Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).
Description

[0001] The present invention relates to an exercise apparatus.

[0002] Exercise apparatuses normally feature a supporting structure which simply rests on the floor, either against a wall or away from the wall to enable access on all four sides, both of which setups demand a fairly large amount of space.

[0003] A relatively compact exercise apparatus is described in DE-U-297 19 740. This exercise apparatus comprises a substantially triangular base. However, the triangular base presents a right angle which renders such an apparatus unsuitable for set up the exercise apparatus in any corner cavity.

[0004] On the contrary, the present invention provides a straightforward, effective solution to the problem of combining a substantially triangular exercise corner with furniture (or an electric household appliance) of any base size. In particular, the present invention solves the problem of combining an exercise corner with any type of shower stall.

[0005] According to the present invention, there is provided an exercise apparatus as claimed in Claim 1.

[0006] A preferred, non-limiting embodiment of the present invention will be described by way of example with reference to the accompanying drawings, in which:

Figure 1 shows a schematic view in perspective of an exercise apparatus in accordance with the present invention;

Figure 2 shows a top plan view of the Figure 1 apparatus;

Figure 3 shows a front view of a variation of the Figure 1 apparatus;

Figure 4 shows a side view of the Figure 3 apparatus;

Figures 5 to 7 show three arrangements of the apparatus.

[0007] Number 5 in Figure 1 indicates as a whole an exercise apparatus comprising a supporting structure 6 having a shaped front wall 7 made, for example, of methacrylate. Supporting structure 6 is preferably in the form of a panelled cabinet closed on all sides, and comprises at least one exercise device, such as a pair of step pedals 8, and a pair of horizontal handgrips 9 close to the top edge of shaped front wall 7. According to the invention, supporting structure 6 comprises a substantially triangular base 11 (Figures 2 and 3) to enable apparatus 5 to be set up in a corner cavity 12. More specifically, triangular base 11 comprises two sides 13a and 13b forming an obtuse angle α; and shaped front wall 7 is located at the hypotenuse 13c of triangular base 11.

[0008] Corner cavity 12 is defined by two substantially perpendicular walls 15 and 16. Apparatus 5 may advantageously be set up alongside a polygonal-based box 17, e.g. a box housing a shower or sauna, in which case, one (16) of the walls defining corner cavity 12 is defined by a wall of box 17. Alternatively, wall 16 may form part of a cupboard or similar.

[0009] Angle α is normally less than 105° and preferably equal to 95°. Advantageously, base 11 is substantially in the form of an isosceles triangle defined by the three sides 13a, 13b, 13c, and the equal angles of which are indicated β; and base 11 comprises a slightly curved, outwardly-convex third side 18.

[0010] Shaped front wall 7 has two opposite vertical lateral edges 19 corresponding to angles β of base 11; and wall 16 of box 17 has a vertical front edge 21.

[0011] As shown in Figures 5-7, the fact that base 11 comprises an obtuse angle α (exaggerated in Figures 5-7 for the sake of clarity) enables apparatus 5 to be set up alongside boxes 17 having base sides of different lengths, while still aligning the respective vertical lateral edge 19 of shaped front wall 7 with the front edge 21 of wall 16.

[0012] More specifically, if the base side of box 17 is of a length L1 shorter than the length of sides 13a and 13b of base 11 and equal to the size of base 11 in a direction perpendicular to one of sides 13a, 13b, the respective lateral edge 19 of front wall 7 is aligned with front edge 21 of wall 16 by positioning apparatus 5 with side 13a contacting wall 15, and with side 13b forming an acute angle with wall 16 (Figure 5).

[0013] If the base side of box 17 is of a length L2 greater than the length of sides 13a and 13b of triangular base 11 and equal to the size of base 11 in the direction of one of sides 13a, 13b, the respective lateral edge 19 of front wall 7 is aligned with front edge 21 of wall 16 by positioning apparatus 5 with side 13b contacting wall 16, and with side 13a forming an acute angle with wall 15 (Figure 6).

[0014] If the base side of box 17 is of a length between L1 and L2, the respective lateral edge 19 of front wall 7 is aligned with front edge 21 of wall 16 by positioning apparatus 5 so that both sides 13a and 13b of base 11 form respective acute angles with walls 15 and 16 (Figure 7).

[0015] Apparatus 5 (Figure 1) also comprises a pair of vertical bars 22 fitted to wall 7, and which are gripped by the user when operating step pedals 8; and a mirror 23 is fitted between the top ends of bars 22 and the two handgrips 9.

[0016] The two bars 22 may be L-shaped, as in Figure 1, in which case, bars 22 comprise respective horizontal arms 24 extending towards the center, and which may be gripped by the user when performing so-called sit-down floor exercises. In the Figure 3 variation, the two bars 22 are straight, but, to enable fitment of L-shaped bars 22, shaped front wall 7 comprises a pair of additional holes 25 for arms 24. Both the Figure 1 and Figure 3 embodiments are provided, between the two bars 22, with two sunlamps 26, each having a respective reflecting surface, e.g. a mirror 27; and each mirror 27 is hinged on the respective outer side and normally serves...
as a cover for respective lamp 26. In actual use, each mirror 27 is opened and oriented to reflect the radiation of respective lamp 26 onto the user.

[0017] At the bottom ends of bars 22 or at the two arms 24, supporting structure 6 is fitted with a hinged bench 28 movable between a vertical closed position housed inside a recess 30 in front wall 7, and a horizontal or work position resting on the floor on a leg 29 hinged to a front edge of and foldable onto bench 28. Arrows A and B in Figure 1 respectively indicate the directions in which the bench swings out from the vertical closed position, and the leg from the fold-up position against bench 28.

[0018] Bench 28 has a mat 31, which may be removed easily, as shown for example by arrow C, and, after stowing bench 28 and leg 29 inside recess 30, may be used for floor exercises.

[0019] Pedals 8 extend from two openings 32 in wall 7 and, like bench 28, swing up into a closed position against wall 7 when not in use. Pedals 8 are used to operate a leg exercising mechanism indicated as a whole by 33, and which comprises a flywheel 34 connected between pedals 8.

[0020] It is provided also a weight 36 which comprises a number of weights or blocks made, for example, of metal and stacked removably to enable weight selection according to the physical strength of the user. For which purpose, recess 30 (Figure 1) has an opening 35 enabling access to the inside to add or remove weights to or from weight 36.

[0021] In the Figure 3 variation, wall 7 is provided, on either side of the two openings 32 for pedals 8, with a further two openings 38 for two ends 39 of a cable 40 (Figure 4) co-operating with a number of transmission pulleys 41, 42, 43. Two ends 39 are fitted with end-of-travel stops and are connected to two stirrups (not shown) foot-operated by the user as an alternative to pedal 8.

[0022] Pulleys 42 are fitted to a prismatic body 44, which is also fitted with a central pulley 45 wound with a further cable 46, which, via a further pulley 47 fitted to a fixed body 48, extends along guide 37 and is connected to weight 36. Cable 46 also extends about a further two pulleys 49, and has an end 51 which comes out through an opening 52 (Figure 3) between mirror 23 and the two handgrips 9. End 51 of cable 46 is also fitted with a stop, and has a handgrip (not shown) for another exercise as an alternative to pedal 8 and the stirrups of cable 40.

[0023] Supporting structure 6 may be provided with two rear walls 53 and 54 (Figure 2) located at sides 13a and 13b of base 11, and forming a dihedral angle equal to angle $\alpha$ between sides 13a and 13b. Walls 53, 54 and 7 define supporting structure 6 substantially in the form of a cabinet having base 11. Walls 53 and 54 are shown by dash lines in Figure 2, and may be fitted to wall 15 and/or 16 to stabilize apparatus 5 when in use.

[0024] Alternatively, walls 53 and 54 may be replaced by a straightforward rear frame.

[0025] The advantages, as compared with known apparatuses, of apparatus 5 according to the invention will be clear from the foregoing description. In particular, apparatus 5 is extremely compact and may be installed easily in a corner cavity 12 and in small environments such as a bathroom.

[0026] In particular, as shown in Figures 1 and 2, some of the exercise devices of apparatus 5 according to the present invention, such as step pedals 8, horizontal handgrips 9, bars 22 and arms 24, are confined within a first ideal triangle 100 having the hypotenuse 100a parallel to hypotenuse 13c of base 11. Moreover, when bench 28 is in the work position, the end of bench 28 fitted with leg 29 is confined within a second ideal triangle 101 having the hypotenuse 101a parallel to both the hypotenuse 13c of base 11 and the hypotenuse 100a of first ideal triangle 100.

[0027] Consequently, when bench 28 is in the closed position (Figures 3, 4), all the exercise devices are confined within first ideal triangle 100; and, when bench 28 is in the work position (Figures 1, 2), all the exercise devices are confined within second ideal triangle 101.

[0028] Among other things, the present invention, as stated, provides a straightforward, effective solution to the problem of combining a substantially triangular exercise corner with furniture (or an electric household appliance) of any base size. In particular, the present invention solves the problem of combining an exercise corner with any type of shower stall or a sauna cabinet.

[0029] As such, apparatus 5 is compact enough to be operated correctly in a bathroom or confined environment. Moreover, the fact that all the exercise devices are confined within a triangle at most equal to the size of triangle 101 provides for minimizing any awkwardness caused by projecting bodies in a confined environment, and which may hinder the freedom of movement of the user. Moreover, the substantially cabinetlike design of structure 6 provides for an attractive appearance and for better integrating the structure with other furnishings.

[0030] Clearly, changes may be made to apparatus 5 as described herein without, however, departing from the scope of the accompanying Claims.

[0031] In particular, base 11 may be in the form of a scalene triangle or trapezium; in which latter case, angle $\alpha$ would be that formed by the two inclined sides of the trapezium.

[0032] Moreover, apparatus 5 may be equipped with further exercise or skin-care elements.

Claims

1. An integrated exercise apparatus (5) comprising a substantially triangular base (11); said apparatus (5) characterized by the fact that said substantially triangular base (11) comprises an obtuse angle ($\alpha$)
which is suitable for set up said apparatus (5) in any corner cavity (12).

2. An integrated exercise apparatus (5) as claimed in Claim 1, wherein said corner cavity (12) is formed by a room wall (15) and a wall (16) of a piece of furniture (17).

3. An integrated exercise apparatus (5) as claimed in Claim 2, wherein said piece of furniture (17) is a shower stall (17).

4. An integrated exercise apparatus (5) as claimed in Claim 2, wherein said piece of furniture (17) is a sauna cabinet (17).

5. An integrated exercise apparatus (5) as claimed in any one of the foregoing Claims, wherein said obtuse angle (\(\alpha\)) is less than 105°.

6. An integrated exercise apparatus (5) as claimed in Claim 5, wherein said obtuse angle (\(\alpha\)) equals 95°.

7. An integrated exercise apparatus (5) as claimed in any one of the foregoing Claims, wherein it comprises at least one exercise device (8, 9, 22, 24, 28, 39, 51).

8. An integrated exercise apparatus (5) as claimed in Claim 7, wherein it comprises at least one device (8) for exercising the user's legs.

9. An integrated exercise apparatus (5) as claimed in any one of the foregoing Claims, wherein it further comprises a pair of sunlamps (26); each of said sunlamps (26) having a respective orientable mirror (27).

10. An integrated exercise apparatus (5) as claimed in Claim 7, wherein it comprises at least one swing-up bench (28) hinged to a shaped front wall (7); said swing-up bench (28) having at least one swing-up supporting leg (29).

11. An assembly characterized by comprising at least one integrated exercise apparatus (5) as claimed in any one of the foregoing Claims.

12. An assembly as claimed in Claim 11, wherein it comprises at least one integrated exercise apparatus (5) as claimed in one of the foregoing Claims 1-10 and a shower stall (17).

13. An assembly as claimed in Claim 11, wherein it comprises at least one integrated exercise apparatus (5) as claimed in one of the foregoing Claims 1-10 and a sauna cabinet (17).

14. An assembly comprising:

- a box (17) housing, in particular, a shower or a sauna, said box (17) comprising a vertical edge (21) having a certain distance (L1, L2) from a room wall (15), and further comprising
  - an exercise apparatus (5) presenting a triangular base (11):
    - said triangular base (11) of said exercise apparatus (5) comprises an obtuse angle (\(\alpha\)) and that said triangular base (11) is shaped in such a manner that a first lateral edge (19) of said exercise apparatus (5) lies on said room wall (15), whereas a second lateral edge (19) of said exercise apparatus (5) is always aligned with said vertical edge (21) of said box (17) irrespective of the distance (L1, L2) of said vertical edge (21) from said room wall (15).

Patentansprüche

1. Integriertes Trainingsgerät (5) mit einer im wesentlichen dreieckigen Basis (11); wobei das Gerät (5) durch die Tatsache gekennzeichnet ist, daß die im wesentlichen dreieckige Basis (11) einen stumpfen Winkel (\(\alpha\)) umfaßt, der sich zum Aufstellen des Geräts (5) in irgendeinem Eckraum (12) eignet.

2. Integriertes Trainingsgerät (5) nach Anspruch 1, bei welchem der Eckraum (12) durch eine Raumwand (15) und eine Wand (16) eines Möbelstücks (17) gebildet wird.

3. Integriertes Trainingsgerät (5) nach Anspruch 2, bei welchem das Möbelstück (17) eine Duschkabine (17) ist.

4. Integriertes Trainingsgerät (5) nach Anspruch 2, bei welchem das Möbelstück (17) eine Saunakabine (17) ist.

5. Integriertes Trainingsgerät (5) nach einem der vorangehenden Ansprüche, bei welchem der stumpfe Winkel (\(\alpha\)) weniger als 105° beträgt.

6. Integriertes Trainingsgerät (5) nach Anspruch 5, bei welchem der stumpfe Winkel (\(\alpha\)) gleich 95° ist.

7. Integriertes Trainingsgerät (5) nach einem der vorangehenden Ansprüche, wobei es mindestens eine Trainingseinrichtung (8, 9, 22, 24, 28, 39, 51) umfaßt.

8. Integriertes Trainingsgerät (5) nach Anspruch 7, wobei es mindestens eine Einrichtung (8) zum Trainieren der Beine des Benutzers umfaßt.
9. Intégré d'entraînement (5) à un d'une autre des prédécesseurs, 
ône, l'être supérieur un paire de séances de (26) 
forme, en sorte que l'être supérieur les séances de (26) un 
entreprenant orientable Spiegel (27) au-

10. Intégré d'entraînement (5) à un d'une autre des prédécesseurs, 
ône qui se présente une banque repliable (28) 
forme, en sorte que l'être supérieur les séances de (26) un 
entreprenant orientable Spiegel (27) au-

11. Voiture, 
ône, l'être supérieur un paire de séances de (26) 
forme, en sorte que l'être supérieur les séances de (26) un 
entreprenant orientable Spiegel (27) au-

12. Voiture, 
ône, l'être supérieur un paire de séances de (26) 
forme, en sorte que l'être supérieur les séances de (26) un 
entreprenant orientable Spiegel (27) au-

13. Voiture, 
ône, l'être supérieur un paire de séances de (26) 
forme, en sorte que l'être supérieur les séances de (26) un 
entreprenant orientable Spiegel (27) au-

14. Voiture, 
ône, l'être supérieur un paire de séances de (26) 
forme, en sorte que l'être supérieur les séances de (26) un 
entreprenant orientable Spiegel (27) au-

Revendications

1. Appareil d'exercice intégré (5) comprenant une ba-

2. Appareil d'exercice intégré (5) selon la revendication 1, dans lequel le côté caveillette (12) est for-

3. Appareil d'exercice intégré (5) selon la revendication 2, dans lequel le côté caveillette (12) est for-

4. Appareil d'exercice intégré (5) selon la revendication 3, dans lequel le côté caveillette (12) est for-

5. Appareil d'exercice intégré (5) selon la revendication 4, dans lequel le côté caveillette (12) est for-

6. Appareil d'exercice intégré (5) selon la revendication 5, dans lequel le côté caveillette (12) est for-

7. Appareil d'exercice intégré (5) selon la revendication 6, dans lequel le côté caveillette (12) est for-

8. Appareil d'exercice intégré (5) selon la revendication 7, dans lequel le côté caveillette (12) est for-

9. Appareil d'exercice intégré (5) selon la revendication 8, dans lequel le côté caveillette (12) est for-

10. Appareil d'exercice intégré (5) selon la revendication 9, dans lequel le côté caveillette (12) est for-

11. Ensemble caractérisé en ce qu'il comprend au moins un appareil d'exercice intégré (5) selon la revendication 11, comprenant au moins un appareil d'exercice intégré (5) selon la revendication précédente 1 à 10 et une ca-

12. Ensemble comprenant au moins un appareil d'exercice intégré (5) selon la revendication précédente 11, comprenant au moins un appareil d'exercice intégré (5) selon la revendication précédente 1 à 10 et une ca-

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13. Ensemble selon la revendication 11, comprenant au moins un appareil d’exercice intégré (5) selon l’une des revendications précédentes 1 à 10 et une cabine de sauna (17).

14. Ensemble comprenant :

- une cabine (17) renfermant, en particulier, une douche ou un sauna, ladite cabine (17) comprenant une arête verticale (21) à une certaine distance (L1, L2) d’une paroi (15) d’une pièce, et comprenant en outre :

- un appareil d’exercice (5) présentant une base triangulaire (11) :

  l’ensemble étant caractérisé par le fait que ladite base triangulaire (11) dudit appareil d’exercice (5) comprend un angle obtus (α) et est configurée de telle manière qu’une première arête latérale (19) dudit appareil d’exercice (5) s’appuie contre ladite paroi (15) de la pièce, tandis qu’une deuxième arête latérale (19) dudit appareil d’exercice (5) est toujours alignée avec ladite arête verticale (21) de ladite cabine (17) quelle que soit la distance (L1, L2) de ladite arête verticale (21) par rapport à ladite paroi (15) de la pièce.