United States Patent [19]

Crosman

[11] 3,731,420

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[54] DOLL SWING CARRYING CASE

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[73] Assignee: **Remco Industries, Inc.**, Harrison, N.J.

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[52] **U.S. Cl.** ..... **46/1 R, 46/11**

[51] **Int. Cl.** **A63h 33/00**

[58] **Field of Search** 46/1, 11, 15

[56] **References Cited**

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Assistant Examiner—Robert F. Cutting
Attorney—Roland T. Bryan et al.

[57] ABSTRACT

A light-weight toy swing carrying case having hinged covers which are positionable from their closed location to an open placement where they serve as counterbalances and maintain the upright swing stable preventing it from tipping during swing motion. The swing case is a container for the swing and any toy figure seated therein and may be conveniently carried by a handle stored in place by stacking.

5 Claims, 6 Drawing Figures

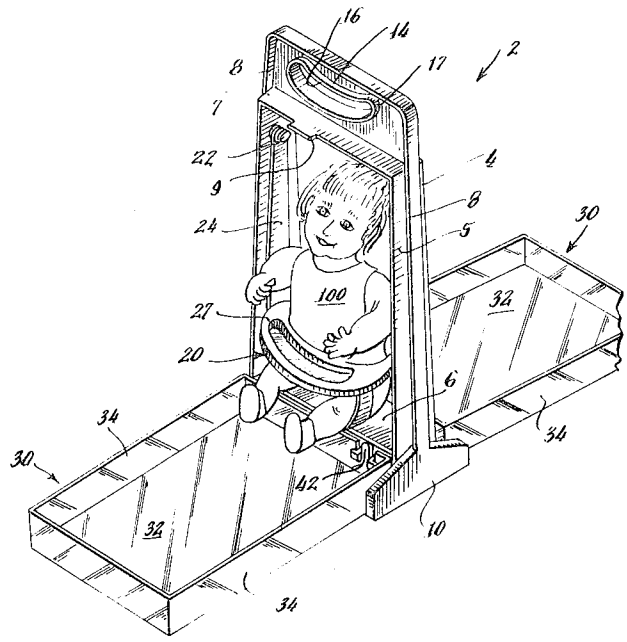


Fig. 1.

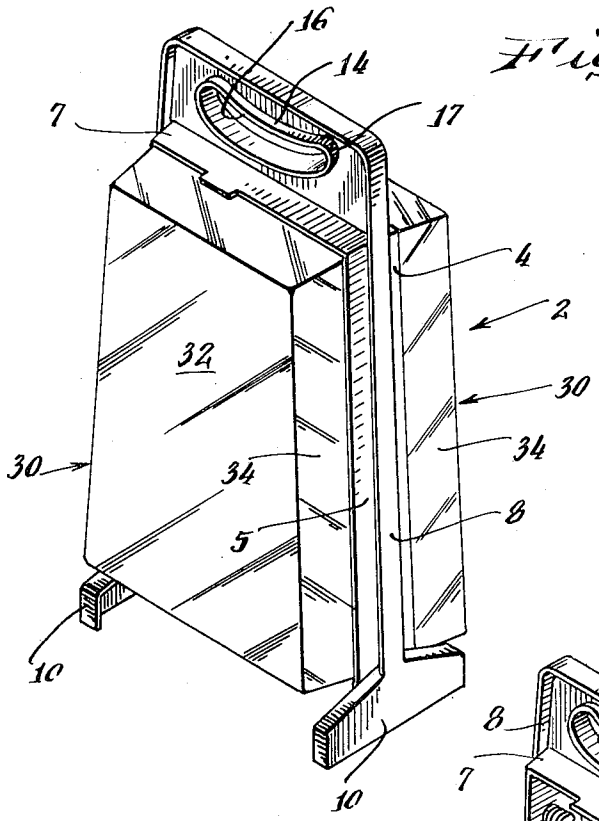

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Fig. 2.

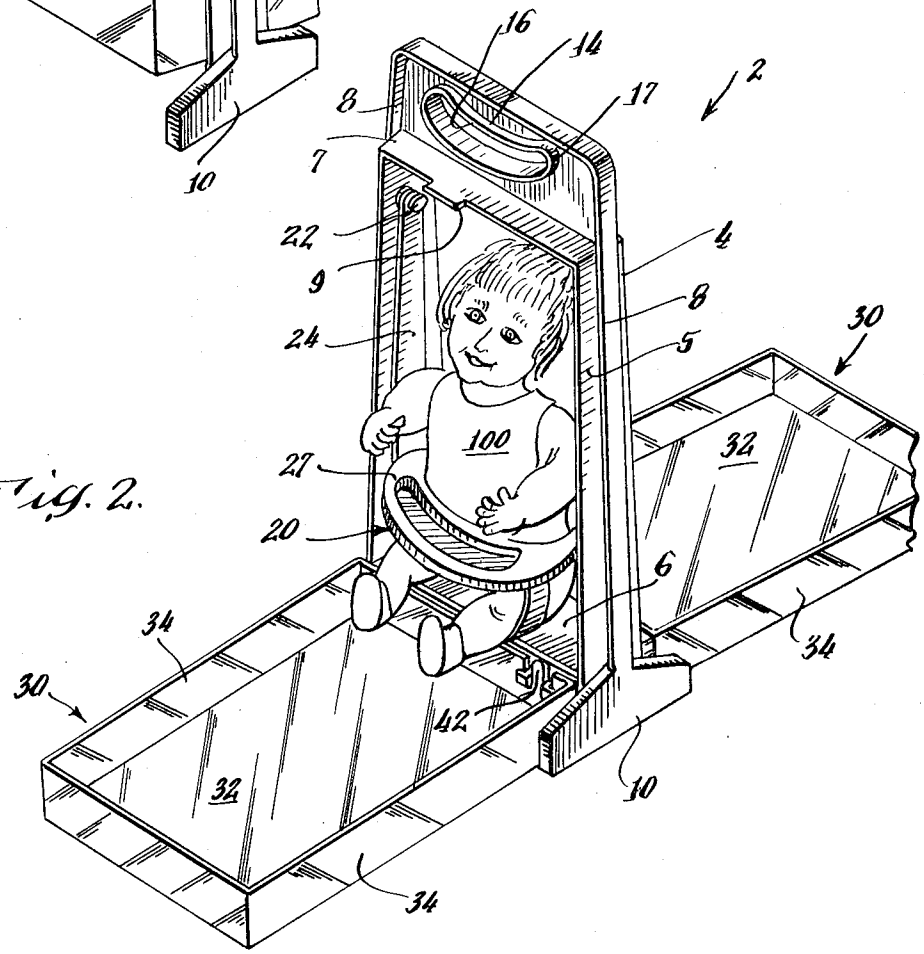

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Fig. 5.

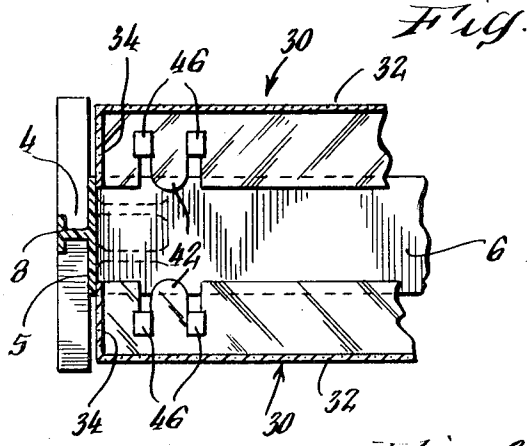


Fig. 3.

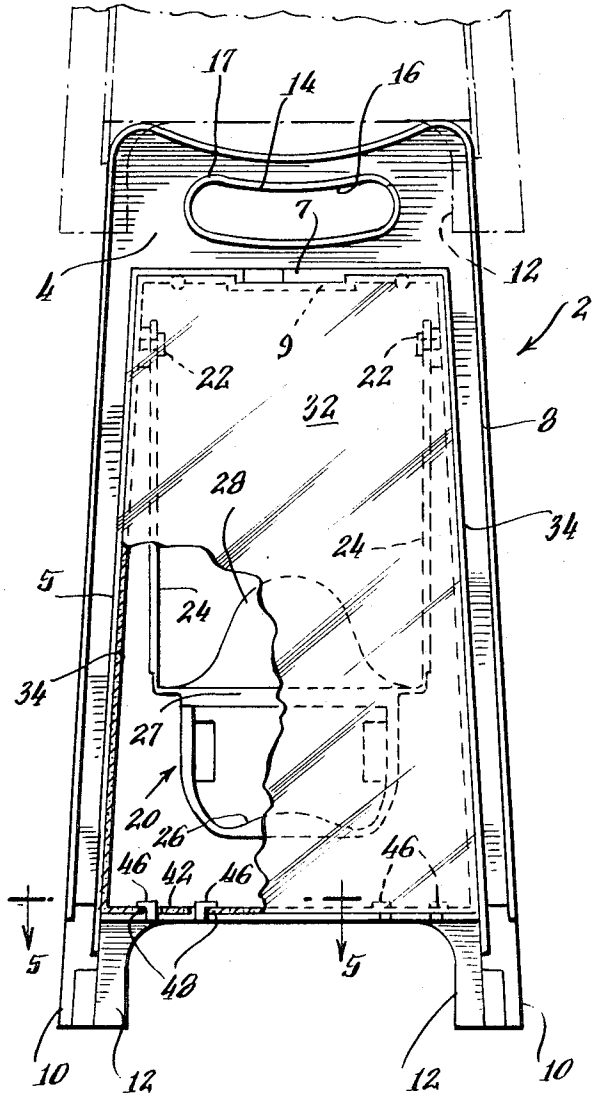
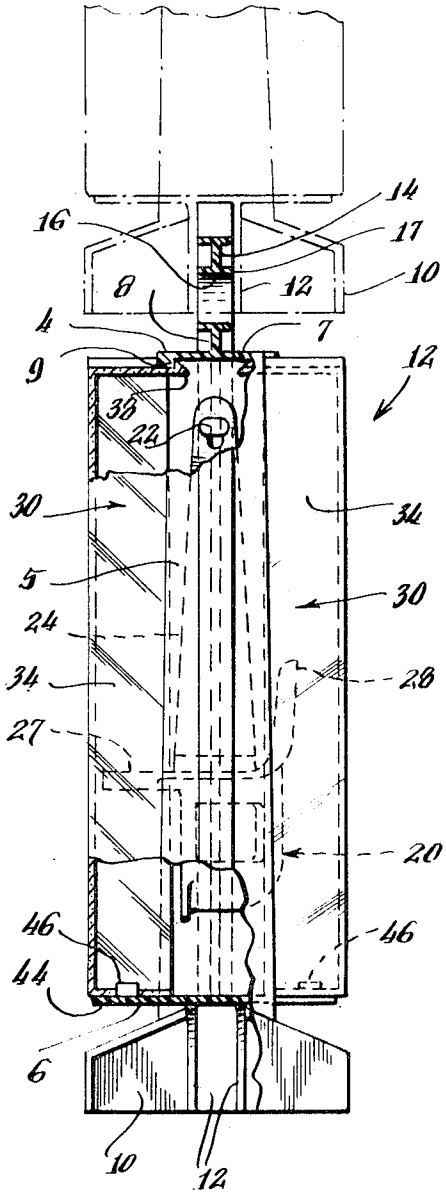


Fig. 4



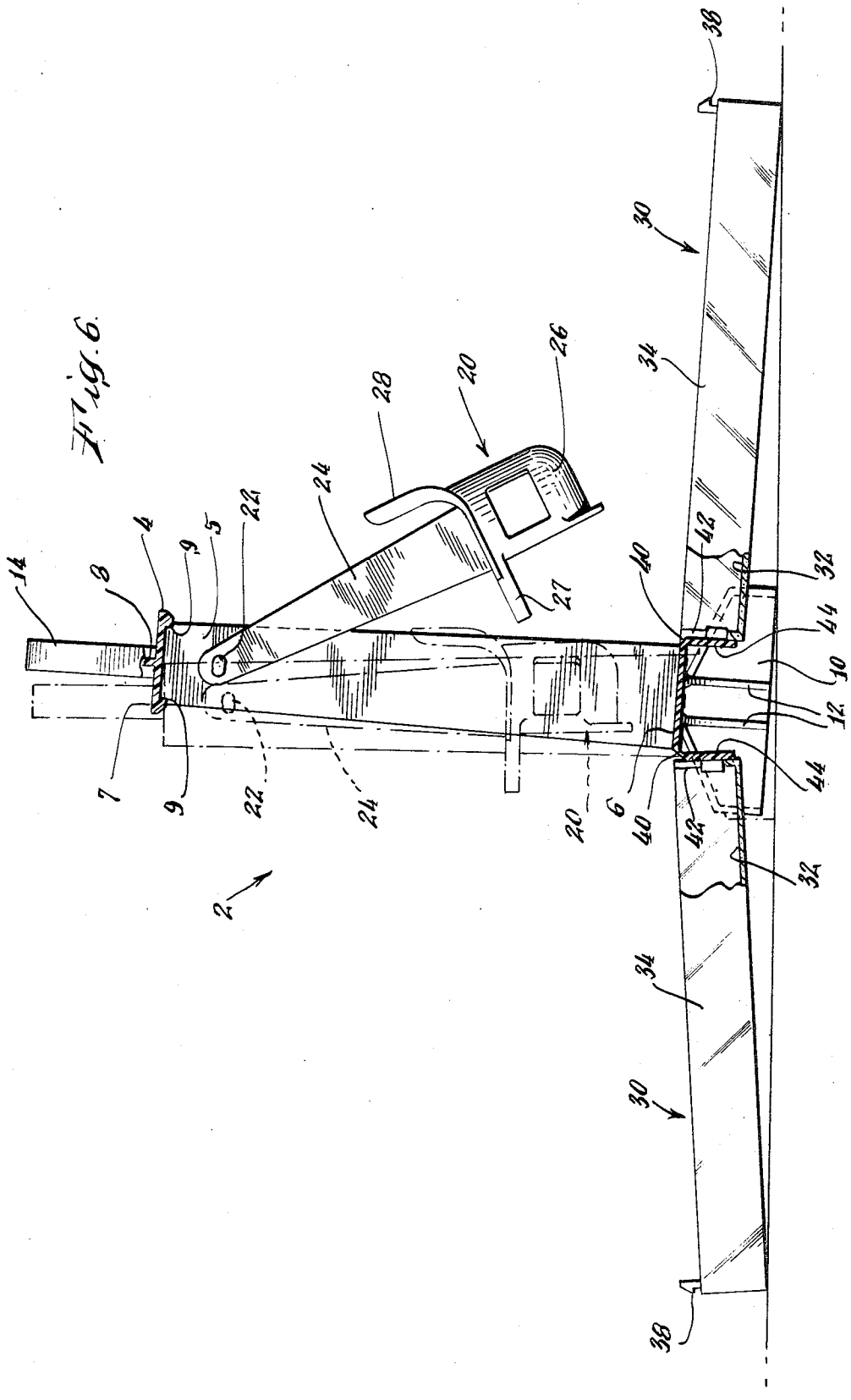

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Fig. 6.

DOLL SWING CARRYING CASE

BACKGROUND OF THE INVENTION

This invention relates to a swing case for a doll-like toy figure and more particularly to a case including light-weight swing possessing unusual stability when used to swing a toy figure with pendulous motion.

Many toys are constructed of light-weight materials, such as plastic and the like, which are selected for their damage resistant properties as well as their economy of use and easy shaping characteristics. Plastic, although a popular material of construction making possible the fabrication of toys having sizes and shapes previously considered unobtainable or impractical, often possesses disadvantages in particular uses due to its extreme light-weight and lack of stability compared to materials such as wood and metal which result in heavier toys. However, any toy structure intended for immobile play use while placed upright on a surface must be sufficiently stable to remain in position for play otherwise a child or other user becomes dissatisfied therewith and loses interest therein, or, as is often the case, becomes frustrated therewith and seeks to use the toy destructively in a manner other than that for which it is intended. Stability is especially required in immobile toys having moving parts such as swings, trapezes, teeter-totters or the like, the pendulous or oscillating motion of which will cause the entire toy to rock to-and-fro and tip over if it is of insuffient weight or otherwise of unsteady placement.

Toy cases or containers are often fabricated from sturdy long-life materials, such as plastic, to increase their attractiveness and the market appeal of the toy. After purchase the containers serve little more than as storage boxes for the toy article therein and thus represent a cost to the consumer which is not fully utilized in terms of delivering maximum enjoyment and satisfaction for each dollar spent on the toy and its container.

SUMMARY OF THE INVENTION

The present invention overcomes the disadvantages associated with light-weight toys to be used when placed in an upright position by incorporating in such toys a convenient form of counterbalance which provides a more effective distribution of weight and assures stability and freedom from tipping over while in use. Particularly, this invention includes, on a frame member supporting a swing for a doll-like toy figure, cover means which complement with the frame to provide a complete enclosure for the swing yet which when open serve as an effective stabilizing counterbalance and steadying structure so that the doll-like figure can be moved on the swing with pendulous motion without tipping over the frame. Moreover, the frame, swing and cover means can be advantageously constructed of light-weight material such as plastic and each having one piece construction.

Therefore it is an object of this invention to provide a toy of light-weight construction and exceptional stability when placed in an upright position.

It is a further object of this invention to provide a doll-like toy figure swing capable of placement on a table top or the like for playing use having unusual stability by virtue of steadying means capable of positioning either on the table surface or acting as enclosures to form a container for the figure and swing.

This invention also ensures the maximum utilization of a toy container by providing a toy container that effectively function as a toy carrying case and is readily usable as a swing for a toy doll-like figure. The container-carrying case has a stackability feature which enhances its marketing appeal and display characteristics.

Thus, an additional object of this invention is to provide a toy swing for a doll-like figure which is conveniently conveyable in its own carrying case and readily usable for playing with stability without increase in weight due to addition of ballast or the necessity of adding many and complex detachable parts and which possess a stackability feature.

Other objects, features and advantages of the invention will be set forth in and apparent from the following description of the preferred embodiment of the invention considered together with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a swing carrying case according to the present invention;

FIG. 2 is a perspective view of the swing carrying case, similar to FIG. 1, with the cover-stabilizing means in an open position revealing the swing and, for illustration purposes, a doll-like toy figure therein;

FIG. 3 is a front view of the swing carrying case showing a portion thereof in partial section to reveal the swing and other detail within;

FIG. 4 is a sectional side view of the swing carrying case taken along the line 4—4 of FIG. 3 and showing also the stacking feature;

FIG. 5 is a top sectional partial view of the hinge mechanism of the carrying case cover-stabilizing means taken along the line 5—5 of FIG. 3; and

FIG. 6 is a side view of the swing carrying case with the cover-stabilizing means in their open position illustrating pendulous motion of the swing and the maximum rocking movement of the swing frame by dash lines.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1 there is shown a swing carrying case 2 of the type embodying the present invention. The carrying case 2 includes a trapezoidal shaped frame member indicated generally at 4 to which are securely attached pedestal legs 10. The pedestal legs 10 are so shaped to enable the carrying case 2 to be placed on a flat surface such as a floor or table top and remain upright without other support. Also attached to the frame member 4 is a handle extension 14 having an opening 16 for ready placement of fingers for transporting and conveying the carrying case conveniently. Also shown in FIG. 1 are the carrying case enclosure covers 30 which are identical except for orientation.

FIG. 2 shows, in a view similar to that of FIG. 1, the carrying case 2 with the covers 30 in an open position revealing the case contents, namely the swing 20 holding doll-like figure 100. The covers 30, in the embodiment shown, are formed of a plane-like surface sheet 32 having a rim or flange-like edge projection 34 extending about its periphery. This edge 34 provides a complementary fit with the frame 4 when the covers 30 are in their closed position. The covers are positionable

either closed or open through their connection to the frame 4 by the hinge indicated generally at 40. The swing is mounted for pendulation within the frame 4 by means of pivot pins 22 secured to the inside of the frame 4.

As seen in FIGS. 1, 2 and 3, the frame member 4 includes side support members 5, a base member 6 and a top member 7. The side support member 4 have molded thereto, for increased structural strength, reinforcing member 8, here shown to be T-shaped, which connect with the pedestal legs 10 and continue about the periphery of the handle 14. The opening 16 in the handle 14 is circumscribed by a reinforcing flange 17. Also shown in FIG. 3 are U-shaped channel inner legs 12 which are sized to receive, in tongue and groove fashion, the handle 14 of another similar carrying case 2, as illustrated in phantom in FIG. 4, for stacking, for display, storage or other purposes. These inner legs 12 also serve to provide a degree of increased strength and stability.

The cover 30 in FIG. 3 is shown cut away in portion to reveal the swing 20 within the carrying case 2. The swing 20 is pivotably attached to the inside of frame 4 by the pins 22 secured to the frame side members 5 and the swing arms 24. The swing has a seat 26 and a back 28 as well as a circumferential member 27 for maintaining a doll-like figure securely in position after placement in the seat 26.

The swing 20, the covers 30 and the trapezoidal frame member 4 are preferably each individually formed in one piece from polyethylene, polypropylene, polyvinyl chloride, (PVC) acrylonitrile-butadiene-styrene (ABS) or other suitable plastic material used in the manufacture of toys. Thus these parts are all light-weight and easy to carry, strong and breakage-resistant as well as attractive. Moreover these materials of construction are convenient to form and completely safe for children. Therefore, this swing and its carrying case may comprise only four parts, the swing 20, the frame member 4, and the two enclosure covers 30, thus minimizing production costs as well as complexities of assembly and use by the child.

Also shown in FIGS. 3 and 4, is the manner in which the cover 30 is held in the closed position to form a container for the swing. The peripheral edge 34 of the cover 30 has a raised lip 38 at its edge extremity. This lip 38 cooperates with a similar lip 9 on the top member 7 of the frame 4 in a latch-like manner to maintain the cover in closed position complementary against the frame 4.

The hinge assembly is shown in detailed top view in FIG. 5 and in side cross-section in FIG. 3. The peripheral edge 34 of the cover 30 has U-shaped portions cut out to leave remaining a tongue 42. The base 6 has hingeable tab-like members 44 depending from it, seen in cross-section in FIG. 4, each of which has two raised projections 46 with undercut portions seen at 48 which form a groove into which the peripheral edge portion of cover 30 securely fits. In assembly, the raised projections 46 slide to the U-shaped opening of the peripheral edge 34 with the peripheral edge 34 fitting in the undercut groove portion 48 of the raised projections 46. The arrangement may be made further interlocking by known means if desired.

The operation of the toy swing is illustrated in FIG. 6 showing the frame 4 containing the swing 20 with enclosure covers 30 open to the position where they contact the surface on which the pedestal legs 10 rest to maintain the toy in an upright position. In this side view, FIG. 6, the swing is shown moving back and forth in an arc lying in the plane of the drawing and substantially parallel to the side member 5 with pendulous motion in a right-left direction when viewing the drawing. When the swing 20 reaches the end of its motion at either extremity of the arc the centrifugal force and the swing's momentum cause a substantial force to be exerted on pivot pin 22 in a direction along the swing arm 24 towards the swing seat 26. This force in turn will cause the frame 4 to pivot about a fulcrum point which can be considered located along the center line of the frame side member 5 in the vicinity of the base 6, pedestal legs 10 and inner legs 12.

With sufficient length of arc and magnitude of momentum from the back and forth swinging, the force on the pin 22, which is dependant in part upon the weight of swing 20 and its contents such as a doll 100, could be great enough to cause the frame 4 to oscillate and eventually tip over because of its light-weight were it not for the covers 30. The covers 30 function as counterbalances absorbing some of the energy arising from the oscillations of the base occurring during pendulation of the swing since forces are transmitted from the base 6 through the hinge means 40 to the cover 30 and partially dissipated there with the result that the swing and frame remain substantially upright and steady. The combined outrigger and counterbalance effect of the enclosure covers 30 enable the frame 4 to oscillate without tipping over or, depending on the degree of forces generated, to remain fixed and immobile entirely without oscillating, then significantly increasing the toy's stability. Yet, since the covers 30 are fabricated from light-weight material the overall weight of the toy is not greatly increased and it remains conveniently conveyable.

When a child desires to no longer play with the swing, he or she may close the covers 30 with the doll 100 remaining in the swing 20 and easily covey it to another location by means of the handle 14. If a household has two or more of such toys, as is often the case, they may be conveniently stored with a minimum of space by stacking one upon the other in a closet or on a shelf or table top. Thus, maximum sufficient use of the entire assembly is obtained to the satisfaction of the manufacturer, retailer and consumer.

I claim:

1. A conveniently conveyable toy swing having effective placement stability when in use comprising:

a frame capable of placement in a substantially upright position having parallel spaced apart side support members and a base,

swing means mounted between the side support members for pendulation in an arc lying in a plane substantially parallel to the side support members, and

counterbalance means movably secured to the base in a plane substantially perpendicular to the plane of the arc for at least partially offsetting frame oscillations occurring during pendulation of the swing means to a degree sufficient to provide sta-

bility to the toy swing preventing it from tipping over during normal swing usage said counterbalance means comprising cover means hingedly mounted on the base for permitting pivotal movement, relative to the base, from a position where it functions as counterbalance to a position where it is complementary adjacent to the side support and forms therein a counterbalance.

2. A conveniently conveyable toy swing having effective placement stability when in use, as claimed in claim 1, wherein the cover means includes two covers for completely encasing the swing means in a closed container when the covers are positioned complementary adjacent to the side support members.

3. A conveniently conveyable toy swing having effective placement stability when in use, as claimed in claim 1, wherein the frame further includes a cross member handle means positioned between the side support members for carrying the toy swing and case.

4. A doll-like object toy swing carrying container comprising:

an open frame having:

a base for placement on a surface to position the toy in a substantially upright position,

parallel spaced apart side support members joined to the base, and

a cross member handle means joining the side support members at a location remote from the base;

swing means mounted between the side support members for pendulation in an arc lying in a plane substantially parallel to the side support member,

the swing means being shaped to receive and securely hold during pendulation a doll-like object;

cover-like enclosure means hingedly secured to the base,

the enclosure means being positionable to a first position complementary adjacent the open frame to form therewith a closed container encasing the swing means within,

the enclosure means being positionable to a second position substantially perpendicular to the frame for at least partially offsetting frame oscillations occurring during pendulation of the swing means to a degree sufficient to provide stability to the toy swing preventing it from tipping over during normal swing usage.

5. A doll-like object toy swing carrying container, as claimed in claim 4, wherein the frame base has dependent therefrom channel-shaped members formed to receive therein the handle means of an adjacently position similar carrying container to provide convenient stackability of a plural thereof.

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