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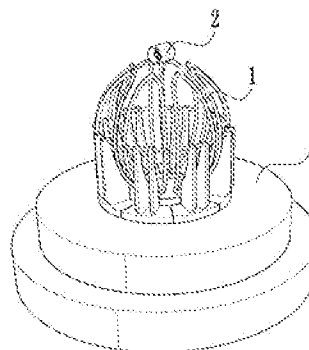
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MULTI-DIRECTIONAL DRAGON DANCE TRAINING DEVICE AND METHOD

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The present invention discloses a multi-directional dragon dance training device, which can be used for special training on strength and agility and cooperative training for dragon dance. The device comprises a hammer member (2) for simulating the weight of a dragon body, a rail mechanism for defining the moving direction of the hammer member (2), and a base (3), wherein the rail mechanism comprises a plurality of rails extending in different directions, the hammer member is capable of moving in the plurality of rails, and the rails are fixed to the base; the rails of the rail mechanism are arc-shaped; and the hammer member (2) comprises at least a hammer head and a rod portion (23) connected to each other.



MULTI-DIRECTIONAL DRAGON DANCE TRAINING DEVICE AND METHOD

Field of the Invention

The present invention belongs to the field of sports equipment, and particularly relates to a multi-directional dragon dance training device and method.

Background of the Invention

Dragon dance is a traditional Chinese folk sports, in which dragon dancers wave poles to achieve the purpose of dragon dance. The dragon dance is still important in the contemporary folk performance activities, and the effect of dragon dance is largely determined by dragon dancers, so it is necessary to train the dragon dancers.

The conventional process of training of dragon dancers usually has three problems. The first is strength of the dragon dancers, the dragon used in dragon dance has a weight, the resistance of wind is an important problem that the dragon dancers need to solve in the process of dragon dance, and the dragon dance requires some tricks, so the dragon dance has certain requirements for strength, and such strength needs to reach the level of muscle memory. The second is agility of the dragon dancers, the dragon dance has more requirements for shaking, the numerous dragon dancers face different situations, and the requirement for pre-judgment on the action of dragon dance is relatively high, so that high agility is required in each direction, and such agility requires long-time training. The third is cooperation, especially cooperation between two dancers, one dancer usually steps on the shoulders of the other one, and such action requires joint practice. At present, the training needs to be completed by many dancers under the guidance of a coach.

The inventors believe no device and method capable of simultaneously satisfying special training on strength and agility and cooperative training for dragon dance at present, and the existing literature has not recorded such device.

Summary of the Invention

The technical problem to be solved by the present invention is to provide a multi-directional dragon dance training device and method for the disadvantage that convenient training devices

and methods are not provided for dragon dance training in the prior art.

The technical solution adopted by the present invention is:

A multi-directional dragon dance training device, including a hammer member for simulating the weight of a dragon body, a rail mechanism for defining the moving direction of the hammer member, and a base, wherein the rail mechanism includes a plurality of rails extending in different directions, the hammer member is capable of moving in the plurality of rails, and the rails are fixed to the base; the rails of the rail mechanism are arc-shaped, and the hammer member includes at least a hammer head and a rod portion connected to each other.

Further, the base is provided with a groove, and a groove cover capable of being opened and closed is arranged on the groove.

Further, the rail mechanism includes a plurality of arc portions, each arc portion includes two arc members, respectively a first arc member and a second arc member, the two arc members have the same radian and length, and two ends of the two arc members are connected to each other; the plurality of arc portions are circumferentially arranged, and the rails are formed between the plurality of arc portions; and the plurality of arc portions are fixed to the base.

Further, the arc members of the arc portions are narrowed at the ends toward the central axes of the arc portions.

Further, the arc portion is provided with a first rod member and a second rod member connected to the two arc members, the first rod member and the second rod member are connected to a vertical plate, and the plurality of arc portions are connected to the base by the vertical plates.

Further, a groove cover is arranged at the top of the groove, and a training aid can be placed in the groove.

Further, a pipe body is arranged in the groove, the pipe body completely covers a side face of the groove, the top end of the pipe body is provided with a wide edge perpendicular to the pipe body, the wide edge extends radially from the end of the pipe body to the outside of the pipe, and a groove cover splicing position is provided between the wide edge and the end of the pipe body.

Further, the hammer head of the hammer member includes a tubular member and a dumbbell, the dumbbell is sleeved in the tubular member, and the rod portion penetrates through the tubular member and is connected to the dumbbell.

Further, the base is cylindrical and includes a plurality of layers, and the top layer of the base is

smaller than the bottom layer of the base.

According to the dragon dance training device and method of the present invention, the hammer member is operated in the rails to simulate the dragon dance, and during the movement of the hammer member, relevant muscle tissues, ligament tissues and the like are trained; the plurality of rails of the rail mechanism in different directions are used for simulating the dragon dance in different directions; the base can be used to enhance the training difficulty and simulate the action at certain height.

In a second aspect, the present invention also discloses a multi-directional dragon dance training method, including the following steps:

when a single dragon dancer is trained, the dancer enters the upper side of the groove cover from the base, keeps the groove cover still, and holds the rod portion; when two dragon dancers are cooperatively trained, the groove cover is opened, the lower dancer enters the groove cover from the base, and the upper dancer stands on the shoulders of the lower dancer and holds the rod portion; when a single dragon dancer uses auxiliary equipment, the dancer puts the auxiliary equipment in the groove, opens the groove cover, enters the upper side of the groove cover from the base, and uses the auxiliary training equipment;

the rod portion is held, and the rod portion penetrates through the rails and moves in the rails;

when the hammer head is lowered to the top of the base, the hammer member is moved upward;

when the hammer head rises to the top of the rails, and the trainee can change the moving direction of the hammer member such that the hammer member moves toward the rails in other directions, or does not change the moving direction of the hammer member such that the hammer member continues to move toward the rails in opposite directions.

In a third aspect, the present invention also discloses a method for manufacturing a multi-directional dragon dance training device, including the following steps:

fixing relative positions of a first arc member and a second arc member in an arc portion such that the plane where the first arc member is located is perpendicular to the plane where the second arc member is located, and welding two ends of the first arc member to two ends of the second arc member;

welding a first rod member such that the first rod member is connected to the midpoint of the first arc member and the midpoint of the second arc member, and welding a second rod member

such that the second rod member is connected to the end of one side of the arc member to form a first arc portion; repeating this step to manufacture a plurality of arc portions;

connecting the upper bottom edge or the inner side of the upper bottom edge of a vertical plate to the first rod member, and connecting the second rod member to the oblique waist or the inner side of the oblique waist of the vertical plate;

connecting the right-angled waist of the vertical plate to an annular member of the base, and arranging the plurality of arc portions circumferentially; mounting the annular member to the top surface of the base to ensure that the annular member is concentric with the groove;

mounting a pipe body in the groove of the base to ensure that the wide edge of the pipe body is at the top of the base; and mounting a groove cover at the top of the pipe body.

The present invention has the following advantages:

1. The hammer member is operated in the rails to simulate the dragon dance, and during the movement of the hammer member, relevant muscle tissues, ligament tissues and the like are trained; the plurality of rails of the rail mechanism in different directions are used for simulating the dragon dance in different directions; the base can be used to enhance the training difficulty and simulate the action at certain height. The whole device is designed for simulation of dragon dance, which can specifically upgrade the quality of a dragon dancer.

2. When the device disclosed by the present invention is used for dragon dance training, special training on strength and agility required by single-person dragon dance and two-person cooperative dragon dance can be simulated, the dragon dance actions in different directions are simulated accurately, the efficiency of dragon dance training is effectively enhanced, and the purpose of training a single person or two persons is achieved.

Brief Description of the Drawings

The accompanying drawings are used for providing a further understanding of the present invention, constituting a part of the present invention, and interpreting the present invention together with the embodiments of the present invention, rather than limiting the present invention.

Fig. 1 is an elevation view of Embodiment 1,

Fig. 2 is an elevation view with a base removed in Embodiment 1,

Fig. 3 is a schematic view of adjacent arc portions and vertical plates in Embodiment 1,

Fig. 4 is a schematic view indicating that a single arc portion is connected to a vertical plate in Embodiment 1,

Fig. 5 is a schematic view of the base in Embodiment 1,

5 Fig. 6 is a schematic view of a groove cover in Embodiment 1,

Fig. 7 is a schematic view of a pipe body in Embodiment 1,

Fig. 8 is a schematic view of a hammer member in Embodiment 1,

Fig. 9 is a schematic view of rails in Embodiment 1.

10 In the figures, 1 arc portion, 11 first arc portion, 12 second arc portion, 13 first rod member, 14 vertical plate, 15 upper rail outlet, 16 lower rail outlet, 2 hammer member, 21 tubular member, 22 dumbbell, 23 rod member, 3, base, 31 annular member, 32 first layer of base, 33 second layer of base, 34 groove cover, 341 groove cover body, 342 handle, 41 groove cover splicing position, 42 wide edge, 43 pipe body, 61 first rail, 62 second rail, 63 third rail, 64 fourth rail, 65 fifth rail, 66 sixth rail, 67 seventh rail, 68 eighth rail.

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Detailed Description of Embodiments

The technical solutions of the present invention will be further described in detail below with reference to the accompanying drawings and embodiments.

20 It should be pointed out that the following detailed descriptions are all exemplary and aim to further illustrate the present application. Unless otherwise specified, all technical and scientific terms used herein have the same meanings generally understood by those of ordinary skill in the art of the present application.

25 It should be noted that the terms used herein are merely for describing specific embodiments, but are not intended to limit exemplary embodiments according to the present application. As used herein, unless otherwise explicitly pointed out by the context, the singular form is also intended to include the plural form. In addition, it should also be understood that when the terms “include” and/or “comprise” are used in the specification, they indicate features, steps, operations, devices, components and/or their combination.

30 It should be pointed out that the orientation terms in the following embodiments are described

according to the drawings and actual usage habits.

Embodiment 1

A multi-directional dragon dance training device includes a hammer member 2 for simulating the weight of a dragon body, a rail mechanism for defining the moving direction of the hammer member 2, and a base 3, wherein the rail mechanism includes a plurality of rails extending in different directions, the hammer member 2 is capable of moving in the plurality of rails, and the rails are fixed to the base 3;

The rail mechanism includes a plurality of arc portions 1, each arc portion 1 includes two arc members, the two arc members have the same radian and length, and two ends of the two arc members are connected to each other; the plurality of arc portions 1 are circumferentially arranged, and the rails are formed between the plurality of arc portions 1; the rails of the rail mechanism are arc-shaped; and the plurality of arc portions 1 are fixed to the base 3.

The arc members of the arc portions 1 are narrowed at the ends toward the central axes of the arc portions 1 so as to form an upper rail outlet 15 and a lower rail outlet 16 that are wider than rail bodies at two ends of the rails.

The arc portion 1 is provided with a first rod member 13 connected to the two arc members, the first rod member 13 is connected to a vertical plate 14, and the plurality of arc portions 1 are connected to the base 3 by the vertical plates 14.

In this embodiment, referring to Fig. 4, totally eight arc portions 1 are provided, the eight arc portions 1 are distributed in a cross shape on the base 3, and eight rails are formed between the eight arc portions 1; since the arc members are narrowed at the ends toward the central axes of the arc portions 1, the actual widths of two ends of the rails are greater than the widths of rail bodies to facilitate the entry and exit of the hammer member 2. The chord length of the arc member should exceed the length of the hammer head for ease of training.

In this embodiment, the arc member is formed by bending a metal bar, and two ends of the arc member are bent toward the same side; when two arc members are welded, the two ends of the first arc member 11 are bent toward the first direction, the two ends of the second arc member 12 are bent toward the second direction, the first arc portion 11 and the second arc portion 12 have the same size, and the first direction is opposite to the second direction. The relative positions of the first arc member 11 and the second arc member 12 are fixed such that the plane where the

first arc member 11 is located is perpendicular to the plane where the second arc member 12 is located, the two ends of the first arc member 11 are welded to the two ends of the second arc member 12, and a first rod member 13 is welded to connect the midpoint of the first arc member 11 with the midpoint of the second arc member 12 to form a first arc portion 11. The second, 5 third, fourth, fifth, sixth, seventh, and eighth arc portions are manufactured by the same method. Further, the radii of the first arc member 11 and the second arc member 12 are obtuse angles. It may be assumed that a spherical surface completely coincides with the first arc member 11 and the second arc member 12.

In this embodiment, the arc portions 1 are connected to the base 3 by vertical plates 14. 10 Referring to Fig. 3, the vertical plate 14 is of a right-angled trapezoid shape, and the top and bottom edges thereof are fixedly connected to the first rod member 13 and a second rod member (not shown) respectively. The vertical plates 14 are made of a material having sufficient strength. Further, the oblique waists of the vertical plates 14 are arc-shaped, and tightly coincide with spherical surfaces of the first arc member 11 and the second arc member 12.

15 The hammer member 2 includes at least a hammer head and a rod portion connected to each other. The length of the rod portion should be similar to the length of the rod held during the dragon dance. In this embodiment, the rod portion may be made of a wooden rod.

Further, the end of the rod portion is sleeved with a metal pipe to weld the hammer head.

The hammer head of the hammer member 2 includes a tubular member 21 and a dumbbell 22, 20 the dumbbell 22 is sleeved in the tubular member 21, and the rod portion penetrates through the tubular member 21 and is connected to the dumbbell 22.

In this embodiment, the dumbbell 22 is used to actively change the weight of the hammer head, thus facilitating the development of a training plan. The dumbbell 22 may be connected to the rod portion by welding, riveting, bolting or the like.

25 Further, the metal pipe at the end of the rod portion is directly welded to the central axis of the dumbbell 22, or the rod portion is connected to the central axis of the dumbbell 22 by a metal tee joint.

A groove is formed in the base 3, a groove cover 34 is arranged at the top of the groove, and a training aid can be placed in the groove. The base 3 is cylindrical and includes a plurality of 30 layers, and the top layer of the base 3 is smaller than the bottom layer of the base 3.

In this embodiment, the base 3 is provided with two layers, and the two layers of the base 3 are stepped, which enables a trainee to quickly arrive at the top surface of the base 3. The groove in the base 3 is cylindrical, a pipe is arranged in the groove, and the groove can be used for placing a training aid and accommodating persons during two-person training. The groove in the base 3 is cylindrical in this embodiment, and the groove may also be in other spatial shape having a volume in one or more embodiments.

Further, in order to improve the manufacturing efficiency, the base 3 further includes an annular member 31, and the annular member 31 is fixedly connected to the vertical plates 14, so that the vertical plates 14 are fixedly connected to the annular member 31 first, and then the annular member 31 is connected to the base 3.

Further, in order to improve the user experience of the groove, a pipe body 43 is arranged in the groove, the pipe body 43 completely covers a side face of the groove, the top end of the pipe body 43 is provided with a wide edge 42 perpendicular to the pipe body 43, the wide edge 42 extends radially from the end of the pipe body 43 to the outside of the pipe, and a groove cover splicing position 41 is provided between the wide edge 42 and the end of the pipe body 43 to facilitate the splicing and mounting of the groove cover 34.

In this embodiment, the base 3 has a height of 1.5 to 2.0 m to offer ease for a trainee to enter the groove. The arc members have a chord length of 1.5 to 2.0 m for ease of training.

It should be noted that, in this embodiment, a handle 342 is fixedly connected to the top of the groove cover 34, so that the groove cover 34 is lifted via the handle 342 to expose the groove.

In order to further fix the arc portion 1, referring to Figs. 3 and 4, an annular member 31 is arranged at the lower half part of the arc portion 1, and the annular member 31 annular member 31 is connected to the vertical plates 14.

This embodiment has at least the following advantages:

1. In this embodiment, the hammer member 2 is operated in the rails to simulate the dragon dance. During the movement of the hammer member 2, relevant muscle tissues, ligament tissues and the like are trained; the plurality of rails of the rail mechanism in different directions are used for simulating the dragon dance in different directions; the base 3 can be used to enhance the training difficulty and simulate the action at certain height; and the whole device is designed for simulation of dragon dance, which can specifically upgrade the quality of a dragon dancer.

2. In this embodiment, wide outlets are formed at the top and bottom ends of the arc portions 1 to facilitate the in and out of the hammer member 2 during training, which is advantageous for speeding up the training and improving the training level.

Embodiment 2

5 Embodiment 2 discloses a multi-directional dragon dance training method. Taking training of a single dragon dancer as an example, the dragon dancer enters the upper side of the groove cover 34 from the base 3, keeps the groove cover 34 still, and holds the rod portion;

The held rod portion penetrates through the rails and moves in the rails;

10 When the hammer head is lowered to the top of the base 3, the hammer member 2 is moved upward;

When the hammer head rises to the top of the rails, and the trainee can change the moving direction of the hammer member 2 such that the hammer member 2 moves toward the rails in other directions, or does not change the moving direction of the hammer member 2 such that the hammer member 2 continues to move toward the rails in opposite directions.

15 In this embodiment, the single dragon dancer takes exercise using the hammer member 2, and the moving trajectory of the hammer member 2 is restricted by the portion held by the dragon dancer and the rails, and operates in accordance with the shape of the rails. Eight rails are used, and the rails are actually 45° apart. In actual operation, the hammer member slides out from the upper side of each rail, and paths in at least seven directions are optional, so that the sports
20 environment in real dragon dance can be simulated as much as possible. In the real dragon dance, the advancement of a team is diverse, but the team generally advances in an S-shaped route. During advancing, each dragon dancer not only needs to swing the dragon, but also faces the influence of external environmental factors such as wind and terrain, so the choice of directions for the dragon dance is diverse, and rails in multiple directions are required.

25 Embodiment 3

Embodiment 3 discloses a multi-directional dragon dance training method. Taking cooperative training of two dragon dancers as an example, the groove cover 34 is opened, the lower dragon dancer enters the groove cover 34 from the base 3, and the upper dragon dancer stands on the shoulders of the lower dragon dancer and holds the rod portion;

30 The held rod portion penetrates through the rails and moves in the rails;

When the hammer head is lowered to the top of the base 3, the hammer member 2 is moved upward;

When the hammer head rises to the top of the rails, and the trainee can change the moving direction of the hammer member 2 such that the hammer member 2 moves toward the rails in other directions, or does not change the moving direction of the hammer member 2 such that the hammer member 2 continues to move toward the rails in opposite directions.

In this embodiment, the upper dragon dancer takes exercise using the hammer member 2, and the training situation simulated in this embodiment is relatively common in the dragon dance. Specifically, the first dragon dancer is required in this performance to rise high into the air, at the same time, the second dragon dancer is ready to let the first dragon dancer step on the shoulders, then the first dragon dancer steps on the shoulders of the second dragon dancer, and both arms of the second dragon dancer hold the legs of the first dragon dancer tightly to fix the position of the first dragon dancer as much as possible.

Thus, the operating state of the hammer member 2 in this embodiment is similar to that in Embodiment 2. In the real dragon dance, the advancement of a team is diverse, but the team generally advances in an S-shaped route. During advancing, each dragon dancer needs to swing the dragon and faces the influence of external environmental factors such as wind and terrain, so the choice of directions for the dragon dance is diverse, and a sufficient turning space is required.

In this embodiment, both arms of the lower dragon dancer need to hold the legs of the first dragon dancer in the dragon dance to fix the position of the upper dragon dancer as much as possible.

Embodiment 4

Embodiment 4 discloses a multi-directional dragon dance training method. Taking cooperative training of a single dragon dancer as an example, a treadmill is arranged in the groove, and the treadmill can be padded with a pad, so that the treadmill has certain height and the dancer can use the treadmill;

The dancer opens the groove cover 34, stands on the treadmill, and holds the rod portion;

The held rod portion penetrates through the rails and moves in the rails;

The treadmill is started on, and the dragon dancer starts running;

When the hammer head is lowered to the top of the base 3, the hammer member 2 is moved upward;

When the hammer head rises to the top of the rails, and the trainee can change the moving direction of the hammer member 2 such that the hammer member moves toward the rails in other directions, or does not change the moving direction of the hammer member 2 such that the hammer member 2 continues to move toward the rails in opposite directions.

The operating state of the hammer member 2 in this embodiment is similar to that in Embodiment 3. In the real dragon dance, the advancement of a team is diverse, but the team generally advances in an S-shaped route. In this embodiment, forward running of the dragon dancer is stimulated by means of the treadmill to train the agility.

When the method disclosed in this embodiment is used for training, the exercise can be taken according to the following rule. Referring to Fig. 9, the hammer member slides out from the upper side of the first rail 61; enters the second rail 62 opposite to the first rail 61, and slides out from the upper side of the second rail 62; enters the third rail 63 beside the first rail 61, and slides out from the upper side of the third rail 63; enters the fourth rail 64 opposite to the third rail 63, and slides out from the upper side of the fourth rail 64; enters the fifth rail 65 beside the third rail 63, and slides out from the upper side of the fifth rail 65; enters the sixth rail 66 opposite to the fifth rail 65, slides out from the upper side of the sixth rail 66, and enters the seventh rail 67 opposite to the sixth rail 66; slides out from the upper side of the seventh rail 67, and enters the eighth rail 66 beside the sixth rail 66; slides out from the upper side of the eighth rail 68, and enters the first rail 61; and so on.

Embodiment 5

Embodiment 5 discloses a multi-directional dragon dance training method. Taking cooperative training of a single dragon dancer as an example, a bench for simulating human shoulders is arranged in the groove, and the bench can be padded with pads to have certain height, so that the dancer can stand on the bench. The method comprises the following steps:

The dancer opens the groove cover 34, stands on the bench, and holds the rod portion;

The held rod portion penetrates through the rails and moves in the rails;

When the hammer head is lowered to the top of the base 3, the hammer member 2 is moved upward;

When the hammer head rises to the top of the rails, and the trainee can change the moving direction of the hammer member 2 such that the hammer member 2 moves toward the rails in other directions, or does not change the moving direction of the hammer member 2 such that the hammer member 2 continues to move toward the rails in opposite directions.

5 The operating state of the hammer member 2 in this embodiment is similar to that in Embodiment 3. The real dragon dance includes an action of stepping on shoulders. In this embodiment, a bench is used to simulate human shoulders, and other similar devices may also be used to simulate human shoulders.

Embodiment 6

10 Embodiment 6 discloses a method for manufacturing a multi-directional dragon dance device, including the following steps:

fixing relative positions of a first arc member 11 and a second arc member 12 in an arc portion 1 such that the plane where the first arc member 11 is located is perpendicular to the plane where the second arc member 12 is located, and welding two ends of the first arc member 11 to two
15 ends of the second arc member 12;

welding a first rod member 13 to connect the midpoint of the first arc member 11 with the midpoint of the second arc member 12 to form a first arc portion; manufacturing the second, third, fourth, fifth, sixth, seventh and eighth arc portions by the same method;

20 connecting the upper bottom edge of a vertical plate 14 to the first rod member 13 by welding, or causing the first rod member 13 to directly penetrate through the upper side of a vertical plate 14, and connecting the first rod member 13 to the oblique waist of the vertical plate 14 by welding, or causing the first rod member 13 to directly penetrate through the inner side of the oblique waist of the vertical plate 14;

25 connecting the right-angled waist of the vertical plate 14 to an annular member 31 of a base 3 by welding or threads, and arranging the first to eighth arc portions 1 circumferentially; mounting the annular member 31 to the top end of the base 3 to ensure that the annular member 31 is concentric with a groove;

30 mounting a pipe body 43 in the groove of the base 3 to ensure that a wide edge 42 of the pipe body 43 is at the top of the base 3; and mounting a groove cover 34 at the top of the pipe body 43.

Described above are merely preferred embodiments of the present application, and the present application is not limited thereto. Various modifications and variations may be made to the present application for those skilled in the art. Any modification, equivalent substitution, improvement or the like made within the spirit and principle of the present application shall fall
5 into the protection scope of the present application.

Conclusies

1. Een multi-directioneel drakendanstrainingstoestel, bevattende een hamerelement (2) om het gewicht van een drakenlichaam te simuleren, een railmechanisme om de bewegingsrichting van het hamerelement (2) te bepalen en een basis (3), waarbij het railmechanisme een aantal rails die zich in verschillende richtingen uitstrekken bevat, het hamerelement (2) in staat is te bewegen in de veelheid aan rails en de rails aan de basis (3) zijn bevestigd;
5 waarbij de rails van het railmechanisme boogvormig zijn;
het hamerelement (2) minimaal een hamerkop en een stanggedeelte (23) die met elkaar
10 verbonden zijn; en de basis (3) voorzien is van een groef.

2. Het multi-directionele drakendanstrainingstoestel volgens conclusie 1, waarbij het railmechanisme een veelvoud aan boogdelen (1) bevat, elk boogdeel (1) twee boogstukken (11, 12) bevat, respectievelijk een eerste boogstuk (11) en een tweede boogstuk (12), de twee
15 boogstukken dezelfde radiaal en lengte hebben, en twee uiteinden van de twee boogstukken (11, 12) met elkaar verbonden zijn; het veelvoud aan boogdelen (1) rondom gerangschikt zijn, en de rails gevormd zijn tussen het veelvoud aan boogdelen (1); en het veelvoud aan boogdelen vastgemaakt is aan de basis (3).

- 20 3. Het multi-directionele drakendanstrainingstoestel volgens conclusie 2, waarin de boogstukken (11, 12) van de boogdelen (1) aan de uiteinden versmald zijn naar de centrale assen van de boogdelen (1).

4. Het multi-directionele drakendanstrainingstoestel volgens conclusie 2, waarbij het boogdeel (1)
25 is voorzien van een eerste stangelement (13) en een tweede stangelement verbonden met de twee boogstukken (11,12), het eerste stangelement (13) en het tweede stangelement zijn verbonden met een verticale plaat (14), en de meervoudige boogdelen (1) zijn verbonden met de basis (3) door middel van de verticale platen (14).

- 30 5. Het multidirectionele drakendanstrainingstoestel volgens conclusie 1, waarin een

groefafdekking (34) aan de bovenkant van de groef is aangebracht, en een trainingshulpmiddel in de groef kan worden geplaatst.

5 6. Het multidirectionele drakendanstrainingstoestel volgens conclusie 5, waarbij een pijplichaam (43) in de groef is geplaatst, het pijplichaam (43) een zijvlak van de groef volledig bedekt, de bovenkant van het pijplichaam (43) is voorzien van een brede rand (42) loodrecht op het pijplichaam (43), de brede rand (42) radiaal van het uiteinde van het pijplichaam (43) naar de buitenkant van de pijp loopt, en een groefafdekking tussen de brede rand en het uiteinde van het pijplichaam is voorzien.

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7. Het multidirectionele drakendanstrainingstoestel volgens conclusie 1, waarbij de hamerkop van het hamerelement een buiselement (21) en een halter (22) bevat, de halter (23) omgeven is door het buiselement (21) en het stanggedeelte (23) door het buiselement (21) heen dringt en met de halter (23) verbonden is.

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8. Het multidirectionele drakendanstrainingstoestel volgens conclusie 1, waarbij de basis (3) cilindrisch is en een veelvoud aan lagen (32, 33) bevat, en de oppervlakte van de bovenste laag (33) van de basis (3) kleiner is dan de onderste laag van de basis.

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9. Een multi-directionele drakendanstrainingwerkwijze gebruik makend van een drakendanstrainingstoestel volgens een van de conclusies 1-8, bevattende de volgende stappen: wanneer een enkele drakendanser wordt getraind, gaat de danser de bovenste zijde van de groefafdekking van de basis in, houdt de groefafdekking stil en houdt het stanggedeelte vast; wanneer twee drakendansers samen worden getraind, wordt de groefafdekking geopend, gaat de 25 onderste danser de groefafdekking van de basis in, en staat de bovenste danser op de schouders van de onderste danser en houdt het stanggedeelte vast; wanneer een enkele drakendanser hulpapparatuur gebruikt, plaatst de danser de hulpapparatuur in de groef, opent de groefafdekking, gaat de bovenste zijde van de groefafdekking in vanaf de basis, en gebruikt de hulpapparatuur voor de training;

30

het hengelgedeelte wordt vastgehouden, en het hengelgedeelte dringt door de rails heen en

beweegt in de rails;

wanneer de hamerkop naar de bovenkant van de basis wordt neergelaten, wordt het hamerelement naar boven bewogen;

5 wanneer de hamerkop naar de bovenkant van de rails stijgt, en de cursist kan de bewegingsrichting van het hamerelement zodanig veranderen dat het hamerelement in meerdere richtingen naar de rails beweegt, of de bewegingsrichting van het hamerelement niet zodanig verandert dat het hamerelement in tegengestelde richting naar de rails blijft bewegen.

10 10. Een werkwijze voor het vervaardigen van een multidirectioneel drakendanstrainingstoestel, bevattende de volgende stappen:

het bevestigen van relatieve posities van een eerste booglid en een tweede booglid in een booggedeelte, zodat het vlak waarin het eerste booglid zich bevindt, loodrecht staat op het vlak waarin het tweede booglid zich bevindt, en het lassen van twee uiteinden van het eerste booglid aan twee uiteinden van het tweede booglid;

15 het lassen van een eerste staaflid, zodat het eerste staaflid verbonden is met het midden van het eerste booglid en het midden van het tweede booglid, en het lassen van een tweede staaflid, zodat het tweede staaflid verbonden is met het uiteinde van een zijde van het booglid om een eerste boogdeel te vormen; deze stap wordt herhaald om een veelvoud aan booggedeelten te vervaardigen;

20 het verbinden van de bovenste onderrand of de binnenzijde van de bovenste onderrand van een verticale plaat met het eerste stangelement en het verbinden van het tweede stangelement met de schuine taille of de binnenzijde van de schuine taille van de verticale plaat;

25 het verbinden van de haakse taille van de verticale plaat met een ringvormig lid van de basis, en het ringvormig lid langs de hele omtrek op de ringvormige delen van de basis plaatsen; het ringvormig lid aan de bovenkant van de basis monteren om ervoor te zorgen dat het ringvormig lid concentrisch is met de groef;

het monteren van een buislichaam in de groef van de basis om ervoor te zorgen dat de brede rand van het buislichaam zich aan de bovenkant van de basis bevindt; en het monteren van een groefafdekking aan de bovenkant van het buislichaam.

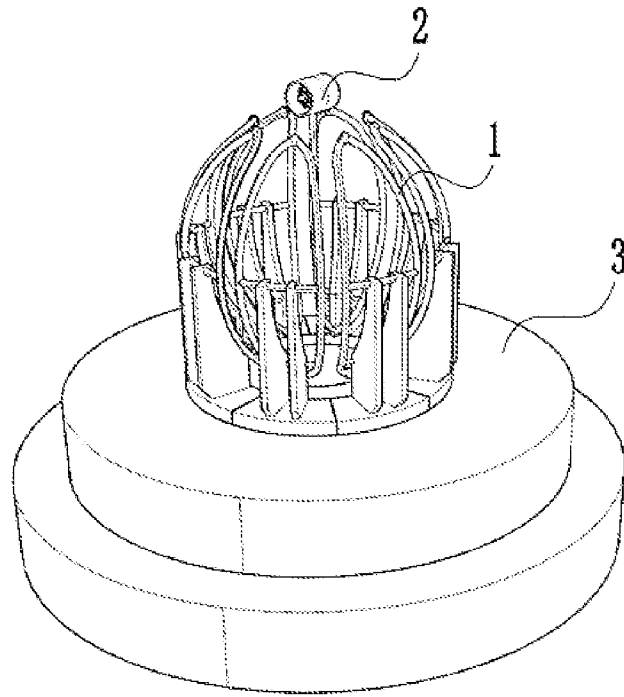


Fig. 1

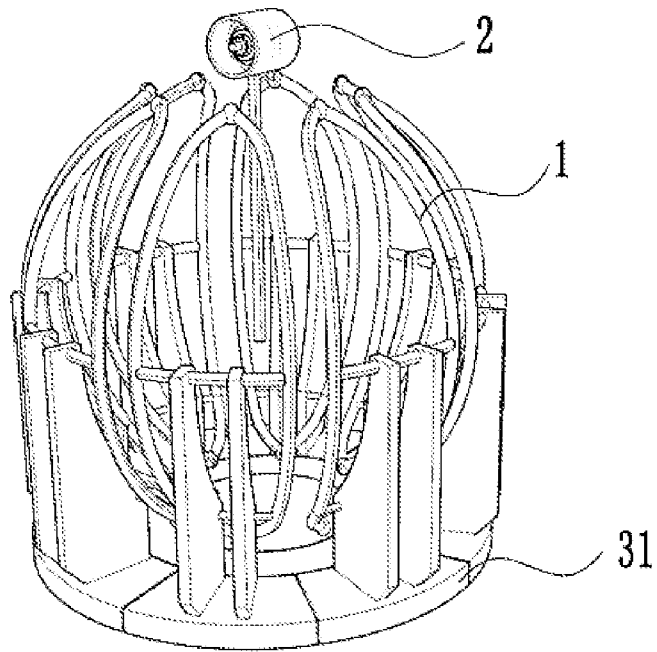


Fig. 2

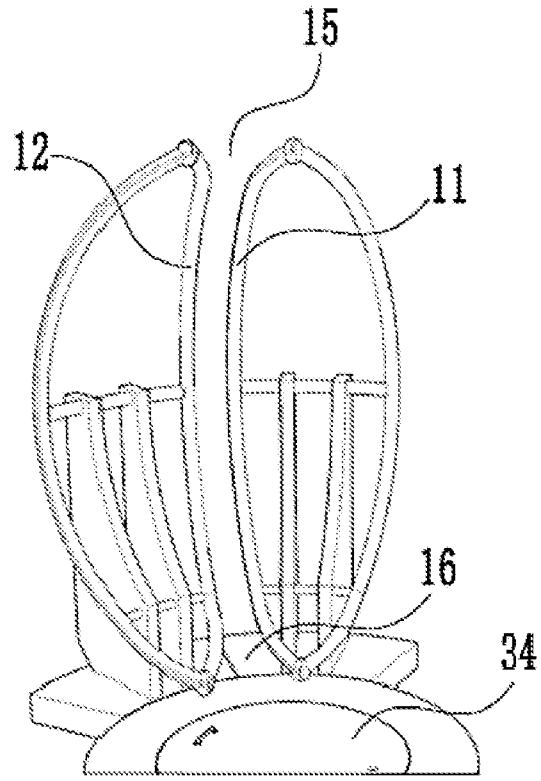


Fig. 3

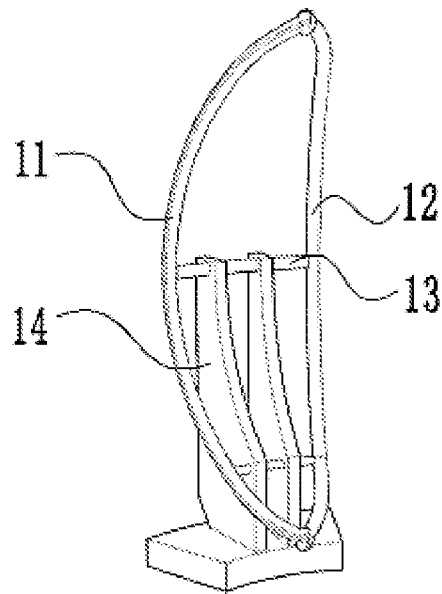


Fig. 4

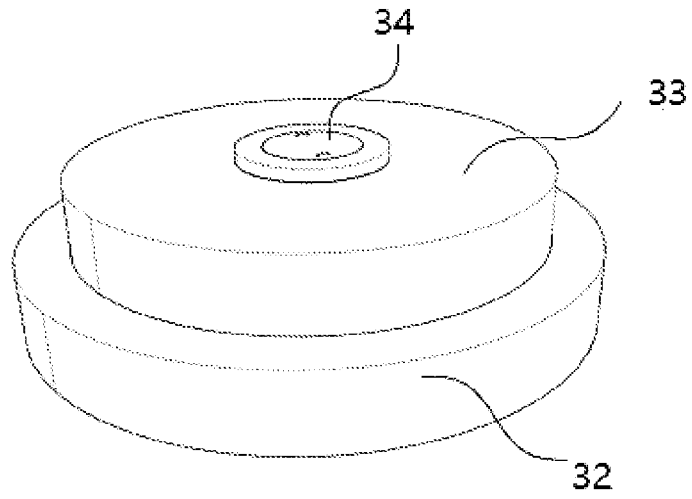


Fig. 5

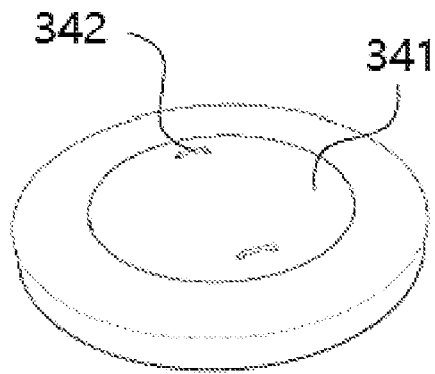


Fig. 6

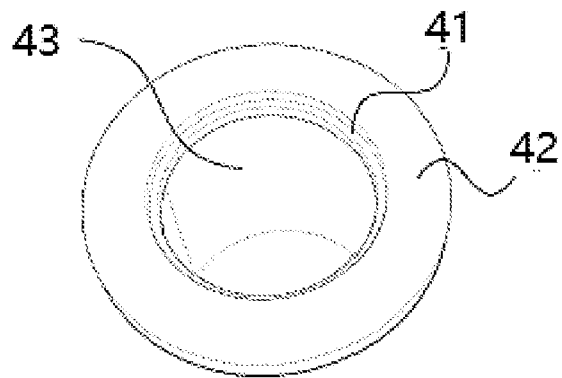


Fig. 7

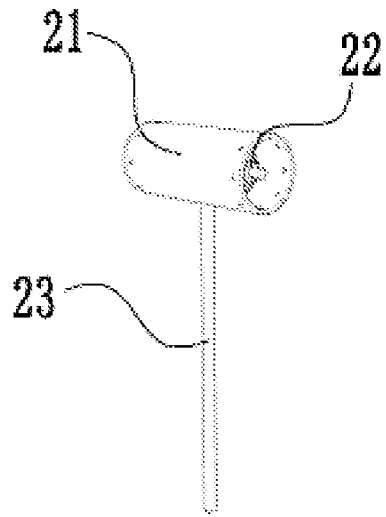


Fig. 8

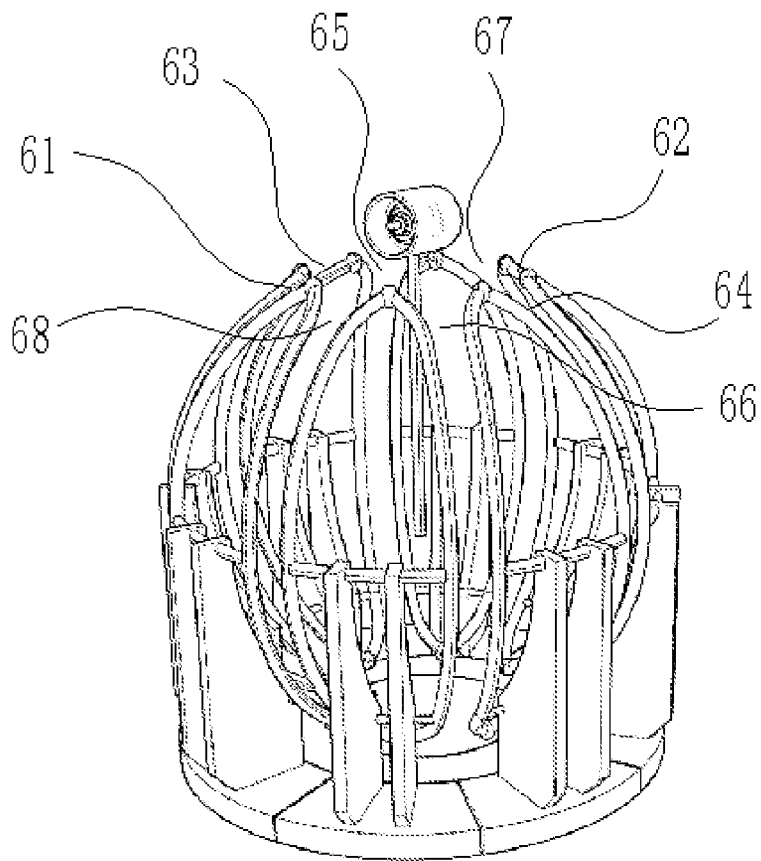
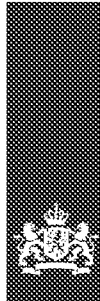


Fig. 9



RAPPORT BETREFFENDE HET ONDERZOEK NAAR DE STAND VAN DE TECHNIEK

Octrooiaanvraag 2024978

Classificatie van het onderwerp ¹ : A63B69/00	Onderzochte gebieden van de techniek ¹ : A63B
Computerbestanden: EPODOC, WPI	Omvang van het onderzoek: Volledig
Datum van de onderzochte conclusies: 24 februari 2020	Niet onderzochte conclusies: -

Van belang zijnde literatuur

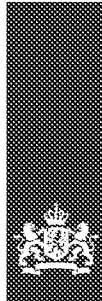
Categorie ²	Vermelding van literatuur met aanduiding, voor zover nodig, van speciaal van belang zijnde tekstgedeelten of figuren	Van belang voor conclusie(s)
A	CN 206660539 U (LEI TAO) 24 november 2017 * Engels uittreksel; figuren * -----	1 – 10
Datum waarop het onderzoek werd voltooid: 6 april 2021	De bevoegde ambtenaar: ir. A.A.M. Bexkens Octrooiencentrum Nederland onderdeel van Rijksdienst voor Ondernemend Nederland	

¹ Gedefinieerd volgens International Patent Classification (IPC).

² Verklaring van de categorie-aanduiding: zie apart blad.

Categorie van de vermelde literatuur:

- X: op zichzelf van bijzonder belang zijnde stand van de techniek
- Y: in samenhang met andere geciteerde literatuur van bijzonder belang zijnde stand van de techniek
- A: niet tot de categorie X of Y behorende van belang zijnde stand van de techniek
- O: verwijzend naar niet op schrift gestelde stand van de techniek
- P: literatuur gepubliceerd tussen voorrrangs- en indieningsdatum
- T: niet tijdig gepubliceerde literatuur over theorie of principe ten grondslag liggend aan de uitvinding
- E: octrooiliteratuur gepubliceerd op of na de indieningsdatum van de onderhavige aanvraag en waarvan de indieningsdatum of de voorrrangsdatum ligt voor de indieningsdatum van de onderhavige aanvraag
- D: in de aanvraag genoemd
- L: om andere redenen vermelde literatuur
- &: lid van dezelfde octrooifamilie; corresponderende literatuur



Rijksdienst voor Ondernemend
Nederland

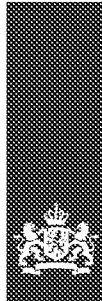
AANHANGSEL

Behorende bij het Rapport betreffende het Onderzoek naar de Stand van de Techniek

Octrooiaanvraag 2024978

Het aanhangsel bevat een opgave van elders gepubliceerde octrooiaanvragen of octrooien (zogenaamde leden van dezelfde octrooifamilie), die overeenkomen met octrooigeschriften genoemd in het rapport. De opgave is samengesteld aan de hand van gegevens uit het computerbestand van het Europees Octrooibureau per 6 april 2021. De juistheid en volledigheid van deze opgave wordt noch door het Europees Octrooibureau, noch door Octrooicentrum Nederland gegarandeerd; de gegevens worden verstrekt voor informatiedoeleinden.

In het rapport genoemd octrooigeschrift		Datum van publicatie	Overeenkomende octrooigeschriften	Datum van publicatie
CN 206660539	U	24-11-2017	(geen)	



SCHRIFTELIJKE OPINIE

Octrooiaanvraag 2024978

Indieningsdatum: 24 februari 2020	Vorrangsdatum: 26 februari 2019
Classificatie van het onderwerp ¹ : A63B69/00	Aanvrager: SHANDONG NORMAL UNIVERSITY QILU UNIVERSITY OF TECHNOLOGY
Deze schriftelijke opinie bevat een toelichting op de volgende onderdelen:	
<input checked="" type="checkbox"/> Onderdeel I	Basis van de schriftelijke opinie
<input checked="" type="checkbox"/> Onderdeel II	Vorrang
<input type="checkbox"/> Onderdeel III	Vaststelling nieuwheid, inventiviteit en industriële toepasbaarheid niet mogelijk
<input type="checkbox"/> Onderdeel IV	De aanvraag heeft betrekking op meer dan één uitvinding
<input checked="" type="checkbox"/> Onderdeel V	Gemotiveerde verklaring ten aanzien van nieuwheid, inventiviteit en industriële toepasbaarheid
<input type="checkbox"/> Onderdeel VI	Andere geciteerde documenten
<input type="checkbox"/> Onderdeel VII	Overige gebreken
<input type="checkbox"/> Onderdeel VIII	Overige opmerkingen
	De bevoegde ambtenaar: ir. A.A.M. Bexkens Octroioentrum Nederland onderdeel van Rijksdienst voor Ondernemend Nederland

¹ Gedefinieerd volgens International Patent Classification (IPC).

Schriftelijke Opinie

Octrooiaanvraag 2024978

Onderdeel I Basis van de schriftelijke opinie

Deze schriftelijke opinie is opgesteld op basis van de op 24 februari 2020 ingediende conclusies.

Onderdeel II Voorrang

Het controleren van de voorrang maakt geen deel uit van het reguliere onderzoek naar de stand van de techniek. Deze schriftelijke opinie is daarom opgesteld zonder dat onderzocht is of de ingeroepen voorrang geldig is, tenzij hieronder anders is aangegeven.

Onderdeel V Gemotiveerde verklaring ten aanzien van nieuwheid, inventiviteit en industriële toepasbaarheid

1. Verklaring

Nieuwheid	Ja: conclusie(s)	1 – 10
	Nee: conclusie(s)	–
Inventiviteit	Ja: conclusie(s)	1 – 10
	Nee: conclusie(s)	–
Industriële toepasbaarheid	Ja: conclusie(s)	1 – 10
	Nee: conclusie(s)	–

2. Literatuur en toelichting

In het rapport betreffende het onderzoek naar de stand van de techniek wordt de volgende publicatie genoemd:

D1: CN 206660539 U (LEI TAO) 24 november 2017

Uit D1 is een trainingstoestel bekend voor kickboxing waarbij verschillende elementen aan een ronddraaiende carrousel beweegbaar zijn opgehangen.

De maatregelen van de conclusies 1 t/m 9 en de werkwijze conclusie 10 zijn niet gevonden in de octrooiliteratuur en worden daarmee nieuw en inventief bevonden.