Sept. 16, 1958 G. D. DUNKLEE ET AL 2,852,258

DIVING BOARD

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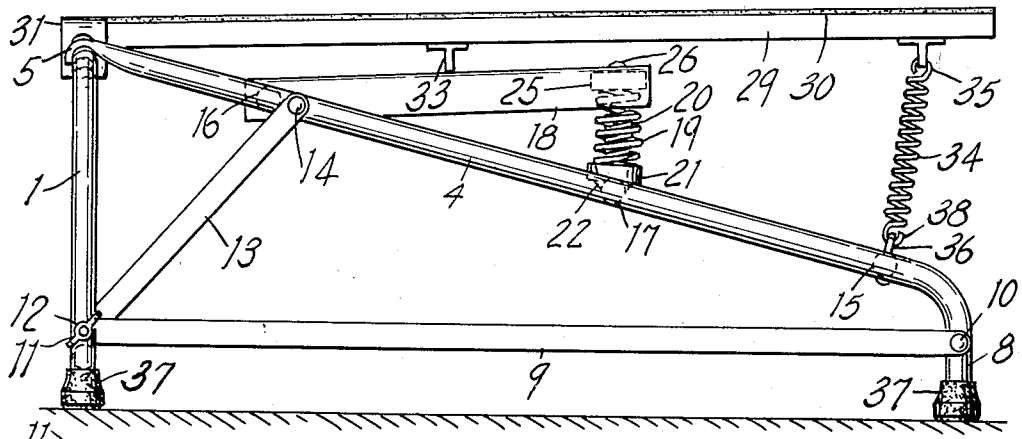


FIG. 1.

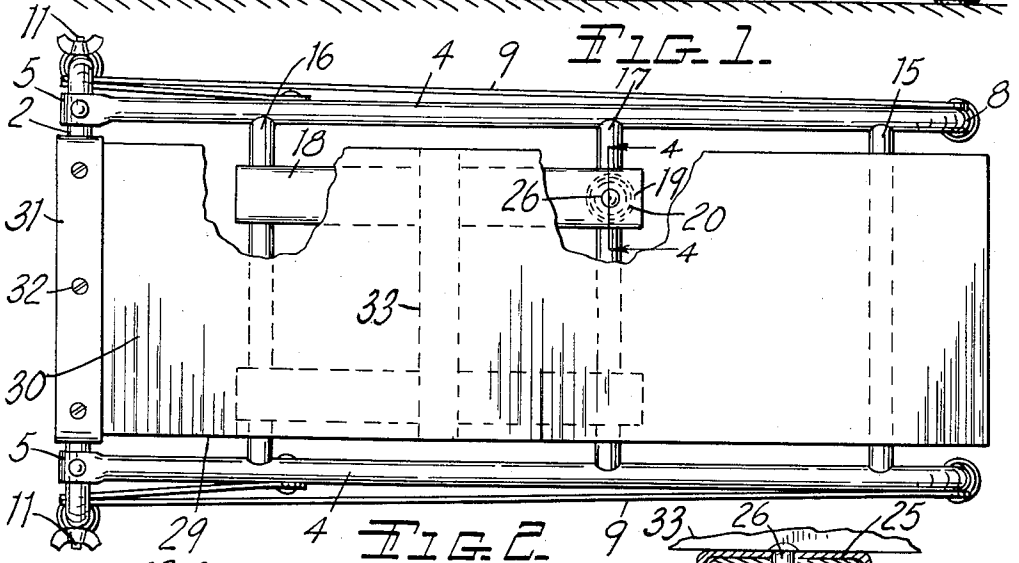


FIG. 2.

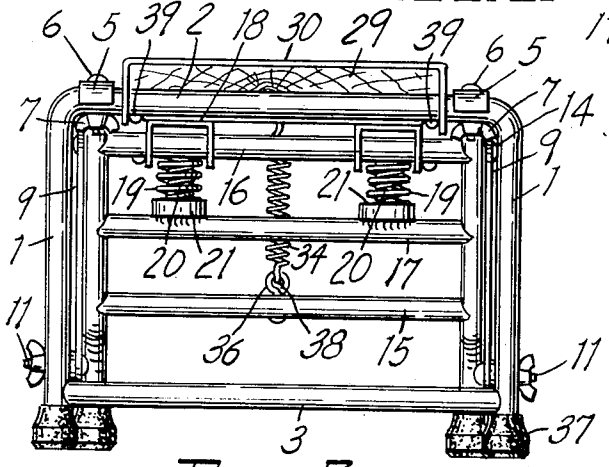


FIG. 3.

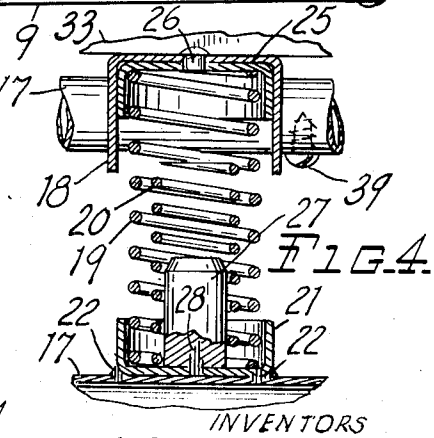


FIG. 4.

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DIVING BOARD

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This invention relates to a portable diving board.

The main objects of this invention are:

First, to provide a portable collapsible diving board which is very stable when erected and does not require anchoring to a dock or other supporting surface.

Second, to provide a collapsible diving board which may be very compactly collapsed and at the same time quite quickly erected for use.

Third, to provide a portable diving board which is relaitvely light in weight and at the same time is strong and durable and stable when erected.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a side elevational view of a diving board embodying our invention, disposed upon a supporting surface conventionally illustrated.

Fig. 2 is a fragmentary plan view.

Fig. 3 is a rear elevational view.

Fig. 4 is a fragmentary view partially in vertical section on a line corresponding to line 4—4 of Fig. 2.

In the accompanying drawing we have illustrated our invention as embodied in a collapsible structure. It is desired, however, to point out that our invention is capable of embodimnet in a noncollapsible structure.

The embodiment of our invention illustrated comprises a rear leg unit including legs 1—1 connected at their upper ends by the top bar 2, the legs and top bar in the embodiment illustrated being formed of a piece of tubular stock. The legs are connected adjacent their lower ends by the cross bar 3.

The laterally spaced forwardly and downwardly inclined longitudinal bars 4 are flattened and curved at their rear ends 5 to rest upon the top piece 2 of the rear legs and are detachably secured thereto by the bolts 6 provided with winged nuts 7 to facilitate rapid assembly and disassembly. The bars 5 have downturned front leg portions 8 at their front ends, these being relatively short as compared to the rear legs 1.

The side bars 9 are pivotally connected to the outer sides of the legs 8 at 10 and are detachably secured to the rear legs 1 by means of the bolts 11 provided with winged nuts 12, the bars 9 being arranged on the inner sides of the rear legs.

The braces 13 are pivotally connected to the longitudinal bars 4 at 14 and detachably secured to the rear legs by the bolts 11, the braces being arranged on the inner sides of the side bars 9. Thus arranged, the rear legs and the longitudinal bars are connected to provide a rigid frame and, at the same time, one that can be readily knocked down.

The longitudinal bars are provided with laterally spaced front, rear and intermediate cross bars 15, 16 and 17, respectively.

Bed members 18 of downwardly facing channel section are disposed between the longitudinal bars 4 and pivotally mounted on the rear cross bar 16. These bed bars are springably supported by means of the main coil springs 19 and the supplemental coil springs 20, which are in the nature of pickup springs coacting with the main springs when the bed bars are depressed or forced downwardly to a predetermined degree.

The upwardly facing cupped holders 21 are fixedly mounted in laterally spaced relation on the intermediate cross bar 17, desirably by welding, as indicated at 22, see Fig. 4.

The downwardly facing cupped sockets 25 are disposed within the bed members 18 in opposed relation to the holders 21 to receive the upper ends of the springs. These spring sockets 25 are connected to the bed members by means of the studs 26. The auxiliary or pickup springs 20 are of less diameter and height than the main springs and are supported at their lower ends by the upwardly projecting studs 27 disposed centrally of the spring holders 21 and secured thereto by the welds 28.

The springboard 29, which is preferably provided with an antislip facing 30, is connected to the top piece 2 of the rear legs by means of the yoke 31 which embraces the rear end of the springboard, the arms being pivoted on the top piece 2. The springboard is fixedly secured to this yoke as by means of screws 32.

The springboard is provided with a cross piece 33 disposed in substantially spaced relation to the rear end of the springboard in supported engagement with the bed members 18. To hold the springboard in this supported engagement, we provide a tension spring 34 which is connected at 35 to the springboard adjacent its front end, its lower end being connected to the front cross bar 15 by means of the eye bolt 36. This rebound spring 34 is tensioned so as to hold the springboard thrust member 33 upon the bed members at all times; that is, while the diving board is being carried about and also when the springboard is released as the result of being relieved of the load of a person diving therefrom or the like.

The legs are desirably provided with elastic or other antiskid foot portions 37.

With this arrangement of parts, while the complete diving board is relatively light in weight and may be carried about in assembled or set up form, the parts are so arranged so that it is very stable and it is not necessary to anchor it to a deck or other surface.

The load upon the diving board is in general central relative to the rear and front legs. The diving board does not project substantially beyond the front legs.

The structure may be readily collapsed and set up and at the same time the parts are securely connected by a manipulation of four bolts; that is, the two bolts 6 and the two bolts 11.

The springs are effectively retained when the structure is set up, but may be removed for compactness in packaging.

The rebound spring is provided with a hook 38 at its lower end which may be disengaged from the eye bolt 36.

The springboard yoke 31 is disposed between the longitudinal bars 4, and its lateral movement is limited by the stops 39, see Fig. 4.

We have illustrated and described our invention in a highly practical embodiment thereof. We have not attempted to illustrate other embodiments or adaptations as it is believed that this disclosure will enable those skilled in the art to embody or adapt our invention as may be desired.

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

1. A collapsible diving board comprising a rear leg unit including a pair of rear legs, a top bar integrally connected to the upper ends of the legs, and a cross bar disposed adjacent the lower ends of the legs, laterally

spaced forwardly and downwardly inclined longitudinal bars having their rear ends disposed upon and detachably secured to said top bar of said rear leg unit, front legs at the front ends of said longitudinal bars integral therewith, laterally spaced front, rear and intermediate cross bars connecting said longitudinal bars, side bars disposed with their front ends on the outer sides of and pivotally connected to said front legs with their rear ends disposed at the inner sides of and detachably secured to the rear legs adjacent their lower ends, braces pivotally connected to the outer sides of said longitudinal bars and detachably secured to the inner sides of said rear legs adjacent the lower ends thereof, laterally spaced bed bars of downwardly facing channel section disposed with their rear ends between said longitudinal bars and pivotally mounted on said rear cross bar thereof, upwardly facing cupped spring holders mounted in laterally spaced relation on said intermediate cross bar, coil springs disposed in said holders, downwardly facing cupped spring sockets mounted in said bed bars in opposed relation to said upwardly facing spring holders, a springboard swingably mounted upon said top bar of said rear leg unit between said longitudinal bars, said springboard having a downwardly facing cross piece resting upon said bed members, and a rebound spring connected to said front cross bar and to the underside of said springboard adjacent the front end thereof.

2. A collapsible diving board comprising a rear leg unit including a pair of rear legs, a top bar integrally connected to the upper ends of the legs, and a cross bar disposed adjacent the lower ends of the legs, laterally spaced forwardly and downwardly inclined longitudinal bars having their rear ends disposed upon and detachably secured to said top bar of said rear leg unit, front legs at the front ends of said longitudinal bars integral therewith, laterally spaced front, rear and intermediate cross bars connecting said longitudinal bars, laterally spaced bed bars of downwardly facing channel section disposed with their rear ends between said longitudinal bars and pivotally mounted on said rear cross bar thereof, upwardly facing cupped spring holders mounted in laterally spaced relation on said intermediate cross bar, coil springs disposed in said holders, downwardly facing cupped spring sockets mounted in said bed bars in opposed relation to said upwardly facing spring holders, a springboard swingably mounted upon said top bar of said rear leg unit between said longitudinal bars, said springboard having a downwardly facing cross piece resting upon said bed members, and a rebound spring connected to said front cross bar and to the underside of said springboard adjacent the front end thereof.

3. A collapsible diving board comprising a rear leg unit including a pair of rear legs, and a top bar connected to the upper ends of the legs, laterally spaced forwardly and downwardly inclined longitudinal bars having their rear ends detachably secured to said top bar of said rear leg unit, front legs at the front ends of said longitudinal bars therewith, laterally spaced front, rear and intermediate cross bars connecting said longitudinal bars, laterally spaced bed bars pivotally mounted on said rear cross bar, upwardly facing cupped spring holders mounted in laterally spaced relation on said intermediate cross bar and having centrally disposed upwardly projecting studs, downwardly facing cupped spring sockets mounted on said bed bars in opposed relation to said upwardly facing spring holders, main coil springs disposed in said holders with their upper ends engaged in said sockets, auxiliary coil springs of smaller diameter and of less length than said main coil springs disposed on said holder studs to project upwardly therefrom with their upper ends normally spaced from said spring sockets, a springboard swingably mounted upon said top bar of said rear leg unit, said springboard having a downwardly facing cross piece resting upon said bed members, and a rebound spring connected to said front cross bar and to the underside of said springboard.

4. A diving board comprising rear legs connected by a cross piece, laterally spaced forwardly and downwardly inclined longitudinal bars supported at their rear ends by said cross piece of said legs, front legs at the front ends of said longitudinal bars, laterally spaced front, rear and intermediate cross bars connecting said longitudinal bars, laterally spaced bed bars pivotally mounted on said rear cross bar thereof, upwardly facing spring holders mounted in laterally spaced relation on said intermediate cross bar and having centrally disposed upwardly projecting studs, downwardly facing spring thrust members mounted on said bed bars in opposed relation to said upwardly facing spring holders, main coil springs disposed in said holders with their upper ends in supporting engagement with said thrust members, auxiliary coil springs of smaller diameter and of less length than said main coil springs disposed on said holder studs to project upwardly therefrom with their upper ends normally spaced from said spring sockets, a springboard swingably mounted upon said rear leg cross piece in supported relation to said bed members, and a rebound spring connected to said front cross piece and to the underside of said springboard adjacent the front end thereof.

5. A diving board comprising laterally spaced rear legs, a rear cross-piece connecting the upper ends of said legs, laterally spaced forwardly and downwardly inclined lonigtudinal bars supportedly connected at their rear ends to said rear legs and terminating at their forward ends in downwardly projecting relatively short front legs, side brace bars extending between and connected to said front and rear legs adjacent the lower ends thereof, laterally spaced rear and front springboard supporting bars mounted on and connecting said longitudinal bars intermediate the ends thereof, laterally spaced bed bars of downwardly facing channel section pivotally mounted on the rear springboard supporting bar, laterally spaced upwardly facing cupped spring holders mounted on the said front springboard supporting bar, downwardly facing cupped spring holders mounted on said bed bars in opposed relation to said spring holders on said front springboard supporting bar, coiled main springboard supporting springs disposed in said holders, supplemental springs of less diameter and length than said main springs disposed within the main springs in supported relation to the spring holders on said bar, a springboard pivotally mounted on said rear cross-piece and having a downwardly projecting support seated upon said bed members in forwardly spaced relation to the rear ends thereof, and a rebound spring acting to urge the springboard upon said bed members and the bed members upon said main supporting springs.

6. A diving board comprising laterally spaced rear legs, a rear cross-piece connecting the upper ends of said legs, laterally spaced forwardly and downwardly inclined longitudinal bars supportedly connected at their rear ends to said rear legs and terminating at their forward ends in downwardly projecting relatively short front legs, side brace bars extending between and connected to said front and rear legs adjacent the lower ends thereof, laterally spaced rear and front springboard supporting bars mounted on and connecting said longitudinal bars intermediate the ends thereof, laterally spaced bed bars pivotally mounted on the rear springboard supporting bar, laterally spaced spring holders mounted on the said front springboard supporting bar, spring holders mounted on said bed bars in opposed relation to said spring holders on said front springboard supporting bar, coiled springboard supporting springs disposed in said holders, a springboard pivotally mounted on said rear cross-piece and having a downwardly projecting support seated upon said bed members in forwardly spaced relation to the rear ends thereof, and a rebound spring acting to urge the springboard upon said bed members and the bed members upon said supporting springs.

7. A diving board comprising laterally spaced rear legs, a rear cross-piece connecting the upper ends of said legs, laterally spaced forwardly and downwardly inclined longitudinal bars supportedly connected at their rear ends to said rear legs and terminating at their forward ends in downwardly projecting relatively short front legs, side brace bars extending between and connected to said front and rear legs adjacent the lower ends thereof, laterally spaced rear and front springboard supporting bars mounted on and connecting said longitudinal bars intermediate the ends thereof, laterally spaced bed bars pivotally mounted on the rear springboard supporting bar, laterally spaced spring holders mounted on the said front springboard supporting bar, spring holders mounted on said bed bars in opposed relation to said spring holders on said front springboard supporting bar, coiled springboard supporting springs disposed in said holders, a springboard pivotally mounted on said rear cross-piece and having a downwardly projecting support seated upon said bed members in forwardly spaced relation to the rear ends thereof.

8. A portable diving board comprising laterally spaced rear legs, a rear cross-piece connecting the upper ends of said legs, laterally spaced forwardly and downwardly inclined longitudinal bars supportedly connected at their upper ends to the rear legs and provided with relatively short legs at their front ends, side brace bars extending between and connected to said front and rear legs adjacent the lower ends thereof, laterally spaced rear and front springboard supporting bars disposed crosswise of said longitudinal bars, laterally spaced bed bars pivotally mounted on the rear springboard supporting bar in overhanging relation to the front springboard supporting bar, coil springboard supporting springs mounted on said front springboard supporting bar in supporting engagement with the swinging ends of said springboard supporting bars, a springboard of a length approximating that of said longitudinal bars pivotally mounted on said rear cross-piece and supportedly engaged with said bed members in forwardly spaced relation to the pivotally supported rear ends thereof, and a rebound spring connected to said springboard and to said longitudinal bars and acting to urge the springboard upon said bed members and said bed members upon said supporting springs.

9. A portable diving board comprising laterally spaced rear legs, a rear cross-piece connecting the upper ends of said legs, laterally spaced forwardly and downwardly ininclined longitudinal bars supportedly connected at their upper ends to the rear legs and provided with relatively short legs at their front ends, side brace bars extending between and connected to said front and rear legs adjacent the lower ends thereof, laterally spaced rear and front springboard supporting bars disposed crosswise of said longitudinal bars, laterally spaced bed bars pivotally mounted on the rear springboard supporting bar in overhanging relation to the front springboard supporting bar, coil springboard supporting springs mounted on said front springboard supporting bar in supporting engagement with the swinging ends of said springboard supporting bars, a springboard of a length approximating that of said longitudinal bars pivotally mounted on said rear cross-piece and supportedly engaged with said bed members in forwardly spaced relation to the pivotally supported rear ends thereof.

10. A portable diving board comprising a supporting frame including laterally spaced forwardly and downwardly inclined longitudinal bars, laterally spaced rear and front springboard supporting bars mounted on and connecting said longitudinal bars intermediate the ends thereof, laterally spaced bed bars pivotally mounted on the rear springboard supporting bar, laterally spaced upwardly facing cupped spring holders mounted on said front springboard supporting bar, downwardly facing cupped spring holders mounted on said bed bars in opposed relation to said spring holders on said front supporting bar, coiled main springboard supporting springs disposed in said holders, supplemental springs of less diameter and length than said main springs disposed within the main springs in supported relation to the spring holders on said bar, a springboard of a length approximating that of the frame swingably mounted on the frame at the rear end thereof and supportedly engaged with said bed members in forwardly spaced relation to the pivoted ends thereof, and a rebound spring connected to the springboard and to said frame.

11. A portable diving board comprising a supporting frame including laterally spaced forwardly and downwardly inclined longitudinal bars, laterally spaced rear and front springboard supporting bars mounted on and connecting said longitudinal bars intermediate the ends thereof, laterally spaced bed bars pivotally mounted on the rear springboard supporting bar, laterally spaced spring holders mounted on said front springboard supporting bar, coiled springboard supporting springs disposed in said holders, and a springboard of a length approximating that of the frame swingably mounted on the frame at the rear end thereof and supportedly engaged with said bed members in forwardly spaced relation to the pivoted ends thereof.

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