July 28, 1970 K. AASE 3,521,848

WALL MOUNTED EXERCISING APPARATUS

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Fig. 1

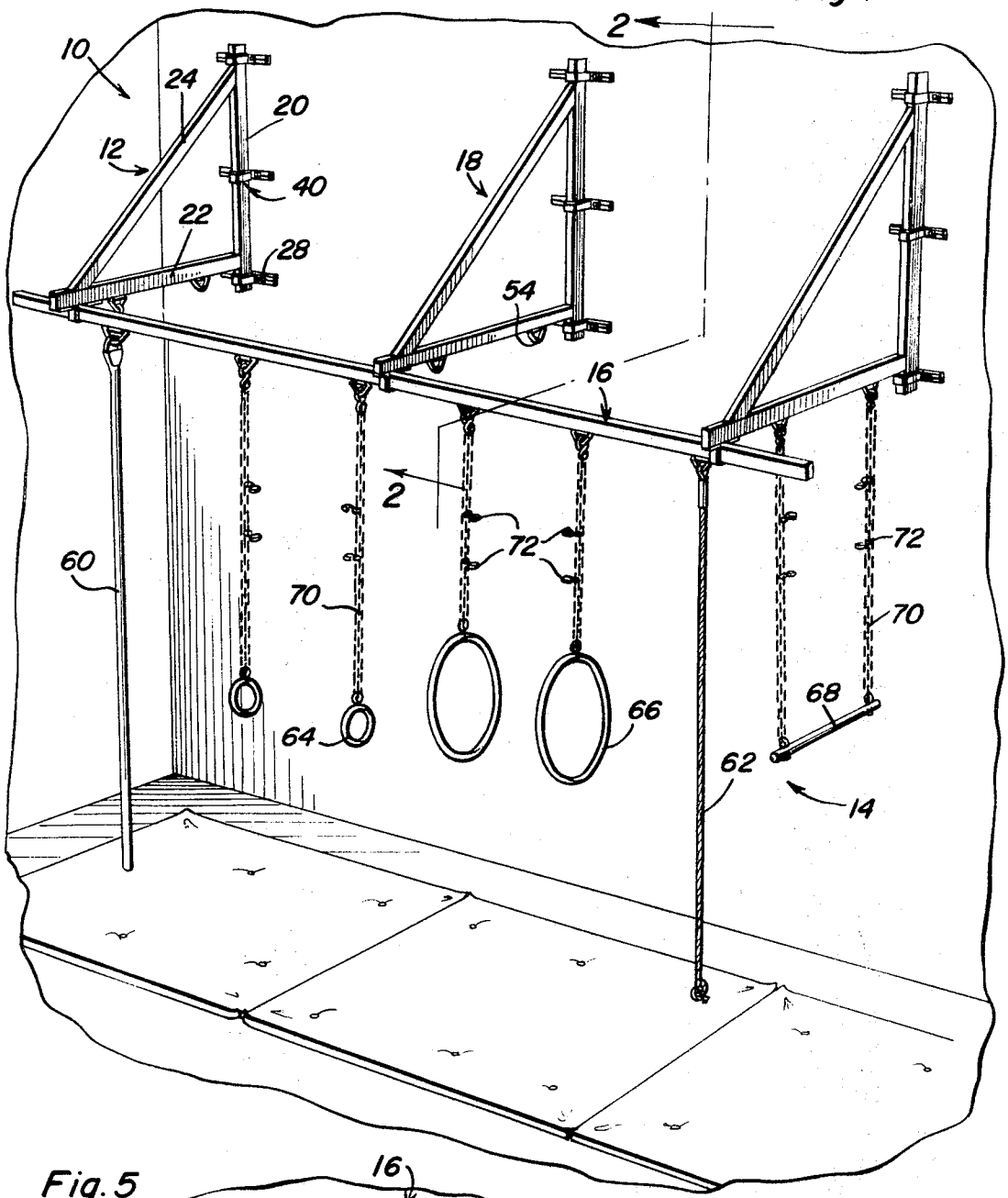
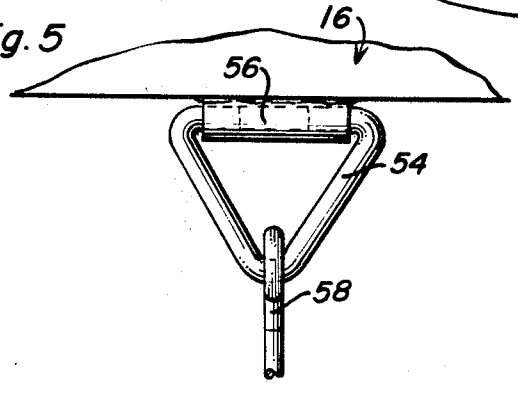


Fig. 5



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Fig. 6

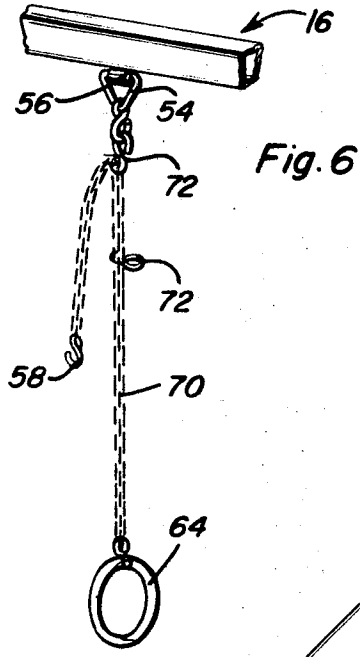


Fig. 2

Fig. 3

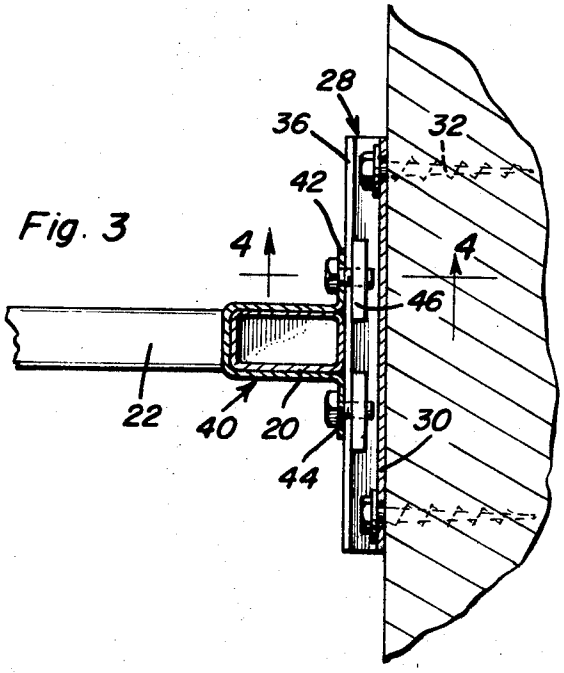
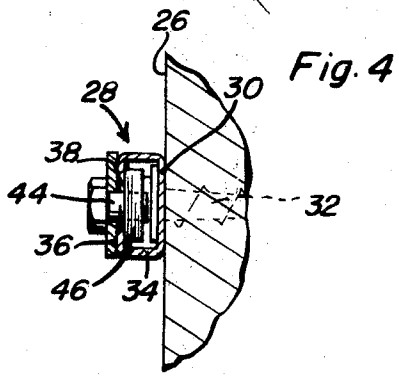


Fig. 4



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3,521,848

WALL MOUNTED EXERCISING APPARATUS

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Int. Cl. A63b 7/02
U.S. Cl. 248—205 5 Claims

ABSTRACT OF THE DISCLOSURE

A physical fitness center including a support beam mounted in an elevated position by a plurality of brackets and in turn suspending exercising apparatus of various types. Selected units of the apparatus are in the nature of chain suspended members with the suspension chains having adjusting hooks secured thereto for selective engagement with the overhead bar so as to vary the height of the unit.

The instant invention generally relates to physical fitness equipment, and is more particularly directed to a self-contained wall mounted exercising assembly.

It is an important object of the instant invention to provide exercising apparatus which is particularly adapted to provide a wall mounted self-contained gym unit which is adaptable for mounting in any convenient location within a gymnasium, hallway, classroom or any other room or passageway, normally in a corner thereof, with the mounting frame being so positioned as to not interfere with the normal use of the area under the unit for passage, classroom work or games such as basketball or the like requiring large clear areas. By the same token, the unit is also adaptable for outdoor use, mounted on an exterior wall, post or other supporting structure.

Another particularly significant object of the instant invention resides in the provision of apparatus which can be adapted for different types of exercises through the use of interchangeable equipment both mounted and adjustable on the overhead mounting frame.

In conjunction with above object, it is also a significant object of the invention to provide equipment from which the suspended items can be removed so as not to interfere with the general use of the areas under the brackets, as well as equipment which is completely removable for storage and other utilization of the space. By leaving the brackets in place, the area can be quickly and simply converted from usual classroom or other use to a gymnasium, this merely entailing the hanging of the individual items from the brackets. This in turn will encourage the frequent use of the equipment for the purpose of instruction and exercise.

In achieving the above objects, and providing self-contained exercising apparatus which, incidentally, is also ideally suited for physical fitness testing and the like, the apparatus utilizes an overhead support beam rigidly mounted by a plurality of mounting brackets with the beam in turn adjustably suspending various pieces of equipment. The majority of the suspended equipment will utilize suspension chains with the individual chains in turn having suspension hooks secured thereto at longitudinally spaced points therealong which hooks can be utilized so as to adjust the effective length of the chains and thereby vary the height of the equipment.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a perspective view of the entire apparatus comprising the instant invention;

FIG. 2 is an enlarged cross-sectional view taken substantially on a plane passing along line 2—2 in FIG. 1;

FIG. 3 is an enlarged cross-sectional detail taken substantially on a plane passing along line 3—3 in FIG. 2;

FIG. 4 is a cross-sectional detail taken substantially on a plane passing along line 4—4 in FIG. 3;

FIG. 5 is an enlarged elevational detail of one of the mounting loops permanently affixed to the support beam; and

FIG. 6 illustrates the adjustable nature of the equipment suspension chains.

Referring now more specifically to the drawings, reference numeral **10** is used to generally designate the self-contained apparatus comprising the instant invention. This apparatus **10** consists basically of a mounting frame **12** and various types of equipment **14** suspended therefrom.

The mounting frame **12** includes an elongated support beam **16** horizontally positioned and rigidified in an elevated location by a plurality of wall hung support brackets **18**. Each of the brackets **18** includes a vertical leg **20** and a horizontal leg **22** rigid with the lower end portion of the vertical leg **20**, as by welding, and projecting horizontally outward therefrom. The outer end of the horizontal leg **22** and the upper end of the vertical leg **20** are in turn rigidly interlocked by a diagonal brace **24** extending therebetween and welded thereto.

The vertical leg **20** of each of the brackets **18** is to be rigidly affixed to the wall **26** with the preferred manner of mounting being illustrated in the drawings and consisting of the utilization of a plurality of mounting channels **28**. Each of the mounting channels **28** includes a flat web **30** which lies flush against the surface of the wall **26** and is suitably anchored thereto by bolts **32** or the like extending through the web **30** and into the wall **26** itself. Integral flanges **34** project forwardly from the upper and lower edges of the channel web **30** and terminate in inwardly directed edge portions **36** which define an access slot **38** therebetween horizontally along the length of the mounting channel **28**. A U-clamp **40** is associated with each mounting channel **28** and encircles the corresponding vertical bracket leg **20** with the laterally directed end portions **42** of the U-clamp **40** overlying the corresponding mounting channel access slot **38**. A pair of bolts **44** are then inserted through the laterally directed end portions **42** and the underlying slot **38** into threaded engagement with an internal nut-like member **46** which, upon a tightening of the bolt **44**, is drawn against the inner faces of the inturned edges **36** so as to effectively clamp the U-member **40** and the received vertical leg **20** against the wall mounted channel **28**. Preferably three such mounting units will be provided, oriented as illustrated in the drawings. Incidently, it will be appreciated that, through the utilization of the mounting channels **28**, the brackets themselves, should the need arise, can be quickly unbolted from the wall, leaving only the mounting channels.

The support beam **16** is received against the lower surface of the outer end portion of each of the horizontal bracket legs **22** and is rigidly affixed thereto in any appropriate manner, such as the illustrated utilization of U-clamps **48** encircling the beam **16** and having the laterally directed end portions **50** thereof bolted to the overlying horizontal leg **22** by bolt means **52**.

A plurality of equipment mounting triangular loops **54** are pivotally secured to the undersurface of the support beam **16** by hollow sleeves **56**. A horizontal leg of each loop **54** is inserted in the sleeve **56** which is in turn welded or otherwise appropriately affixed to the beam **16**. In this manner the depending apex of the triangular loop **54** is adapted to receive and center a suspension hook **58** affixed to the individual pieces of equipment. Incidently, as

will be appreciated from the drawings, the equipment mounting loops **54** can also be provided on the horizontal bracket legs **22** so as to provide for a utilization of all the available space within the area of the apparatus.

The equipment **14** itself can be of any appropriate type, including climbing poles and ropes **60** and **62**, rings **64**, hoops **66**, and/or trapeze bars **68**. In each instance, the individual pieces of equipment will be releasably suspended from the mounting loops **54** through the utilization of support hooks **58**. Further, in those instances where elongated flexible suspension means such as chains **70** are utilized to suspend the various pieces of equipment, additional or secondary suspension hooks **72** will be provided at longitudinally spaced points along the length of the individual chains or the like **70**. The purpose of these additional suspension hooks **72**, which incidentally are preferably in the nature of S-hooks with one loop received through a chain link and closed thereabout, is to provide a simplified and unique means for adjusting the height of the involved equipment, be it rings **64**, hoops **66** or trapeze bars **68**. In this manner, the equipment can accommodate a wide range of different age and size groups through merely a utilization of the appropriate suspension hook, either **58** or **72**.

From the foregoing, it will be appreciated that a unique physical fitness device has been defined, this device being in effect a self-contained exercising gym including provision for suspended equipment of all types which can be utilized interchangeably and individually adjusted. The equipment will be suspended from an overhead support beam which in turn is affixed to a plurality of brackets secured to an appropriate support wall. If so desired, through slight modifications in the support brackets themselves, provision can be made for suspending the entire device either diagonally across a corner or from an overhead support or ceiling. Further, when actually supplying the device, a storage vaulting box will also be provided, this vaulting box being hollow and of a size so as to easily receive the removable equipment for storage purposes. Likewise, it is contemplated that, in actual practice, visual teaching aids will also be provided, such being in the nature of large, easy-to-read charts setting forth procedures and techniques so as to assist in setting up a regular program of physical fitness. Incidentally, while not specifically noted supra, it is contemplated that both the bracket members and the beam **16** be constructed of lightweight hollow rectangular steel tubing.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. Self-contained exercising apparatus comprising an elongated support beam, means mounting said support beam in a horizontal overhead position, a plurality of mounting loops fixed to said beam and depending therefrom at longitudinally spaced points therealong for supporting reception of suspension hooks associated with pieces of exercising equipment, said means mounting the support beam comprising a plurality of brackets, each bracket including a vertical leg, means for affixing each vertical leg to a supporting wall, and a horizontal leg rigidly secured to the lower end portion of each vertical leg and projecting outwardly therefrom, said support beam being secured to the outer end portion of each horizontal bracket leg and extending transversely thereacross, and a plurality of mounting loops affixed to the horizontal bracket legs for supporting reception of suspension hooks associated with pieces of exercising equipment, each of said brackets including a rigid diagonal brace extending between the outer end portion of the horizontal leg and the upper end portion of the vertical leg and rigidly engaged with said legs, the means for affixing each bracket vertical leg comprising a horizontally orientated forwardly opening channel anchored to the supporting wall, and means releasably locking the associated vertical leg to the channel.

2. The apparatus of claim **1** wherein each channel includes opposed inwardly directed edge portions along the forward portion thereof so as to define an access slot therebetween, said means for releasably locking each vertical leg to the associated channel including a U-clamp encircling the leg, said U-clamp including laterally directed end portions overlying the access slot, bolt means inserted through the end portions of the U-clamp and the underlying access slot, and means within the channel engaged with the bolt means.

3. Self-contained wall-mounted exercising apparatus comprising an elongated support beam, means mounting said support beam in a horizontal overhead position, and equipment mounting means fixed to said beam and depending therefrom at longitudinally spaced points therealong for the support of pieces of exercising equipment, said means mounting the support beam comprising a plurality of brackets, each bracket including a vertical leg, means for affixing each vertical leg to a supporting wall, and a horizontal leg rigidly secured to the lower end portion of each vertical leg and projecting outwardly therefrom, said support beam being secured to the outer end portion of said horizontal bracket leg and extending transversely thereacross in laterally spaced relation to the vertical bracket legs, said means for affixing each bracket vertical leg comprising a horizontally orientated forwardly opening channel anchored to the supporting wall, and means releasably locking the associated vertical leg to the channel.

4. The apparatus of claim **3** wherein each channel includes opposed inwardly directed edge portions along the forward portion thereof so as to define an access slot therebetween, said means for releasably locking each vertical leg to the associated channel including a U-clamp encircling the leg, said U-clamp including laterally directed end portions overlying the access slot, bolt means inserted through the end portions of the U-clamp and the underlying access slot, and means within the channel engaged with the bolt means.

5. The apparatus of claim **4** wherein each of said brackets includes a rigid diagonal brace extending between the outer end portion of the horizontal leg and the upper end portion of the vertical leg and rigidly engaged with said legs.

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