May 12, 1931. L. J. GRUBMAN 1,805,085

EYE MOUNTING FOR DOLLS

Filed Jan. 2, 1926

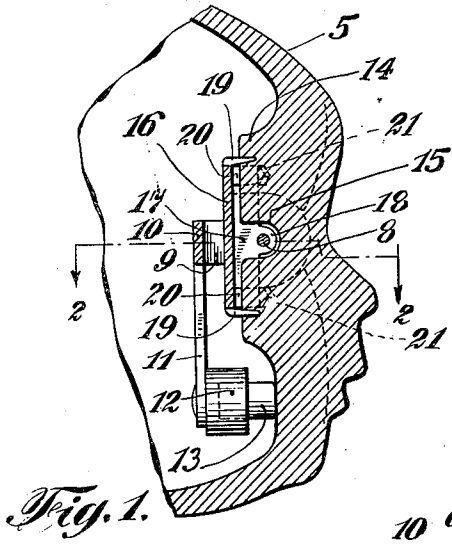


Fig. 1.

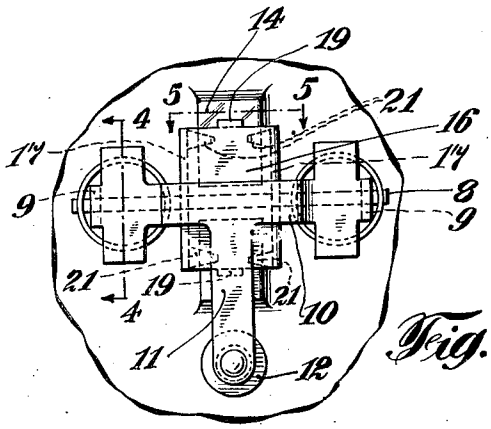


Fig. 3.

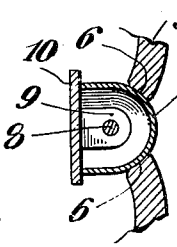


Fig. 4.

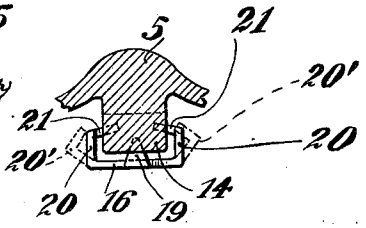


Fig. 5.

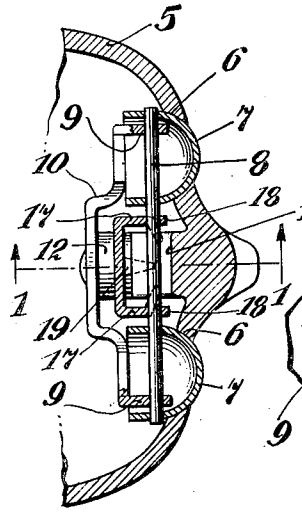


Fig. 2.

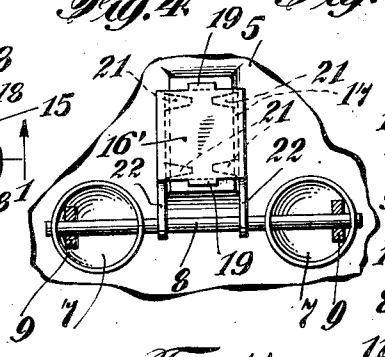


Fig. 7.

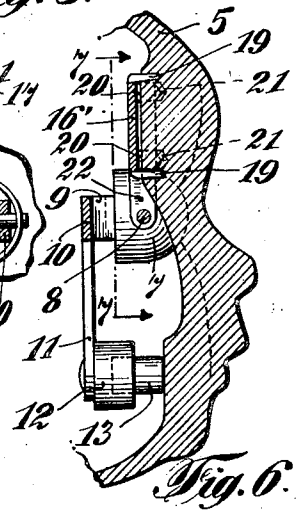


Fig. 6.

INVENTOR

Leo J. Grubman

BY C. P. Goepel

his ATTORNEY

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UNITED STATES PATENT OFFICE

LEO J. GRUBMAN, OF BELLE HARBOR, NEW YORK

EYE MOUNTING FOR DOLLS

Application filed January 2, 1926. Serial No. 78,728.

This invention relates to eye mountings for dolls, and has for its primary object and purpose to provide simple, effective and quickly operable means for attaching the eye mounting in operative relation to the wall of the doll head and with the spaced artificial eye members properly located or positioned with respect to the spaced sockets in the head wall.

In its broader aspects, my present improvement comprehends the provision of such an attaching means for an eye mounting having spaced bendable parts, each of which is provided with means adapted to be impaled in the structure of the doll head wall.

More particularly, in a practical embodiment of the invention, I provide the spaced members with means for transmitting oscillatory motion thereto including a common pivotal axis for said members, and an attaching plate in which said axis is mounted, the said plate being provided with bendable parts adapted to be positioned at opposite sides of a portion of the doll head structure and each of said parts terminating in an angularly disposed spur adapted to be imbedded or impaled in the head structure when said parts are bent to assume a predetermined position relative to said structure.

With the above and other objects in view, the invention consists in the improved eye mounting for dolls, and in the form, construction and relative arrangement of its several parts as will be hereinafter more fully described, illustrated in the accompanying drawings, and subsequently incorporated in the subjoined claims.

In the drawings, wherein I have disclosed several simple and practical embodiments of my present improvements and in which similar reference characters designate corresponding parts throughout the several views:—

Figure 1 is a vertical sectional view through a doll head taken approximately on the line 1—1 of Fig. 2, and showing one form of my improved doll eye mounting arranged therein;

Fig. 2 is a horizontal sectional view taken on the line 2—2 of Fig .1;

Fig. 3 is a rear elevation showing the eye mounting in its applied position;

Fig. 4 is a detail vertical section taken on the line 4—4 of Fig. 3;

Fig. 5 is a detail horizontal section taken on the line 5—5 of Fig. 3;

Fig. 6 is a sectional view similar to Fig. 1, illustrating a slightly modified form of the device, and

Fig. 7 is a sectional view taken substantially on the line 7—7 of Fig. 6.

For the purpose of illustrating the manner of application of my improved eye mounting, in the accompanying drawings, I have shown a doll head 5 which may be molded or otherwise fashioned from wood pulp, papier-mâché or other suitable composition material. The front wall of this doll head is provided with the usual eye sockets indicated at 6, arranged in appropriate spaced relation to the other molded facial features of the doll head.

In the illustrated construction, I have shown the artificial eye members 7 in the form of substantially hemispherical shells, though in so far as my present improvements are concerned, this is not an essential feature and if desired these eye members may be of solid construction. For the purpose of transmitting oscillatory motion to these eye members they are connected by a common axis or pivot rod 8 extending through the geometrical centers of said eye members. To the opposite ends of this pivot rod, the angular end portions 9 of a frame plate 10 are suitably fixed, said frame plate having a depending central portion 11 to which a suitable weight 12 is fixed whereby said frame plate is caused to swing or oscillate in the manipulation of the doll. The swinging movement of said frame plate and therefore the oscillatory movement of the eye members in the respective sockets in one direction, is limited in the usual manner by contact of a suitable resilient bumper member 13 on the weight 12 with the front wall of the doll head.

As shown in Figs. 1 to 5 of the drawings,

the front wall of the doll head between the spaced eye sockets is formed with a vertically extending rib 14 on the inner side thereof, said rib at its approximate center being recessed as at 15.

For the purpose of securely attaching the eye mounting in its applied position with respect to the doll head wall, I provide a plate 16 having angularly disposed flanges 17 on its opposite side edges, each of which is formed with an apertured ear 18 to loosely receive the pivot rod 8. Upon the upper and lower ends of the plate 16 between the flanges 17 thereof the angularly projecting spurs 19 are formed. From the upper and lower ends of each flange 17 a part 20 is separated but remains integrally connected with the body of the plate 16. These parts 20 normally project outwardly at an oblique angle from the edges of the plate 16 as indicated at 20′ in Fig. 5 of the drawings, each of said parts at its extremity terminating in an inwardly projecting spur 21.

In the application of the device above described to its operative position within the doll head, as the eye members 7 are positioned in the respective sockets 6 of the head wall, the pivot rod 8 for said eye members is located within the central recess 15 of the rib 14 on the head wall and the flanges 17 of the attaching plate are positioned in parallel relation to this rib at the opposite sides thereof. Sufficient pressure is now applied to cause the end spurs 19 to become firmly impaled or imbedded in the rib 14. Thereafter, by means of a suitable tool, the parts 20 at the upper and lower ends of the attaching plate are bent inwardly so that the spurs 21 thereon will also be forcibly imbedded in the rib 14. In this manner, it will be evident that the oscillatory eye mounting may be very quickly and securely attached in its applied position with the spaced eye members in accurate relation to the walls of the eye sockets. The spurs 19 above referred to serve to initially fix the location of the eye members 7 and their pivot rod 8 with respect to the eye openings in the wall of the doll head, said spurs serving to hold the mounting in such location while the parts 20 are subsequently bent inwardly to impale or imbed the spurs 21 thereof in the part 14 of the doll head structure whereby the attaching plate is immovably fixed with relation to said structure, and the mounting thus permanently supported in accurately located relation with the eye openings.

I have above referred to the plate 16 as a support for an oscillatory eye mounting, but it will be obvious that this improved supporting member may also be used for the purpose of attaching and supporting various other devices upon the wall of the doll head. It is to be particularly noted that by reason of the described means for attaching the supporting member on plate 16 to the wall of the doll head, the element immediately supported thereby, (in the present instance the axis 8) is positioned substantially in the same plane as the attaching spurs 21, perpendicularly of the doll head wall. Therefore most of the strain or stress transmitted to the attaching spurs is in a vertical direction so that the said spurs are not so likely to work loose or to be pulled from the wall structure of the doll head.

In Figs. 6 and 7 of the drawings, I have shown an alternative form of the attaching means, wherein the side flanges of the attaching plate 16′ are extended downwardly below the body of the plate as at 22 to provide bearings for the pivot rod or axis of the eye mounting. In this case, the rib or projection on the inner side of the head wall is located substantially above the eye socket 6 and does not extend between and below the same. The means for securing this plate 16′ in fixed relation to the projection of the doll head wall is substantially the same as that above described.

From the foregoing description considered in connection with the accompanying drawings, the construction, manner of operation and several advantages of the described embodiments of my present disclosure will be clearly understood. The device consists of comparatively few parts which are of very simple form, thereby reducing to a minimum the manufacturing costs of the mounting while at the same time enabling the eyes to be easily, quickly and properly mounted within the doll head without requiring the exercise of a very high degree of skill upon the part of the workmen. I believe it to be new in the art to provide an attaching means for such oscillatory eye mountings having bendable parts provided with spurs or other equivalent means and which may be bent by means of a simple tool to impale or imbed said spurs in the structure of the head wall, and I have herein illustrated and described several simple and practical constructions for accomplishing this purpose. It is, however, apparent that fundamentally this general idea might be exemplified by means of various other alternative mechanical structures, and I, therefore, reserve the privilege of resorting to all such legitimate changes in the form, construction and relative arrangement of the several parts as may be fairly embodied within the spirit and scope of the invention as claimed.

I claim:

1. An attaching and supporting member for oscillatory eye mountings for dolls having integrally formed parts positioned in angular relation to each other and having means adapted to be impaled in angularly

related surfaces internally formed upon the front wall of a doll head.

2. An attaching and supporting member for oscillatory eye mountings for dolls consisting of a rectangular plate adapted to be arranged in substantially parallel relation to the front wall of the doll head, said plate being provided upon its opopsite side edges with means yieldable relative to the plate and adapted to be embedded in spaced surfaces internally formed on the doll head wall, and additional means integrally formed with one end of the plate and adapted to impale an internal projection of the doll head wall between said spaced surfaces.

3. An attaching and supporting member for oscillatory eye mountings for dolls consisting of a plate adapted to be arranged in substantially parallel relation to an internal projection on the front wall of the doll head, said plate having integrally formed parts opposed to substantially parallel surfaces on said projection, and said parts carrying means adapted to be embedded in said surfaces of the projection to thereby fix the supporting plate in its attached position.

4. An attaching and supporting member for oscillatory eye mountings for dolls consisting of a plate having supporting means for the mounting adapted to be arranged in substantially parallel relation to an internal projection on the front wall of the doll head, said plate having integrally formed anchoring parts to engage substantially parallel spaced surfaces on said projection.

5. An attaching and supporting member for an oscillatory eye mounting for dolls consisting of a plate having supporting means to receive the axis of an oscillatory eye mounting, said plate adapted to be positioned with respect to spaced internally formed surfaces on the front wall of a doll head and having integrally formed relatively yieldable edge portions provided with means adapted to be embedded in said surfaces of the doll head wall to thereby fix said plate in its attached position.

6. In combination with a doll head having spaced vertical surfaces internally formed on its front wall, an attaching and supporting plate for an oscillatory eye mounting having parts projecting from one side of the plate at an angle to the plane thereof and provided with means adapted to be embedded in the respective internal vertical surfaces on the head wall to fix said plate in its attached position.

7. In combination with a doll head having an internal projection on its front wall providing vertically extending angularly related surfaces, an attaching and supporting plate for an oscillatory eye mounting adapted to be positioned in substantially parallel relation with said projection on the head wall, and said plate being provided upon its opposite side edges and upon one of its ends with parts integrally formed with said plate and extending in angular relation to each other adapted to be embedded in the respective angularly related surfaces of said projection to thereby fix said plate in its attached position.

8. In combination with a doll head having an internal projection on its front wall and an oscillatory eye mounting for said head said mounting including an axis; an attaching plate for the eye mounting having bearing means for the axis thereof and adapted to be positioned with respect to said projection on the head wall, said plate being provided with bendable parts positioned on opposite sides of said projection on the head wall and each terminating in an angularly projecting spur adapted to be impaled under pressure in said projection.

9. In combination with a doll head having an internal projection on its front wall and an oscillatory eye mounting for said head, said mounting including an axis; an attaching plate for the eye mounting having bearing means for the axis thereof and adapted to be positioned with respect to said projection on the head wall, said plate at its upper and lower ends being provided with rigid angularly projecting spurs to be imbedded in said projection at vertically spaced points, and said plate at its opposite side edges being also provided with bendable parts each terminating in an angularly projecting spur adapted to be impaled in the relatively opposite sides of said projection to extend in angular relation to said first named spurs.

10. In combination with a doll head having eye openings in its front wall and spaced vertically extending surfaces internally formed on said wall between the eye openings, an attaching plate for an oscillatory eye mounting having integrally formed means for supporting the eye mounting and adapted to be attached solely to the front wall of the doll head between said spaced vertically extending surfaces, and said plate also having additional integral parts at its opposite side edges provided with means adapted to be embedded in said spaced vertical surfaces of the head wall to thereby fixedly secure said plate in its attached position.

11. In combination with a doll head having spaced eye openings in its front wall and spaced vertically extending surfaces internally formed on said wall, connected relatively yieldable attaching parts having means to respectively impale said spaced vertical surfaces and retain said attaching parts in fixed relation to the head wall, and a part connected with and depending below said attaching parts provided with bearing

means positioned adjacent said eye openings, eye members and a shaft carrying said eye members rotatably mounted in said bearing means.

12. An eye mounting for dolls comprising attaching means embodying a sheet metal plate having integrally connected angularly related parts yieldable under pressure relative to each other, said plate having spaced ends provided with means adapted to be embedded under pressure in spaced internal surfaces formed on the front wall of a doll head, and an additional part connected with the attaching means and depending therefrom, said part being provided with bearing means to receive the axis of an oscillatory eye setting.

13. As a new article of manufacture, a supporting member for attachment to a doll head comprising a metal plate provided on opposite edges thereof with integrally formed parts bendable to angularly projecting positions relative to the plane of said plate, and each of said parts having its terminal portion angularly bent relative to said part and formed to provide an attaching spur adapted to impale the wall structure of a doll head when said part is bent with respect to the plate.

14. As a new article of manufacture, a supporting member for attachment to a doll head comprising a metal plate provided on opposite edges thereof with integrally formed parts bendable to angularly projecting positions relative to the plane of said plate, and each of said parts having its terminal portion angularly bent relative to said part and formed to provide an attaching spur adapted to impale the wall structure of a doll head when said part is bent with respect to the plate, and said plate being further provided with additional integrally formed means for supporting a member substantially in the same plane as said attaching spurs perpendicularly of the doll head wall.

15. In a device of the character specified the combination of a doll's head having eye-sockets and projecting from the inner wall of the face portion thereof a post having opposite side walls, an eye hanger comprising a body portion, opposite upstanding ears thereon, each of said ears being provided with a plurality of inturned teeth, the distance between opposite teeth being approximately equal to the width of said head post and means on said hanger for operatively supporting an eye shaft and opposite eye-balls, said ears being pressed inwardly toward each other and said teeth penetrating said head post whereby said hanger is secured in position.

16. In a device of the character specified the combination with a doll's head having eye-sockets and projecting from the inner wall of the face portion thereof a post having opposite side walls, of an eye hanger comprising a body portion, opposite upstanding ears thereon, each of said ears being provided with an inturned tooth the distance between opposite teeth being approximately equal to the width of said head post, means on said hanger for operatively supporting an eye shaft and opposite eye-balls and an eye-shaft and eye-balls carried by said means, said hanger being constructed and adapted for being positioned relatively to said post by the seating of said eye-balls in the eye-sockets and said teeth being constructed and adapted for penetrating said head post upon said ears being pressed inwardly toward each other for securing said hanger in position.

In testimony that I claim the foregoing as my invention, I have signed my name hereto.

LEO J. GRUBMAN.