J. C. POORE.

DIRIGIBLE EYE STRUCTURE FOR DOLLS.

APPLICATION FILED JUNE 17, 1919.

1,328,100. Patented Jan. 13, 1920.

FIG. 1.

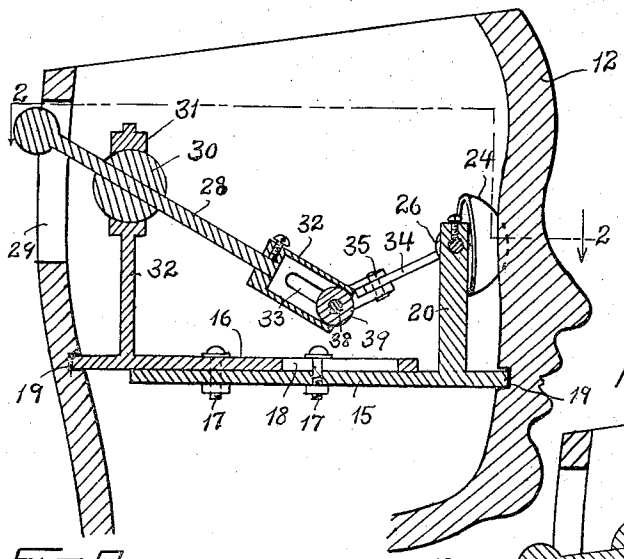


FIG. 4.

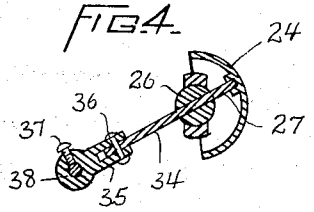


FIG. 5.

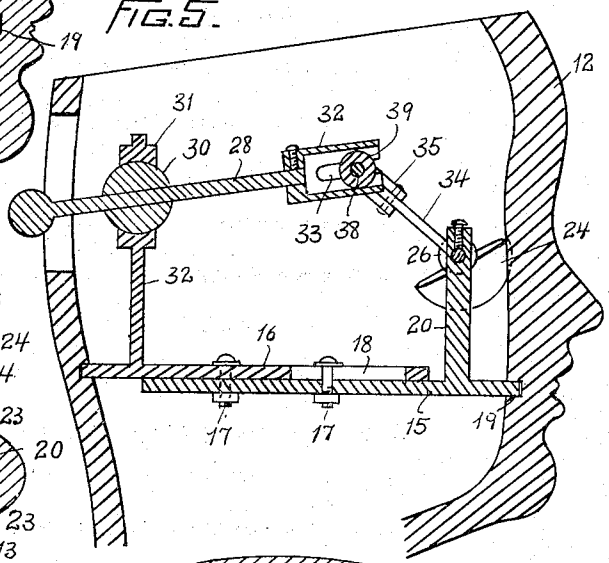


FIG. 2.

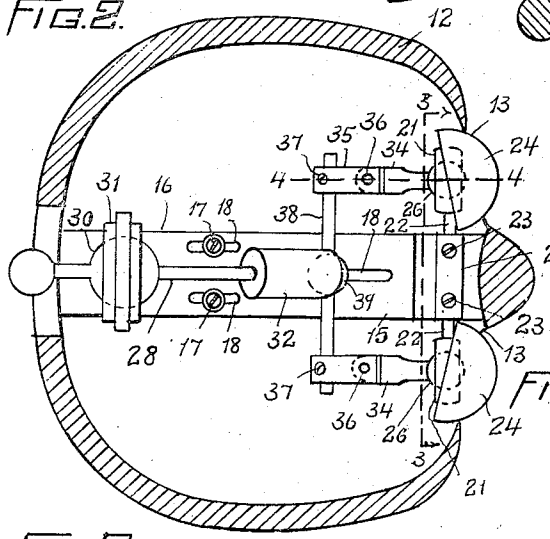


FIG. 6.

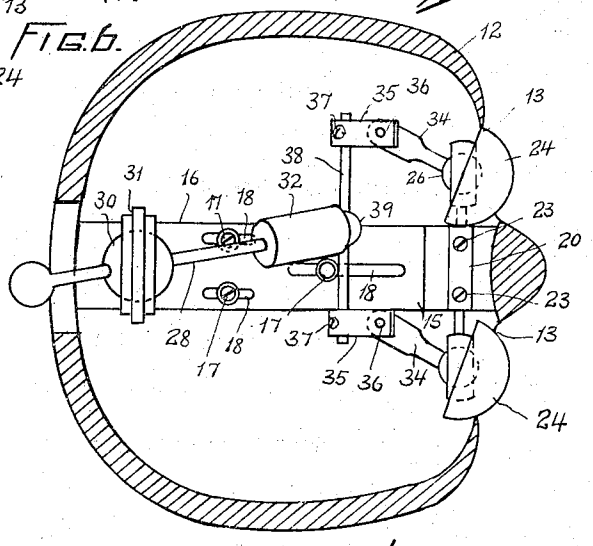
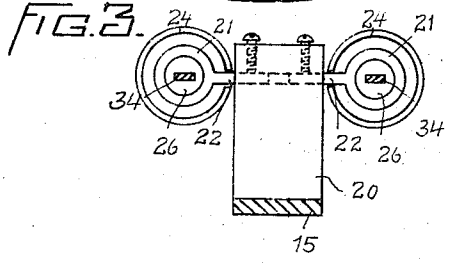


FIG. 3.



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DIRIGIBLE-EYE STRUCTURE FOR DOLLS.

1,328,100. Specification of Letters Patent. Patented Jan. 13, 1920.

Application filed June 17, 1919. Serial No. 304,779.

To all whom it may concern:

Be it known that I, JOHN C. POORE, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Dirigible-Eye Structures for Dolls, of which the following is a specification.

This invention has for its object to provide a doll head having suitable eye openings, with a structure which is attachable as a single part to the interior of the head, and includes a holder, a pair of eyes supported by the holder in operative relation to said eye openings, and manually operable controlling mechanism carried by the holder and organized to universally swing the eyes in unison, the structure being self-contained and applicable as a single part to the head.

The invention is embodied in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings forming a part of this specification,—

Figure 1 is a vertical section of a portion of a doll head provided with a structure embodying the invention.

Fig. 2 is sectional view of the head on line 2—2 of Fig. 1, and a plan view of the eye structure.

Fig. 3 is a section on line 3—3 of Fig. 2, looking toward the right.

Fig. 4 is a section on line 4—4 of Fig. 2.

Fig. 5 is a view similar to Fig. 1, showing a different position of the eyes.

Fig. 6 is a view similar to Fig. 2, showing a different position of the eyes.

The same reference characters indicate the same parts in all of the figures.

In the drawings 12 represents a doll head having suitable eye openings 13, and formed internally to receive the eye structure hereinafter described.

Said structure includes a holder attachable to the interior of the head. In the embodiment of the invention here shown, the holder includes a base portion formed by plates or parts 15 and 16, connected by bolts 17, one of the plates being provided with bolt-receiving slots 18, the arrangement being such that the length of the base may be varied to cause the opposite ends of the base to enter mortises 19, formed in the internal surface of the head.

Rigidly secured to the holder, and preferably to a front standard 20 forming a part of the holder, are two fixed universal joint members 21, which, as here shown, are the socket members of ball and socket joints, each member being provided with a shank 22, and said shanks being inserted in a socket in the standard 20, and rigidly secured therein by set screws 23.

24, 24, represent a pair of eyes, which are preferably concavo-convex shells, and are provided with universal joint members 26, here shown as ball members of ball and socket joints, adapted to coöperate with the fixed members 21. The joint members 26 are rigidly attached to the eyes 24 by arms 27, as shown by Fig. 4, said arms being fixed both to the eyes and to the joint members 26.

The fixed universal joint members 21 are arranged to support the eyes in their operative relation to the eye openings.

The manually operable controlling mechanism carried by the holder, is organized to swing the eyes in unison, so that they may occupy either of the positions shown by Figs. 1, 2, 5 and 6, and other positions.

In the embodiment of the invention here shown, the said controlling mechanism includes a manually operable lever 28, fulcrumed to swing universally on the holder, and having an outer arm movable in an opening 29 in the head, and connections between said lever and the eyes 24, organized to impart universal swinging movements from the lever to the eyes.

In the embodiment of the invention here shown, the lever 28 is provided with a ball member 30, fixed to the lever and adapted to turn in a socket member 31 fixed to a rear standard 32 on the base of the holder. The members 30 and 31 constitute a universal joint connection between the holder and the lever.

The inner end of the lever is provided with an elongated tubular socket member 32 fixed to the lever and provided with longitudinal slots 33.

The arms 27 which connect the eyes of the ball members 26, are extended through said ball members to form the outer members 34 of two jointed arms, the inner members 35 of which are connected with said outer members by pivots 36. The jointed arms thus formed are flexible edgewise, as indicated by Fig. 6, and are inflexible sidewise. The inner arm members 35 are rigidly secured by set screws 37 to a connecting rod 38. Said rod is provided with

a spherical enlargement 39, which is movable in the tubular socket member 32 on the lever 28, said enlargement and tubular member constituting a sliding ball and socket joint.

It is believed that the foregoing description, in connection with the drawings, renders the operation of the structure embodying my invention sufficiently obvious, without further description, it being clear that a movement of the lever 28 to either of the positions shown by the drawings, and to other positions, causes corresponding movements of the eyes 24, so that the eyes may appear to be looking in various directions, and may appear to be closed.

The independent adjustability of the fixed universal joint members 21, by the means illustrated by Fig. 3, enables the distance between the eyes to be varied, so that if desired, the eyes may appear to be looking in different directions, thus producing either a wall-eyed or a cross-eyed effect.

I claim:

1. A dirigible eye structure for dolls, comprising a holder attachable to the interior of a doll head, a pair of fixed universal joint members attached to said holder, a pair of eyes having universal joint members coöperating with said fixed members, and supported in operative relation to eye openings in the head, and manually operable controlling mechanism carried by the holder and organized to universally swing the eyes in unison, said mechanism including a lever fulcrumed to swing universally on the holder and having an arm movable in an opening in the head, and connections between said lever and the eyes.

2. A dirigible eye structure for dolls, comprising a holder attachable to the interior of a doll-head, a pair of fixed universal joint members attached to said holder, a pair of eyes having universal joint members coöperating with said fixed members, and supported in operative relation to eye openings in the head, and controlling mechanism including a lever fulcrumed to swing universally on the holder and having an arm movable in an opening in the head, jointed arms composed of outer members fixed to the eyes, and inner members jointed to the outer members, said arms being flexible edgewise and inflexible sidewise, a connecting rod fixed to and connecting the inner members of said arms, and provided with a spherical enlargement, and a tubular socket member fixed to said lever and slidably engaged with said enlargement, said tubular member and enlargement constituting a sliding ball and socket joint.

3. A dirigible eye structure for dolls, comprising a holder attachable to the interior of a doll-head and including a base which is variable in length and is provided with tenons adapted to enter mortises in the head, a pair of fixed universal joint members attached to said holder, a pair of eyes having universal joint members coöperating with said fixed members and supported in operative relation to eye openings in the head, and manually operable controlling mechanism carried by the holder and organized to universally swing the eyes in unison.

4. A dirigible eye structure for dolls, comprising a holder attachable to the interior of a doll-head, a pair of spaced apart socket members fixed to said holder, a pair of eyes provided with inwardly projecting arms fixed to the eyes, ball members fixed to said arms, universally movable in said socket members, and supported by the latter to hold the eyes in operative relation to eye-openings in the head, and manually operable means carried by the holder for universally swinging the said arms, ball members, and eyes, in unison.

5. A dirigible eye structure for dolls, comprising a holder, including a base engageable with the interior of a doll-head, and front and rear standards fixed to said base, the rear standard being provided with a fixed universal joint member, a pair of fixed universal joint members attached to the front standard, a pair of eyes having movable universal joint members coöperating with said fixed members, and supported in operative relation to eye openings in the head, a manually movable lever having a universal joint member coöperating with the joint member on the rear standard, and connections between said lever and the eyes.

In testimony whereof I have affixed my signature.

JOHN C. POORE.