Oct. 10, 1950 L. B. LINDSAY 2,525,304

HOCKEY GOAL

Filed July 7, 1949

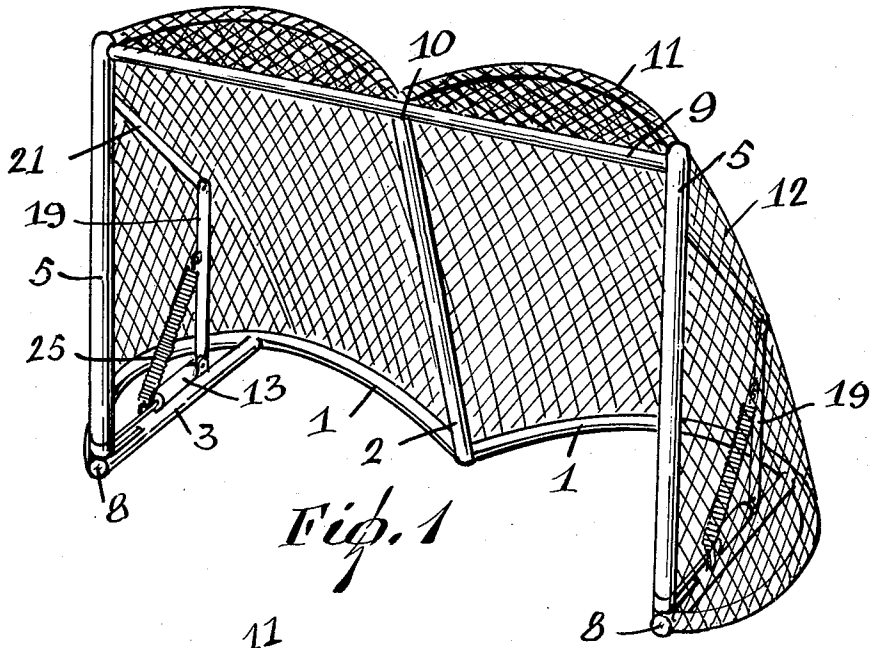


Fig. 1

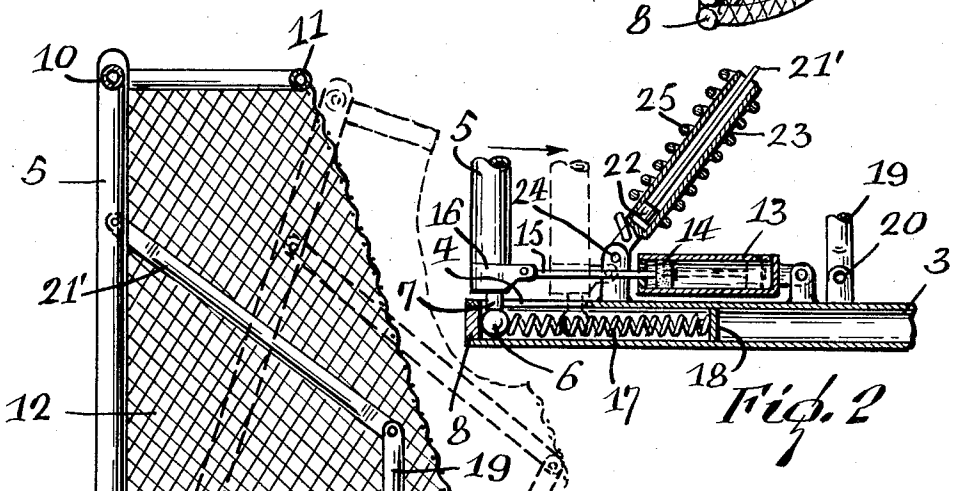


Fig. 2

Fig. 3

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Patented Oct. 10, 1950

2,525,304

UNITED STATES PATENT OFFICE

2,525,304

HOCKEY GOAL

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Application July 7, 1949, Serial No. 103,516

6 Claims. (Cl. 273—127)

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The present invention pertains to a novel goal and resides in improvements on my United States Patent No. 2,449,708 of September 21, 1948.

In the patented device the end posts of the goal yield under impact by buckling at the center. More yieldability at the bottom of the posts is desirable, and the principal object of the invention is to fill this need. Other features of the patented goal may be incorporated although not shown herein.

The stated object is accomplished by mounting the upper ends of the posts pivotally on the fixed frame structure and setting the lower ends slidably in a pair of fixed braces. These ends are backed by springs which are compressed as the ends are displaced.

In order to prevent too rapid a return of the posts, each is connected to a check device or dash pot including a fluid-filled cylinder and a by-passing piston. The posts are further backed by articulated props which guide their movement. The props are also fitted with checks or dash pots of the character set forth.

The invention is fully disclosed by way of example in the following description and in the accompanying drawings in which:

Figure 1 is a prespective view of the goal;

Figure 2 is a detail transverse vertical section, and

Figure 3 is an end view showing in dotted lines the deflected position.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

As in the aforementioned patent, the base of the goal consists of two arcuate sections 1 joined together at one end, with their remaining ends spaced apart the distance of the desired goal entrance. A center post 2 is secured to the connection of the sections 1 and stands somewhat rearward of a line joining the free ends of the sections 1. From each such end, a tubular brace 3 extends inwardly and is fixed to the corresponding section in the manner of a chord. The braces are preferably perpendicular to a line joining the free ends of the sections 1.

Each brace 3 is formed with a longitudinal slot 4 forming its forward end. In each slot is slidably mounted the lower end of a side post 5. For this purpose the lower end of each post is formed with a ball 6 over which is a restriction 7 receivable in the slot by sliding the ball in the open end of the section 1. After this the open end is plugged at 8.

The upper ends of the posts 5 are joined by a

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bar 9. The center post 2 is inclined for attachment to the bar 9 at 10. Arcuate sections 11, of less depth than the sections 1, are fastened to the ends of the posts 5 and 2. The four arcuate sections and the three posts form a frame on which is mounted the screen 12 in two somewhat conical surfaces.

On each brace 3 is mounted a closed cylinder 13 containing a fluid and a ported or by-passing piston 14. A rod 15 extends from the piston and is pivoted to the corresponding post 5 by a strap 16. Each ball 6 is backed by a coil spring 17 in the brace 3 and bearing against a pin or stop 18.

It is now evident that the lower end of each post 5 will move in the brace 3 under impact. Its return movement by the compressed spring 17 will be checked by the retarded return of the by-passing piston 14, after the fashion of a door check. The cylinder 13 and piston 14 will therefore be identified in the claims as a check.

To each brace 3 is pivotally attached the lower end of a link 19, at 20, behind the cylinder 13. The upper end of the link is joined to the corresponding post 5, forming an articulated prop. The connection consists of a rod 21. The upper end of link 19 is also connected to brace 3 by a rod 21′ pivoted to the upper end of the link 19 and carrying a by-passing piston 22 working in a fluid-filled cylinder 23, pivoted at 24 on the brace 3. The cylinder is surrounded by a coil spring 25 having its ends connected respectively to the cylinder and the link 19.

It has already been pointed out that either post 5 will yield at its lower end on impact by a player. In this movement, the upper end of the post swivels on the top bar 10, to which it is pivotally attached. The movement of the posts is guided by the articulated props 21′—23, and the accompanying rearward movement of each link 19 is restrained by expansion of its spring 25 and the check 22, 23. When the spring recoils, the return of the post is further retarded or cushioned by the check 22, 23 as in the case of the checks 13, 14.

It is now evident that injury to the players by impact with the posts 5 is practically eliminated by the yieldable mounting of the posts as described.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claims.

What I claim is:

1. A goal comprising a base structure having two free ends determining the width of the goal entrance, a horizontal tubular brace at each end, a pair of posts having their respective lower ends slidably mounted in said braces, a compressed spring in each brace and bearing against the lower end of the post in the same brace, and a check device joining each post to the brace receiving the same post, said check devices being positioned to cushion the expansion of said springs, whereby to prevent too rapid return of said posts after being displaced by impact thereon.

2. A goal comprising a base structure having two free ends determining the width of the goal entrance, a horizontal tubular brace at each end, a pair of posts having their respective lower ends ball-shaped and slidably mounted in said braces, a compressed spring in each brace and bearing against the lower end of the post in the same brace, and a check device joining each post to the brace receiving the same post, said check devices being positioned to cushion the expansion of said springs, whereby to prevent too rapid return of said posts after being displaced by impact thereon.

3. A goal comprising a base structure having two free ends determining the width of the goal entrance, a horizontal tubular brace at each end, a pair of posts having their respective lower ends slidably mounted in said braces, a compressed spring in each brace and bearing against the lower end of the post in the same brace, an upper bar rigidly connected to said base structure, the upper ends of said posts having a swivel connection to the ends of said bar, and a check device joining each post to the brace receiving the same post, said check devices being positioned to cushion the expansion of said springs, whereby to prevent too rapid return of said posts after being displaced by impact thereon.

4. A goal comprising a base structure having two free ends determining the width of the goal entrance, a horizontal tubular brace at each end, a pair of posts having their respective lower ends slidably mounted in said braces, a compressed spring in each brace and bearing against the lower end of the post in the same brace, an articulated prop between each brace and the adjacent post, and a check device joining each post to the brace receiving the same post, said check devices being positioned to cushion the expansion of said springs, whereby to prevent too rapid return of said posts after being displaced by impact thereon.

5. A goal comprising a base structure having two free ends determining the width of the goal entrance, a horizontal tubular brace at each end, a pair of posts having their respective lower ends slidably mounted in said braces, a compressed spring in each brace and bearing against the lower end of the post in the same brace, an articulated prop between each brace and the adjacent post, a check device incorporated in each articulated prop, and a check device joining each post to the brace receiving the same post, said check devices being positioned to cushion the expansion of said springs, whereby to prevent too rapid return of said posts after being displaced by impact thereon.

6. A goal comprising a base structure having two free ends determining the width of the goal entrance, a horizontal tubular brace at each end, a pair of posts having their respective lower ends slidably mounted in said braces, a compressed spring in each brace and bearing against the lower end of the post in the same brace, an articulated prop between each brace and the adjacent post, an upper bar rigidly connected to said base structure, the upper ends of said posts having a swivel connection to the ends of said bar, and a check device joining each post to the brace receiving the same post, said check devices being positioned to cushion the expansion of said springs, whereby to prevent too rapid return of said posts after being displaced by impact thereon.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,449,708	Lindsay	Sept. 21, 1948