APPLICATION**

(43) Date of publication:

**08.02.2006** Bulletin 2006/06

(51) Int Cl.:

**A63B 19/04** (2006.01)

**A61H 1/00** (2006.01)

(21) Application number: **05015512.6**

(22) Date of filing: **18.07.2005**

(84) Designated Contracting States:

**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR  
HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI  
SK TR**

Designated Extension States:

**AL BA HR MK YU**

(30) Priority: **02.08.2004 IT BG20040007**

(71) Applicant: **GLOBAL TRADE S.r.L.**  
**24048 Treviolo BG (IT)**

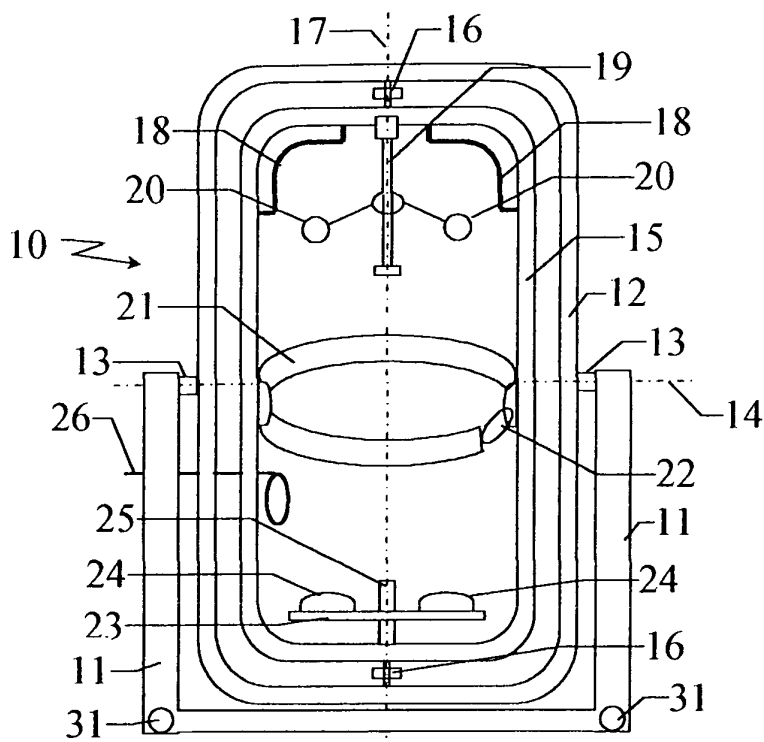
(72) Inventor: **Triggianese, Dorian**  
**24010 Costa Serina (BG) (IT)**

(74) Representative: **Giambrocono, Alfonso et al**  
**Giambrocono & C. s.p.a.,**  
**Via E. Zambianchi, 3**  
**24100 Bergamo (IT)**

(54) **Apparatus for gymnastic exercises**

(57) Apparatus for gymnastic exercises comprising a base including support means; an outer frame of rectangular shape rotatably connected to said support means; an inner frame of rectangular shape rotatably

connected to said outer frame; said inner frame comprising fixing means for fixing a person's feet; gripping means to be gripped by a person's hands; protection means for a person's hands such that said hands cannot extend beyond said inner frame.



**Fig. 1**

## Description

**[0001]** The present invention relates to an apparatus for gymnastic exercises.

**[0002]** To improve one's physical form and maintain one's body in good health, sporting activity is recommended. For this purpose numerous apparatuses have been created to aid this activity. In using such apparatuses, the movements have to be repeated numerous times. Moreover an apparatus is frequently dedicated to the development of a single type of muscle.

**[0003]** Sporting activity carried out with such apparatuses hence becomes repetitive and boring.

**[0004]** An object of the present invention is to provide a gymnastic apparatus which is not repetitive and boring.

**[0005]** Another object is to provide an apparatus able to develop and strengthen many types of muscles.

**[0006]** Another object is to enable the apparatus to be easily stored by requiring little space.

**[0007]** Another object is to ensure the safety of the person using the apparatus.

**[0008]** These and other objects are attained according to the present invention by an apparatus for gymnastic exercises comprising a base including support means; an outer frame of rectangular shape rotatably connected to said support means; an inner frame of rectangular shape rotatably connected to said outer frame; said inner frame comprising fixing means for fixing a person's feet; gripping means to be gripped by a person's hands; protection means for a person's hands such that said hands cannot extend beyond said inner frame.

**[0009]** Further characteristics of the invention are described in the dependent claims.

**[0010]** According to the invention an apparatus is provided which confers considerable benefits on the various muscles, in particular those of the back, without always repeating the same exercises, while at the same time being pleasant to use.

**[0011]** It is of small dimensions and closable to enable it to be stored in a small space. Wheels are provided to allow its easy movement.

**[0012]** All edges are rounded to avoid any discomfort.

**[0013]** Being of small dimensions, the arms if not positioned correctly could penetrate between the moving members (frames), hence suitable protection means are provided, these also being removable or closable to limit overall dimensions.

**[0014]** The characteristics and advantages of the present invention will be apparent from the ensuing description of a practical embodiment thereof, illustrated by way of non-limiting example in the accompanying dimensions, in which:

Figure 1 is a front view of a first embodiment of a gymnastic apparatus;

Figure 2 is a side view of a first embodiment of a gymnastic apparatus in its open position;

Figure 3 is a side view of a first embodiment of a

gymnastic apparatus in its closed position;

Figure 4 is a front view of a second embodiment of a gymnastic apparatus.

**[0015]** With reference to Figure 1, this shows a front view of a first embodiment of a gymnastic apparatus 10 according to the present invention. It comprises a base 11 in the form of a trestle. To this there is applied an outer frame 12 of rectangular shape. The outer frame 12 comprises two pivots 13 connected mechanically thereto substantially at the centre of its longer sides. The pivots 13 together with relative bearings (not shown) form the rotary coupling between these and the base 11 to enable the outer frame 12 to rotate about a horizontal axis 14.

**[0016]** An inner frame 15 of rectangular shape is applied to the outer frame 12.

**[0017]** The outer frame 12 is applied to the inner frame 15 by two bearings 16 connected to them substantially at the centre of their shorter sides.

**[0018]** The bearings 16 form the rotary coupling between the two frames 12 and 15 to enable the inner frame 15 to rotate about an axis 17.

**[0019]** The frames 12 and 15 are constructed of metal tubular elements.

**[0020]** The inner frame 15 comprises two handles 18 applied to its upper inner corners. It comprises a shaft 19 connected to the centre of the upper shorter side. To this shaft there are slidably connected two armrests 20 removably fixable to the wrists of the person who is to use the apparatus. The two armrests 20 are connected to the shaft 19 through a length such that a person's hands can move and extend only as far as the limit of the inner frame 15.

**[0021]** It comprises a belt 21 fixed to the centre of the two longer sides of the inner frame 15, and openable and closable by suitable closure means 22. It also comprises footrest means 23 including means 24 for locking the feet, and adjustable in height (by about 20-30 cm) to enable the means 23 to be fixed at various heights on a support 25.

**[0022]** The inner frame has dimensions of about 250 cm x 110 cm, the space between the inner frame 15 and the outer frame 12 being about 6 cm.

**[0023]** Figures 2 and 3 show side views of the gymnastic apparatus 10 in its open position and closed position respectively.

**[0024]** The base 11 comprises a foldable bar 30 (or chain) positioned horizontally to maintain the base stable when open and able to withdraw when the base 11 is closed, as in Figure 3.

**[0025]** The shaft 19 is connected to the inner frame 15 in such a manner as to enable it to withdraw when the base 11 is closed. It can have a releasable catch which maintains it projecting when the apparatus 10 is in use, or can be rotated at the point of its connection to the inner frame 15.

**[0026]** The base 11 also comprises two wheels 31 connected to its outside such that when the base is open

they do not contact the floor. In contrast, when the base 11 is closed only the wheels 31 contact the floor.

[0027] The apparatus 10 also comprises a retainer 26 which locks the two frames 12 and 15 to the base 11 in a vertical position.

[0028] In a second embodiment of a gymnastic apparatus shown in Figure 4, the shaft 19 and relative armrests 20 are not present. As personal protection a system has been used which creates a closed region formed from at least one sheet of material 40 and 41, preferably transparent, which surrounds the person, limiting his/her extension to the inner width of the inner frame 15.

[0029] This protection preferably consists of two sheets of perspex, one front 40 and one rear, of suitable thickness to maintain the curvature when fixed to the inner frame 15. The sheets 40 and 41 are fixed by snap-mounting the sheets over suitable grips 42 (for example cubic projections) on the inner surfaces of the two longer sides of the inner frame 15. The sheets must comprise suitable holes at the grips 42. The sheets can also be of other plastic or metal materials of such strength as to maintain their substantially circular shape. The sheets 40 and 41 can be fixed to the inner frame 15 by hinges, etc.

[0030] After the foregoing structural description, the operation of the apparatus will now be described.

[0031] When in its operative state the apparatus 10 is fixed in its initial position by the retainer 26. The person who is to effect gymnastic exercises with the apparatus 10 positions the footrest 23 at the required height, and locks the feed with the locking means 24. He/she tightens the belt and locks it by the closure means 22, inserts the arms into the two armrests 20, releases the retainer 26 and grips the two handles 18.

[0032] At this point by inclining himself/herself out of balance and tightening the muscles the person starts the operation of the apparatus 10, by which the two frames 12 and 15 begin to rotate about their respective axes of rotation 14 and 17 respectively. The outer frame 12 rotates about the horizontal axis 14 and the inner frame 15 rotates about the axis 17. The axis 17 rotates in consequence of the rotation of the outer frame 12.

[0033] The hands inserted into the armrests 20 can be displaced and moved but only as far as the limit of the inner frame 15, to avoid any possibility of their being struck by the outer frame 12 during the rotations.

[0034] On termination of movement, the person releases his/her hands from the armrests 20, uncouples the belt 21, releases the feet from the footrest 23 and descends from the apparatus 10, preferably after locking it with the retainer 26.

[0035] If the form of protection shown in Figure 4 is used, the person instead of inserting his/her arms through the two armrests 20 initially sets the two sheets 40 and 41 on the inner frame 15 and either climbs inside from below or opens them to enter.

## Claims

1. An apparatus for gymnastic exercises comprising a base including support means; an outer frame of rectangular shape rotatably connected to said support means; an inner frame of rectangular shape rotatably connected to said outer frame; said inner frame comprising fixing means for fixing a person's feet; gripping means to be gripped by a person's hands; protection means for a person's hands such that said hands cannot extend beyond said inner frame.
2. An apparatus for gymnastic exercises as claimed in claim 1, **characterised in that** said support means are in the form of a trestle.
3. An apparatus for gymnastic exercises as claimed in claim 2, **characterised in that** said trestle can be closed and comprises wheels positioned such as to be available only when said trestle is closed.
4. An apparatus for gymnastic exercises as claimed in claim 1, **characterised in that** said outer frame of rectangular shape is connected rotatably to said support means substantially at the centre of its longer sides.
5. An apparatus for gymnastic exercises as claimed in claim 1, **characterised in that** said inner frame of rectangular shape is connected rotatably to said outer frame substantially at the centre of its shorter sides.
6. An apparatus for gymnastic exercises as claimed in claim 1, **characterised in that** said inner frame comprises a belt fixed substantially at half height, to retain a person's body.
7. An apparatus for gymnastic exercises as claimed in claim 1, **characterised in that** said fixing means for fixing a person's feet are height
8. An apparatus for gymnastic exercises as claimed in claim 1, **characterised in that** said protection means for a person's hands comprise, connected to the centre of the upper side of said inner frame, a shaft to which armrests are slidably connected to fix the person's wrists.
9. An apparatus for gymnastic exercises as claimed in claim 8, **characterised in that** said shaft is connected to the centre of the upper side of said inner frame in a foldable manner.
10. An apparatus for gymnastic exercises as Gaimed in claim 1, **characterised in that** said protection means comprise a semirigid sheet which surrounds at least the upper half of said inner frame.

11. An apparatus for gymnastic exercises as claimed in claim 10, **characterised in that** said protection means comprise two semirigid sheets removably connected to the longer sides of said inner frame.

5

12. An apparatus for gymnastic exercises as claimed in claim 1, **characterised in that** said outer frame rotates about a first horizontal axis, said inner frame rotating about a second axis which rotates with said outer frame.

10

15

20

25

30

35

40

45

50

55

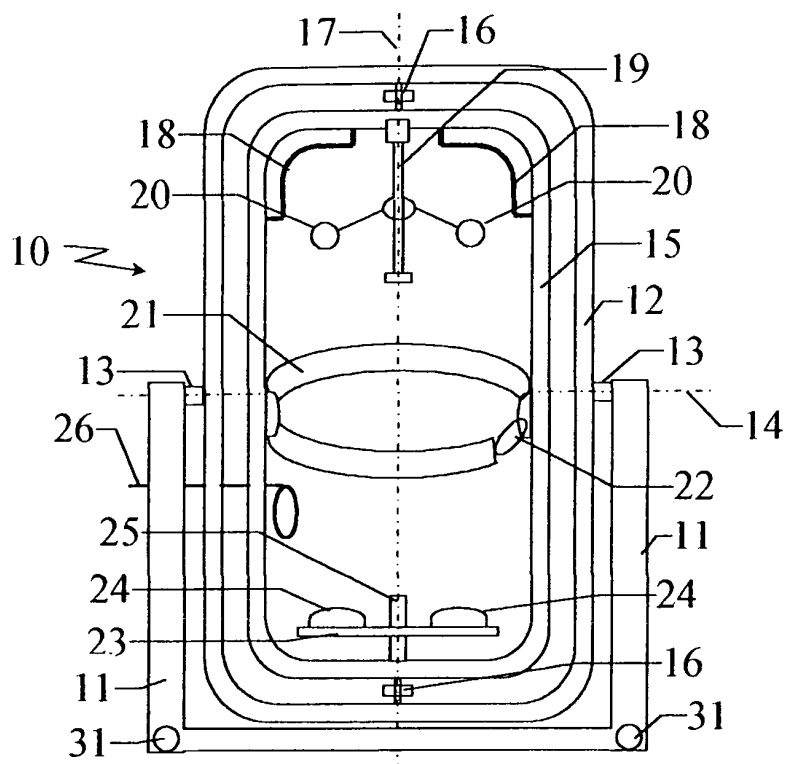


Fig. 1

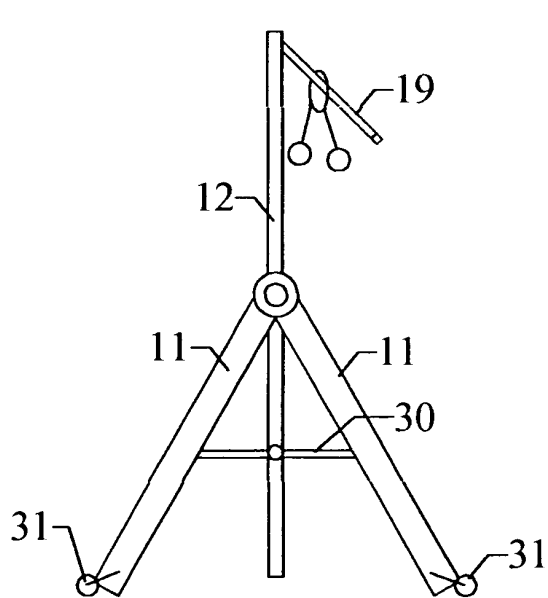


Fig. 2

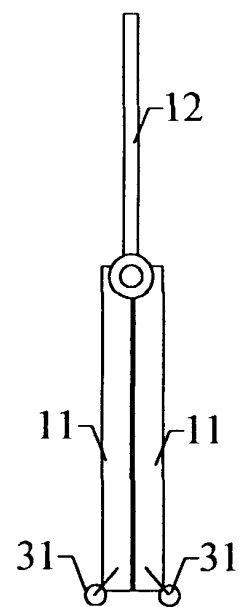


Fig. 3

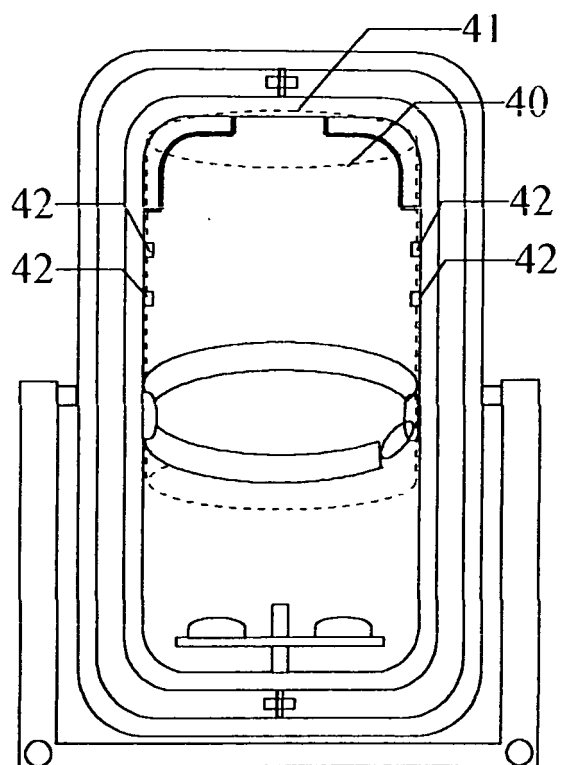


Fig. 4