

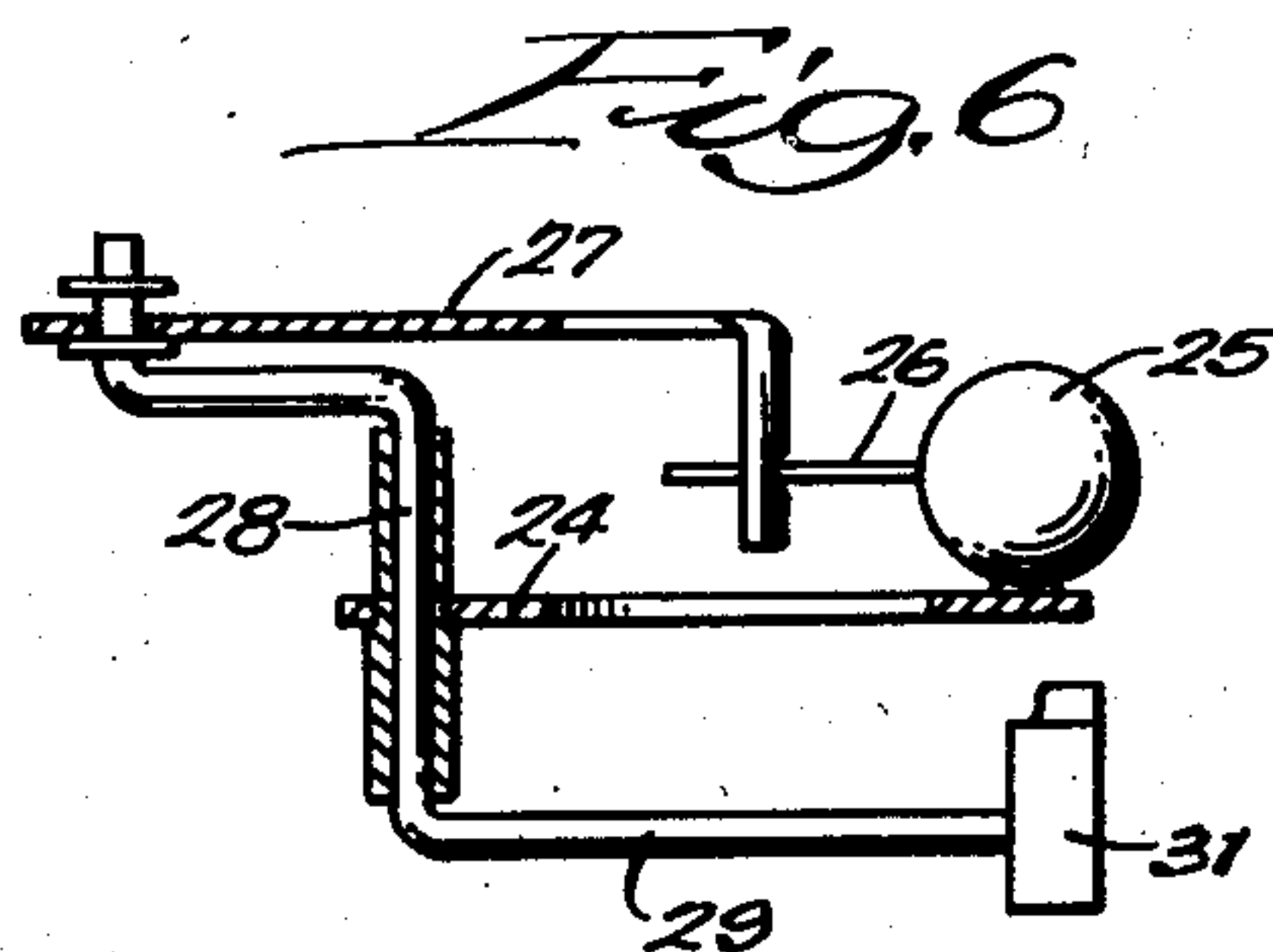
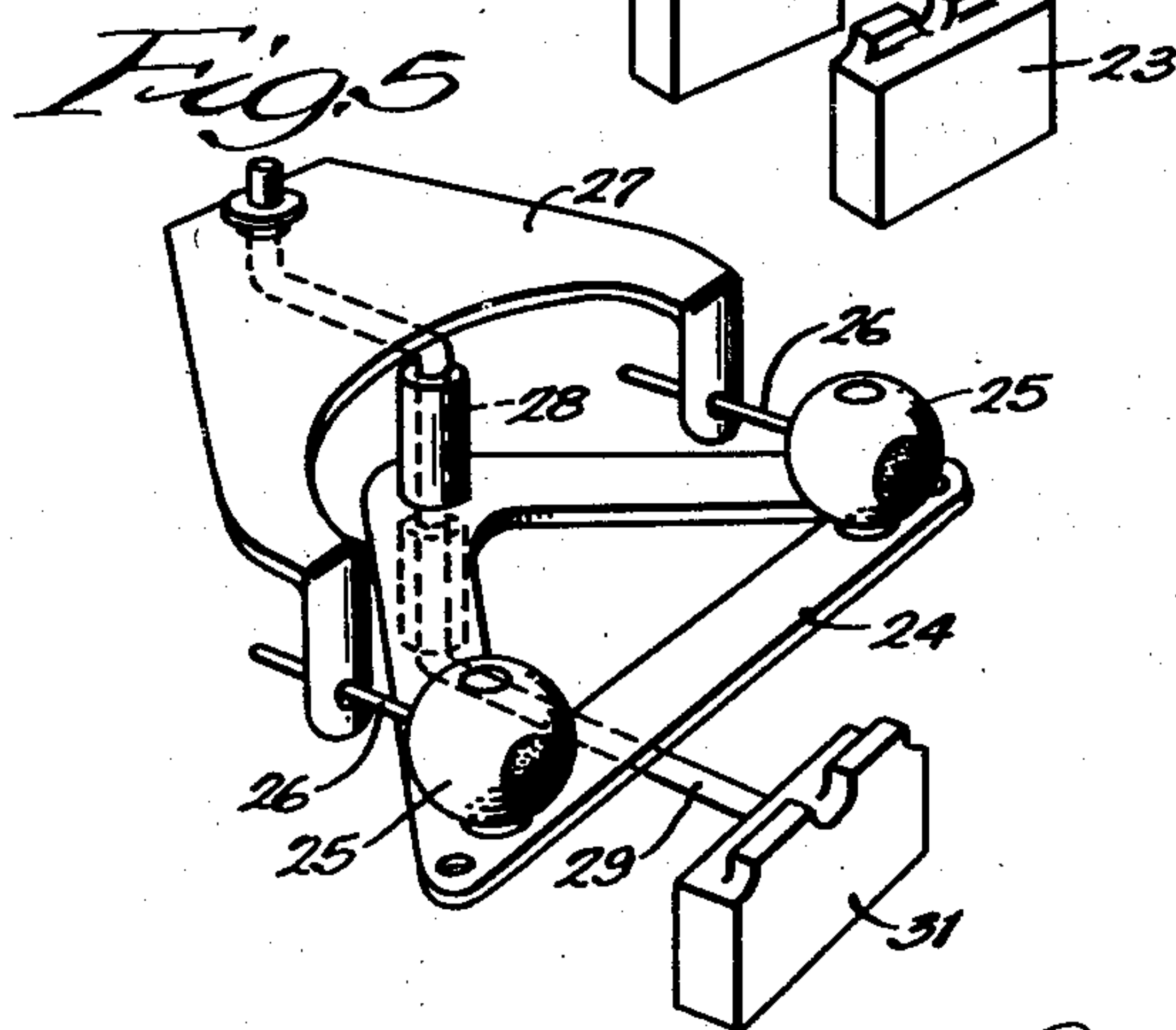
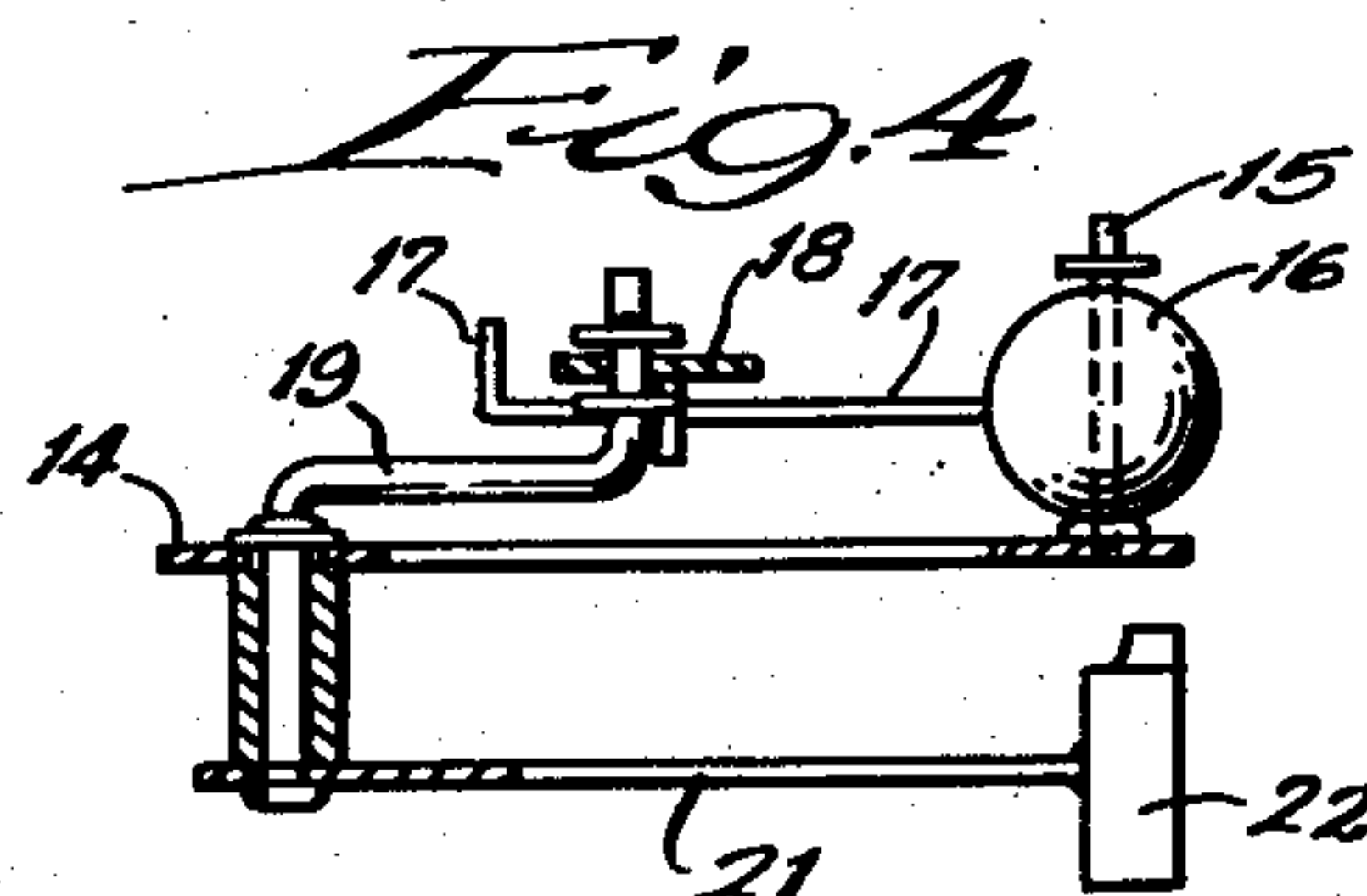
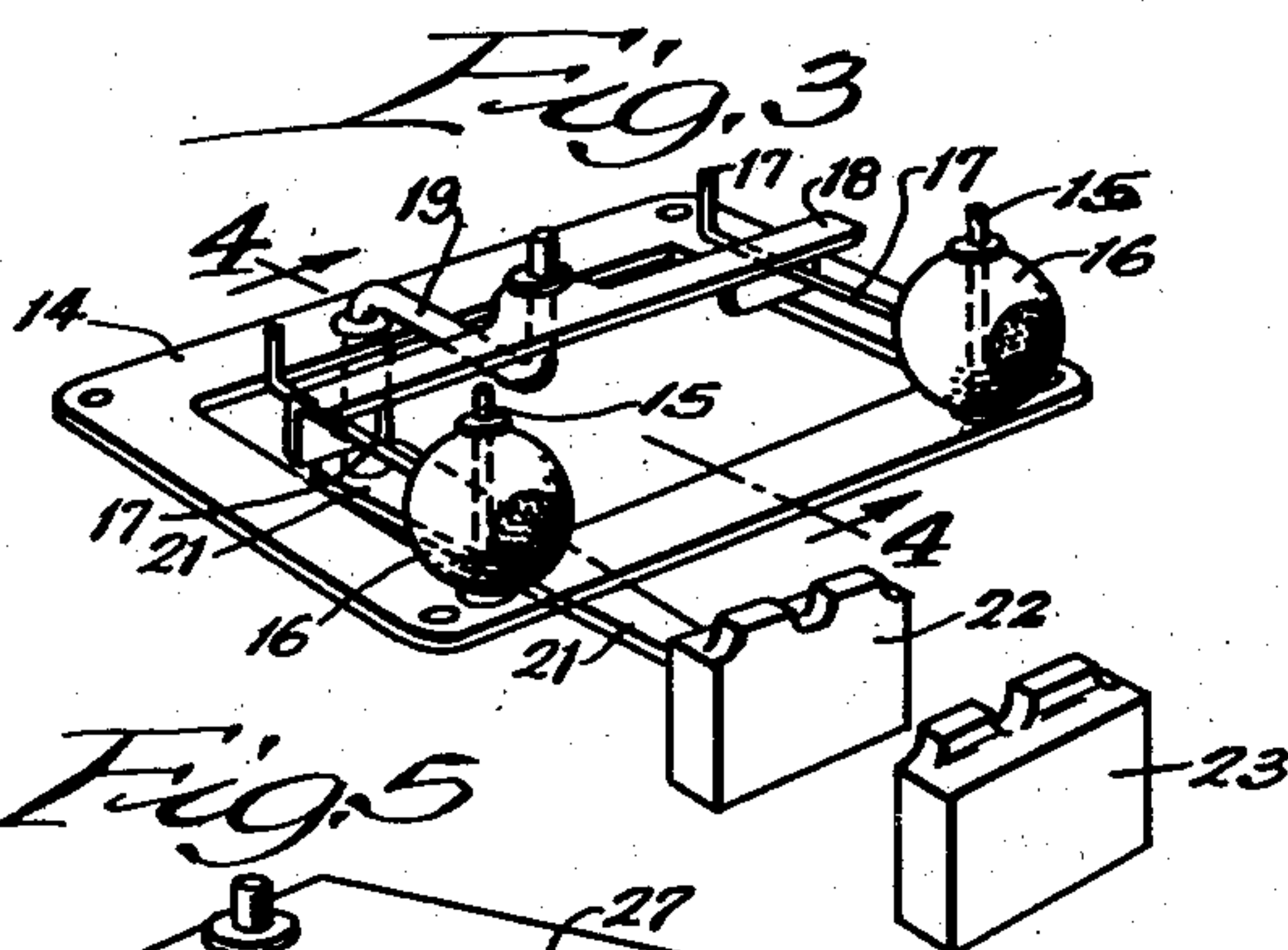
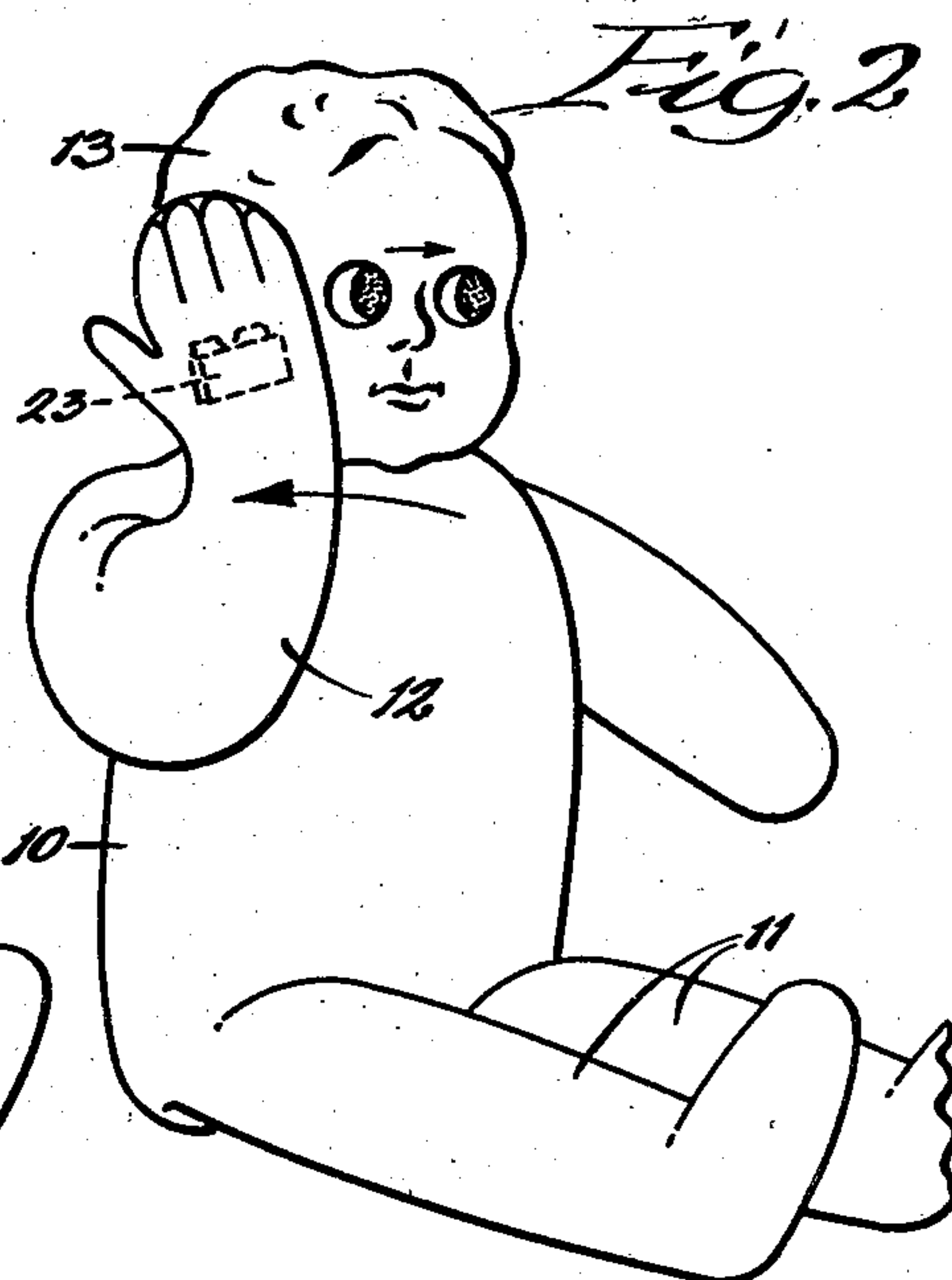
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DOLL WITH MAGNETIC EYE MOVEMENT

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DOLL WITH MAGNETIC EYE MOVEMENT

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10 Claims. (Cl. 46—45)

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This invention relates to dolls and more particularly to dolls having movably mounted eyes.

One of the objects of the invention is to provide a doll in which the eyes are pivotally mounted for movement from side to side, to be controlled from externally of the doll without requiring any mechanical connection extending through the doll.

Another object is to provide a doll in which the eyes of the doll are movable in response to movement of the doll's hand or the like adjacent its face. The eyes may be made to move in the same direction as the hand or in a direction opposite thereto to produce different effects.

Still another object is to provide a doll in which the eyes are moved magnetically. In a preferred construction, the eyes are pivotally mounted in the head and are connected to a magnetic element in the head which may be attracted or repelled by a complementary magnetic element movable adjacent the head.

A further object is to provide a mounting and control assembly for dolls' eyes which can easily be assembled in a hollow doll head as a unit.

The above and other objects and advantages of the invention will be more readily apparent from the following description when read in connection with the accompanying drawing, in which—

Figure 1 is a perspective view of a doll embodying the invention;

Figure 2 is a view similar to Figure 1, showing a different position of the parts;

Figure 3 is a perspective view of the eye mounting and control unit;

Figure 4 is a side elevation of the unit of Figure 3; and

Figures 5 and 6 are views similar to views 3 and 4 respectively, showing an alternative construction.

The doll, as illustrated in Figures 1 and 2, may have a body 10 of any desired configuration and form of any desired material. The body carries legs 11 and arms 12 which are preferably of flexible construction or are articulated so that they may be moved relative to the body. The doll is completed by a hollow head 13, which may be formed of papier-mâché, non-magnetic sheet metal such as aluminum, porcelain, or the like. The head is formed with eye openings through which eye members, to be described later, are visible, and is preferably made in two parts to be attached together after insertion of the eye mounting and control unit.

The eye mounting and control unit, as seen in Figures 3 and 4, comprises a rectangular supporting plate 14 which is of a size and shape to fit horizontally in the hollow head just below the level of the eye openings. The plate may be secured in the head in any desired manner as, for example, by having its edges fit into grooves

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formed in the head. At its forward end the plate carries vertically extending pivot pins 15, which may be of flexible material to accommodate irregularities in the eye openings. Spherical or partially spherical eye members 16 are pivoted on the pins 15 in a position to register with the eye openings in the head, to be visible there-through.

To turn the eye members about their pivots, each of the eye members is formed with a rearwardly extending rod 17. The two rods 17 are connected by a crossbar 18 having downwardly extending flanges formed with perforations through which the rods 17 extend. The crossbar is adapted to be moved transversely of the support by a crank 19 vertically pivoted in the support and having a forwardly extending offset arm pivotally connected to the crossbar 18. At its lower end, beneath the support, the crank carries a forwardly extending arm 21 which has a magnetic element 22 at its outer end. When the support is assembled in the doll's head, the magnetic element 22 will lie in the head adjacent to the mouth or chin portion thereof.

To move the eyes, the second complementary magnetic element 23 may be moved back and forth across the chin portion of the head, causing the magnetic element 22 to follow its motion so that the eyes will be turned. Either or both of the magnetic elements 22 and 23 may be permanent magnets and the other may, if desired, be simply a steel or iron armature to be attracted to the magnet. In either case, the magnetic element 22 will follow the movement of the element 23 to cause the eyes to turn.

The magnetic element 23 may conveniently be mounted in one of the hands of the doll, as shown in Figures 1 and 2, or in a powder puff or the like, to be carried by the hand. As the hand is moved back and forth across the face of the doll, the magnetic element 22 within the head will follow its motion to turn the eyes. In the construction as shown in Figures 1 to 4, the crank is so arranged and connected to the eye members that the motion of the eyes will be opposite to that of the magnetic element 23, as indicated by the arrows in Figures 1 and 2.

To produce a movement of the eyes in the same direction as that of the magnetic element 23 a construction as shown in Figures 5 and 6 may be employed. This construction comprises a support 24 similar to the support 14 and carrying the eye members 25 on vertical pivots in a position to register with the eye openings in the head. The eye members have rearwardly extending rods 26 thereon engaged by downwardly turned fingers 27. The bar or yoke 27 is pivotally connected to the upper end of a crank 28 vertically pivoted in the support 24 and offset rearwardly at the

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upper end of the support, as shown. Below the support the crank has a forward extension 29 carrying a magnetic element 31 to lie in the doll head adjacent the chin portion thereof.

With this construction the eyes will be turned in the same direction as the magnetic element 31 is moved, so that the eyes will follow the motion of the hand or of an object carried thereby in which the magnetic element 23 is mounted.

While two embodiments of the invention have been shown and described in detail, it will be understood that they are illustrative only and are not intended to be a definition of the scope of the invention, reference being had for this purpose to the appended claims.

What is claimed is:

1. In a doll having a hollow head with eye openings therein, a support to be mounted in the head, a pair of eye members pivotally mounted on the support in register with the eye openings, means interconnecting the eye members for pivotal movement together, an operating member pivotally mounted on the support and connected to the interconnecting means to move it and the eye members as the operating member is moved, a magnetic element carried by the operating member and lying adjacent a wall of the head, and a complementary magnetic element to be moved adjacent the doll head to cause the first magnetic element to move the operating member.

2. In a doll having a hollow head with eye openings therein, a support to be mounted in the head, a pair of eye members pivotally mounted on the support in register with the eye openings, a crank pivoted in the support, means connecting one end of the crank to the eye members to move them as the crank is moved, a magnetic element connected to the other end of the crank, and a complementary magnetic element to be moved adjacent the head to cause the first magnetic element to move the crank.

3. In a doll having a hollow head with eye openings therein, a support to be mounted in the head, a pair of eye members pivotally mounted on the support in register with the eye openings, a crank pivoted in the support, means connecting one end of the crank to the eye members to move them as the crank is moved, a magnetic element carried by the other end of the crank and lying within the head adjacent the chin portion thereof, and a complementary magnetic element to be moved across the chin portion to cause movement of the first magnetic element and the crank.

4. In a doll having a hollow head with eye openings therein, a support to be mounted in the head, a pair of eye members pivotally mounted on the support in register with the eye openings, a crank pivoted in the support, means connecting one end of the crank to the eye members to move them as the crank is moved, a magnetic element carried by the other end of the crank and lying within the head adjacent the chin portion thereof, and a complementary magnetic element to be moved across the chin portion to cause movement of the first magnetic element and the crank, said complementary magnetic element being carried by a hand of the doll.

5. In a doll having a hollow head with eye openings therein, a support to be mounted in the head, a pair of eye members mounted on vertical pivots on the support in register with the eye openings, a crank mounted on the support on a vertical axis, means connecting the upper end of the crank to the eye members to turn them about

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their pivots as the crank is turned, a magnetic element connected to the lower end of the crank and movable horizontally adjacent the chin portion of the head, and a complementary magnetic element to be moved across the chin portion of the head to cause the first magnetic element and the crank to move.

6. In a doll having a hollow head with eye openings therein, a support to be mounted in the head, a pair of eye members mounted on vertical pivots on the support in register with the eye openings, a crank mounted on the support on a vertical axis, a connecting bar pivoted to the crank and to the eye members to turn them as the crank is moved, a magnetic element connected to the crank and movable horizontally adjacent the chin portion of the head, and a complementary magnetic element to be moved across the chin portion of the doll.

7. In a doll having a hollow head with eye openings therein, a support to be mounted in the head, a pair of eye members mounted on vertical pivots on the support in register with the eye openings, a crank mounted on the support on a vertical axis, means connecting the upper end of the crank to the eye members to turn them about their pivots as the crank is turned, a magnetic element connected to the lower end of the crank and movable horizontally adjacent the chin portion of the head, and a complementary magnetic element to be moved across the chin portion of the head to cause the first magnetic element and the crank to move, the crank being so pivoted and arranged that it will cause the eye members to move about their pivots in the same direction as the first magnetic element moves about the crank axis.

8. In a doll having a hollow head with eye openings therein, a support to be mounted in the head, a pair of eye members mounted on vertical pivots on the support in register with the eye openings, a crank mounted on the support on a vertical axis, means connecting the upper end of the crank to the eye members to turn them about their pivots as the crank is turned, a magnetic element connected to the lower end of the crank and movable horizontally adjacent the chin portion of the head, and a complementary magnetic element to be moved across the chin portion of the head to cause the first magnetic element and the crank to move, the crank being so pivoted and arranged that it will cause the eye members to move about their pivots in the opposite direction from that in which the first magnetic element moves about the crank axis.

9. In a doll head construction, a support to be mounted in a doll head, a pair of eye members mounted on the support on parallel pivots, a crank pivoted on the support on an axis parallel to said pivots, means connecting the crank to the eye members to turn them as the crank is turned, and a magnetic element connected to the crank to turn the crank as the magnetic element is moved.

10. In a hollow doll head having eye openings therein, eye members pivotally mounted in the head in register with the openings, a magnetic element movably mounted in the head adjacent the chin portion thereof, and means connecting the eye members to the magnetic element to turn the eye members about their pivots as the element is moved.

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