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2,540,484

"YES" AND "NO" INDICATING DOLL

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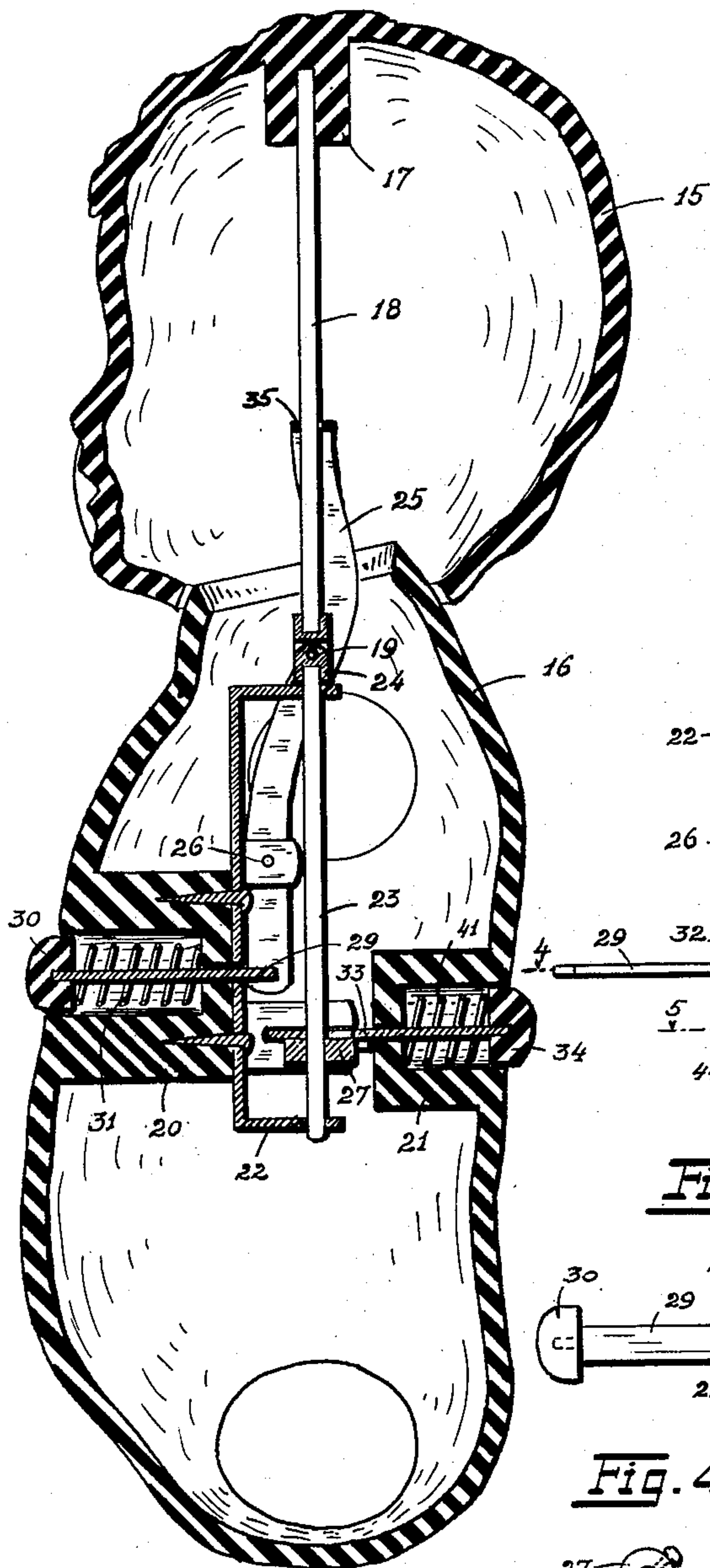


Fig. 1.

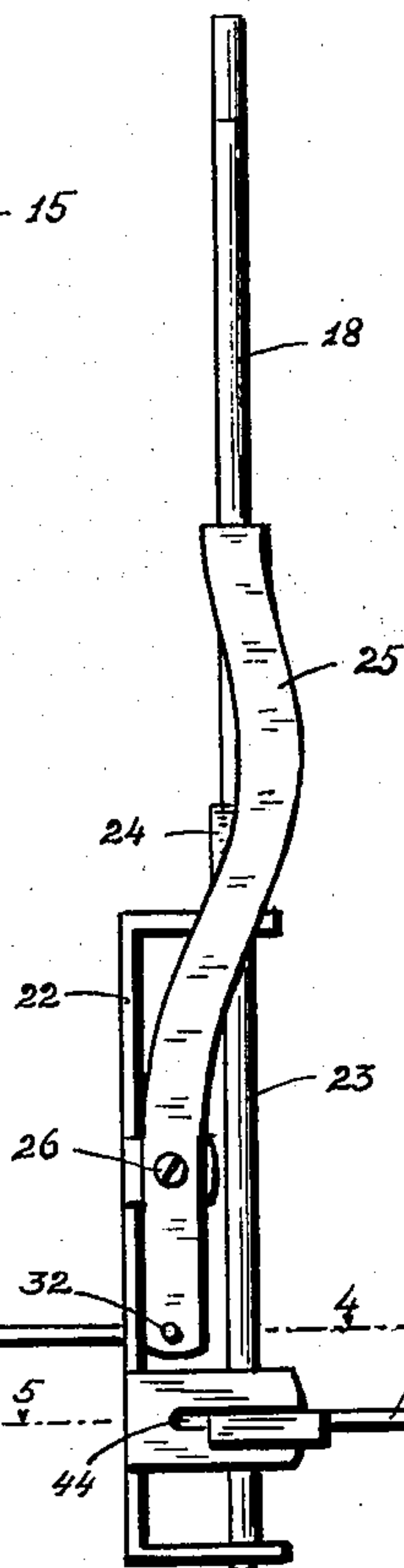


Fig. 2.

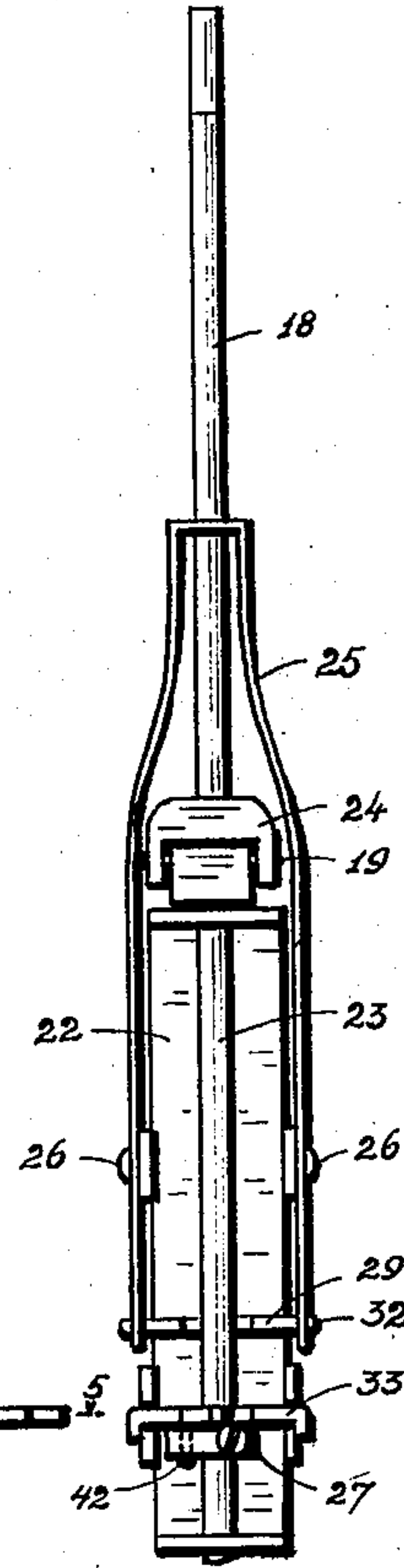


Fig. 3.

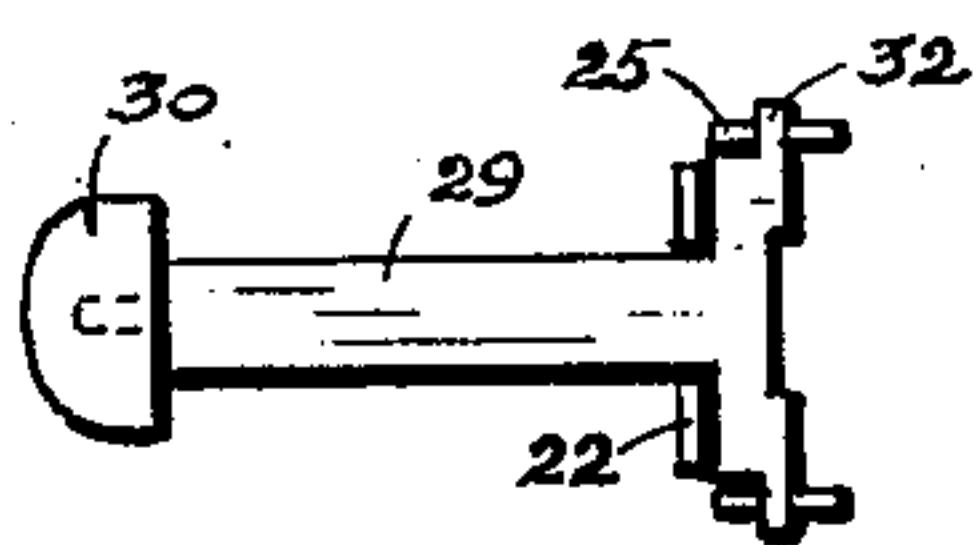


Fig. 4.

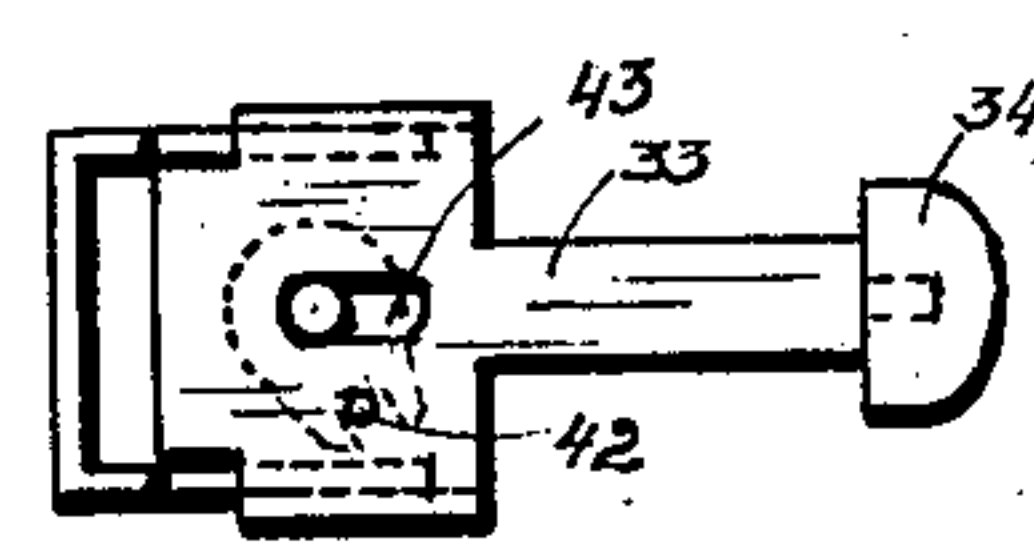


Fig. 5.



Fig. 6.

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"YES" AND "NO" INDICATING DOLL

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2 Claims. (Cl. 46—119)

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The present invention relates to dolls and more particularly to improvements therein to accomplish gestures emulating speech.

The principal object of this invention is to provide a novel and improved doll, so constructed that it permits the child holding it in hand, by simple manipulation without touching the head of the doll, to cause the head to nod as if to say "yes," and when desired, to cause the head to turn from front to side and back again, as if to say "no."

Another object hereof is to provide a novel and improved doll of the character mentioned, which is reasonable in cost, easy for a child to work while holding the doll in one hand, simple in construction and effective in carrying out the purposes for which it is designed.

Other objects and advantages will become apparent as this disclosure proceeds.

In the accompanying drawings forming part of this specification, similar characters of reference indicate corresponding parts in all the views.

Fig. 1 is a central sectional side view of the torso and head portion of a doll's body and mechanism included therein, embodying the teachings of this invention.

Fig. 2 shows part of the mechanism as seen in Fig. 1.

Fig. 3 is a side view of Fig. 2.

Fig. 4 is a fragmentary sectional view taken at lines 4—4 in Fig. 2.

Fig. 5 is a fragmentary sectional view taken at lines 5—5 in Fig. 2.

Fig. 6 is a top plan view of a component of said mechanism.

In the drawings, the numeral 15 designates a doll's hollow head which is separate from the hollow torso member 16 on which it sets. The interiors of both said members are communicative. The head 15 is free for rotary movement about a central vertical axis, and also free for nodding movement. For such purpose, it is practical that the upper part of the torso member 16, which comes in contact with the head while the latter moves, shall be of a spherical surface, so that the action of movement be as in a ball joint.

Interior the head member 15, at the top, it is provided with a boss 17, in which boss is secured the upper end of a rod 18. This joint is rigid, so that upon axial rotary movement of said rod, the head will turn with it. It may also be noted, that this rod 18 is also capable of swinging movement about axis pin 19 at the lower end of said rod.

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Extending inwardly from the wall of the torso 16, one at the front and one at the rear, are the horizontally positioned cups 20 and 21, respectively, with their mouths at the exterior surface of the torso, and with their bottoms positioned vertical and spaced from each other within the torso. These cups may be integral with the torso member, and likewise, the boss 17 may be made integral with the head 15.

Interior the torso member 16, the cup 20 has mounted thereon a bracket or frame 22, which carries a vertically positioned revolvable shaft 23. The upper end of this shaft and the lower end of rod 18, are joined by a knuckle joint indicated at 24, or otherwise suitably linked for permitting swing movement of said rod 18 about the horizontal axis pin 19 of said joint. An uprightly positioned lever 25, is pivoted intermediate its ends on frame 22 at axis pin 26; the upper end of said lever engaging the rod 18 as a bearing therefor when said rod is revolved axially; such engagement also serving upon movement of the lever about its fulcrum 26, to swing said rod about the axis pin 19. The shaft 23 carries a collar 27 secured thereto. This collar has a slot 28, along a radial line laterally of said shaft.

A stem 29 is horizontally positioned through cup 20, and terminates in a button 30 at the mouth of said cup. Said stem 29 extends free through the cup's bottom into the hollow of the torso member 16, where it is linked to the lower end of the lever 25. A stressed compression coil spring is positioned within the cup about the stem 29, and is indicated by the numeral 31; said spring resting between the underside of the button 30 and the bottom of the said cup 20. The pivotal connection between the stem 29 and the lever 25, is indicated at 32.

A stem 33 is horizontally positioned through cup 21, and terminates in a button 34 at the mouth of said cup. Said stem 33 extends free thru said cup's bottom into the hollow of the torso member 16, where its enlarged end 33' is slidably mounted on the frame member 22 along a slot track 44. The shaft 23 passes through said stem end which has the slot 43 for such purpose. This slot is longitudinal along said stem 33, and its length will determine the scope of movement of the stem 33. This stem carries a pin 42 extending therefrom directly into the slot 28 of the collar 27. A stressed compression coil spring 41 is positioned with the cup 21 about said stem 33; said spring resting between

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the underside of the button 34 and the bottom of said cup 21.

It is preferred that the buttons 30 and 34 shall protrude a little outward of the torso, and one shall be higher up the torso than the other. Collar 27 and the knuckle structure 24 may serve to journal the shaft 23 on the frame 22.

With the mechanism at rest position as shown in Fig. 1, the rod 18 is in axial alignment with the shaft 23, and the face of the doll is forward front. The doll may be dressed, and ordinarily, it would be.

To make the doll nod its head 15, as though it were saying "yes," the torso 16 is held upright in hand, with thumb at position of the button 30, and the remaining fingers at the back of the doll, but of course out of contact with the position of the button 34. Upon movement of the fingers to close the palm, button 30 will be pushed into the cup 20, stressing spring 31 and causing lever 25 to swing about its pivot 26, whereby rod 18 will be swung towards the front; the axis 19 being positioned in a direction from side to side of the doll. Now, the button 30 is released, whereby action of spring 31 will cause all moved elements to return to initial rest position as shown in Fig. 1. Repetition of the above described manipulation will cause successive nods of the doll's head.

To make the doll's head turn from forward front rest position, towards the side and back again, to emulate negative gesture, as if it were saying "no," the thumb is slid off the position of button 30, and a finger is placed on position of the button 34 and pressed into cup 21, stressing spring 41. Inward movement of stem 33, will cause pin 42 to give arcual movement to the collar 27. Shaft 23 will turn a bit, whereupon the head 15 will turn towards the side of the doll. The extent of such movement need not exceed forty-five degrees. Upon release of button 34, action of the spring 41 will cause all moved elements to return to initial rest position. Repetition of this last described manipulation will cause successive "no" movements of the head.

It is to be noted, that simultaneous operation of the buttons 30 and 34 is not possible, because the shaft 23, and the rod 18, need be in axial alignment for said shaft to turn.

The cups 20 and 21 are at different heights on the torso 16, when opposite one another as in the embodiment shown, so that the buttons 30 and 34 may be individually pressed. Of course, the operating mechanism may be designed with button positions elsewhere on the torso, and said mechanism may be adapted for movement of hand or foot of the doll, as will be apparent to those versed in the art.

It may also be noted, that for practical construction, the lever 25 may be a U-shaped piece as illustrated, with rod 18 positioned through a hole 35 in the bridge piece connecting the duplicate arms of said lever. In this manner, the lever engages the rod for its swinging movement, is in sliding relation with said rod, because such movements would be required in the embodiment shown, and said lever also acts as a bearing for the axial rotary movement of said rod 18.

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This invention is capable of numerous forms and various applications without departing from the essential features herein disclosed. For instance, it may be applied to Teddy-bears and animal form dolls. It is therefore intended and desired that the embodiment shown herein shall be deemed illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claims rather than to the specific description herein to indicate the scope of this invention.

I claim:

1. In a doll, the combination of a hollow torso having an opening at the top, a separate head atop the torso, a frame piece mounted within the torso, a rod rigidly secured to the head and extending downwardly therefrom, an uprightly positioned shaft rotatably mounted on the frame piece; said shaft and rod being connected with each other in pivotal relation about a substantially horizontal axis; said rod and shaft, in normal rest position, being substantially in axial alignment and said substantially horizontal axis being along a line from side to side of the torso, a lever slidably engaging the rod, and said rod being free for axial rotation relative to the lever and for swinging movement with respect to said lever; said lever being pivotally mounted on the frame piece, a stem movably mounted through the torso wall, connected to the said lever and adapted to shift the lever when slid in an inward direction with respect to the torso, resilient means urging said stem outwardly of the torso, a second stem movably mounted through the torso wall, means associated with said second stem and the shaft, adapted to turn said shaft upon movement of said second stem and resilient means urging the second stem outwardly of the torso, whereby upon reciprocating movement of the first stem, the head will nod repeatedly, and upon reciprocating movement of the second stem, the head will repeatedly turn from front to sidewise and back again, within the locus of part of a revolution.

2. A doll as defined in claim 1, wherein the lever has a lateral extension provided with a hole therethrough and wherein the rod is positioned through said hole whereby said rod may slide, swing and axially rotate with respect to said lever.

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