

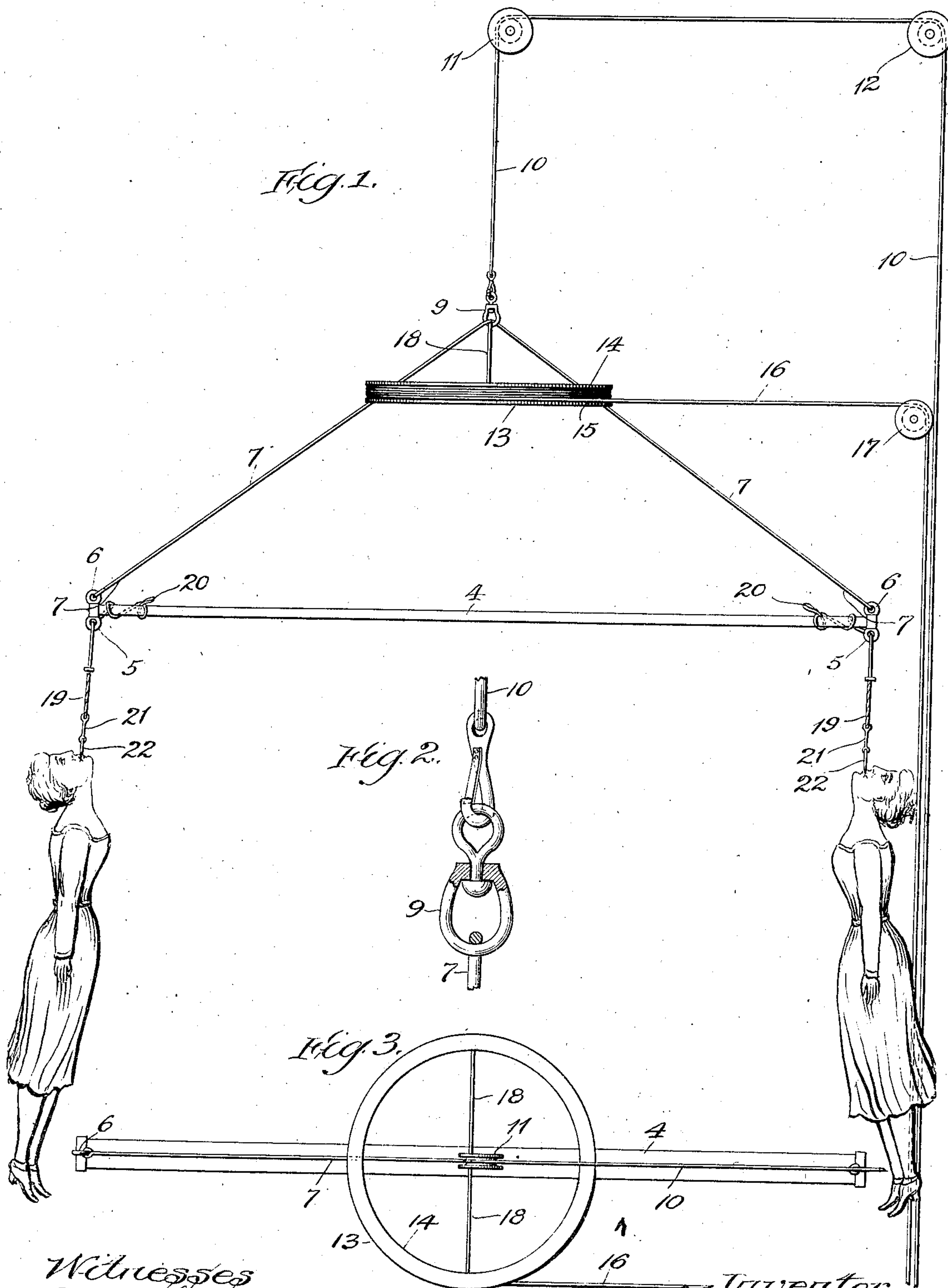
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MEANS FOR PRODUCING AERIAL GYMNASTIC PERFORMANCES.

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# UNITED STATES PATENT OFFICE.

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## MEANS FOR PRODUCING AERIAL GYMNASTIC PERFORMANCES.

No. 847,139.

Specification of Letters Patent.

Patented March 12, 1907.

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*To all whom it may concern:*

Be it known that I, JOSEPH JOHN WILLIAMS, a citizen of the United States, and a resident of Jackson, in the county of Hinds and State of Mississippi, have invented certain new and useful Improvements in Means for Producing Aerial Gymnastic Performances, of which the following is a full, clear, and exact specification.

This invention relates to means for producing aerial gymnastic performances, the apparatus of which may be raised from a stage or the ground well above the same or near the top of a tent or any suitable place, together with the performers of the act, and which is adapted for the suspension at points removed from each other of depending devices to which the performers attach and suspend themselves while being carried through the act by the apparatus.

The object of my invention is to provide means by which the performers may be suspended in mid-air at distances apart and substantially in the same horizontal plane and be bodily revolved about a substantial vertical axis and in such a manner that they may have the appearance of flying in a circle through the air and at considerable distance above the audience viewing them—as, for instance, a distance above a theatrical stage or in the upper part of a circus-tent or open air.

A further object of my invention is to provide means by which two or more performers may be suspended in mid-air at predetermined distances apart and against the possibility of their bodies coming in contact with each other and in such a manner that when revolved about a vertical axis their bodies, through centrifugal force, will assume inclined positions and by means enabling them to, by bodily force, during their suspension rotate their bodies on an axis therethrough while being carried around in a circle.

A further object of my invention is to provide means by which two or more performers may suspend themselves in mid-air at predetermined distances apart and by the neck, and especially by the mouth, in substantially the same horizontal plane by means of twisted fibrous ropes, which may be tightly twisted by a rotary movement of the bodies of the performers on their own axes and which by their own torsion while the performers are sus-

ended therefrom will actuate the bodies of the performers in the opposite direction and operate to accelerate their revolutions.

A still further object of my invention is to provide means by which two or more performers may be suspended in mid-air, as last above stated, and by means and in such manner that they may be revolved in a horizontal plane about a vertical axis at a point midway between that of their point of suspension and in such manner that during the rotation or twisting of their individual bodies they will by centrifugal force be extended on lines oppositely diverging downwardly from each other.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts by which the said objects and certain other objects hereinafter appearing are attained, all as fully described with reference to the accompanying drawing, and more particularly pointed out in the claims.

In the said drawing, Figure 1 is a side elevation of an apparatus embodying my invention with the performers suspended in their operative position therefrom. Fig. 2 is a top plan view of the apparatus on a reduced scale, and Fig. 3 an enlarged view of the swivel by which apparatus is connected with and suspended from a cable or rope passing over pulleys above a stage or in the upper part of a tent or high pole in open air.

As shown in the drawings, 4 indicates a bar, which may be round or angular form in cross-section and which is sufficiently stiff not to bend under the weight of the performers and which in actual practice is from five to ten or more feet in length and provided at or toward each end with rings 5 and 6, extending below and above the bar, and which are preferably projections from a clamp 7, sleeved and tightly secured to the bar and, if desirable, removable therefrom for convenience in packing and storage for transportation.

To the ring 6 by direct attachment or by means of ordinary clips, as may be for detachable purposes, are secured the opposite ends of a cable or rope 7, to the center of length of which is attached a swivel 9, the cable or rope 7 being of such a length as when extended, as shown in Fig. 1, it forms, with the bar, a triangular frame or structure



adapted to be suspended by means of a cable or rope 10, passing over pulleys 11 and 12, at considerable distance apart, and preferably a distance equally more than one-half the length of the bar 4, so that the latter will be clear of the cable, which extends below the pulley 12 to a point in convenient reach of and for manipulation by attendants standing on the floor or ground a substantial distance below the upper pulleys.

Instead of forming the triangular upper side of the frame by means of the cable 7 said sides may be formed of rods secured in the rings 6 or directly to the bar 4 by any commonly-used joint and secured at their upper ends to the swivel 9 by any clamping device ordinarily employed or suitable for that purpose. Swivel 9 serves the twofold purpose of a convenient detachable connection between the frame and the suspending cable or rope 10 and of permitting the frame to be revolved about a vertical axis, and to which end there is supported on the upper triangular sides of the frame a drum 13, rigidly and preferably clamped to its supporting sides by any suitable means, preferably such as will permit its detachment therefrom for packing and shipping purposes.

The drum 13 is provided with an upper side flange 14 and a lower side flange 15, between which the body of the drum is sufficiently long for a number of turns about it of a cable or rope 16, secured at one end to the drum and passing thence to and over a pulley 17, preferably located in approximately a horizontal line extending from the face of the drum and down to a point within convenient reach of attendants for manipulating the drum, as hereinafter described, and revolving the bar or circle 4 horizontally about a substantially vertical axis through the swivel and the drum.

Drum 13 is secured to cables, rods, or ropes 7 by clips or other suitable fastenings, (not shown,) which may be and preferably removably connect the drum therewith, and is also preferably held against tipping or straining the fastenings by cords 18, secured at opposite sides of the drum and attached at their opposite ends to the swivel 9 or to the cables 7 at about that point; but it would be no departure from my invention to have a pyramidal frame formed by four diverging rigid rods or bars suspended from the swivel and having cable 7 attached thereto as a support for the drum 13.

Attached to each of the rings 5 are fibrous ropes 19 19 and also shorter ropes 20 20, which are shown wound about the bar 4 out of use and out of the way during the employment of the longer ropes 19. These ropes or suspending devices are of twisted fibrous material—such, for example, as ordinary manila or cotton rope—and at their lower ends are permanently secured to snap-

hooks 21 21, providing means for detachably securing thereto mouthpieces 22 22, which preferably are of yielding material and so formed and shaped and of such a size that they may be gripped by the teeth of the performer in such a manner as to suspend themselves by the employment of the teeth, the muscles of the jaw, and the neck, as indicated in the drawing, and during the performance in mid-air hereinafter described and which for some time past has been publicly repeated several hundred times, as hereinafter described.

In the employment of the apparatus herein shown and described it is first lowered to such a point that the performers standing on the ground or stage, as may be, may insert in their mouths and between the teeth the mouthpieces 22, the cable or rope 16 having before been given the desired number of coils about the drum 13. After getting a good grip on the mouthpieces and before the lifting of the structure, together with the bodies, is commenced the performers take hold of the rope with one or both hands, as may be, to steady themselves and at the same time gradually permit their weight to be suspended entirely from the mouthpieces, and before or when they have reached the extreme height of their elevation they then entirely release them from the rope and after the necessary amount of practice may remain suspended by the mouth for a considerable length of time, amounting to a good many minutes, in mid-air with their hands dropped to their sides.

As the apparatus is now publicly employed and has been for some time there are three acts, in the first of which the short ropes 20 20 are employed, the performers presenting themselves to the audience dressed in afternoon or evening costume, consisting of long skirts and broad picture-hats, the colors of which are in harmony with the surroundings, and fans in their hands. They step to the bar, hang their open fans thereon, and seemingly take hold of the hand portion with their mouths, but as a matter of fact they insert the mouthpieces, as before described, and after being lifted to the desired point and hanging there motionless for some time they simultaneously deliberately close their fans, drop them below, where they are caught by attendants, and as deliberately proceed to remove their hat-pins and after removing their hats put the hat-pins back in their hats and drop them to the attendants and finally remove their skirts, leaving them suspended in mid-air in tights or other fancy costume, and then the attendant at the cord 16 begins a gradual pull thereon, and thereby starts and as gradually increases the revolution of the bar-steel circle 4 about its vertical axis, which is continued for a minute or more, when they are lowered to the ground for a resting spell. The cords in this first act are



the short cords, for the reason that during the revolution it is desired that their bodies remain at a right angle to and behind the revolving bar and not assume an inclined position, such as will follow from the employment, as will be readily explained, of the longer ropes 19.

In the second act the performers come out dressed in white or other color skirt fancy costume and after being lifted or elevated in the manner as before described and while stationary and with their arms free go through the skirt-dance as ordinarily performed upon the stage, and after this has been continued some time then the cord 16 is again pulled upon, and while their bodies are revolved about a circle the skirts spread out both from the wands held by the hands and from the body in such a manner that as they swing about this circle they have the appearance of enormous butterflies or birds. After this butterfly act has been continued for some time the performers are lowered for a resting spell for the third act, and for the purpose of which the longer ropes 19, with their mouthpieces, are employed. In this third act the performers are dressed in tights, and as soon as they are raised to their performing position the cord 16 is then pulled upon until the bodies of the performers are flying through the air in a circle with such rapidity that the centrifugal force puts their bodies in outward and inclined position substantially beyond the end of the bar 4, and then while in this position they simultaneously twist their bodies until the ropes are so tightly twisted that after a reverse turn of the bodies the torsion of the ropes is sufficient to revolve their bodies so rapidly that they are hardly distinguishable as human bodies, although, as before stated, clothed in tights.

In conclusion it should be observed that the bar may be of such length that three or more persons may suspend themselves therefrom as before described and that the bar may be bent to the form of the arc of a circle or an entire circle and any number of persons suspend themselves therefrom, and thereby avoid the otherwise necessity of having the bar of such an increased length as to render more or less difficult the perfect balancing of the bodies of any number of persons it may be desirable to employ and suspend by a single overhead cable or rope.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a device for the purpose herein described, a horizontal bar, means for raising the same to considerable elevation and low-

ering it therefrom, of depending suspensory devices and means for suspending the human body below the same through the action of the teeth together with the muscles of the jaws and neck, substantially as described.

2. In a device for the purpose described, a horizontal bar, devices for raising, lowering and suspending the same in mid-air, and means for revolving said bar horizontally on a vertical axis, substantially as described.

3. In a device for the purpose described, a horizontal bar, means secured directly thereto and projecting above the same, means for raising, lowering and suspending said bar in mid-air, a drum connected therewith, and a cord for actuating said drum to revolve the bar, horizontally about a vertical axis, substantially as described.

4. In a device for the purpose described, a horizontal bar, a suspending device therefor converging to a point above the center of length thereof, a swivel, and a cable or rope secured to said swivel whereby said bar may be raised and lowered and revolved horizontally about a vertical axis bisecting the center of length thereof, substantially as described.

5. In a device for the purpose described, a horizontal bar, a cable attached at opposite ends of the bar and extending above the same, a swivel secured to said cable or rope with its axis bisecting the center of length of said bar, means for raising, lowering and suspending said bar in mid-air, a drum mounted upon said cable or rope and means for actuating said drum and thereby revolving the bar horizontally about the vertical axis, substantially as described.

6. In a device for the purpose described, a horizontal bar, means for raising, lowering and suspending said bar in mid-air, a drum, connected with said bar, means for actuating said drum and revolving the bar horizontally about a vertical axis, of suspending devices attached at or near the opposite ends of said bars, and depending below the same and means whereby performers may suspend themselves by their mouth in mid-air therefrom, substantially as described.

7. In a device for the purpose described, a horizontal bar, devices suspending the same in mid-air and means for revolving said bar horizontally about a vertical axis, substantially as described.

In witness whereof I have hereunto set my hand and affixed my seal this 5th day of November, A. D. 1906.

JOSEPH JOHN WILLIAMS. [L. S.]

Witnesses:

A. S. STEWART,  
AUG. CHABAUD.