United States Patent

[11] 3,586,324

[72] Inventor **Benhard M. Bearson**
Lanesboro, Minn.

[21] Appl. No. **815,720**
[22] Filed **Apr. 14, 1969**
[45] Patented **June 22, 1971**

[73] Assignee **Goals, Inc.**
Lanesboro, Minn.

[54] **VERTICALLY ADJUSTABLE BASKETBALL GOAL**
2 Claims, 3 Drawing Figs.

[52] **U.S. Cl.** ..... **273/1.5 R,** 248/284
[51] **Int. Cl.** **A63b 63/04**
[50] **Field of Search** 273/1.5; 248/284

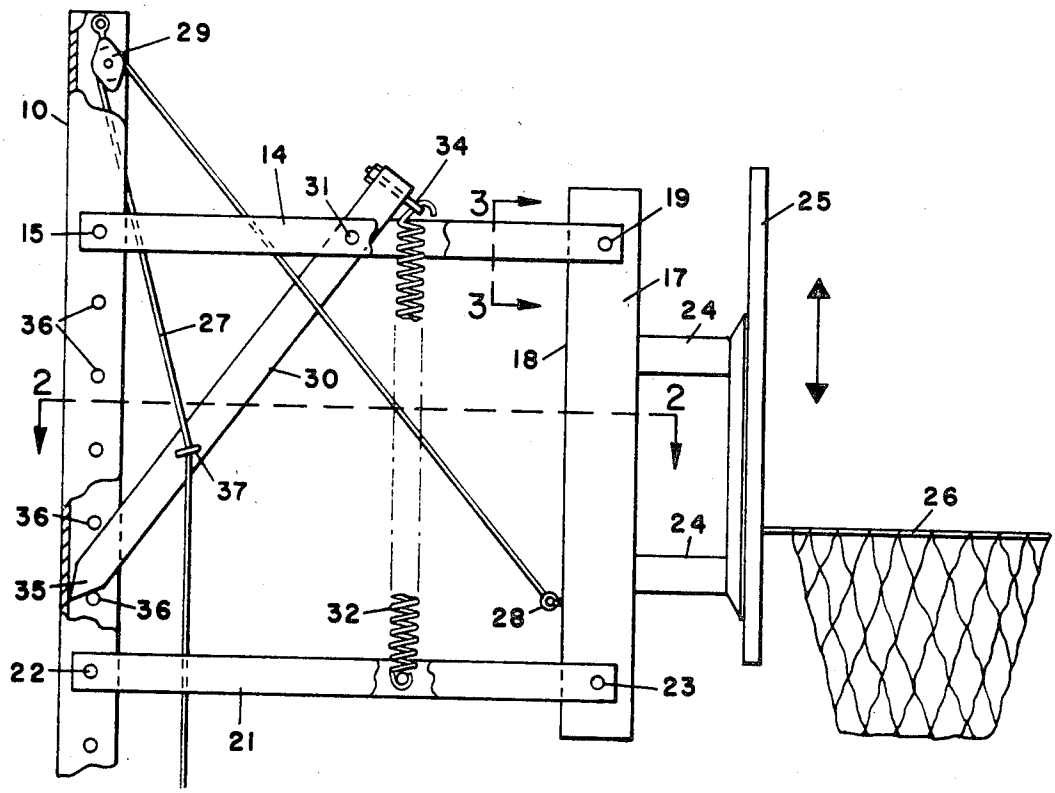
[56] **References Cited**

UNITED STATES PATENTS

2,313,188	3/1943	Woodburn	273/1.5
2,881,003	4/1959	Drew	273/1.5
3,462,102	8/1969	Rivers	248/284 X

Primary Examiner—Richard C. Pinkham
Assistant Examiner—Paul E. Shapiro
Attorney—G. A. Ellestad

ABSTRACT: A basketball goal is carried by upper and lower pairs of parallel arms which are pivoted to a support so that the goal may be vertically adjusted by means of a flexible cable passing over a pulley carried at the top of the support. The goal is held in adjusted position by a lever which is pivotally carried by the upper arms and is spring biased so that the lower end of the lever is normally held against selected, spaced stop means carried by the support. The cable passes through an eyelet carried by the lever whereby the lever may be selectively moved out of engagement with the stop means.



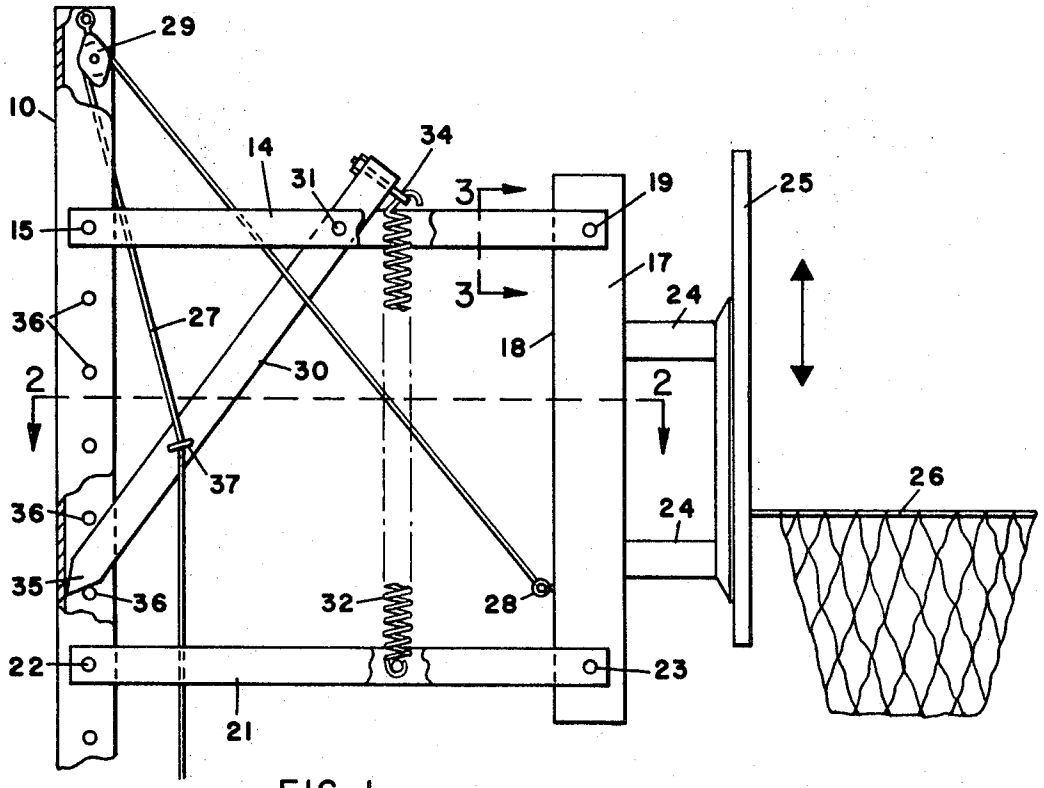


FIG. 1

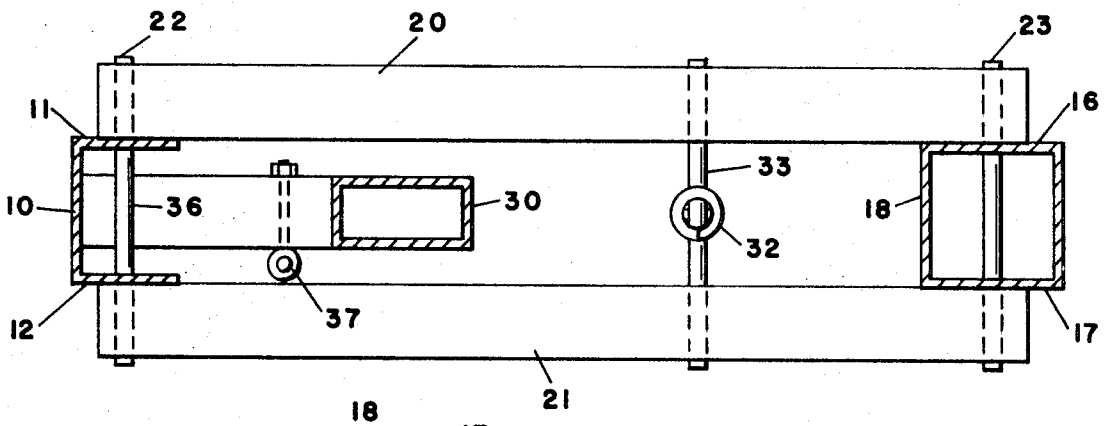


FIG. 2

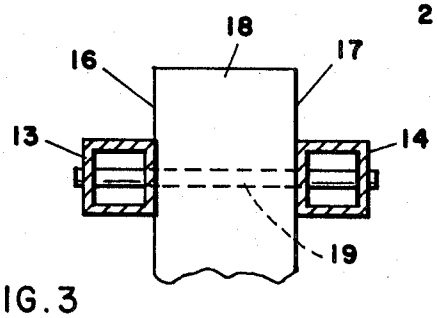


FIG. 3

BENHARD M. BEARSON
INVENTOR.
BY G. A. Ellestad
ATTORNEY

VERTICALLY ADJUSTABLE BASKETBALL GOAL

BACKGROUND OF THE INVENTION

This invention relates to basketball goals and more particularly it has reference to basketball goal which may be adjusted vertically. On regulation basketball courts the basket is positioned at a height which is much too high for use by children so that they are unable to develop proper playing skills. On a playground, a basketball goal of a fixed height will not accommodate all of the children of a wide range of heights who desire to play the game.

SUMMARY OF THE INVENTION

An object of the present invention is to provide a relatively simple yet efficient structure for moving a basketball goal vertically into selected adjusted position. Other objects are to provide such a structure which can be produced at a minimum cost by performing relatively simple mechanical operations on material which is widely available; and to provide a goal which can be adjusted easily and safely held in adjusted position.

According to the invention, upper and lower pairs of parallel arms are pivotally connected at their respective ends to a vertical support member and a front member which carries the backboard and hoop. The goal is held in adjusted vertical position by means of a lever which is pivotally carried between the upper pair of arms and extends downwardly and inwardly into operative engagement with stop means which are spaced vertically along the support member. A spring connected to the lower pair of arms and the upper end of the lever normally urges the lower end of the lever into engagement with the stop means. The goal may be moved vertically by means of a flexible cable which is fastened to the lower portion of the front member and extends upwardly over a pulley at the upper part of the support member and thence downwardly through an eyelet carried by the lever adjacent its lower end portion.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side view of a basketball goal embodying the invention, with parts broken away.

FIG. 2 is a view, on an enlarged scale, taken on line 2–2 of FIG. 1.

FIG. 3 is a fragmentary sectional view taken on line 3–3 of FIG. 1.

DESCRIPTION OF PREFERRED EMBODIMENTS

A preferred embodiment of the invention is shown in the drawings wherein **10** indicates a vertical support member which may be attached by suitable means to a post, wall of a building or the like. The support member **10** which is U-shaped in cross section and has the two sides **11** and **12** may conveniently be formed of stock material such as channel iron. Forwardly extending upper arm means comprising a pair of parallel arms **13** and **14** are pivoted, respectively, at the sides **11** and **12** at the upper portion of member **10** by means of the pin **15**. The forward end portions of arms **13** and **14** are pivoted, respectively, at the sides **16** and **17** of the front member **18** by means of the pin **19**. Similarly, the lower arm means comprise the pair of parallel arms **20** and **21** which have their rear ends pivoted, respectively, at the sides **11** and **12** by the pin **22** and their forward ends pivoted respectively, to the sides **16** and **17** of member **18** by the pin **23**.

Fixedly secured to the front member **18** by any suitable means such as arms **24** is the backboard **25** on which is mounted the hoop or basket **26**. Since the front member **18** and the fixed support member **10** are pivotally connected to the upper and lower parallel arms **13**, **14** and **20**, **21**, the hoop **26** will move vertically with the movement of the front member **18**. The front member is moved vertically by means of a flexible cable, such as a rope **27**, which has one end secured to the eyelet **28** at the lower part of member **18** and extends upwardly and over a pulley **29** mounted at the upper part of support member **10**. The front member **18** and the attached backboard **25** and hoop **26** are held in adjusted vertical

position by means of the lever **30** which has its upper end pivotally mounted by means of pin **31** between the upper pair of arms **13** and **14**. Biasing means such as coil spring **32** has its lower end secured to pin **33** between the arms **20**, **21** and its upper end secured at **34** to the upper end of lever **30**. The spring **32** normally acts to move a part such as end portion **35** carried by the lever **30** into operative engagement with the stop means formed by a plurality of rods or pins **36** which extend between the sides **11** and **12** of support member **10** and are vertically spaced along this member.

As indicated by the arrow in FIG. **1**, the goal comprising the backboard **25** and attached loop **26** may be selectively moved up and down. Pulling downwardly on the rope **27** will cause the pivoted parallel arms to move upwardly to thereby raise the front member **18** and the attached backboard and hoop **26**. As the arms **13** and **14** turn about pivot pin **15** and move upwardly, the lever **30** also moves upwardly with its lower end **35** riding over the rod stop means **36** until a selected position is reached and the lever **30** acts to hold the goal in such position. The rope **27** passes downwardly from the pulley **29** through opening means carried by the lever **30** such as the eyelet **37** supported at one side of lever **30**.

To lower the goal, the rope **27** is pulled downwardly and also forwardly away from the support member **10**. Since the rope **27** passes through the eyelet **37** carried by lever **30**, such manipulation of the rope will free the end **35** of lever **30** from engagement with stop means **36**. With the lever **30** held in such position, tension on the rope **27** may be released in such a manner as to permit the goal to move downwardly to a selected position. The rope is then moved rearwardly to permit the end **35** of lever **30** to engage one of the stop means **36** and thereby hold the goal in fixed, adjusted position.

From the foregoing, it will be apparent that the invention provides a relatively simple, yet efficient means for selectively adjusting a basketball goal in a vertical direction. The support member **10** can be made from standard channel iron and the parallel arms, lever and front member can be made of such standard material as steel tubing. Hence, the entire structure can be made and assembled with a minimum of mechanical operations and thereby reduce manufacturing costs. When in adjusted position, the goal is securely held without reliance upon the loosening or tightening of wing nuts, for example, which are employed in some of the prior art structures. Various modifications may be made without departing from the spirit of the invention as pointed out in the appended claims.

I claim:

1. A basketball goal comprising a fixed vertical support member, a front member, upper arm means and lower arm means extending between the two members, the end portions of the upper and lower arm means being pivotally connected to the respectively adjacent members, a backboard and attached hoop carried by the front member, means for raising and lowering the front member and the attached backboard and hoop comprising a pulley carried at the upper portion of the support member, a flexible cable having one end secured to the front member and extending upwardly over the pulley and thence downwardly, means for selectively holding the front member and attached backboard in adjusted vertical position comprising vertically spaced stop means carried by the support member, a lever having an end portion pivotally carried by the upper arm means and extending downwardly and inwardly towards the support member, and biasing means normally urging a part carried by the lower end portion of the lever into operative engagement with said stop means, means carried by the lever for providing an opening, said cable extending downwardly from the pulley and through said opening whereby the part carried by the lower end portion of the lever may be selectively moved out of operative engagement with the stop means.

2. The structure recited in claim **1** wherein the vertical support member is U-shaped in cross section, the stop means comprise spaced rods extending between the sides of the support member and the lower portion of the lever carries an eyelet down through which the flexible cable extends.