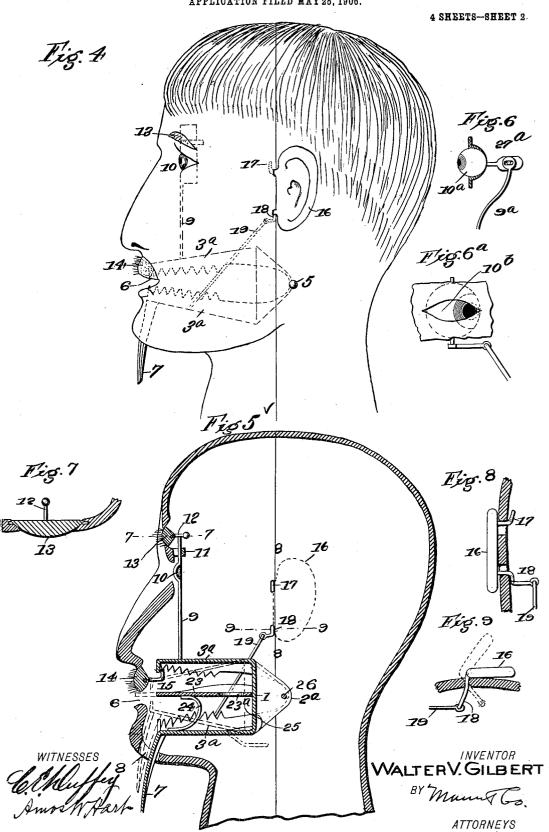
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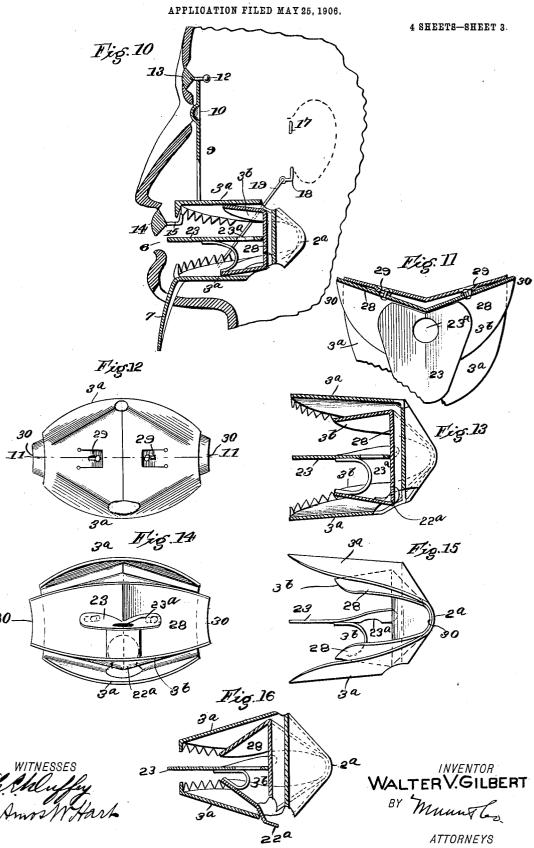
TOY. APPLICATION FILED MAY 25, 1906. 4 SHEETS-SHEET 1. Fig.3 26 **Z5** 

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APPLICATION FILED MAY 25, 1906.



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## W. V. GILBERT. TOY.

APPLICATION FILED MAY 25, 1908.

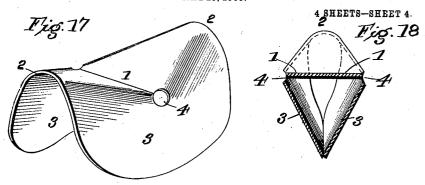
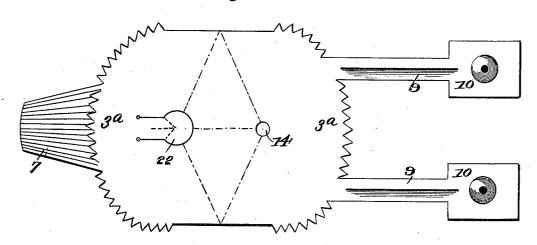
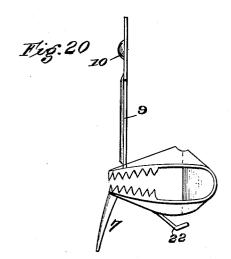
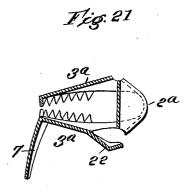


Fig. 19









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## UNITED STATES PATENT OFFICE.

## WALTER VILLA GILBERT, OF LONDON, ENGLAND.

## TOY.

No. 837,216.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed May 25, 1906. Serial No. 318,724.

To all whom it may concern:

Be it known that I, Walter Villa Gilbert, a subject of the King of Great Britain, residing in the city of London, England, 5 have invented an Improvement in Toys, of

which the following is a specification.

My invention is an improvement in the class of figure toys, or those which outwardly resemble animals, preferably human beings. to The eyes, eyebrows, ears, lips, jaws or teeth, tongue, gullet, and beard are movable, the same being operatively connected with or actuated by a device in the nature of a compound spring-lever, for which I have filed, 15 May 9, 1906, an application for patent, Serial No. 316,047. The said device is actuated by compression in opposing directions and is thus caused to impart or allow a plurality of motions in various directions, and upon re-20 covering its normal condition, which occurs by its own elasticity upon being released from the compression, it imparts or allows a corresponding plurality of motions reciprocal to those caused by said compression.

The device forms the chief feature or element in the toy hereinafter described for imparting the required movements to the eyes, ears, and other parts of the figure representing the head of a man or animal, whereby the 30 moving features or parts are actuated in an unusual or extravagant manner, so that the figure may present, preferably, a grotesque

appearance.

I will proceed to describe the details of 35 construction, combination, and operation of parts by reference to the accompanying

drawings, in which-

Figure 1 is a front view of a figure representing a human head and provided with de-40 vices for moving the eyes, ears, lips, &c., according to my invention. Fig. 2 is a transyerse section of the same. Fig. 3 is another transverse section illustrating a modification. Fig. 4 is a side view of the figure or head rep45 resented in Fig. 1. Fig. 5 is a central vertical section of same. Figs. 6 and 6° illustrate modifications in respect to construction and arrangement of the eyes of the figure and means for moving the same. Fig. 7 is a cross-section on the line 7 7 of Fig. 5. Fig. 8 is a vertical section on the line 8 8 of Fig. 5. Fig. 9 is a horizontal section on the line 9 9 of Fig. Fig. 10 is a vertical section of the head with a modified construction of a portion of the attachment or actuating device. Fig. 11

Fig. 12. Fig. 12 is a plan or back view of the parts shown in section in Fig. 11. Fig. 13 is a vertical longitudinal section of the actu-Fig. 13 is ating device shown in Figs. 10, 11, 12. 60 Fig. 14 is a face or front view of the parts shown in Figs. 12 and 13. Fig. 15 is an end view of the parts shown in Figs. 12 and 13. Fig. 16 is a central longitudinal section showing the parts in an early stage of compres- 65 sion, the gullet being open instead of closed, as in Figs. 13 and 15. Fig. 17 illustrates the device or compound spring-lever in its chief form or outline. Fig. 18 is a central transverse section of the same when compressed 70 endwise so that the jaws or sides are brought together. Fig. 19 is a plan view showing the actuating device or compound spring-lever with attachments, including the eyes, beard, teeth, and gullet of the figure, all of which 75 may be struck or cut out of resilient sheet material. Fig. 20 is an end view of the parts shown in Fig. 19 when shaped and adjusted in the proper form and relation for attachment within the figurehead proper. Fig. 21 8c is a vertical section of the main portion of

the parts shown in Fig. 20.

Referring, in the first instance, to Fig. 17, which represents in a general way the compound spring-lever or resilient device form- 85 ing the comparatively simple and inexpensive but chief actuating medium in the toy, it will be understood that it is constructed from a plate or blank of resilient material, preferably stiff cardboard, which may be rendered 90 dampproof by being coated or otherwise treated with any suitable damp-resisting material or thin sheet metal having the required degree of elasticity. It will be seen that it is formed, in the first instance, from a plate or 95 blank of the required shape by bending the same lengthwise and then indenting the back of the bow thus formed, as shown at 1. Thus a transverse indent is formed midway between the ends or apices 2 of the bow, and the 100 sides or wings 3, projecting from such back, are internally concave. It will be noted that the back portion merges into and joins the sides or wings 3 by means of arched and internally-concave connections. The backitself 105 approximates a diamond shape indented transversely at the center. At an end or the ends of the indent 1 an opening 4 is preferably formed in order to prevent buckling or rupture of the device at those parts under the 110 effect of numerous strains. When pressure is a horizontal section on the line 11 11 of | is applied to the ends or apices 2 of the device,

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the relatively flat triangular components on [ opposite sides of the transverse indent 1 assume a more acute angle with relation to each other, the said indent recedes, and at the same time the sides or wings 3 move inward or approach each other or come in actual contact, as shown in Fig. 18. In other words, the inward movement of the indent 1 and the sides or wings 3 is proportionate to the degree 10 of pressure applied to the ends or apices 2. When such pressure is relieved, the natural resiliency of the device restores it to the primary or original condition, the sides or wings 3 thus moving apart, as will be readily under-15 stood. It will now be understood that Figs. 17 and 18 have been thus referred to mainly to enable the operation of the chief features of the toy to be more readily understood from the following description. The device or 20 compound spring-lever is suitably shaped for arrang ment within the mouth-cavity of the figure, as shown in Figs. 1 to 5, inclusive. Figs. 4 and 5 such device is shown in end view by dotted lines and in vertical transverse section, respectively. The sides or wings 3 before referred to are thus arranged one over the other, the same being designated by the numerals 3<sup>a</sup> 3<sup>a</sup>. The indented back portion 1 (see especially Fig. 5) is thus vertical. Pro-30 vision is made for applying pressure to the ends or apices 2ª of the device by means of short rods 5, provided with knobs, as shown in Figs. 1, 2, 4, the said rods passing loosely through the openings in the neck of the figure 35 directly back of the lower jaw portion, where they are convenient for access. Pressure may be applied to these rods by the thumb and finger, and thus the ends or apices 2ª of the device or spring-lever will be forced to-40 ward each other, with the effect of projecting the indent 1 and closing the sides or jaws 3°, more or less, and correspondingly. turned edges of the wings 3a are toothed, as shown in several figures, and the mouth 6 of 45 the figure is open to a required degree. teeth are visible from the front when the said wings 3<sup>a</sup> are closed, as indicated by dotted lines, Fig. 5. A part 7, representing a beard, may be extended down from the lower jaw or 50 wing of the device through the slot 8, formed in the chin of the figure. This part 7 may be formed integral with the lower jaw of the device or attached thereto, as preferred, and in practice the actual beard may be imitated in 55 a more lifelike manner by attaching hairs to the front side of the part 7.

As shown in Figs. 1, 5, 19, and 20, rods or narrow plates 9 extend upward from the upper jaw or wing 3ª of the spring device, and at 60 the required point the same are provided with a concavity 10, which is made to imitate the eye of a human being as nearly as practicable. The rods or plates 9 may be corrugated, and they extend upward and slide in keepers 11, 65 Figs. 1 and 5. their upper ends being loosely

connected with the arm 12 of movable eyebrows 13. (See Figs. 5 and 7.) The said eyebrows are pivoted at their ends, and consequently rocked whenever the upper wing or jaw of the spring device is actuated—that 70 is to say, carried downward—and then re-leased. The upper lip 14 of the figure is also pivoted in substantially the same way. It is provided on the rear side with an upwardlybentarm 15, (see Fig. 5,) whose free end under- 75 lies the upper jaw or wing of the spring device. The lip 14 is weighted in such manner as to maintain normally the position indicated in Fig. 5, in which the upper portion of the same abuts the septum of the nose. It is apparent 80 that when pressure is applied to the ends or apices 2<sup>a</sup> of the spring device by means, say, of the knobbed rods 5, before referred to, and the jaws or wings 3ª are consequently approximated more or less and the indent projected, 85 as indicated by dotted lines, Fig. 5, the beard will be drawn upward or retracted through the slot 8, the upper lip will be rotated to a certain degree so that a mustache could be projected upward and forward, thus adding 90 to the grotesqueness of the figure, the teeth of the jaws will also become visible between the lips, and the eyes 10 will be moved downward and the eyebrows turned upward like the upper lip.

By the same means and the movements of the spring device the ears are wagged more or As shown in Figs. 4, 5, 8, 9, a form representing an ear is provided with an in-wardly-projecting prong 17 and combined 10c prong and arm 18, the same being arranged in slots or openings formed in the side of the hollow head. The arm 18 is connected by a rod 19 with the lower jaw or wing of the spring device, and consequently when the 105 jaws or wings close by compression, as before described, the upward movement of the lower jaw will swing the ear on its two lateral prongs. By compressing and releasing the spring device several times the ears will thus 110

be caused to wag correspondingly

It will be readily understood that by the combined movements above described the figure will be caused to present a highly gro-

tesque appearance.

While, as before intimated, the spring device proper may be constructed single and all the other movable parts attached thereto in any suitable or convenient manner for the sake of economy of construction I may form 120 the device and certain of the connected parts integral, as indicated in Figs. 19, 20, 21. Fig. 19 represents in the flat a blank comprising a plate of spring material from which the spring device or compound spring-lever 125 proper is formed, the same having toothed edges, the beard part 7 projecting on one side and the bars or plates 9 having the eyes 10 projecting from the opposite side. The dotted diamond indicates the general out- 130

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lines or shape of the back of the device, and part 22 indicates a part cut out to form the gullet, which is shown plainly in Figs. 20, 21—that is to say, as indicated in these fig-5 ures—and also in Fig. 5. The rear central portion of the lower jaw or wing and a portion of the back are cut out to form a blank which has an obtuse angle, the same being normally closed. When, however, compression is applied to the ends or apices 2ª of the spring device, the indent thus projected, and the jaws or wings 3a caused to approach nearer each other, the gullet portion 22 is thrown down and outward correspondingly. 15 If a pea or other article of suitable size be introduced through the mouth 6 of the figure and deposited on the lower jaw or wing 3a, it will lie there motionless until the spring device is compressed, as before described; but 2c upon the lower jaw rising, as indicated by dotted lines, Fig. 5, whereby it has a forward inclination, as also indicated by full lines, Figs. 20 and 21, the pea or other article will thus roll backward and through the passage-25 way formed by the said outward movement of the gullet-piece 22, and thus passes downward through the neck or body of the figure. By this means the figure is made to simulate the operation of swallowing small articles 30 that may be conveniently introduced through the mouth or opening 6. In addition to the other features thus far

described I arrange (see Fig. 5) a plate 23 horizontally between the jaws or wings 3ª of 35 the spring device and support it upon the lower jaw or wing by means of a curved plate-spring 24, and when compression is applied to the ends or apices 2ª of the spring device the indented central portion 1 of the 40 back or arch thereof is projected forward toward the mouth 6 of the figure, as indicated by a vertical dotted line 25, and consequently the tongue 23 is projected forward to a like degree, and thus becomes more plainly visible 45 at the mouth 6. This position adds greatly to the grotesqueness of the figure under the manipulation described. In order to provide for swallowing a pea or other article placed upon the tongue 23 instead of below 50 it, the tongue is provided at its rear end with an opening 23°, located above the gulletopening before described.

In Fig. 2 the tongue 23 is shown in plan view, together with its opening 23a, and the 55 spring is indicated by a dotted square. A rod, string, or tape 26 is attached to the back of the spring device, the same passing through the end portion thereof and being provided with knobs, whereby it serves to 60 limit the extension of the bowed back without, however, hindering the compression of the same by means of the knobbed rods 5. do not restrict myself to this particular means for operating—that is, compressing 65 the spring device—since various attach- until they are flush with the ends 30 of the 130

ments may be employed instead, or any form of attachment may be dispensed with and the neck of the figure simply provided with openings 27, as indicated in Fig. 3, such openings being of sufficient size to receive the 70 ends of a person's fingers, so that they may be applied to the ends or apices of the spring device, and thus compress it, as aforesaid.

In Fig. 6 I have indicated a modification in respect to the operation of the eyes. In this 75 instance the eyes 10<sup>a</sup> are represented as spherical instead of simply concavo-convex, as in Figs. 5 and 10, and an arm 27° extends rearward and is loosely connected with a rod or bar 9a, which in practice would extend to 80 and connect with one of the jaws 3ª of the spring device. Thus the compression of the latter would affect the partial rotation of the eyes 10a.

In Fig. 6a I show an eye 10b arranged and 85 adapted to rotate sidewise instead of verti-

cally, as in Fig. 6.

It is to be understood that I may connect the two eye bars or rods with either of the jaws or wings 3ª of the spring device, or for 90 increasing the grotesque effect one such bar or rod may be connected with the upper jaw and the other with the lower jaw, so that one eye will move or tilt upward as the other moves or tilts downward, and either or both 95 of such eyepieces may carry two eyes, as indicated in Fig. 1, and each eye may be differently colored, thus again increasing the grotesque effect.

In Figs. 10 to 16, inclusive, I represent a 100 modification which relates chiefly to the spring device or compound spring-lever proper. The modification consists in introducing a longer but otherwise approximately similar spring device 28 within the 105 main device. They may be connected, as indicated in Figs. 11 and 12, by means of tongues 29, which are cut out of the main or outer spring device and connected to the inner one, 28. This connection must be suffi- 110 ciently loose to allow a certain play between the outer and inner spring devices, so that the inner one, 28, may be compressed in advance of the outer and without affecting the outer one until a certain desired degree of 115 such compression has been produced. To this end the tongues 29 may be provided with slots, as indicated in Figs. 11, 12, to allow a certain play for the rivets, or any other preferred construction for attaining the same 120 end may be adopted.

As shown in Fig. 14, the ends or apices 30 of the inner spring device project beyond the corresponding portion of the outer device, and thus if the fingers be applied to such 125 apices 30 it is obvious the inner device will be compressed and operated in advance of the outer one, since the pressure will not reach or be applied to the ends of the outer one

By such primary compression of inner one. the inner spring device 28 its jaws or sides 3b will be caused to move toward each other when but little movement has been imparted 5 to the outer jaws 3a, and as a consequence the tongue 23 will be projected or forced forward in advance of the complete closure of the outer jaws 3°. Fig. 16 illustrates such initial or primary movement of the tongue 10 23, the outer device being closed in lesser de-

gree than the inner one 28.

In Figs. 13 and 15 the tongue 23 is shown retracted or in normal position. It will be seen that by employing the supplemental 15 spring device 28 a peculiarly grotesque effect is produced, since the tongue will be visible in or exterior to the mouth 6 of the figure in advance of the teeth of the jaws 3<sup>a</sup>, and, further, the gullet 22<sup>a</sup> (see Fig. 16) will be 20 opened at the same time with the projection of the tongue 23, so that the figure may appear to swallow a pea or other article placed upon the tongue and caused to roll backward to and through the opening therein.

I claim-1. A figurehead provided with a spring device arranged wholly within the mouth-cavity and comprising opposing jaws or wings and a connecting bowed, and indented 30 back portion which upon being compressed endwise serves to actuate the said jaws, sub-

stantially as described.

2. A figurehead provided with a spring device arranged wholly within the open mouth-cavity and comprising opposing jaws and a bowed indented back portion connecting the said jaws, the latter being provided with teeth and arranged contiguous to the mouthopening so that upon compression of the 40 back portion endwise the jaws are closed and the teeth thus approximated and rendered visible through the mouth-opening, substantially as described.

3. A figurehead having an elastic device 45 arranged wholly within the mouth-cavity and adapted for application of pressure endwise for actuating it and a movable part representing a movable feature of a living animal, and means connecting such part with 50 said device whereby when the latter is actuated the said movable part is actuated si-

multaneously, substantially as described. 4. A figurehead having an elastic device arranged wholly within the mouth-cavity 55 and adapted for the application of pressure for actuating it, a part simulating the eye of a living creature, and means connecting it with such spring device whereby upon actuation of the latter the eye is moved substan-60 tially as described.

5. A figurehead having an elastic device wholly within the mouth-cavity, and a part representing the eye of a living creature, the said part being an attachment or portion of 65 a bar connected with the spring device so

that the two are actuated together, substan-

tially as described.

6. A figurehead having an elastic device arranged wholly within the mouth-cavity and comprising opposing jaws or wings and 70 an indented bowed back which upon being compressed serves to actuate the jaws, and a part representing a movable eyebrow, and means for connecting it with the actuating device so that both are moved simultane- 75

ously, substantially as described.

7. A figurehead having an elastic device wholly within the mouth-cavity and comprising opposing jaws or wings and an indented bowed back, which, upon compression, actuates the jaws, and parts representing the eyes and eyebrows of a living creature, and a bar connecting the two and also connecting them with the actuating device so that all are moved simultaneously, substan- 85 tially as described.

8. A figurehead having a spring device arranged in the mouth-cavity, and a part representing the eyebrow of a living creature, the same being pivoted in the cavity in the 90 head and adapted to oscillate vertically, and means connecting with the spring device whereby it is oscillated when the spring device is actuated, substantially as described.

9. A figurehead having a spring device 95 wholly within the mouth-cavity, the same comprising opposing jaws or wings, and an indented bowed back portion connecting the same, and which, upon compression serves to actuate the jaws, and a part representing an 100 ear of a living creature, and means connecting it with the spring device whereby both are moved simultaneously, substantially as described.

10. A figurehead having a spring device 105 arranged in the mouth-cavity, and a part representing the ear of a living creature, the same being pivoted or hinged in the side of the figurehead and provided with an interiorly-projecting lever-arm, and a rod con- 110 necting the latter with one of the jaws of the spring device whereby actuation of the latter produces oscillation of the ear, substan-

tially as described. 11. A figurehead having a spring device 115 arranged in the mouth-cavity and comprising opposing jaws or wings and an indented bowed back portion, which upon compression actuates the jaws toward each other and a part representing the tongue of a living 120. creature, the same being arranged and supported horizontally and movably between the jaws so that upon compression of the spring device, the tongue is projected forward between the jaws, substantially as de- 125

12. A figurehead having a spring device arranged in the mouth-cavity, the same comprising opposing jaws and an indented bowed back which upon compression actuates the 130 837,216 5

jaws toward each other, and a part representing the tongue of a living creature, the same being arranged between the jaws horizontally and movably and its rear end in contact with the indented bowed back portion of the device so that upon compression of the latter the forward projection of the indented back forces the tongue part forward between the front ends of the jaws, substantially as de-10 scribed.

13. A figurehead provided with a spring device arranged wholly within the mouthcavity and comprising opposing jaws and a bowed indented back portion connecting 15 their rear ends and having an opening in the rear portion of the lower jaw for passage of a small article which may be inserted between

the jaws, substantially as described.

14. A figurehead having a spring device 20 arranged wholly within the mouth-cavity and comprising opposing jaws having a connecting back portion which is bowed and indented transversely and thus adapted upon compression endwise to actuate the said jaws, the 25 lower jaw and the indented back having a partially-cut-out portion, which upon said compression, is thrown downward and outward and thus simulates the operation or movement of the gullet of a living creature, 30 substantially as described.

15. A figurehead having a spring device arranged in the mouth-cavity and comprising opposing jaws and a transversely-indented back portion connecting them and which 35 upon endwise compression serves to actuate the jaws, the lower jaw having an opening at the rear end and a part representing the tongue of a living creature, the same consisting of a plate arranged horizontally between 40 the jaws and provided in its rear portion with an opening that practically registers with the opening in the lower jaw so that small articles placed upon the tongue may pass down through the openings referred to, substan-

45 tially as described. 16. A figurehead having a spring device in the mouth-cavity, the same comprising opposing jaws and a bowed and transverselyindented back portion which connects them 50 and serves to actuate them when compressed endwise, a part representing the tongue of a living creature, the same being arranged horizontally between the jaws and having a spring-support which permits forward 55 movement, the lower jaw and indented back of the spring device having a cut-out portion which upon compression of the spring device is opened or operated like

the natural gullet, while the tongue part is oc forced forward between the front ends of the jaws, substantially as described.

17. A figurehead having in its mouth-cavity a spring device comprising opposing jaws and an indented and bowed back portion 65 which connects them and which upon com-

pression actuates said jaws vertically, a part representing the tongue of a living creature, the same being arranged between the jaws and in contact with the back of the spring device, and a spring upon which the tongue 70 part is supported, the lower end of said spring being attached to the lower jaw of the spring devices, substantially as described.

18. A figurehead having in its mouth-cavity a spring device comprising opposing jaws 75 and a connecting and an indented bowed back portion which upon endwise compression actuates the jaws, a part representing the upper lip of a living creature, the same being pivoted and thus adapted to oscillate in a ver- 80 tical direction, and means connecting it with one of the jaws of the spring device whereby it is rotated more or less when the jaws are

actuated, substantially as described.

19. A figurehead having a spring device 85 arranged in the mouth-cavity and comprising opposing jaws and a connecting and indented portion which connects and serves to actuate them when compressed endwise, and a part representing the upper lip of a living 90 creature, the same being pivoted and adapted to oscillate, and a rearwardly-projecting arm which is adapted to engage one of the jaws when the latter are actuated, substantially as described.

20. A figurehead having a spring device comprising a part adapted for vertical oscillation and arranged wholly within the mouthcavity and provided with a downwardlyprojecting part which is visible exteriorly, 100 the same serving to represent the beard of a living creature, substantially as described.

21. A figurehead provided with a spring device arranged in the mouth-cavity and comprising opposing jaws and an indent- 105 ed back portion which upon compression actuates said jaws, the lower jaw having a downwardly-projecting part which passes through the chin portion of the figurehead and is thus adapted to represent the beard of a 110 living being, substantially as described.

22. A figurehead having a spring device arranged wholly within the mouth-cavity and comprising opposing jaws, and an indented bowed back portion, and devices connected 115 with the ends of the back and projecting laterally and serving for application of pressure whereby the jaws are actuated, substantially

as described.

23. A blank comprising an oval-shaped 120 plate provided with teeth and having on one side a projecting part to represent the beard of a living animal, and on the other side projecting parts constructed with portions simulating the eyes of a living creature, the said 125 blank thus being adapted to be folded transversely and then indented across the back to produce an operative spring device, and attachments, substantially as described.

24. A figurehead provided in the mouth- 130

cavity with two spring devices one arranged within the other, each comprising opposing jaws, and a connecting and indented back portion, the ends of the inner device projecting beyond those of the outer and a part representing the tongue of a living creature, the same being arranged within and connected with the inner spring device, whereby upon compression applied endwise to the inner spring device the tongue part is projected forward and between the front ends of the outer spring device before the latter is actuated, substantially as described.

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25. A figurehead having in its mouth-cavity spring devices arranged one within the other and each comprising opposing jaws having a connecting indented back portion, the ends of the back of the inner device projecting beyond those of the outer, substantially as de-

20 scribed. 26. A figurehead provided in its mouthcavity with two spring devices one arranged within the other and each comprising opposing jaws and a bowed back, which is indented 25 transversely, both having coincident openings in the lower jaw and the opening in the inner spring device provided with a cut-out part which normally closes it but upon compression opens through the opening of the 30 outer device in imitation of the movement of a gullet in a living creature, a part representing the tongue of a living creature, the same being supported horizontally upon the inner spring device and provided with an opening 35 in its rear portion so that a small article placed upon the tongue part may be passed backward through said opening and thus

when the device is compressed pass downward through the gullet portion, substan-

tially as described.

27. A figurehead having in its mouth-cavity two spring devices arranged one within the other and each comprising opposing jaws having a bowed indented back portion, the ends of the inner one projecting beyond those 45 of the outer, and means for connecting them while permitting one to slide on the other, the same comprising tongues cut out-of one of the devices and provided with slots, and pins passing through said slots and connecting the two devices substantially as described.

28. The combination with a figurehead of a spring device located therein and comprising opposed jaws or wings and a connecting 55 and indented back portion, an upward extension connected with one of said jaws and comprising a bar having a plurality of eyes represented therein whereby as one eye is removed from view the other takes its place as 60 described.

29. The combination with a figurehead of a spring device arranged in the mouth-cavity and including opposing jaws and parts extended upward therefrom and parts representing eyes, one being connected with the lower jaw and the other with the upper jaw, whereby when the spring device is actuated the eyes move in different directions, as described.

WALTER VILLA GILBERT.

Witnesses:

Solon C. Kemon, Amos W. Hart.