

April 14, 1925.

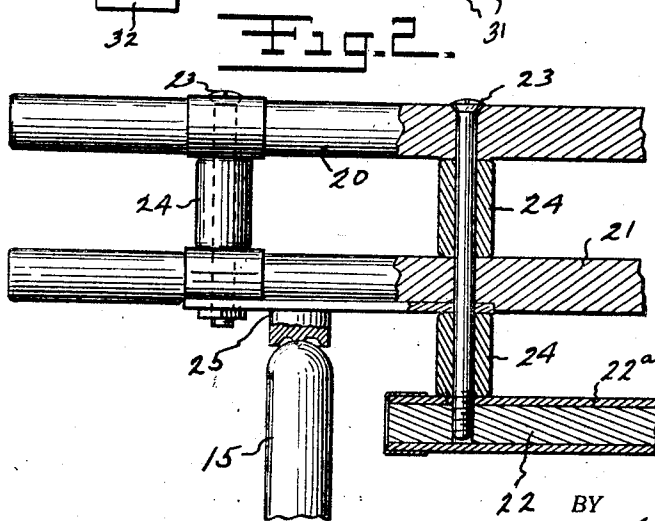
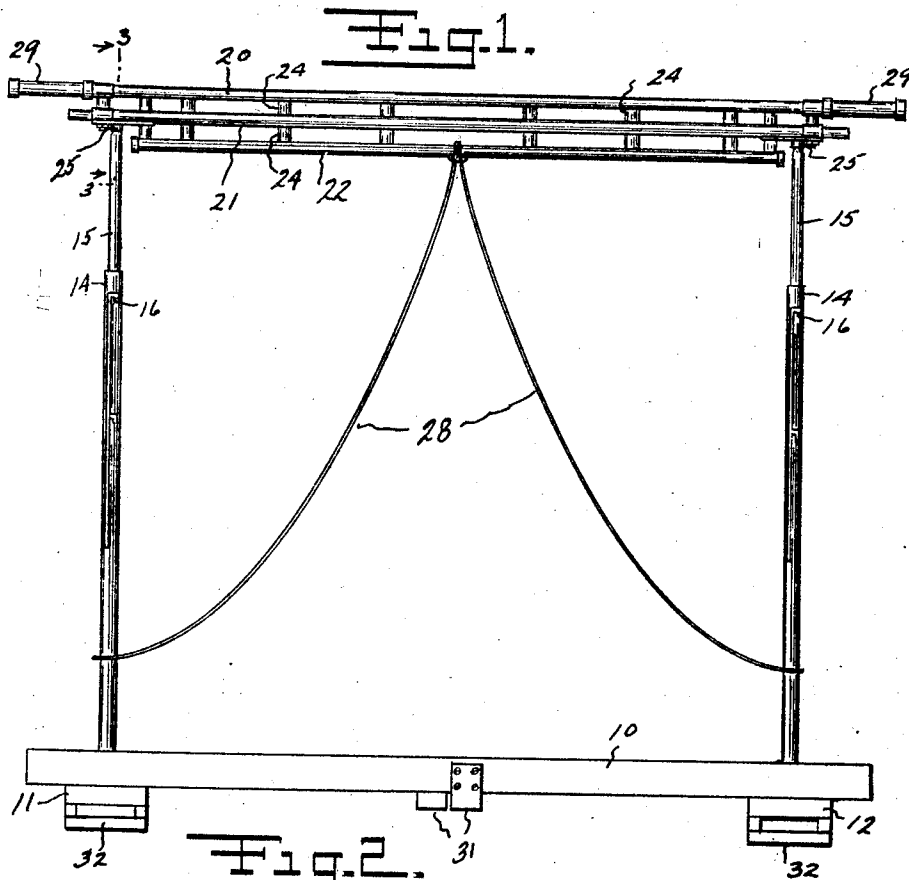
E. L. CAREY

1,533,633

HURDLE

Filed Oct. 21, 1922

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 3.

Fig. 4.

Fig. 5.

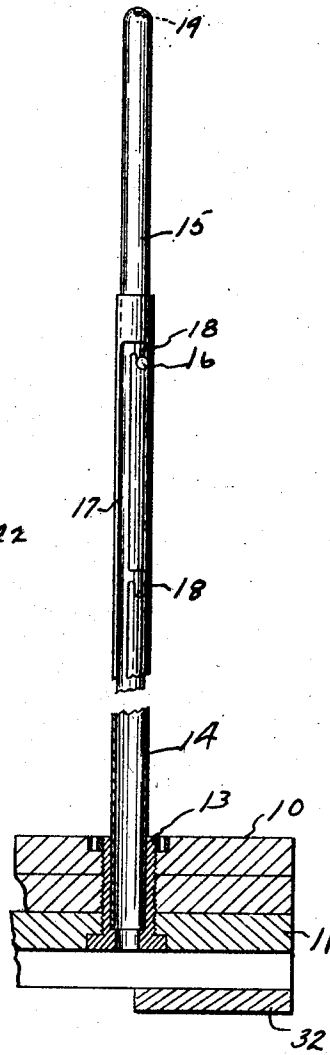
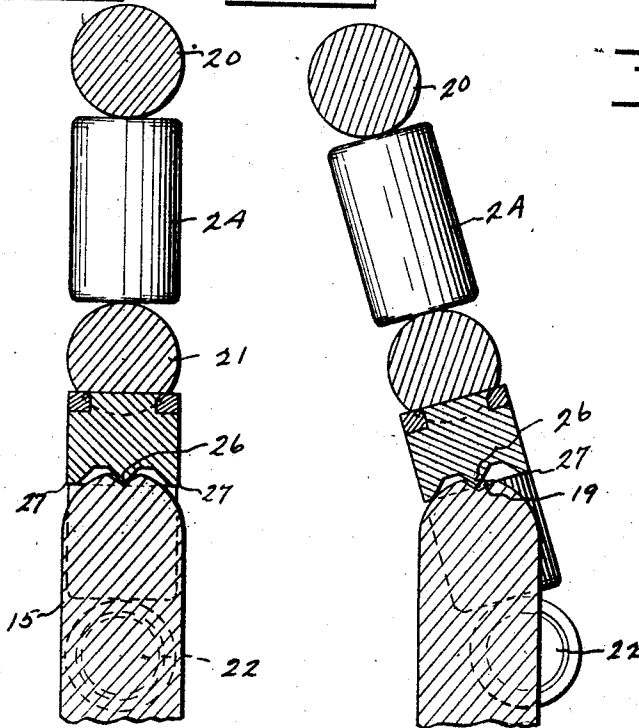


Fig. 6.

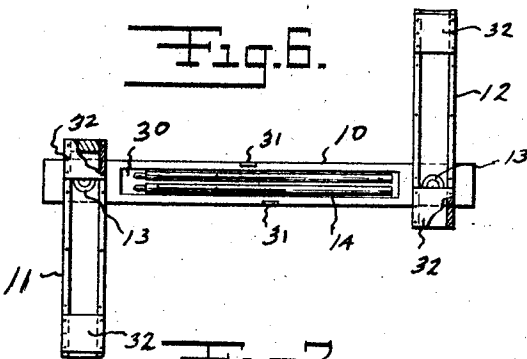
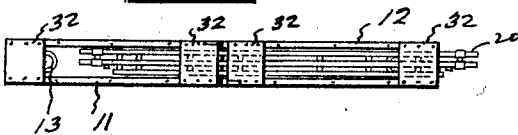


Fig. 7.



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UNITED STATES PATENT OFFICE.

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HURDLE.

Application filed October 21, 1922. Serial No. 595,894.

To all whom it may concern:

Be it known that I, EDWARD L. CAREY, a citizen of the United States, residing at New York, borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Hurdles, of which the following is a specification.

My present invention relates to improvements in apparatus which may be used as a hurdle in athletic races, though it may also be used for other sports, such as high jumping and the like.

My invention will be best understood from the following description and the annexed drawings, in which Fig. 1 is a front elevation of an illustrative form of my invention showing the several parts in position when in use; Fig. 2 is an enlarged end portion, partly in section, of Fig. 1; Fig. 3 is a section on the line 3—3 of Fig. 1, looking in the direction of the arrows; Fig. 4 is similar to Fig. 3, but with the parts in slightly different position; Fig. 5 is a partially vertical section on a somewhat larger scale of a part of Fig. 1; Fig. 6 is a plan view of the base of the arrangement shown in Fig. 1 when it is being utilized as a holder for the other parts of the apparatus, but with the opening in the base uncovered, and Fig. 7 shows the entire apparatus folded up ready for carrying.

Like reference characters indicate like parts in the several views.

In the arrangement shown in Fig. 1, a base 10 is provided with foot pieces 11 and 12 pivotally connected to the base 10 through a socket member 13 so that the foot pieces may be turned from the position shown in Fig. 6 (which position they occupy in Fig. 1) to the position shown in Fig. 7 in the manner and for a purpose to be more fully described hereinafter. Into the sockets 13 at either end of the base 10 is inserted a metallic tube 14, this tube, in turn, having a rod 15 telescoping therein and held in extended position in relation to the tube 14 by a pin 16, the tube 14 having a long slot 17 and bayonet slots 18 which permit the rod 15 to be supported in adjusted position in a well known manner.

The tops of the rods 15 are arranged to carry a cross bar so that the cross bar will be free to oscillate through a relatively small arc if it is slightly touched by the runner, but so that it will fall if the runner strikes

it with any considerable force, and preferably the parts are arranged so that when the cross bar is displaced, it will fall and not be thrown forward into the path of the runner to cause possible injury to the latter, or into the path of a neighboring runner.

In the illustrative embodiment, each of the rods 15 has a curved top with a recess 19 in the center thereof. The cross bar shown is made up of a top rod 20, a support rod 21, and a weight rod 22, these rods being parallel and held in spaced relation by fasteners such as the screws 23 passing through distance pieces 24. The weight rod 22 may conveniently be made of metal so that the center of gravity of the entire cross bar is well below the support rod 21. In order to protect the runner from injury, the weight rod 22 may be conveniently covered with rubber, as shown at 22^a.

On the bottom of the support rod 21 and at either end thereof in a position to engage the tops of the rods 15 is a support piece 25 which may be fastened to the support rod 21 in any convenient manner. In the illustrative form, this support 25 is a metallic piece having its bottom turned so as to produce a pointed projection 26 surrounded by an edge 27 spaced from the projection. As best shown in Fig. 3, when the cross bar is resting on the supports 15, the lower part of the projection 26 rests in the bottom of the recess 19 but with the walls of the projection out of contact with the walls of the recess and with the edge 27 out of contact with the top of the rod 15. With this arrangement, the cross bar may be oscillated through a relatively small arc the weight rod 22 acting as a pendulum to bring the rod back to the normal position of Fig. 3. If, however, the cross bar is struck so as to swing it beyond this predetermined arc, then, as shown in Fig. 4, the edge 27 will contact with the curved top of the rod 15 and further turning of the rod will cause the projection 26 to lift out of the recess 19 and the curved top of the rod 15 will then permit the bar to drop, the lifting of the projection 26 out of the recess 19 insuring that the bar will surely fall, this certainty being increased by the curved top 15 with which the edge 27 cooperates.

In order to prevent the rod being flung violently to a considerable distance from the supports 15, I may provide a string or cable

28 looped around the center of the bar and having loops over the supports 14. Such a cable will not interfere with the operation of the cross bar, but will serve to hold it if it is struck with a considerable blow. The cross bar may also be provided with detachable socket handles 29 in order to give the required length for the top rod.

It is desirable that the hurdle be arranged so that it may be conveniently packed up for carrying from one place to another, and to that end, I have arranged the base portion so that it will also serve as a kind of box for the different portions. The base 10 is provided with a recess 30 large enough to hold the standards when the rod 15 is pushed into the tube 14. If desired, additional space may be provided for other parts as well, such as the removable ends 29. The foot pieces, which are turned to the position shown in Fig. 6 when the hurdle is in use, are arranged to be swung to the position shown in Fig. 7 so that they form a lid over the recess 30. Stops 31 are provided on the base 10 to limit the swinging motion of the feet 11 and 12. Preferably I form recesses in the foot pieces 11 and 12 so that the cross bar may be slipped longitudinally through the foot pieces, as shown in Fig. 7, these recesses being covered by blocks 32 which form a slideway for the cross bar. When the cross bar is in position, it will extend from one foot piece to the other and will lock them against rotation. When the parts are in the position shown in Fig. 7 but with the cross bar pushed fully into place within the foot pieces, the entire structure is snugly packed and locked together, so that it may be readily carried. It will be understood that the recesses in the foot pieces are made just wide enough for the cross bar, so that the cross bar will be held in the recess frictionally.

It will be understood that the arrangement which I have described is merely illustrative and that its construction may be varied within wide limits.

I claim:

1. In a device of the class described, a pair of standards and a cross bar having a support at either end above the center of gravity of the bar, said supports resting on the tops of said standards and being held thereon by gravity only, the tops of said standards being curved and said supports having surfaces engaging with said curved tops and adapted to permit free oscillation of the cross bar through a predetermined arc and to cause the bar to fall when the predetermined arc is exceeded.

2. In a device of the class described, a pair of standards and a cross bar having a support at either end to engage the tops of the standards to support the cross bar with its center of gravity below the standard

tops, each of said standard tops being curved and having a recess therein and each support having a projection adapted to enter the recess, said standard tops and said supports being constructed and arranged to permit free oscillation of the cross bar through a predetermined arc and to lift the projections from the recesses when such arc is exceeded, to cause the bar to fall.

3. In a device of the class described, a pair of standards and a cross bar having a support at either end to engage the tops of the standards to support the cross bar with its center of gravity below the standard tops, each of said standard tops having a recess therein and its surface curved away and downward from the edges of the recess and each support having a central projection adapted to enter the recess and support the weight of the bar on the bottom of the recess, and an edge portion out of contact with the standard top when the bar is hanging vertically and adapted to engage the top when the bar is swung through a predetermined arc.

4. In a device of the class described, a pair of standards and a cross bar having a support at either end to engage the tops of the standards to support the cross bar with its center of gravity below the standard tops, said bar comprising a support rod, a top rod and a weight rod spaced apart and connected together with the weight rod below the standard tops, said support rod being held by gravity only on the tops of said standards.

5. In a device of the class described, a pair of standards and a cross bar having a support at either end above the center of gravity of the bar, said supports resting on the tops of said standards and being held thereon by gravity only and a flexible cord connecting the standards and the cross bar and having sufficient slack between the points of connection to the bar and the standards when the bar is in normal position to permit the bar to oscillate on its supports.

6. In a device of the class described, a base, a pair of standards detachably mounted on the base and a bar detachably supported on the standards, said base having foot pieces pivotally connected at either end thereof and a recess large enough to receive the standards when the standards are detached from the base, said foot pieces being arranged to be moved over the recess to form a lid therefor.

7. In a device of the class described, a base, a pair of standards detachably mounted on the base and a bar detachably supported on the standards, said base having foot pieces pivotally connected at either end thereof and a recess large enough to

receive the standards when the standards are detached from the base, said foot pieces being arranged to be moved over the recess to form a lid therefor, and said foot pieces being provided with recesses to receive the cross bar, whereby the foot pieces are locked against turning when the cross bar is inserted in said recesses.

8. In a device of the class described, a pair of standards and a cross bar having a support at either end resting pivotally on said standards with its center of gravity below these supports, said cross bar having a top bar and a weight bar spaced apart

and connected together with the weight rod below the standard tops, said cross bar being free to be moved bodily horizontally relatively to said standards when resting thereon.

9. In a device of the class described, a pair of standards and a cross bar having a support at either end resting pivotally on said standards with its center of gravity below these supports, said cross bar being free to be moved bodily horizontally relatively to said standards when resting thereon.

EDWARD L. CAREY.