United States Patent

Glass et al.

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[54] **COMBINATION DOLL AND ACCESSORY IMPLEMENTS**

[72] Inventors: **Marvin I. Glass,** Chicago; **Howard J. Morrison,** Highland Park; **Robert K. Allen,** Frankfort, all of Ill.

[73] Assignee: **Marvin Glass & Associates**

[22] Filed: **Nov. 4, 1971**

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[52] **U.S. Cl.**.....**46/245,** 46/116

[51] **Int. Cl.**.....**A63h 13/00,** A63h 33/26

[58] **Field of Search**.....46/14, 116, 245

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Primary Examiner—Louis G. Mancene
Assistant Examiner—Robert F. Cutting
Attorney—James F. Coffee et al.

[57] **ABSTRACT**

A combination doll and accessory set wherein the doll has a movable body and a movable limb connected to a tiltable head and adapted to hold a simulated electric mixer, and the accessory set includes a mixing bowl and simulated electric mixer which may traverse about the interior of the bowl to mix ingredients deposited in the bowl and cause movement in the doll body and head with the circuit for activating the mixer including a portion of the hand of the doll and also including a portion of the handle of the mixer.

19 Claims, 8 Drawing Figures

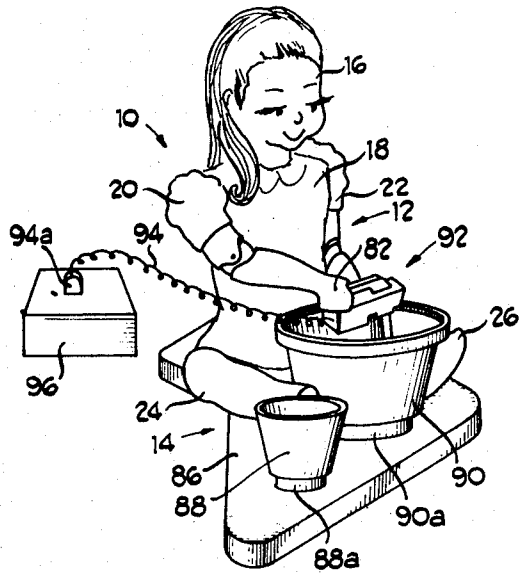
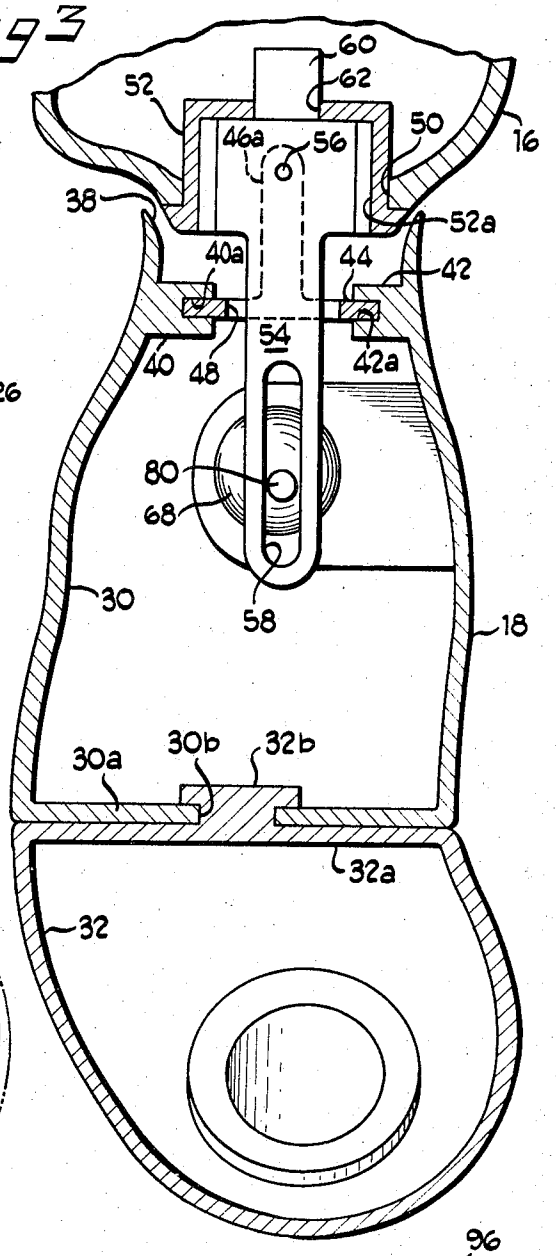


Fig 3



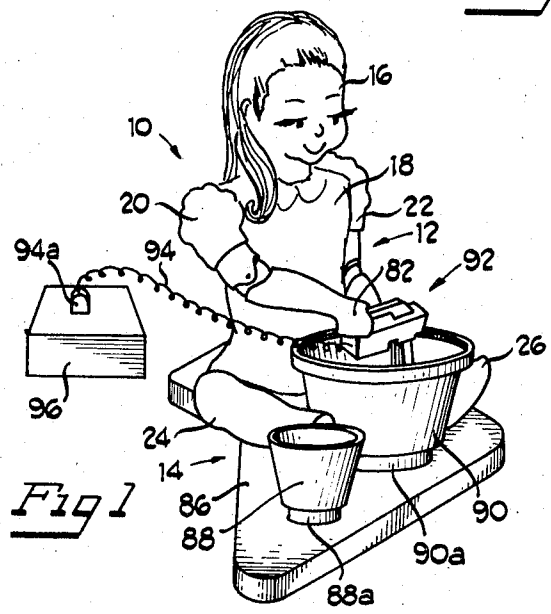
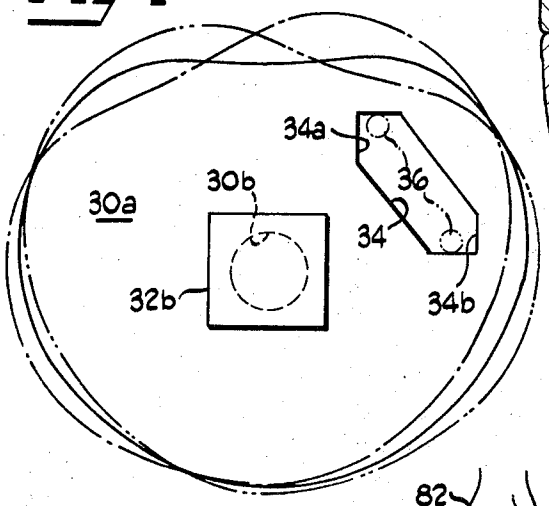
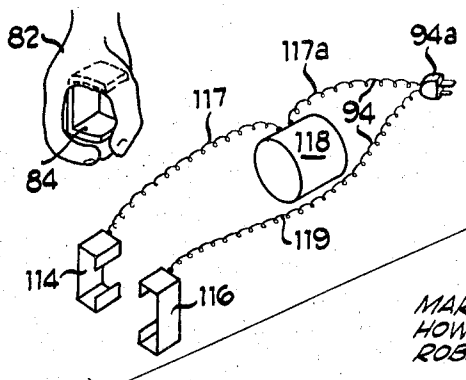


Fig 1

Fig 4





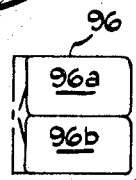
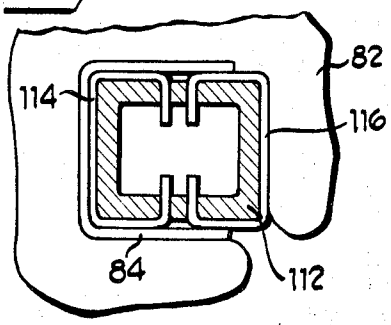


Fig 8

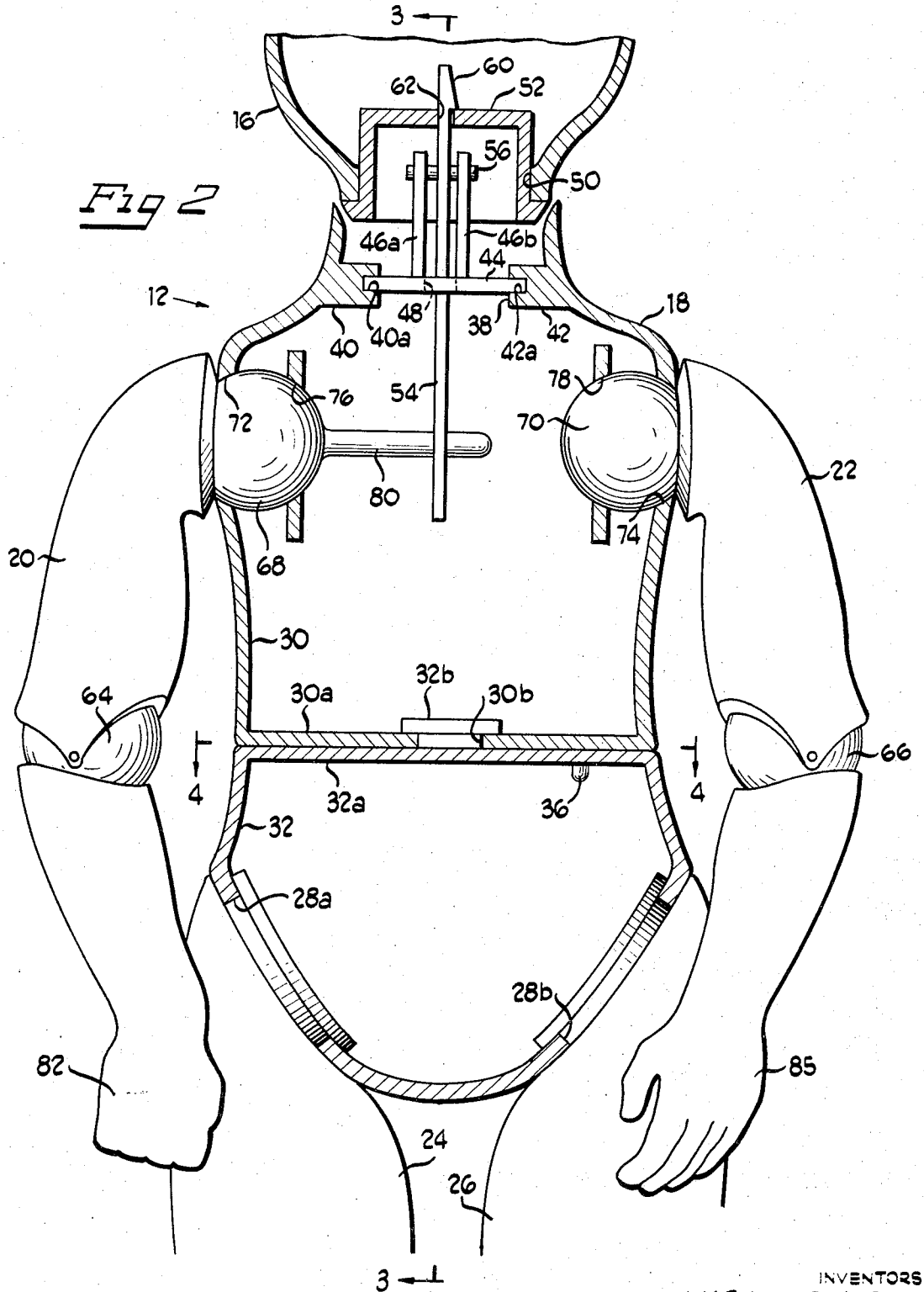
Fig 7



INVENTORS
MARVIN I. GLASS
HOWARD J. MORRISON
ROBERT K. ALLEN

BY Coffee, Weitzel & Sweeney
ATTORNEYS

Fig 2



INVENTORS
MARVIN I. GLASS
HOWARD J. MORRISON
ROBERT K. ALLEN

BY Coffee, Weigel & Sweeney
ATTORNEYS

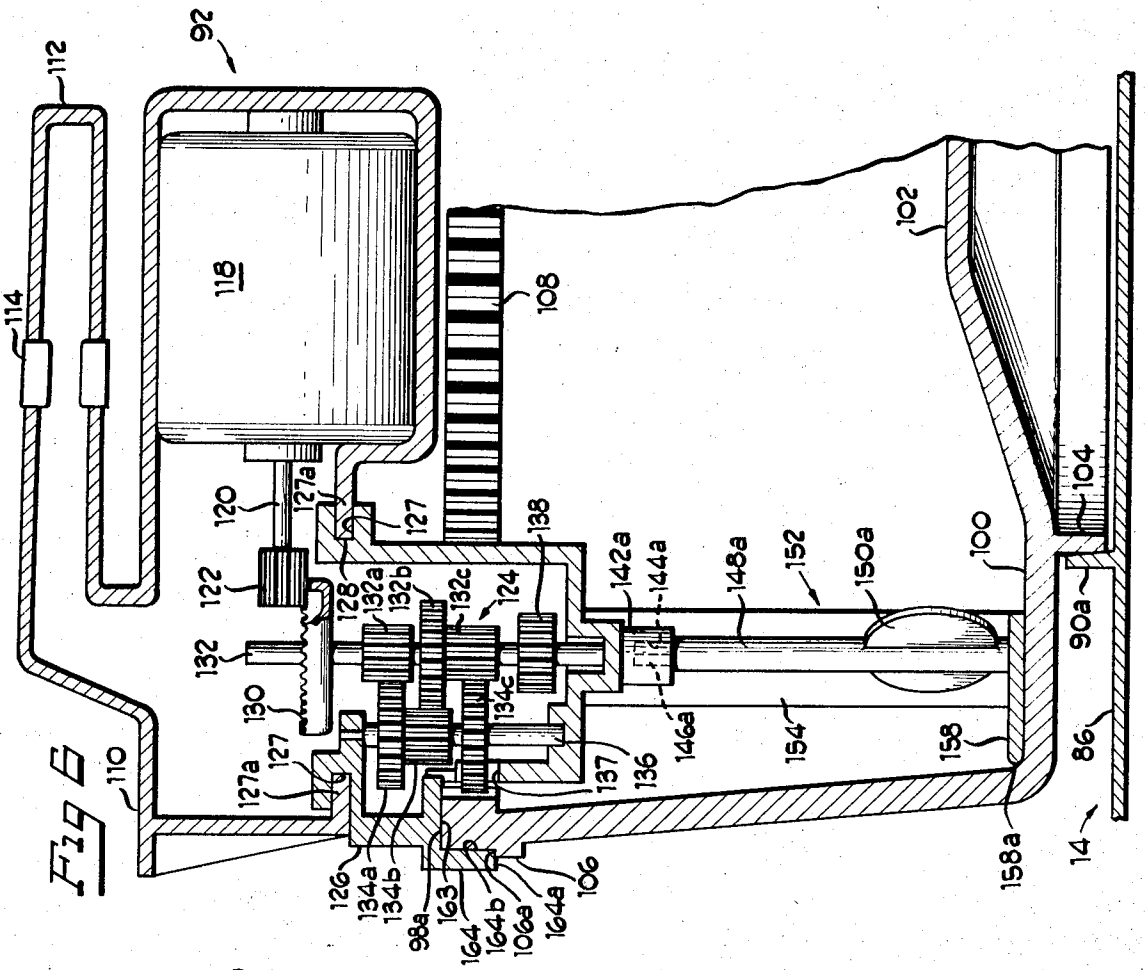


Fig 8

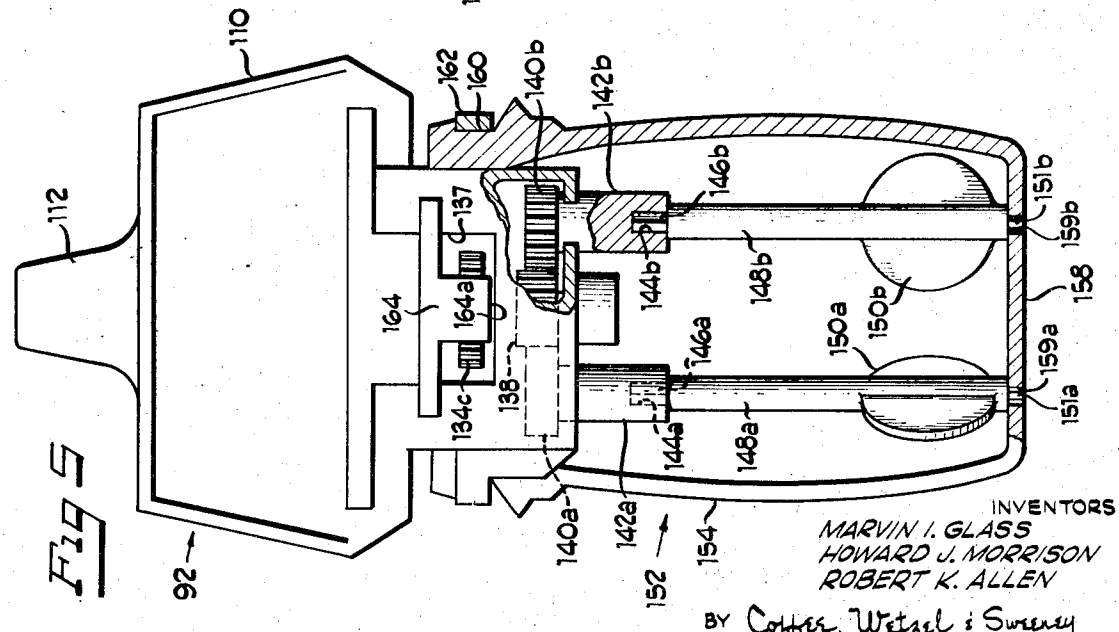


Fig 5

INVENTORS
MARVIN I. GLASS
HOWARD J. MORRISON
ROBERT K. ALLEN
BY Cofper, Wetzel & Sweeney
ATTORNEYS

COMBINATION DOLL AND ACCESSORY IMPLEMENTS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to dolls, and more particularly to a combination doll and accessory apparatus.

2. Brief Description of the Prior Art

In recent years there has been the provision of a great number of different types of dolls which are capable of performing simulated human functions. These include dolls that walk, dance, apparently verbally respond to external stimulus, and the like. There has further been the development of dolls which can apparently participate with the child in some sort of an activity. Those dolls which appear to be capable of simulating human functions to instructions are of greater fascination to children. This invention is directed towards meeting the continuing need and desire in the art to provide an improved doll which is capable of simulating human functions and participating with a child.

SUMMARY OF THE INVENTION

This invention is directed in brief, to the provision of an improved doll and related auxiliary apparatus for performing a simulated human function.

The best mode currently contemplated for carrying out the invention includes the provision of a doll figure having a body including relatively movable torso portions and a tiltable head, and a pair articulated arms and legs connected to the body, with one of the arms having a hand portion with a first contact element therein. The invention further includes accessory elements in the form of a base platform on wh the doll may be seated and a simulated mixing bowl, which is to be held within flanges on the base platform. The mixing bowl is adapted to receive a small electric mixer held in the doll hand which may be driven to track about a ring gear on the inner periphery of the mixing bowl. Portions of the doll move responsive to the tracking of the mixer about the bowl as it is held in the doll's hand. The electric mixer includes beater assemblies and has a handle with complementary contact portions for engaging with the contact portions in the doll hand for activating the mixer motor.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the combination doll and accessory implements of this invention;

FIG. 2 is a fragmentary enlarged section view mainly through the torso of the doll of this invention;

FIG. 3 is a section view taken generally along the line 3—3 of FIG. 2;

FIG. 4 is diagrammatic view of the upper and low torso connection of the doll of this invention;

FIG. 5 is a view partially broken away in section of the mixer unit utilized with the doll and accessory implements of this invention;

FIG. 6 is a fragmentary section view showing the mixer and mixing bowl utilized with the doll and accessory implements of this invention;

FIG. 7 is a fragmentary enlarged section view showing the relationship between the grip of one hand of the doll and the handle portion of the mixer of this invention; and

FIG. 8 is a diagrammatic perspective view showing the related components of the circuitry for activating the mixer utilized with the doll and accessory components of this invention;

While this invention is susceptible of embodiment in many different forms, forms, there is shown in the drawings and will herein be described in detail a specific embodiment therefor, with the understanding that the present disclosure is to e considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiment illustrated.

BRIEF DESCRIPTION OF THE PREFERRED EMBODIMENT

The combination doll and related accessories **10** of this invention includes a doll **12** and accessory components **14** to be described.

Doll **12** has the usual head **16** and torso **18**, a pair of arms fasten and **22**, and a pair of legs **24** and **26**. Legs **24** and **26** are articulated for movement relative to the doll by being connected through openings **28***a* and **28***b* in the lower portion of the torso **18**.

Torso **18** includes an upper portion **30** having bottom panel **30***a* and central opening **30***b* therein. Torso **18** also includes a lower portion **32** having a top panel **32***a* which supports a post **32***b* having an enlarged head that extends through the opening **30***b* in the panel **30***a* to fasten the upper portion **30** to the lower portion **32** for relative rotational movement. In addition, there is a slot **34** provided in the top panel **32***a* of lower torso **32** and a pin **36** depends from the bottom panel **32***a* of upper torso **30** through slot **34** to thereby limit the amount of relative rotational movement of the upper and lower torso portions **30** and **32**, respectively. Slot **34** terminates at the V-shaped ends **34***a* and **34***b* so that pin **36** may travel in a narrow elongate oval path of travel and the torso may turn to-and-fro responsive to one of the arms being carried through a circular path of travel.

The upper portion **30** of the torso has an open upper end **38** defining a neck portion of the doll. Open end **38** is somewhat larger than the lower portion of head **16** to permit tilting motion of the head **16** relative to the torso **18**. The open end **38** has inwardly directed flanges **40** and **42** having slots **40***a* and **42***a*, respectively. An annular ring **44** is rotatably held within the slots **40***a* and **42***a*. The annular ring **44** supports a pair of spaced apart uprights **46***a* and **46***b* and the ring **44** has a space **48** therein between the uprights **46***a* and **46***b*.

Head **16** has an opening **50** in the bottom portion for receiving head insert **52**, which is generally a box-like structure with a bottom opening **52***a*. A link member **54** is secured within insert **52** and is pivoted on a pin **56** which extends between the uprights **46***a* and **46***b*. The link **54** depends through the space **48** in the annular ring **44** and, at its lower portion, has an elongate vertical slot **58**. At its upper end the link **54** has a tab **60**, which extends through slot **62** in insert **52**. By this arrangement, as the link **54** moves to- and-fro, by being pivoted about pin **56**, the head will tilt to- and-fro as well. It is contemplated that known eye blinking structure may be provided with doll head **16** for simulating eye blinking during tilting motion of the doll head.

Each of the arms **20** and **22** is provided with elbow socket joints **64** and **66** so that the lower portion of the

arm is articulated for movement relative to the upper portion. In addition, the upper portions of the arms **20** and **22** are provided with ball ends **68** and **70**, respectively, which extend through sockets **72** and **74** in the upper torso **30** and are received in sockets **76** and **78**, respectively, in the interior of the upper torso **30**, to provide a generally universal mounting of the arms relative to the doll body. A pin **80** protrudes from ball end **68** to the interior of upper torso **30** and resides in slot **58** of link **54**. Up and down movement of arm **20** becomes lost motion of pin **80** in slot **58**, but side to side movement of arm **20** causes pin **80** to engage the sides of slot **58** and move head **16**. Therefore, as the pin **80** moves to- and-fro responsive to movement of the arm **20**, this movement will be translated into tilting movement of the head **16** through aforedescribed structure.

Arm **20** is provided with a hand **82** at the lower end thereof, which is generally configured in an open, fist-like grip. The interior of hand **82** is provided with a U-shaped metal contact member in the interior thereof, which constitutes a bridge for completing a circuit as will be described. A hand **85** is also provided at the end of arm **22**, but need not be of any special configuration.

Included in the accessories **14** of the combination of this invention, is a base structure **86** from which there is supported a small bowl or cup **88** within an upstanding annular flange **88***a*. This bowl may be utilized for premixing of ingredients or the like. An ingredient or mixing bowl **90** is also supported on base **86** within an upstanding annular flange **90***a*. The accessories further include a mixing utensil or mixer **92** having a cord **94** which leads therefrom and terminates in outlet plug **94***a* connected to a source of power, which may be a wall outlet or, as shown, a battery pack **96** having batteries **96**a and **96***b*. Cord **94** is comprised of two wires as will be described later.

Bowl **90** has a generally cylindrical, slightly frustoconical, side wall **98** which extends upwardly from a bottom **100** and terminates at an upper edge **98***a*. Bottom **100** has a center raised portion **102** and a depending flange **104** which fits within the annular flange **90***a* of the base **14**. The bowl further includes an exterior peripheral flange or rib **106** defining an upper arcuate shoulder **106***a* near the upper edge **98***a*. The interior of the upper end near edge **98***a* has a tracking or gear surface **108** formed therein which defines a ring gear.

Mixer **92** includes a housing **110** having an elongate handle portion **112**. A pair of C-shaped contacts **114** and **116** are disposed on the handle. With reference to FIG. **8**, the contacts **114** and **116** are in communication with a source of power **96** through a circuit including wire **117** which runs from contact **114** to motor **118** and wire **117***a*, which runs from motor **118** to plug **94***a* and is part of the cord **94**. Further, the contact **116** is in direct communication with plug **94***a*, through wire **119**.

The mixer motor **118** includes an output shaft **120** which supports an output shaft gear **122**. Output shaft gear **122** is in driving engagement with gear train **124** of beater head **126**. Beater head **126** has an outwardly opening circumferential notch, **127** at its upper end which receives the edge portions **127***a* of opening **128** in housing **110** to rotatably mount the head **126** relative to the mixer housing **110**. By this arrangement, beater head **126** comprises a turret relative to housing **110**.

The gear train **124** includes a ring gear **130** fastened on shaft **132**. Gear shaft **132** supports reduction gears **132***a*, **132***b*, and **132***c* which are in meshing engagement with reduction gears **134***a*, **134***b* and **134***c* supported on shaft **136**. Gear **134***c* extends through opening **137** in beater head **126** for meshing driving engagement with ring gear surface **108**, so that gear **134***c* comprises a driving member with respect to surface **108** which comprises a tracking surface.

Shaft **136** terminates in a beater drive gear **138** which is in meshing engagement with laterally adjacent beater gears **140***a*, **140***b* which are connected to rotatable beater hubs **142***a* and **142***b*, respectively. Beater hubs **142***a* and **142***b* terminate in sockets **144***a* and **144***b*, respectively, for receiving the reduced ends **146***a* **146***b* of beater shafts **148***a* and **148***b*, respectively. Beater shafts **148***a* and **148***b* have radial enlargements at their respective lower ends comprising beater ends **150***a* and **150***b*. The bottom of the beater shafts **148***a* and **148***b* terminate in reduced pin-like ends **151***a* and **151***b*.

The mixer **92** further includes a generally U-shaped beater shroud **152** having upright arms **154** and **156** joined by a bottom **158**. The bottom **158** includes a forward edge **158***a* which is intended to track against the interior of the junction of side wall **98** and bottom **100**. The bottom also has spaced openings **159***a* and **159***b* for rotatably receiving the reduced beater shaft ends **151***a* and **151***b*, respectively. The upper end of the arms **154** and **156** include a reduced notch **160**, which is received within the retaining ring **162**. It is intended that the shroud could be removed from the housing by squeezing inwardly on the arms **154** and **156** so that the reduced notch **160** would clear the retaining ring **162** and allow for removal of the shroud.

The beater head **126** has a horizontal rib **163** which is intended to rest on the upper edge **98***a* of side wall **98**. Rib **163** supports a depending lip **164** terminating in bottom edge **164***a* which abuts shoulder **106***a* of rib **106**. The inner face **164***b* of lip **164** abuts the outer surface of the bowl **90** between rib **106** and edge **98***a* when the gear **134***c* is in meshing engagement with gear ring **108**. By this arrangement, and the rotatable mounting of beater head **126**, the beater head will "track" about the bowl and the remainder of housing **110** will revolve about the beater head when motor **118** is activated.

In operation, when the doll hand **82** is placed about the handle **112** of mixer **92**, the contact **84** bridges the contacts **114** and **116** to complete the circuit between the motor and the source of power, assuming that the plug **94***a* is electrically connected with the source of power **96**. If such is the case, the mixer motor is activated and, assuming that the gear **134***c* is in meshing engagement with the ring gear **108** in the interior of the bowl **90**, the mixer will track about the interior of the bowl. The beater head assembly will rotate in the manner of a turret relative to the mixer housing **110** and the hand grip will bias the mixer toward the center of the bowl in opposition to the retaining influence exerted by the overhanging lip **164**. As the doll arm **20** tracks along with the rotation of the mixer **92** about the interior of the periphery of the bowl, the doll body will swivel from side to side, through the provision of the aforementioned connection of the upper torso and lower torso through the post and opening **32***b* and **30***b* and the pin and slot **36** and **34**. The movement of arm

20 will also impart a to- and-fro tilting movement to the doll head 16. The mixer is further urged in a tracking pattern around the interior of the bowl closely adjacent to the side walls by the upraised center portion 102 of the bottom, which also tends to urge the ingredients towards the side wall 90 and the forward edge 158a of the shroud limits the outward movement of the mixer in the area of the bottom of the bowl. The beaters may be easily removed for cleaning by first removing the shroud itself and then axially withdrawing the beater shafts from the rotatable hubs.

Thus, it can be seen that the doll and related accessories of this invention provide a novel combination entertainment and participation toy for a child in that the doll may play the role of a "helper" by functioning to mix certain ingredients, which it is contemplated, could be actually used subsequently, as a food product. The doll itself apparently responds through the movement of its body and tilting of its head. These responsive movements are resultant from the driving action of the mixer 92 which thus performs the dual function of mixing ingredients and also acting as a drive source positioned outside the doll for imparting movement to portions of the doll.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, as some modifications may be obvious to those skilled in the art.

We claim:

1. In combination, a doll and accessory set, comprising:

means defining a doll body and doll arms connected to said body, at least one of said arms terminating in a gripping portion, said doll including said arms having one portion which is movable relative to another portion responsive to movement of said at least one arm;

a simulated ingredient bowl for receiving ingredients to be mixed, said bowl having a circumsurrounding side wall terminating in an open top and including means defining a tracking surface generally about the side wall thereof,

and a simulated mixing utensil including a housing having a handle portion for retention in the gripping portion of said doll, motor means in said housing a drive system operably connected with said motor means and driven thereby, said drive system including a utensil driving member for tracking on said bowl tracking surface and driving said utensil thereabout; whereby when said handle is retained in the doll gripping portion and the motor is activated to drive the utensil about said bowl, said relatively movable portions of said doll body are caused to move relative to each other.

2. The combination of claim 1 wherein the simulated mixing utensil has an opening in the housing and the drive system driving member is a gear which extends through said opening, and wherein the tracking surface on said bowl comprises a ring gear surface about the side wall thereof.

3. The combination of claim 2 wherein the mixing utensil housing includes an overhanging lip spaced from the driving member for embracing the side wall of the bowl to hold the utensil in engagement with the bowl.

4. The combination of claim 3 wherein said bowl has a shoulder on the surface opposite said tracking surface, said shoulder being located to abut said lip when the utensil is in tracking engagement with the bowl.

5. The combination of claim 1 wherein the driving member is located in a turret which is rotatable relative to the remainder of the utensil housing so that the doll gripping portion may traverse a generally circuitous path of travel during circuitous tracking of said utensil about said bowl.

6. The combination of claim 5 wherein said turret supports depending beater means which are operably associated with said drive system to be driven while said utensil transverses said bowl.

7. The combination of claim 6 wherein said bowl has a bottom spanning said wall with the medial portion of the bottom being raised relative to the remainder and wherein said utensil turret includes a shroud which embraces the beater means, the shroud having a bottom which abuts the bowl bottom when the utensil is in tracking engagement therewith, with the shroud bottom having inner and outer edges which lie between the raised portion of the bowl bottom and the bowl side wall at its juncture with the bowl bottom.

8. The combination of claim 5 wherein the simulated mixing utensil has an opening in the housing and the drive system driving member is a gear which extends through said opening, and wherein the tracking surface on said bowl comprises a ring gear surface about the side wall thereof.

9. The combination of claim 1 wherein said doll includes a torso having upper and lower portions which are movable relative to each other responsive to tracking of said utensil about said bowl when said gripping portion retains said handle.

10. The combination of claim 1 wherein one doll arm, having said gripping portion, is connected to the doll body by means affording substantially universal movement of the arm relative to the body.

11. The combination of claim 10 wherein said one doll arm has an extension to the interior of the doll body and wherein said doll body has a head movably connected thereto, with said head also having an extension which is adjacent to the arm extension and in a position to be engaged thereby to move the doll head as the doll arm moves responsive to tracking of said utensil.

12. The combination of claim 11 wherein said doll includes a torso having upper and lower portions which are movable relative to each other responsive to tracking of said utensil about said bowl when said gripping portion retains said handle

13. The combination of claim 1 wherein said motor means is part of a circuit including spaced contact members on said utensil housing handle and wherein said doll arm gripping portion has a circuit bridging means for closing the circuit through the handle contacts when the handle is retained in the gripping portion.

14. In combination, a toy figure and accessory set, comprising:

means defining a figure body including limbs connected to a torso, said body having portions movable relative to each other responsive to movement of at least one limb;

a vessel-like accessory having a tracking surface thereon;

and, a tool including a housing having a connecting portion for connection with a figure limb, and another portion for tracking engagement with said accessory tracking surface:

a motor associated with one of said tools and said accessory;

and a driving member associated with said motor and connected with one of said tool and accessory to drive one relative to the other and cause said tool to track relative to said accessory;

whereby, when said at least one limb is connected to said tool and said motor is activated to drive said driving member, said relatively movable portions of said body will move responsive to tracking of said tool about said accessory.

15. The combination of claim **14** wherein the accessory is an open top vessel with the tracking surface adjacent the open top.

16. The combination of claim **14** wherein the motor is associated with the tool and the tool is driven about the accessory.

17. The combination of claim **16** wherein the said one limb has a housing gripping portion with a first circuit activating component and the housing connecting portion has a second circuit activating component and is engageable with the gripping portion for holding the housing relative to the limb and activating the motor circuitry.

18. The combination of claim **17** wherein the accessory is an open top vessel with the tracking surface adjacent the open top.

19. The combination of claim **18** wherein the figure torso includes relatively movable portions and said at least one limb is movable relative to said torso.

* * * * *

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,680,254 Dated August 1, 1972

Inventor(s) Marvin I. Glass, Howard J. Morrison, Robert K. Allen

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

Summary of the Invention

Line 36, column 1 "wh" should read --which--.

Brief Description of the Drawings

Line 6, column 2 "forms," should not be duplicated.

Line 9, column 2 "e" should be --be--.

Brief Description of the Preferred Embodiment

Line 21, column 2 "fasten" should have been --20--.

Line 33, column 2 "32a" should be --30a--.

Claims

Line 48, column 5 A comma was omitted after "housing".

Signed and sealed this 6th day of March 1973.

(SEAL)
Attest:

EDWARD M.FLETCHER,JR.
Attesting Officer

ROBERT GOTTSCHALK
Commissioner of Patents

FORM PO-1050 (10-69)

USCOMM-DC 60376-P69
* U.S. GOVERNMENT PRINTING OFFICE : 1969 O—366-334