

May 15, 1928.

1,669,993

H. MÜLLER

TOY FIGURE

Filed July 7, 1927

2 Sheets-Sheet 1

Fig. 1.

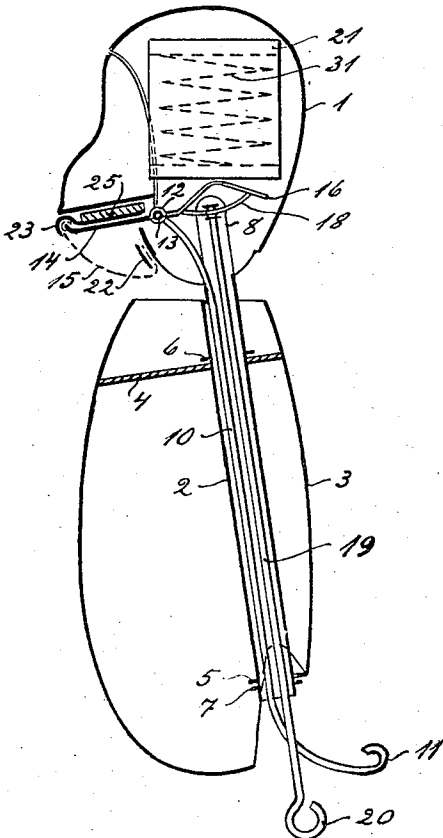


Fig. 2.

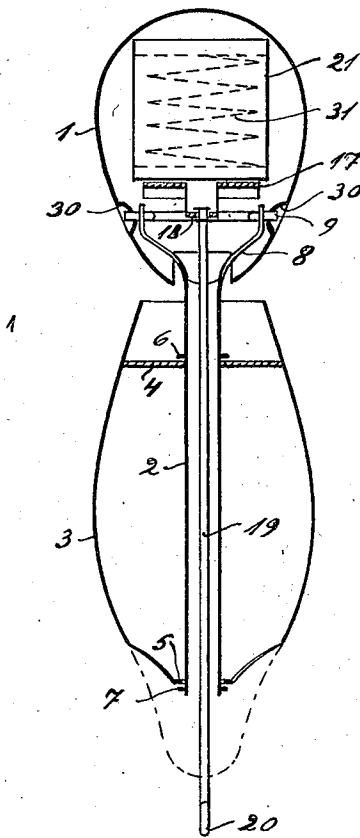


Fig. 3.

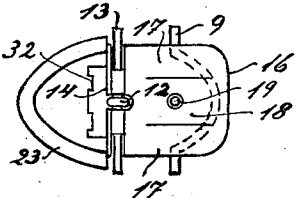
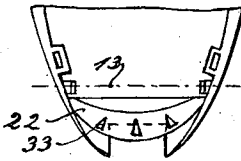


Fig. 4.



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Fig. 5.

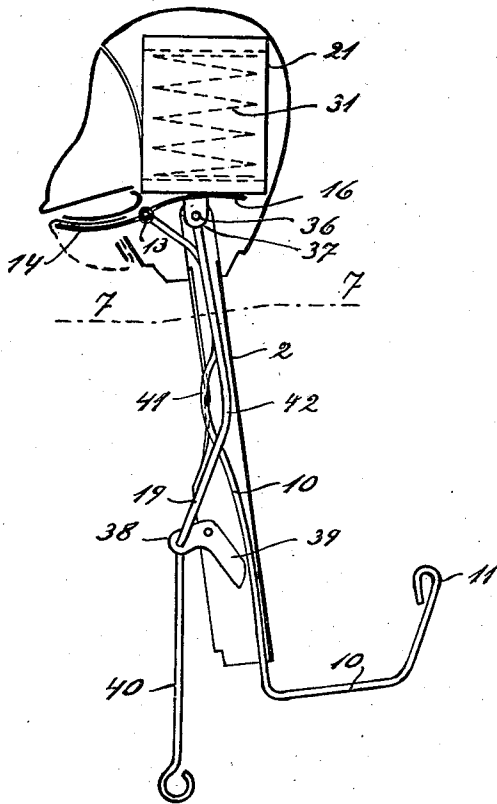
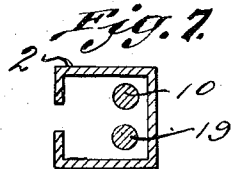
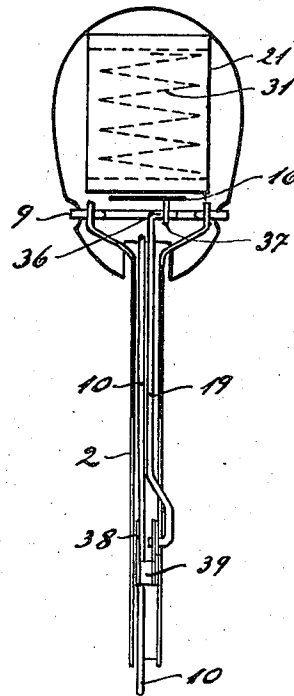


Fig. 6.



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UNITED STATES PATENT OFFICE.

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TOY FIGURE.

Application filed July 7, 1927, Serial No. 203,395, and in Germany April 13, 1926.

This invention relates to a toy-figure comprising a mechanism to be operated from the outer side and by means of which a nodding and turning movement of the head can be produced. The invention has for its object to improve the natural impression of the toy-figure and this object is attained by connecting the underjaw of the mouth or snout in such a manner with a pulling or pressing element to be operated from the outer side so that the snout or mouth may be opened in any position which the head assumes. The arrangement may be made in such a manner that two operating elements the one independent of the other are provided the one for moving the head and the other for opening the snout. The two kinds of movement might however be controlled by the operation of only one of the elements. The invention relates further to the special construction of the toy figure which is distinguished by simplicity and cheapness. Several embodiments of the invention are shown, by way of example, in the accompanying drawings in which Figs. 1-4 show a toy-figure imitating a monkey with two separate and independent elements for moving the head and the underjaw and Figs. 5-7 show a toy-figure with elements dependent the one of the other for moving both parts.

Fig. 1 show a toy-figure of the first form of construction in vertical section.

Fig. 2 is a vertical section at right angles to Fig. 1.

Fig. 3 shows in top plan view the movable underjaw.

Fig. 4 shows in front elevation the lower portion of the head without the movable underjaw.

Fig. 5 is a vertical section showing a modified form of toy-figure.

Fig. 6 is a section at right angles to Fig. 5.

Fig. 7 is a section on line 7-7 of Fig. 5.

The head 1 of the toy-figure is carried by a tubular support 2 rotatably mounted in transverse disks 4 and 5 fixed in the body 3. Stops 6 and 7 serve for preventing shifting of the tubular support 2 in vertical direction. The tubular support 2 is slit at the upper end, the arms of this slit portion being bent so that a fork 8 is formed. In this fork an axle 9 is journaled, the ends of which project into bearing holes in the wall of the head. At the points where these

bearing holes are situated the wall of the head has cavities 30. The head is adapted to oscillate in a vertical plane around the axle 9. The oscillating movement can be controlled from the outer side by means of a rod 10 which is located in the tubular support 2 and bent at its outer end in rearward direction to form a tail 11. The upper forwardly bent end of rod 10 which forms an eye engages over the axle 13 journaled in the wall of the head. This axle 13 serves at the same time as pivot axle for the movable underjaw.

When the rod 10 is being pushed up and pulled down the head oscillates forward and backward around the axle 9 and when the rod 10 is turned with the aid of the tail 11 the head turns together with the tubular support 2.

The plate which forms the underjaw and is oscillatable around the axle 13 is constructed like a two-armed lever 14, 16. The arm 16 of this lever, which rearwardly projects into the head of the toy figure, is subdivided by incisions into three portions. The two outer portions 17, 17 are curved in upward direction. The central portion 18 is curved in downward direction. To this central portion 18 a rod 19 is connected which passes through the tubular support 2 and has at its lower end a ring-shaped handle 20. In the head of the toy-figure an elastic voice 21 is inserted, which bears at the upper end on the wall of the head and rests at the lower end on the upwardly curved portions 17 of plate 16, said plate being pressed downward by the action of a spiral spring 31, arranged in the voice, so that the plate 14 of the underjaw is normally held in the closed position. When rod 19 is pushed upward or pressed with the ring 20 upon a support, the voice 21 is compressed and the mouth of the toy-figure opens, a sound being produced when the compression of the bellows is strong enough.

The point of connection between the rod 19 and the portion 18 of plate 16 is situated substantially in the same transverse plane as the oscillating axle 9 of the head and at the same time coaxially with the pivot axle 2 of said head. In this manner it becomes possible, to open the mouth in any position of the head.

In order that the rod 19 for operating the mouth be not impeded by the oscillating

axle of the head, this axle is set off in rearward direction between the arms of fork 8 of the head support. The set off portion prevents at the same time endwise shifting of the axle in the fork 8, said axle being secured in its position by the cavities in the wall of the head.

In order to make the movable underjaw as true to nature as possible, a piece 15 of soft cloth, for instance of plush, is arranged between the jaw plate 14 and the neck to imitate a beard. This piece of cloth is clamped between the jaw plate 14 and a plate 23 resting upon said jaw plate. The two plates are connected the one with the other in such a manner that the edge of the upper plate is bent downward over the corresponding edge of the jaw plate. Herefrom results a smooth fitting of the beard. The upper plate 23 is cup-shaped at the inner portion and in this cavity a piece of cloth 25 is arranged, which is preferably of red colour so that it imitates a tongue. It serves at the same time for covering the hinge of the underjaw. The beard 15 is fixed on the neck by means of a semi-circular plate 22, which is connected with the neck by pointed tongues 33.

Between the two parts the piece of cloth is clamped in being laid in folds. Owing to the folds and to the semi-circular form of plate 22 an imitation of a thick beard is obtained.

For the rod 19 a pull-element might also be substituted. The rod presents however the advantage that the toy-figure can be made to carry out hopping movements on a support, the mouth-opening and the voice being sounded at every hop. The loose mounting of the voice in the head facilitates considerably the manufacturing of the toy-figure.

In the toy-figure shown in Figs. 5 to 7 the element 10 for moving the head and the element 39 for operating the mouth are passed through a tubular support 2 of rectangular cross section. The rod 19 is bent at the upper end and the stud 36 which is thus formed passes through a flap 37 cut out of and bent down from the rear extension 16 of the jaw-plate 14. The lower end of rod 19 is hingedly fixed on one arm 38 of an elbow-lever 38, 39, which is mounted between the lower enlarged portions of the side-walls of the head-support 2. The other arm of the elbow-lever is downwardly inclined and its end bears on the rod 10 for the operation of the head, said rod 10 passing between said elbow-lever and the rear-wall of the head-support 2. An eye at the upper end of rod 10 is placed over the axle 13 of the hinge of the movable lower jaw 14.

When rod 10 is being moved up and down the head swings around the ends of axle 9 and when the rod 10 is further pressed

obliquely forward it makes the elbow-lever 38, 39 oscillate so that the arm 38 of said lever lifts the rod 19. This rod 19 makes the jaw-plate 14 oscillate around the axle 13 in opposition to the action of the spring 31, located in the voice 21, and which makes the mouth close as soon as the oblique pressure on rod 10 ceases. In this manner it is possible to produce, by means of the handle 11 of rod 10, a movement of the head as well as of the mouth.

The opening of the mouth and the sounding of the voice may be produced, besides by the rod 10, by banging the toy-figure on a support. With this object in view a downwardly directed rod 40 is fixed to the arm 38 of the elbow-lever, the movements of said arm being transmitted to rod 19. Other movements of the toy-figure might be evidently derived from the arm 38 or rod 19, for instance the arms and legs of the toy-figure might be moved when the mouth is being opened.

Rod 10 has a curved portion 41 which overlaps the curved portion 42 of rod 19 so that these rods lie flat the one at the side of the other and can easily slide the one along the other without jamming.

I claim:—

1. A toy figure comprising a body, a head, a hollow shaft carried by the body whereby the head may be rotated, a horizontal transverse shaft carried by the hollow shaft on which the head is pivotally mounted for oscillating movements, a movable jaw carried by the head and mounted to oscillate on a horizontal transverse axis parallel with and arranged substantially in the same horizontal plane as the first-named transverse axis, an operating element extending through the hollow shaft and operatively coupled to the head for oscillating the same, and an operating element extending through the hollow shaft and operatively coupled to the jaw for oscillating the same.

2. A toy figure comprising a body, a head, a hollow shaft extending through the body for rotating the head, a horizontal transverse shaft carried by the hollow shaft and on which the head is mounted to oscillate, a movable jaw carried by the head and having an operating arm extending into the head in rear of its pivot, a rod extending through the hollow shaft and coupled to said arm for oscillating the head on its transverse axis, a rod extending through the shaft and coupled to the jaw for oscillating the same, and a sounding device arranged in the head in the path of movement of the arm so as to be operated by said arm when the jaw is oscillated.

3. A toy figure having a movable head, an element for moving said head, a horizontal axle in said head, an underjaw oscillatably mounted on said axle, an arm extending

rearwardly from said underjaw and subdivided into three portions, the outer portions being curved upwardly and the central portion being curved downwardly, a push element attached to said central portion, and a collapsible and expansible sound producing device resting upon said outer portions of the arm and arranged between the same and the upper walls of the head so as to be collapsed when the push element is operated to move the underjaw. 10

In testimony whereof I affix my signature.

HEINRICH MÜLLER.