

Feb. 21, 1933.

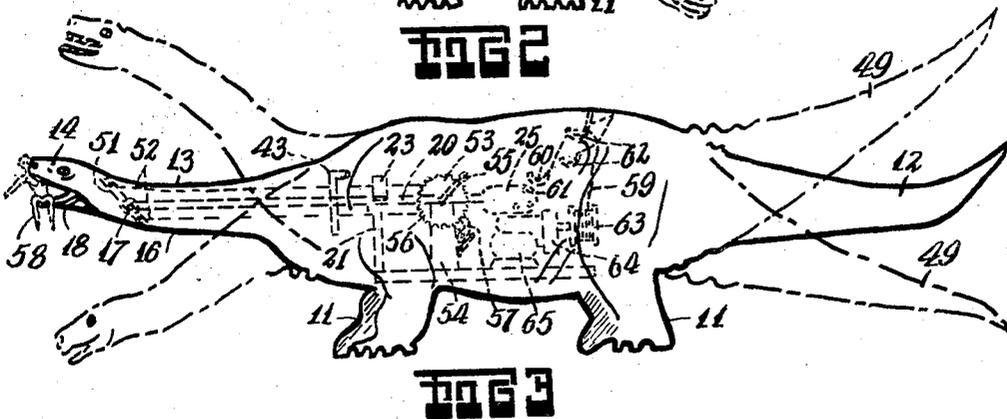
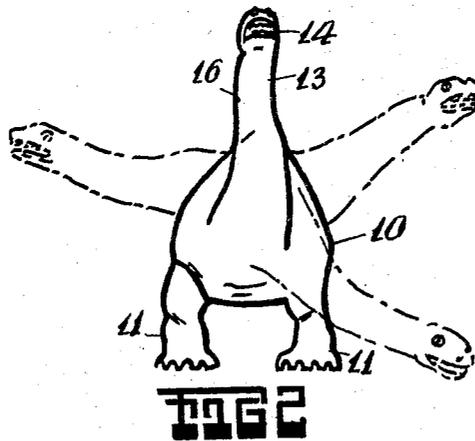
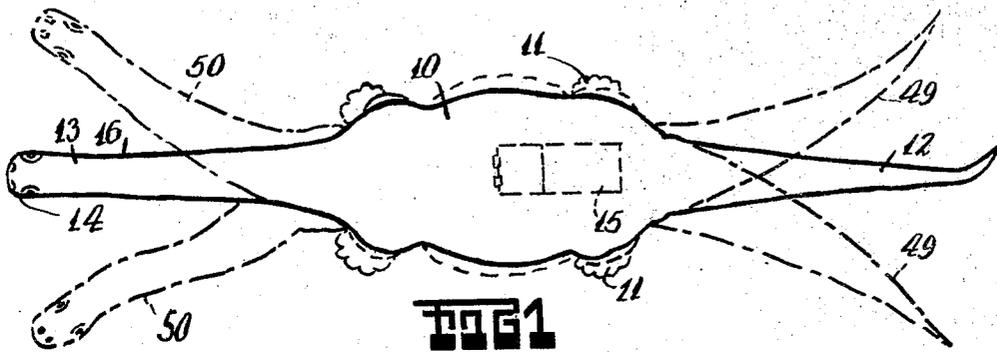
G. H. MESSMORE

1,898,587

HEAD MOVEMENT FOR A DEVICE SIMULATING A DINOSAUR OR OTHER ANIMAL

Filed July 24, 1931

2 Sheets-Sheet 1



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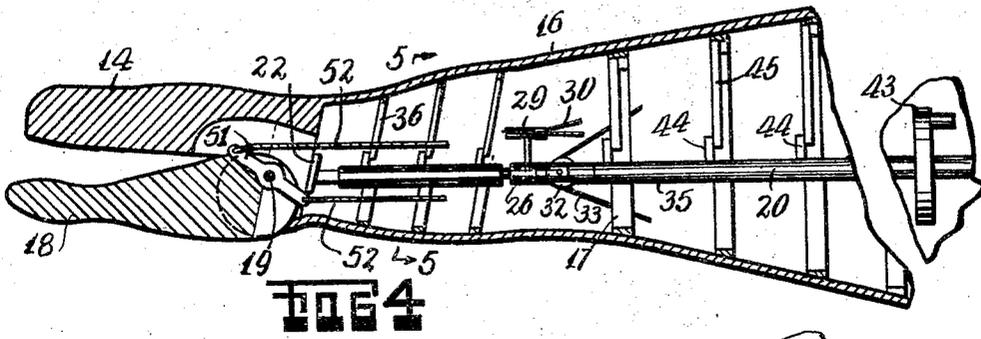
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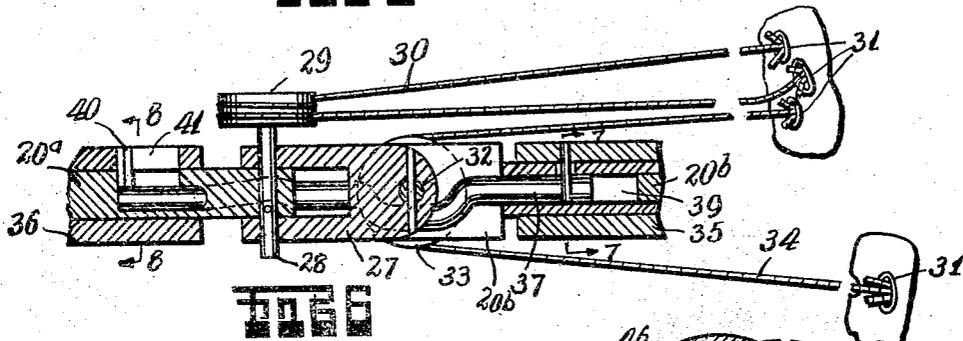
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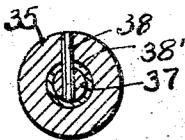
2 Sheets-Sheet 2



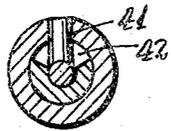
**FIG 4**



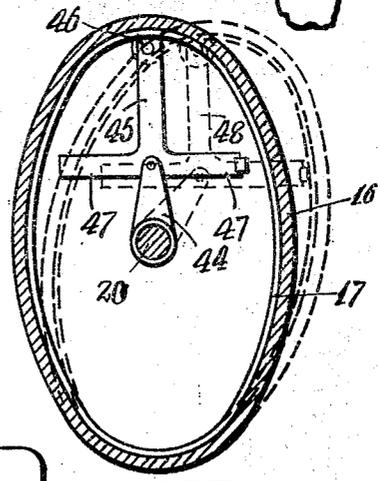
**FIG 6**



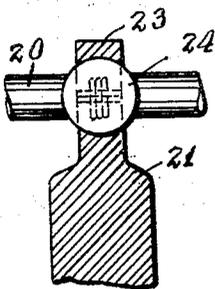
**FIG 7**



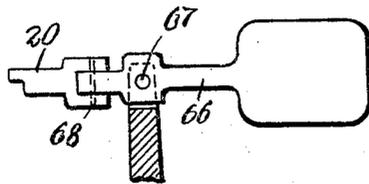
**FIG 8**



**FIG 9**



**FIG 10**



**FIG 11**

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# UNITED STATES PATENT OFFICE

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HEAD MOVEMENT FOR A DEVICE SIMULATING A DINOSAUR OR OTHER ANIMAL

Application filed July 24, 1931. Serial No. 552,885.

This invention relates to new and useful improvements in a head movement for a device simulating a dinosaur or other animal for stage purposes.

5 The invention has for an object the construction of a head movement which is characterized by the ability to move in all directions and capable of movements simulating the natural cords within the neck of an animal.

10 The invention proposes that the device be constructed of full or of miniature size. It is intended that a person control the movements of the head to provide amusement.

15 The invention has for a still further object the construction of a hollow body with a hollow neck made from some flexible material and supporting a head, and a plurality of substantially transverse ring-shaped ribs within the neck capable of assuming distorted conditions under stress.

20 As another object of this invention it is proposed to provide means for bending said transverse ring-shaped ribs into positions to simulate the moving cords in an animal's neck.

25 Furthermore, it is proposed to provide a shaft extending through the hollow neck and connected at one end with the head and at the other end being universally supported so that the head may be moved in all directions.

30 Another one of the objects of this invention is to construct the shaft of sections which may be universally relative to each other for the purpose of bending the neck at various points.

35 Furthermore, it is proposed to provide a moveable jaw upon the head of said device arranged for holding a dancer so that the dancer may be lifted up by the animal for entertaining purposes.

40 The invention still further proposes the construction of a device of the class mentioned which is of simple, durable construction, dependable in use and efficient in action and which can be manufactured and sold at a reasonable cost.

45 For further comprehension of the invention, and of the objects and advantages

thereof, reference will be had to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings, forming 55 a material part of this disclosure:—

Fig. 1 is a plan view of a device simulating a dinosaur and constructed according to this invention.

Fig. 2 is a front elevational view of Fig. 1. 60

Fig. 3 is a side elevational view of Fig. 1.

Fig. 4 is a fragmentary sectional view of the neck of the animal.

Fig. 5 is a transverse sectional view taken on the line 5—5 of Fig. 4. 65

Fig. 6 is an enlarged detailed view shown in section of a portion of Fig. 4, particularly the junction of the shaft sections which extend through the neck of the device.

Fig. 7 is a sectional view taken on the 70 line 7—7 of Fig. 6.

Fig. 8 is a sectional view taken on the line 8—8 of Fig. 6.

Fig. 9 is a central longitudinal sectional view of the standard which supports the shaft extending through the neck of the device. 75

Fig. 10 is a view similar to Fig. 9 but illustrating a modification.

80 The animal to which the invention is applied in this specification is in the form of a dinosaur. Numeral 10 indicates the body which is supported by legs 11. At the rear, the body is provided with a tail 12, and at the front with a neck 13 supporting a head 85 14. The body 10 is hollow and a person may enter therein through a door 15. The neck 13 also is hollow and is made from flexible covering material 16 held in shape by a plurality of transverse substantially ring-shaped ribs 17. The head 14 has a lower jaw 90 18 which is pivotally supported at 19 so that it may open and close.

95 A rigid shaft 20 is universally supported upon a standard 21 within the hollow body. The other end of this shaft connects with a flange 22 attached upon the head 14. This shaft serves to rigidly hold the neck of the device. The standard 21 has a top cap 23 100 which holds down a ball 24 constituting the

universal joint. This allows the head to be moved in all directions. A counterweight 25 is attached upon the shaft for the purpose of counter-balancing the head and the neck  
5 to make it easy for a person to move.

The shaft 20 is made from sections which are universally connected at the point 26 in the center of the neck 13. The universal joint is formed by pivotally connecting one  
10 shaft section, indicated on the drawings by reference numeral 20<sup>a</sup>, with a link 27 so that the section may move in a horizontal plane. In turn, the link 27 is pivotally connected with the other shaft section, indicated by  
15 reference numeral 20<sup>b</sup>, in a manner so that it may move in the vertical.

The shaft sections 20<sup>a</sup> and 20<sup>b</sup> may assume various angular positions controllable from within the body 10 by the person operating  
20 the device. For this purpose a pintle 28 is rigidly attached upon the shaft section 20<sup>a</sup> and freely extends through the link 27. This pintle carries a drum 29 upon which a cord 30 is wound. This cord extends to the  
25 body 10 and its ends are attached upon brackets 31 for the purpose of holding the pivotal connection in a stationary position. A second pintle 32 is rigidly attached upon the link 27 and is free in the shaft section  
30 20<sup>b</sup> and carries a drum 33. A cable 34 is wound over this drum and extends within the body 10. The ends of this cable are also attached upon brackets 31. A sleeve 35 is freely mounted upon the shaft section 20<sup>b</sup>  
35 and a second sleeve 36 upon the shaft section 20<sup>a</sup>. These sleeves are connected for uninary motion by an intermission cable 37.

This cable 37 has a pin 38 extending transversely through one of its ends and into the  
40 sleeve 35 passing through a transverse slot 38' in the shaft section 20<sup>b</sup>. The cable extends into a coaxial recess 39 in the shaft section 20<sup>b</sup>. The cable 37 then passes to a recess in the shaft section 20<sup>a</sup> and is there provided  
45 with another pin 40 transversely arranged and extending into a longitudinal slot 41 in the sleeve section 36. The pin 40 also passes through a transverse slot 42 in the shaft section 20. The construction is such that when  
50 the sleeve 35 is turned, the rotation will be transmitted by the cable 37 to correspondingly turn the sleeve 36.

A hand wheel 43 is fixed upon the sleeve  
55 35 and is located within the body 10. A plurality of radial arms 44 project at spaced intervals from the sleeves 35 and 36 and pivotally connect with brackets 45 which in turn are pivotally connected at their top  
60 ends 46 upon the tops of the ribs 17. The brackets 45 have lateral projecting portions 47 which do not touch the sides of the ribs 17 but come quite close to them. As the sleeves are turned one way or the other, the radial arms 44 will be correspondingly  
65 moved and cause pivoting of the brackets 45

which will distort the neck of the device and in this manner to simulate cords of an animal's neck. Dot and dash lines 48 indicate a pivoted position of the bracket in which  
70 the neck of the animal is distorted.

The tail 12 of the animal may also be moved universally. This motion is indicated by the dot and dash lines 49 on the drawings. The details of this mechanism  
75 for moving the tail are not shown on the drawings since it forms no part of this invention. The dot and dash lines 50 indicate various moved positions of the head of the device. All of these motions are possible by the mechanism which has been  
80 described.

A lever 51 is fixed upon the lower jaw 18 of the device and connects with cables 52 which extend to a drum 53 which is rotatively mounted on a standard 54 within the  
85 body 10. A handle 55 connects with the drum for the purpose of turning it. A plurality of teeth 56 are formed upon the drum and are engaged by a spring pressed pawl 57 for the purpose of holding the drum in  
90 various stationary positions. This arrangement allows the body to be opened and closed by manually lifting off the pawl 57 and turning a handle 55. A dancer, indicated by the dot and dash lines 58, may be  
95 lifted up by the animal for the amusement of the crowd.

The neck of the animal may be moved universally either by manually moving of the counterweight 25 or by the provision of  
100 mechanical means. For moving the weight 25 mechanically, a cable 59 has a hook 60 on its end for engagement in various openings 61 in the weight 25. This cable may be extended over one or another of a plurality of stationary hooks 62 mounted within the  
105 body 10. The cable is wound upon the drum 63 connected with a gear reduction system 64 and with a motor 65.

In Fig. 10, a modified form of standard  
110 similar to the standard 21 has been disclosed for universally supporting the shaft 20. This standard pivotally supports a counterweight 66 at 67. This counterweight is adapted to swing in a vertical  
115 plane. The shaft 20 pivotally connects at 68 with an extension from the counterweight and is adapted to swing in a horizontal plane. This construction provides a universal arrangement whereby the shaft 20  
120 may assume various positions for correspondingly moving the head.

In operation, a person is hid within the body 10 and provides the amusement for  
125 the crowd outside. The head of the animal will be moved in various directions by pivoting the shaft 20 as desired. During this pivoting, the hand wheel 43 may be turned to cause the sleeves 35 and 36 to move correspondingly and pivot the brackets 45 to  
130

bulge out and distort the neck simulating moving cords in the animal's neck. The neck may be bent at intermediate points by loosening the cables 30 and 34 from their brackets 31 and slightly move them so as to cause pivoting of the universal joint between the shaft sections 20<sup>a</sup> and 20<sup>b</sup>.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims. Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:—

1. A head movement for a device simulating a dinosaur or other animal, comprising a hollow body with a hollow neck having flexible material and connected with a head, a plurality of substantially transverse ring-shaped ribs attached within the flexible material of the neck, a rigid shaft extending through the neck and attached at one end upon the head of the animal and at the other end being universally supported, means for universally supporting the last mentioned end of said shaft, a sleeve on said shaft, radial arms projecting from said sleeve, brackets pivotally connected within said ring-shaped ribs and having projecting portions terminating adjacent other portions of said ribs, and said brackets being pivotally connected with said radial arms.

2. A head movement for a device simulating a dinosaur or other animal, comprising a hollow body with a hollow neck having flexible material and connected with a head, a plurality of substantially transverse ring-shaped ribs attached within the flexible material of the neck, a rigid shaft extending through the neck and attached at one end upon the head of the animal and at the other end being universally supported, means for universally supporting the last mentioned end of said shaft, a sleeve on said shaft, radial arms projecting from said sleeve, brackets pivotally connected within said ring-shaped ribs and having projecting portions terminating adjacent other portions of said ribs, and said brackets being pivotally connected with said radial arms, said means for universally supporting said shaft comprises a standard, and a ball member on the shaft disposed between a cap and standard.

3. A head movement for a device simulating a dinosaur or other animal, comprising a hollow body with a hollow neck having flexible material and connected with a head, a plurality of substantially transverse ring-shaped ribs attached within the flexible material of the neck, a rigid shaft extending through the neck and attached at one end upon the head of the animal and at the other

end being universally supported, means for universally supporting the last mentioned end of said shaft, a sleeve on said shaft, radial arms projecting from said sleeve, brackets pivotally connected within said ring-shaped ribs and having projecting portions terminating adjacent other portions of said ribs, and said brackets being pivotally connected with said radial arms, said shaft being made from sections universally connected to allow bending intermediate of said neck.

4. A head movement for a device simulating a dinosaur or other animal, comprising a hollow body with a hollow neck having flexible material and connected with a head, a plurality of substantially transverse ring-shaped ribs attached within the flexible material of the neck, a rigid shaft extending through the neck and attached at one end upon the head of the animal and at the other end being universally supported means for universally supporting the last mentioned end of said shaft, a sleeve on said shaft, radial arms projecting from said sleeve, brackets pivotally connected within said ring-shaped ribs and having projecting portions terminating adjacent other portions of said ribs, and said brackets being pivotally connected with said radial arms, said shaft being made from sections universally connected to allow bending intermediate of said neck, and means for holding the sections of the shaft in various adjusted positions.

5. A head movement for a device simulating a dinosaur or other animal, comprising a hollow body with a hollow neck having flexible material and connected with a head, a plurality of substantially transverse ring-shaped ribs attached within the flexible material of the neck, a rigid shaft extending through the neck and attached at one end upon the head of the animal and at the other end being universally supported, means for universally supporting the last mentioned end of said shaft, a sleeve on said shaft, radial arms projecting from said sleeve, brackets pivotally connected within said ring-shaped ribs and having projecting portions terminating adjacent other portions of said ribs, and said brackets being pivotally connected with said radial arms, said shaft being made from sections universally connected to allow bending intermediate of said neck, and means for holding the sections of the shaft in various adjusted positions, comprising drums connected with the universal joint between the shaft sections, and means for turning said drums.

6. A head movement for a device simulating a dinosaur or other animal, comprising a hollow body with a hollow neck having flexible material and connected with a head, a plurality of substantially transverse ring-shaped ribs attached within the flexible ma-

terial of the neck, a rigid shaft extending through the neck and attached at one end upon the head of the animal and at the other end being universally supported means for  
 5 universally supporting the last mentioned end of said shaft, sleeves on said shaft, radial arms projecting from said sleeves, brackets pivotally connected within said  
 10 ring-shaped ribs and having projecting portions terminating adjacent other portions of said ribs, and said brackets being pivotally connected with said radial arms, said shaft being made from sections universally connected to allow bending intermediate of said  
 15 neck, and means for holding the sections of the shaft in various adjusted positions, comprising drums connected with the universal joint between the shaft sections, and means for turning said drums, one of said sleeves  
 20 being mounted on each of the sections of said shafts, and means for connecting said sleeves for unitary movements.

7. A head movement for a device simulating a dinosaur or other animal, comprising  
 25 a hollow body with a hollow neck having flexible material and connected with a head, a plurality of substantially transverse ring-shaped ribs attached within the flexible material of the neck, a rigid shaft extending  
 30 through the neck and attached at one end upon the head of the animal and at the other end being universally supported, means for universally supporting the last mentioned end of said shaft, a sleeve rotatable on said  
 35 shaft, radial arms projecting from said sleeve, brackets pivotally connected within said ring-shaped ribs and having projecting portions terminating adjacent other portions of said ribs, and said brackets being  
 40 pivotally connected with said radial arms, a handle wheel being mounted upon said sleeve for its manual turning.

8. A head movement for a device simulating a dinosaur or other animal, comprising  
 45 a hollow body with a hollow neck having flexible material and connected with a head, a plurality of substantially transverse ring-shaped ribs attached within the flexible material of the neck, a rigid shaft extending  
 50 through the neck and attached to one end upon the head of the animal and at the other end being universally supported, means for universally supporting the last mentioned end of said shaft, a sleeve on said shaft, radial arms projecting from said sleeve, brackets  
 55 pivotally connected within said ring-shaped ribs and having projecting portions terminating adjacent other portions of said ribs, and said brackets being pivotally connected with said radial arms, said head being provided with a movable jaw, and means for moving said jaw.

9. A head movement for a device simulating a dinosaur or other animal, comprising  
 60 a hollow body with a hollow neck having

flexible material and connected with a head, a shaft extending through the neck and attached at one end upon the head of the animal, and means for universally supporting  
 70 the other end of said shaft, said shaft being made from sections universally connected to allow bending intermediate of said neck.

10. A head movement for a device simulating a dinosaur or other animal, comprising  
 75 a hollow body with a hollow neck having flexible material and connected with a head, a shaft extending through the neck and attached at one end upon the head of the animal, and means for universally supporting the other end of said shaft, said shaft being made from sections universally connected to allow bending intermediate of said neck, and means for holding the sections of the shaft in various adjusted positions.

11. A head movement for a device simulating a dinosaur or other animal, comprising  
 85 a hollow body with a hollow neck having a covering of flexible material and connected with a head, a shaft extending through the neck and attached at one end upon the head and universally supported near the other end upon the body, and a counterweight upon the other end of the shaft for counter-balancing the weight of  
 90 the head.

12. A head movement for a device simulating a dinosaur or other animal, comprising  
 95 a hollow body with a hollow neck having a covering of flexible material and connected with a head, and a shaft extending through the neck and attached at one end upon the head and universally supported near the other end upon the body.

In testimony whereof I have affixed my  
 105 signature.

GEORGE H. MESSMORE.

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