ADJUSTABLE JUMP BAR STAND

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ABSTRACT

An adjustable jump bar stand for skaters, skateboarders and the like includes an elongated post, a base for receiving a lower end segment of the post so that the post is supported vertically and an elongated jump bar having an end swivellably and adjustably connected to the post so that the jump bar extends out horizontally from the post at a variable elevation thereon and can swivel about the post. The jump bar provides an obstacle over which skaters can jump while being forgiving enough to avoid injury to the skaters.
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RELATED APPLICATION

[0001] This application claims the benefit of Provisional Application No. 60/368,572, filed Apr. 1, 2002.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] This invention relates to apparatus for use by skateboarders, in-line skaters and bikers. It relates more particularly to an adjustable jump bar over which those individuals may jump.

[0004] 2. Background Information

[0005] Skateboarders, skaters and the like utilize various obstacles in order to test their aerial prowess. These obstacles include ramps, quarter pipes, grind rails and similar apparatus. However to applicants' knowledge these obstacles have not included a standalone adjustable jump bar for enabling such individuals to test their height and distance jumping abilities. It would be desirable, therefore, to be able to provide another type of obstacle to test the aerial skills of skateboarders, skaters and bikers.

SUMMARY OF THE INVENTION

[0006] Accordingly it is an object of the invention to provide a stand alone jump bar over which a skateboarder, skater and biker may jump to test his/her athletic prowess.

[0007] Another object of the invention is to provide such a jump bar which is adjustable as to height.

[0008] A further object of the invention is to provide a jump bar of this type which is safe to use.

[0009] An additional object of the invention is to provide a jump bar stand which may be packaged and sold in a knock-down condition and assembled easily by the purchaser.

[0010] Another object of the invention is to provide a height-adjustable jump bar stand which may be used at the same time by a plurality of skateboarders or the like.

[0011] Still another object of the invention is to provide a jump bar stand which is relatively easy and inexpensive to make in quantity.

[0012] Other objects will, in part, be obvious and will, in part, appear hereinafter.

[0013] The invention accordingly comprises the features of construction, combination of elements and arrangement of parts which will be exemplified in the following detailed description, and the scope of the invention will be indicated in the claims.

[0014] Briefly, our jump bar stand comprises an upstanding post or pole supported by a stable base which may rest on the ground or other flat surface. A bar or arm extends out laterally from the post to form a barrier over which an airborne skateboarder, skater or the like may jump to test his/her aerial skill. The person using the stand may leap into the air from the ground or, more preferably, be launched into the air by a ramp placed in front of the jump bar. Preferably, the bar is adjustably connected at one end to the post so that the bar may be set at various elevations above the surface supporting the base. Desirably also, the bar is swivelily connected to the post as a safety precaution so that in the event a skater fails to clear the bar while airborne, the bar will swing out of the way allowing the skater to follow his/her original trajectory, and return to the ground safely. In other words, the bar does not present an unforgiving obstacle to the user.

[0015] Further as we shall see, the components of the jump bar stand are simple parts which are easy to manufacture and to assemble. Therefore, with all of the above advantages, the stand should prove to be a popular product in the marketplace.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] For a fuller understanding of the nature and objects of the invention, reference should be made to the following detailed description taken in connection with the accompanying drawings, in which:

[0017] FIG. 1 is a perspective view of an adjustable jump bar stand according to the invention;

[0018] FIG. 2 is an exploded perspective view on a larger scale showing the elements of the FIG. 1 stand in greater detail;

[0019] FIG. 3A is a fragmentary elevational view with parts in section of a portion of the FIG. 1 stand;

[0020] FIG. 3B is a sectional view taken along line 3B-3B of FIG. 3A;

[0021] FIG. 4 is a view similar to FIG. 1 of another stand embodiment;

[0022] FIG. 5 is an exploded perspective view of the FIG. 4 stand, and

[0023] FIG. 6 is a fragmentary perspective view with parts broken away on a larger scale showing certain elements of the FIG. 4 stand in greater detail.

DETAILED DESCRIPTION OF ILLUSTRATIVE EMBODIMENTS

[0024] Referring to FIG. 1 of the drawings, a jump bar stand shown generally 10 may be used to test the aerial prowess of a skater S launched into the air from a ramp R positioned in front of the stand. The stand includes a relatively large area base 12 which may rest on the ground or other surface, an upstanding post 14 whose lower end segment is releasably connected to the base and a bar 16 which extends out horizontally from the post at a selected elevation above the base. In use, the stand 10 may be positioned at a selected distance beyond the ramp R. The skater S may take a run up the ramp and test his ability to pass over the bar 16 while airborne. As we shall see, the bar 16 is height-adjustable on post 14 and the stand 10 can be positioned at various distances from the ramp R to test the jumping ability of the skater S as to both height and distance.

[0025] Preferably, all of the components of stand 10 are molded of a suitable weather-resistant plastic material such as UV-stabilized high-density polyethylene and polypropylene.
Refer now to FIG. 2 which illustrates the components of stand 10 in greater detail. As seen there, the base 12 comprises a pair of more or less identical semi-circular sections 12a and 12b which combine to form a circular base having a diameter of about 14 inches. Each section, 12a, 12b has a downwardly dished upper wall 22, a generally flat lower wall 24 and a diametric vertical wall 26 extending between walls 22 and 24. Preferably the lower wall 24 is formed with a marginal downward flange 24a adapted to rest on the underlying support surface. Also, each section 12a, 12b may be rigidified by internal ribbing 27.

Each base section 12a, 12b also includes a vertical, semi-cylindrical pocket 28 adjacent to and midway along wall 26. The pocket has a bottom wall 28a and a side wall 28b with a flare 28c at its upper end adjacent to the top wall 22 of the base section. When sections 12a and 12b are brought together with their vertical walls 26 in abutment, the pockets 28 of the two sections form a cylindrical socket 29 of a flared mouth for readily receiving the lower end segment of post 14. Preferably, vertical ribs 32 are formed in the side walls 28b of pockets 28 to assure a tight sliding fit of the lower end segment of post 14 in base 12.

In order to releasably secure together the base sections 12a and 12b, a key 34 projects out from the wall 26 of each base section, that key being adapted to slidably engage in a keyway 36 in the other base section. In other words, each base section has a key 34 on one side of its pocket 28 and a keyway 36 on the other side of that pocket. When the two sections are juxtaposed so that the walls 26 of the two sections are opposite one another, the key 34 of each section is located directly opposite the keyway 36 of the other section. Thus when one section, say section 12b, is positioned on the ground, the other section 12a may be keyed to the former section by aligning the ends of the keys and keyways of the two sections and lowering section 12a until the keys and keyways of the two sections interfit like puzzle pieces.

Referring to FIGS. 2, 3A and 3B, post 14 is typically in the order of 30 inches long and may be visualized as being composed of a pair of elongated spaced-apart parallel rectangular plates 14a and 14b bisected by a third parallel rectangular plate 14c. The dimensions of the plates are such that their edges combine to define an imaginary cylinder C.

Also, the post includes a series of integral circular plates 14d spaced equally along the rectangular plates and at their ends to divide the post into a series of levels. Preferably, the diameter of the plates 14d is somewhat larger than that of the aforesaid imaginary cylinder C so as to define a series of circular keys or flanges 44 spaced apart along the post concentric to the aforesaid imaginary cylinder C. All of the plates combine to give post 14 a high degree of rigidity even though it is a molded plastic part of appreciable length. The keys or flanges 44 function as demarcations to facilitate setting the jump bar 16 at various elevations on the post as will be described.

If desired, markings such as the numerals N may be inscribed on one or more plates 14a-14c between keys 44 to mark various elevations above the underside of base 12 as shown in FIG. 3A.

When the lower end segment of post 14 is inserted into the socket in the assembled base 12, the vertical ribs 32 at the side walls of the socket tightly engage at least two circular flanges 44 of the post 14 so that the post is firmly supported by the base. However, to prevent possible injury to a skater, if the post 14 is struck laterally by a skater, the post 14 may wedge apart the base sections 12a and 12b with sufficient force to pull the keys 34 of the base sections out of their keyholes 36 allowing the post 14 to separate from base 12. Also as we shall see the bar 16 may separate from the post. Alternatively, the stand may simply tip over out of the way of the skater. In any event, the changes of injury to the skater are minimized.

Referring now to FIGS. 2 and 3, the bar 16 is simply a lightweight shell 52 which may be on the order of 30 inches long and tapered as shown. The shell has a top wall 52a and a pair of opposite side walls 52b, 52b. To rigidify the shell, internal longitudinal and/or lateral ribbing 52c may extend between those walls.

Formed integrally at the larger end of shell 52 is a clip 54 composed of a pair of spaced-apart, mirror image, resilient clip arms 54a, 54a. These arms are shaped and spaced apart so as to enable them to resiliently engage around post 14. Preferably, the opposing surfaces of arms 54a are provided with smooth bearing surfaces 56 adapted to slide easily on the edges of the plates 14a to 14d comprising post 14.

As best seen in FIGS. 3A and 3B, the bearing surfaces 56 are formed with arcuate keyholes or grooves 58 midway along their heights. These grooves are shaped to receive the post flanges 44 in order to releasably set the elevation of the jump 16 bar on the post 14.

Bar 16 may be engaged to post 14 by positioning clip 54 over the upper end of the post and pushing down on the clip so that the clip arms spread apart and grip the edges of the post flanges 44. The height of the clip 54 is such that when the clip is engaged around the post, the clip grips appreciable lengths of the post plates 14a to 14c and at least one plate 14d whose flange is received in the clip grooves 58. This assures that the bar 16 is firmly supported by the post and extends out at right angles to the post as a cantilever.

When the bar is secured to the post, the bearing surfaces 56 of the clip arms are slideable on the post plate edges enabling bar 16 to swivel easily about the post. Also with the application of small vertical force on clip 54, the jump bar may be moved along the post over the flanges in opposition to the spring bias of the clip arms until the clip reaches the desired height whereupon the post flange 44 at that height snaps into the clip grooves 58. Thus when the jump stand is assembled as shown in FIG. 1, the height of the bar 16 may be set to suit the desires of the particular skater S, that set height being reflected by the numeral N just above clip 54. Furthermore if, when attempting a jump, the skater should fail to clear bar 16, the bar is free to swivel on post 14 when contacted by the skater so that the bar does not interfere with the forward motion of the skater. Also, if the skater strikes the bar from above, the bar's resilient clip 54a will release from the post 14.

When not in use, the jump stand 10 may be disassembled quite easily by sliding bar 16 from post 14, removing post 14 from stand 12 and separating the base sections 12a and 12b so that the components of the jump stand 10 can be stored conveniently in a minimum amount of space.
[0039] Refer now to FIGS. 4 and 5 which illustrate a second jump stand embodiment 68 which may be used by a plurality of skaters, skateboarders and the like at the same time. Like the stand 10 shown in FIG. 1, the stand 68 includes a base 70 and a post 72 supported vertically by the base. However unlike stand 10, the stand 68 includes two jump bars 74, 74' adaptively supported on post 72. The bars 74 may be oriented at different angles relative to the post and be positioned at different elevations on the post. This enables two skaters or the like to approach the jump stand from the same or different angles and jump over the two bars 72, preferably one at a time.

[0040] As shown in FIGS. 4 and 5, base 70 is made in one piece, preferably of the same material as stand 12. The illustrated base is circular, but it, like base 12, could have other shapes. Base 70 is formed with a centrally located vertical socket 76 for slidably receiving the lower end segment of post 72. The illustrated socket 76 is in the form of a clover leaf with the side walls of the socket forming three lands 76a which have more or less the same curvature as post 72. Thus when the post is inserted into the socket, the lands 76a resiliently engage the post thereby firmly supporting the post in an upright position. Yet when the post is impacted from the side, it will readily release from the base.

[0041] If desired, the upper surface of base 70 may be formed with a plurality of flats 78 to which decorative decals may be applied. The base may also be formed with the same internal rigidifying ribbing described above in connection with base 12.

[0042] Still referring to FIGS. 5 and 6, in this jump stand embodiment, the post 72 is a cylindrical metal, e.g. steel or aluminum, tube or pipe having an outer diameter in the order of 1 1/2 inches and a length in the order of 3-4 feet. The wall of post 72 is rolled to form a lengthwise series of circular grooves or keyways 82. Preferably these grooves are spaced apart a distance in the order of one inch and numerals N may be inscribed on the surface of the post between the grooves to indicate the height of a particular groove above the undersurface of the base 70. Also, the opposite ends of post 72 may be closed by end caps 84 plugged into the ends of the post.

[0043] As best seen in FIG. 5, each jump bar 74 may comprise a lightweight elongated I-beam molded of the same material as bar 16 and may be on the order of 3-4 feet in length. Formed integrally at one end of beam 86 is a clip 88. In this clip, however, the clip 88 is connected to the remainder of beam 86 by way of a shoulder or jog 92 so that the clip is offset vertically from the longitudinal axis of shell 86 for reasons that will become apparent.

[0044] Referring to FIGS. 5 and 6, clip 88 includes a pair of mirror image, resilient clip arms 88a, 88b which are spaced apart a distance that enables them to resiliently engage around post 72. The opposing surfaces of the clip arms have bearing surfaces 94 which are arranged to slidably engage the surface of post 72 when clip 88 is slid onto the upper end of the post. Also, the bearing surfaces 94 are each provided with a horizontal arcuate rib or key 96 which is arranged to engage in the grooves 82 of post 72 as clip 88 is slid down along post 72. In other words, the spacing of the clip arms 88a, 88b is such that when the keys 96 of the clip are positioned opposite a keyway 82 of the post, the keys snap into the keyway thereby releasably fixing the vertical position of the associated jump bar 74 on the post.

[0045] As best seen in FIG. 6, the height of each clip 88 corresponds more or less to two groove spaces 82 e.g. about 2 inches. As noted above, the clip of each bar 74 is offset from the remainder of that bar by the shoulder or jog 92. In accordance with the invention, this offset corresponds to the spacing of the keyways 82 on post 72, i.e., about one inch. This offset allows both jump bars 74 to be positioned so that their tops are at the same elevation on post 72. More particularly as shown in FIG. 4, the left-hand jump bar 74 is positioned at a slightly higher elevation than the right-hand jump bar because its clip 88 is set at the next higher available keyway 82. However, if the left-hand jump bar should be inverted prior to being clipped to the post, its upper wall will have the same elevation as that of the right-hand jump bar 74 due to the offsetting jogs 92 on the two bars. Thus, the height of each bar 74 may be positioned at every one inch demarcation along the post 72 even though its clip 88 is two inches high.

[0046] When the jump stand 68 is in use, it may be desirable to give the skater or skateboarder the ability to mark the distance jumped. Accordingly, the jump stand may include a marker shown generally at 100. The illustrated marker is simply a molded plastic plate 102 whose underside is formed with a vertical pocket 104 sized to receive the upper end of post 72. When a skater clears a jump bar 74, the point beyond the bar where the skater contacts the ground or other surface can be designated by placing the marker 100 at that location to function as a target for the next jumper to exceed. When not in use, the marker 100 may be engaged to the top of post 72 (or post 14) as shown in phantom in FIG. 4 so that it does not become lost.

[0047] The jump bar stand 68 depicted in FIG. 4 has all of the advantages of the one shown in FIG. 1 in that each jump bar 74 is height adjustable on post 72. Also, each bar is free to swivel relative to the post in the event that it is contacted by a jumper. Therefore, the bars are quite unlikely to impede the forward motion of the jumper and thereby cause injury to the jumper. Also, of course, if the skater should contact post 72 while in the air, the bars 74 will be unclipped from the post and the post will disengage from the base or the entire stand will tip over out of the way of the skater.

[0048] It will thus be seen that the objects set forth above are among those made apparent from the preceding description are efficiently attained and, since certain changes may be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

[0049] It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention described herein:

What is claimed is:
1. A jump bar stand for skaters, skateboarders and the like, said stand comprising:
   an elongated post having an end segment;
   a base connected to the end segment of the post above the base so as to support the post vertically, and
   an elongated jump bar having an end swivelly connected to the post so that the jump bar extends out perpendicular to the post at a variable angle thereabout.
2. The stand defined in claim 1 wherein the base comprises a molded plastic member having a centrally located, vertical socket for snugly receiving said end segment of the post.

3. The stand defined in claim 2 wherein the socket has a cylindrical wall.

4. The stand defined in claim 2 wherein the socket has a clover leaf-shaped wall with a plurality of lands resiliently engaging the end segment of the post received in said socket so that upon side impact the post will be released readily from the base.

5. The stand defined in claim 1 and further including means for adjustably setting the elevation of the jump bar on the post.

6. The stand defined in claim 1 wherein said post has a circular cross-section, and said end of the jump bar includes a clip having spaced-apart, opposing, resilient clip arms which clip to the post so as to allow the jump bar to slide along and pivot on the post.

7. The stand defined in claim 6 and further including interfitting surfaces on the clip and post for adjustably setting the elevation of the jump bar on the post.

8. The stand defined in claim 7 wherein the interfitting surfaces include:

   a series of keyways spaced along the post, and

   at least one key on the clip which engages in the keyways when the clip is positioned at selected elevations on the post.

9. The stand defined in claim 7 wherein the interfitting surfaces include:

   a series of keys spaced along the post, and

   at least one keyway on the clip which receives the keys when the clip is positioned at selected elevations on the post.

10. The stand defined in claim 1 wherein the base, the post and the jump bar are all of a weather-resistant plastic material.

11. The stand defined in claim 10 wherein the base, post and jump bar are all of UV-stabilized high density polyethylene and/or polypropylene.

12. The stand defined in claim 1 wherein the base and jump bar are of a weather-resistant plastic material and the post is a cylindrical metal tube or pipe.

13. The stand defined in claim 1 and further including a second elongated jump bar having an end swivelly connected to the post, said second jump bar extending out horizontally from the post and being oriented on the post at a different angle from the first-mentioned jump bar.

14. The stand defined in claim 1 wherein the base is composed of two substantially identical sections with interfitting surfaces enabling the two sections to be keyed together about the end segment of the post.

15. A jump bar stand for skaters, skateboarders and the like, said stand comprising:

   a stable base;

   an elongated post extending up from the base, said post having height demarcations at spaced-apart locations along its length;

   an elongated rigid arm having an end formed as a clip which resiliently grips the post so that the arm can slide along and about the post and be positioned on the post at any one of said demarcations said arm also being separable from the post when impacted from above.

16. The stand defined in claim 15 wherein said clip includes a portion which interfits with said any one of the demarcations to releasably set the arm at that height on the post.

17. The stand defined in claim 16 wherein the demarcations are circular, and the clip portion includes a rib for releasably engaging in said grooves.

18. The stand defined in claim 16 wherein the demarcations are circular flanges on the post, and the clip portion includes a groove shaped to releasably receive said flanges.

19. The stand defined in claim 15 wherein the arm includes a jog adjacent to the clip which offsets the clip from the remainder of the arm in a direction along the post a distance substantially equal to the spacing of said demarcations.

20. The stand defined in claim 19 and further including a second similar arm whose clip grips the post such that the clip is offset in the opposite direction from the clip of the first-mentioned arm.

21. The stand defined in claim 15 wherein the base is composed of two substantially identical sections with interfitting surfaces enabling the two sections to be keyed together about the end segment of the post.

22. The stand defined in claim 15 wherein the post comprises a cylindrical tube or pipe, and said demarcations are circular grooves spaced along the tube or pipe.

23. The stand defined in claim 15 wherein the post comprises a unitary molded plastic part composed of elongated intersecting plate-like portions having edges which define an imaginary cylinder, and said demarcations are circular flanges which extend out from said edges at spaced-apart locations along said plate-like portions, said flanges being concentric to said imaginary cylinder.

24. The stand defined in claim 15 wherein said base has a centrally located vertical socket, and said post has a lower end segment sized to plug into said socket.

25. The stand defined in claim 15 wherein the post has a lower end segment slidably received in a socket in the base, and the socket has a clover leaf-shaped wall with a plurality of lands resiliently engaging said lower end segment of the post so that the post is supported upright by the base yet, upon side impact, will be released readily from the base.

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