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(54) EXERCISE APPARATUS

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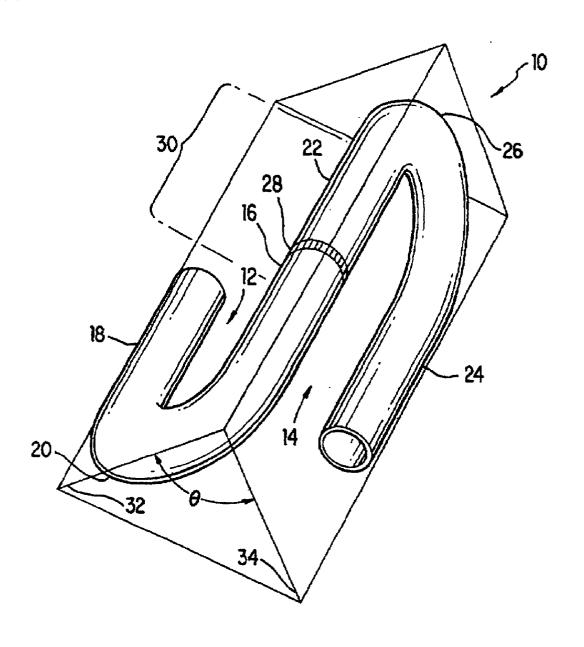
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#### (57)**ABSTRACT**

Provided is an exercise device that features two interlocking portions, each of which defines a catch. Each catch comprises two spaced-apart leg portions with a hook portion extending therebetween. The first leg portion of one catch is connected to the first leg portion of the other catch, defining a coupling, with said coupling and the first leg of the first catch lying in a first plane, and the hook portion of the second leg portion of the second catch lying in a second plane. The device can hang on a door or other high place to facilitate pull-ups, or can rest on the floor or wall to facilitate push-ups.



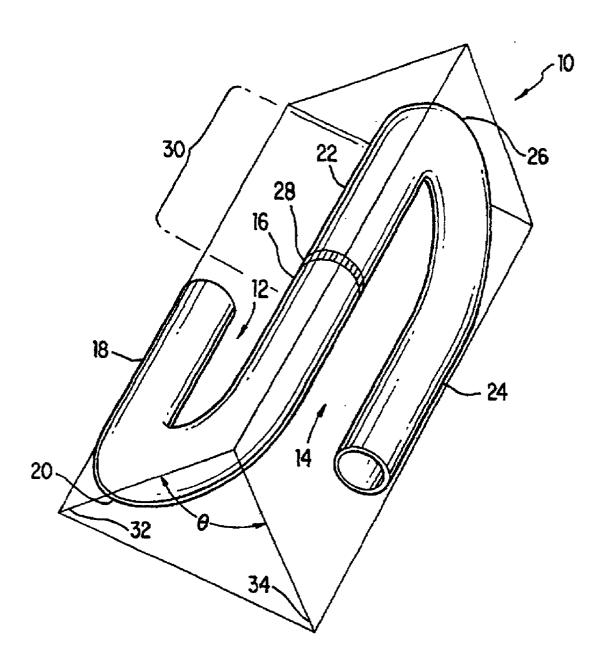
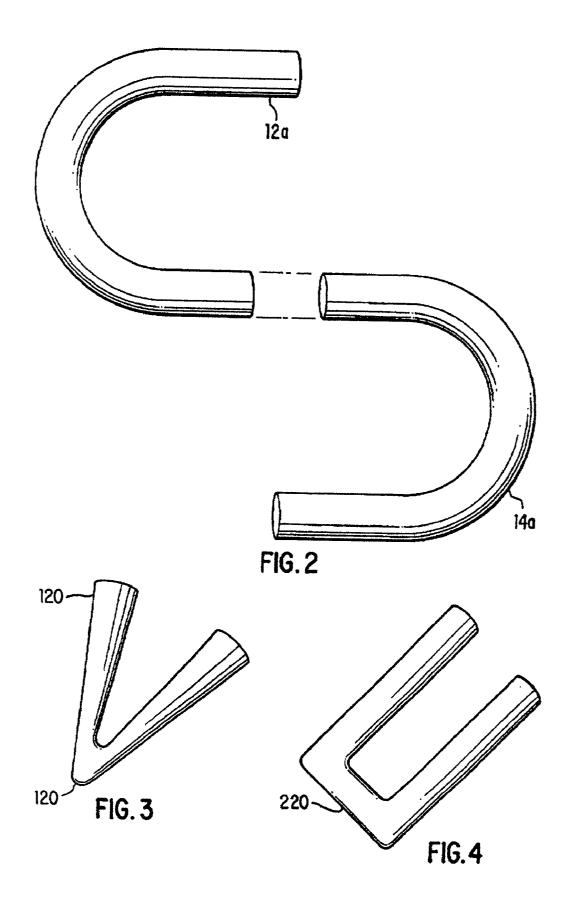
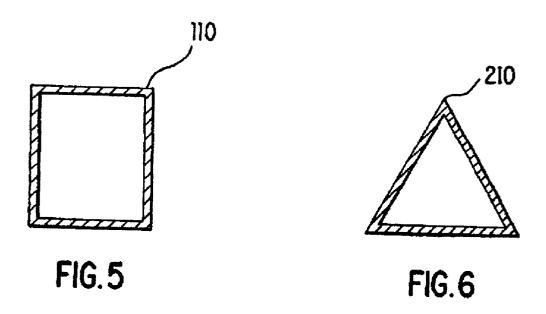
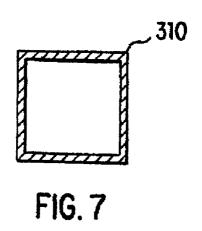


FIG.1







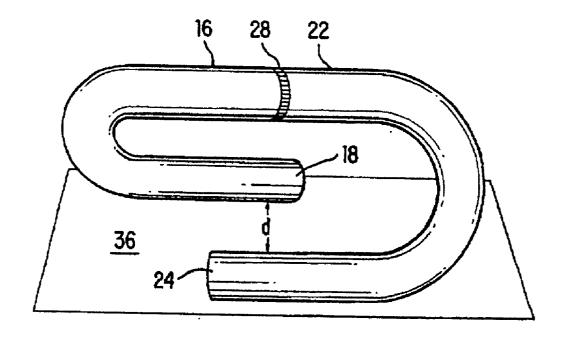


FIG.8

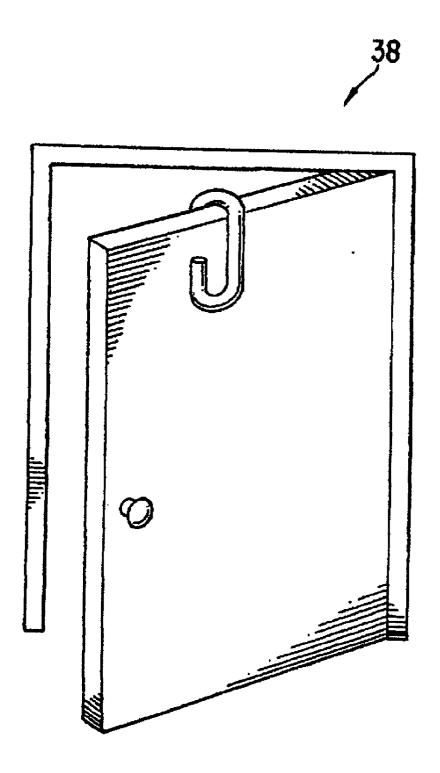


FIG. 9

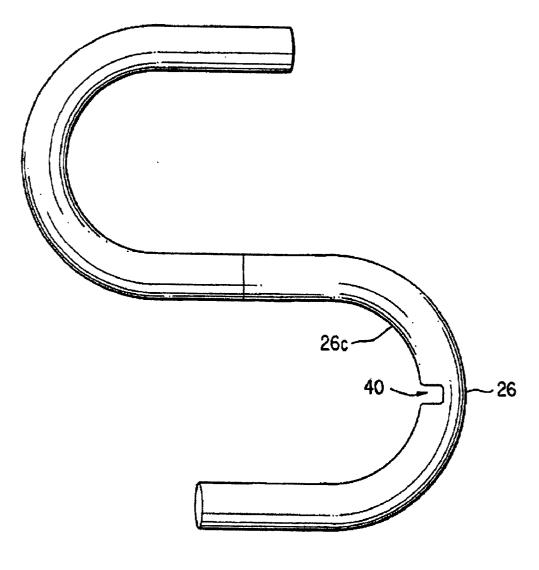


FIG.10

#### **EXERCISE APPARATUS**

#### BACKGROUND OF THE INVENTION

[0001] The present invention relates to portable exercise devices. More particularly, the present invention relates to a portable exercise device that hangs on a door to facilitate pull-ups or rests on a surface to facilitate push-ups.

[0002] In recent years, devices for exercising at home or while traveling have become increasingly popular. Major considerations in determining the value of the device are the variability of exercises that can be performed, ease of using the device, and storage space required to house the device. Home exercise devices commonly employ weights or springs. They often are too large or too heavy to pack in luggage. Many focus on just one muscle group; others require special accessories.

[0003] One existing portable pull-up device, the DOOR-GYM®, which is available through BodyTrends located at url address http://www.BodyTrends.com/dorgym.htm. DOORGYM® affixes to the top trim of a door-frame and provides handles for the user to perform pull-ups. Alternatively, DOORGYM® may be placed on a floor to facilitate push-ups. As this device is intended for use with a door-frame, it is sized accordingly.

[0004] What is needed, therefore, is a portable exercise device having a smaller footprint while affording multiple exercise routines.

### SUMMARY OF THE INVENTION

[0005] Provided is an exercise device that features a body having two catches. Each catch includes two spaced-apart leg portions with a hook portion extending therebetween. The first leg portion of one catch is connected to the first leg portion of the other catch, defining a coupling, with the coupling and the first leg of the first catch lying in a first plane, and the hook portion of the second leg portion of the second catch lying in a second plane. The first plane extends transversely to the second plane, defining an angle therebetween. The hook of each catch, as well as the second leg of each catch, extend into different planes from the coupling. The angle between the second and first leg of each catch depends on the settings of the interlocking mechanism.

[0006] These and other embodiments of the present invention, as well as its advantages and features are described in more detail in conjunction with the text below and attached figures.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 is a detailed perspective view of the exercise device;

[0008] FIG. 2 is a simplified plan view of two tubular segments employed to form the exercise device shown in FIG. 1;

[0009] FIG. 3 is a simplified plan view of a tubular segment shown in FIG. 2 in accordance with a first alternate embodiment;

[0010] FIG. 4 is a simplified plan view of a tubular segment shown in FIG. 2 in accordance with a second alternate embodiment;

[0011] FIG. 5 is a cross-sectional view of a body shown in FIG. 1 in accordance with a third alternate embodiment of the present invention;

[0012] FIG. 6 is a cross-sectional view of a body shown in FIG. 1 in accordance with a fourth alternate embodiment of the present invention;

[0013] FIG. 7 is a cross-sectional view of a body shown in FIG. 1 in accordance with a fifth alternate embodiment of the present invention;

[0014] FIG. 8 is a perspective view of showing a configuration of the exercise device shown in FIG. 1 in use to perform a push-up exercise;

[0015] FIG. 9 is a perspective view of a the exercise device shown in FIG. 1 for use to perform a pull-up exercise;

[0016] FIG. 10 is plan view of the exercise device shown in FIG. 1 in accordance with a seventh alternate embodiment:

# DESCRIPTION OF THE SPECIFIC EMBODIMENTS

[0017] Referring to FIG. 1, a body 10 comprises two catches 12 and 14. Catch 12 includes first and second spaced-apart legs 16 and 18, with a hook portion 20 extending therebetween. Catch 14 includes first and second spacedapart legs 22 and 24, with a hook portion 26 extending therebetween. First legs 16 and 22 are collinear and are coupled together with a coupling 28, defining a grip portion 30. In this manner, catches 12 and 14 are coupled together to lie in two differing planes, shown as 32 and 34, respectively. Specifically, first and second legs 16 and 18, as well as hook portion 20 lie in a common plane 32. First and second legs 22 and 24 and hook portion 26 are also coplanar, lying in a common plane 34. Planes 32 and 34 intersect along grip portion 30 and extend therefrom, transversely to each other and defining an angle  $\Theta$  therebetween. Although angle  $\Theta$  may be of any size, in the present example, angle  $\Theta$  is an oblique angle.

[0018] Referring to both FIGS. 1 and 2, body 10 may be formed from two segments 12a and 14a of hollow cylindrical metal tubing, each of which is an identical length. Segments 12a and 14a are bent into a U-shape to form catches 12 and 14. As a result, body 10 may have a circular cross-section and hook portions 20 and 26 have an arcuate shape. It should be understood, however, that hook portions may have any shape desired. For example, hook portions 20 and 26 may have a triangular shape, shown as hook portions 120 in FIG. 3. Alternatively, as shown in FIG. 4, hook portion 220 may have a rectangular shape.

[0019] Moreover, it should be understood that while body 10 is described as being formed from hollow cylindrical metal tubing, body 10 may be formed from any type of material, such as hollow or solid metal, hollow or solid plastic, hollow or solid rubber and the like. In addition, the shape of the material employed to form body 10 may be any desired. For example, body 110 may have a rectangular cross-section, shown in FIG. 5, a triangular cross-section as shown in FIG. 6 or a square cross-section as shown in FIG. 7

[0020] Referring to both FIGS. 1 and 8, in one manner of operation body may be employed to perform a one-handed push. To that end, second legs 16 and 24 lie in a common plane, such as by resting against a surface 36, with grip portion 30 being spaced-apart from surface 36. Grip portion 30 is grasped by a hand of a user so as to allow the user to support the user's weight upon body 10. By properly balancing one's weight, a user may commence with performing a one handed push-up by repeatably retracting one's arm toward, and extending from, one's torso. Employing two bodies 10 a user can perform a two-handed push-up.

[0021] Referring to both FIGS. 1 and 9 in another manner of operation, hook portion 26 may be supported by a surface of a support, shown as a door 38, which extends transversely to a direction of gravity §. In this manner, hook portion 20 may be grasped by a hand of a user to facilitate performing pull-up exercises. Employing a second body (not shown) a user can perform a two-handed pull-up.

[0022] Referring to FIGS. 9 and 10 to enhance coupling of hook portion 26 to door 38, a surface of hook portion 26c may be contoured with a recess 40 so that the profile of surface 26c matches a profile of a portion of door 38 to which it is coupled. In this manner, recess is provided with a rectangular shape.

[0023] Although the invention has been described in terms of specific embodiments, one skilled in the art will recognize that various modification and improvements may be made. For example, although the recess mentioned above has been described as having a rectangular shape, the recess may have an arcuate shape. Therefore, the scope of the invention should not be based upon the foregoing description. Rather, the scope of the invention should be determined based upon the claims recited herein, including the full scope of equivalents thereof.

What is claimed is:

- 1. An exercise device comprising:
- a body defining first and second catches, with each of said first and second catches including first and second spaced-apart leg portions with a hook portion extending therebetween, with the first leg portion of said first catch connected to the first leg portion of said second catch, defining a coupling, with said coupling and said first catch lying in a first plane, and the hook portion of the second leg portion of said second catch lying in a second plane, with said first plane extending transversely to said second plane, defining an angle therebetween.
- 2. The device as recited in claim 1 wherein the second leg portion of said first catch extends toward said second catch and the second leg portion of said second catch extends toward said first catch overlapping the second leg portion of said first catch.
- 3. The device as recited in claim 1 wherein said angle is an oblique angle.
- **4**. The device as recited in claim 1 wherein said hook portion has an arcuate shape.
- 5. The device as recited in claim 1 wherein said hook portion has a rectangular shape.
- **6**. The device as recited in claim 1 wherein said hook portion has a triangular shape.
- 7. The device as recited in claim 1 wherein said hook portion has an arcuate recess formed therein.

- 8. The device as recited in claim 1 wherein said body has a cross-sectional shape, with said shape being selected from a group consisting essentially of circular, triangular, rectangular and square.
  - 9. An exercise device comprising:
  - first and second bodies, each of which defines first and second catches, with each of said first and second catches including first and second spaced-apart leg portions with a hook portion extending therebetween, with the first leg portion of said first catch connected to the first leg portion of said second catch, defining a coupling, the second leg portion of said first catch extending toward said second catch and the second leg portion of said second catch extending toward said first catch to overlap the second leg portion of said first catch, with said coupling and said first catch lying in a first plane, and the hook portion of the second leg portion of said second catch lying in a second plane, with said first plane extending transversely to said second plane, defining an angle therebetween.
- 10. The device as recited in claim 9 wherein said angle is an oblique angle.
- 11. The device as recited in claim 10 wherein said hook portion has a shape selected from the group consisting essentially of arcuate, rectangular and triangular.
- 12. The device as recited in claim 11 wherein said hook portion has an arcuate recess formed therein.
- 13. A method of forming an exercising device, said method comprising:

providing a body having opposed ends;

- forming a catch at each of said opposed ends, each of which includes first and second spaced-apart leg portions with a hook portion extending therebetween, with the first leg portion of said first catch being connected to the first leg portion of said second catch, defining a coupling; and
- orientating said coupling and said first catch to lie in a first plane, and the hook portion of the second leg portion of said second catch to lie in a second plane, with said first plane extending transversely to said second plane, defining an angle therebetween.
- 14. The method as recited in claim 13 wherein orientating said coupling and said first catch further includes orientating said coupling and said first catch to lie in a first plane, and orientating the hook portion of the second leg portion of said second catch to lie in a second plane, with said first plane extending transversely to said second plane, defining an oblique angle therebetween.
- 15. The method as recited in 13 further including providing an additional body having opposed termini and forming an additional catch at each of said opposed termini, each of which includes an additional first and second spaced-apart leg portions with an additional hook portion extending therebetween, with the additional first leg portion of said additional first catch being connected to the additional first leg portion of said additional second catch, defining an additional coupling; and orientating said additional coupling and said additional first catch to lie in said first plane, and the additional hook portion of the additional second leg portion of said additional second catch to lie in said second plane.
- 16. The method as recited in claim 15 further including providing a door, attaching said first catch and said additional first catch to said door.

17. The method as recited in claim 15 further resting said second catch and said second additional catch on a floor.

18. The method as recited in claim 15 further including forming a grip on the first leg portion of said first catch and

forming an additional grip on the additional first leg portion of said additional first catch.

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