

No. 631,626.

Patented Aug. 22, 1899.

S. E. EDWARDS.  
MECHANICAL TOY.

(Application filed Nov. 26, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig 1

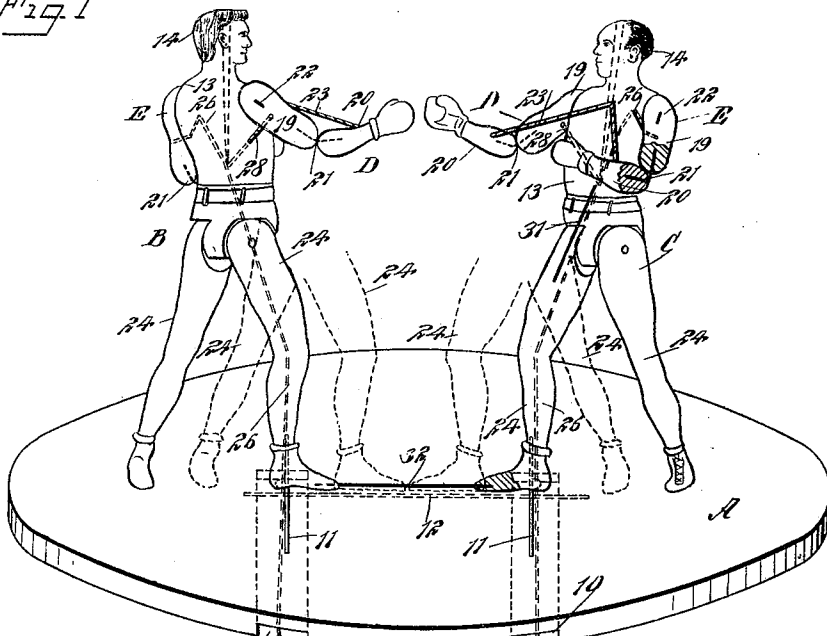


Fig 2

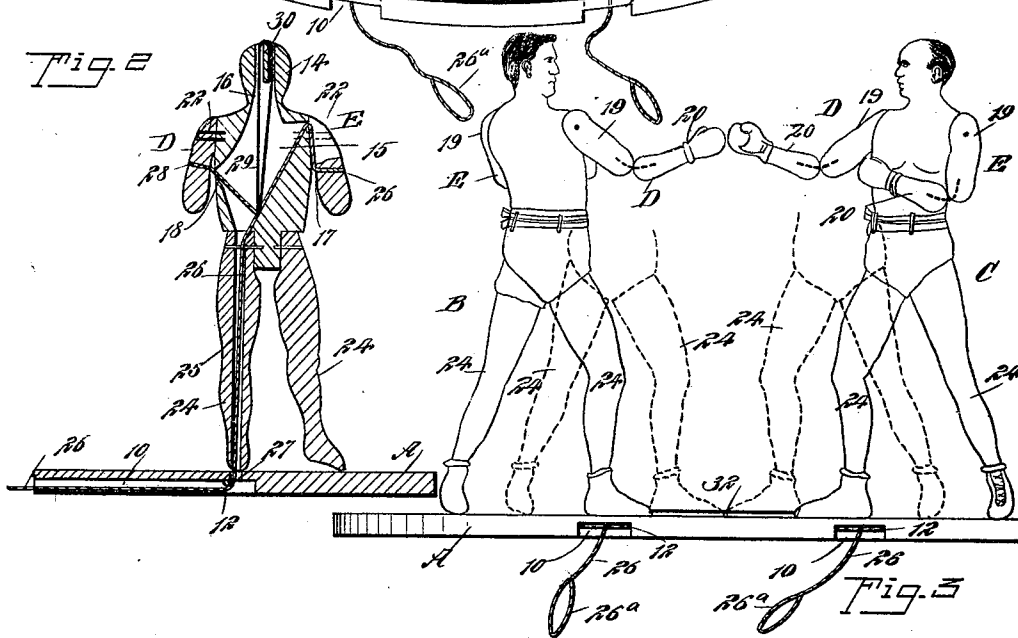


Fig 3

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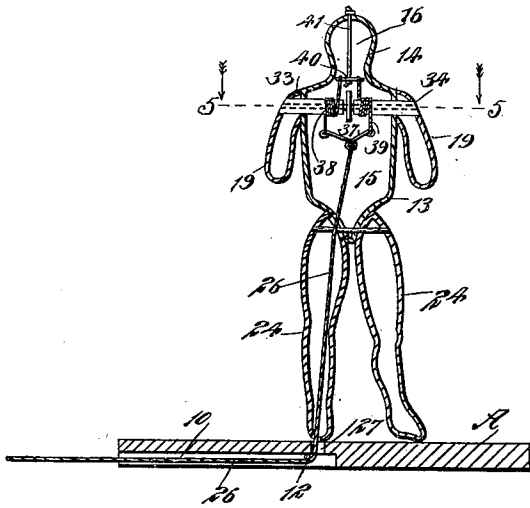


Fig. 4

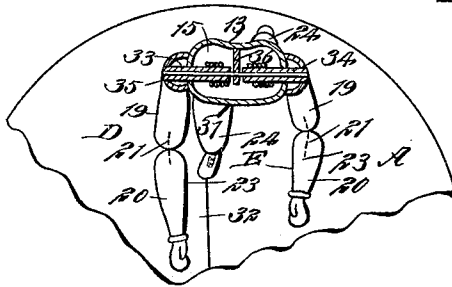


Fig. 5

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# UNITED STATES PATENT OFFICE.

SHERWOOD EMORY EDWARDS, OF DANVILLE, VIRGINIA.

## MECHANICAL TOY.

SPECIFICATION forming part of Letters Patent No. 631,626, dated August 22, 1899.

Application filed November 26, 1898. Serial No. 697,522. (No model.)

*To all whom it may concern:*

Be it known that I, SHERWOOD EMORY EDWARDS, of Danville, in the county of Pittsylvania and State of Virginia, have invented a new and useful Improvement in Mechanical Toys, of which the following is a full, clear, and exact description.

The object of the invention is to provide a toy in which figures, jointed or otherwise constructed, may be manipulated by hand upon a stage or platform and made to imitate the movements of actual prize-fighters or the movements incident to the practice of any game or athletic sport.

Another object of the invention is to provide a means whereby the figures may be held and operated upon a platform without being actually attached to the same and whereby the figures may be simultaneously or independently operated, or either figure or all of the figures caused to fall at the option of the operator.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved toy. Fig. 2 is a longitudinal section through the body and both limbs of a figure and also a section through the platform, the section of the platform being at an angle to that of the figure. Fig. 3 is a side elevation of the platform and figures supported thereby, illustrating a modified construction of the figures. Fig. 4 is a vertical section through a figure made of metal and having my improvement applied, and Fig. 5 is a transverse section on the line 5 5 of Fig. 4.

The platform or stage A may be given any desired contour and may be made of any suitable material. Two parallel recesses 10 are made in the bottom of the platform, one at each side of the center, and these recesses terminate at a point near the longitudinal center of the platform, as shown in Figs. 1 and 2. A pin 11, preferably circular in cross-section, is located in the upper portion of the platform or stage, transversely thereof

and parallel with the walls of the recesses 10, while a similar pin 12 is made to extend longitudinally of the platform or stage and transversely of the recesses 10, the pin 12 being at the bottom or under portion of the stage or platform, as is shown particularly in Fig. 1.

In the drawings I have illustrated in Figs. 1 and 3 two images B and C, which are of the same construction, wood or like material being employed. The head 14 of such an image is preferably integral with the trunk or body 13, and the body is provided with an interior chamber 15, the head being provided with a connecting-chamber 16, and at the left-hand side of the trunk or body adjacent to the shoulder portion an aperture or opening 17 is made, which, as shown in Fig. 2, has an upwardly inclination and communicates with the chamber 15, while at the right-hand side of the trunk or body and at a point lower than the position of the aperture or opening 17 a horizontal opening 18 is made.

The arms D and E are in two sections—namely, a shoulder-section 19 and a forearm-section 20—the two sections of the arms being connected by an elastic strip 21, which may be of rubber or of any other spring material, the object of this connection being to bring the two sections of the arms practically in longitudinal alinement when the two sections are free to assume an erect position. The shoulder-sections 19 of the arms are attached to the shoulder portions of the trunk or body when wood or like material is used by elastic or spring pivots 22, and these pivots are so connected with the shoulder-sections of the arms and with the trunk or body that in the normal position of the images the left hand is in a rearward, bent, or warding position, while the right hand is in a forward, substantially straight, or striking position. The outward movement of each arm is controlled by strands 23, that are attached to the forearms and to the center of the trunk at a point near the shoulders. Thus when the shoulder-section of an arm is carried rearward the cord 23, attached to the forearm portion of that arm, will cause the said forearm-section to be brought to a position at a right angle to the shoulder-section, as shown in the right-hand figure in Fig. 1.

The legs 24 of the image are pivotally at-

5 tached to the trunk or body, and one leg is  
 in a bent advanced position, while the other  
 leg is made to assume a rearward position, as  
 illustrated also in Fig. 1. The forwardly ex-  
 10 tended or bent leg is provided with an aper-  
 ture or bore 25, that extends through it from  
 top to bottom and communicates with the  
 chamber 15 in the trunk or body. A cord,  
 15 tape, chain, or thread 26 is carried up through  
 the bore 25 in the forwardly-extended leg of  
 the image and into the chamber 15 and  
 through the aperture or opening 17 at the left-  
 hand side of the image to an engagement with  
 20 the shoulder-section 19 of the left arm, as  
 shown particularly in Fig. 2, the said cord,  
 chain, or thread being passed up through an  
 aperture 27, made in the base at the rear por-  
 tion of a recess 10 therein, as shown also in  
 25 Fig. 2, so that the cord, thread, or chain will  
 pass in engagement with the lower or longi-  
 tudinal pin 12, which will act as a roller-bear-  
 ing and prevent undue chafing of the said  
 cord. A second thread, cord, or chain 28 is  
 30 attached to the right arm of the figure and is  
 passed into the chamber of the trunk or body  
 through the right-hand aperture in the latter,  
 the chain, thread, or cord 28 being attached  
 to the main cord, chain, or thread 26 at a  
 point near the lower end of the trunk or body  
 35 chamber 15. The cords, chains, or threads 26  
 and 28 are of a non-elastic character; but an  
 elastic cord 29 is attached to the main thread,  
 cord, or chain 26 where it connects with the  
 auxiliary chain, cord, or thread 28, and the  
 40 said elastic cord 29 is carried within the cham-  
 ber of the head and over a projection 30 or  
 its equivalent, located in the head, as is also  
 shown in Fig. 2. Thus it will be observed  
 that when the main chain, cord, or thread 26  
 45 is drawn outward the body portion of the im-  
 age will be made to assume an upright posi-  
 tion; but when the main cord, chain, or thread  
 26 is relieved from tension the body will as-  
 sume a forwardly-inclined position by reason  
 of the elastic connection 31 being made be-  
 50 tween the body or trunk and the forwardly-  
 advanced leg 24, as is shown especially in  
 Fig. 1.

55 The two images that are made to face each  
 other have their advanced feet connected by  
 an elastic cord 32, as shown in Figs. 1 and 3.  
 The outer end of each main cord 26 is pref-  
 erably provided with a loop 26<sup>a</sup>, adapted to  
 fit over a finger of a hand of the operator.  
 60 When the images are constructed as shown  
 in Fig. 1, if tension is exerted in an outwardly  
 direction upon the main cord 26 of either  
 image the right hand of the image, with which  
 the cord is connected, is given an upward and  
 forward position and the left hand a down-  
 65 ward and backward position, being bent at  
 the elbow through the restraining influence  
 of the controlling-cord 23. Thus the right  
 arm is brought in a position of advance, while  
 the other arm is carried to a striking position,  
 and as soon as the right arm is elevated the  
 flexible connection between the sections of

the arm will carry the members thereof prac-  
 tically to a horizontal position; but the posi-  
 tion of the forearm relative to the shoulder  
 section when the arm is in striking position  
 is regulated entirely by the length of the con-  
 trolling-cord 23. It is evident that the main  
 cords 26 of the two figures may be operated  
 simultaneously and that the cord of either  
 figure may be independently operated. In  
 this manner the movements of prize-fighters,  
 for example, may be quite accurately imitated,  
 especially when the operator is practiced in  
 the manipulation of the toy.

In the position of the images shown in Figs.  
 1 and 3 the toes of the advanced feet of the  
 opposing images will be widely separated by  
 draft strain applied to the cords 26; but the  
 moment that tension on either of the main  
 cords 26 is released the image controlled by  
 the cord that is released from tension will  
 move automatically toward the opposing fig-  
 ure by reason of the elastic connection. It  
 is also evident that if the main cord 26 of  
 either image be fully relieved from tension  
 the image controlled by that cord will fall on  
 the platform. The prostrate image may be  
 instantly restored to its upright position by  
 drawing out the cord 26, connected therewith,  
 and at the same time the image, restored to  
 its upright position, will assume a defensive  
 attitude.

It is to be understood that in order to main-  
 tain the images at rest in an upright position  
 both controlling-cords 26 must be drawn taut  
 and the advanced feet of both images must  
 be over the openings or apertures 27 in the  
 platform. In rapid manipulation, however,  
 of either or both the cords 26 one image will  
 advance toward and retreat from the other  
 rapidly enough to prevent the images from  
 resting flat on the platform, and while an  
 image will fall to or toward the platform when  
 its cord is sufficiently released, yet the device  
 can be so manipulated that the fall will  
 cleverly represent the dodging of a live boxer  
 or a knock-out blow delivered by his antago-  
 nist. It is also to be understood that there  
 is no permanent connection between the im-  
 ages and the platform, but that the former  
 are merely loosely supported on the latter.

It is evident that the toy may be made of  
 any desired size and the figures be under com-  
 plete control. In fact, the toy may be made  
 of such size that it can be readily carried in  
 the pocket.

In Fig. 3 I have illustrated a slightly-modi-  
 fied form of toy, in which the trunk, head,  
 and legs are rigidly connected, the arms, how-  
 ever, being pivoted to the trunk and made  
 in two sections, having a spring connection  
 with each other, each arm comprising a shoul-  
 der and a forearm section. When the images  
 are constructed in this manner, the feet of  
 their advanced lower limbs are connected by  
 a cord 32, before described, and the images  
 are held in an upright position by exerting  
 outward tension upon the controlling-cords

26, which in this instance are simply secured to the advanced feet of the images. It is evident that the images may be made to assume an upright position under such a construction, or that they may be permitted to fall on the platform or support. In the modified form of the toy, however, the movements of the arms are brought about by agitating the base or support upon which the images are held.

In the form of the image shown in Figs. 4 and 5 metal is employed and the various parts of the image are hollow. The arms are connected to drums 33 and 34, loosely mounted upon a spindle 35, that extends from one arm to the other and is journaled in a bearing 36 in the body of the image, as shown in Fig. 5. The cord 26, that extends from the outside of the platform within the image, is attached to the center of a rod 37; and cords 38 and 39 are secured to the ends of the rod, said cords being wound in opposite directions upon the drums 33 and 34, the opposite ends of the cords being secured to the ends of an upper rod 40, said rod being attached to the head by an elastic or spring connection 41. The same movement of the images and their limbs is obtained by the manipulation of the cord 26, whether the images are made of wood or metal, although the mechanism acting directly upon the arms of the images or figures is slightly different. The pins 12, as heretofore stated, prevent undue chafing of the operating cords, chains, or threads 26 where said chains, cords, or threads are drawn outward, while the pin 11 prevents the operating cord, chain, or thread from chafing while the images are advancing toward or receding from each other.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a platform, of an image adapted to be loosely supported by its legs on the platform and having a body pivotally supported on said legs, a controlling device passing through the platform to the under side of the same, being arranged for manipulation beneath the platform, and a connection between the controlling device, the legs, and the body of the image whereby to maintain the image in an upright position on the platform and permit it to fall at pleasure, as described.

2. In a mechanical toy, a platform, opposing images adapted to be loosely supported on the platform, said images being independent of each other except at their lower extremities, an elastic connection between such lower extremities and tending to draw the same together, manipulating devices connected with the said lower extremities and arranged when manipulated to draw the extremities away from each other against the action of the elastic connection, and guides carried by the platform for said manipulating devices, as described.

3. The combination, of a platform, images arranged to be loosely supported thereon, arms attached to said images, said arms being constructed in shoulder and forearm sections, controlling devices for the forearm-sections of the said arms, an elastic connection between the opposing lower limbs of the images, and a controlling device arranged to be manipulated beneath the platform whereby to hold the images in an upright position on the platform and operate the arms of the images, as described.

4. In a mechanical toy, the combination, with a platform, of images adapted to be loosely supported thereon, each image being provided with arms pivoted to the trunk, the arms being constructed in two sections having a spring connection, controlling devices for the forearm-sections of the arms, lower limbs pivotally attached to the trunk of each image, a spring connection between one of said lower limbs and the trunk, a spring connection between the opposing lower extremities of the images, and a cord guided by the platform, which cords extend through the lower opposing limbs of the images to a connection with the shoulder-sections of the arms, as described.

5. In a mechanical toy, the combination, with a platform, of images adapted to be loosely supported thereon, each image being provided with arms pivoted to the trunk, the arms being constructed in two sections having a spring connection, controlling devices for the forearm-sections of the arms, lower limbs pivotally attached to the trunk of each image, a spring connection between one of said lower limbs and the trunk, a spring connection between the opposing lower extremities of the images and a cord guided by the platform, which cords extend through the opposing lower limbs of the images to a connection with the shoulder-sections of the arms, and a spring connection between the controlling-cord of each of the images and the head portion of the trunk, as set forth.

6. The combination, with the platform, of the opposing images loosely supported thereby, said images being independent of each other except at their lower extremities, a connection between such lower extremities and tending to draw them together and controlling devices connected with said images and arranged when manipulated to draw said images loosely apart against the action of said elastic connection and maintaining the images in an upright position on said platform, as described.

7. In a mechanical toy, the platform, images loosely supported by said platform, an elastic cord connecting the lower extremities of said images and tending to draw them together, and an inelastic controlling-cord connected with a lower extremity of each image and extending down through the platform to the under side thereof, said latter cords being independent of each other, as described.

8. In a mechanical toy, the combination with the platform, of the images thereon, a cord passing through said platform, up through each image and connected with the  
5 body and arms to actuate the same, and an elastic connection, at a point in said cord, between the latter and the head of the image, as and for the purpose described.

9. In a mechanical toy, the platform, an  
10 image thereon, a pivotal connection between a leg of said image and the body of the same, an elastic connection between said leg and

body whereby to draw the latter forward on the former, and a controlling device passing up through said leg and connected with said  
15 body, said device being arranged to hold the body upright on the platform against the tension of said elastic connection, as and for the purpose described.

SHERWOOD EMORY EDWARDS.

Witnesses:

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