June 1, 1965 R. S. BERENDT ETAL 3,186,127

BOTTLE CAP TOYS

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Fig. 1.

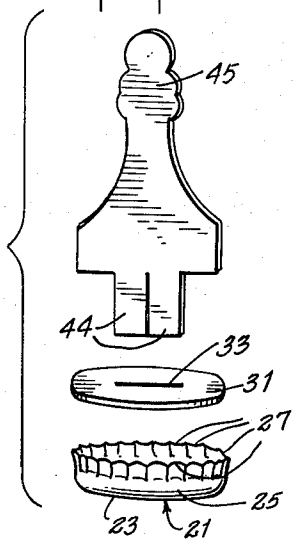


Fig. 2.

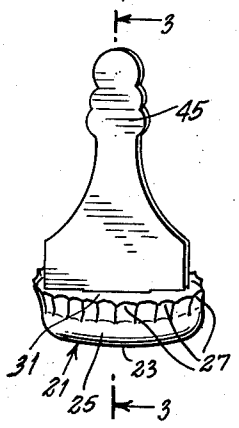


Fig. 3.

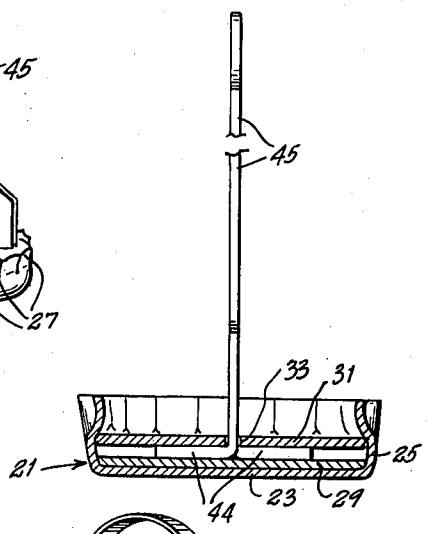


Fig. 4.

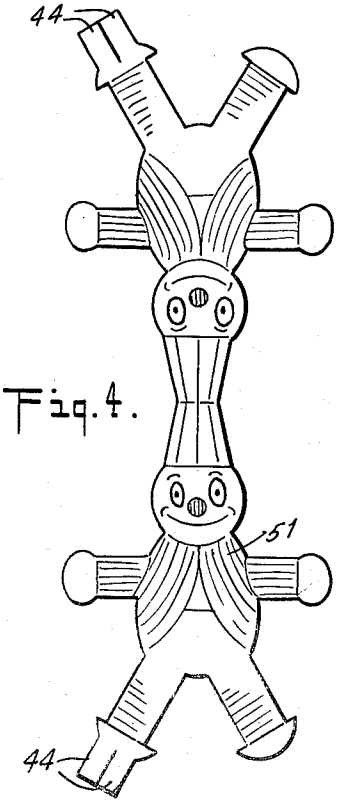
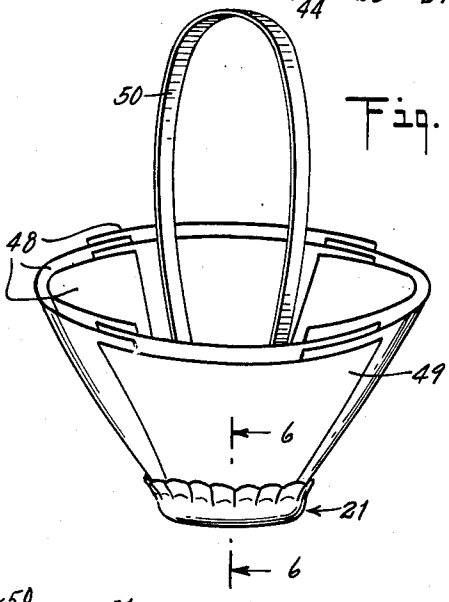


Fig. 5.



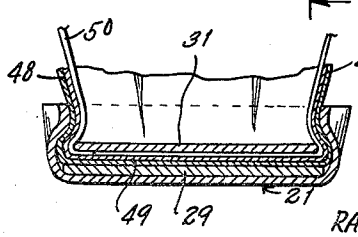


Fig. 6.

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BOTTLE CAP TOYS

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Fig. 7.

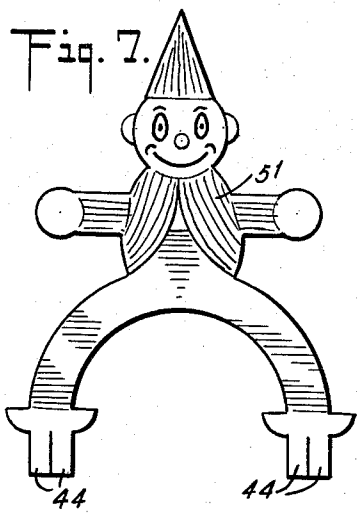


Fig. 8.

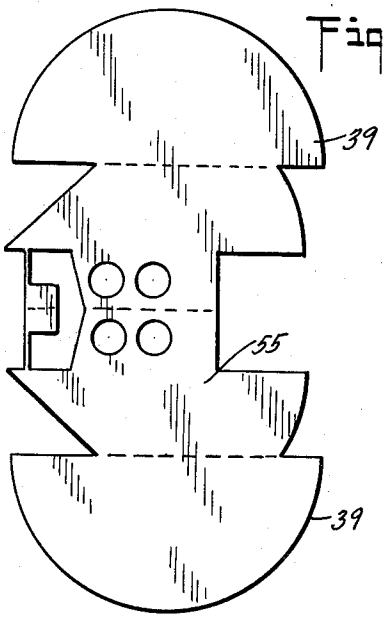


Fig. 10.

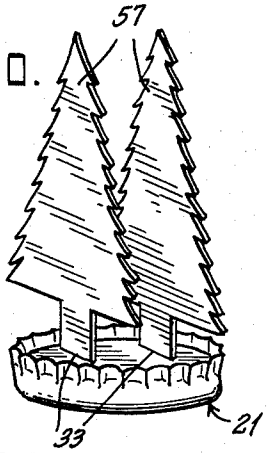


Fig. 9.

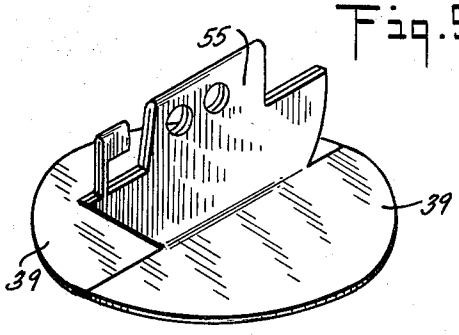


Fig. 11.

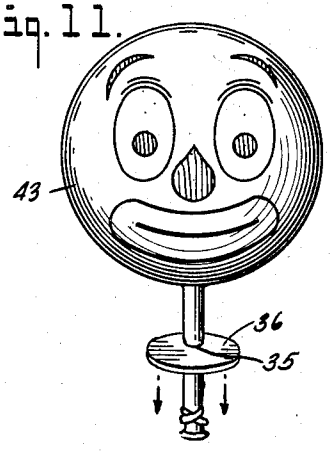
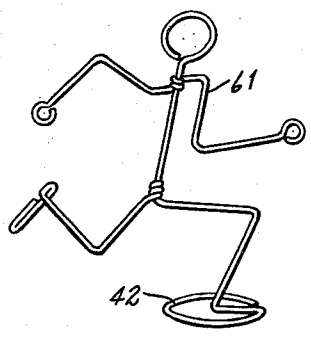


Fig. 12.



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BOTTLE CAP TOYS

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Fig. 13.

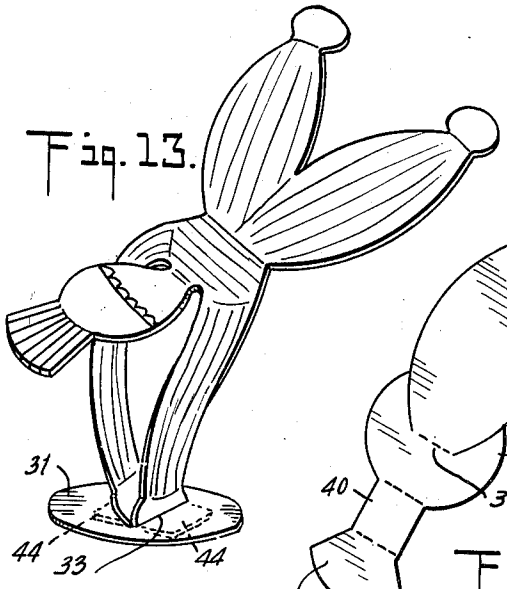


Fig. 14.

Fig. 17.

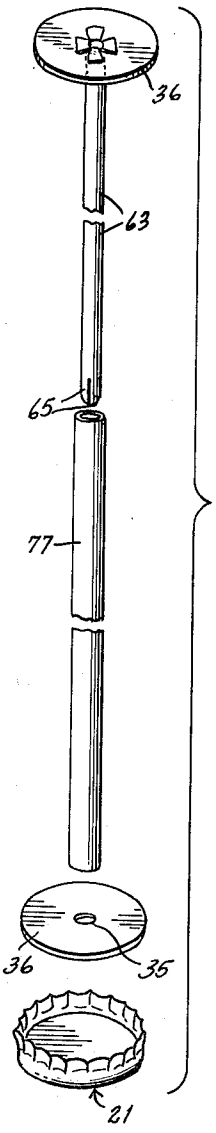


Fig. 15.

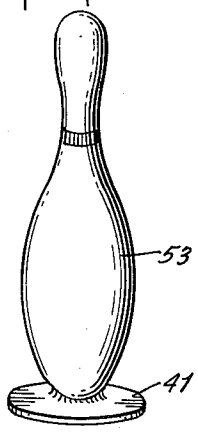


Fig. 18.

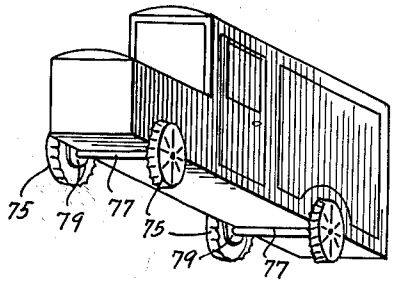


Fig. 19.

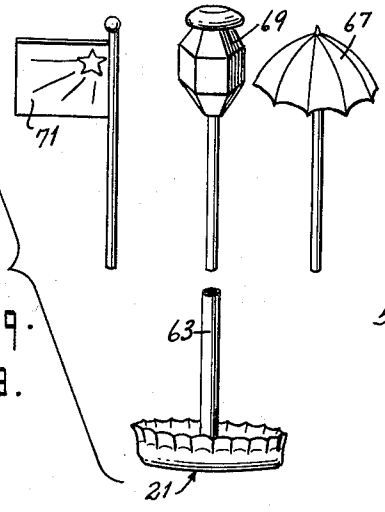
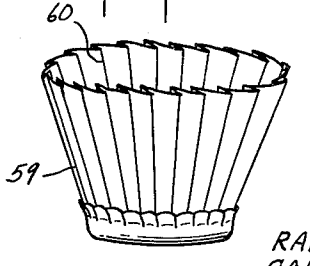


Fig. 16.



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United States Patent Office

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3,186,127

BOTTLE CAP TOYS

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Filed Aug. 15, 1961, Ser. No. 131,633
30 Claims. (Cl. 46—151)

This invention relates to new and useful improvements in the toy field and more particularly seeks to provide economical toys that can be constructed from waste crown bottle caps and paper cut-outs, wires, plastic, or similar materials, to form simple shapes.

Crown bottle caps of crimped metal are removed from bottles of soda, beer, fruit juices, etc., daily in homes and commercial establishments throughout the world, none of which are reused as bottle caps and practically none of which are further used for any purpose.

Many cheap toys are made from paper and other materials, particularly cut-out sections of paper sheets but it is difficult to support these patterns and especially to have the toy regain inherently a vertical position as they invariably tend to fall over at the slightest touch or movement of air.

Therefore, it is an object of this invention to utilize bottle caps as bases for economical cheap toys made from paper or similar materials.

It is a further object of this invention to utilize bottle caps as bases for simple toys of almost unlimited design and variation.

It is also an object of this invention to utilize bottle caps as bases for paper straw axles and bearings between two caps to effect a set of wheels which may be attached to other paper toys to simulate wheeled vehicles.

It is another object of this invention to utilize bottle caps as bases for paper chessmen.

It is an additional object of this invention to utilize bottle caps to provide floating toys.

With the above objects and others in view, the nature of which will be more apparent, the invention will be more fully understood by reference to the drawings, the accompanying detailed description and the appended claims:

In the drawings:

FIG. 1 is an exploded perspective view of a chessman, separate locking disc and bottle cap constructed in accordance with this invention;

FIG. 2 is a perspective view of the elements of FIG. 1 after final assembly;

FIG. 3 is a vertical section taken on line 3—3 of FIG. 2;

FIG. 4 is a plan view of a two ply clown prior to mounting in a bottle cap;

FIG. 5 is a perspective view of a basket mounted in a bottle cap;

FIG. 6 is a vertical section taken on line 6—6 of FIG. 5;

FIG. 7 is a plan view of a clown adapted to be supported by bottle caps on both feet;

FIG. 8 is a plan view of a two ply boat with an integral locking disc which is formed from two half circle discs, one on each ply;

FIG. 9 is a perspective view of the boat of FIG. 8 immediately prior to mounting in a bottle cap;

FIG. 10 is a perspective view of a pair of trees mounted on one bottle cap;

FIG. 11 is a perspective view of an inflated balloon and locking disc ready for mounting on a bottle cap;

FIG. 12 is a perspective view of a three dimensional wire figure with an integral locking disc;

FIG. 13 is a perspective view of a two dimensional cut-out having a three dimensional effect in view of the manner of mounting on a bottle cap;

FIG. 14 is a plan view of a bowling pin having an integral locking disc;

FIG. 15 is a perspective view of a hollow molded plastic simulated bowling pin with an integrally molded locking disc;

FIG. 16 is a perspective view of a paper-bottle cap shuttlecock;

FIG. 17 is an exploded perspective view of telescoping straws mounted in bottle caps with locking discs for forming wheeled toys;

FIG. 18 is a perspective view of a truck using the unit of FIG. 17 as axles and wheels; and

FIG. 19 is an exploded perspective view of a hollow straw supported vertically on a bottle cap with a variety of figures that may be inserted in the hollow straw.

Referring to the drawings in detail, this invention as illustrated is embodied in various paper, balloon, plastic or wire figures that may be supported vertically in a bottle cap or horizontally between two bottle caps, all of the figures being secured to the bottle cap by a disc that is forced or urged into a locked position in a bottle cap.

As shown in FIGS. 1 to 3, the conventional bottle cap 21 (new or used) comprises a circular flat main section 23, a cylindrical wall section 25 with a plurality of crimps 27 and a cork or plastic sealing disc 29 resting snugly in juxtaposition with the main section 23. The internal diameter describing the crimps 27 is smaller than the internal diameter described by the cylindrical wall section 25 between the crimps 27 and sealing disc 29 which permits the cap to be sealed on to a bottle having an annular beaded opening.

A paper or other flat locking disc 31 can be easily snapped or pushed into a locked position between the crimps 29 and sealing disc 29 after the caps have been removed from bottles. The locking discs are used to secure figures to bottle caps by any one of various means, e.g. by slits 33 (FIGS. 1, 2, 3, 10 and 13), by circular opening 35 in disc 36 (FIGS. 11 and 17), or by placing a portion of the figure under the entire disc (FIGS. 5, 6 and 16), in each instance the locking disc being separate from the figure. However, the disc may be an integral part of the figure as almost a full circle 37 (FIG. 14), a pair of semi-circles 39, 39 (FIGS. 8 and 9), a full circle 41 (FIG. 15), or a wire circle 42 (FIG. 11). The figures generally have split tabs 44 which lie parallel (FIG. 3) between the locking disc 31 and the sealing disc 29. Various other ways of using locking discs to secure figures will, of course, be apparent to those in the art.

The types of figures to be mounted on the bottle caps are infinite, including, for example, chessmen 45 (FIGS. 1 to 3), clowns 51 (FIGS. 4 and 7), baskets 49 (FIGS. 5 and 6), boats 55 (FIGS. 8 and 9), trees 57 (FIG. 10), balloons 43 (FIG. 11), wire figures 61 (FIG. 12) which may be readily constructed of pipe cleaners, bowling pins 47 and 53 (FIGS. 14 and 15) which may readily be made in sets, shuttlecocks 59 (FIG. 16) and tubular elements (FIGS. 17, 18 and 19). Moreover, the various figures may be single ply planar (FIGS. 1, 7 and 14), double ply planar (FIGS. 4 and 9), double planar spaced (FIG. 10),

pseudo-three-dimensional (FIGS. 12 and 13) or three-dimensional (FIGS. 5, 11, 15, 16 and 17).

The chessman 45 of FIG. 1 only represents one of a complete set that can be formed of waste bottle caps and one sheet of punch-out paper. Such chessmen have the weight and the feel of the more expensive sets available heretofore on the market which are weighted at the base in contrast to the cheaper unweighted sets.

The bowling pins 47 or 53 of FIGS. 14 and 15 are also only one of a complete set of ten which may be positioned in a triangular pattern like actual bowling pins and then knocked over by rolling marbles or small balls or by shooting a paper slug with a rubber band. The figures here should be heavy enough so that they will remain horizontal on falling, as the object of the game is to knock the pins over.

However, the clowns 51 of FIGS. 4 and 7 are sufficiently light compared to the bottle cap and locking disc, so that the entire toy always regains its vertical position even when knocked over. These and the shuttlecock 59 of FIG. 16 make excellent objects to be thrown by one or between two of the paper paddles claimed in our copending application, Serial No. 131,634, filed of even date herewith. Moreover, the bottle caps with such lightweight figures will float on water and can be used in various water play activities and as floating decorations such as flowers in bowls at parties. Furthermore, such lightweight toys may be thrown onto a horizontal board with a target having selective scoring areas like a dart board as these units are much cheaper and safer for children.

As shown in FIGS. 17 to 19, the end of a straw 63 may be split into a plurality of tongues 65 underneath the locking disc 35. One tongue is sufficient but a plurality increases the durability of the attachment. Also plastic straws are more durable than paper ones. If this straw is positioned vertically, it may then serve as a tubular holder for various other figures such as an umbrella 67, lamp 69, flag 71, etc. This straw may also be attached at both ends to a bottle cap and serve as a simulated axle between two simulated wheels 75. This axle may be mounted to a toy or may pass through a larger straw 77 which is then mounted in supports 79 depending from a paper box truck (FIG. 18), wagon, or other similar device, in which case the inner straw 63 serves as an axle within the outer straw 77 as a bearing. This gives a simple but remarkably substantial and free-wheeling construction that withstands a lot of wear. The supports 79 are merely downturned tabs of the paper truck.

It is obvious, of course, that the one piece clown 51 of FIG. 4, like the boat 55 of FIGS. 8 and 9, will be folded at the junction between the heads to make a reinforced two ply figure and that the four tabs 44 will be in alignment then for insertion under a locking disc.

The basket 49 of FIG. 5 is formed from two circular sheets of paper which have been radially cut toward the center (leaving an integral outer portion) so that the individual segments 48 may overlap on forming the basket. The double sheets are cut at different points to provide staggering of the weak points in the basket. A handle 50 is provided which also folds under the locking disc 31, and may be inside (as shown) or outside the basket portion. The shuttlecock 59 of FIG. 16 is made from a single circular sheet of paper that has been fluted at 60 to reduce the diameter.

FIG. 14 demonstrates how the locking disc may be integral with the figure in the plan view. The bowling pin 47 folds at line 36 to become transverse to locking disc 37 while the neck 40 is folded under disc 37 and tab 38 then folds upwardly to replace the section taken out of disc 37 by the bottom portion of bowling pin 47.

Many other various combinations will suggest themselves to those skilled in the art. Obviously the various means of attaching figures with a locking disc as shown in these specific examples can be interchanged with the specific figure patterns shown which are not intended to limit our invention.

We claim:

1. A toy comprising a bottle crown cap as a support, a locking disc fitting snugly within said cap, and a figure extending transversely away from said cap and attached thereto by said locking disc.

2. A toy comprising a bottle crown cap as a support, a locking disc fitting snugly within said cap and provided with an opening therethrough, and a figure extending transversely away from said cap, said figure having a tongue thereon, said tongue extending through said opening and lying between said cap and said locking disc.

3. The toy of claim 2 wherein said tongue includes two tabs which extend from said opening in opposed directions.

4. The toy of claim 2 wherein said opening is circular.

5. The toy of claim 2 wherein said opening is a slot.

6. The toy of claim 1 wherein said figure is a chessman.

7. The toy of claim 1 wherein said figure is a simulated bowling pin.

8. The toy of claim 1 wherein said figure is a clown.

9. The toy of claim 1 wherein said figure is a tubular element.

10. The toy of claim 1 wherein said figure is a balloon.

11. The toy of claim 1 wherein said figure is a wire.

12. The toy of claim 1 wherein said figure is a cut-out-paper figure.

13. The toy of claim 1 wherein said figure is sufficiently heavy to remain horizontal when placed in a horizontal position.

14. The toy of claim 1 wherein said figure is sufficiently light relative to said cap to regain a vertical position inherently when placed in a horizontal position.

15. The toy of claim 1 wherein said figure is three dimensional.

16. The toy of claim 1 wherein said figure is hollow.

17. The toy of claim 1 wherein said figure is sufficiently light so that the cap will float on water.

18. The toy of claim 17 wherein said figure forms a basket.

19. The toy of claim 1 wherein a portion of said figure fits under the entire area between said cap and said locking disc.

20. The toy of claim 19 wherein said figure forms a shuttlecock.

21. A toy comprising a bottle crown cap as a support, a locking disc fitting snugly within said cap, and a figure integral with and extending transversely away from said disc.

22. The toy of claim 21 wherein said locking disc comprises at least two complementary segments with an associated portion of said figure extending from each segment.

23. The toy of claim 22 wherein said complementary segments are each approximately 180°.

24. The toy of claim 21 wherein said figure and locking disc are molded plastic.

25. The toy of claim 2 wherein said figure is a tubular element.

26. The toy of claim 25 wherein said tongue is provided and a cap secured at each end of said tubular element.

27. The toy of claim 26 wherein said tubular element is mounted within an outer larger tubular element.

28. A toy comprising a platform, a spaced pair of bottle crown caps as supports, locking disc fitting snugly within each said cap and provided with an opening therethrough, an inner tubular element extending transversely to and between said caps, said inner tubular element having a tongue at each end, said tongues extending through said respective openings and lying between said respective caps and said locking discs, said inner tubular element being mounted within a larger outer tubular element, said outer tubular element being mounted below said platform whereby said outer tubular element and said caps simulate an axle and wheels.

29. The toy of claim 28 wherein there are a pair each

of said tubular elements and four caps whereby a double axled, four-wheeled vehicle is simulated.

30. A toy adapted for mounting in a bottle crown cap as a horizontal support comprising a locking disc having size and resiliency to snap into engaging parallel relationship with said cap and provided with an opening therethrough, a figure adapted to be attached to said cap by said disc, said figure to extend vertically from said cap and disc, said figure having a tongue thereon adapted to extend through said opening and lie between said cap and said disc, the vertical height of said figure being

substantially greater than the diameter of said disc and said cap.

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DELBERT B. LOWE, *Primary Examiner.*