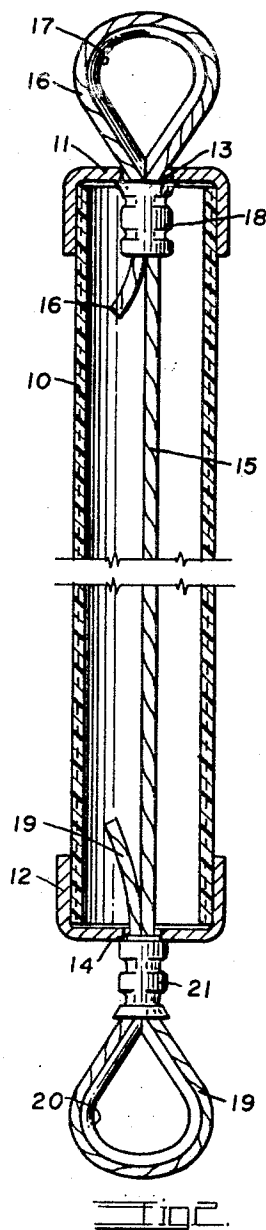
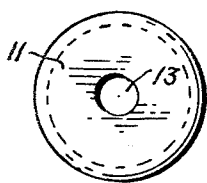
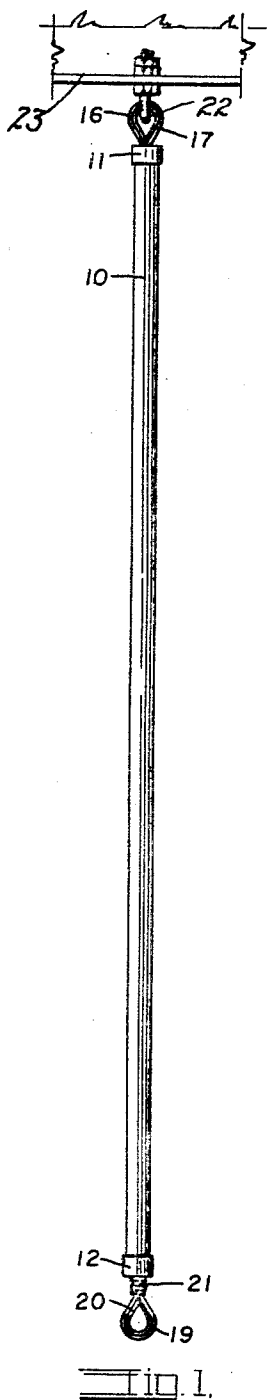


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R. M. FENNER ET AL  
GYMNASTIC CLIMBING POLES

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INVENTORS  
Robert M. Fenner  
Donald E. Hamilton  
BY *[Signature]*  
ATTORNEY

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## GYMNASTIC CLIMBING POLES

Robert M. Fenner and Donald E. Hamilton, both of  
3200 S. Zuni St., Englewood, Colo. 80110

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5 Claims

### ABSTRACT OF THE DISCLOSURE

An elongated fibre-glass tube surrounding a tension cable which extends axially through said tube and projects through caps on the extremities of said tube, the projecting extremities of said cable being looped against said caps to prevent relative longitudinal movement between said tube and said cable.

This invention relates to a climbing pole for use in gymnasiums for the training of classes in gymnastics. Climbing poles are conventional equipment in present day gymnasiums. Such a pole usually comprises a circular, solid, wooden pole having a length of approximately twenty feet provided with a hanging clevis secured at its upper extremity by means of which it may be freely suspended from an overhead structure. Such poles are difficult to maintain straight, due to warpage of the wood, and are dangerous to use due to breakage and splintering of the wood. Should such a pole break or become detached from its hanging clevis while being climbed, a serious accident could occur.

The principal object of this invention is to provide a climbing pole which will neither splinter nor warp and to so construct the pole that it will be supported in the hanging position from its lower extremity so that should pole breakage occur neither the pole nor the climber will fall.

The solid wooden poles are exceedingly heavy and when not in use are swung upwardly to a horizontal position by hoisting and securing the lower extremity thereof to the overhead structure. The result is, to place a permanent bend in the pole.

Another object of this invention is to provide a lightweight tubular pole with an internal tension member which will resist bowing or bending in both the horizontal and the vertical positions and which will relieve the pole of all tensional stresses when in use.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention, reference is made to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In the drawing:

FIG. 1 is a side elevational view of the climbing pole of this invention in the suspended position ready for use;

FIG. 2 is an enlarged, fragmentary, vertical, longitudinal section of the pole of FIG. 1; and

FIG. 3 is a detail top view of a pole cap element to be later described herein.

The improved gymnastic climbing pole of this invention employs an elongated, hollow, fibre-glass tube 10. In actual practice the tube has a length of twenty feet, an outer diameter of 1½" and a ⅛" wall thickness.

The tube 10 is closed at its upper and lower extremities by means of a top cap 11 and a bottom cap 12, respectively. The caps 11 and 12 are formed from metal, preferably cast aluminum, with an internal diameter slightly

less than the outer diameter of the tube and are press-fitted upon the extremities of the tube so as to be self-retaining.

The top cap 11 is provided with an axially positioned cable opening 13, as shown in FIG. 3 and the bottom cap 12 is provided with a similar cable opening 14. A flexible, steel tension cable 15 extends axially through the tube 10 and through the cable openings 13 and 14.

The upper extremity of the cable 15, indicated at 16, extends upwardly through the upper cable opening 13 in the cap 11 and is looped about a grooved, upper cable thimble 17. The extremity then returns through the upper opening 13 and is clamped to the axial cable 15 and against the inside of the cap 11 by means of a conventional swedge cable fitting 18.

The lower extremity of the cable 15, indicated at 19, extends downwardly through the lower cable opening 14 in the cap 12 and is looped about a lower cable thimble 20 then returns upwardly through the lower cable opening 14 to the interior of the tube 10. The returning extremity 19 is permanently clamped to the axial cable 15 and against the lower cap 12 by means of a second conventional swedge cable fitting 21.

The assembly procedure is as follows: the first swedge cable fitting 18 is swaged in place within the upper cap 11 to lock the upper cable thimble 17 fixedly in place on the upper cap; the cable 15 is then passed through the tube 10 and the upper cap 11 is pressed into place on the upper extremity of the tube 10; the lower cap 12 is passed over the lower extremity 19 of the cable and pressed into place on the lower extremity of the tube 10; the lower extremity 19 of the cable is wrapped about the lower thimble 20 and passed upwardly through the lower swedge cable fitting 21 into the tube 10 to pull the swedge fitting 21 tightly against the bottom of the lower cap 12; the swedge fitting 21 is now placed in a conventional swedging device which acts to simultaneously tension the cable 15 between the caps and to permanently clamp the fitting 21 in place on the cable 15.

Thus, the length of cable within the tube 10 is prestressed so as to maintain its axial position and fixedly clamp the end caps 11 and 12 in place on the tube 10.

When the climbing pole is suspended from an overhead structure 23 by means of a suitable hanger 22, as indicated in FIG. 1, the entire weight of the tube 10 and the person climbing thereon will be supported on the bottom cap 12 and the latter will be supported by the tension cable 15 without placing any tension stresses upon the tube 10. The lower thimble 20 provides convenient means for attaching a hoist line to draw the climbing pole to a horizontal stored position beneath the overhead structure 23.

It has been found that when the pole is rapidly climbed by a gymnast there is a tendency for the long taught cable to vibrate laterally against the inner wall of the tube 10 thus creating objectionable noise. This can be easily and economically eliminated by packing paper or other packing materials in the tube before installing the bottom cap. Wrapping the cable in old newspapers to prevent contact with the tube has been found to be an economical and permanently satisfactory noise eliminator.

While a specific form of the invention has been described and illustrated herein, it is to be understood that the same may be varied within the scope of the appended claims, without departing from the spirit of the invention.

Having thus described the invention what is claimed and desired to be secured by Letters Patent is:

1. A gymnastic climbing pole comprising:

(a) an elongated hollow tube of a length to be climbed by a human being;

(b) a cap closing each extremity of said tube;

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- (c) a flexible cable extending axially through said tube and through said caps;
- (d) means for attaching one extremity of said cable to an overhead support so as to suspend said tube in a vertical position;
- (e) a loop formed in each extremity of said cable;
- (f) clamping means securing the returning extremity of each of said loops to said cable, each of said clamping means contacting one of said end caps to resist axial movement of said cable in said tube; and
- (g) said caps being fitted over the extremities of said tube and said cable being prestressed to draw said caps toward each other against and over the extremities of said tube.

2. A gymnastic climbing pole as described in claim 1 having looped, grooved cable thimbles incorporated in the loops at the extremities of said cable to maintain said loops in an open position to receive means for supporting said tube.

3. A gymnastic climbing pole as described in claim 2 in which the clamping means at one extremity of said tube interiorly contacts one of said caps and the clamp-

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means at the other extremity of said tube exteriorly contacts the other of said caps.

4. A gymnastic climbing pole as described in claim 2 in which the elongated hollow tube is formed of non-metallic material.

5. A gymnastic climbing pole as described in claim 4 having non-metallic packing material interposed between the cable and the inner wall of said tube to prevent lateral contact therebetween.

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ANTON O. OECHSLE, *Primary Examiner*.

RICHARD W. DIAZ, JR., *Assistant Examiner*.