United States Patent [19]

Goldfarb et al.

[11] **3,844,061**

[45] **Oct. 29, 1974**

[54] **ANIMATED LIFTING TOY**

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[73] Assignees: **Adolph E. Goldfarb,** Tarzana; **Erwin Benkoe,** Encino, both of, Calif.

[22] Filed: **Feb. 21, 1973**

[21] Appl. No.: **334,443**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 118,778, Feb. 25, 1971, Pat. No. 3,751,849.

[52] **U.S. Cl.** **46/119,** 46/40

[51] **Int. Cl.** **A63h 11/00**

[58] **Field of Search** 46/24, 25, 26, 40, 116, 46/119, 120, 247; 214/6

[56] **References Cited**

UNITED STATES PATENTS

3,552,055 1/1971 Matsubayashi et al. 46/26

FOREIGN PATENTS OR APPLICATIONS

341,424 10/1959 Switzerland 46/119

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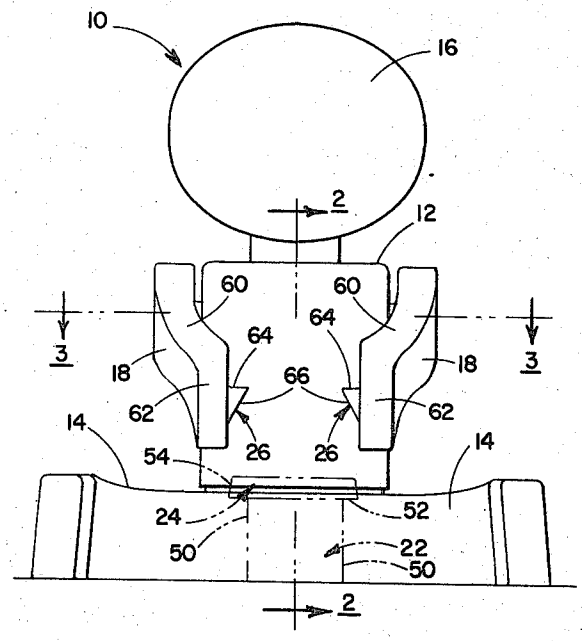
Assistant Examiner—Robert F. Cutting
Attorney, Agent, or Firm—Robert M. Ashen

[57] **ABSTRACT**

A toy in the form of an animated figure having a pair of outstretched arms which are operable to lift an object placed in front of the figure. Each time the figure lifts an object, an additional object may be positioned in front of the figure beneath the lifted object, and the toy may be operated to lift the stack comprised of the original object and the subsequently-placed object. Additional objects may be added to the stack lifted by the toy by successively placing them beneath the lifted stack in front of the toy and operating the toy.

9 Claims, 7 Drawing Figures



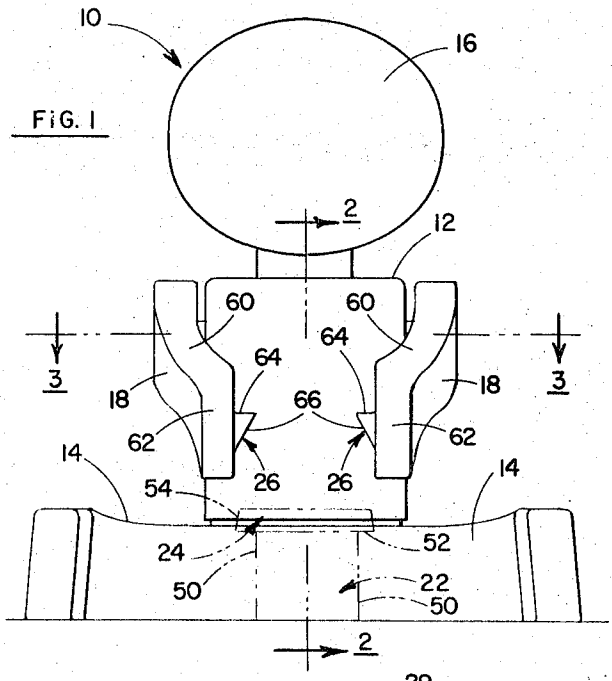


FIG. 1

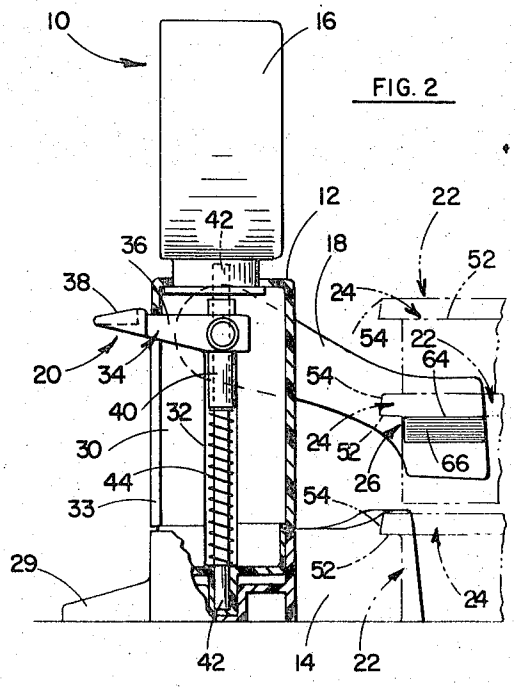


FIG. 2

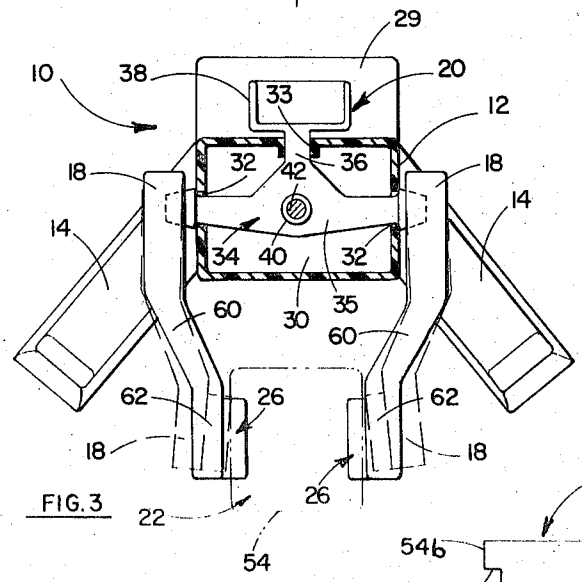


FIG. 3

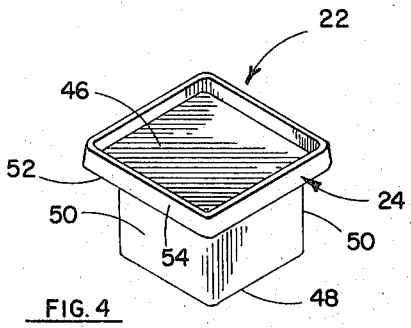


FIG. 4

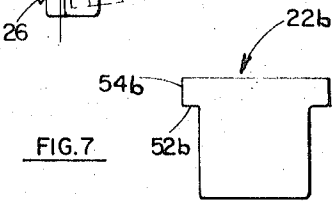


FIG. 7

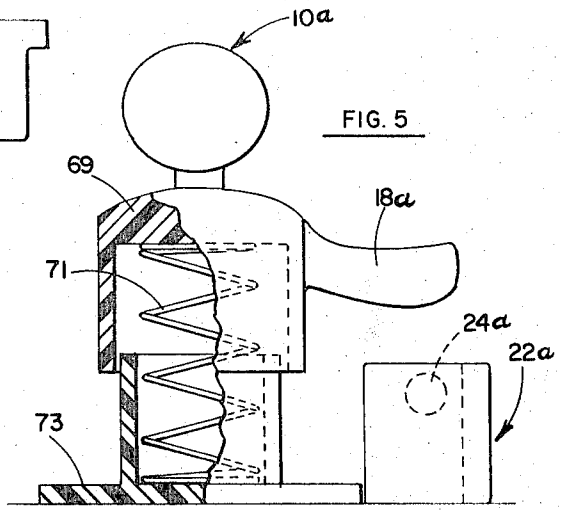


FIG. 5

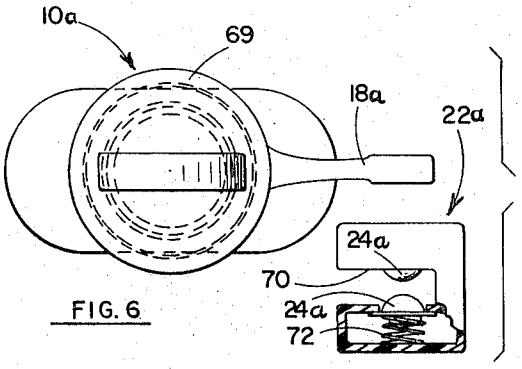


FIG. 6

ANIMATED LIFTING TOY

This application is a continuation-in-part of U.S. patent application, Ser. No. 118,778, filed on Feb. 25, 1971 now U.S. Pat. No. 3,751,849.

Children have always been delighted with toys that simulate human activity. This is particularly true for very young children. As children get older, they wish to have a more direct participation and tend to prefer implements which they may use in performing activities of their parents or others which they may simulate. On the other hand, younger children lack the muscular coordination and experience to perform some of these activities. Such younger children are fascinated and delighted by toys requiring only simple manipulation, such as pushing a lever, or turning a crank, or turning on a switch which results in the toy providing such animation or activity. At the same time the play value is greatly heightened if the child can participate in the action rather than simple pushing a lever or the like and then sitting back to watch.

The present invention contemplates a toy in the form of an animated figure which will perform a human function, that is the lifting of first one and then additional objects, such as blocks or simulated bricks. The device may be operated simply and easily even by a younger child, however, the objects may be sequentially placed in front of the toy figure by the child-user so that there is sense of participation and involvement with the play activity. In one form, the movement of the animated figure is a simple up-and-down movement of its arms to a grasping position at opposite sides of the object to be lifted. Projection means may be provided at the top of the sides of the object so that when the arms are subsequently lifted, the object will be lifted with the arms. When another object is placed below the lifted object, the arms can again be lowered by the simple downward movement to a similar position surrounding and grasping the lower-most object of the stack of objects in front of the figure. When the arms again are raised, all of the objects in the stack are thereby raised. In this one form of the device, the arms are resiliently biased inwardly so that they can be spread and will thereby move over the projection means on the sides of the object as the arms are being lowered to the grasping position relative to the object. In the drawings:

FIG. 1 is a front elevational view of an animated toy lifting figure and one stackable object such as a simulated block or brick, comprising a preferred embodiment of the present invention;

FIG. 2 is a broken-side sectional view taken generally along line 2—2 of the toy lifting figure of FIG. 1;

FIG. 3 is a plan sectional view of the toy lifting figure taken generally along line 3—3 of FIG. 1;

FIG. 4 is a perspective view of one of the objects;

FIGS. 5 and 6 show an alternative embodiment of the toy;

FIG. 7 shows a modified form of stackable object.

One form of the animated lifting figure is described and illustrated in the co-pending U.S. application referred to above.

A presently preferred embodiment of the invention is shown in FIGS. 1–4. In general, the lifting figure toy 10 comprises a body 12, a pair of legs 14, a head 16, and a pair of movable arms 18. The movable arms 18 are connected to actuating means 20 on the toy figure

which raise and lower the arms, and thereby cause the arms to grasp and pick-up objects 22 placed in front of the toy figure. The objects 22, which are preferably capable of stacking one above the other, have means 24 thereon which interengage with means 26 on the arms to effect the lifting of the objects.

Now considering the illustrated toy figure 10 in further detail; it has a main section which comprises the body 12, legs 14 and head 16 of the figure. The illustrated figure is disclosed in a sitting position with its body upright and its legs extending forwardly and outwardly at an angle. The legs 14 thus provide a support base for the figure and also provide an open area immediately in front of the figure and below the forwardly extending arms 18 for the disposition of objects to be lifted. A rear extension 29 from the lower edge of the body 12 helps to maintain the figure upright, especially when a push lever 38 at the rear of the body is depressed downwardly. The main section may be fabricated in one or more pieces, as for example, the particular structure shown in FIGS. 1–3, comprises molded plastic sections which are assembled together by known methods to form the main section. Other suitable materials and construction may be utilized for the main section. The body of the figure has a cavity 30 therein. There are a pair of opposed, vertically-extending slots 32 at either side of the body and a vertically extending rear slot 33 at the back of the body. Slots 32 and 33 are in communication with the cavity 30. The arms 18 are mounted at their inner ends to a support member 34 disposed within the cavity. The support member 34 is generally T-shaped, having a cross bar 35 which extends out of either side slot 32 and supports on either end one of the arms. Support member 34 also has a stem 36 which extends rearwardly of the toy figure through the rear slot 33. The outer end of the stem 36, which is disposed outwardly of the body 12, is formed to provide a push lever 38. The support member 34 is mounted on a vertical tube 40 that slides up and down on a vertical rod 42. The rod 42 is mounted at its ends within the body 12 and extends generally centrally of the body cavity 30. A coil spring 44 is disposed around the rod 42 below the tube 40. Downward movement of the tube 40 (and the parts which are connected to it: the support member 34 and the arms 18), serves to compress the spring 44. In other words, the spring 44 biases the arms to the raised position shown in FIG. 2. Obviously, the arms may be lowered against the force of the spring by downward push on the lever 38.

Each of the stackable objects 22 illustrated in FIGS. 1-4 is a generally rectangular block which may be made of molded plastic or other suitable material. The illustrated block 22 has a generally flat top and bottom wall surfaces 46, 48, and a pair of opposed side surfaces 50. The illustrated block is symmetrical and therefore it may be rotated 90° in either direction, and the surfaces which are shown as front and back surfaces in the drawings will then be disposed sideways and will provide a pair of opposed side surfaces. Thus, the illustrated construction offers the advantage that the child-user does not have to concern himself about which pair of side faces are disposed front-to-back and which pair are disposed side-to-side. This is particularly advantageous when played by younger or pre-school age children. Disposed around the upper edge of each block and extending outwardly therefrom is engagement

means **24** in the form of a lip or rib. This lip **24** has a downwardly-facing, horizontal shoulder surface **52** for engagement by the arms of the animated figure as will be further explained. The lip **24** also has a downwardly and outwardly inclined camming surface **54** around its upper edge for guiding the arms of the figures as will also be explained.

As shown in FIG. **3**, the illustrated arms **18** extend first forwardly from the shoulder of the toy figure and then each has an inwardly angled intermediate portion **60**. The inner or pick-up end portions **62** of the arms then extend straight forwardly in parallel relation to one another. The spacing between these end portions **62** may be about the width of each block **22** so that the block will fit therebetween.

Each arm has lifting means **26** in the form of an inwardly directing lifting projection having a horizontal, upper, lifting-lip or shoulder **64** and a downwardly and outwardly inclined cam surface **66** adaped to engage the cam surface **54** of the block to be lifted. As shown best in FIG. **3** when the two arms **18** are moved downwardly over a block, the cam surfaces **66** on the arms engage the cam surfaces **54** on the block to thereby flex the arms outwardly (as shown in broken line). This permits the lifting projections **26** of the arms to pass the lifting lip **24** of the block. The arms **18** then resiliently spring inwardly to grasp the side surfaces **50** of the block with the lifting projections **26** of the arms. The lifting shoulders **64** on the arm projections engage the lifting shoulders **52** on the block when the arms are raised upwardly, so that the block is thereby lifted by the arms.

In playing with the toy **10**, the child places one of the blocks **22** in the space in front of the toy, and pushes down on the push lever **38** to cause the arms **18** to come down around and grasp that block. The lever **38** is then allowed to move upwardly under the urging of the spring **44**. This causes the arms (with the block) to be elevated to the position shown in FIG. **2**. The user controls the rate of upward movement, and can thereby prevent sudden jolts which would tend to dislodge the block from the arms or topple the upper blocks in a stack being raised. It will be noted that the block is elevated to a position where there is sufficient room underneath it for the child to readily insert another one of the blocks. The child then presses down again on the lever **38**, and the arms move down along the sides of the first block and over the lip **22** and around the sides of the second block. The the lever is again permitted to be raised by the spring to again raise up the arms and thereby raise the stack comprised of two of the blocks. Again there is sufficient space beneath the lowermost block in the stack for the insertion of an additional block. The play may continue in this manner until the blocks are exhausted or the stack topples over.

To assist the alignment of the blocks and prevent them from toppling to readily, interlocking means may be provided on the blocks for engaging with other blocks disposed above and below it in a stack. In the illustrated apparatus, the interlocking means is provided by the peripheral lip **22** which extends around the upper edge of each block and above the top wall **46** of the block. This lip **22** thus forms a shallow receptacle for receiving therein the lower end of another block which is placed upon the top of the first block

Various modifications may be made in the details of the illustrated structure without departing from the spirit and scope of the present invention. For example, instead of raising and lowering just the arms, the entire figure or some portion thereof may raise and lower as disclosed in the copending application referred to above. Similarly as also illustrated in that application, the arms may be spring biased inwardly rather than being resilient as in the structure illustrated in this application in FIGS. **1–3**.

FIGS. **5** and **6** show an alternative configuration. The entire upper section **69** of the FIG. **10***a* is supported by a compression coil spring **71** upon a base section **73** of the figure. The upper section carries a single arm **18***a*. Downward pressure on the upper section **69**, depresses it and the arm **18**a downwardly relative to the base section **73**. When upper section **69** is released, it will be urged back upwardly by the spring **71**. The arm **18***a* passes downwardly into a central vertical slot **70** in a block **22***a*. The block **22***a* may have opposed retractable lifting projections **24***a* on either side of the slot **70** adjacent its upper end. One or both projections **24***a* may be biased inwardly by a spring **72**. When the arm **18***a* engages the projections **24***a*, the projections **24***a* are depressed outwardly to permit the arm to pass. The arm **18**a is then in a lifting position relative to the block **22***a* so that when the arm is subsequently lifted, the block will be lifted with it. The vertical slot **70** may continue down through the block **22***a* so that the arm **18**a can subsequently be moved down into a mating slot **70** in the next block **22***a*. Thus, additional blocks **18***a* may be added to the stack in the manner described above.

If desired as another altervative, the arm **18***a* could have depressions in its sides which would engage projecting portions of the lifting projections **24***a* of the block **22***a*. To facilitate this form of construction, the downward movement of the arm **18***a* could be provided with means which permit the user to apply an initial short downward stroke where it would align with the block projections **24***a*, and subsquently to apply a long downward stroke where the arm would pass through the slot and into engagement with the projections of a lower block.

Another variation would be to provide one fixed rigid arm and one flexible or movable arm. Further, two rigid fixed arms could be combined with means on a block or object which itself incorporates the resiliency or movability in a manner similar to that shown in FIGS. **5** and **6**. The block may also be varied. FIG. **7** shows a molded plastic block **22***b* having a shoulder **52***b* and a surface **54***b* which is straight or inclined somewhat outwardly toward the top rather than inclined inwardly toward the top. This construction permits the block to be molded as a single part in a simple single cavity mold. The illustrated structure, however, provides a simple and economical embodiment which is the presently preferred form of the invention.

We claim:

1. Play apparatus comprising:

a plurality of liftable play objects, each of said play objects having a pair of opposed side walls and a projection disposed adjacent the upper edge of each of said side walls,

an animated toy figure for picking up a plurality of said play objects which are sequentially placed in front of said figure, said figure comprising:

a body adapted to rest upon a supporting surface;

arm means extending forwardly from said body, and

control means operatively associated with said arm means for lowering and raising at least said arm means of said figure,

a first lifting means on said arm means, and a second lifting means on said play objects, said second lifting means comprising said projections on said play objects, said first and second lifting means being arranged to releasibly engage with one another, said first and second lifting means being proportioned and arranged to overlie one another when one of said play objects is placed on the supporting surface in a predetermined position in front of said body, one of said lifting means being retractable by virtue of engagement of the other of said lifting means incident to downward movement of said arm means relative to one of said objects in said predetermined position in front of said figure, to thereby effect interengagement between first and second lifting means.

2. The play apparatus of claim **1** wherein each of said side projections comprises an elongated rib having a downwardly-directing lifting-surface and having an upwardly-directed, inclined, camming-surface.

3. The play apparatus of claim **1** wherein each of said play objects is symmetrical by virtue of having another pair of such opposed side walls and projections.

4. The play apparatus of claim **2** wherein said arm means comprise a pair of spaced-apart arms having projections theron, each of said arm projections comprising an upwardly-facing lifting-surface and a downwardly-facing, inclined, camming-surface.

5. The play apparatus of claim **4** wherein said arms are biased inwardly to a holding position but are movable outwardly.

6. The play apparatus of claim **5** wherein said arms are constructed of resilient, flexible material.

7. The play apparatus of claim **5** wherein said arms are spring biased to said inward holding position.

8. The play apparatus of claim **2** wherein only said arm means is vertically movable.

9. The play apparatus of claim **2** wherein each of said play objects has an top portion and a bottom portion, the top portion of each object being releasibly engageable with the bottom portions of the other of said objects to limit transverse movement between two of said objects stacked upon one another.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,844,061 Dated October 29, 1974

Inventor(s) Adolph E. Goldfarb, Manuel Fernandez

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In Claim 8, Column 6, line 16, change "Claim 2" to -- Claim 1--.

In Claim 9, Column 6, line 18, change "Claim 2" to -- Claim 1--.

In Claim 4, Column 6, line 7, change "theron" to --thereon--.

Signed and sealed this 14th day of January 1975.

(SEAL)
Attest:

McCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents

USCOMM-DC 60376-P69
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