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W. SALEMME

1,997,123

DOLL'S EYE MECHANISM

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Fig. 1.

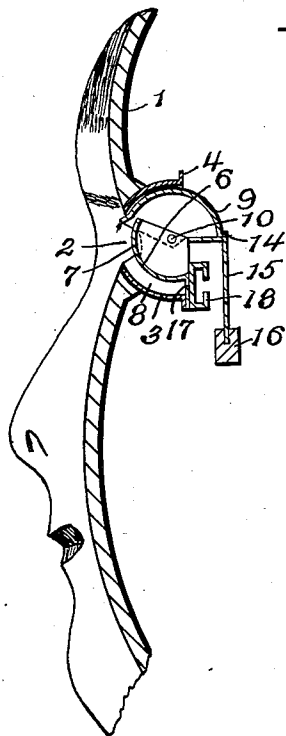


Fig. 2.

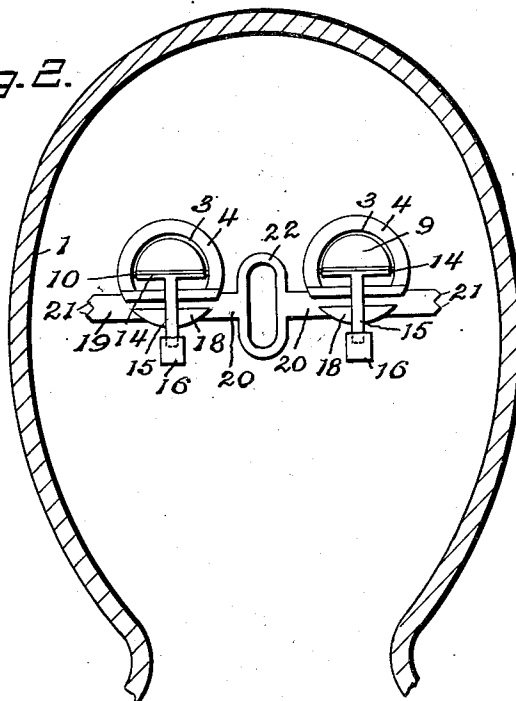


Fig. 3.

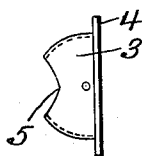


Fig. 4.

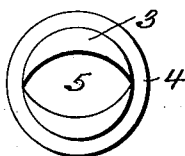


Fig. 7.

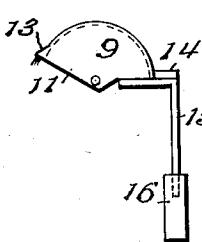


Fig. 8.

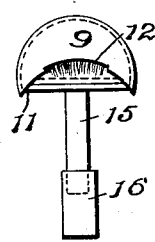


Fig. 5.

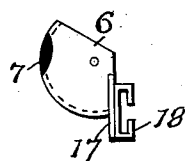


Fig. 6.

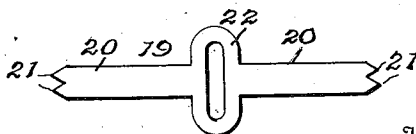
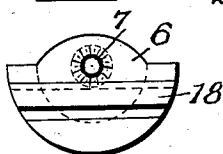


Fig. 9.

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DOLL'S EYE MECHANISM

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Application January 10, 1935, Serial No. 1,222

9 Claims. (Cl. 46—40)

This invention is directed to an improvement in dolls' eyes of the type which are movable in different positions of the doll to simulate the opening and closing of the eyes in a natural manner.

Dolls' eyes constructed for opening and closing in accordance with the position of the doll are well known but difficulty has been experienced in securing the structure with sufficient rigidity to the head of a doll to insure the proper operation of the parts even under the usual rough handling to which the dolls are subjected.

It is an object of the present invention to provide a means for anchoring and properly supporting in position the operative mechanism of the doll's eyes to insure a much longer life and much more satisfactory and effective operation, even under rough handling, than has heretofore been possible.

A further object of the invention is the provision of anchoring means which are arranged for free sliding connection with the eye mechanism and without other attachment or connection to such mechanism, so that an anchoring means may be selected according to the size of the doll's head and readily and conveniently placed in position for subsequent anchoring effect, so that without change other than the selected length of the anchoring member, the eye mechanisms may be used with dolls of different sized heads.

The invention is illustrated in the accompanying drawing, in which:

Figure 1 is a vertical sectional view through a doll's head, with the line of section passing through the mechanism for controlling the simulated eye movement, the anchoring member being omitted.

Figure 2 is a rear view showing the eye mechanisms for both eyes, the anchoring member being in place, with the doll's head in vertical section.

Figure 3 is a side view of the supporting shell.

Figure 4 is a face view of the same.

Figure 5 is a side view of the eye carrier.

Figure 6 is a face view of the same.

Figure 7 is a side view of the cut-off.

Figure 8 is a front view of the same.

Figure 9 is a rear elevation of the anchoring member.

With particular reference to the drawing, the doll's head 1 is of conventional form provided with openings 2 forming the eye openings. A supporting shell 3 is secured at the margin of the openings 2, this shell extending within the head inwardly of the opening in the form of a rounded body terminating in an edge flange 4. The

forward wall of the shell is formed with a conventionally shaped opening 5 simulating the usual eye opening.

Secured to the flange 4 is the eye carrier 6 constituting a rounded shell-like element which bridges the eye opening 5 of the shell 3, and on which eye carrier there is formed, painted or otherwise arranged a simulation of the human eye, as at 7. This eye carrier, except at its connection with the flange 4, is spaced throughout its length from the shell 3, providing a space 8 between the lower portion of the supporting shell and the eye carrier.

A cut-off 9 in the form of a rounded shell-like body is pivotally supported at 10 in the body of the shell 3 slightly forward of the flange 4. This cut-off is of sufficient peripheral length to extend rearwardly beyond the pivot and is, of course, of a thickness to pass freely into the space 8. The forward edge of the cut-off is of convex formation, as at 11, corresponding to the similar formation of the upper portion of the eye opening 5 in the shell 3, and throughout a portion of this convex edge, eyelashes 12 are secured or arranged to simulate the normal eyelashes.

That portion of the cut-off immediately adjacent the convex edge 11 is slightly flared outwardly relative to the center, as at 13, the relation being such that when the cut-off is in position to fully expose the simulated eye 7 with the eyelashes 12 in proper position, the flared portion 13 will engage the upper edge of the opening 5 in the shell 3 and thus limit the movement of the cut-off in the opening direction.

The cut-off is formed to extend rearwardly of the pivotal support 10 and appropriately secured to this rearward projection at 14 is a depending bar 15 carrying a weight 16 at the lower end. The connection of the parts provides that the bar 15 shall be vertical of the doll's head when the flared portion 13 is in engagement with the edge of the shell opening to limit the movement of the cut-off, and it will be evident that when the doll is placed in a reclining position, the movement of the weight to assume a vertical position will rock the cut-off forwardly, simulating the movement of the upper eyelid to cover the eye. In this movement, the forward edge of the cut-off rides into the space 8 between the eye carrier 6 and the lower portion of the shell 3.

Secured to the rear edge of the eye carrier 6, or more particularly to the flange 17 of such carrier which is connected to the flange 4 of the shell 3 to secure the eye carrier in place, is a guide member 18 which is preferably of hollow form 55

open at its rear edge and extending the full width of the shell 3. An anchor 19 cooperates with the guides of the eye mechanisms, such anchor including bars 20 of a size to slide freely in the guides 18 and having their outer or free ends formed with spurs or like sharpened projections 21.

The anchor as an integral construction includes a uniting centrally arranged portion 22 which is a vertically elongated member arranged substantially in the form of the letter "O" with the marginal bar in the upper portion connected to the upper edges of the bars 20 and the marginal bar of the lower portion connected to the lower edges of the bars. In other words, the anchor includes a central member of hollow form which extends above and below the bars, with the bars connected integrally with the member and extended in alignment in both directions from approximately the center of the member. The anchor, or more particularly the central member 22 thereof, is of a material which will permit yielding under pressure within the member.

Of course, the eye mechanism described is duplicated and the anchor is arranged so that the bars 20 thereof cooperate with the guides of both members, the central portion 22 being arranged between the guides. The anchor is chosen of a particular length which will arrange the spurs immediately adjacent the inner surface of the head at each side of the eye mechanism and after the eye mechanisms have been mounted as described, an appropriate tool is inserted in the central opening of the center member 22 of the anchor and turned so as to force the bars 20 in opposite directions. The movement is continued until the spurs 21 at the terminals of the bars are forced sufficiently into the material of the head to securely fix the anchor at the ends, and as the central portion 22 having been somewhat distorted by its movement incident to the spreading of the bars is of metal, it will retain the distorted position and hold the bars in their anchored connection with the head.

Of course, the bars are supported in the guides 18 and these guides form integral parts of the fixed element of the eye mechanisms. As the guides are arranged inwardly of the head, there is provided for the eye mechanisms a support remote from the connection of the shell 3 with the opening 2 in the head of the doll and thus rearwardly of the pivotal support 10 on which the cut-off swings. An extremely rigid construction is thus provided and overcomes a very serious objection to conventional eye mechanisms of this character which as a rule are secured to the edge of the eye opening in the doll head and, in some instances, to the inner surface of the doll head surrounding the eye opening. This provides a support only at the forward portion of the eye mechanism and incident to the usual handling of a doll in the hands of a child, the connection is of rather inferior permanence. By the use of the anchor described, however, the eye mechanisms are supported at the forward portion of the doll head and at the sides of the doll head rearwardly of the forward portion. The anchor resists movement in all directions and stabilizes the entire structure to maintain its connection in the doll head under more severe usage and for a materially greater time than with the conventional constructions.

The anchor as a whole is slidable in the guides and obviously may be chosen for its length commensurate with the space in the particular doll

head which the anchor is to occupy. Thus, while the eye mechanisms may remain the same, a difference in anchor length merely means the use of the appropriate anchor wholly regardless of the eye mechanisms with which it cooperates.

Through the provision of the anchor and the particular mechanisms described, a simple and extremely rugged arrangement is provided and as the cut-off or simulated eyelid moves on a pivot guided more or less by the shell 3 and eye carrier, the action is extremely free and there is no possibility of the cut-off sticking or moving with a jerky movement.

What is claimed to be new is:

1. In combination with eye closing mechanisms for a doll and means carried by the doll's head for independently and pivotally supporting each of the eye closing mechanisms of an anchor independent of and remote from the pivotal support of the eye closing mechanisms, said anchor slidably cooperating with both mechanisms and including bars connected at their inner ends and having doll head engaging means at their outer ends, the connected inner ends being movable to project the outer ends of the bars into interlocking engagement with the doll head without severing the connection between the bars.

2. In combination with the eye mechanisms for a doll and means carried by the doll's head for directly and independently supporting each of said eye mechanisms for pivotal movement, of an anchor independent of and arranged remote from the pivotal support of the eye mechanisms, said anchor including a bar having slidable connection with each eye mechanism and terminally formed to anchor in the material of the head, and means connecting the bars capable of being mechanically spread to force the bars apart into anchoring cooperation with the material of the head.

3. In combination with the eye mechanisms for a doll and pivotal supporting means for each mechanism carried by the doll's head, of an anchoring means wholly independent of the pivotal support for the eye mechanisms, said anchoring means including a guide formed on each mechanism, and an integral anchoring member including bars cooperating with the guide, terminal spurs on the bars and curved portions connecting the inner or adjacent ends of the bars, said bars being spread by taking up the curved portions to move the spurs into anchoring contact with the material of the doll's head.

4. In combination with the eye mechanisms for a doll's head, means carried directly by the head for pivotally supporting each of said mechanisms, of an anchoring means wholly independent of the pivotal support for the eye mechanisms, said anchoring means including a guide carried by each mechanism, and an integral anchor freely slidable in the guides and comprising as a unit anchor bars having terminal spurs and oppositely curved sections connecting the upper and lower edges of the inner or adjacent ends of the bars, whereby under pressure on the adjacent ends of the bars, said bars may be moved in opposite directions without destroying the integrity of the anchoring unit.

5. A doll's eye mechanism including a shell secured at its forward edge to the eye opening in the doll's head, an eye carrier secured to and spaced from the wall of the shell and underlying the opening in the doll's head, said carrier being formed or provided with the representation of an eye, and a cut-off pivotally carried by the shell

and movable to a position to simulate an eyebrow or to a position covering the eye representation, said cut-off in the latter position passing into the space between the shell and eye carrier.

5 6. A doll's eye mechanism including a shell secured at its forward edge to the eye opening in the doll's head, an eye carrier secured to and spaced from the wall of the shell and underlying the opening in the doll's head, said carrier being
10 formed or provided with the representation of an eye, a cut-off pivotally carried by the shell and movable to a position to simulate an eyebrow or to a position covering the eye representation, said cut-off in the latter position passing into the
15 space between the shell and eye carrier, and means slidably cooperating with the shell for anchoring the latter to the doll's head remote from the connection of the shell to the edge of the eye opening in the head.

20 7. A doll's eye mechanism including a shell secured at its forward edge to the eye opening in the doll's head, an eye carrier secured to and spaced from the wall of the shell and underlying the opening in the doll's head, said carrier being
25 formed or provided with the representation of an eye, a cut-off pivotally carried by the shell and movable to a position to simulate an eyebrow or to a position covering the eye representation, said cut-off in the latter position passing into the
30 space between the shell and eye carrier, and a central anchor slidably cooperating with the rela-

tively inner ends of both shells and engaging the material of the head of the doll remote from the eye openings.

8. A doll's eye mechanism including a shell secured at its forward edge to the eye opening in the doll's head, an eye carrier secured to and spaced from the wall of the shell and underlying the opening in the doll's head, said carrier being
5 formed or provided with the representation of an eye, a cut-off pivotally carried by the shell and movable to a position to simulate an eyebrow or to a position covering the eye representation, said cut-off in the latter position passing into the
10 space between the shell and eye carrier, and a weight for controlling the movement of the cut-off.
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9. A doll's eye mechanism including a shell secured at its forward edge to the eye opening in the doll's head, an eye carrier secured to and spaced from the wall of the shell and underlying the opening in the doll's head, said carrier being
20 formed or provided with the representation of an eye, and a cut-off pivotally carried by the shell and movable to a position to simulate an eyebrow or to a position covering the eye representation, said cut-off in the latter position passing into
25 the space between the shell and eye carrier, the forward edge of the cut-off being flared to engage the shell and limit the opening movement of the cut-off.
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