HEAD HAVING TWO DEGREES OF RANDOMLY SELECTED MOVEMENT

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ABSTRACT OF THE DISCLOSURE

A movable doll's head having two degrees of movement, namely, nodding movement signifying a "yes" answer and turning movement signifying a "no" answer and a vibrating selector which produces one or the other of these head movements based on its vibrated position. Since the vibrated position of the selector changes frequently, the head movement which is ultimately produced is essentially randomly selected or unpredictable, thereby contributing to the play value of the product.

The present invention relates to toys, and more particularly to a movable head having "yes" and "no" responsive head movements which are randomly produced. The significant play value of the movable head hereof is attributable to two features. The first is the basic concept of the functioning of the product wherein it has "yes" and "no" responsive movements and can thus be used either as a fortune telling-type device or in conjunction with the playing of different types of children's games in which "yes" and "no" decisions are made. The second is the random nature in which these head movements are produced. Obviously, the play value is considerably lessened if one movement is produced much more frequently than the other. The random functioning of a toy of the nature involved herein is therefore always a desirable feature, but it is also a feature which it is not easy to provide with uncomplicated, mass produced parts that must be easily assembled and not render the cost of the toy product prohibitive. Broadly, it is an object of the present invention to provide a randomly functioning movable head which is economically mass produced and which maintains its ability to function randomly over prolonged periods of use. Specifically, it is an object to provide a selector for a "yes" and "no" movable head which has a simple, reliable mode of operation for randomly selecting one of the possible head movements.

A movable head demonstrating objects and advantages of the present invention includes a doll's head having a horizontal axis and a longitudinal axis and mounting means permitting nodding and turning movements respectively about each axis to signify "yes" and "no" answers. Also included are first and second actuating members operatively arranged to provide these head movements; these means being located on opposite sides of a dividing wall. A vibrating selector is urged through an actuating stroke during which it is set in vibration as it approaches the dividing wall and is thus in a vibrated position either on one side or the other of this wall. This, in turn, results in corresponding actuation of either the first actuating member or the second actuating member based on the randomly occurring vibrated position of the selector. The above brief description, as well as further objects, features and advantages of the present invention, will be more fully appreciated by reference to the following detailed description of a presently preferred, but nonetheless illustrative, embodiment in accordance with the present invention, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a perspective view of a movable doll's head demonstrating objects and advantages of the present invention;

FIG. 2 is a partial side elevational view on an enlarged scale, taken in section on line 2—2 of FIG. 1 illustrating internal structural features of the device;

FIG. 3 is a plan view in section taken on line 3—3 of FIG. 2 illustrating further internal features;

FIG. 4 is a partial front elevational view in section taken on line 4—4 of FIG. 2, best illustrating details of the pivotal mounting for the doll's head;

FIG. 5 is a plan view in section taken on line 5—5 of FIG. 2 best illustrating the rotative mounting for the doll's head; and

FIG. 6 is a partial plan view similar to FIG. 5 showing the parts thereof after a rotative movement, the moving element being shown in phantom perspective.

Reference is now made to the drawings and in particular to FIG. 1 illustrating a doll's head, generally designated 10, movably mounted on a supporting housing 12 for a purpose which will soon be obvious. More particularly, the mounting of the doll's head 10 on the housing 12 is such that the head has a pivotal or nodding degree of movement in the direction of a nodding axis such as would signify an affirmative or "yes" response of the head. The mounting also permits a rotative degree of movement about a longitudinal axis of the head such as would signify a negative or "no" response of the head. One or the other of these responsive head movements are caused incident to inserting a card C through a front opening or slot 12c into the housing 12. It is intended that the card C have a printed question thereon requiring either a "yes" or "no" answer and that this answer be provided by the responsive movement of the head 10. To this end, and as will be explained in greater detail herein, the selection of one or the other head movements A, B is produced on a random basis. Thus the movable doll's head is a device having considerable play value used alone or in conjunction with the playing of one or many different types of children's games.

As best shown in FIG. 1, a nodding neck portion 10a of the doll's head 10 extends into a cylindrical housing opening 12b. Housing 12 also has a bottom opening 12c closed by a bottom member or base 14 which snaps into place within the opening 12c, the base 14 having lateral projections 14a along its front and rear edges for this purpose (only the front projection 14a being shown in FIG. 1) which are accommodated in suitable cut-outs 12d and which snap over a lower housing wall 12e. Appropriately secured to the base 14 within the housing 12 is an internal housing member 16 having a raised medial portion 16a which, in turn, has a hub 16b molded centrally thereof. Rotatably disposed on the hub 16b is a U-shaped mounting element 18, the upstanding opposite arms 18a and 18b of which extend through openings in the bottom wall 12f which bounds the cylindrical housing opening 12b. Each of the arms 18a, 18b has a notch 18c in the upper end thereof which accommodates a lateral shaft projection 10b on the neck 10a thus permitting pivotal or nodding movement A in the head 10 about the imaginary horizontal axis of the shaft projections 10b. As is best appreciated from FIG. 2, this nodding movement A is produced when a first actuating member 20, also extended through an opening in the bottom wall 12f, is actuated through movement in a manner soon to be described. The nodding movement A of the head 10 causes compression of a return spring 22a of a head return mechanism 22 so that after each such nodding movement the head is automatically returned to an upright position as illustrated in FIG. 1.
As previously noted, the mounting element 18 for the head 10 is rotatably mounted on the hub 16b and extends through openings in the wall 12f having a sufficient radial extent to allow for a radial transverse of the element 18. That is, as best shown in FIG. 5, the bottom wall 12f has a pair of oppositely disposed radial cut-outs 12g and 12h through which extend the upstanding arms 18a and 18b. Thus the mounting element 18 is actuated through rotative movement, the head 10 mounted on this element also partakes of this rotative movement about an imaginary longitudinal axis through the center of the hub 16b. To this end, the mounting element 18 is operatively associated with a second depending actuating member 24 which, when actuated through movement rearwardly of the housing 12, is effective to cause rotative movement in the mounting element 18. As is best understood by considering FIG. 6 in conjunction with FIG. 4, the second actuating member 24 has an L-shaped body mounted for sliding movement on a pin 26 and further has a lateral leg 24a. The second actuating member 24 also includes an upstanding pin 24b extending through a slot 18d in the semicircular body 18c which connects the two upstanding arms 18a and 18b. In this manner, movement of the actuating member 24 along the pin 26 results in the pin 24a urging the body 24b through the pin 24b and the second depending actuating member about the hub 16b and thus rotative movement B in the head 10. This movement of the actuating member 24 is against the urging of a return spring 25 disposed about the pin 26 and seated at one end against the member 24 and at its opposite end against a rear wall 16f of the internal housing 16 (see FIG. 2). Thus, after a rotative movement B of the head and the release of the member 24, the return spring 25 is effective to return the head 10 back to its normal front orientation with respect to the housing 12, as illustrated in FIG. 1.

A latitude of modifications is shown and how the selection of either the first or the second actuating members 20 and 24 to produce the corresponding head movement A, B is made on a random basis, attention is particularly directed to FIG. 3 in conjunction with the previously noted figures. As shown in FIG. 5, the internal housing member 16 includes an extending side cover portion 16a arranged for reciprocating movement on the medial portion of the housing base 14 and under the cover 16c is a T-shaped slide member 30 including an upstanding front wall 30a which, at a medial portion, has a transverse section 30b. Riveted, as at 32, on section 30b is a vibrating selector member 34 including elongated body 34a fabricated of an appropriate springy metal and having riveted on its free end, as at 36, a pointer 34b. As best shown in FIG. 3, the point of the pointer 34b lies in the same vertical plane as the point of a dividing wall 16c which separates the then adjacent located first and second actuating members 20 and 24. In the starting position of the slide 30 as shown in FIG. 3, the pointer 34b is in a clearance position from the first and second actuating members 20, 24. It is contemplated, however, that during an actuating stroke rearwardly of the housing 12, the slide 30 and thus the pointer 34b thereon will move from the clearance position 34b, into a position ultimately on one or the other side of the dividing wall 16c so that it either abuts against the first actuating member 20 or against the second actuating member 24. The selection and actuation of one of the members 20, 24 through movement in turn produces one or the other of the head actuating movements A, B.

It is during the foregoing actuating stroke of the pointer 34b that the selector member 34 is set in vibration so that as it approaches the dividing wall 16c it will have a vibrated position either to one side or to the other side of the divider wall 16c, and continued movement thereafter will produce the positioning resulting in actuation of one of the two actuating members 20, 24. To produce this vibration in the selector member 34, the pointer 34b has inclined cam surfaces 34c, either one of which cooperates with a depending projection 38 located in the path of movement of the pointer 34b. That is, the projection 38 engages one cam surface 34 during the initial portion of the actuating stroke and causes lateral movement of the pointer 34. Movement past the projection 38, however, results in the release of the pointer 34 which then partakes of vibrative movement transverse to the direction of the actuating movement. Typical vibrated positions of the pointer 34b are illustrated in phantom perspective in FIG. 3.

Referring now to FIG. 2, it will be seen that the base 14 has a transverse molded ridge 14a against which the slide front wall 38 is seated at its starting position. This starting position is immediately adjacent the front housing slot 12a which readily facilitates the introduction of the card C through the slot 12a for urging the slide 30 through its actuating stroke. The side walls of the front cover portion 16g of the internal housing member 16 each has curved guide surfaces 16h to guide the forward end of the card C up against the front wall 38a. The actuating stroke of the slide 30 is against the urgency of a return spring 40 attached at one end to an upstanding hook 14c on the base 14 and at its other end to a depending hook 40c on the slide 30. The return spring 40 is thus effective, in an obvious manner, to urge the slide 30 back to its starting position when the use of the doll's head 10 removes the card C and releases the slide 30.

From the foregoing description it should be readily appreciated that the selection by the vibrating selector member 34 of one or the other of the actuating members 20 and 24 occurs strictly on a random basis since it depends in turn on the randomly occurring vibrated position of the selector member 34 as it passes the dividing wall 16c. Thus, it will not be possible to accurately predict the responsive head movement of the head 10 which greatly contributes to the play value of the movable head 18. A latitude of modifications is shown and how the selection of either the first or the second actuating members 20 and 24 to produce the corresponding head movement A, B is made on a random basis, attention is particularly directed to FIG. 3 in conjunction with the previously noted figures. As shown in FIG. 5, the internal housing member 16 includes an extending side cover portion 16a. Arranged for reciprocating movement on the medial portion of the housing base 14 and under the cover 16c is a T-shaped slide member 30 including an upstanding front wall 30a which, at a medial portion, has a transverse section 30b. Riveted, as at 32, on section 30b is a vibrating selector member 34 including elongated body 34a fabricated of an appropriate springy metal and having riveted on its free end, as at 36, a pointer 34b. As best shown in FIG. 3, the point of the pointer 34b lies in the same vertical plane as the point of a dividing wall 16c which separates the then adjacent located first and second actuating members 20 and 24. In the starting position of the slide 30 as shown in FIG. 3, the pointer 34b is in a clearance position from the first and second actuating members 20, 24. It is contemplated, however, that during an actuating stroke rearwardly of the housing 12, the slide 30 and thus the pointer 34b thereon will move from the clearance position 34b, into a position ultimately on one or the other side of the dividing wall 16c so that it either abuts against the first actuating member 20 or against the second actuating member 24. The selection and actuation of one of the members 20, 24 through movement in turn produces one or the other of the head actuating movements A, B.

What is claimed is:
1. A movable doll's head comprising a doll's head having a horizontal axis and a longitudinal axis, means mounting said doll's head for nodding movement about said horizontal axis to signify an affirmative response and for rotative movement about said longitudinal axis to signify a negative response, first and second separate actuating means located adjacent each other operatively associated with said doll's head for respectively actuating said doll's head through said nodding movement and said rotative movement, and a vibrating selector means operatively arranged to have an actuating stroke selectively abutting against said first and second actuating means whereby the selection of said first and second actuating means is randomly determined by the vibrated position of said vibrating selector means.
2. A movable doll's head as defined in claim 1 wherein said vibrating selector means includes means operatively associated with said doll's head for respectively actuating said doll's head through said nodding movement and said rotative movement, and a vibrating selector means operatively arranged to have an actuating stroke selectively abutting against said first and second actuating means whereby the selection of said first and second actuating means is randomly determined by the vibrated position of said vibrating selector means.
3. A movable doll's head as defined in claim 2 wherein said first free end of said resilient member includes a cam surface and said means mounting said doll's head includes a depending projection located in the path of said actuating stroke of said selector means, said projection cooperating with said cam surface to select said resilient member in vibrating motion during said actuating stroke.
4. A movable doll's head as defined in claim 1 including a housing supporting said doll's head disposed about said vibrating selector means, said housing having a front opening therein providing access to said vibrating selector means.
means for means adapted to be projected through said opening incident to actuating said vibrating selector means through said actuating stroke.

5. A movable doll’s head comprising a doll’s head having a horizontal axis and a longitudinal axis, a housing for said doll’s head, mounting means for mounting said doll’s head on said housing for nodding movement about said horizontal axis to signify an affirmative response and for rotative movement about said longitudinal axis to signify a negative response, depending first and second separate actuating means located adjacent each other within said housing for respectively actuating said doll’s head through said nodding movement and said rotative movement, and a selector means movable within said housing through an actuating stroke from a clearance position into selective abutment against said first and second actuating means, said selector means including an elongated resilient member having a free end thereon adapted to have vibrating motion transverse to said actuating stroke, the end limits of said vibrating motion alternately locating said free end in position to abut one and then the other of said first and second actuating means, whereby the selection of said first or second actuating means is randomly determined by the vibrated position of said resilient member.

6. A movable doll’s head as defined in claim 5 wherein said free end of said resilient member includes a cam surface and said housing has a depending projection located in the path of said actuating stroke of said selector means, said projection cooperating with said cam surface to set said resilient member in vibrating motion during said actuating stroke.

7. A movable doll’s head as defined in claim 6 wherein said housing has a front opening therein providing access to said selector means for means adapted to be projected through said front opening incident to actuating said selector means through said actuating stroke.

References Cited

UNITED STATES PATENTS

1,661,329 3/1928 Gale 273—161
2,368,088 1/1945 Brewer 273—161
3,362,103 1/1968 Neumann 273—156
20 ANTON O. OECHSLE, Primary Examiner
U.S. Cl. X.R.

46—119; 273—138