United States Patent [19]

Breslow et al.

[11] **3,757,463**

[45] **Sept. 11, 1973**

[54] **DOLL WITH MOVABLE PART FOR COACTION WITH MOVABLE PART OF ACCESSORY**

[75] Inventors: **Jeffrey D. Breslow**, Highland Park; **Marvin I. Glass**, Chicago, both of Ill.

[73] Assignee: **Marvin Glass & Associates**, Chicago, Ill.

[22] Filed: **Feb. 22, 1972**

[21] Appl. No.: **228,142**

[52] **U.S. Cl.** **46/118**, 46/33, 46/44, 46/120

[51] **Int. Cl.** **A63h 13/00**, A63h 5/00

[58] **Field of Search** ..... 46/44, 33, 116, 135 R, 46/118

[56] **References Cited**

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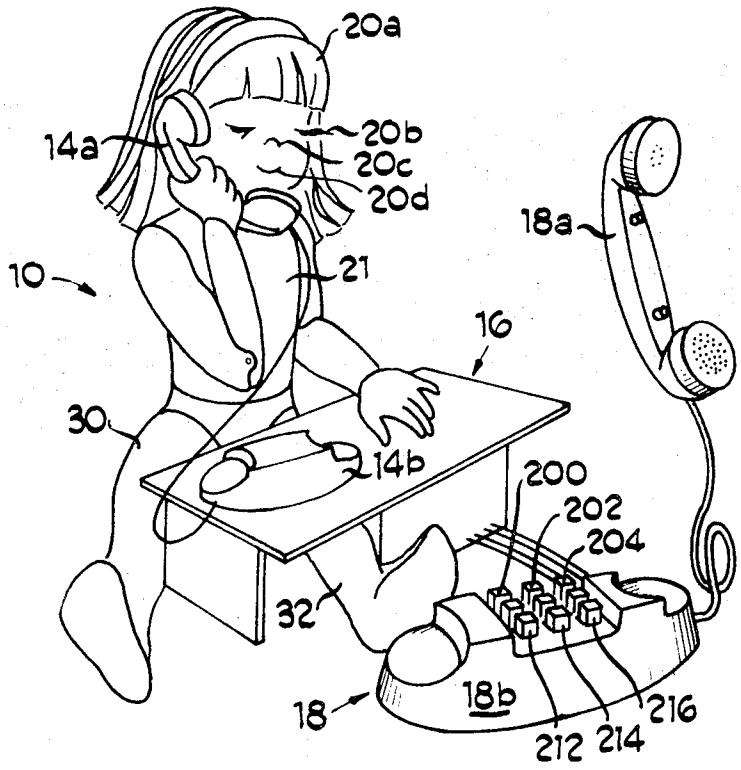
Primary Examiner—F. Barry Shay

Attorney—James F. Coffee et al.

[57] **ABSTRACT**

A doll and associated telephone accessory for the doll and for a participant for simulating response by the doll to a telephone call, characterized by the provision of fluid conduits and piston-like bellows associated with the telephone and doll component connected with the conduits for movement of components of the doll and actuation of the doll telephone responsive to depression of buttons on the participant's telephone.

6 Claims, 11 Drawing Figures



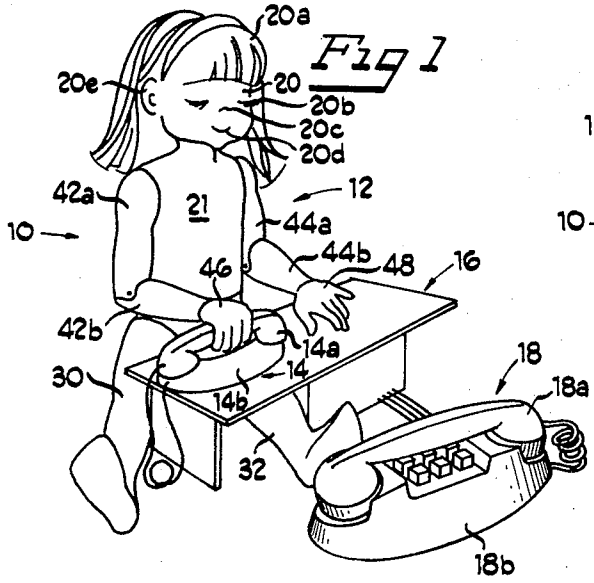


Fig 1

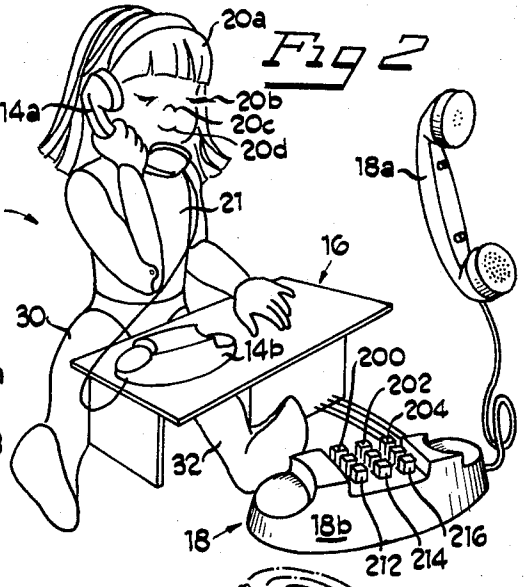


Fig 2

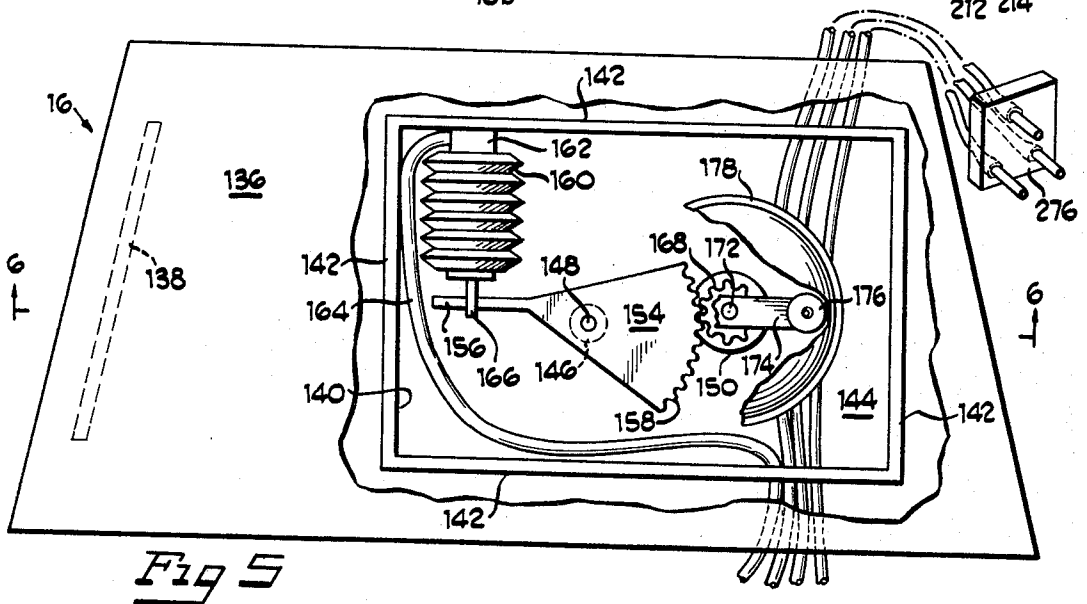


Fig 5

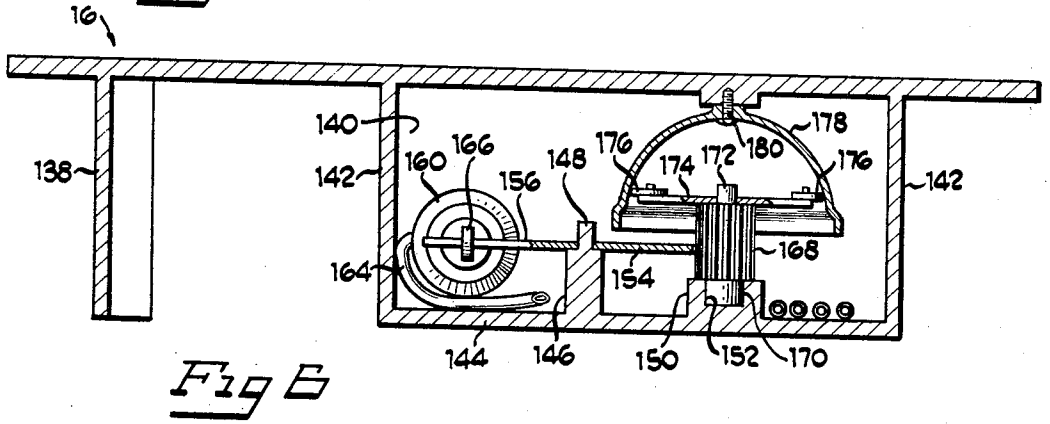


Fig 6

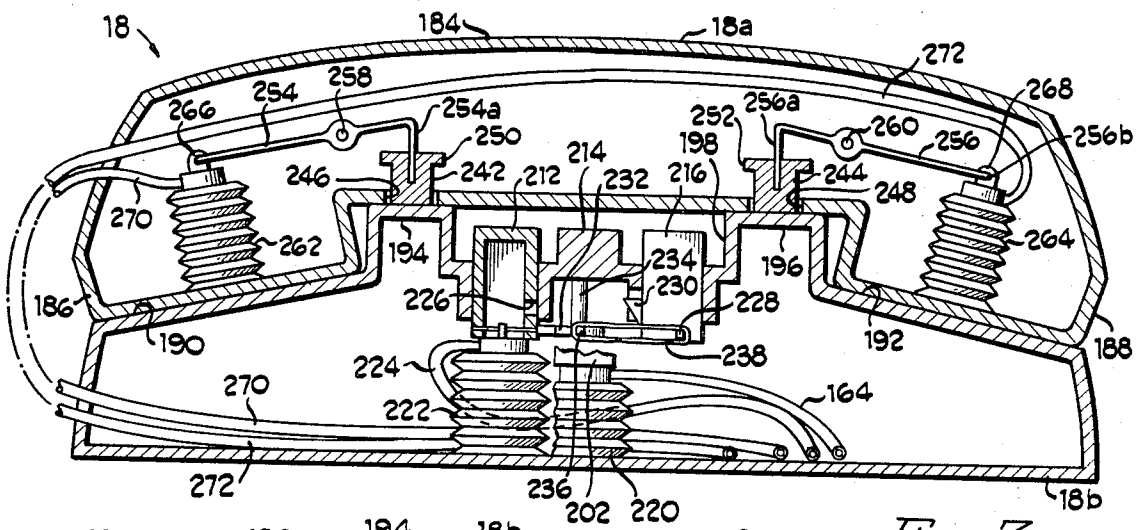


Fig 3

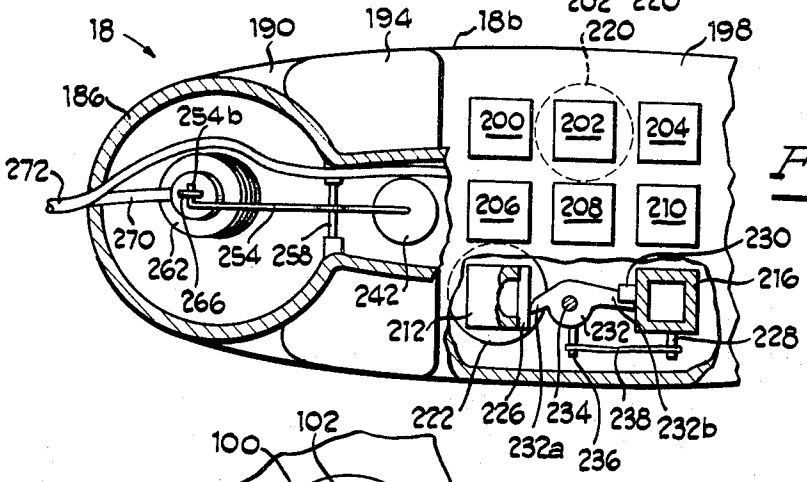


Fig 4

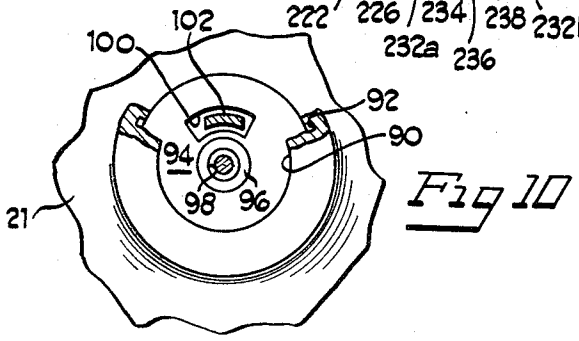


Fig 10

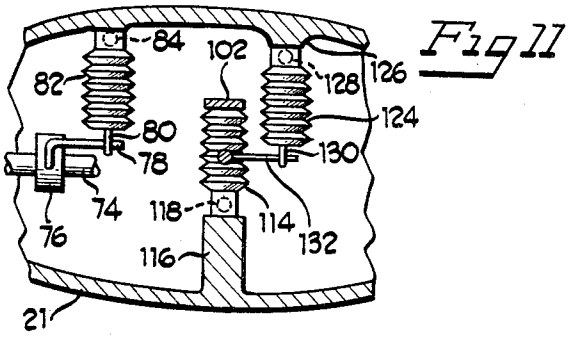


Fig 11

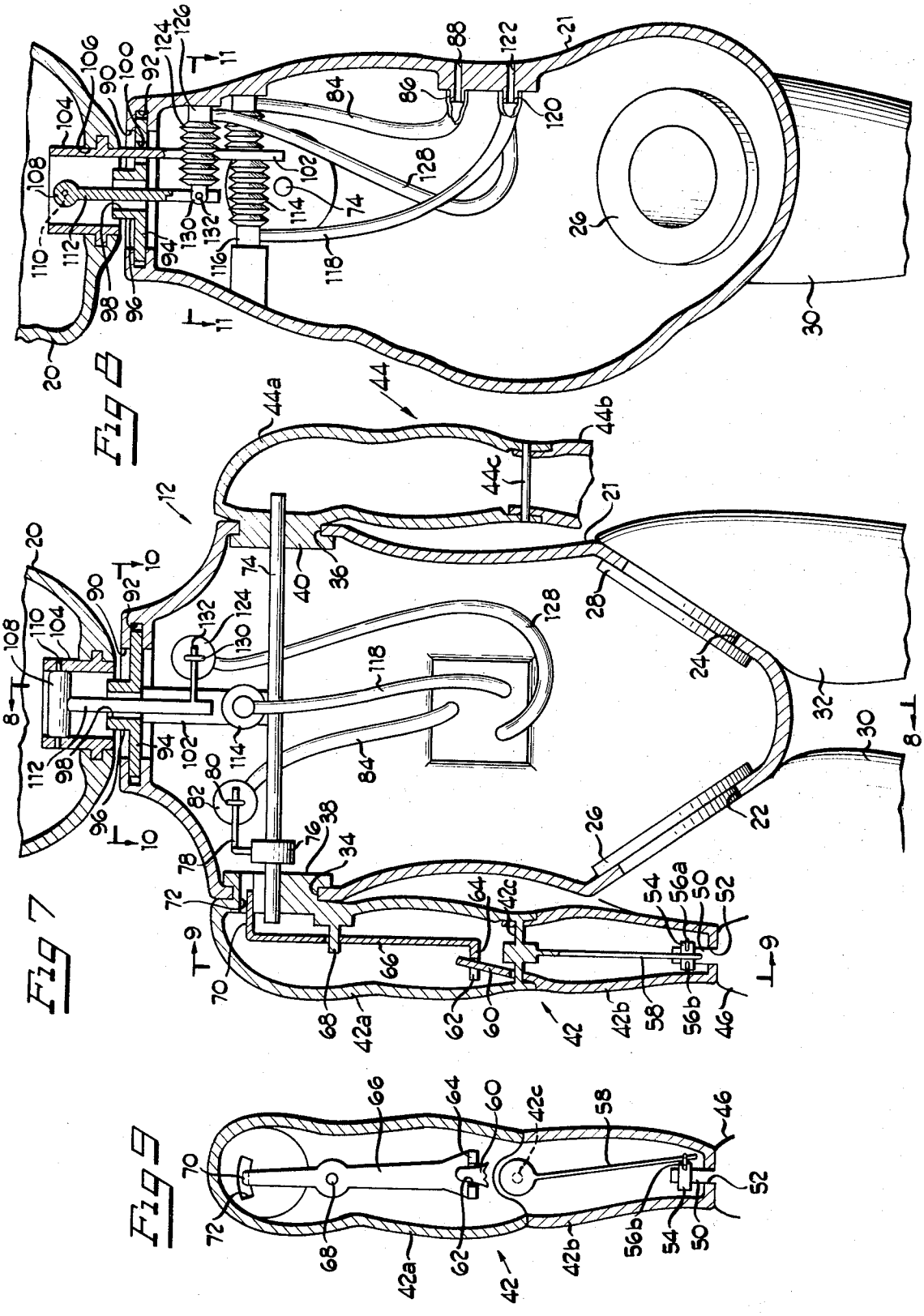


Fig 8
Fig 7
Fig 5

DOLL WITH MOVABLE PART FOR COACTION WITH MOVABLE PART OF ACCESSORY

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to movable figures toys and more particularly to a doll and related telephone accessories for simulating telephone conversation with a participant.

2. Brief Description of the Prior Art

Fluid actuated movable figure toys are disclosed in the following U.S. Pats. Nos.: Giannone, 2,920,419; Scaparino, 3,090,156; Ostrander, 3,125,827; Boulard-Cogan, 3,153,881; Beatty, Sr., 3,392,483; Boginiski, et al., 3,599,363; Mendigal, 3,600,845.

Generally speaking, in such toys, air or fluid is pumped to move portions of a doll or doll-like figure. These toys possess the advantage of being inexpensive in the utilization of a fluid medium and quiet and reliable in operation.

Recently there has been developed in the art, a number of dolls or the like which seem to participate in an activity together with, or responsive to, the actions of a participant. Such movable figure toys are well received in that they add realism to participation with them and seem like a "playmate."

It is the object of this invention to meet the continuing need and desire in the art to provide improved forms of activity participating movable figure toys, and in particular, one which is actuated responsive to a fluid displacement system.

SUMMARY OF THE INVENTION

This invention is directed, in brief, to the provision of an improved movable figure toy in the form of a doll and accessory telephone with the doll, with one telephone having movable components which move responsive to an air line and bellow system actuated by the other telephone.

The best mode currently contemplated for carrying out the invention includes the provision of a doll figure having a head which is movable in a horizontal and vertical plane to simulate affirmative and negative nodding and a movable limb including an arm and wrist arrangement constructed and arranged to go through the motions of picking up a phone headset and raising it to the ear of the doll with the headset being part of a simulated telephone for the doll. A master telephone is provided for a participant. The participant's telephone has push buttons thereon with bellows and conduits associated therewith for displacing fluid in the conduits responsive to depression of certain buttons. The fluid conduits are associated with bellows in the interior of the doll and also with the doll telephone which, in turn, are connected to suitable linkage arrangement for moving the movable components thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view showing the doll of this invention and related telephone accessories, with the doll telephone and doll arm in the rest position wherein the doll headset is cradled on the base of the doll telephone;

FIG. 2 is a perspective view similar to FIG. 1 showing the doll in a working position with the doll headset raised to the ear of the doll head through the actuation of the doll arm;

FIG. 3 is a vertical section view through the participant's master telephone;

FIG. 4 is a fragmentary plan view of the participant's telephone, partially broken away in section;

FIG. 5 is a plan view partially broken away in section of the supporting table for the doll telephone;

FIG. 6 is a section view through the doll table taken generally along the line 6—6 of FIG. 5;

FIG. 7 is a fragmentary vertical section view through the doll;

FIG. 8 is a section view taken generally along the line 8—8 of FIG. 7;

FIG. 9 is a section view through the doll arm taken generally the line 9—9 of FIG. 7;

FIG. 10 is a horizontal section view through the doll neck, taken along the line 10—10 of FIG. 7; and

FIG. 11 is a horizontal section view through the upper portion of the doll's torso taken generally along the line 11—11 of FIG. 8.

While this invention is susceptible of embodiment in many different 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 be 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 accessory **10** of this invention includes a doll generally indicated **12**, a doll telephone **14** including a simulated headset **14*a*** and base **14*b*** which rests on a table **16**. The set further includes a master telephone **18** again having the simulated headset **18*a*** and base **18*b***.

The doll **12** includes a head **20** having the usual simulated characteristics, such as hair **20*a***, eyes **20*b***, nose **20*c***, and mouth **20*d***, and ears **20*e***. The head is supported on a torso **21** with the torso having leg openings **22** and **24**, for receiving the flanged ends **26** and **28** of legs **30** and **32**, whereby the legs are articulated relative to the torso for movement through the aforementioned connection.

The torso **21** further includes, at its upper end, arm openings **34** and **36** for receiving the flanged ends **38** and **40** of arms **42** and **44**. Each arm **42** and **44**, comprises an upper portion **42*a*** and **44*a*** and a lower portion **42*b***, **44*b***, connected to each other by a cross web or pin **42*c***, **44*c***, respectively, so that the upper and lower portions of the arm are movable relative to each other as well as the entire arm being movable relative to the torso through the aforementioned connection of the flanged ends of the arms in the arm openings.

The ends of the arms **42** and **44** have simulated hands **46** and **48**. At least hand **46** has a stub **50** which extends through an opening **52** in the arm **42** to rotatably mount the hand **46** relative to the arm. It is contemplated that the hand **46** would be so configured and arranged as to grip the headset **14*a*** and hold the two together for movement.

Stub **50** supports a ring **54** which has spaced abutments **56*a*** and **56*b*** thereon. The free end of rod **58** lies between abutments **56*a*** and **56*b*** and is connected to web **42*c***. As the lower arm **42*b*** pivots, rod **58** will travel circumferentially with ring **54** rotating the hand about the wrist joint afforded by the connection **50–52**.

Lower arm 42*b* has an extension 60 which extends into upper arm 42*a*. Extension 60 is received in a slot 62 in lower legs 64 of lever 66. Lever 66 is pivoted on a stub 68 in the interior of upper arm 42*a* and has an upper leg 70 which is received in an arcuate slot 72 formed in the flanged end 38 of the arm 42.

A rod 74 extends across the upper portion of the interior of torso 21 and is connected to the flanged end 38 of arm 42 and rotatably received in the flanged end 40 of arm 44. Rod 74 has an enlargement 76 near the arm socket 34 with a laterally extending projection 78. Projection 78 is connected to a plunger 80 which is associated with the resilient air bellows 82. The plunger 80 and bellows 82 comprise a piston-type means which is extensible and retractable to impart motion to as associate component.

Bellows 82 is fastened to the rear wall of the torso and is in fluid communication with fluid line or conduit 84. Conduit 84 extends to a nipple 86 surrounding air inlet 88 on the back of the torso. As air is fed to the bellows 82 through the conduit 84, the bellows will expand in a piston or plunger-like fashion, moving the plunger 80 forwardly to rotate rod 74. The rod will move the upper arm through a limited amount of movement before the side of the arcuate slot 72 will engage the upper leg 70 of lever 66. Following this absorbtion of lost motion, lever 66 will then also impart movement to lower arm 42*b* causing it to raise, while the upper arm is also rotating. As the lower arm is raised, as previously described, the wrist connection between the hand 46 and lower arm 42*b* will rotate and, as this action continues, the doll will go through the motion of the arm moving from a rest position, where the headset 14*a* is on base 14*b*, through a lifting motion to a working position, where the arm and hand move the headset 14*a* adjacent the ear 20*e* of the doll so that the doll is simulating talking into the telephone headset.

The head 20 is connected to the neck opening 90 of the torso 21. Neck opening 90 has an interior annular groove 92 for rotatably receiving the periphery of plate 94. Plate 94 has a centrally oriented upstanding hub 96 which has an opening 98 therethrough. The plate 94 also has a slot 100 which is offset from the center with the slot 100 being generally arcuate in configuration as best seen in FIG. 10. A depending extension 102 of sleeve 104 extends through the slot 100. The slot 100 is intended to be both wider, and of greater circumferental extent, than the extension 102, to allow relative movement of the extension 102 with respect to the slot 100.

Sleeve 104 is captivated in an opening 106 at the bottom of the head 20. The sleeve 104 supports a depending T-shaped tongue 108 which is pivoted on pin 110 to the interior of the sleeve for movement in a generally horizontal plane, or about an axis which is generally transverse to the axis of rotation of the plate 94 through which the depending extension 102 extends. Relatively speaking, the tongue 108 is pivoted about a horizontal axis and plate 94 may rotate about a vertical axis. The tongue 108 has a depending extension portion 112 which extends through the opening 98 in hub 96 of plate 94.

A bellows 114 abuts the depending extension 102 and is fastened at 116 to the interior of the torso 21. Fluid line or conduit 118 extends from the bellows 114 to a nipple 120 which is in communication with inlet 122 for the admission of fluid into the conduit from the exterior of the torso. A bellows 124 is fastened at 126 to the interior of the torso and is in communication with a conduit or fluid line 128 which is similarly connected to a nipple and inlet as described with respect to conduit 118, but not shown in the drawings. Bellows 124 has a plunger 130 which is connected to a rod 132 which constitutes a lateral extension of the depending extension 112. Thus, when bellows 124 is extended responsive to the admission of fluid thereinto, it will push the rod 132 forwardly, causing relative rotation of the head with respect to the torso, in that the sleeve 104 will be caused to turn until the extension 102 engages the side of the slot 100 in plate 94, which will permit further rotation of the head relative to the torso as the plate 94 rotates with respect to the groove 92. This movement about a generally vertical axis constitutes the equivalent of a negative to-and-from motion in the head. When the bellows 114 is filled with fluid and extends it will push the extension 102 to cause the head to rotate about the vertical axis afforded by pivot 110 and this will constitute the equivalent of an affirmative nodding of the head indicating a positive response.

The table 16 is best shown in FIGS. 5 and 6 includes a top 136 supported on one side by a sheet-like depending leg structure 138. The table 16 also has a depending bell chamber 140 which serves to support the top 136. The bell chamber 140 is defined by walls 142 which depend from the underside of top 136 and are spanned by a bottom 144 which is substantially coplanar with the terminus of leg 138. The bottom 144 has an upwardly extending post 146 with a reduced end 148. The bottom also has an upwardly extending hub 150 with a centrally formed recess 152. both the posts 146, and hub 150, face inwardly to the interior of the chamber 140 for supporting components to be described.

Gear segment 154 is pivoted to the reduced end 148 of post 146. The gear segment 154 has a rear leg 156 and a forward arcuate toothed gear surface 158. Bellows 160 is fastened at one 162 to wall 142 and is in communication with fluid line or conduit 164. Bellows 160 has a forwardly extending plunger 166 which is connected to the rear leg 156 of gear segment 154. Thus, extension and contraction of bellows 160 will cause gear segment 154 to pivot about the reduced end 148 of post 146.

Gear 168 has a bottom stub 170 which is rotatably received in recess 152 of hub 150 and a top stub 172. Top stub 172 supports arm 174 which has discs 176 at its opposite ends. The arm 174 and its discs 176 are positioned to the interior of a bell 178 which is fastened by screw 180 to the underside of the table top 136. Thus, as the gear segment 154 is rotated about reduced end 148 by actuation of bellows 160, the gear surface 158 will rotate gear 160 about bottom stub 170 and cause rotational movement to be imparted to arm 174. This will cause disc 176 to engage the interior of bell 178 and thereby produce a ringing sound. It is intended that the bell and disc would be so constructed such that the ringing sound produce would closely simulated that of a telephone ringing.

The master or participant telephone 18 is intended to be a close simulation of a table-model push button telephone. The headset portion 18*a* has the usual handle portion 184 which supports a simulated mouth piece 186 at one end and simulated ear piece 188 at the opposite end. When resting on the base 18*b*, the mouth piece 186 overlies the recessed portion 190 at one end,

and ear piece 188 overlies the recessed portion 192 on the other end, so that, in a fashion common to such telephones, the head piece 18*a* is cradled with respect to the base 18*b*. Adjacent each of the recess portions 190 and 192, the base is provided with raised shoulders 194 and 196 which flank either side of a central recessed area 198. Push buttons are disposed in the recessed area 198 much in the same fashion as a conventional telephone. As illustrated in the drawings it is intended that push buttons 200, 202, 204, 206, 208, 210, 212, 214 and 216 would be provided in the recessed area 198.

Push button 202, as best seen in FIGS. 3 and 4, is connected to a bellows 220 supported on the bottom of the interior of base 18. Bellows 220 is connected with fluid line 164 which extends to the bellows 160 on the underside of table 16.

Push button 212 is connected with bellows 222 also supported on the bottom of the interior of base 18*b*. Bellows 222 is connected with fluid line 224 which extends outwardly of the participants phone 18 to a junction to be described. Button 212 has an opening 226 in the side thereof, as best seen in FIG. 3. Button 216 has a laterally extending post 228 as well as an outwardly extending cam surface 230. A lever 232 is pivoted on a post 234 for movement in a horizontal plane. Lever 232 has opposite legs 232*a* and 232*b*, which are adjacent the buttons 212 and 216. Lever 232 includes an outwardly extending post 236 and a biasing means or rubber band 238 extends between post 236 of lever 232 and post 228 of button 216. By this arrangement, as button 216 is depressed, cam surface 230 will strike leg 232*a*, causing rotation to be imparted to lever 232 about pin 234 in opposition to the biasing force exerting by band 238. However, band 238 will urge the lever to return to its initial position, thereby raising button 212 following the ringing of the bell 178 in bell chamber 140.

The handle portion 184 of head set 18 has buttons 242 and 244 which are movably received in openings 246 and 248. These buttons 242 and 244 have flanges 250 and 252 preventing their egress from the openings 246 and 248. Each button 254 and 256 is connected with a lever 254 and 256. Levers 254 and 256 have downturned ends 254a and 256a which are connected to the buttons 242 and 244, respectively, and offset opposite ends 254*b* and 256*b*. These levers are connected to pivot pins 258 and 260 to mount the levers for pivotal movement to the interior of the head set 18*a*.

The offset ends 254*b* and 256*b* are connected to bellows 262 and 264 by extending through eye portions 266 and 268. The bellows 262 and 264 are located in the simulated mouth piece and ear piece areas 186 and 188 respectively, of the head set 18*a*. Bellows 262 and 264 are connected with conduits or fluid lines 270 and 272, respectively, which extend outwardly of the head set 18*a* into the base 18*b*.

It is intended that the conduit lines 270, 272, 224, and 164, would extend from the participant's phone 18 into the chamber 140 in the table 16. From there the conduit 164 would extend directly to the bellows 160. The remaining conduits would be fastened to a conduit block 276 with a short portion of each conduit extending through the opposite side of the block. These conduits and this block are intended to be constructed and oriented so as to fit into the inlet passages such as 88 and 122 at the rear of the torso 21 of the doll. By this arrangement, the conduits can be placed in communication with the conduits in the interior of the doll. Thus, it can be seen that this connection is extremely simple and easily understood. No elaborate sealing means is necessary particularly, since it is intended that the fluid operating medium would be air, itself.

In operation, the child participant, by operating phone 18, can cause the phone 14 to ring, causing the doll to lift the phone to its ear and further causing the doll to go through an affirmative or negative head nodding movement. Thus, the child participant can simulate the joyful endeavor of calling his simulated playmate on the phone, having the playmate, in the form of a doll, answer the phone, converse with the doll, and then have the doll express either an affirmative or negative response, depending on which is desired by the child, who is in control of the telephone 18.

Specifically, the doll may be operated in the following manner. The participant may lift the head set 18*a* and depress several of the buttons to simulate the act of calling a particular telephone number, and then, finally, depress 202, to activate bellows 220. Bellows 220 will be depressed, forcing a surge of fluid through the conduit 164 which will cause the bellows 160 to expand and pivot the gear 154 thereby rotating gear 168 causing the disc 176 to strike the interior of bell 178 and create a ringing sound.

Following this, the participant may depress button 212 which will compress bellows 233 causing fluid to be displaced in line 224 resulting in expansion of bellows 82. Expansion of bellows 82 will move plunger 80 causing arm 42 to move from the position shown in FIG. 1 to the position shown in FIG. 2 where the head set is positioned adjacent the doll's head. The participant may then converse with the doll and may cause the doll to respond to the conversation by activating either of the buttons 242 or 244. Depression of button 242 will compress bellows 262 displacing fluid in line 270 and 138 causing expansion of bellows 124. This will cause the plunger to work against rod 132 causing the head 20 to rotate about a vertical axis simulating a negative shaking of the head. Depression of button 244 will compress bellows 264 displacing fluid in lines 272 and 118 causing expansion of bellows 114. Bellows 114 bears against extension 102 and, when expanded, will cause the head 20 to pivot about a horizontal axis thereby simulating an affirmative nodding movement.

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

We claim:

1. A combination doll and accessory set comprising: means defining a doll having a torso supporting head and limb components, at least one of which is articulated for movement relative to the remainder of the doll to constitute a movable component; a remote participant accessory connected by at least one fluid conducting conduit to said doll, said participant accessory having manipulatable actuation means for displacement of fluid in said conduit with piston means connected to said conduit for displacement responsive to displacement of fluid therein; linkage means interconnecting said piston means and said at least one movable component for movement of said movable component responsive to displacement of fluid caused by manipulation of said actuation means on said participant's ac-

cessory; a second accessory positioned intermediate the participant accessory and the doll and provided with a movable component having linkage means connected thereto for moving the movable component of the second accessory in response to movement of the linkage means thereof; piston means associated with the linkage means of the movable component of the second accessory for moving the same; and conduit means connected to the piston means of the second accessory and to said participant accessory for moving the linkage means of the second accessory and thus the movable component thereof responsive to displacement of fluid caused by manipulation of the actuation means on said participant accessory, the movable component of the second accessory being associated with said at least one movable component of the doll and wherein said at least one movable component of the doll moves said accessory component when actuated by said participant accessory.

2. The combination of claim 1 wherein both the doll head and limb are movable relative to the doll torso and including means connecting the doll head and limb with the participant accessory for movement thereof responsive to actuation of the participant accessory.

3. A combination doll and accessory set comprising: means defining a doll having a torso supporting head and limb components, at least one of which is articulated for movement relative to the remainder of the doll to constitute a movable component, a remote participant accessory connected by at least one fluid conducting conduit to said doll, said participant accessory having manipulatable actuation means for displacement of fluid in said conduit with piston means connected to said conduit for displacement responsive to displacement of fluid therein, linkage means interconnecting said piston means and said at least one movable component for movement of said movable conponent responsive to displacement of fluid caused by manipulation of said actuating means on said participant's accessory, a second accessory positioned intermediate the participant accessory and the doll and provided with a movable component, said at least one movable conponent of the doll including a movable arm having a hand component and wherein said arm and hand move between a rest position, wherein said hand is in engagement with the movable component of said second accessory away from the doll body, and a working position, wherein the arm and hand move the movable component of the second accessory to a position adjacent one portion of the doll body, and with said second accessory comprising a simulated telephone with the movable component thereof being a simulated headset portion and wherein the portion of the body to which the movable component of the simulated telephone is moved is adjacent the head of the doll body.

4. A combination doll and accessory set comprising: means defining a doll having a torso supporting head and limb components, at least one of which is articulated for movement relative to the remainder of the doll to constitute a movable component, a remote participant accessory connected by fluid conducting conduits to said doll, said participant accessory having manipulatable actuation means for displacement of fluid in said conduits with piston means connected to said conduits for displacement responsive to displacement of fluid therein, linkage means interconnecting said piston means and said at least one movable component for movement of said movable component responsive to displacement of fluid caused by manipulation of said actuating means on said participant's accessory, a second accessory positioned intermediate the participant accessory and the doll and provided with a movable component, said participant accessory comprising a simulated telephone and said manipulatable actuation means thereof comprising piston means therein and push buttons thereon connected to said latter piston means, said fluid conduits leading from said latter piston means outwardly of said accessory for displacement of fluid in said conduits by actuation of said push buttons, said movable component comprising the doll head, said doll head being mounted for movement on the doll torso about two axes generally transverse to each other, the simulated telephone participant accessory piston means comprising separate pistons and associated push buttons connected with the head for initiating movement of the head about either of said axes, said doll limb component comprising an arm which is movable relative to the doll torso and having a hand portion connected thereto, and said second accessory comprising a simulated telephone with the movable component thereof being a simulated headset portion, the doll arm and hand being movable from a rest position, wherein the hand is in engagement with the headset portion and remote from the doll head, and a working position, wherein the arm and hand move the headset adjacent the doll head.

5. The combination of claim 4 wherein the second accessory includes a bell component with a link means for actuating the same, said link means being associated with a piston means for moving the link means, and said last mentioned piston means being connected with conduit lines associated with the participant's accessory to actuate the last mentioned piston means by manipulating said actuation means.

6. The combination of claim 5 wherein the actuation means on the participant's accessory is provided with means for returning the actuation means to a non-actuating position following movement thereof.

* * * * *

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,757,463 Dated September 11, 1973

Inventor(s) JEFFREY D. BRESLOW et al

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

Column 3, line 15, after "motion to" delete "as" and insert --an--.

Column 6, line 29, after "bellows" delete "233" and insert --223--.

Column 8, line 31, after "buttons" insert --, said conduits comprising a separate conduit line for each said piston, said separate lines being--.

Signed and sealed this 18th day of December 1973.

(SEAL)
Attest:

EDWARD M. FLETCHER, JR.
Attesting Officer

RENE D. TEGTMEYER
Acting Commissioner of Patents