To all whom it may concern:

Be it known that I, Morris Gerberg, a citizen of the United States, residing in the city of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Articulated Eyes for Automatons, of which the following is a full, clear, concise, and exact description.

This invention relates to improvements in dolls and particularly to the eyes, the principal object being to provide a pair of eyes capable of rolling in different directions, closely simulating the appearance of the natural movement of human beings in opening, closing and rolling from side to side spontaneously upon moving the doll body into different positions.

A further object is in the provision of simple but effective means, arranged interiorly of the head structure, which operate the eyes automatically.

A still further object is to provide a mechanism, upon which the eyes are secured, that can be easily and quickly dismounted or assembled within the hollow head structure, thereby enabling the eyes to be changed, if desired, at any time.

Other objects are to provide mechanism that is not readily liable to become disarranged or damaged, even if subjected to severe handling, as is likely to be accorded by a child, and being actuated by the natural force of gravity, is positive in operation and capable of continuous service.

These and other like objects are attained by the novel construction and combination of parts, elements and principles hereinafter fully described and shown in the accompanying drawing, forming a material part of this disclosure, and in which:

Figure 1 is a perspective view showing the exterior of a doll’s head having eyes moved by gravity in any direction.

Fig. 2 is a rear elevational view of the same showing an articulating mechanism made in accordance with the invention.

Fig. 3 is a vertical sectional view taken on line 3—3 of Fig. 2, and

Fig. 4 is a perspective view showing the articulating mechanism as dismounted.

The head and upper part of the bust of the doll are made in two shell-like sections, respectively rear and front, the latter being formed and shaped to correspond with the features of a human being in miniature, concavo-convex in cross section and perforate except for the eye openings 10 formed at each side of the nose 11 below the brows 12.

Secured by solder 13 or other fastenings in the concavity of the forehead 14, central of the shell, is a thin strip 16 of resilient material having a downwardly extending, curved flat portion 17 and separated from it, by shearing, are side elements 18 formed with curved engaging loops 19, open toward the plate portion 17, and in the plane of the eye openings 10, the foregoing constituting, in effect, a spring clip or bracket by which the eyes and their actuating mechanism are supported.

The eyes 20 are shaped from sheet metal into semispherical form and have internally extending extending lugs 21 at their lower peripheral edges, similar but shorter lugs 22 being formed with their upper edges, and pivoted in these lugs are vertical spindles 24 upon which the eyes rotate when rolling side-wise.

Pivoting the extreme outer ends of the lower lugs 21 is a link 25, causing the eyes to move in unison.

Firmly engaged centrally of the spindles are sleeves 28, and passing diametrically through the sleeves and spindles is a rod 30, having fixed collars 31 adapted to make contact with the outer edges of the side elements 18, when the rod is engaged in the loop 19, the rod being pressed easily into place therein or removed therefrom by springing the elements 17 and 18 in opposite directions.

To one of the sleeves 28 is secured a wire lever 32 bent to extend rearward and downward and terminating in a weight 34, by which the opening or closing action of the eyes is affected.

Formed with one of the lugs 22 of the eyes, is a reverse curved element 35, adapted to contact with the interior of the head and act as a stop, preventing rolling the eyes too far upward, the weight 34 acting in a similar manner when the eye is rolled downwardly.

From the foregoing it will be seen that a
practical and efficient mechanism has been disclosed the construction and use of which will be clear to those familiar with the art.

Having thus described my invention, what
5 I claim as new and desire to secure by Letters Patent, is:
1. In movable eyes for dolls, the combination with a hollow head having eye openings of eyes suited thereto, mountings permitting said eyes to turn on vertical and horizontal axes, means for actuating said eyes, and a spring clip in said head engageable with said mountings.

2. In movable eyes for dolls, the combination with a hollow head having eye openings and a pair of eyes, of pivotal supports on which said eyes may move in a horizontal plane, a single transverse pivotal support on which the first named supports are mounted permitting said eyes to move in a vertical plane, connections between said eyes whereby they are compelled to act in unison, and means for detachably engaging said support within said head.

3. In movable eyes for dolls, the combination with a hollow head having eye openings and a pair of eyes, of pivotal supports on which said eyes operate in a horizontal plane, a single transverse pivotal support on which the first named supports are mounted permitting said eyes to move in a vertical plane, means limiting the movement of said eyes, and means fixed in said head adapted to resiliently engage said transverse support.

4. In movable eyes for dolls, the combination with a hollow head having eye openings and a pair of eyes suited thereto, of pivotal supports on which said eyes may move in a horizontal plane, a single transverse pivotal support on which the first named supports are engaged permitting said eyes to move in a vertical plane, means for actuating said eyes, and a resilient clip bracket fixed in said heads adapted to engage said transverse support.

5. In articulated eyes for automatons, the combination with a hollow casing representing a head and having eye openings, of a spring clip bracket fixed in said casing, a pair of semi-spherical eyes suited to the mentioned eye openings, opposed lugs formed with the rear edges of said eyes, spindles pivoted in said lugs permitting said eyes to move in a horizontal plane, a support rod in which said spindles are mounted permitting said eyes to move in a vertical plane, connections between said eyes whereby they are compelled to operate in unison, a weighted lever engaged with said rod whereby said eyes are moved on their horizontal axis and means formed in said bracket receptive of said rod.

MORRIS GERBERG.