I. MARKS.

EYES FOR DOLLS.

APPLICATION FILED JUNE 3, 1920.

1,374,212. Patented Apr. 12, 1921.

Fig. 1.

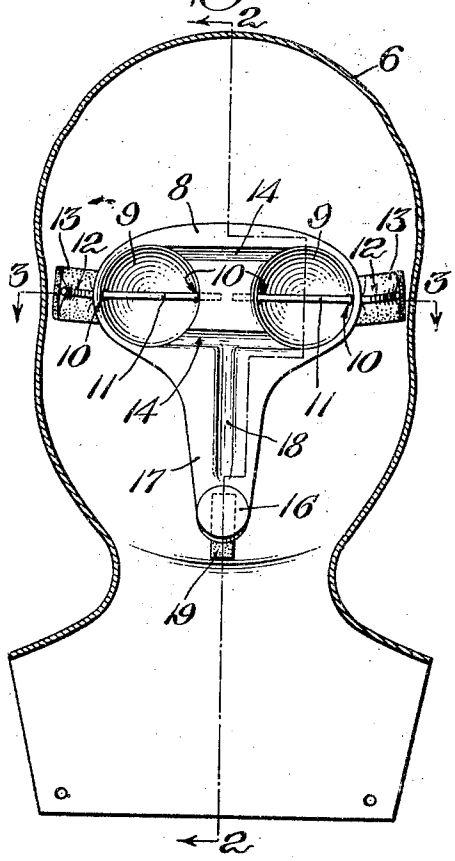


Fig. 2.

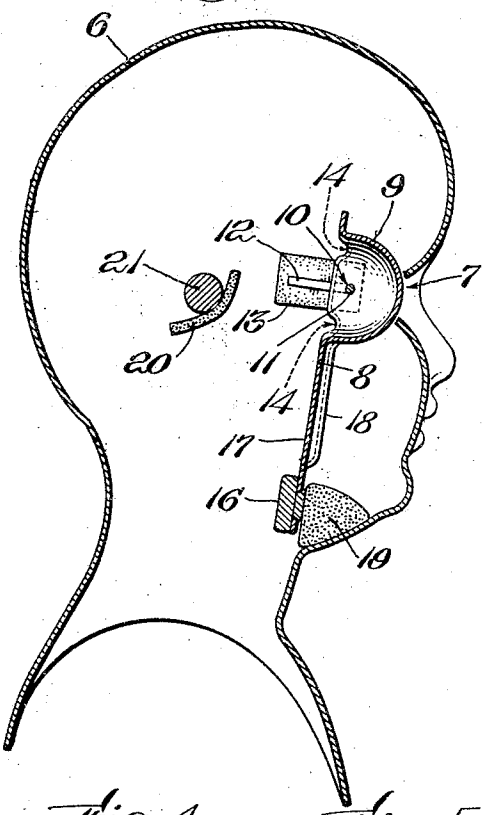
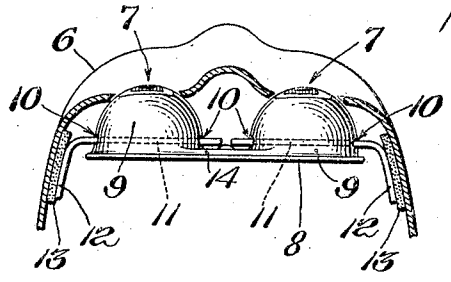


Fig. 3.



Witness

H. C. Bowser

Fig. 4.

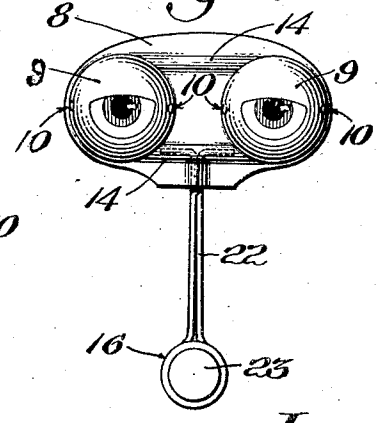
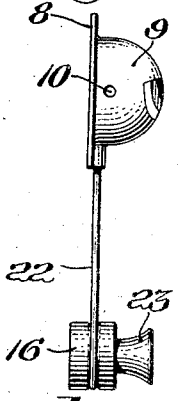


Fig. 5.



Inventor

Isidor Marks

by his attorneys

Clark Owen, Fisk & Hildreth

UNITED STATES PATENT OFFICE.

ISIDORE MARKS, OF DORCHESTER, MASSACHUSETTS.

EYES FOR DOLLS.

1,374,212. Specification of Letters Patent. Patented Apr. 12, 1921.

Application filed June 3, 1920. Serial No. 386,248.

To all whom it may concern:

Be it known that I, ISIDORE MARKS, a citizen of the United States, residing at Dorchester, Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Eyes for Dolls; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to eyes for dolls, and more particularly to dolls' eyes of the type which are adapted to give the effect of opening as the doll is raised into an erect position and closing as the doll is tipped backwardly.

Certain objects of the invention are to improve and simplify the construction of dolls' eyes of the above mentioned type for the purpose of rendering them less expensive to manufacture, and to provide improved means for pivotally securing the eyes in the head.

To the accomplishment of these objects and such others as may hereinafter appear, as will be readily understood by those skilled in the art, the invention consists in the improved construction and arrangement of parts illustrated in the accompanying drawings and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a vertical sectional view of a doll's head showing, in rear elevation, the improved eye structure in its preferred embodiment; Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1; Fig. 3 is a fragmentary sectional view taken on the line 3—3 of Fig. 1; Fig. 4 is a detail view, in front elevation, showing a modified form of the invention; and Fig. 5 is a detail view, in side elevation, of the device shown in Fig. 4.

Referring to the drawings, a doll's head, constructed of thin sheet material such as celluloid, is indicated at 6, the head being provided with openings 7 for the eyes. Mounted within the head 6, adjacent the eye openings 7, is the improved eye structure which is formed from a single piece of celluloid or other suitable sheet material and comprises a thin, flat plate 8 of the shape best shown in Fig. 1. The plate 8 is provided with a pair of hollow, substantially hemispherical, protuberances 9 which are formed integrally with the plate by means of a suitable molding operation. The eye structure is made of flesh colored stock and portions of the protuberances or eye shells 9 are painted white to represent the eye-balls. The iris and pupil of the eye is then painted upon the white portions of the eye shells.

To produce the effect of the opening of the eyes, as the doll is raised into an erect position and the closing of the eyes, as the doll is tipped backwardly, the eye structure is mounted with provision for tilting movement relatively to the head, so that as the doll is tipped backwardly the flesh colored portions of the eye shells above the pupils of the eyes will be brought into view, thus giving the appearance of closed eye-lids. To this end small holes 10 are punched through the eye shells 9 at diametrically opposite points, the holes of one eye shell being coaxially alined with the holes of the other eye shell to permit the passage through the four holes of a suitable pivot rod. In order to facilitate the assembly of the eye structure in the head the pivot rod is constructed in two separate sections, 11, 11, as shown clearly in Figs. 1 and 3. One end of each pivot rod section is bent, as indicated at 12, to conform to the contour of the adjacent portion of the inside of the head when the pivot rod sections are assembled in the eye structure. When thus assembled, the inner ends of the pivot rod sections will be arranged substantially in butting relationship. The bent outer ends 12 of the pivot rod sections are directed rearwardly and are cemented to small pieces of felt 13 which are, in turn, cemented to the head 6. By means of the above described mode of mounting the eye structure, a strong four-point suspension is provided, whereby the structure is securely supported, the cemented joints between bent ends of the pivot rod sections and the head being subjected to less strain than if a two point suspension were employed. In mounting the eye structure in the head the two pivot rod sections may be separated or moved toward each other as may be found necessary in order to fit them to the particular head to which the structure is to be applied. In this way they may be readily adjusted to compensate for slight variations in the widths of the different heads, thereby avoiding the necessity of using tools for bending the pivot rod to

shorten or lengthen it according to the width of the head. To impart rigidity to the plate 8 so as to maintain the holes 10 in coaxial alinement and thus to insure that the eye structure will swing freely upon the pivot rod sections, a pair of stiffening ribs 14 are molded into the plate 8, the ribs being arranged to extend parallel with the pivot rod sections.

The swinging movement of the eye structure relatively to the head is effected by means of a weight 16 that is carried by an extension 17 of the plate 8, the weight 16 tending to hold the plate vertical irrespective of the position of the doll. The extension 17 is strengthened and made rigid by means of a rib 18 which is molded therein and extends perpendicular to the ribs 14 in the upper portion of the plate. To limit the extent of tilting movement of the eye shells, a pair of stops 19 and 20 are provided which are adapted to be engaged by the weighted end of extension 17 as the latter swings in one direction or the other. The stops 19 and 20 consist of pieces of felt which serve to deaden the sound caused by the engagement of the extension 17 with the stops. As shown in Fig. 2, the stop 19 is secured adjacent the front portion of the neck of the doll, while the stop 20 is carried by a cross-bar 21 which serves to strengthen the head. In order to bring the painted portions of the eye into proper relation with the eye openings the normal position of the eye shells may be adjusted when the rods are secured in place by changing the size of the stop 19.

In the modified construction illustrated in Figs. 4 and 5, the weight 16 is carried by means of a depending wire 22 which is suitably secured to the plate 8 which carries the eye shells. As shown, the weight 16 is held in a loop formed at the lower end of two parallel strands of wire and the upper ends of the wire are bent substantially at right angles in opposite directions and are received in the recess formed by the lowermost of the strengthening ribs 14, said ends being fimly secured to the plate by means of cement. A rubber buffer 23 may be carried by the weight 16 and the wire 22 may be made long enough to permit the buffer 23 to engage with the front portion of the inside of the neck so that the stop 19 will not be required. With this construction, accurate adjustment of the painted portions of the eye shells relatively to the eye openings in the head may be conveniently effected by bending the wire 22.

It will be seen that the above described eye structure is of extremely simple and inexpensive construction. Furthermore, it will be apparent in assembling the eye structure in the head that the pivot rod sections may be adjusted relatively to each other to adjust them to the width of the particular head to which the structure is being applied, thus obviating the necessity of bending or altering the length of the pivot rod during the assembling operation. Consequently, the eye structures may be quickly and easily attached, irrespective of slight variations in the shape or width of the heads.

While it is preferred to employ the specific construction and arrangement of parts shown and described, it will be understood that this construction and arrangement is not essential except so far as specified in the claims and may be changed or modified without departing from the spirit and true scope of the invention.

What is claimed as new, is:—

1. An eye structure for dolls' heads comprising spaced apart hemispherical protuberances integrally formed on a piece of sheet material, and a pair of rods for pivotally securing the eyes in the head, the rods being axially alined and severally extended through the protuberances at diametrically opposite points thereon and being severally secured at their outer ends to the opposite sides of the head.

2. An eye structure for dolls' heads comprising substantially hemispherical protuberances integrally formed on a piece of sheet material, a pair of rods extending diametrically through the protuberances in coaxial alinement for pivotally securing the eyes in the head, the rods having bent outer ends conforming to the contour of the interior of the head at opposite sides thereof and being movable axially with respect to each other to bring the bent ends into engagement with the sides of the head for securement thereto, and means for securing the bent end of each rod to the head.

3. An eye structure for dolls' heads comprising a generally triangular piece of sheet material having hemispherical protuberances formed at two of its corners, the structure being also provided with a weight at its third corner and with a centrally arranged T-shaped stiffening rib.

ISIDORE MARKS.