

Nov. 16, 1943.

F. H. RICHTER

2,334,290

TOY

Filed April 2, 1943

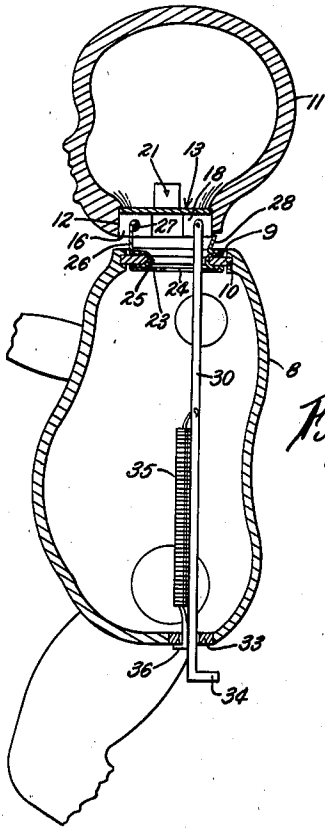


Fig. 1

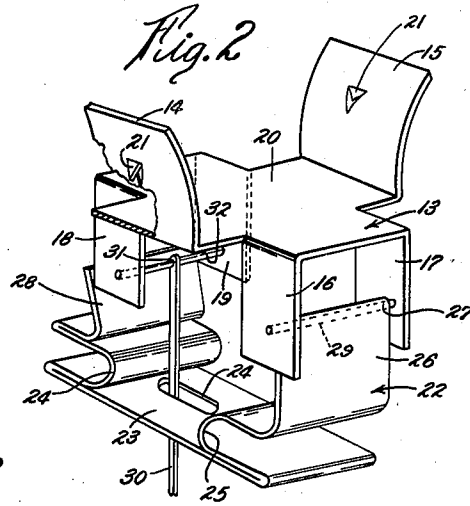


Fig. 2

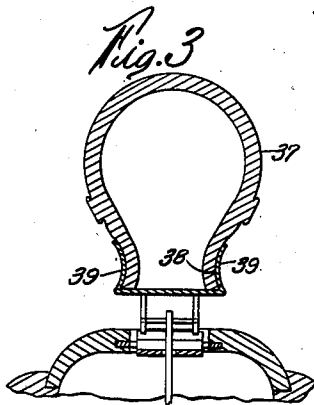


Fig. 3

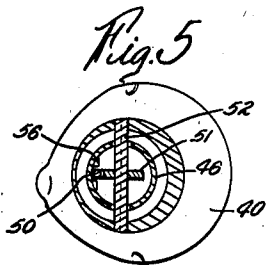


Fig. 5

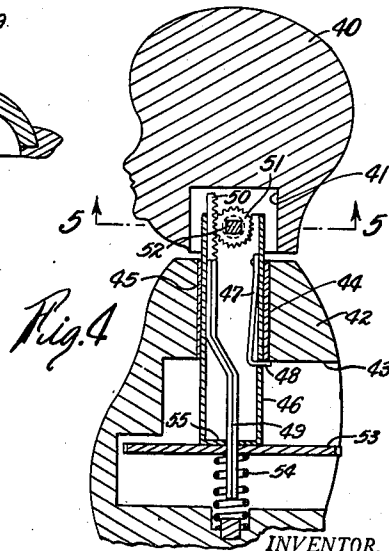


Fig. 4

INVENTOR.

BY Frank H. Richter

W. May, Sackhoff & Probst
ATT'YS

UNITED STATES PATENT OFFICE

2,334,290

TOY

Frank H. Richter, Cincinnati, Ohio

Application April 2, 1943, Serial No. 481,570

5 Claims. (Cl. 46-119)

This invention relates to a toy figure and is particularly disclosed here in connection with a doll in which the head may be actuated, at a point remote from the head, to simulate both nodding and shaking of the head.

An object of the invention is to provide a toy figure of this kind in which the movements described are effected by a means simple in construction and in operation.

Another object is the provision of such a device in which the nodding and turning of the head may be accomplished simultaneously to achieve a droll effect.

Another object is to provide a figure of this kind in which the head and body parts are movably connected as described and in which the connection means are simple and sturdy to withstand the rough usage to which devices of this character are normally subjected.

These and other objects are attained by the means described herein and illustrated in the accompanying drawing, in which:

Fig. 1 is a longitudinal cross-sectional view through one form of doll of the present invention, the arm and leg portions being shown fragmentally.

Fig. 2 is a detail perspective view of the units connecting the head and body of the doll seen in Fig. 1.

Fig. 3 is a transverse cross-section through the head and shoulder portions of a slightly modified form of the invention.

Fig. 4 is a longitudinal cross-sectional view through the head and body portions of a modified form of the invention.

Fig. 5 is a cross-sectional view taken on line 5-5 of Fig. 4.

In greater detail and with reference to the drawing, the device seen in Fig. 1 may comprise a hollow body 8 having an open neck portion 9 within which a washer 10 may be anchored. A hollow head 11 is formed with a base opening 12 adapted to receive an upper connecting unit 13. This unit is preferably formed of light resilient metal or plastic material and comprises a base 20, a pair of oppositely disposed, upwardly divergent arms 14 and 15, and two pairs of parallel, spaced, downwardly projecting lugs 16-17 and 18-19, respectively. The divergent arms 14 and 15 may each have a small tongue 21 struck outwardly therefrom, which tongues are adapted to bite into the interior surface of the head 11 when the latter is positioned upon the resilient arms 14 and 15, said tongues being

adapted to preclude upward displacement of the head.

The washer 10 positioned in the top of the body 8, is adapted to rotatably support a lower connecting unit 22. This unit may comprise a base 23 formed with a central aperture 24. The unit 22 is formed to provide a pair of oppositely disposed channels 24 and 25 adapted to slightly engage the washer 10. Above the channel 25 the unit 22 is formed into a flange 26, the upper end of which is turned to provide a journal 27. The unit 22 above the channel 24, is formed to provide a stop member 28.

The flange 26 is adapted to be positioned at the front of the body 8 of the doll and is furthermore adapted to be received between the lugs 16 and 17 of the upper connecting unit 13. A pin 29 extends through the lugs 16 and 17 and the journal 27 whereby the head of the doll is pivotally connected to the body for hinged movement in a vertical plane. That is to say, this connection provides for nodding of the head.

This action is achieved by means of a rod 30 having its upper end pivotally connected as at 31 to a shaft 32 extending between the lugs 18 and 19 of the upper connecting unit 13. The rod extends downwardly through the aperture 24 of the lower connecting unit, into the hollow body of the doll with the lower end of the rod projecting outwardly of the bottom of the body, through a suitable opening, such as the anchored washer 33 (Fig. 1). The lower end of the rod 30 may be bent rearwardly as at 34 for ready manipulation of the rod. Within the body, a spring 35 having one end secured to the rod and the opposite end to the body portion of the body, as at 36, urges the rod downwardly.

When so urged, that is to say, in the normal position of the head 11, the latter is held in a level position with the rear corner portion of the lugs 18-19 in contact against the stop member 28, as seen in Fig. 1. When the rod 30 is pushed upwardly repeatedly, the head is caused to nod. When the rod, instead of being moved lengthwise is turned upon its longitudinal axis, the head is similarly turned by virtue of the connection seen at 31, Fig. 2. At this time the channels 24 and 25 slide on the washer 10 to provide for such movement, that is, shaking of the head.

It is apparent that the head may be moved in both ways simultaneously for achieving a droll effect. In Fig. 3 a slightly modified form of the device is seen. Here the doll's head 37 is formed with an integral neck 38 which preferably flares

at the lower end. The upper connecting unit, in this instance is formed with a pair of resilient arms 39 adapted to engage the outer surface of the neck, on opposite sides thereof, the structure of the other remaining connecting parts of the device being the same as those described in connection with Figs. 1 and 2.

A further modification of the invention is shown in Figs. 4 and 5. In this case the head 40 may be solid, except for an opening 41 at the base of the head. The body 42 is formed with a lower enlarged chamber 43 opening to the rear of the body and with a restricted vertical chamber 44 communicating at the lower end with the chamber 43 and extending through the upper end of the body.

The smaller chamber 44 may be provided with a suitable liner 45 and an elongated sleeve member 46 extends through said liner with the upper end of the sleeve projecting into the opening 41 of the head. The sleeve is anchored in position relative to the liner by means of a spring finger 47 secured within said sleeve and having its lower end, as at 48, projecting beneath the lower end of the liner 45.

A rod 49 extends upwardly through the lower end of the sleeve 46 and has its upper end formed into a rack 50. This rack engages a pinion 51 non-rotatably mounted within the head opening 41, on a shaft 52 extending through the sides of the lower head or neck portions of the doll and also through the upper end portion of the sleeve 46. The shaft 52 is of squared cross-section so that the head 40 is not movable relative to the shaft.

The lower end of the rod 49 is provided with means for moving the rod lengthwise, for which purpose a plate 53 may be secured adjacent the lower end of the rod. An expansion spring 54 normally urges the plate 53 and consequently the rod, upwardly. When it is desired to cause the doll's head to nod, the plate 53 is depressed, at which time the rack 50, operating on the pinion 51, causes the head to nod. The spring 54 returns the rod 49 and the head 40 to the positions seen in Fig. 4.

In order to provide for lateral pivotal movement of the head 40, that is for achieving a simulation of shaking of the head, the rod 49 which, as will be seen, is of angular cross-section, passes through the closed lower end 55 of the sleeve 46, in tight fitting relationship therewith, so that when the rod is turned, the sleeve is similarly rotated, on its longitudinal axis and, since the head is connected to the upper end of the sleeve, the head is similarly turned. A pair of small lugs 56, Fig. 5, on the inner face of the sleeve 46, are disposed one on each side of the rod 49 to preclude disalignment of the latter during vertical movement.

Variations will suggest themselves upon consideration of the means herein disclosed, but these are believed to be comprised within the spirit and scope of the present invention.

What is claimed is:

1. A toy figure comprising a body, an independent head, means connecting the head with the body and providing for both vertical and lateral pivotal movement of the head, a rod positioned in the body for lengthwise movement therein and also for movement about the longitudinal axis of the rod, said rod having one end connected with the head, and means for turning the rod on its longitudinal axis to effect turning of the head and for actuating the rod lengthwise to effect nodding of the head.

2. A toy figure comprising a body, an independent head, a head-support member mounted rotatably in and projecting above the body, means pivotally connecting the head to the projecting portion of said member, and a rod in the body and associated with the head for pivotally moving the latter upon vertical movement of the rod to simulate nodding of the head, said rod being non-rotatably connected with said head-support whereby rotation of the rod results in rotation of the head-support to effect simulation of shaking of the head.

3. A toy figure comprising a body, a head, a head-support member mounted rotatably in and projecting above the body, a shaft passing non-rotatably through the head and pivotally mounted at the top of said head-support member, a pinion fixed to said shaft, and a rod mounted in said body for vertical longitudinal movement therein and having at the top a rack cooperating with said pinion to effect nodding action of the head upon movement of the rod, the latter being associated non-rotatably with said head-support member whereby upon rotation of the rod said member is caused similarly to rotate for achieving a simulation of shaking of the head.

4. A toy figure comprising a body, an independent head, means connecting the head with the body and providing for both vertical and lateral pivoting movement of the head, a rod positioned in the body for lengthwise movement therein, and also for rotation about the longitudinal axis of the rod, said rod having one end connected with the head, whereby, upon turning of the rod the head is similarly turned, and upon lengthwise actuation of the rod, the head is pivotally moved in the vertical plane to simulate nodding.

5. A toy figure comprising a body, an independent head means connecting the head with the body and providing for both vertical and lateral pivotal movement of the head, a rod positioned in the body for lengthwise movement therein and also for rotation about the longitudinal axis of the rod, said rod having one end connected with the head for vertical pivotal movement only, and means at the opposite end of the rod for turning it on its longitudinal axis to effect turning of the head and for actuating the rod lengthwise to effect nodding of the head.

FRANK H. RICHTER.