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2,916,288

BASKETBALL BACKSTOPS

Filed Sept. 7, 1956

2 Sheets-Sheet 1

FIG. 1.

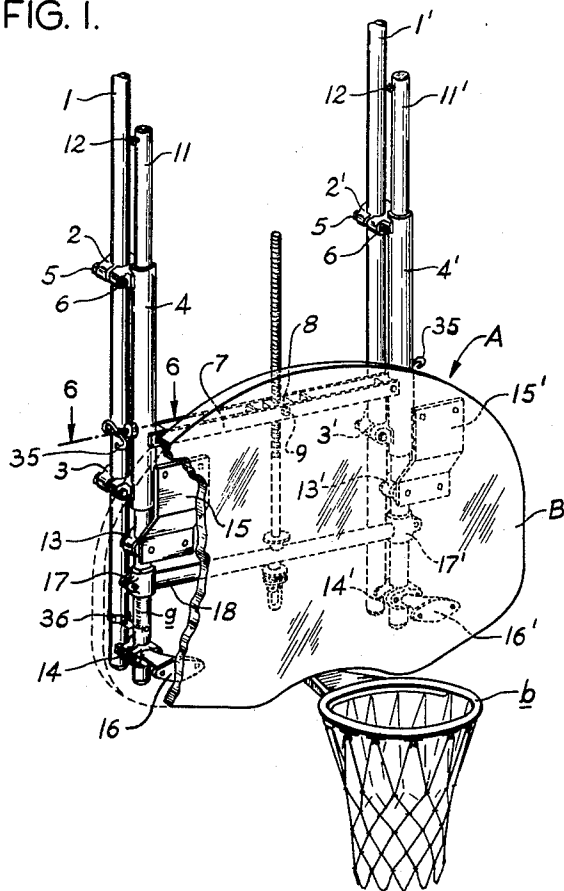


FIG. 5.

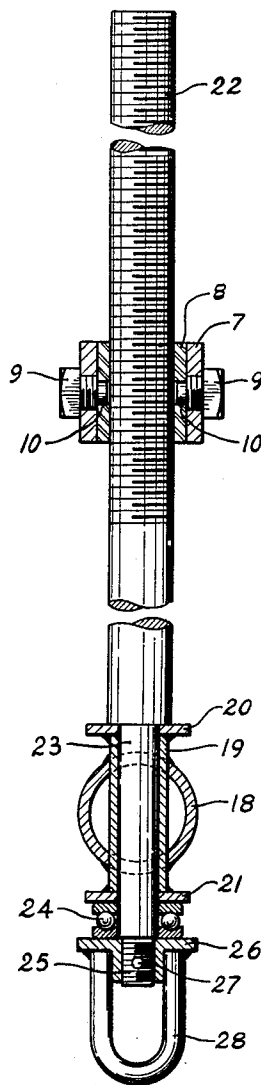
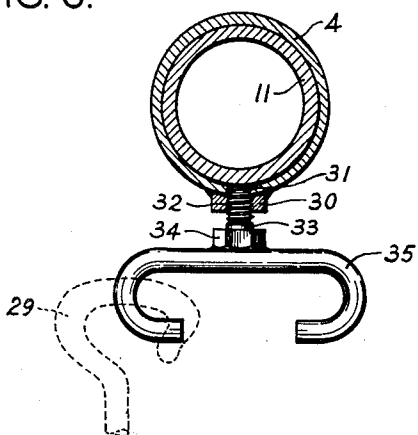


FIG. 6.



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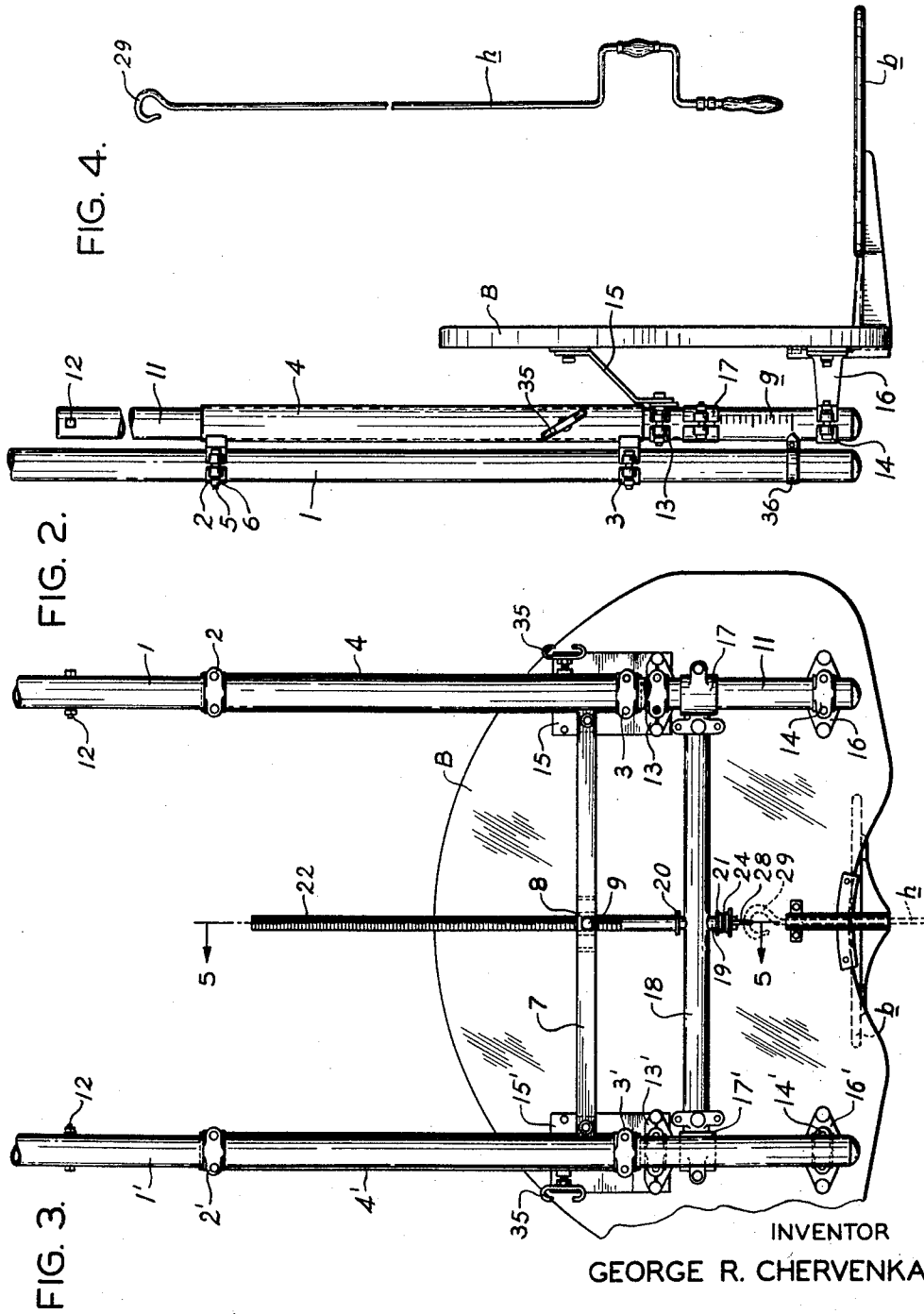
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BASKETBALL BACKSTOPS

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2 Sheets-Sheet 2



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BASKETBALL BACKSTOPS

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7 Claims. (Cl. 273—1.5)

This invention relates in general to certain new and useful improvements in basketball backstops and, more particularly, to a vertically adjustable backstop for use in school gymnasiums, on playgrounds, and similar locations.

Most school gymnasiums are equipped in such a manner that the area can be employed for various different types of activity. For example, the athletic equipment of all sorts can be removed and the chairs or other seating structures set up to convert the gymnasium into an auditorium for assemblies, dramatic performances, or other types of exercises for which chairs or similar theatre-type seating can be set up. On the other hand, when basketball games are scheduled, the seating structures can be removed from the playing area and the basketball backstops lowered from the ceiling into playing position. For such purpose, a number of types of swinging basketball backstops have been devised, including framework mounted in the ceiling structure upon suitable hinges and provided with ropes, cables, pulleys, and the like for optionally swinging the backstop up into inoperative position and lowering it into operative position. These backstops, however, are all constructed to come to rest in operative position at the so-called "standard" height for adult basketball games.

In elementary schools, the multiple use to which gymnasiums must be put include not only different types of activities, but also different types of equipment to fit children at different age levels. The smaller children, obviously, cannot use equipment of a size and type solely adapted for adult and teenage use. For basketball playing, it is, therefore, necessary to provide lower backstops or baskets for the younger children, but within the size limitations of ordinary elementary school gymnasiums and even secondary school gymnasiums, it is difficult, if not well nigh impossible, to provide a plurality of basketball courts having backstops and baskets at the various different height levels above the floor requisite to the needs of younger and smaller children. Consequently, most schools either adopt a compromise basket height, which inconveniences the older and taller players, or eliminate entirely any provision for younger children.

It is, therefore, the primary object of the present invention to provide a basketball backstop and supporting structure which can readily be adjusted to any height above the floor within rather broad limits so as to enable a basketball playing area to be quickly and readily adapted to the needs of children of various different age levels.

It is another object of the present invention to provide a height-adjustable backstop which is rugged and will withstand the very considerable impact forces imposed upon it during active use.

It is also an object of the present invention to provide a height-adjustable backstop which can be adjusted from floor level in a simple, convenient, and speedy manner.

It is an additional object of the present invention to provide a basketball backstop of the type stated which

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can be adjusted to any desired height accurately and precisely and is equipped with visual means to assist in such adjustment.

It is a further object of the present invention to provide a height-adjustable backstop which can be readily installed on any existing type of basketball backstop mounting equipment.

With the above and other objects in view, my invention resides in the novel features of form, construction, arrangement, and combination of parts presently described and pointed out in the claims.

In the accompanying drawings (two sheets):

Fig. 1 is a perspective view, partly broken away and in section, of a basketball backstop constructed in accordance with and embodying the present invention;

Fig. 2 is a side elevational view of the basketball backstop;

Fig. 3 is a rear elevational view of the basketball backstop;

Fig. 4 is an elevational view of the operating crank forming a part of the present invention;

Fig. 5 is a fragmentary sectional view taken along line 5—5 of Fig. 3; and

Fig. 6 is a fragmentary sectional view taken along line 6—6 of Fig. 1.

Referring now in more detail and by reference characters to the drawings, A designates a basketball backstop structure comprising two spaced parallel tubular main legs 1, 1', which extend upwardly to the ceiling or roof-supporting girders of the gymnasium and are there mounted in any conventional or suitable manner. Inasmuch as the mounting of the upper end of these main legs 1, 1', does not form a part of the present invention, such mounting means is not shown or particularly described herein.

Clamped upon the lower ends of the main legs 1, 1' as shown in Fig. 1, by means of split collars 2,2', 3,3', are tubular sleeves 4,4'. The split collars 2,2', 3,3', are substantially identical in construction and are each provided with a clamping bolt 5 having a conventional nut 6. By means of the clamping bolt 5 and nut 6, the several split collars 2,2', 3,3', can be adjusted to bear tightly or loosely against the legs 1,1', so as to afford a means for adjusting the height of the sleeves 4, 4', with respect to the legs 1,1', and also for permitting the sleeves 4, 4', to be installed upon main legs 1 which may already be installed in the gymnasium.

The tubular sleeves 4, 4', are, furthermore, exactly the same length and arranged in precise parallelism so that the upper and lower ends thereof, are substantially at the same height level above the floor when the backstop structure A is operatively mounted upon the supporting main legs 1, 1'. Bolted or otherwise rigidly secured to, and extending horizontally between, the sleeves 4, 4', is a cross-frame 7 which is centrally provided with a vertically bored and tapped nut 8 held in place by set screws 9 having trunnion-ends 10, so that the nut 8 can rock slightly about a transverse horizontal axis and thereby accommodate itself to any minor inaccuracies in manufacture as the backstop structure A is assembled for ultimate use.

Slidably and telescopically mounted in, and extending through, the sleeves 4, 4', are sliding legs 11, 11', provided at their upper ends with stop screws 12 and at their lower ends with vertically spaced pairs of clamping-brackets 13, 13', 14, 14'. Respectively welded, riveted, or otherwise rigidly attached to the clamping-brackets 13, 13', are forwardly offset mounting plates 15, 15', and similarly carried by the lower clamping-brackets 14, 14', are forwardly extending bracket arms 16, 16', the plates 15, 15', and bracket arms 16, 16', being conventionally attached to the rear base of a basketball backboard B

which may be of any conventional contour construction and is equipped in the usual manner with a conventional basket *b*.

Clamped tightly around each of the sliding legs 11, 11', just below the clamping-brackets 13, 13', are sleeves 17, 17', respectively, which are rigidly engaged with the opposite ends of a transversely extending bracebar 18. Mounted centrally in the bracebar 18 is a vertical bearing sleeve 19 having upper and lower horizontal thrust-collars 20, 21. Threadedly mounted in the nut 8, and extending vertically therethrough, is a long adjustment screw 22 which is threaded for the major portion of its entire length but is unthreaded at its lower end and is, at such lower end, diametrically reduced to provide a spindle-portion 23 which is rotatably mounted in, and extends through, the bearing sleeve 19 and through a ball-thrust bearing assembly 24. At its lowermost end, the screw 22 is further turned down and threaded to provide a terminal portion 25 upon which is mounted a hanger-nut 26, the latter being threaded up tightly and held rigidly in place by a pin 27. Welded or otherwise rigidly mounted upon the under face of the hanger-nut 26 and extending downwardly therefrom is a U-shaped eye-forming member 28 adapted to receive the upper hooked end 29 of an elongated hand crank *h*.

Each of the sleeves 4, 4', is provided in its outwardly presented lateral face with a rigidly welded nut 30, which is aligned with a drilled and tapped hole 31 for receiving the threaded end 32 of a locking bolt 33, the head 34 of which is welded to a C-shaped actuator handles 35, all as best seen in Fig. 6.

Adjustably mounted upon the lower end of the main leg 1 is a pointer element 36 extending forwardly toward the lower exposed end of the sliding leg 11, the latter being provided with a series of suitably imprinted graduations *g* which afford a visual indication of the height adjustment of the backstop structure A and, more particularly, the basket *b*.

In use, the backstop structure may be shifted vertically to any desired height by inserting the hooked end 29 of the handle *h* in the eye-forming element 28 and rotating the screw 22 in the appropriate direction to raise or lower the entire structure, the sliding legs 11, 11', shifting suitably within the auxiliary elements 4, 4'. When the desired height adjustment has been achieved, the hooked end 29 of the handle *h* can be removed from the eye-forming element 28 of the screw 22 and hooked into the actuating handle 35 of the clamping screws 32. By appropriately rotating this handle 35, the locking bolts 33 can be threaded inwardly into tight clamping engagement against the sliding legs 11, 11', all as best seen in Fig. 6. In order to change the adjustment of the basket *b*, it is merely necessary to loosen the locking bolts 33 by use of the handle *h* and then re-engage the hooked end of the handle 29 with the eye-forming element 28 of the screw 22, so that the screw can again be rotated in the appropriate direction to shift the basketball backstop B and the supported basket *b* upwardly or downwardly as may be necessary to the new height.

It should be understood that changes and modifications in the form, construction, arrangement, and combination of the several parts of the basketball backstops may be made and substituted for those herein shown and described without departing from the nature and principle of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. For use with a basketball backstop structure, a height-adjustable back board support comprising a pair of spaced parallel tubular members, a transverse element extending between and supported by the tubular members, means slidably mounted in the tubular members for engagement with the back board, a cross bar connected at its ends to and extending between said means, a nut operatively mounted in the transverse member, and a

screw threadedly engaged in the nut and rotatably mounted in the cross bar for shifting said means within the tubular members whereby to vary the height of the back board.

2. For use with a basketball backstop structure, a height-adjustable back board support comprising a pair of spaced parallel tubular members, a transverse element extending between and supported by the tubular members, means slidably mounted in the tubular members for engagement with the back board, a cross bar connected at its ends to and extending between said means, a nut swivelly mounted in the transverse member, and a screw threadedly engaged in the nut and rotatably mounted in the cross bar for shifting said means within the tubular members whereby to vary the height of the back board.

3. A basketball backstop comprising a depending vertical framework, a pair of spaced vertical slide-forming tubular members mounted on said framework, a transverse element extending between and supported by the tubular members, a pair of elongated elements mounted in said tubular members for vertical sliding movement therein, a cross bar connected at its ends and extending between said pair of elongated elements, threaded means operatively mounted on the transverse member, and a screw rotatably mounted in said cross bar and threadedly engaged in said threaded means for shifting said elongated elements in unison within said tubular members into any selected position of vertical adjustment within predetermined limits.

4. A basketball backstop comprising a depending vertical framework, a pair of spaced vertical slide-forming tubular members mounted on said framework, means for optionally adjusting the height of said tubular members with respect to said framework, a transverse element extending between and supported by the tubular members, a pair of elongated elements mounted in said tubular members for vertical sliding movement therein, a cross bar connected at its ends and extending between said pair of elongated elements, threaded means operatively mounted on the transverse member, and a screw rotatably mounted in said cross bar and threadedly engaged in said threaded means for shifting said elongated elements in unison within said tubular members into any selected position of vertical adjustment within predetermined limits.

5. A basketball backstop comprising a depending vertical framework, a pair of spaced vertical slide-forming tubular members mounted on said framework, a transverse element extending between and supported by the tubular members, a pair of elongated elements mounted in said tubular members for vertical sliding movement therein, a cross bar connected at its ends and extending between said pair of elongated elements, threaded means operatively mounted on the transverse member, a screw rotatably mounted in said cross bar and threadedly engaged in said threaded means for shifting said elongated elements in unison within said tubular members into any selected position of vertical adjustment within predetermined limits, and means for optionally locking said elongated elements in any selected position of adjustment.

6. A basketball backstop comprising a depending vertical framework, a pair of spaced vertical slide-forming tubular members mounted on said framework, a transverse element extending between and supported by the tubular members, a pair of elongated elements mounted in said tubular members for vertical sliding movement therein, a cross bar connected at its end and extending between said pair of elongated elements, threaded means operatively mounted on the transverse member, a screw rotatably mounted in said cross bar and threadedly engaged in said threaded means for shifting said elongated elements in unison within said tubular members into any selected position of vertical adjustment within predetermined limits, releasable bolt means for locking said

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elongated elements in any selected position of adjustment, and a hook-like actuator formed on said bolt-like means.

7. A basketball backstop comprising a depending vertical framework, a pair of spaced vertical slide-forming tubular members mounted on said framework, a transverse element extending between and supported by the tubular members, a pair of elongated elements mounted in said tubular members for vertical sliding movement therein a cross bar connected at its ends and extending 10 between said pair of elongated elements, threaded means operatively mounted on the transverse member, a screw rotatably mounted in said cross bar and threadedly engaged in said threaded means for shifting said elongated elements in unison within said tubular members into any 15 selected position of vertical adjustment within predeter-

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mined limits, an eye-forming element provided on the lower end of said screw, releasable bolt means for locking said elongated elements in any selected position of adjustment, and a hook-like actuator formed on said bolt means.

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