E. A. AHLER.

DOLL.

APPLICATION FILED JULY 8, 1920.

1,387,224. Patented Aug. 9, 1921.

Fig. 1.

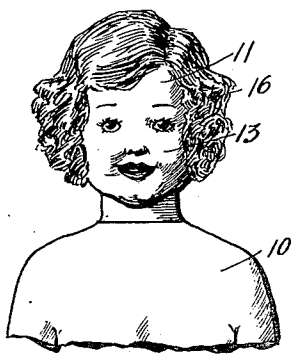


Fig. 2.

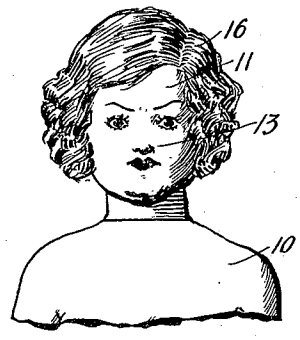


Fig. 3.

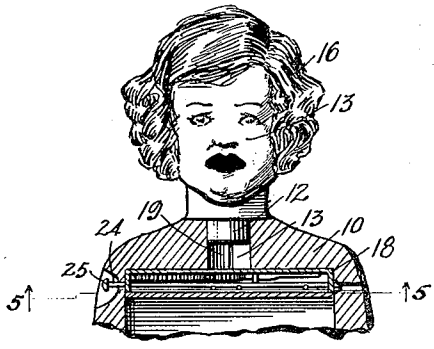


Fig. 4.

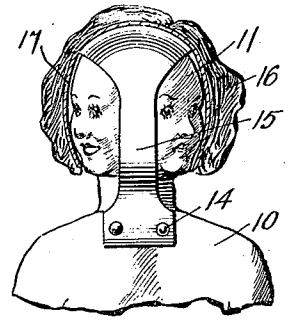
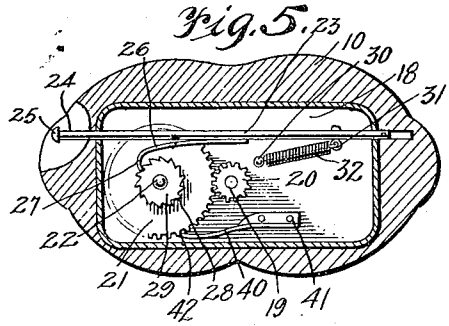


Fig. 5.



WITNESSES

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DOLL.

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To all whom it may concern:

Be it known that I, EDWIN A. AHLER, a citizen of the United States, and a resident of Chester, in the county of Delaware and State of Pennsylvania, have invented a new and Improved Doll, of which the following is a full, clear, and exact description.

The present invention relates to new and useful improvements in figure toys, and it pertains more particularly to dolls.

It is the primary object of the invention to construct a doll in such a manner that any one of a plurality of facial expressions may be displayed at will.

It is a further object of the present invention to so construct the head of the doll as to render the same capable of rotation about a vertical axis.

It is a still further object of the invention to provide a novel operating means for rotating the head to dispose one of the several facial expressions in display position.

With the above and other objects in view, reference is had to the accompanying drawings, in which—

Figure 1 is a front elevation of the doll with one of the facial expressions in display position;

Fig. 2 is a similar view with another of the facial expressions in display position;

Fig. 3 is a view partly in elevation and partly in section illustrating the position of the operating mechanism;

Fig. 4 is a rear view of the head of the doll;

Fig. 5 is a horizontal sectional view taken on the line 5—5 of Fig. 3.

Referring more particularly to the drawings, the reference character 10 designates the upper portion of the doll, and 11 designates the doll's head. The head 11 has a reduced portion 12 in simulation of a neck, and said reduced portion is mounted for rotation in the open upper end of a recess 12, as more clearly shown in Fig. 3. The head 11 is constructed in such a manner as to provide a plurality of faces 13, and said faces 13 are different in their expressions.

Secured to the rear of the body portion 10, as by means of rivets or the like 14, is a rigid support 15. This support 15 projects upwardly over the head 11, and forms the carrying means of the wig or hair of the doll. By this construction it is apparent that the head member 11 is free to rotate independently of the hair or wig. The hair or wig 16 is carried by a base 17, which in turn is supported by means of the member 15 heretofore mentioned.

The reference character 18 designates a housing mounted in the shoulder section of the doll's body, and said housing 18 serves to carry the mechanism by which a rotation of the head is effected. Extending through the top wall of the housing and connected at its upper end to the reduced neck portion 12 of the head, is a shaft 19. A small gear 20 secured to the lower end of the shaft 19, is adapted to be driven by means of a large gear 21 mounted on a shaft 22. The gear 21 is adapted to be rotated by means of a reciprocating rod 23, and said rod 23 is mounted in the shoulder section of the body 10, or in the mechanism housing, in such a manner as to have one of its ends projecting therefrom, as at 24, and provided with an operating button 25. Rigidly secured to the rod 23 is a pawl 27, and said pawl 27 is adapted for engagement with the teeth 28 of a ratchet wheel 29 carried by the large gear 21.

Secured at one of its ends as at 30, to the housing 18, and at its opposite end to an eye 31 carried by the rod 23, is a coil spring 32. As the rod 23 is reciprocated in one direction, the coil spring 32 is placed under tension, and upon release of said reciprocating rod, the spring serves to return it to normal position.

The operation of the device is as follows: With any one of the facial expressions in display position, to change the same, it is only necessary to reciprocate the rod 23 by means of its operating button 25. As the rod 23 is reciprocated, the pawl 26 by reason of its engagement with the teeth 28 of the ratchet 29, will rotate the same together with the gear wheel 21. This rotation of the gear wheel 21 rotates the small gear 20, and the shaft 19. As the shaft 19 is rotated, the head 11 is moved to a position in which another facial expression will appear from beneath the wig 16. Upon releasing the operating button 25, the several parts are returned to their normal position and are then ready for a subsequent operation. It is to be understood that one thrust of the rod 23 will position a facial expression owing to the ratio of gearing being so designed.

To prevent the gear wheel 21 rotating

when the operating rod and pawl 27 are moving to their initial position, a spring pawl 40 secured as at 41 to the housing 18, is employed, and the free end of said pawl is adapted to engage the teeth of the gear wheel 21 as indicated at 42 in Fig. 5.

From the foregoing it will be seen that the present invention provides a novel toy in which any one of a plurality of facial expressions may be displayed, and while in the present instance but three different facial expressions are shown, it is to be understood that any number may be employed without departing from the spirit of the invention.

What is claimed is:

1. In a doll, a body portion, a head revolubly mounted thereon, a gear wheel carried by the head, a second gear wheel meshing with the first-mentioned gear wheel, and reciprocating means for imparting rotary movement to said gear wheels to effect a step-by-step rotary movement of the head of the doll.

2. In a doll, a body portion, a head revolubly mounted thereon, a gear wheel carried by the head, a second gear wheel meshing with the first-mentioned gear wheel, and reciprocating means for imparting rotary movement to said gear wheels to effect a step-by-step rotary movement of the head of the doll.

3. In a doll, a body portion, a head revolubly carried thereby, a gear wheel carried by said head, a second gear wheel meshing with the first-mentioned gear wheel, means for imparting a rotary step-by-step motion to the gear wheels to effect a step-by-step rotary movement of the head of the doll in one direction, and means for preventing rotary movement of the operating mechanism in the opposite direction.

EDWIN ARTHUR AHLER.