United States Patent

[11] 3,598,406

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[21] Appl. No. **705,700**
[22] Filed **Feb. 15, 1968**
[45] Patented **Aug. 10, 1971**

[54] **GYMNASTIC APPARATUS**
10 Claims, 4 Drawing Figs.

[52] **U.S. Cl.** ..... **272/61,** 272/60, 272/78, 273/1.5 R, 273/55 A, 272/57 R
[51] **Int. Cl.** **A63b 1/00,** A63b 7/04, A63b 63/04
[50] **Field of Search** 273/1.5, 55; 272/60, 61, 62, 63, 78

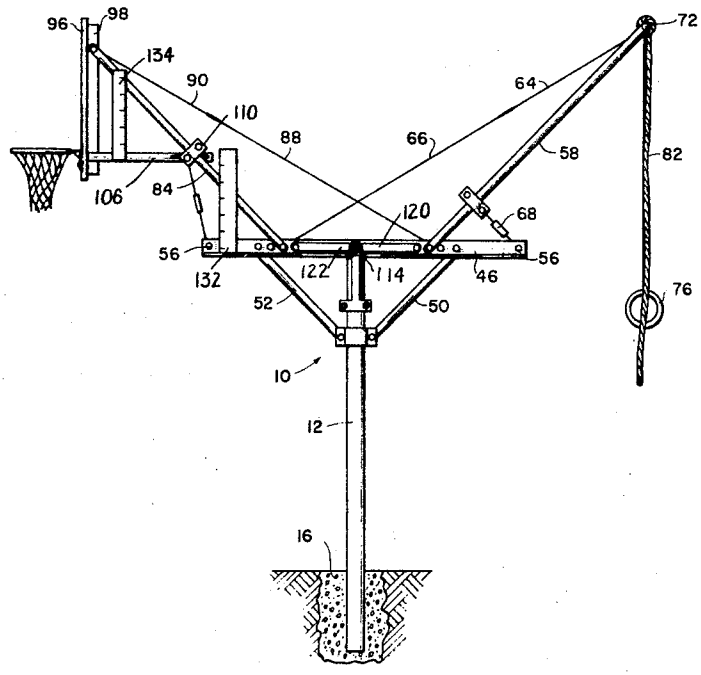
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ABSTRACT: A gymnastic apparatus having a pair of spaced parallel upright posts, each post having a horizontally extending crossmember independently secured thereto at the upper end of the post. The crossmembers are in substantially coplanar alignment, and together with the upright posts form a pair of parallel T-shaped members. A plurality of spaced horizontal bars are interposed between the crossmembers and are connected at the opposite ends to the crossmembers. The crossmembers and spaced bars thus form a horizontal ladder for exercising. The crossmembers and upright posts provide a common support structure for a plurality of exercising devices, including a punching bag and heavy training bag, each secured at opposite sides to the crossmembers and a basketball backstop and a climbing rope each secured to the outer ends of, and held in place by, a pair of upwardly and outwardly inclined bars whose inner ends are secured to the crossbars at opposite ends of the device. Each upright post is adjustable with respect to its height.



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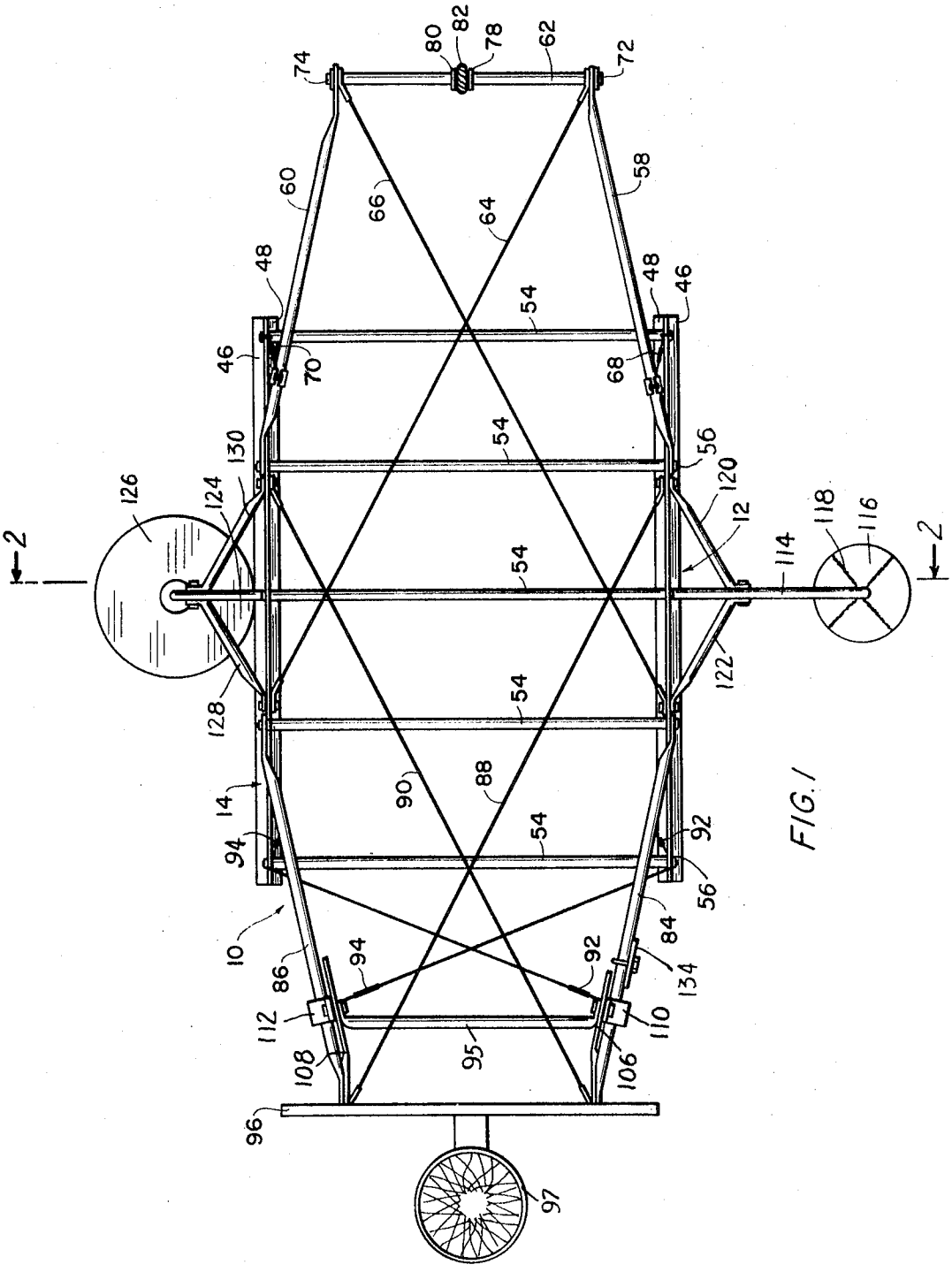


FIG. 1

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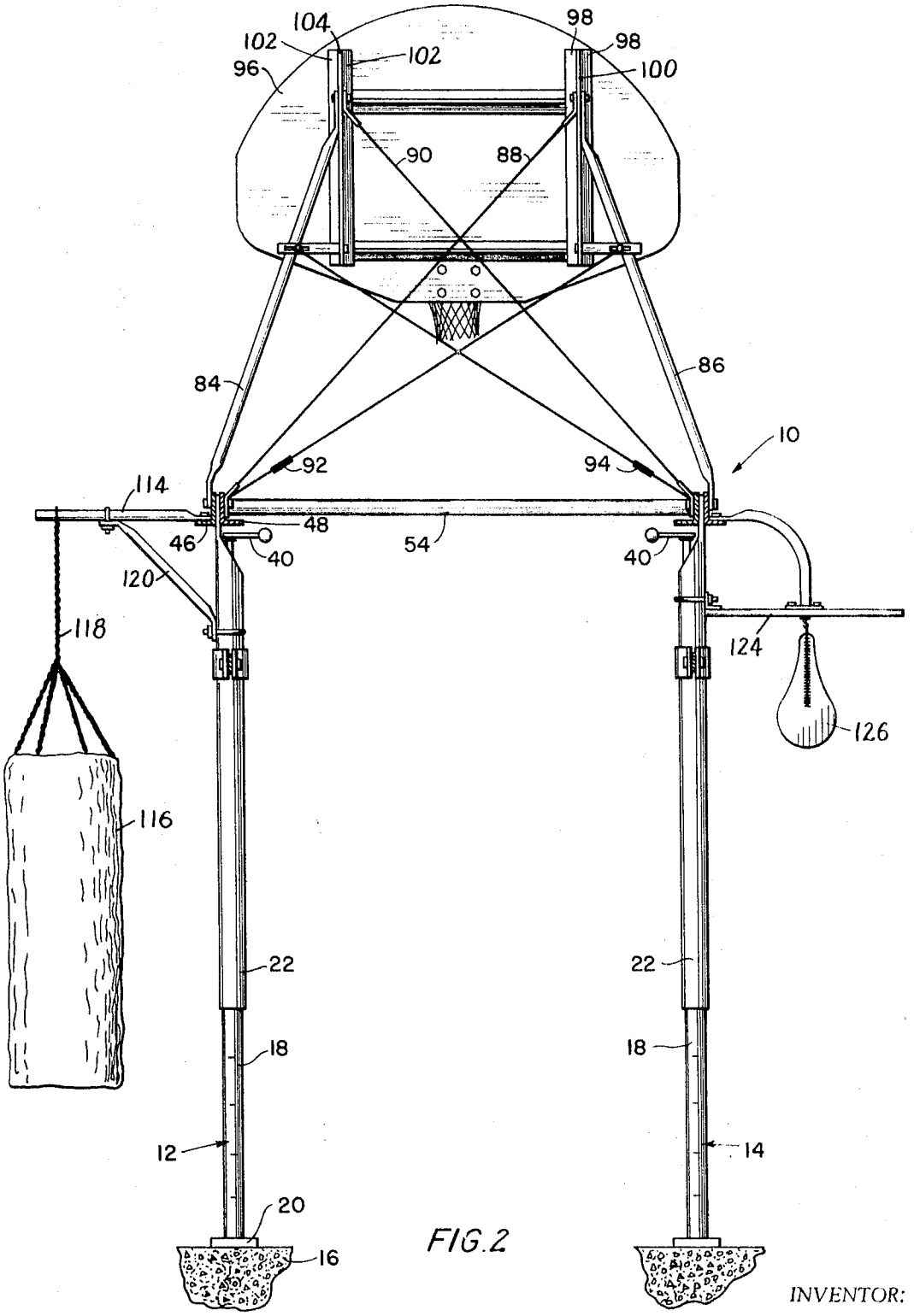


FIG. 2

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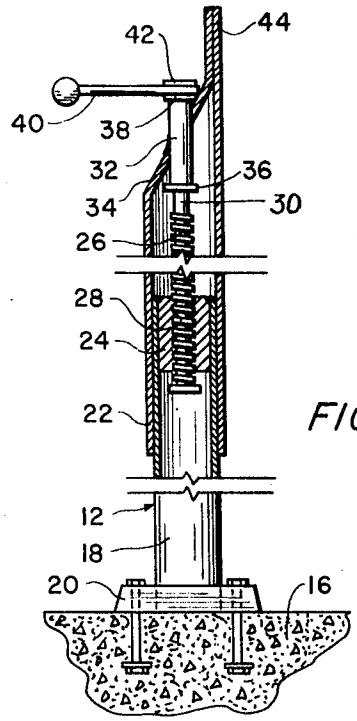


FIG. 4

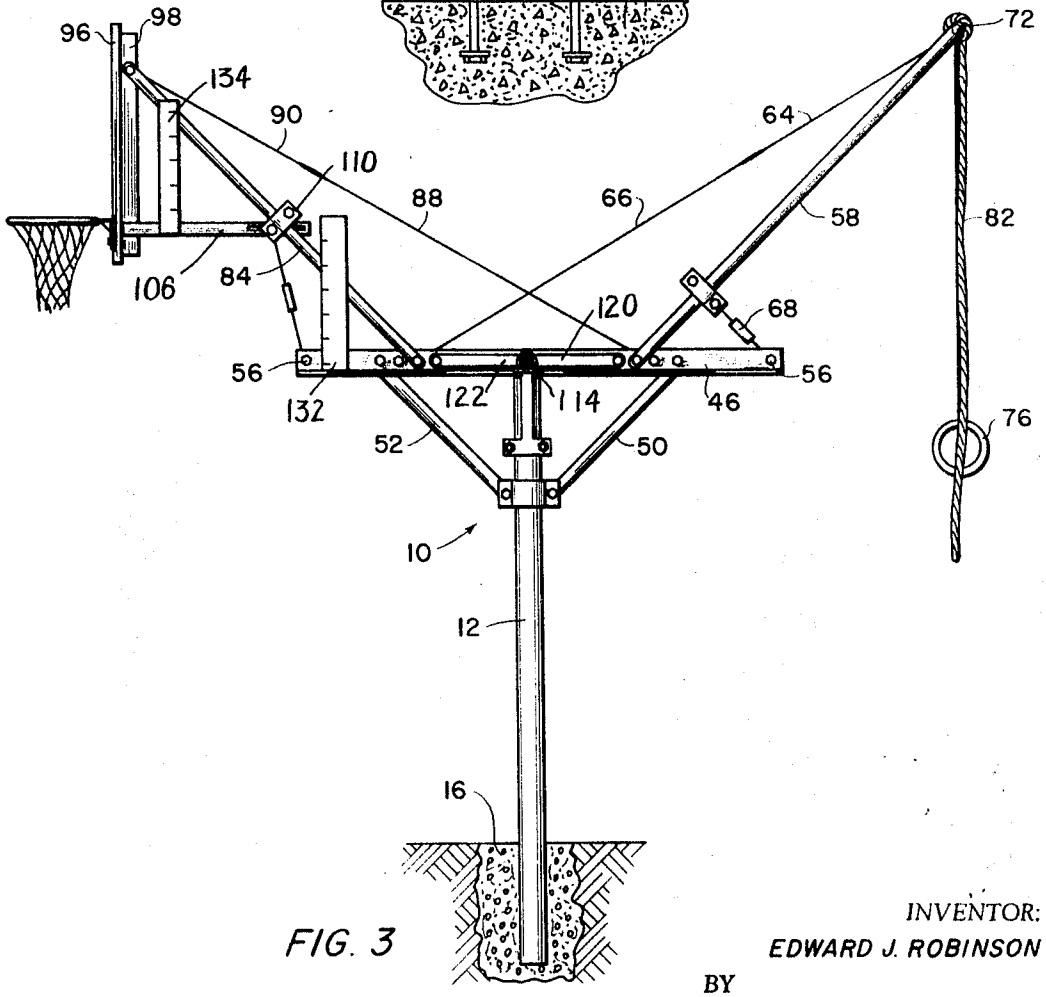


FIG. 3

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GYMNASTIC APPARATUS

This invention relates to improvements in exercising and recreational equipment and more particularly, but not by way of limitation, to a simple and economical gymnastic device providing a plurality of items on a single apparatus.

There is considerable concern today with physical health and well-being, and as a result there is great emphasis on exercise and recreational activities. Many persons are able to take advantage of large exercising or gymnastic apparatus in commercial-type installations, such as in schools, or the like, but it is often difficult if not impossible for some persons to make arrangements to take advantage of this type of equipment. In addition, most persons would exercise more if such equipment were more readily available, such as in his own yard or playground area. Of course, there are many types of gymnastic devices on the market today for home use, such as swing sets having slide boards, teeter-totters, and the like incorporated thereon. However, these devices normally do not include equipment for use by both children and adults, and those devices having equipment for adult use are usually quite expensive, and difficult to install.

The present invention contemplates a simple, economical gymnastic apparatus which may be used by both children and adults, and which is particularly designed and constructed for ease of assembly and installation. The entire device may be erected and installed by an individual, unassisted. The device may be originally purchased with a minimum of exercising equipment provided thereon, and additional items may be subsequently required and added to the original installation without disassembling or dismantling the apparatus. The economy of construction assures that the apparatus will be available for home yard use, or may be utilized in substantially any exercising or recreational area, such as institutional grounds, both private or public, campgrounds, places of relatively small area such as in conjunction with motels and the like, or substantially any site wherein it is desirable or advantageous to provide exercising devices. The apparatus includes horizontal bars, basketball net and backboard, punching bag, heavy training bag, rings, climbing rope, height scale for jumping exercises, all mounted on a common support structure. Furthermore, the equipment is mounted on the structure in a manner wherein more than one of the devices or items may be utilized simultaneously, thus providing recreation or exercising opportunity for more than one person at a time.

It is an important object of this invention to provide a common structure for a plurality of exercising items which is of an economical structure for facilitating use of the device by a greater number of people than otherwise possible.

It is another object of this invention to provide a gymnastic device including a plurality of exercising items which is of extreme simplicity of erection and installation.

Another object of this invention is to provide a simple and economical gymnastic apparatus wherein additional or optional exercising devices may be readily installed thereon without dismantling the previously installed equipment.

Still another object of this invention is to provide a gymnastic apparatus wherein a plurality of recreational or exercising items are mounted on a common support structure in such a manner than several of the items may be utilized simultaneously by different persons.

Other and further objects and advantageous features of the present invention will hereinafter more fully appear in connection with a detailed description of the drawings in which:

FIG. 1 is a plan view of a gymnastic apparatus embodying the invention.

FIG. 2 is a view taken on line 2–2 of FIG. 1 of a gymnastic apparatus embodying the invention.

FIG. 3 is a side elevational view of a gymnastic apparatus embodying the invention.

FIG. 4 is a broken sectional view of a support post for the gymnastic apparatus, particularly depicting one form of height adjustment therefor.

Referring to the drawings in detail, reference character **10** generally indicates a gymnastic apparatus comprising a pair of substantially identical support members **12** and **14** spaced apart an appropriate distance in accordance with the desired overall width for the apparatus. Each post **12** and **14** is adapted for installation in the ground in any well-known manner, such as being set in a concrete foundation **16**. Since the posts **12** and **14** are substantially identical, only the structure of the post **12** will be set out in detail herein.

The post **12** is preferably adjustable with respect to the overall height thereof, and as particularly shown in FIG. **4**, the post **12** may comprise a first rod or pole member **18** set in the concrete pad **16** in any well-known manner, or may be threadedly secured to a base or foot member **20** which in turn is bolted or otherwise secured to the concrete foundation **16**. An outer sleeve **22** may be telescopically arranged with respect to the rod **18** in any well-known manner. As shown herein a collar member **24** is welded or otherwise secured to the upper end of the rod **18** for receiving a threaded shank or rod member **26** therethrough. The collar **24** is provided with a centrally disposed internal bore **28** extending therethrough and provided with a thread complementary to that of the threaded shank **26**.

The upper end of the shank **26** is smooth, as shown at **30** and extends through a sleeve **32** which is preferably centrally disposed in the sleeve **22**, and secured thereto in any well-known manner such as by welding, or the like. Of course, the upper end **34** of the sleeve **22** is preferably closed, and may be angularly disposed, as shown in FIG. **4**. The inner sleeve **32** extends through the closed end **34** and the shank portion **30** is journaled in the sleeve **32** in any suitable manner (not shown). A pair of stop members **36** and **38** are spaced on the outer periphery of the shank portion **30** and disposed adjacent the opposite ends of the sleeve **32** for maintaining the rod **26** in a preselected longitudinal position within the sleeve **22** whereby rotation of the rod **26** in one direction causes the sleeve **22** to move downwardly with respect to the rod or pipe **18**, and rotation of the rod **26** in an opposite direction causes the sleeve **22** to move upwardly with respect to the pipe **18**. Of course, any suitable means may be provided for rotating the shank **26**, and as shown herein, a handle **40** is secured to the upper end of the shank portion **30** for facilitating manual rotation of the rod **26**. It is preferable to secure the handle **40** to the shank portion **30** by a suitable ratchet member as indicated at **42**.

The uppermost end of the sleeve **22** extends beyond the ratchet and handle **40** and is flattened as shown at **44** for receiving a pair of horizontally extending crossbeams **46** and **48** on the opposite flat faces thereof. The crossbeams **46** and **48** are preferably made from angle stock, and are preferably of a lightweight metal, such as aluminum, but not limited thereto. The beams **46** and **48** are bolted, or otherwise secured to the flat portion **44** in such a manner that the horizontal legs of each beam extend outwardly from the flat portion **44** in opposite directions, as clearly shown in FIG. **2**. Suitable angularly disposed brace members **50** and **52** are secured between the support post **12** and the beams **46** and **48** for stabilization as depicted in FIG. **3**, and as is well known in this type of structure.

As hereinbefore set forth, the support posts **12** and **14** are substantially identical, and are disposed in a spaced relationship for receiving and supporting a plurality of spaced horizontally disposed bars **54** therebetween. Substantially any desired number of the horizontal bars may be provided, and the spacing therebetween may be at the preferred interval for facilitating the use thereof during gymnastic exercising thereon, as is well known. The bars **54** may be secured to the aligned crossbeams **46**—**48** of the posts **12** and **14** in any well-known manner. For example, a rod member (not shown) may extend through each bar and through spaced apertures (not shown) provided in the crossbeams **46**—**48**. The rods may be threaded on the outer ends thereof for receiving nuts **56** for securing the rods and respective bars **54** in position between the crossbeams **46**—**48**.

A first pair of complementary bars **58** and **60** are bolted or otherwise secured to the crossbeams **46—48** of the support posts **12** and **14**, respectively. The bars **58** and **60** extend upwardly at an angle from the crossbeams **46—48**, and converge in a direction toward each other at the outer ends thereof, as particularly shown in FIG. **1**. The outer ends of the bars **58** and **60** are spaced apart by a transversely extending bar **62**. The opposite ends of the bars **58** and **60** may be flattened, as is well known, and as shown in FIG. **1**, for facilitating connection thereof with the crossbeams **46—48** and crossbar **62**. In addition, suitable cross wires **64** and **66** may be secured between the bars **58** and **60** and the respectively opposite support posts **12** and **14** for additional stability and strength for the bars **58** and **60**, and for maintaining the bars **58** and **60** in the desired upwardly extending angular position. Furthermore, suitable holddown members, or turnbuckle arrangements **68** and **70** may be secured between the bars **58** and **60** and the respective support posts **12** and **14** for additional stability for the bars **58** and **60**.

The opposite ends **72** and **74** of the crossbar **62** extend beyond the bars **58** and **60**, respectively, whereby the usual type of still ring **76** may be hung from or secured to each of the ends **72** and **74**. In addition, a pair of spaced outwardly extending flange members or keeper members **78** and **80** are provided on the bar **62** and interposed between the bars **58** and **60** for retaining a climbing rope **82** in position and supported from the bar **62**. Of course, the rope **82** may be secured to the bar **62** in any suitable manner to preclude accidental dislodging of the rope during any climbing thereon.

A second pair of complementary bars **84** and **86** substantially identical with the bars **58** and **60** are similarly secured to the support posts **12** and **14** respectively and extending upwardly and angularly therefrom in a direction opposite from the bars **58** and **60**. The bars **84** and **86** are retained in the upward angular position by suitable cables or wires **88** and **90** secured between the bars **84** and **86** and the respectively opposite support posts **12** and **14** in a similar manner as hereinbefore set forth with regard to the wires **64** and **66**. Holddown members or turnbuckle arrangements **92** and **94** may also be provided between the support posts **12** and **14** and respective bars **84** and **86** for facilitating the retaining of the bars in the desired position. In addition, the outer ends of the bars **84** and **86** are spaced apart by a transversely extending crossbar **95** which may be spaced slightly inwardly from the outer extremities of the bars **84** and **86**, if desired.

A basketball backboard **96** having the usual basketball net device **97** secured to one face thereof is secured between the outer ends of the rods or bars **84** and **86** in any suitable manner, and as depicted herein is preferably adjustably secured on the bars **84** and **86** in such a manner that the height of the basketball net **97** may be adjusted to provide equal function thereof for both children and adults. As particularly shown in FIG. **2**, the adjustable connection of the backboard **96** may comprise a first pair of complementary angle iron members **98** secured to the face of the backboard **96** opposite from the basket **97**, and bolted to the opposite faces or sides of an upright bar or vertical rib **100** secured to the outer extremity of the bar **86**. A second pair of spaced angle iron members **102** are spaced from and parallel with the brackets **98** and are similarly secured to a vertical rib **104** secured to the outer extremity of the bar **84**. It is preferable to provide a plurality of longitudinally spaced apertures (not shown) on the rib **100** in alignment with a similar plurality of spaced apertures (not shown) on the rib **104** in order that the vertical position of the angle iron member **98** and **102** may be adjusted to adjust the overall height of the backboard **96**.

It is also preferable to provide a pair of stabilizer members **106** and **108** between the lower portion of the backboard **96** and the bars **84** and **86**, respectively. The stabilizers **106** and **108** are adjustably secured to the respective bars **84** and **86** in any well-known manner, as shown at **110** and **112** to facilitate the adjustment of the vertical height of the backboard **96**.

An outwardly extending support member **114** is bolted or otherwise secured to the crossmember **46—48** of the support post **12** for supporting a heavy training bag **116** which is suspended therefrom in any well-known manner, such as by the chain device **118**. A pair of angularly disposed strengthening webs **120** and **122** are bolted or suitably secured between the support **114** and the post **12**.

An outwardly extending arm **124** is suitably secured to the support post **14** for supporting a punching bag **126**. The bag **126** may be secured to and suspended from the support **124** in any well-known or suitable manner, and a pair of oppositely disposed brace members **128** and **130** are suitably secured between the support arm **124** and the post **14** to properly strengthen and brace the arm **124**.

It is preferable to provide a gymnastic mat or pad (not shown) on the surface of the ground beneath the apparatus **10** to cushion any falls during use of the device.

It is preferable to provide a jump scale **132** for the device, with said jump scale being secured to one of the crossmembers **46—48** in such a manner as to extend upwardly therefrom. The scale **132** is provided with suitable indicia for indicating a scale of height in order to provide a reference for jumping heights, as is well known. A second jump scale **134** may also be provided for the device, if desired, and may be secured to one of the support braces **106**. The second jump scale **134** may be provided with a second indicia for indicating greater heights than the first jump scale **132**, thus providing a more versatile use of the jump scale on the apparatus.

In order to assemble and erect the apparatus **10**, the support posts **12** and **14** may be properly embedded in the ground or in the foundations **16** in any well-known manner. Of course, it is to be noted that the apparatus may also be installed within an enclosure, such as in a gymnasium, or the like, in which event the posts **12** and **14** may be bolted or otherwise secured to the floor or foundation base of the structure. It is further noted that substantially all of the elements of the apparatus **10** are bolted together thus providing great ease of assembly of the entire device. In addition, the height of the posts **12** and **14** may be adjusted by manipulation of the ratchet handle **40**.

The crossmembers **46—48** are bolted to the upper ends of the support posts **12** and **14** in such a manner that upon the initial securing of the crossmembers to the posts the crossmembers may be pivoted about the single bolt connection therebetween. Of course, the crossbars **54** may be bolted between the crossmembers **46—48** prior to installation of the crossmembers **46—48** on the respective posts **12** and **14**. In one pivotal position of the crossmembers **46—48** one end portion thereof will be lowered to a position substantially close to the surface of the ground for facilitating access thereto for installation of the bars **58** and **60** thereon. The bars **58** and **60**, brace wires **64** and **66**, and other elements supported by and included in conjunction with the bars **58** and **60** may be assembled on the crossmembers **46—48**, and the crossmembers **46—48** may be pivoted in an opposite direction to facilitate access to the opposite end thereof.

In this second position, the bars **84** and **86** may be secured to the crosspieces **46—48**, with the assembly of the wires **88** and **90**, and remaining elements associated with the bars **84** and **86** assembled therewith. The crossmembers may then be pivoted to a substantially horizontal position, and the brace members **50** and **52** may be installed for facilitating retaining of the crossmembers **46—48** in the horizontal position.

The supports arms **114** and **124** may be bolted to the respective supports posts **12** and **14** either prior to the embedding of the posts in the foundation, or subsequent thereto, as desired. Of course, the apparatus **10** may be initially procured with a minimum of elements or items therewith, such as the horizontal bars and basketball portion only, and the additional or auxiliary items or features may be procured subsequently and added to the apparatus. Thus, the expense of the apparatus is lessened or eased, and the simple installation renders the device attractive for individual ownership.

From the foregoing it will be apparent that the present invention provides a novel gymnastic apparatus which is simple and inexpensive in construction and which may be readily assembled and installed. A plurality of exercising devices are provided on the apparatus and so arranged that several of the items may be utilized at the same time, thus providing simultaneous utilization by several persons. The apparatus may be assembled for either indoor or outdoor installation, and may be readily disassembled for removal to a second or new site, then quickly reassembled and installed at the new location.

Changes may be made in the combination and arrangement of parts as heretofore set forth in the specification and shown in the drawings, it being understood that any modification in the precise embodiment of the invention may be made within the scope of the following claims, without departing from the spirit of the invention.

What I claim is:

1. A gymnastic apparatus comprising a support structure, a plurality of exercising devices carried by the support structure, said support structure comprising a first upright post member, a second upright post member spaced from the first post member, a horizontally extending crossmember independently secured to the upper end of each post, said crossmembers being disposed in substantially coplanar alignment, a plurality of transversely extending horizontally disposed spaced bars interposed between the crossmembers and having the opposite ends thereof secured to the crossmembers to provide horizontal ladder rungs for exercising, said crossmembers and supports posts providing a common support structure for the said plurality of exercising devices, wherein each upright post is adjustable with respect to the height thereof.

2. A gymnastic apparatus comprising a support structure, a plurality of exercising devices carried by the support structure, said support structure comprising a pair of spaced upright post members, horizontally extending crossmembers secured to the upper end of each post and disposed in substantially coplanar alignment, a plurality of transversely extending horizontally disposed spaced bars secured between the crossmembers to provide horizontal ladder rungs for exercising, said crossmembers and support posts providing a common support structure for the said plurality of exercising devices, a first pair of upwardly and angularly extending aligned bars secured to the support structure, brace means secured between the support structure and the said first pair of bars for stabilization thereof, a transversely extending rod secured to the said bars in the proximity of the outer ends thereof, a plurality of ring members suspended from said transverse rod for exercising manipulations thereon, and climbing rope means secured to the said transverse rod.

3. A gymnastic apparatus comprising a support structure, a plurality of exercising devices carried by the support structure, said support structure comprising a pair of spaced upright post members, horizontally extending crossmembers secured to the upper end of each post and disposed in substantially coplanar alignment, a plurality of transversely extending horizontally disposed spaced bars secured between the crossmembers to provide horizontal ladder rungs for exercising, said crossmembers and supports posts providing a common support structure for the said plurality of exercising devices, a first pair of upwardly and angularly extending aligned bars secured to the support structure, brace means secured between the support structure and the said first pair of bars for stabilization thereof, a transversely extending bar secured between the outer ends of the first pair of bars, exercising ring means suspended from the transversely extending bar, climbing rope means suspended from the transversely extending bar, a second pair of upwardly and angularly extending aligned bars secured to the support structure and oppositely disposed with respect to the first pair of bars, brace means secured between the support structure and said second pair of bars for stabilization thereof, and basketball net means secured to the outer ends of the said second set of bars.

4. A gymnastic apparatus as set forth in claim **3** wherein said basketball net means includes a backboard secured to the second pair of bars, a basketball net secured to the outer face of the backboard, said backboard being adjustably secured to said second pair of bars for variation of the height of the basketball net.

5. A gymnastic apparatus as set forth in claim **3** and including a jump scale means secured to at least one of said second pair of bars.

6. A gymnastic apparatus as set forth in claim **3** including support arm means secured to one of said upright posts and extending outwardly therefrom, and punching bag means suspended from said support arm means.

7. A gymnastic apparatus as set forth in claim **3** including support arm means secured to one of said upright posts and extending outwardly therefrom, and heavy training bag means suspended from said support arm means.

8. A gymnastic apparatus as set forth in claim **3** including first support arm means secured to one of said upright posts and extending outwardly therefrom, punching bag means suspended from said first support arm means, second support arm means secured to the other of said upright posts and extending outwardly therefrom opposite from the first support arm means, and heavy training bag means suspended from said second support arm means.

9. A gymnastic apparatus as set forth in claim **3** wherein each of said upright posts is adjustable with respect to the height thereof.

10. A gymnastic apparatus as set forth in claim **9** wherein the basketball net means is adjustably secured to the second pair of bars for variation of the overall height of the basketball net means.