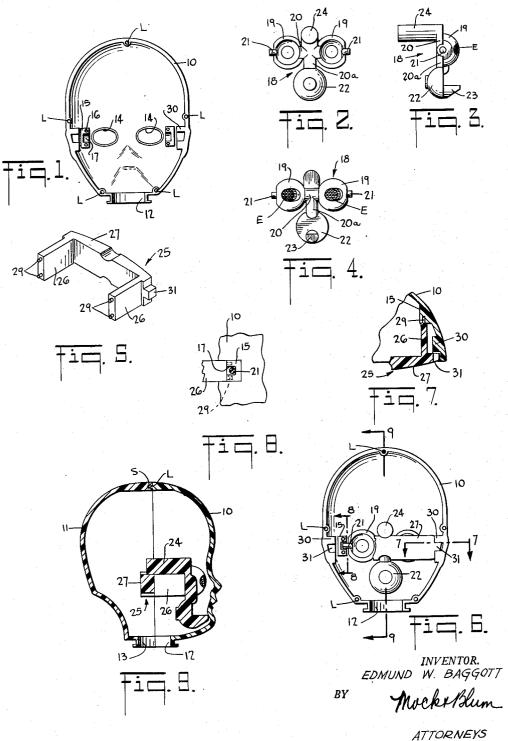
EYE-SET CONSTRUCTION FOR DOLLS

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## UNITED STATES PATENT OFFICE

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## EYE-SET CONSTRUCTION FOR DOLLS

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This invention relates to a doll or other toy figure and is concerned more especially with an improved simulated eye-set which may be easily and rapidly mounted in the hollow head of the doll or other figure in such a manner as to simulate the opening of eyes when the doll is moved to vertical upright position and the closing of eyes when the doll is moved to a reclining or horizontal position.

A primary object of the invention is the pro-  $^{10}$ vision of an improved doll-head and eye-set combination which is characterized by extreme ease and rapidity of assembly as distinguished from prior art constructions of the same general char-

Another object of the invention is the provision of a doll-head and eye-set combination of the character indicated wherein the doll-head comprises a pair of interfitting front and rear head sections and wherein the eye-set assembly may be wholly supported in the front head section prior to the attachment of the rear head section thereto.

An additional object of the invention is the provision of a doll-head and eye-set combination of the character indicated wherein the side walls of the front head section are provided adjacent the rear edge thereof with a pair of oppositely disposed retaining sockets for the recepretaining member which maintains the eye-set in turnable operative position, thereby making the mounting of the eye-set completely independent of the rear head section and greatly facombination.

A further object of the invention is the provision of a doll-head and eye-set combination of the character indicated which comprises a minimum number of component elements, each of 40 which may be conveniently molded from suitable material, such as cellulose acetate or other plastic material, and which may be readily assembled without requiring the use of auxiliary fastening elements.

The foregoing objects as well as additional objects and advantages of the invention will be readily apparent in the course of the following detailed description taken in connection with the accompanying drawing which illustrates a preferred embodiment of the invention, and wherein-

Fig. 1 is an inner elevation at the rear of the front head section of the doll with the eye-set and retaining member removed;

Fig. 2 is a rear elevation of the eye-set unit; Fig. 3 is a side elevation of the eye-set unit; Fig. 4 is a front elevation of the eye-set unit; Fig. 5 is a front perspective view of the retain-

ing member; Fig. 6 is an inner elevation at the rear of the front head section showing the eye-set unit and retaining member assembled therein, a portion

of said retaining member being broken away; Fig. 7 is a sectional detail view taken on line

7-7 of Fig. 6; Fig. 8 is a sectional detail view taken on line

-8 of Fig. 6, and

Fig. 9 is a medial vertical section taken on line 9-9 of Fig. 6 and showing the complete assembly with the rear head section in position.

In the embodiment of the invention illustrated in the drawings, the doll-head comprises a front head section 10 and a rear head section 11. Both of these head sections are preferably molded from suitable plastic material, such as cellulose acetate or the like, and are preferably flesh-colored for imparting greater verisimilitude to the doll-head. Front and rear head sections 10 and II are each preferably provided with integral, depending, semi-circular flanges 12 and 13 respectively which define an annular neck projection when said head sections are fitted together. Annular neck projection 12, 13 may be attached tion of integral mounting lugs formed on the 30 to a doll body (not shown). Alternatively, head sections 10 and 11 may be molded integrally with respective body sections, if desired.

The rear edge-wall of front head section 10 is provided with a series of rearwardly projecting cilitating assembly of the doll-head and eye-set 35 lugs L and the front edge-wall of rear head section II is provided with a series of sockets S so that said front and rear head sections may be interfitted by locating the lugs L in their respective sockets S.

Front head section 10 is provided with suitably disposed eye openings or eye sockets 14, whose edge-walls are preferably beveled in order to allow accurate fit and turning movement of the eye members 19 in said eye sockets. A pair of transversely aligned bearings 15 is provided in front head section 10, said bearings being preferably molded integrally with the inner wall thereof. Each bearing 15 includes a pair of aligned sockets 16 and an intermediate bearing recess 17, which is open at its rear face and also at its side face adjacent the respective eye socket 14 for the reception of the turnable eye-set 18, as will be more fully described hereinafter.

Eye-set 18 is preferably molded from flesh-55 colored plastic material as a one-piece unit. It 3

comprises two cup-shaped eye-shells 19 interconnected by a transverse bridge 20. Each eyeshell 19 has an integral pivot-lug 21 extending transversely outwardly therefrom. Said pivot lugs 21 are received in the bearing recesses 17 of bearings 15 and serve for turnably mounting eyeset 18 between said bearings. The outer convex face of each eye-shell 19 is marked or imprinted in any suitable manner to provide imitation eyes E which are movable into and out of registration with eye sockets 14 in order to simulate the opening and closing of eyes. The surface markings may be applied to pieces of paper or other material, which are then affixed in proper position to the convex outer faces of eye-shells 19.

In order to provide for turning movement of eye-set 13 as the doll is moved from upright vertical position to reclining horizontal position, transverse bridge 28 is formed integrally with a depending bar 29a which is provided with a terminal enlargement 22 in order to provide the necessary biasing weight. A forwardly extending stop or abutment 23 is formed integrally with enlargement 22. When the doll-head is held in normal upright and vertical position, bar 29a assumes a vertical position with stop 23 in abutment against a respective portion of the front head section 19, as shown in Fig. 9 thereby maintaining eyes E of the eye members 19 in accurate registration within the eye sockets 14.

On the other hand, when the doll-head is inclined rearwardly in a counterclockwise direction from its position of Fig. 9, eye-set 18 will turn clockwise on the axis of its pivot-lugs 21 by reason of the biasing weight or enlargement 22, thereby causing the imitation eyes E to move out of registration with the eye sockets 14 and to expose the flesh-colored portions of eye-members 19 above said eyes in realistic simulation of closed eyelids and a recumbent sleeping position of the 40 doll.

If desired, the transverse bridge 20 of eye-set 18 may be provided with a laterally projecting lug 24 which serves as an auxiliary weight and stop member. When the doll-head is in its vertical upright position of Fig. 9, the weight of said lug 24 serves to bias eye-set 13 to turn counterclockwise relative to the doll head and to maintain the eyes E in accurate registration with the eye sockets 14. The lug 24 may also be of sufficient length to abut the upper edge of retaining member 25, as shown in Fig. 9, in the vertical position of the doll-head, thereby preventing the counterclockwise rotation of eye-set 18 beyond the desired position of registration of eyes E  $_{55}$ within eye sockets. Thus lug 24 may supplement the action of lower forwardly extending stop 23 for accurate registration of the eyes E within the eye sockets 14. Of course, the auxiliary lug 24 may be omitted.

A significant feature of the invention resides in the construction and arrangement of retaining member 25 and its operative association with front head section 10 to maintain eye-set 18 in assembled operative position wholly independently of rear head section 11, thereby greatly contributing to economy, rapidity and ease of assembly of the doll-head. As best shown in Fig. 5, retaining member 25 is provided with a pair of lateral and forwardly extending holding arms 70 26 and an integral rear connecting portion 27. Each lateral arm 26 is provided with a pair of integral studs 29 extending forwardly from its front face. In assembling the eye-set turnably within the bearing recesses 17 of bearings 15, 75

studs 29 of retaining member 25 are received within the respective recesses or sockets 16 of respective bearings 15.

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In order to support eye-set 18 within the dollhead completely independently of rear head section II, the arrangement of the present invention provides for directly and fixedly securing retaining member 25 to front head section 10. For this purpose front head section 10 is formed adjacent its rear edge-wall with a pair of oppositely disposed integral sockets 30. Retaining member 25 is provided with lateral lugs 31 which are preferably formed integrally with the rear connecting portion 27 thereof. After eye-set 18 has been installed in position with pivot-lugs 21 received within the bearing recesses 17 of bearings 15, retaining member 25 is adjusted into position with studs 29 retained within bearing sockets 16. Lateral lugs 31 are simultaneously received within sockets 30 of front head section 10 to complete the eye-set assembly prior to assembling the front and rear head sections 10 and 11. If desired, adhesive may be employed to firmly seat the lugs 31 within the sockets 30 of front head section 10, although a secure friction or snap fit may suffice between said lugs and sockets.

Following the assembly of the eye-set 18 and retaining member 25 in the manner indicated, the 30 front and rear head sections are interfitted by aligning lugs L and sockets S and adhesive may be applied along their abutting edge-walls.

Since certain modifications may be made in the device of the present invention without departing from the scope thereof, it is intended that all matter contained in the foregoing description and shown in the accompanying drawing be interpreted merely as illustrative and not in a limiting sense.

## I claim:

1. A molded doll-head comprising hollow front and rear half head sections adapted to be fixedly joined along their facing peripheral edges, said front head section having a convex front wall containing a pair of transversely spaced eye openings, a pair of integrally-molded bearing members located on the rear surface of said front head section adjacent to and spaced on opposite sides of said eye openings, said bearing members having opposed side faces containing transversely-alined bearing recesses which extend to the respective rear faces of said bearing members, a molded eye set having eye members and a pair of alined laterally-projecting pivot pins insertable within said bearing recesses from the rear of said front head section and turnable in said bearing recesses with the eye members in registration with said eye openings, a pair of socket members integrally molded on opposite sides of the rear edge-wall of said front head section and spaced transversely and rearwardly of the bearing members, said socket members having respective facting sockets each of which opens into the rear face and also into the inner face of its respective socket member, and a retaining member having a pair of spaced parallel legs joined by an integrally-molded connecting arm, said legs having flat, planar front ends, said connecting arm having a pair of lugs extending laterally from opposite sides thereof, said lugs being sized and adapted to be inserted and fixed within the respective sockets from the rear of said front head section to couple the retaining member to said front head section, said legs being sufficiently long to extend forwardly with the planar front ends of

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said legs respectively abutting the rear faces of said bearing members and extending across the recesses therein in the coupled position of said retaining member, thereby holding the eye member pivot pins rotatably within said bearing recesses.

2. A doll head according to claim 1 in which each bearing member contains respective socket openings on its rear face, said socket openings being spaced on either side of the bearing recess, and the forward ends of each retaining member leg bears corresponding projecting stub pins which fit within said socket openings when said retaining member lugs are in their inserted positions.

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