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D. P. GRUDOSKI

3,145,024

GLIDER-TYPE PLAYGROUND SWING

Filed Aug. 8, 1961

FIG. 1

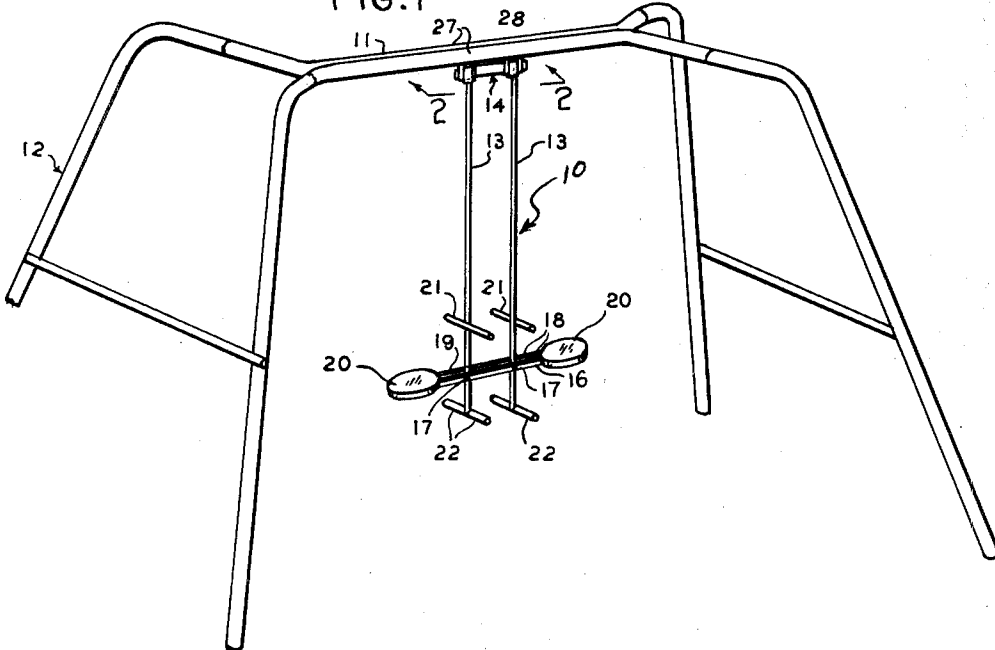


FIG. 2

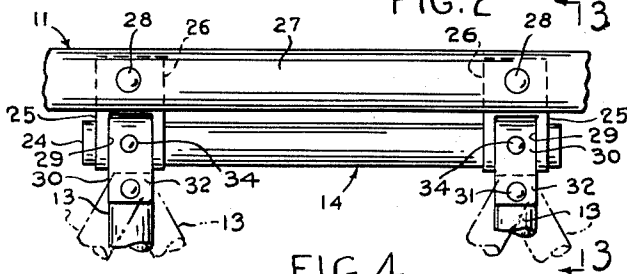


FIG. 3

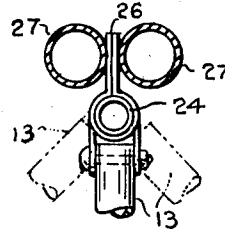


FIG. 4

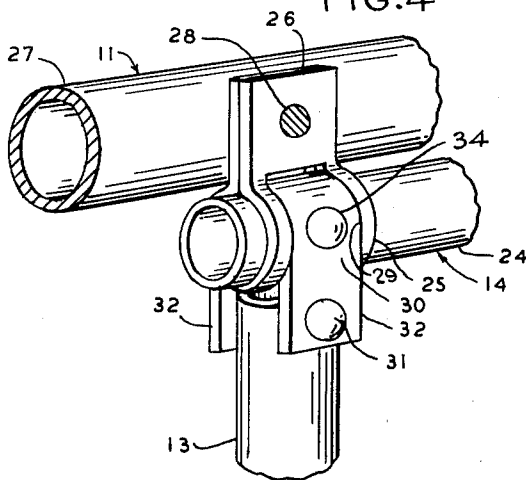
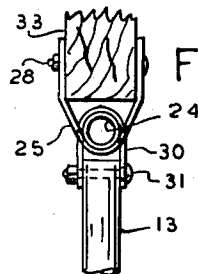


FIG. 5



INVENTOR.
Daniel P. Grudoski
BY William Cleland
Attorney

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3,145,024

GLIDER-TYPE PLAYGROUND SWING

Daniel P. Grudski, Hartstown, Pa., assignor to Blazon, Inc., Cuyahoga Falls, Ohio, a corporation of Ohio
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This invention relates to playground equipment, and in particular relates to glider type play swings.

In the past, children's glider type swings have been provided wherein transversely spaced drop-arms were suspended from a horizontal supporting structure to swing in parallelism, as maintained by a cross-bar pivoted to the drop-arms intermediate the upper and lower ends thereof. The swinging or gliding action was controlled from seats affixed on opposite end extensions of the cross-bar, as by riders on the seats applying requisite pressure to hand grips and foot rests provided on the drop-arms above and below the cross-bar pivots. The swinging action of such swings, however, was limited to movement within a single vertical plane through the top pivots of the drop-arms.

An object of the present invention is to provide a novel glider-type swing, including improved suspension means for the drop-arms by which the swing is selectively manually controllable by one or more riders to swing the same in an infinite number of angularly disposed planes or in arcuate paths defining a variety of curvate configurations, or in more intricate combinations of planar and arcuate paths.

Other objects of the invention will be manifest from the following brief description and the accompanying drawings.

Of the accompanying drawings:

FIGURE 1 is a perspective view of playground apparatus embodying the improved glider swing of the invention.

FIGURE 2 is an enlarged fragmentary view of the upper portions of the swing substantially as viewed on the line 2-2 of FIGURE 1.

FIGURE 3 is a further enlarged cross-section taken substantially on the line 3-3 of FIGURE 2.

FIGURE 4 is a still further enlarged perspective view, partly broken away and in section, illustrating the structure of FIGURES 2 and 3 in greater detail.

FIGURE 5 is a cross-section corresponding to FIGURE 3, illustrating a modified form of the invention.

Referring to FIGURES 1 to 4 of the drawing, the numeral 10 designates a glider-type swing embodying the features of the invention, the same being supported on a top bar 11 of a rigid supporting frame 12.

Swing 10 includes transversely spaced drop-arms 13, 13 of tubular metal, swivelly supported on the top bar 11, as by means of an attaching member or bracket 14. The drop-arms are maintained to swing in parallelism, in a manner to be described later, as by means of a cross-bar 16 pivoted to the drop-arms at points 17 intermediate the upper and lower ends of the same. The cross-bar 16 may be formed of a pair of angle bars 18, 18 embracing opposite sides of the drop-arms, and having opposite end extensions 19, 19 outwardly of the respective pivots on which seats 20, 20 are affixed. As best shown in FIGURE 1, the drop-arms may have affixed thereon laterally oppositely extending hand grips 21, 21 and foot rests 22, 22, respectively above and below the pivots 17.

The attaching member 14 may include an elongated metal tube 24, journaled in spaced bearing members 25, 25 having upward extensions 26, 26 bolted between a pair of tubular portions 27, 27, constituting the top bar 11, as by means of bolts 28, 28. The bearings 25 may have cut-out portions 29 within which a U-shaped metal

strap 30 is received to be affixed to the tube 24 to rotate with the same. The upper ends of the drop-arms 13 are pivoted at 31 between transversely spaced downward extensions 32, 32 of the strap portions 30. As shown in full and chain-dotted lines in FIGURE 2, this arrangement is such that the drop-arms are swingable in opposite lateral directions about the two pivots 31, in parallelism within a plane of such swinging movement at right angles to the axes of pivots 31, and always including the axes of the drop-arms. The drop-arms are also swingable in opposite transverse directions with the tube 24, about a given horizontal axis of the same whereby said plane of swinging movement is infinitely variable as indicated in full and chain-dotted lines in FIGURE 3. Bolts 34a prevent axial movement of tube 24 in the bearings 25, and in addition prevent independent twisting movement of one drop-arm 13 with respect to the other on said tube.

In use of the improved swing shown in FIGURES 1 to 4, riders seated on the seats 20 may grip the hand portions 21 and rest their feet on the corresponding foot rests 22, so that by application of requisite pressures to the same, combined with appropriate shifting of the riders' body weights on the seats, they may swing the drop-arms varyingly about the axes of the pivots 31 (see FIGURE 2) and/or on the horizontal axis of the tube 24 (see FIGURE 3), while maintaining the drop-arms in parallelism within the variously positionable plane of swinging movement thereof about said axis of the tube. By this means, the riders may maneuver the swing through a wide range of swinging movements laterally and transversely of the support 12, such movements including an infinite number of angularly disposed, transversely extending planes, and/or arcuate paths of many configurations. As an example, it is possible to move the swing to define figure-eight, circles, ovals, and the like. In any event, there can be no substantial twisting movement of the drop-arms, as referred to above, because they are always maintained in parallelism within a single, though variously positioned, said plane of swinging movement thereof.

FIGURE 5 shows a modification of the invention which corresponds in all respects to FIGURE 3, except that it illustrates a method of adapting the swing for attachment to an overhead floor beam or rafter 33. Like parts are designated by like numerals previously referred to, unless otherwise noted.

Modifications of the invention may be resorted to without departing from the spirit thereof or the scope of the appended claims.

What is claimed is:

1. A playground or like swing for suspension on an overhead support, comprising: a pair of bearings having means for attaching the same to the overhead support to be laterally spaced in horizontal alignment thereon; an elongated rigid member having cylindrical portions journaled in said bearings to be relatively rotatable therein about a horizontal axis; said member having downward extensions affixed thereon and rotatable with the same; a pair of drop-arms pivotally connected at upper ends thereof to said downward extensions to depend therefrom and to swing in parallelism in a plane of swinging movement of the drop-arms about transverse axes angularly of a horizontal axis of said member; and a cross-bar pivotally connected to said drop-arms intermediate the ends thereof to maintain the drop-arms in substantial parallelism upon being swung on said horizontal and transverse axes; said cross-bar having opposite extensions laterally outwardly of the drop-arms; said plane of swinging movement of the drop-arms being variously positionable by transverse swinging movement thereof about said

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horizontal axis; said drop-arms having manually operable means thereon above and below the cross-bar, whereby riders on said opposite cross-bar extensions may by selective application of pressure to said manually operable means swing said drop-arms variously about said horizontal and transverse axes.

2. A playground or like swing for suspension from an overhead support, comprising: a pair of bearings having means for fixedly attaching the same to the overhead support to be laterally spaced in horizontal alignment thereon; cylindrical portions journaled on said bearings to be relatively rotatable therein about a fixed horizontal axis of the aligned bearings; said cylindrical portions having downward extensions affixed thereon and rotatable with the same about said horizontal axis; a pair of drop-arms pivoted at the upper ends thereof to said fixed downward extensions to depend therefrom; means for maintaining said cylindrical portions in a plane of lateral swinging movement of the drop-arms in various positions of transverse swinging movement of the drop arms about said fixed horizontal axis, in which plane the drop-arms swing in parallelism about transverse axes which are relatively fixed with respect to the downward extensions, and which extend angularly of said fixed horizontal axis; and connector means between said drop-arms for maintaining the same in parallelism upon being swung on said horizontal and transverse axes; said connector means having opposite riding extensions laterally outwardly of the drop arms; said drop-arms having manually operable means above and below said connector means whereby riders on said riding extensions may by selective application of pressure to said manually operable means swing the drop-arms variously about said horizontal and transverse axes.

3. A playground or like swing for suspension from an overhead support, comprising: a rigid supporting mem-

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ber having laterally spaced supporting portions; a pair of pivotal means each including relatively fixed and movable parts; said fixed parts having means thereon for fixedly attaching the same to said overhead support; means for mounting said movable parts on said relatively fixed parts for rotation of the movable parts with respect to said fixed parts about a fixed horizontal axis of the rigid member; said movable parts having rigid downward extensions and rotatable with the same about said fixed horizontal axis; a pair of drop-arms pivoted at the upper ends thereof to said downward extensions to depend therefrom; means for maintaining said movable parts in a plane of lateral swinging movement of said drop-arms about said fixed horizontal axis, in which plane the drop-arms swing in parallelism about transverse axes which are relatively fixed with respect to the downward extensions, and which extend angularly of said fixed horizontal axis; and connector means between said drop-arms for maintaining the same in parallelism upon being swung on said horizontal and transverse axes; said connector means having opposite riding extensions laterally outwardly of the drop arms; said drop-arms having manually operable means above and below said connector means whereby riders on said riding extensions may by selective application of pressure to said manually operable means swing the drop-arms variously about said horizontal and transverse axes.

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