

May 28, 1940.

S. USINSKIS

2,202,677

MARIONETTE

Filed May 4, 1939

3 Sheets-Sheet 1

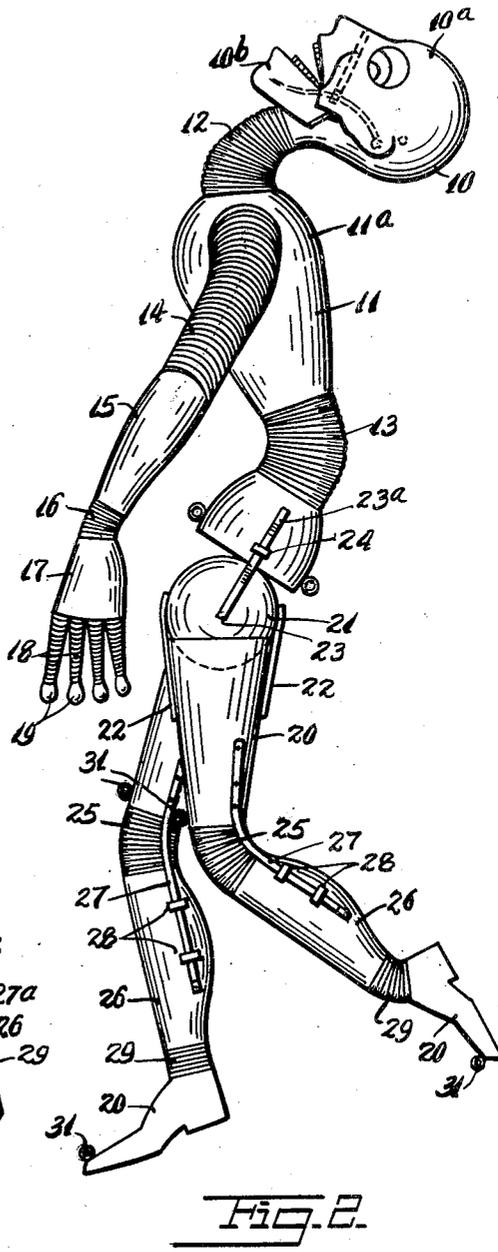
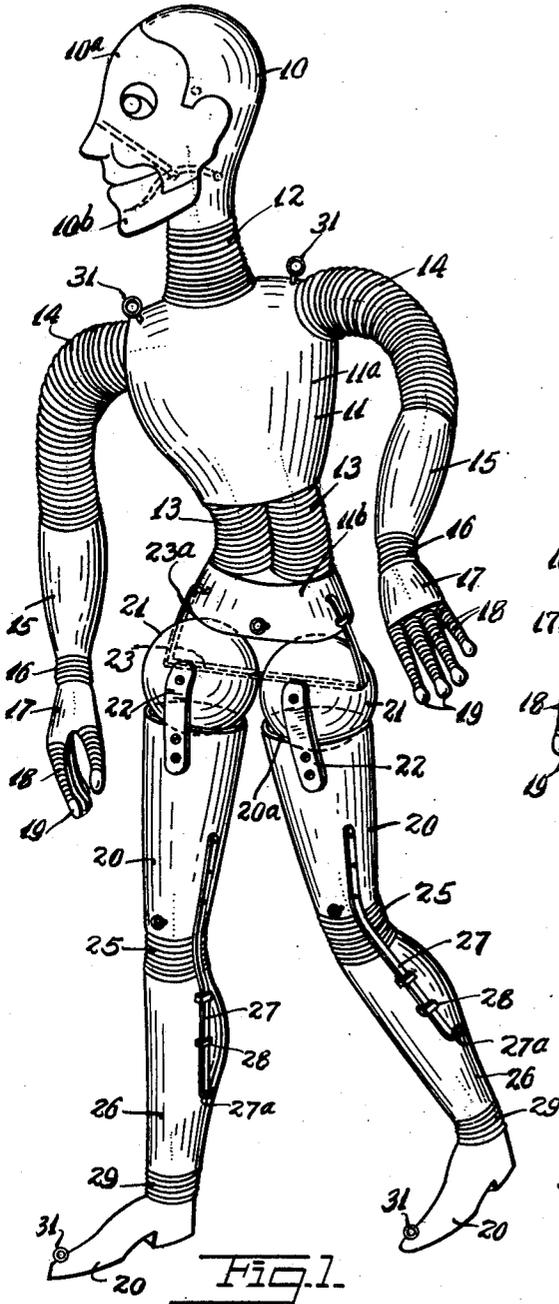


Fig. 2.

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3 Sheets-Sheet 2

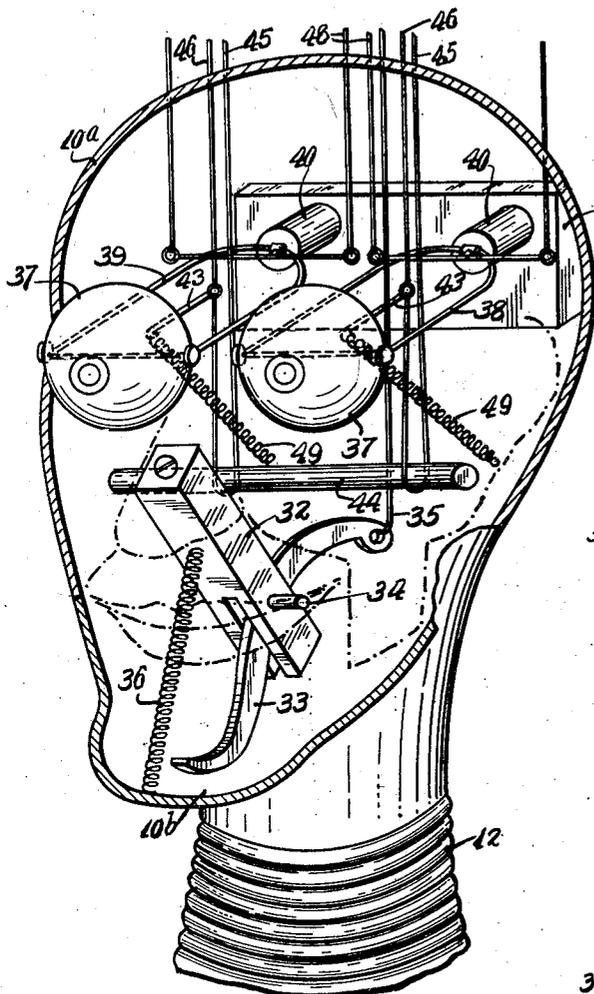


Fig. 3.

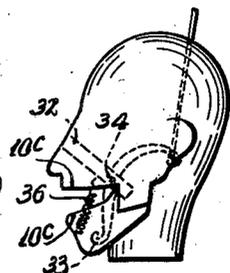


Fig. 4.

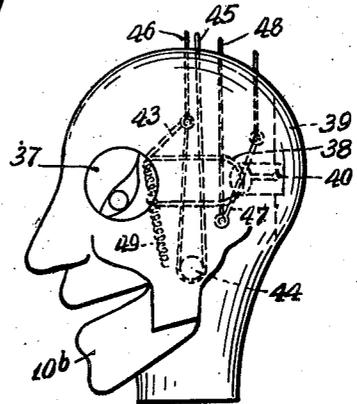


Fig. 6.

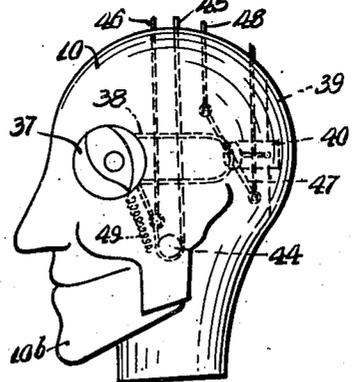


Fig. 7.

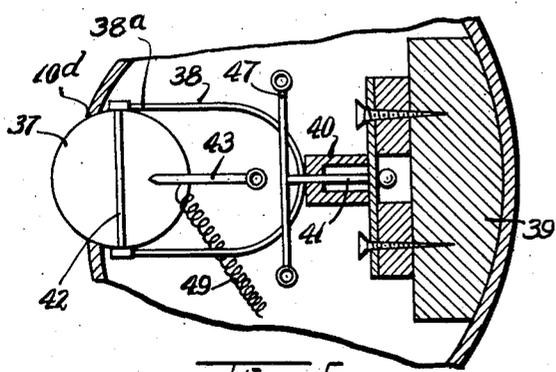


Fig. 5.

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3 Sheets-Sheet 3

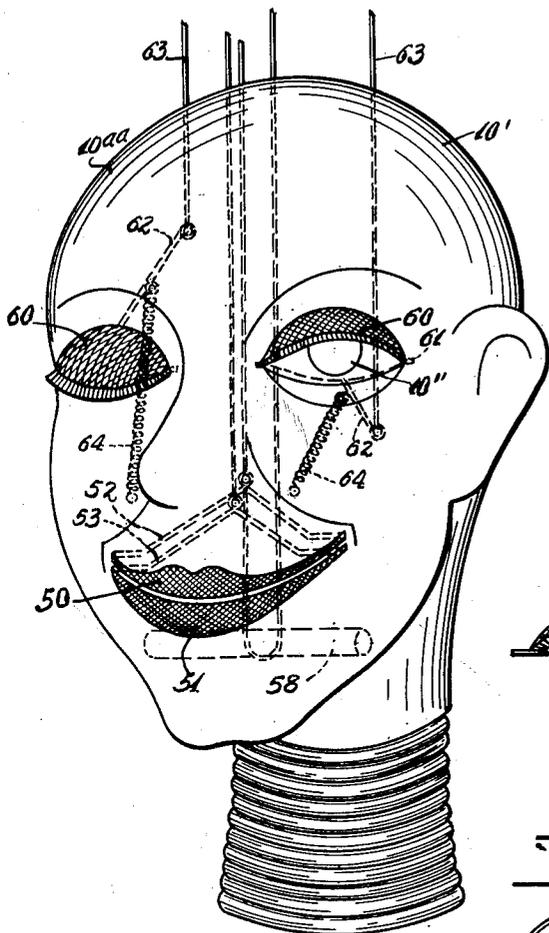


Fig. 8.

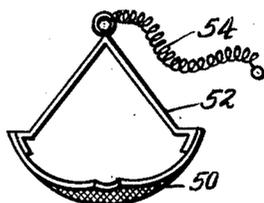


Fig. 9.

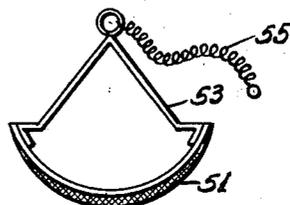


Fig. 10.

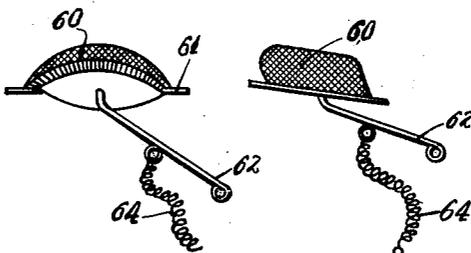


Fig. 11.

Fig. 12.

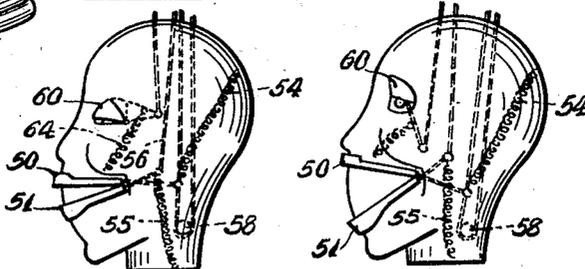


Fig. 13.

Fig. 14.

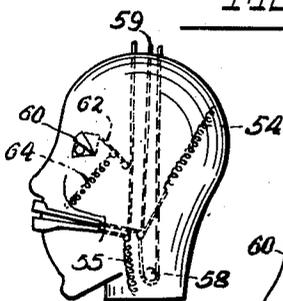


Fig. 15.

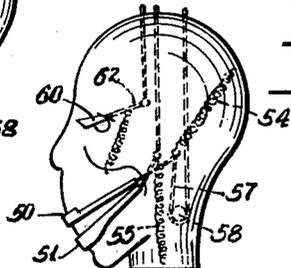


Fig. 16.

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# UNITED STATES PATENT OFFICE

2,202,677

## MARIONETTE

Stasys Usinakis, Kaunas, Lithuania

Application May 4, 1939, Serial No. 271,637

3 Claims. (Cl. 46-126)

This invention relates to new and useful improvements in marionettes.

The invention has for an object the construction of a marionette consisting of a body having a movable head, a torso constructed of separate sections, and movable legs and arms.

Still further it is proposed to provide springs between the separate parts forming said body in a manner to permit said parts to be turned and pivoted to various desired positions to simulate the movements of the human body.

Still further it is proposed to provide the head with a movable lower jaw controlled by strings and provided with a spring adapted to urge the lower jaw into a normal closed position.

Still further it is proposed to provide movable eyes for the head which are urged into a normal position by means of springs and which have strings connected therewith in a manner to permit the eyes to be moved to various desired positions within the sockets formed in the head.

Still further it is proposed to provide a pair of lips pivotally mounted upon the head and provided with springs for urging the same into a normal position and having strings connected therewith in a manner to permit the lips to be moved.

Another object of the invention is to provide the eyes of the head with eyelid members which are adapted to be moved through the medium of the strings connected therewith.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a perspective view of a marionette constructed according to this invention.

Fig. 2 is a side elevational view of Fig. 1.

Fig. 3 is a sectional perspective view of the head, per se.

Fig. 4 is an elevational view of Fig. 3.

Fig. 5 is a horizontal sectional view of one of the eyes, per se.

Fig. 6 is a side view illustrating another of the pivoted positions of the eyes.

Fig. 7 is a side elevational view illustrating another pivoted position of the eyes.

Fig. 8 is a perspective view of a head constructed according to a modification of the invention.

Fig. 9 is a plan view of the upper lip.

Fig. 10 is a plan view of the lower lip.

Fig. 11 is a perspective view of the eyelid.

Fig. 12 is a side view of the eyelid.

Fig. 13 is a side view of the head showing one of the adjusted positions of the parts.

Fig. 14 is a view similar to Fig. 13 illustrating another position of the parts.

Fig. 15 is still another view similar to Fig. 13 and illustrating another position of the parts.

Fig. 16 is another view similar to Fig. 13 illustrating a still further position of the parts.

The marionette, according to this invention, includes a body having a head 10 and a torso 11 consisting of an upper section 11<sup>a</sup> and a bottom section 11<sup>b</sup>. A spring 12 is mounted upon the upper torso section 11<sup>a</sup> forming the neck and pivotally connects the head with the torso. Springs 13 are mounted between the upper torso section 11<sup>a</sup> and the bottom torso section 11<sup>b</sup> for permitting the torso sections to assume various pivoted positions with relation to each other. Springs 14 extend from the sides of the upper torso section 11<sup>a</sup> and form the shoulders and upper arm portions of the marionette. Members 15 are mounted on the ends of the springs 14 and form the lower arms for the marionette. Springs 16 are mounted upon the members 15 and form the wrists of the device.

A member 17 is connected to each of the springs 16 and forms the palm of the hand, and a plurality of springs 18 extend from the members 17 forming the fingers and are provided with finger tips 19. Each of the arms is similar in construction.

Members 20 form the upper legs of the marionette and are provided with sockets 20 within which balls 21 are adapted to nestle for forming the connections between the lower torso section 11<sup>b</sup> and the legs. The balls 21 are maintained in position within the sockets 20<sup>a</sup> by means of straps 22 which extend between the balls 21 and the upper ends of the members 20.

A means is provided for connecting the balls 20 to the lower section 11<sup>b</sup> of the torso 11 for permitting the legs to be moved to various pivoted positions with relation to the torso. This means comprises a spring 23 extending through the balls 21 and which have their ends 23<sup>a</sup> bent upwards and passed through U-shaped clips 24 mounted upon the lower torso section 11<sup>b</sup>. The ends of the springs 23 are securely attached to the lower torso section 11<sup>b</sup> at a point above the clips 24.

Springs 25 continue from the bottom end of the members 20 and have the upper ends of the leg sections 26 connected therewith. A means is

provided for limiting the pivoting of the leg sections 26 to a front and rearward movement only. This means comprises a flexible member 27 which has its upper ends securely attached to the members 20 and which extend downwards along the sides of the leg sections 27. The bottom ends of the flange members are slidably passed through U-shaped members 28 mounted on the sides of the leg sections 26. The free ends of the flexible members 27 are bent outwards as indicated by the reference numeral 27<sup>a</sup> to prevent their disengagement from the U-shaped members 28. Springs 29 are connected to the lower ends of the leg sections 28 and comprise the angles of the marionette, and have the feet 30 connected thereto. At various points throughout the body of the marionette there is provided a plurality of screws 31 to which strings are adapted to be attached for permitting the sections of the body to be flexed as desired to simulate the movements of the human body.

The operation of this marionette is somewhat similar to the marionettes generally used today, that is the movements thereof are controlled by pulling the strings to cause the sections of the body to move in one direction, and by pulling other strings for causing the sections of the body to move in the other direction.

The details of the head are shown in Figs. 3 to 7 inclusive. As shown in these figures, the head consists of a hollow main section 10<sup>a</sup> constructed of sheet metal and upon which a lower jaw 10<sup>b</sup> is pivotally supported. The sections forming the head at the mouth are formed with inwardly extending portions 10<sup>c</sup> which prevent one from looking into the interior thereof when the lower jaw 10<sup>b</sup> is moved to an open position with relation to the section 10<sup>a</sup>. A means is provided for permitting the lower jaw 10<sup>b</sup> to be moved to its open position and comprises a block 32 which has one of its ends securely attached to the main portion 10<sup>a</sup> of the head and which extends downwards at an inclination thereto to a position adjacent the lower jaw 10<sup>b</sup>.

The bottom end of the member 32 is bifurcated and has a lever 33 pivotally supported upon a pintle 34 which extends between the arms of the bifurcated end. One end of the lever 33 bears against the inside face of the lower jaw 10<sup>b</sup> and the other end has a string 35 connected thereto and which extends through the top wall of the head and is adapted to pull the lever 33 to open the lower jaw 10<sup>b</sup>. A spring 36 has one of its ends attached to the lower jaw 10<sup>b</sup> and the other of its ends attached to the block 32 for urging the jaw 10<sup>b</sup> into a normal closed position when no pressure is applied to the string 35.

The head 10 is further provided with a pair of eyes which are operative in socket 10<sup>d</sup> formed in the head 10. Each of the eyes comprises an eyeball 37 which engages its respective socket 10<sup>d</sup>. A yoke 38 for each eyeball 37 is pivotally supported at its rear and has a pair of forwardly extending fingers 38<sup>a</sup> which engage opposite sides of the eyeball 37. A block 39 is mounted in back of the head 10 and has a finger 40 for each of the eyeballs extending therefrom. The yoke 38 is provided with a rearwardly extending trunnion 41 which turnably engages the finger 40. A pintle 42 is extended through each of the eyeballs 37 and each pintle has its ends turnably supported in the arms 38<sup>a</sup> of the yoke 38. A lever 43 extends from each eyeball 37 to a position between the arms 38<sup>a</sup> on the yoke upon which the eyeball is supported.

A stationary element 44 is mounted between the side walls of the head and parallel to the eyeballs 37. A string 45 has one of its ends attached to the lever 43 and the other of its ends extended downwards over the stationary element 44 and then passed through the top of the head to be pulled for causing the eyeball to be pivoted upwards. A string 46 has its end attached to the lever 43 and passed through the top of the head for being pulled to cause the eyeball 10 to pivot downwards.

A means is also provided for causing a rocking motion to be imparted to the eyeballs within the sockets 10<sup>d</sup>. This means comprises a member 47 which extends across the arms 38<sup>a</sup> of the yoke 38 and which has strings 48 connected thereto and passed through the top of the head in a manner to be successively pulled for causing the eyes to rock. A spring 49 for each of the eyeballs 37 has one of its ends connected to the eyeball and the other of its ends connected to the back of the head for urging the eyes into their normal position with relation to the sockets 10<sup>d</sup>.

According to the modification of the invention shown in Figs. 8 to 16 inclusive, the construction of the marionette is similar to that previously described except for the construction of the head 10'. The head 10' consists of a main section 10<sup>aa</sup> upon which an upper lip 50 and a lower lip 51 are pivotally supported. The ends of the lips 50 and 51 are provided with trunnions which are pivotally supported in the head 10. The top lip 50 is provided with a rearwardly extending lever 52 and the lower lip 51 is provided with a rearwardly extending lever 53. A spring 54 is connected to the lever 52 and a portion of the head for urging the upper lip into a normal position. A similar spring 55 is connected to the lever 53 of the lower lip 51 for urging this lip into a normal position. A spring 56 is adapted to be attached to the lever 53 of the lower lip for causing the lower lip to be pivoted to various positions about the trunnions which pivotally support the same.

A string 57 is attached to the lever 52 of the upper lip 50 and passes downwards over a stationary element 58 and through the top of the head in a manner to be pulled for causing the upper lip 50 to be pivoted upwards. A string 59 is connected to the lever 52 of the upper lip 50 and extends through the top of the head 10' in a manner to be pulled for causing the lips 50 and 51 to move downwards.

The head 50' is also provided with eyelids 60 for covering the eyes 10'' of the head 10'. The eyelids 60 are provided with outwardly extending trunnions 61 which pivotally support the eyelids 60. A lever 62 extends rearwards from each of the eyelids 60 and has a string 63 connected therewith in a manner to cause the eyelid to be pivoted to a position in which it will extend over the eyes 10'' as shown on the left hand side of Fig. 8. A spring 64 is connected to each of the levers 62 intermediate the ends thereof, and each of the springs 64 has its free end attached to a portion of the head 10' for urging the lid 60 into a position as shown on the right hand side of Fig. 8.

Figs. 13 to 16 show different positions which the eyelids and lips may assume when certain of the strings connected with these parts are pulled.

While I have illustrated and described the preferred embodiments of my invention, it is to be

understood that I do not limit myself to the precise constructions 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. In a marionette, a hollow head having eye sockets, eyes engaging said sockets, a yoke for each eye pivotally supported at its rear and having a pair of forwardly projecting fingers engaging opposite sides of said eye, pintles engaging through the ends of said fingers and diametrically through said eyes for turnably supporting the eyes, a radial lever projecting from the back of each eye, a stationary element, strings connected with said levers and extending over said stationary element for pulling the eyes in one direction, other strings connected with said levers for pulling the eyes in the other direction, and strings for pivoting said yokes.

2. In a marionette, a hollow head having eye sockets, eyes engaging said sockets, a yoke for each eye pivotally supported at its rear and having a pair of forwardly projecting fingers engaging opposite sides of said eye, pintles engaging through the ends said fingers and diametri-

cally through said eyes for turnably supporting the eyes, a radial lever projecting from the back of each eye, a stationary element, strings connected with said levers and extending over said stationary element for pulling the eyes in one direction, other strings connected with said levers for pulling the eyes in the other direction, and strings for pivoting said yokes, and springs connected to said eyes and to a portion of said head for urging said eyes into their normal position.

3. In a marionette, a torso, a pair of legs, and means for connecting the bottom end of said torso to the top ends of said legs, comprising a spherical member engaging a socket formed in the upper end of each of said legs, straps having one of their ends attached to the top of said legs and the other of their ends attached to said spherical members for fixedly holding said spherical members in position in said sockets, said torso being rested on said spherical members, and means for pivotally connecting said torso to said spherical members, comprising a U-shaped spring having its intermediate arm rotatively extended diametrically through said spherical members and its side arms securely attached to diametrically opposite sides of the bottom end of said torso.

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