

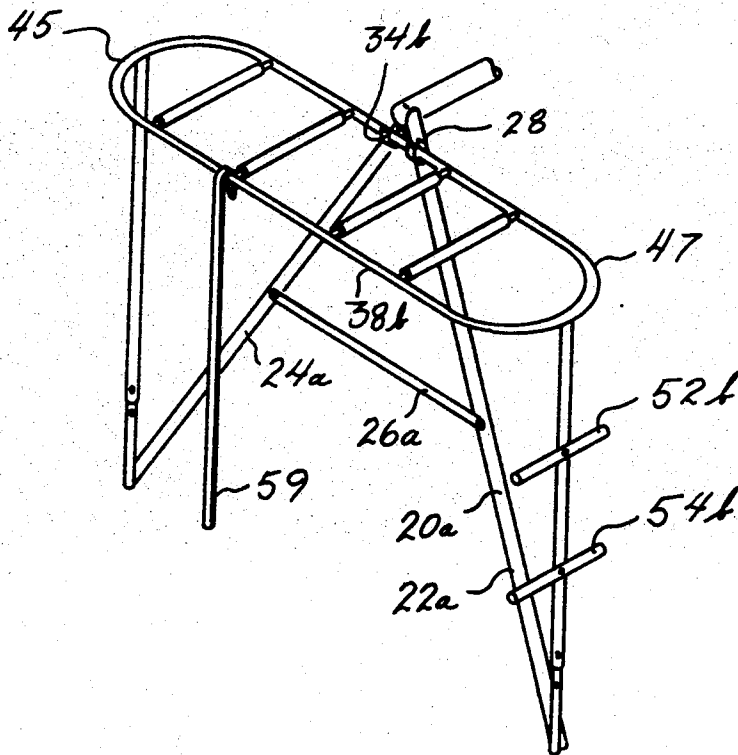
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[56] **References Cited**  
**FOREIGN PATENTS**  
 724,531 12/1965 Canada ..... 272/63  
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[54] **CLIMBING ASSEMBLY FOR ATTACHMENT TO AN A-FRAME**  
 7 Claims, 17 Drawing Figs.

[52] U.S. Cl. .... 272/63,  
 272/60, 272/61, 272/85  
 [51] Int. Cl. .... A63b 3/00  
 [50] Field of Search ..... 272/60, 63,  
 61

**ABSTRACT:** A climbing device assembly for attachment to an A-frame having hooks to fasten the device to the apex of the A-frame. A set of spaced apart parallel hollow bars, one of which is held to the A-frame by said hooks, and ladder rungs connecting said parallel bars together. At least one pole is connected to each end of the set and to the bottom of the legs of the A-frame.



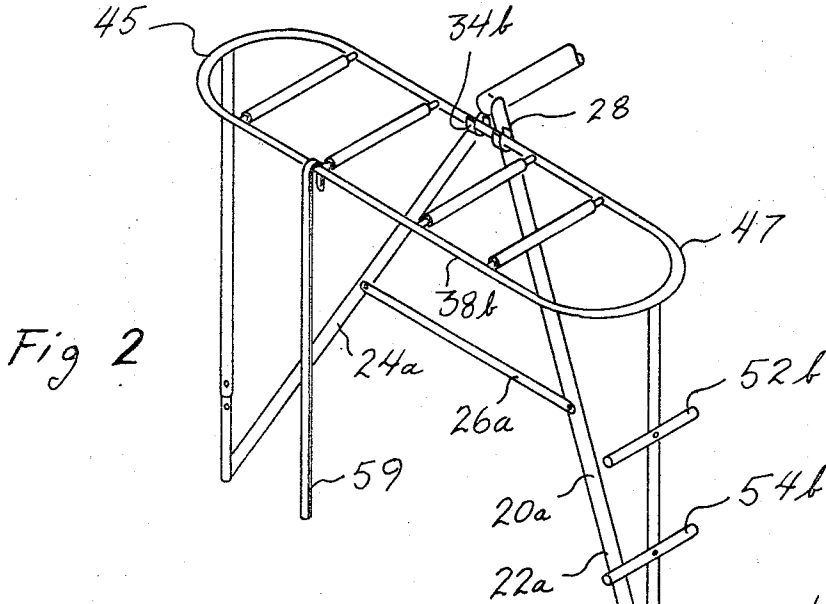


Fig 2

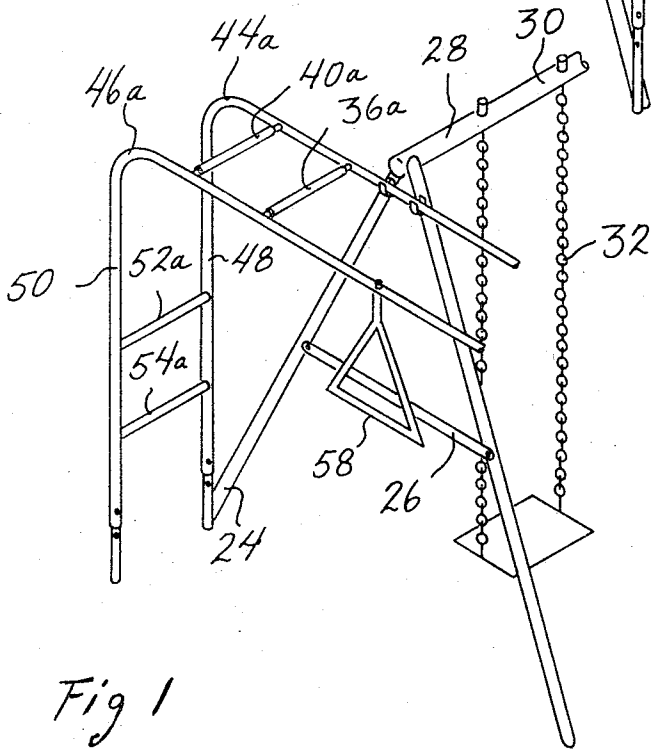


Fig 1

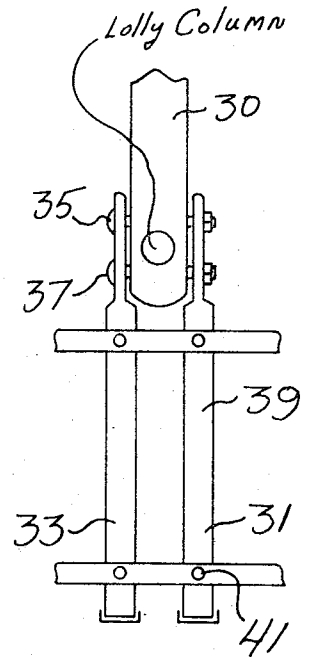
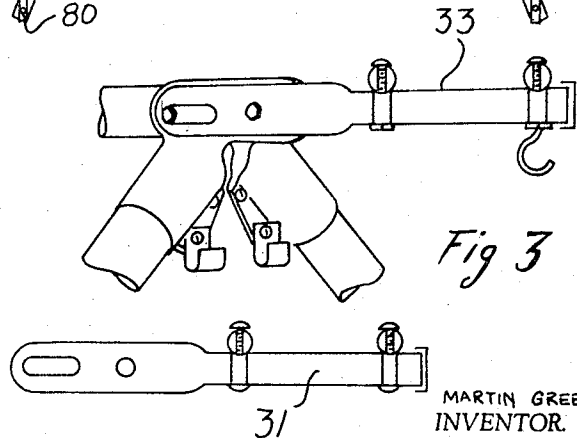
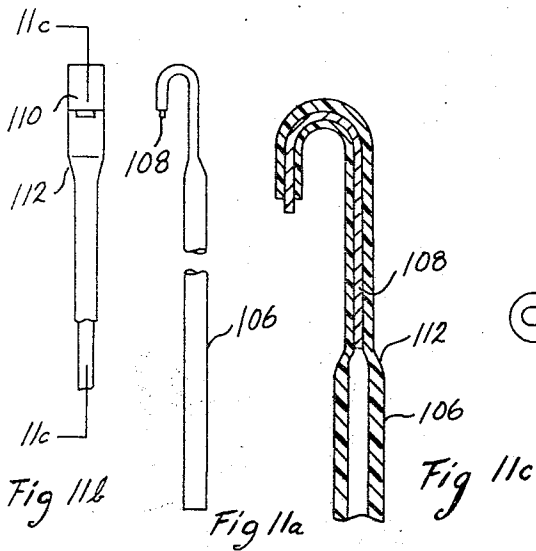
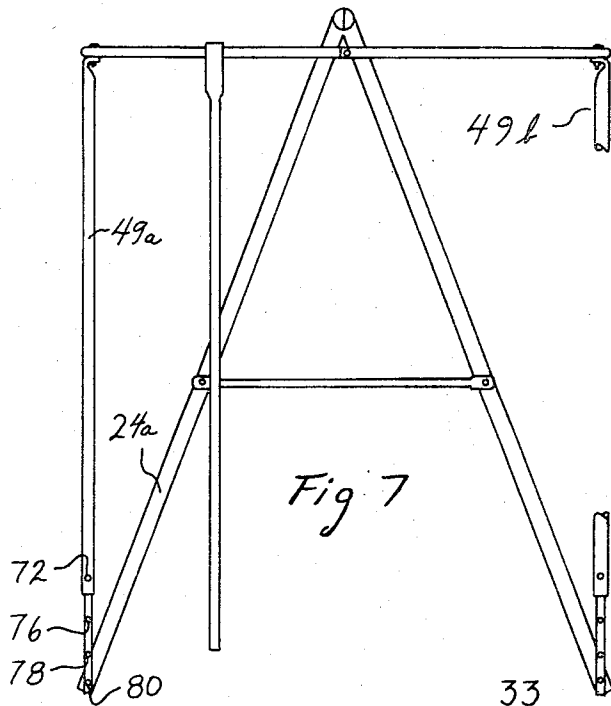
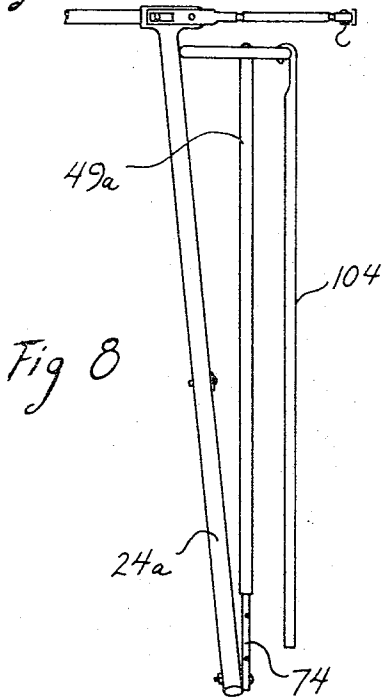
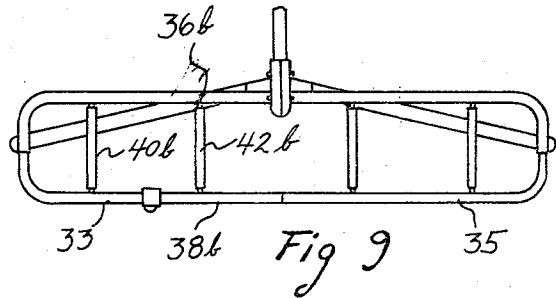
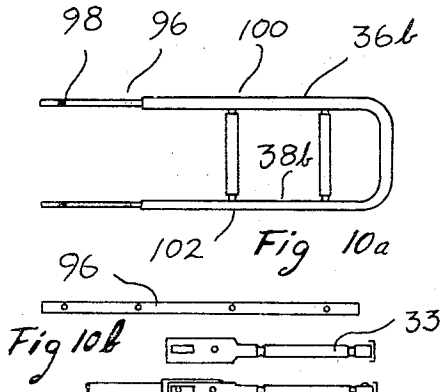


Fig 3a

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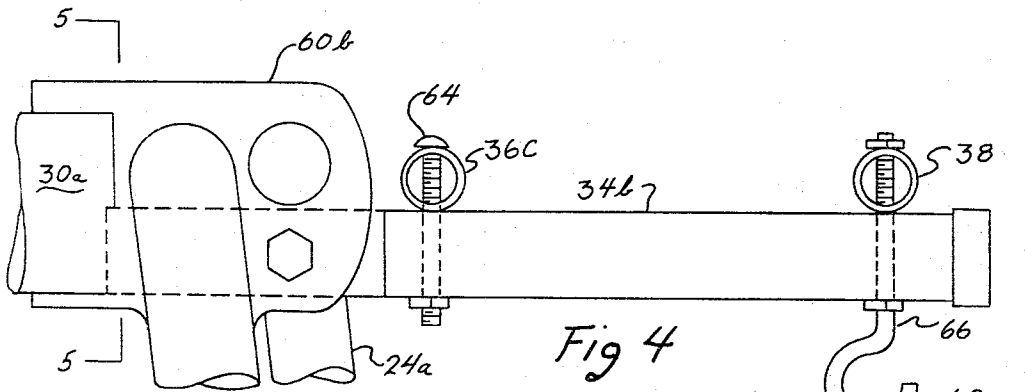


Fig 4

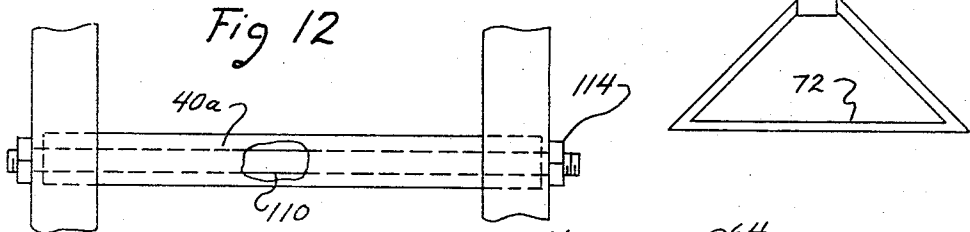


Fig 12

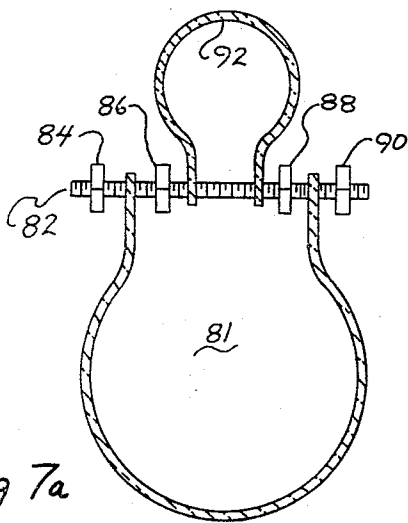


Fig 7a

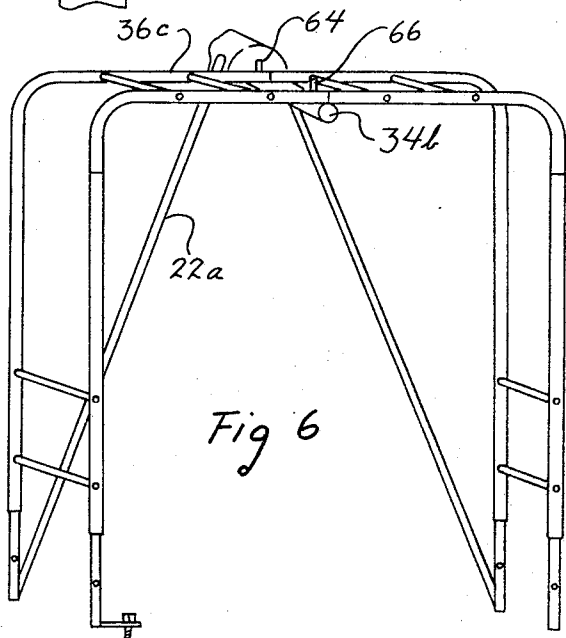


Fig 6

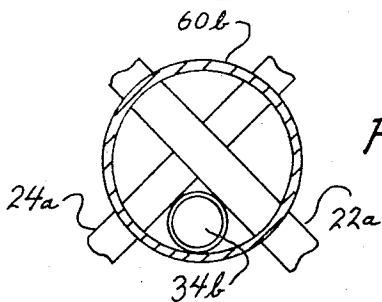


Fig 5

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## CLIMBING ASSEMBLY FOR ATTACHMENT TO AN A-FRAME

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

The present invention relates to children's outdoor gymnastic assemblies and more particularly to a gymnastic assembly which can be fastened to or used as an addition to an existing assembly.

#### 2. Description of the Prior Art

Presently used gymnastic assemblies usually consist of a pair of spaced apart A-frames and a main bar extending between the apexes of the two A-frames.

### SUMMARY OF THE INVENTION

The present invention contemplates a climbing device assembly for attachment to an A-frame having fastening means to fasten the device to the apex of the A-frame, a set of spaced apart parallel hollow bars, one of which is held to the A-frame by said fastening means ladder rungs connecting said parallel bars; and at least one pole connected to each end of the set and to the bottom of the legs of the A-frame.

### OBJECTS OF THE INVENTION

The object of this invention is that the physical fitness hand climber can be attached to an existing gymnastic assembly or gym set without eliminating any other play from the gym set, yet without extending the top bar.

Another object of this invention is it can be attached to the outer end of a gym set without interference with the other plays of the gym set.

A further object of this invention is while attaching it to one end of a gym set frame it automatically braces the frame structure of the gym set.

Another object of this invention is that the hand climbing structure is balanced in such a manner as not to tilt the gym set structure.

An important feature of this invention is the safety factor that combines the hand climbing structure, since it is a fact, that the users do climb on the gym frame. The frame is usually a 2-inch or 2½-inch frame with a chin bar of 1 inch and since the climbers are mostly children the danger exist that the hold on grip is too small for the climber to be in a safe position, therefore, the chance of accidents are great.

This structure herein described provides small size tubing at all times close to the climber's body that enables the climber to grip and hold on from many points.

A further object of this invention is the simplicity of the hand climber and the inexpensive way that the hand climber can be produced due to the fact that no tooling is necessary for the manufacturer that produces conventional gym sets. Due to the fact the hand climber can be produced and sold inexpensively to the consumer yet produces a reasonable profit for the manufacturer.

Yet another object of this invention is the simplicity of attaching the physical fitness hand climber to a gym frame without the need to drill holes in the gym frame.

Yet another object of this invention are the use of firemen poles that act as studs and are adjustable to fit the various heights of gym sets.

Another object of this invention is that the firemen poles provide a competitive structure for the climbers to mount and climb at either end of the climbing structure.

Still another object of this invention is that it can be attached to an out of the way wall of lolly column or any other out of the way structure with the same ease as attaching it to a gym set frame.

Many new devices have been developed and produced for gym sets however, each new item that is attached to the gym set, must replace another play on the gym set, thereby removing a play that may be a good physical fitness play. The physical fitness hand climber does not replace or interfere with any other plays on the gym set as it is attached to the outer end of the gym set.

The invention as well as other objects and advantages thereof will become more apparent from the following detailed description when taken in connection with the accompanying drawing, in which:

### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of one embodiment of the inventive concept herein contemplated;

FIG. 2 shows in perspective another embodiment of the inventive concept herein contemplated;

FIG. 3 presents in perspective one type of attachment means used herein; FIG. 3A shows a top view;

FIG. 4 depicts a longitudinal side view of another type of attachment means used herein;

FIG. 5 is a cross-sectional view along lines 5-5 of FIG. 4;

FIG. 6 shows a perspective view of the arrangement means illustrated in FIG. 1 but using the attachment shown in FIG. 4;

FIG. 7 shows an end view of the arrangement illustrated in FIG. 2 employing certain constructional features;

FIG. 7a shows an attachment unit used to attach the invention contemplated herein to a conventional A-frame;

FIG. 8 shows a side view of the arrangement illustrated in FIG. 7;

FIG. 9 presents a top view of the embodiment shown in FIG. 7 again emphasizing constructional features;

FIG. 10a is a longitudinal portion of the arrangement shown in FIG. 8 but showing inner constructional details;

FIG. 10b is a longitudinal view of part of the inner construction of FIG. 10a;

FIG. 11a shows a side view of one of the poles used for the embodiment shown in FIGS. 7 and 8;

FIG. 11b is a front view of the pole shown in FIG. 11a;

FIG. 11c is a view along lines 11c-11c of FIG. 11b; and,

FIG. 12 is a longitudinal view of one of the ladder rungs shown in FIGS. 1 and 2.

### DETAILED DESCRIPTION

In the drawing (FIG. 1) there is shown an A-frame 20 having legs 22, 24 a center bar 26 and an apex 28. The A-frame supports a main bar 30 used for other gymnastic equipment e.g., a swing 32. Attached to the apex 28 are fastening means, e.g., hooks 34a.

The attachment provided for herein comprises inner and outer horizontal spaced apart parallel hollow frame bars 36a and 38a which are held by a plurality of horizontal upper rungs 40a 42a, etc.

The rungs (See FIG. 12) have three components and sometimes an outer covering. First, there is a hollow elongated cylindrical tube which will partly enter the spaced apart frame bars at predetermined location. Passing through the frame bars from one side to the other are flat head stove bolts. These stove bolts have a flat slotless head and are threaded only at the outer end. A nylon cap nut is used over the threads to hold the bolt and the cylindrical tube to the frame bars. The climbing rungs are covered with a rubber sleeve.

The spaced apart metal bars 36a, 38a terminate in elbow pieces 44a, 46a. The inner and outer elbows in turn enters a inner and outer vertical poles 48, 50. Vertical poles 48 and 50 are likewise held together by a plurality of rungs 52a, 54a. There is no rung connecting the apex of the elbows 44a, 46a to make it easier for a child to climb and prevent injury. From the outer bar 38a may be attached a universal joint 56 holding a triangle 58. Inner pole connects the horizontal bar 36a with the bottom leg of the A-frame.

In the embodiment shown in FIG. 2 there is shown a similar device also held an A-frame 20a with legs 22a, 24a. There are a pair of spaced apart hollow bars 36b, 38b held to the apex 28 of the A-frame. These bars 36b, 38b are held by a plurality of rungs 40b, 42b and terminate in a U-shape end pieces 45, 47. Connecting the center of the U-shape end pieces to the bottom legs of the A-frame are poles 49a, 49b which may have rungs 52b, 54b. The joint 52 and triangle 54 may also be used to attach to bar 38b, also, an additional moveable pole 59 may be provided.

The devices shown in FIGS. 1 and 2 are intended primarily as additions to existing equipment. There are however, more than one size of A-frames and the equipment is to fit on any kind of A-frame. One arrangement is by means of hooks 34a shown in greater detail in FIG. 3. Every A-frame has an inverted V-shape end piece 60. End piece 60a has wings 62 with apertures for screws. These screws are removed, and, longer screws 64 are used instead. These longer screws pass through apertures 66 in inner bar 36a or 36b and are thus used to fasten the bars to the A-frame and hold the hooks 34a in place. It is also advantageous to use the bracket arrangement which can be used either alone or with the hooks 34a. This is sometimes called a lolly column arrangement. The brackets 31 and 33 are disposed on opposite sides of main bar 30 and extend past the end of the bar. They are bolted to the main bar by bolts 35, 37 and include a narrow section 39 which extends outwards. The brackets serve to further hold the devices of FIGS. 1 and 2 to the existing equipment by means of bolts 41.

Another way of fastening the parallel bars to the A-frame is by means of boltless arrangement, shown in FIGS. 4, 5 and 6. End piece 60b holds a large diameter main bar 30a. The legs of the A-frame 22a, 24a pass through end piece 60b as shown in FIG. 5 in a figure X and passing under the legs of the figure X is a support bar 34b. Support bar 34b is bolted to the end piece 60b by bolts 62 which also hold legs 22a, 24a in place. The parallel bars 34c, 36c are affixed to support bar 34b by means of bolts 64, 66, the outer bolt 66 terminating in a hook 68.

Attached to the hook 68 is a universal joint 70 which holds an exercise triangle 72.

As is evident from FIGS. 1 and 2, the present invention has either a ladder arrangement with ladder poles 48, 50 or a single pole arrangement 49a, 49b at the end of the parallel bars. The single pole 49b may be a fire pole or a ladder 49b with rungs 52b, 54b. In any event, the pole 49a, 49b or inner pole 48, is fastened to the leg 24a of the A-frame. Poles 48, 49a, 49b 50 are adjustable in length as shown in FIGS. 7 and 8. Thus there is an aperture 72 at the bottom of the pole, e.g., pole 49a and a telescoping inner extension 74 also with a plurality of apertures 76, 78. Thus the length of the pole is adjusted by passing bolts through these apertures. The bottom of A-frame leg 24a is fastened to the bottom of extension 74 by bolt 80. When the embodiment of FIG. 1 is used and the ladder arrangement is used, the inner extension may include a foot 77 (See FIG. 6) which can be bolted to the floor.

Instead of using bolts 80, it is possible to use a fastener unit 81 shown in FIG. 7. This unit consists of a threaded rod 82 having four nuts 84, 86, 88 and 90 thereon. Extending in horseshape between inner nuts 86, 88 is an inner plastic yoke (with a wire inside) 92, and extending likewise between the two outer bolts 84, 90 is an outer plastic yoke 94. The inner yoke 92 is first placed around the smaller diameter pole to be fastened and the inner nuts are fastened. Then the larger diameter pole is inserted into the outer yoke and the outer nuts are fastened. Then the larger diameter pole is inserted into the outer yoke and the outer nuts are fastened.

FIGS. 9, 10a, 10b show that the horizontal parallel bars 36b, 38b are adjustable and have first and second sections 33, 35.

Within hollow bars 36b, 38b is an inner elongated member 96 e.g., a rod or cylinder with a plurality of apertures 98. These apertures line up with corresponding apertures 100, 102 in hollow bars 36b, 38b. There are of course more apertures in elongated member 96 than in the hollow bars 36b, 38b. Thus, elongated member 96 may be moved within hollow bars 36b, and telescoped with respect to sections 33, 35.

An additional removable pole 104 may be fitted to one of the bars 36b, 38b (or 36a, 38a). This pole 104 has a rubber or

plastic cover 106 and a hook insert 108 at the top. This pole is made as follows. First, the plastic or rubber sheath is forced over a flat metal piece 108. This metal piece is then bent into a hook shape so that the bent portion has a flat face 110. Preferably, the metal piece has a shoulder 112. This will prevent the outer sheath from slipping down as the children climb the pole.

Finally, the ladder rungs 40a, 40b, 42a, 42b, are as shown in FIG. 12. These are made from an outer hollow tube 110 with a very long bolt 112 passing therethrough secured by a nut 114.

In the device, all bolts and nuts are preferably made of nylon.

It is to be observed therefore that the present invention contemplates an assembly for an outdoor gym set which can be attached to conventional A-frames already on the market. A pair of inner and outer horizontal hollow bars 36a, 38a; 36b, 38b; 36c, 38c, are held together by ladder rungs 40a, 42a; 40b, 42b; and the inner hollow bar 36a, 36b is held to the apex of the A-frame 28 by fastening means, e.g., hooks 34a or a support bar 34b. The horizontal bars have rounded end pieces 44a, 46a, 45, 47. These in turn are connected to the bottom of the A-frame legs 22, 24; 22a, 24a by at least one pole, 48, 49a. This pole 48, 49b may form part of a ladder with rungs 52a, 54a; 52b, 54b, or be a fire pole 49a.

Additional equipment such as a triangle 58 or an additional removable pole 59 may be fastened to the outer parallel bar 38a, 38b.

The assembly may be connected to the A-frame by hooks 34a fastened to the end piece 60a of the A-frame or by a support bar 34b inserted into the end piece 60b of the A-frame.

The rungs 40a should be hollow with a single bolt 110 passing therethrough and through the horizontal bars.

I claim:

1. A climbing device for attachment to the apex of an A-frame having an apex and two legs, comprising:

a. inner and outer spaced apart parallel hollow bars held by ladder rungs with telescoping means in said bars to adjust the length thereof so that said bars outer ends extend over the legs of said A-frame;

b. first fastening means for holding said inner bar to said A-frame apex;

c. at least one pole of adjustable length connecting the said bars outer ends to the bottom of said A-frame legs; and,

d. second fastening means fastening one end of each of said poles to one of said A-frame leg.

2. The device as claimed in claim 1 wherein said pole forms part of a ladder and a second pole held to said first pole by additional rungs and elbows connecting said parallel bars and said poles.

3. The device as claimed in claim 1 wherein at least one of said poles forms a ladder with rungs, said parallel bars terminating in a U-shaped end pieces, and said poles connecting at one end to said U-shaped end pieces.

4. A device as claimed in claim 3 wherein said first fastening means are hooks, said A-frame having an endpiece with bolts, said hooks and an inner bar being bolted to said endpiece.

5. A device as claimed in claim 3, said fastening means including a support bar, said A-frame having an endpiece receiving therein the ends of the A-frame legs in X-configuration, said support bar passing under said legs in said endpiece at right angles to the plane defined by said X-configuration, said support bar being bolted to said horizontal bars.

6. A device as claimed in claim 3 including a universal hinge attached to said outer bar and a triangle held by said hinge.

7. A device as claimed in claim 3 including an additional pole removably attached to one of said inner and outer bars having a hook end for attachment thereto.