Aug. 25, 1931. L. A. NEMCOVSKY 1,820,087

EYE MOUNTING FOR DOLLS

Filed June 7, 1927 3 Sheets-Sheet 1

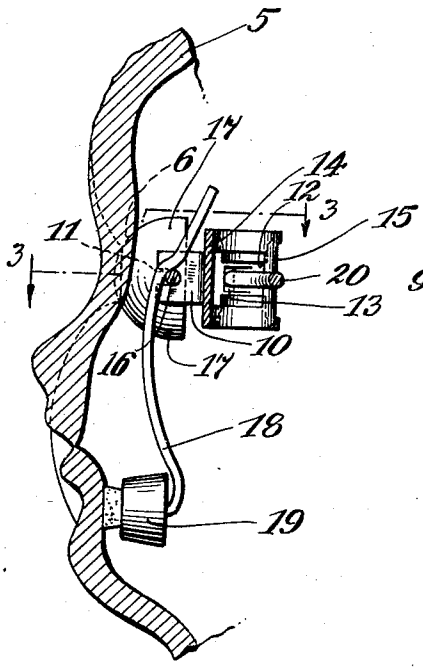


Fig. 1.

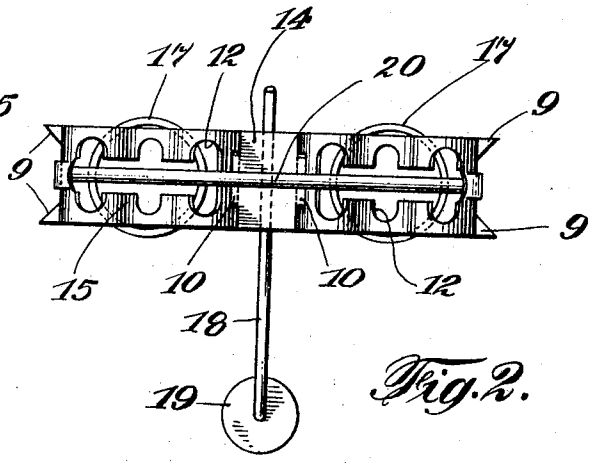


Fig. 2.

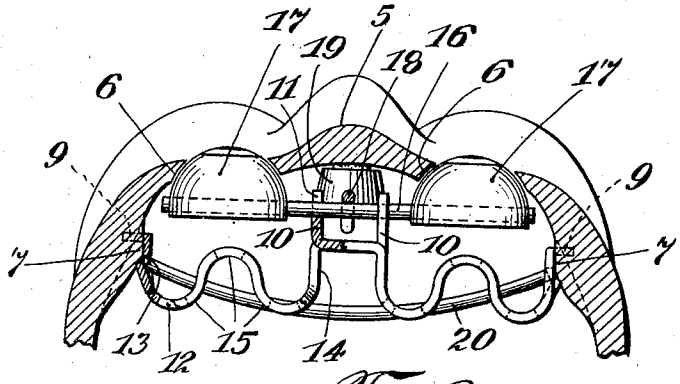


Fig. 3.

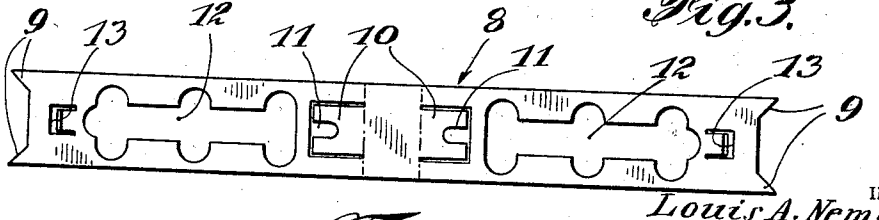


Fig. 4.

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Filed June 7, 1927 3 Sheets-Sheet 2

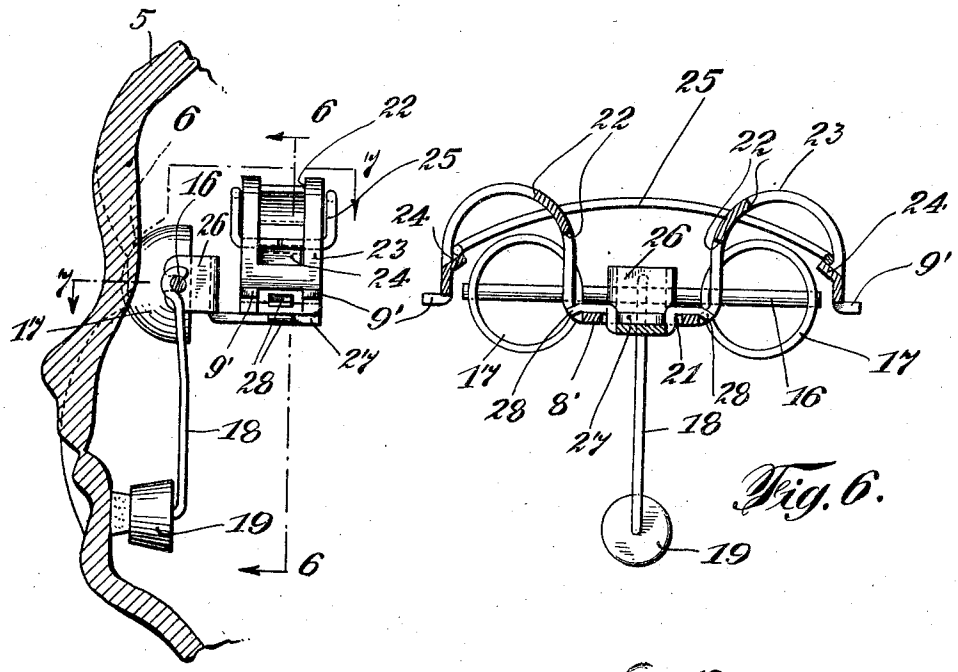


Fig. 5.

Fig. 6.

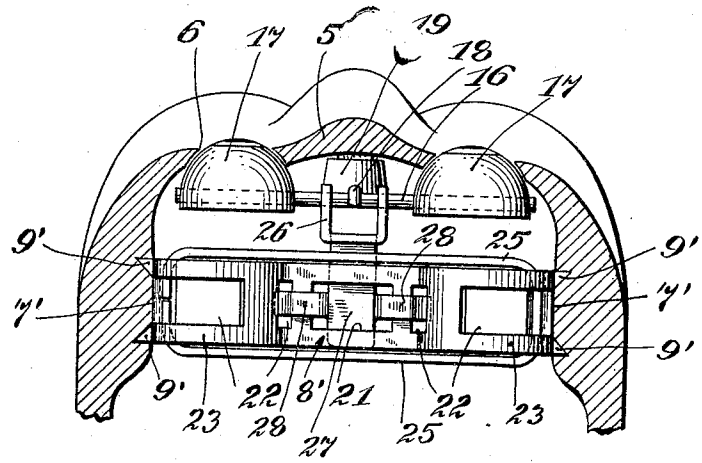


Fig. 7.

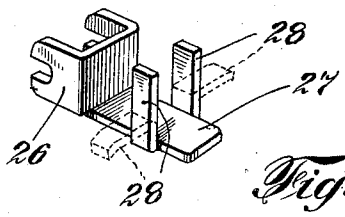


Fig. 8.

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EYE MOUNTING FOR DOLLS

Filed June 7, 1927 3 Sheets-Sheet 3

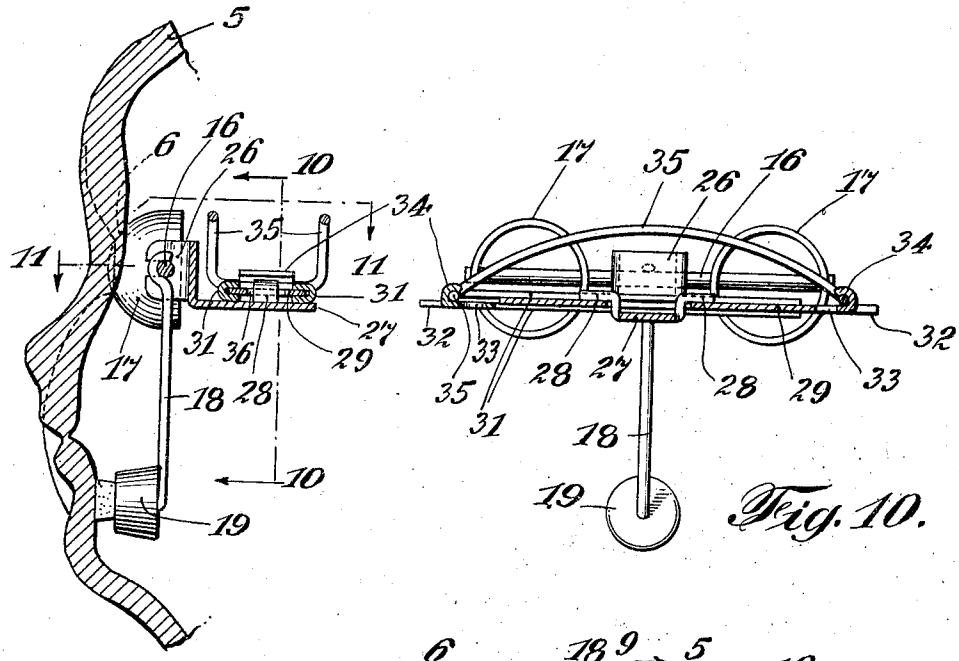


Fig. 9.

Fig. 10.

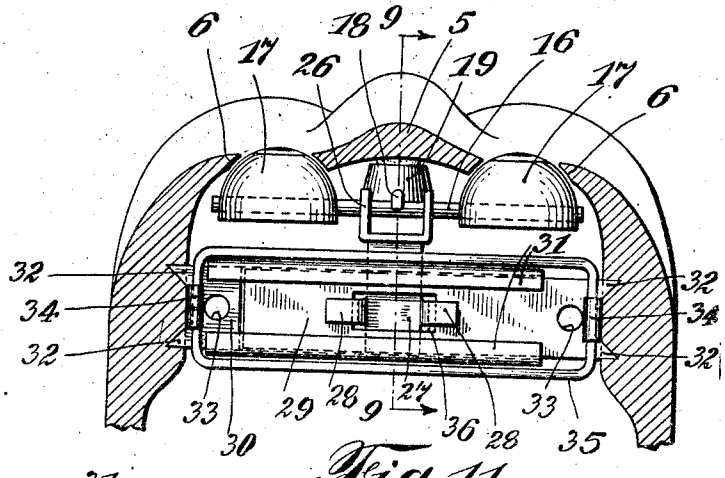


Fig. 11.

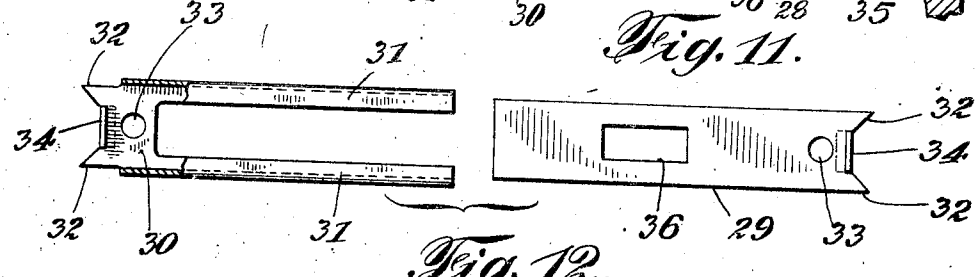


Fig. 12.

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UNITED STATES PATENT OFFICE

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EYE MOUNTING FOR DOLLS

Application filed June 7, 1927. Serial No. 197,017.

This invention relates to eye mountings for dolls, and has for its primary object to provide an improved means for supporting an oscillatory eye setting within a doll head which may be easily and quickly attached to the head wall without the use of adhesives and which is provided with means for automatically maintaining the mounting in a substantially rigid attached position, notwithstanding subsequent shrinkage of the composition structure of the head wall. It is another object of the invention to provide a supporting bridge for the eye setting having relatively movable parts provided with means for impaling internal abutment surfaces on opposite sides of the doll head, and a resilient tensioned member extending between said parts of the bridge and engaged therewith acting to expand or separate the same relative to each other and thereby apply a continuously acting force constantly urging the impaling means into the structure of the head wall.

It is also another object of the invention in one embodiment thereof to provide a supporting bridge of the above character having integrally formed means projecting towards the front wall of the doll head and having bearing seats or recesses receiving the rod or axis of the oscillatory eye setting. In another embodiment of the supporting bridge structure, I may form the same into slidably engaged parts connected by the resilient element acting to slide said parts in relatively opposite directions and engage the impaling means thereof in the opposite side walls of the doll head, and a separate bracket element to receive the oscillatory eye setting provided with means whereby it may be readily attached in fixed relation to the supporting bridge after the latter has been mounted in the doll head.

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 illustrated several simple and practical embodiments of the invention, and in which similar reference characters designate corresponding parts throughout the several views,—

Figure 1 is a vertical sectional view through the front wall of a doll head illustrating one embodiment of my improved eye mounting applied thereto;

Fig. 2 is a rear elevation of the mounting, the doll head being omitted;

Fig. 3 is a horizontal sectional view taken substantially on the line 3—3 of Fig. 1;

Fig. 4 is a plan view of the blank from which the eye mounting is formed;

Fig. 5 is a vertical section similar to Fig. 1, showing another embodiment of the device;

Fig. 6 is a sectional view taken substantially on the line 6—6 of Fig. 5;

Fig. 7 is a horizontal sectional view taken on the line 7—7 of Fig. 5;

Fig. 8 is a detail perspective view of the bearing bracket for the eye setting;

Fig. 9 is a vertical section similar to Fig. 6 showing another alternative embodiment of my invention;

Fig. 10 is a sectional view taken substantially on the line 10—10 of Fig. 9;

Fig. 11 is a horizontal sectional view taken on the line 11—11 of Fig. 9, and

Fig. 12 is a detail plan view of the supporting bridge shown in Fig. 11, the parts thereof being separated and one of said parts partially in section.

Referring in detail to the drawings, and more particularly to Figs. 1 to 4 thereof, the doll head 5 is molded or otherwise fashioned from wood pulp, papier mache, or other suitable composition material to provide the customary facial features on the outer surface thereof in appropriate relation to each other. The front wall of the doll head is provided with the usual eye openings therethrough in spaced relation to each other, the head wall at the inner side of each opening being milled to provide an eye member receiving socket as indicated at 6.

The opposite side wall of the doll head adjacent to each of the eye receiving sockets

6 is internally formed with a vertical abutment surface 7, said surfaces being in parallel relation to each other and in planes substantially at right angles to the general plane of the front wall of the doll head.

The supporting bridge for the eye setting in this embodiment of my invention is formed from a single strip of resilient sheet as indicated generally at 8 in Fig. 4 of the drawings. This metal strip is of course, of predetermined length to permit of its subsequent formation as will be presently explained, in accordance with the distance between the internal abutment surfaces 7 of the doll head.

The strip 8 is stamped out by means of a suitable cutting die to provide at each end thereof the spaced spurs 9. In the central portion of the strip, spaced longitudinally extending tongues 10 are cut which remain integrally connected at one of their ends with the body of the strip, the other end of each tongue having a bearing seat or recess 11 formed therein. Between these tongues at its opposite ends, the central part of the strip is cut out or formed with the elongated openings 12 so that the parts of the metal strip at the opposite sides of these openings will readily yield or give. There is also provided in each end of the metal strip an outwardly struck lip or finger affording a shoulder 13, the purpose of which will hereinafter appear.

After the blank has been cut out in the manner illustrated in Fig. 4, it is then bent to provide a central U-shaped portion 14 and a succession of reversely bent semi-circularly curved portions 15 at each side of the central portion 14, said latter bends being formed in the parts of the metal strip provided with the cut-outs or elongated openings 12. The ends of the metal strip then extend in the same direction as the central part 14 and in substantially parallel relation to the opposite sides thereof. The spurs 9 are also bent to project laterally at right angles to these end portions of the bridge member while the tongues 10 are bent out of the plane of the opposite sides of the U-shaped part 14 and extended forwardly therefrom so that they project in spaced parallel relation to each other and at right angles to the plane of the central part of the U-shaped bend 14.

A resilient wire rod 20 is then bowed and placed under tension, said rod extending through the slots or openings 12 and having its opposite ends engaged against the shoulders 13. Therefore, it will be understood that the tendency of this tensioned rod is to straighten out the curved sections 15 of the bridge plate and thereby separate or force the opposite ends of the bridge plate away from each other.

For purposes of illustration, I have shown a conventional type of oscillatory eye setting which includes the rod or axis 16 upon the opposite ends of which the eye members 17 are suitably secured, a pendulum rod 18 having a suitable weight 19 on its lower end being securely fixed at its upper end to the central portion of the rod 16.

In the use of the device above described, the eye setting may be first inserted within the doll head through the neck opening thereof, and the bridge member then likewise positioned through the neck opening within the doll and by the sense of touch, the rod 16 of the eye setting can be readily engaged in the bearing seats or recesses 11 of the forwardly projecting spaced tongues 10. The operator now presses inwardly upon the opposite ends of the bridge plate 8, the curved sections 15 thereof and the rod 20 yielding to such pressure until the spurs 9 are positioned inwardly of the planes of the flattened surfaces 7 and the opposite sides of the head wall. The eye members 17 are then properly fitted into the respective sockets 6 and the bridge plate is released. Thereupon, the bridge plate tends to return to its normal position and is also positively distended by the rod 20, thus impaling the spurs 9 under pressure in the structure of the doll head wall and closely engaging the ends of the bridge plate against the abutment surfaces 7. However, the rod 20 is still held under considerable tension. Therefore, as the doll head wall shrinks, the ends of the bridge plate and the spurs 9 will be constantly pressed or urged outwardly by the tendency of the resilient rod 20 to straighten out, thus preventing the loosening of the spurs 9 in the head wall and their possible detachment therefrom so that the supporting bridge for the eye setting will be completely released. Thus, notwithstanding such shrinkage of the doll head wall, the security of the attachment of the bridge member to the opposite sides of the head wall will be maintained, thus obviating the displacement of the eye setting from its proper position in operative relation to the eye sockets in the front wall of the doll head.

In Figures 5 to 8 of the drawings, I have illustrated another embodiment of the device which differs in two principal respects from the construction above described in that the bridge plate is positioned in a horizontal instead of a vertical plane, and secondly, the bearing means for the eye setting instead of being integrally formed with the bridge plate consists of a separate bracket member provided with suitable means for attachment to the central portion of the bridge plate.

In this modified construction, the bridge plate 8′ also consists of a stamped sheet metal plate or strip which is provided with a central opening indicated at 21 and spaced elongated openings 22 at each side of said central opening. The latter portions of the bridge plate

are bent to form the single U-shaped parts 23 projecting from one side of the central portion of the plate, the free ends of said U-shaped parts 23 being provided with spaced laterally projecting spurs 9'.

The ends of the bridge plate are also provided with inwardly struck tongues or projections 24 at the outer ends of the openings 22 at the outer portions of the bridge plate. An elongated normally closed loop of resilient wire 25 is adapted to be positioned at its ends within the bends 23 of the bridge plate and against the tongues 24. This arrangement of the loop 25 may be readily effected by first engaging the closed end of the loop against one of the tongues 24 and then expanding or spreading the side portions of the loop apart so as to permit the ends of the wire at the opposite end of the loop to be engaged against the inner side of the bridge plate at its opposite ends upon the other of the tongues 24.

A supporting bracket member for the eye setting shown in detail in Fig. 8 of the drawings consists of a sheet metal stamping having a U-shaped end portion 26 and an arm 27 projecting from the intermediate part thereof and in a plane at right angles thereto. Upon the opposite side edges of the arm 27, the bendable lugs or fingers 28 are formed, said fingers normally extending at right angles to the arm 27.

In this latter construction of the device, the bridge plate is first inserted through the neck opening of the doll head, the end portions of the bends 23 thereof being forced inwardly to permit of the arrangement of the bridge plate between parallel abutment surfaces 7' on the opposite side walls of the doll head, it being understood that said bridge plate is arranged in a horizontal plane with the curved portions 23 thereof projecting upwardly from the intermediate portion of the plate. The resilient wire loop 25 is thus placed under tension so that upon release of the bridge plate, the end portions thereof will be outwardly expanded by said wire loop and the spurs 9' will be forcibly embedded or impaled in the abutment surfaces 7'. The eye setting properly arranged upon the spaced arms of the U-shaped part 26 of the supporting bracket is then inserted through the neck opening of the doll head and the arm 27 of said bracket is positioned beneath the central portion of the bridge plate so that the fingers 28 on said arm will project upwardly through the central opening 21 in the bridge plate. Said fingers are then bent downwardly upon the intermediate part of the bridge plate at opposite ends of said opening, and the extremities of said fingers bent over the edges of the openings 22. Thus, the bracket member may be easily, quickly and securely attached to the supporting bridge plate to sustain the eye setting in its proper operating position.

In Figures 9 to 12 of the drawings, I have illustrated a further alternative form of the invention. In this construction, the supporting bridge consists of two relatively slidable parts shown in detail in Fig. 12 of the drawings. Each of these parts is in the form of a simple sheet metal stamping, the part 29 being in the form of an elongated plate or metal strip of suitable length and width, the edges of which are slidably engaged in parallel guide channels 31 formed on the other part 30. Each of these bridge parts at one of its ends is provided with the spaced spurs 32 and adjacent thereto with an opening 33. Between the spurs 32, a lug 34 is formed which is adapted to be turned over and clinched upon one end of the expanding wire loop 35.

The part 29 is further provided with a longitudinally extending opening 36 therein for the attachment of a supporting bracket for the eye setting, said bracket being of substantially the same form and construction as that shown in Fig. 8 of the drawings.

In the use of this last described embodiment of the invention, pins or lugs on the relatively movable parts with suitable tools are adapted to be engaged in the openings 33 of the respective bridge parts which are then forced inwardly so the distance between the spurs 32 on the outer ends of said bridge parts is such that said spurs may be readily positioned between the internal abutment surfaces on the side walls of the doll head. The tool is then removed, whereupon the expanding loop 35 slides the bridge parts relative to each other in an outward direction and forcibly impales the spurs 32 in the opposite sides of the head wall. It will be seen that this construction when attached to the wall of a doll head provides a very rigid and substantial support for the eye setting. In each of the illustrated embodiments of my invention, any shrinkage of the doll head wall is automatically compensated for by a corresponding adjustment of the supporting bridge for the eye setting whereby any possibility of the release or detachment of the supporting bridge from the doll head wall by reason of such shrinkage will be obviated. It will be appreciated that since the several parts of the device are in the form of very simple stampings of sheet metal, that the same may be manufactured at comparatively small cost. At the same time however, each of the constructions herein referred to is reliable and efficient for the purpose in view. Nevertheless, it is possible that the same results might be attained by means of various other alternative forms of the several constructions herein particularly described, and I accordingly, 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. In combination with a doll head having spaced eye openings in its front wall and internal abutment surfaces on its side walls adjacent said eye openings, a supporting bridge for an oscillatory eye setting consisting of a resilient metal plate having spaced portions yieldable under pressure for movement towards and from each other and provided with spurs adapted to impale said abutment surfaces of the doll head wall, said parts of the bridge plate adapted to be forced inwardly towards each other to position the spurs thereof for engagement with said abutment surfaces, and a bowed resilient member extending between and engaged with said relatively movable parts of the bridge plate to urge the same away from each other and force the spurs under pressure into the structure of the head wall, and said bridge plate having means projecting forwardly therefrom between the eye openings of the doll head wall adapted to receive the axis of an oscillatory eye setting.

2. A supporting bridge for oscillatory eye settings for dolls comprising a plate of resilient sheet metal having spaced curved portions relatively yieldable towards and from each other and provided with spurs adapted to impale the opposite side walls of a doll head, said plate being centrally provided with means to receive the axis of an oscillatory eye setting, and a bowed resilient member engaged at its ends with the spaced parts of the bridge plate having the spurs thereon and placed under tension by the inward movement of said parts to position the spurs for engagement in the opposite side walls of the doll head.

3. A supporting bridge for oscillatory eye settings for dolls comprising a stamped resilient sheet metal plate bent to provide a central U-shaped part and reversely bent portions at opposite sides of said U-shaped part yieldable relative to each other, and the opposite ends of said plate being provided with laterally projecting spurs, said ends of the plate being adapted to be forced under pressure towards each other to position said spurs to be embedded in internal surfaces formed on opposite sides of a doll head wall, and said central part of the bridge plate having tongues struck therefrom and projecting forwardly provided with bearing seats to receive the axis of an oscillatory eye setting.

4. A supporting bridge for oscillatory eye settings for dolls comprising a stamped resilient sheet metal plate bent to provide a central U-shaped part and reversely bent portions at opposite sides of said U-shaped parts yieldable relative to each other, and the opposite ends of said plate being provided with laterally projecting spurs, said ends of the plate being adapted to be forced under pressure towards each other to position said spurs to be embedded in internal surfaces formed on opposite sides of a doll head wall, and said central part of the bridge plate having tongues struck therefrom and projecting forwardly provided with bearing seats to receive the axis of an oscillatory eye setting, and a bowed resilient wire rod extending between said ends of the bridge plate and engaged therewith and constantly tending to urge the same apart and embed the spurs in the structure of the doll head wall.

5. A supporting bridge for oscillatory eye settings for dolls comprising a plate of resilient sheet metal adapted to be transversely positioned within a doll head adjacent the front wall thereof, means centrally connected with the bridge plate to receive the axis of the eye setting, said plate having spurs at its ends to impale the opposite side walls of the doll head and provided between said spurs and said central part of the plate with curved relatively yieldable portions adapted to be placed under tension in positioning the bridge plate within the doll head and acting to constantly urge the ends of said plate apart and embed the spurs thereof in the doll head structure.

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

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