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(54) **HYBRID AMUSEMENT SLIDE**

(57) The present invention relates to hybrid amusement slide defining a movement path of a user from a first point to a second point, comprising a sliding trail for supporting the user from below and a gliding system including a guide means for suspending the user from above. It can be described as a combination of a classical slide and a Zipline or Flyline.

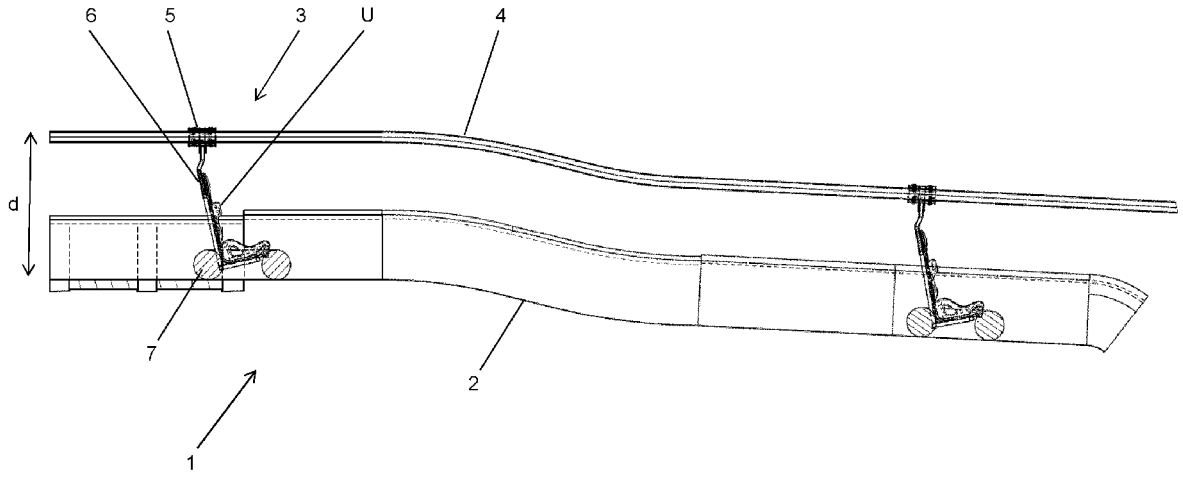

Figure 1

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Description

[0001] The present invention relates to a hybrid amusement slide which combines the classical slide experience with an additional gliding system.

[0002] A traditional slide, be it a dry slide or a water slide, comprises a sliding trail starting at a first point and ending at a second point. The sliding trail can be, for example, a tube or have a U-shaped cross section. Traditionally, the sliding trail starts at the first point and moves strictly downward to the second point, wherein the user slides driven by gravity. The user can have direct contact to the sliding trail, in which case the slide is referred to as a body slide, or can use a vehicle like a raft, a ring, a boat, a mat or a sack. Recent developments also enable uphill sections, for example driven by water jets or electromagnetic forces acting on the vehicle.

[0003] The purpose of the present invention is further extending the ride experience. This is achieved by the hybrid amusement slide defined by claim 1 and particular embodiments defined by the dependent claims.

[0004] The hybrid amusement slide according to the present invention defines a movement path of a user from a first point to a second point, comprising a sliding trail for supporting the user from below and a gliding system including a guide means for suspending the user from above.

[0005] The sliding trail is a guide which maintains the user on the defined movement path while sliding. The sliding trail can have any closed or open cross section, and can for example be a tube or a channel having a U-shaped cross section.

[0006] The gliding system includes a guide means, such as a rail, a tube or a rope, wherein the user is attached to a running gear and the running gear runs along the guide means. The user might for example wear a harness which is attached to the running gear. In another example, the vehicle which accommodates the user is attached to the running gear. In this document, the expression "running gear" denotes any element which is in contact with the guide means of the gliding system can glide or roll along the guide means.

[0007] Attachment means are used as means which attach the user to the running gear. The attachment means can include the harness or the vehicle and any components connecting the running gear and the harness or the vehicle. The attachment means can be understood as a part of the vehicle. In addition, the running gear might be understood as a part of the vehicle.

[0008] Gliding systems are known as standalone attractions referred to as Zip Line or Fly Line. The present invention might therefore also be explained as a combination of a classical slide and a Zip Line.

[0009] The advantage of the hybrid amusement slide according to the present invention is the enhanced experience for the user because the combination of the sliding trail and the gliding system enables movement paths which are not possible with one of the two components alone.

[0010] In one embodiment, each part, or section, of the movement path has at least one of the sliding trail and the gliding system. However, there can be a section having only one of the sliding trail and the gliding system. One design of the hybrid amusement slide involves that the user first slides on the sliding trail while being suspended by the gliding system. The sliding trail then ends and the user is then only held by the gliding system. This design gives the user the impression that he will fall when the sliding trail ends, but he remains secured by the gliding system.

[0011] It is of course possible that, in another embodiment, only some parts, or sections, of the movement path have at least one of the sliding trail and the gliding system. One design of the hybrid amusement slide involves that the user first slides on the sliding trail while being suspended by the gliding system. The sliding trail then ends and the user is then only held by the gliding system. Then the user is released from the gliding system and the gliding system also ends.

[0012] In one embodiment, a vertical distance between the sliding trail and the gliding system varies along the movement path. This vertical distance, in combination with dimensioning of the attachment means, defines whether or not the user, or the vehicle, is in contact with the sliding trail. The vertical distance might be understood as the shortest possible distance between the sliding trail and the guide means for each point along the movement path. The vertical distance is typically given along an axis orthogonal to the surface of the sliding trail and running through the guide means.

[0013] When both the sliding trail and the gliding system are present in a section of the movement path, the vertical distance is typically chosen such that the user, or the vehicle, is in contact with the sliding trail. If the vertical distance increases above a predetermined threshold, the user, or the vehicle, loses contact to the sliding trail and thus only glides using the gliding system.

[0014] In one embodiment, the hybrid amusement slide is configured such that the user can disengage from the gliding system. Once the user is disengaged from the gliding system, he is only supported by the sliding trail from below.

[0015] There are several options for disengaging the user from the gliding system. One option involves disengaging the running gear from the guide means. A second option involves disengaging the harness, the vehicle or the attachment means from the running gear. The third option involves disengaging the harness or the vehicle from the attachment means. The fourth option involves disengaging the user from the harness or the vehicle.

[0016] In one embodiment, the hybrid amusement slide is configured such that the user can engage with the gliding system. In one implementation, the user engages with the vehicle or a harness attached to the gliding system. In another implementation, the user is accommodated by the vehicle and the vehicle engages with the

gliding system, for example with the attachment means or the running gear. In yet another implementation, the user wears a harness and the harness engages with the gliding system, in particular the attachment means or the running gear.

[0017] In one embodiment, the hybrid amusement slide further comprises a drive system configured to drive the user. The drive system can be part of the sliding trail, of the gliding system or a combination thereof. For example, the drive system generates water jets or an (electro)magnetic field acting on the vehicle which accommodates the user. In another example, the drive system acts on the running gear to which the user is attached.

[0018] In one embodiment, the hybrid amusement slide comprises a track switch for diverting the movement path. This means that the movement path can split into two or more sub-paths. Optionally, the two or more sub-paths can rejoin at a later point.

[0019] The track switch can be part of the sliding trail, of the gliding system or of a combination of both. If the track switch is part of the gliding system, this means that the guide means splits into two or more sub-means.

[0020] In one example, the movement path has a section in which the sliding trail splits into a left part and a right part. The gliding system does not comprise a track switch in this section, such that the user remains attached to the guide means and follows either the left or the right part of the sliding trail. It is also possible to disengage the user from the gliding system before the sliding trail splits.

[0021] In another example, the sliding trail does not comprise a track switch, but the gliding system has a track switch, such that there is a section of the movement path having two or more guide means to one of which the user can be attached. In one exemplary implementation, one of the guide means maintains its vertical distance to the sliding trail, while the other guide means increases its vertical distance from the sliding trail, thus raising the user and giving the experience of a jump.

[0022] In yet another example, both the sliding trail and the gliding system include a track switch, resulting in two or more potentially independent movement sub-paths in this section.

[0023] In one implementation, the hybrid amusement slide comprises a control system for controlling the track switch. In one example, the control system receives user input by the user to control the track switch. The user input can be given before the user starts its slide or during the slide.

[0024] In one embodiment, the hybrid amusement slide comprises a vehicle for accommodating the user. As explained above, the vehicle can be connected to the running gear which runs, rolls or glides on or in the guide means, for example via attachment means. As further explained above, the vehicle can for example a boat, a raft, a ring, a mat or a sack.

[0025] In one embodiment, the vehicle comprises the running gear for running along the guide means.

[0026] In one embodiment, the guide means has a hollow core for guiding the running gear and an end of the guide means optionally has a funnel-shaped opening to guide the running gear of the vehicle into the hollow core of the guide means. This allows for engaging the vehicle, and thus the user, with the gliding system.

[0027] Instead of being guided inside the hollow core of the guide means, the running gear can also run on the outside of the guide means. In this case, the guide means can or cannot have a hollow core.

[0028] In one embodiment, the vehicle comprises a contact part configured to be in contact with the sliding trail and being releasable from the rest of the vehicle. The rest of the vehicle might include a seat for accommodating the user. The contact part can for example be a ring. When the contact part is released from the rest of the vehicle, the user remains accommodated by the rest of the vehicle and for example remains suspended by the gliding system through the rest of the vehicle. However, the contact part separates from the rest of the vehicle, thus giving the user the impression that the vehicle is broken or a part of the vehicle got loose. In one design of the hybrid amusement slide, the sliding trail ends, such that the contact part releases from the rest of the vehicle and falls down while the user remains suspended by the gliding system.

[0029] In one embodiment, the hybrid amusement slide comprises a harness for accommodating the user. The harness comprises an arrangement of straps or ropes and at least one locking device, like a carabiner, to ensure that it does not detach from the user unintentionally. An example is a five point harness. The harness can comprise the running gear.

[0030] In one implementation, the harness comprises a hook and the gliding system comprises a rope as the guide means to which the hook of the harness is engageable. In this implementation, the hook glides along the rope to suspend the user from above. The hook is an example of the running gear.

[0031] As an alternative to the hook, the harness comprises a running gear comprising one or more wheels rolling on or in the guide means.

[0032] In one embodiment, there is a part of the movement path at which there is no sliding trail, but a guide means as explained above.

[0033] In one embodiment, the hybrid amusement slide does, along the movement path, first comprise a section with a guide means only and then a section with a sliding trail only as explained above.

[0034] It lies within the scope of the present application to combine one or more of the embodiments or examples as long as technically feasible.

[0035] In the following, the invention is described with reference to the appended figures which give background explanations and represent specific embodiments of the invention. The scope of the invention is however not limited to the specific features disclosed in the context of the figures, wherein

Fig. 1 shows an embodiment of the concept of the hybrid amusement slide from the side;
Fig. 2 shows a sectional view in a direction parallel to the movement path;
Fig. 2a shows a perspective view of a part of the hybrid amusement slide;
Fig. 3 shows a first modification of the hybrid amusement slide;
Fig. 4 shows a second modification of the hybrid amusement slide;
Fig. 5 shows a third modification of the hybrid amusement slide;
Fig. 6 shows a fourth modification of the hybrid amusement slide;
Fig. 7 shows a second embodiment of a hybrid amusement slide;
Fig. 8 shows a first modification of the second embodiment of the hybrid amusement slide;
Fig. 9 shows a second modification of the second embodiment of the hybrid amusement slide;
Fig. 10 shows a third embodiment of a hybrid amusement slide;
Fig. 11a shows a top view of an example of the guide means;
Fig. 11b shows a perspective view of the track switch of the guide means;
Fig. 11c shows a sectional view of the guide means;
Fig. 12a shows a hook of a harness engaged with a rope of the gliding system;
Fig. 12b shows the hook of Fig. 12a disengaged from the rope;
Fig. 13 shows a perspective view of a ring as a vehicle attached to a rope as guide means.

[0036] Figure 1 shows a schematic side view of a hybrid amusement slide 1. The hybrid amusement slide is also simply referred to as slide 1.

[0037] Figure 2 shows a schematic sectional view of the slide 1 of Figure 1.

[0038] The slide 1 comprises a sliding trail 2 for supporting the user U from below. The sliding trail 2 can be a body slide or a slide used with a vehicle, such as a ring, a boat, a mat or a sack. In the present example, the vehicle is a ring 7.

[0039] The sliding trail 2 can be a dry slide or a water slide in which a film of water propagates along the sliding trail 2 to reduce friction. The sliding trail 2 typically utilizes gravity to accelerate the user U while sliding.

[0040] The slide 1 further comprises a gliding system 3 including guide means 4 for suspending the user U from above. In the present example, the guide means 4 is a pipe or tube for guiding a running gear 5. The running gear 5 comprises a plurality of wheels 5a to roll along the guide means 4. In the present example, the gliding system 3 comprises attachment means 6 for attaching the user U to the running gear 5. The attachment means 6 comprises a seat 6a for accommodating the user. Not shown in the Figures is an optional restraint system for securing the user U in the seat 6a.

[0041] The bottom of the seat 6a rests in the ring 7, which is intended to slide along the sliding trail 2. It shall be noted that the ring 4 is optional and the seat 6a could be intended for gliding on the sliding trail 2.

[0042] As shown in Figure 2, the sliding trail 2 has a U-shaped cross section to accommodate the user U, for example via the ring 4. The shape of the sliding trail 2 enables a lateral movement of the user U depending on the forces acting during the slide.

[0043] Figure 2 further indicates a vertical direction v and a horizontal direction h. Those directions are defined relative to the sliding trail 2. The horizontal direction h is parallel to the bottom of the sliding trail 2 and perpendicular to the sliding direction of the user U. The vertical direction is perpendicular to the bottom of the sliding trail 2, and is thus perpendicular to both the horizontal direction h and the sliding direction of the user U.

[0044] A vertical distance d between the sliding trail 2 and the guide means 3 is given in the vertical direction and determines whether the user U is supported only from below via the sliding trail 2, only suspended from above via the gliding system 3 or a combination of both.

[0045] The guide means 4 typically runs parallel to the sliding trail 2. For example, it is located centrally above the sliding trail 2 in the horizontal direction h.

[0046] The hybrid amusement slide 1 defines a movement path of the user U from a first point to a second point. If the hybrid amusement slide 1 is a pure gravity slide, the first point is higher than the second point and the movement path typically continuously descends from the first to the second point.

[0047] Figure 2a shows a perspective view onto a hybrid amusement slide 1. Figure 2a shows the guide means 4 located centrally above the sliding trail 2. In the view shown in Figure 2a, the movement path of the user U makes a righthand curve. This causes centrifugal forces acting on the user U, the ring 7 and the attachment means 6 in the horizontal direction h. Those forces let the user U swing up the left wall of the sliding trail 2. The gliding system 3 enables this movement, for example by enabling a rotation of the running gear 5 about the guide means 4 or a rotation of the attachment means 6 relative to the running gear 5.

[0048] Figure 3 shows a modification of the slide 1 of Figure 1. The part of the movement path of the slide 1 shown in Figure 3 is divided into three sections S1, S2 and S3. In the sections S1 and S3, the user U is supported by the sliding trail 2 from below and is suspended by the gliding system 3 from above. In section S2, there is no sliding trail 2 for supporting the user U from below and the user U is only suspended by the gliding system 3.

[0049] At the transition from section S1 to section S2, the sliding trail 2 descends downwards such that the vertical distance h between the sliding trail 2 and the guide means 4 increases. The user U thus loses contact to the sliding trail 2 and hovers by use of the gliding system 3.

[0050] When the user U approaches section S2, he

experiences a sensation which cannot be created using a traditional slide. This sensation involves the fear of falling when the sliding trail 2 ends.

[0051] In the transition from section S2 to S3, the sliding trail 2 sets in again, with a short part having an ascending slope to smoothly accept the user U on the sliding trail 2. In other words, the vertical distance between the guide means 4 and the sliding trail 2 increases at the transition from section S2 to section S3. In section S3, the user U is again both supported by the sliding trail 2 from below and suspended from above via the gliding system 3.

[0052] In the modification shown in Figure 3, the ring 4 stays attached to the attachment means 6 such that the ring is in contact with the sliding trail 2 both in section S1 and section S3.

[0053] In one implementation, the ring 4 detaches from the attachment means 6 in the transition from section S1 to section S2. This increases the sensation experienced by the user U. In section S3, the attachment means 6 are in contact with the sliding trail 2. It shall be noted that the ring 4 is also optional in section S1. In this case, no ring is present and the seat 6a is in contact with the sliding trail 2 both in section S1 and section S3.

[0054] In one implementation, the slope of the guide means 4 in section S2 is larger than in sections S1 and S3. This gives the user U the impression of dropping in section S2.

[0055] In one implementation, section S1 of the slide 1 can be omitted, which means that the movement path starts with the gliding system 3 only, not having a sliding trail 2 for supporting the user U from below. However, the transition from section S2 to S3 remains.

[0056] Figure 4 shows a modification of the modification shown in Figure 3. Like in the modification of Figure 3, both the sliding trail 2 and the gliding system 3 are present in section S4, only the gliding system 3 is present in section S5 and there is a transition between sections S4 and S5. However, section S6 does not contain a sliding trail 2, but rather a brake run 8 for braking the user U at the end of the slide.

[0057] In one implementation, the ring 7 detaches from the attachment means 6 in section S5 as described above. In another implementation, the ring 7 is not present at all as described above, which means that already in section S4 the attachment means 6 are in contact with the sliding trail 2.

[0058] It is of course possible to combine the modifications of Figure 3 and Figure 4. In this case, sections S1, S2 and S3 are succeeded by sections S4, S5 and S6 of Figure 4. In general, it is possible to combine any sections of the movement path as described herein as long as technically feasible.

[0059] Figure 5 shows another modification of the hybrid amusement slide 1. Sections S7 and S8 correspond to sections S1 and S2 shown in Figure 3. However, in section S8, the ring 7 detaches from the attachment means 6. In section S9, another ring 7 is waiting for the user U accommodated by the attachment means 6, in particular the seat 6a. The attachment means 6 engage with the new ring 7 at the transition from section S8 to section S9 and the slide continues with the new ring 7.

[0060] Not shown in Figure 5 are vehicle transport means which collect the vehicle, in the present example the ring 7, detached from the attachment means 6 in section S8 and transporting the collected ring 7 to the transition from section S8 to section S9.

[0061] Figure 6 shows another modification of the hybrid amusement slide 1. In this modification, the movement path has section S10 and a section S11, wherein section S10 corresponds to section S2 of Figure 2 or section S8 of Figure 5.

[0062] Section S11 corresponds to section S3 of Figure 3 or section S9 of Figure 5, but comprises an uphill section having an ascending slope. This means that the movement path of the hybrid amusement slide 1 moves upwards in the uphill section. The user U can accomplish the uphill section based on remaining kinetic energy or there can be a drive system for delivering additional energy to the user U in the uphill section. The drive system can act on the running gear 5, the attachment means 6, the ring 7 or a combination thereof.

[0063] In one implementation, the ring 7 is not present. This means that, in section S11, the attachment means 6a are in contact with the sliding trail 2.

[0064] Figure 7 shows another embodiment of a hybrid amusement slide 11. The slide 11 comprises a sliding trail 12 similar to the sliding trail 2 of the previous embodiment and a gliding system 13 comprising a rope 14 as the guide means and a harness 16a for accommodating the user U.

[0065] The harness 16a is attached to a running gear 15, which runs along the rope 14, via the attachment means 16.

[0066] The part of the movement path of the slide 11 shown in Figure 7 has three sections S12, S13 and S14. In section S12, only the gliding system 13, but not the sliding trail 12 is present. The user U slides or glides along the rope 14 only. In section S13, both the sliding trail 12 and the gliding system 13 are present. At the beginning of the section S13, the vertical distance between the rope 14 and the sliding trail 12 gradually decreases until the user U is in contact with the sliding trail 12. In section S13 of the movement path, the user U is both supported from below by the sliding trail 12 and suspended from above by the gliding system 13.

[0067] At the end of section S13 of the movement path, the harness 16a detaches from the attachment means 16 such that, in section S14 of the movement path of the slide 11, the user U is only supported from below by the sliding trail 12. Optionally, the rope 14 ends shortly after the harness 16a is detached from the attachment means 16. However, the harness 16a might remain attached to the attachment means 16, and thus to the guide means 14, in section 14, such that the user U is supported from below and suspended from above in this section.

[0068] The running gear 15 can have at least one wheel for rolling along the rope 14, at least one gliding surface for gliding along the rope 14 or a combination thereof.

[0069] Figure 8 shows a modification of the slide 11 of Figure 7 in terms of other sections S15, S16 and S17 of the movement path of the hybrid amusement slide 11. In section S15, both the sliding trail 12 and the gliding system 13 are present, such that the user U is both supported from below and suspended from above. In section S16, only the gliding system 13 is present, but not the sliding trail 12, such that the user is only suspended from above in section S16.

[0070] Section S17 is a brake section in which, like in section S16, only the gliding system 13 is present, but not the sliding trail 12. In section S17, the user U is slowed down in a brake run 18, in particular to a complete stop, for example by braking the running gear 15. At section S17, the attachment means 16 are detached from the running gear 15 or the harness 16a is detached from the attachment means 16, such that the user U can leave the hybrid amusement slide 11.

[0071] Figure 9 shows a second modification of the slide 11 similar to the first modification of Figure 8. In the second modification, sections S15 and S16 are identical to the ones of the slide 11 of Figure 8. However, section 17a is not a brake section like section 17. Instead, the harness 16a is detached from the attachment means 16 in section 17a such that the user U experiences a free fall. The user can for example fall into a water basin or any kind of dry damping material.

[0072] Figure 10 shows a third embodiment of a hybrid amusement slide 21 comprising a sliding trail 22 and a gliding system 23. The gliding system 23 comprises a rope 24, a running gear 25 gliding or rolling along the rope 24, attachment means 26 connected to the running gear 25 and a harness 26a attached to the attachment means 26. The user U is attached to the harness 26a and rests on a ring 27 as an embodiment of the vehicle.

[0073] The movement path of the slide 21 shown in Figure 10 has three sections S18, S19 and S20. In section S18, the gliding system 23 is present, but not the sliding trail 22. In section S19, both the sliding trail 22 and the gliding system 23 are present. In section S20, only the sliding trail S22 is present, but not the gliding system 23.

[0074] In section S18, the user U slides along the rope 24 suspended from above. In section S19, the sliding trail S22 sets in, for example with a decreasing vertical distance d between the sliding trail 22 and the rope 24. In section S19, the ring 27 starts to get in contact with the sliding trail 22.

[0075] At the end of section S19, the ring 27 detaches from the attachment means 26 and the rope 24 ends. The user U then proceeds to section S20 where he slides along the sliding trail 22 on the ring 27.

[0076] Figure 11a shows a top view of a gliding system 33. The guide means of the gliding system 33 is a hollow tube 34 in which a running gear 35 can glide or roll. At its lower end pointing towards the sliding trail, the tube 34 has a slit through which the running gear 35 can be connected to the attachment means.

[0077] At an upstream end, the pipe 34 has a funnel-shaped opening 34a at which the running gear 35 can inter into the hollow core of the tube 34.

[0078] At its downstream end, the pipe 34 has an optional track switch at which the tube diverts into a first tube 34b and a second tube 34c. The track switch comprises diverting means (not shown) which determine into which of the tubes 34b and 34c the running gear 35 moves at the track switch. The diverting means can be driven by a drive system controlled by a control system of the hybrid amusement slide. The setting of the diverting means can be controlled randomly, in a predetermined pattern or set by the user, either before starting the slide or during the slide.

[0079] Figure 11b shows a perspective view onto the gliding system 33. In this view, the funnel-shaped opening 34a of the tube 34 can be identified in more detail.

[0080] Figure 11c shows a sectional view of the tube 34. In the example shown in Figure 11c, the running gear 35 comprises a spherical member gliding inside the hollow core of the tube 34. A part of the inner surface of the tube 34 which comes into contact with the running gear 35 has an anti-friction surface to enable smooth gliding of the running gear 35 inside the tube 34.

[0081] At its lower end, the longitudinal slit can be seen through which the running gear 35 extends towards the outside of the tube 34. The attachment means are connected to the part of the running gear 35 which protrudes through the longitudinal slit to the outside.

[0082] Figure 12a shows another example of a gliding system 43 in a first state. The gliding system 43 comprises a rope 44, a running gear 45 for gliding along the rope 44 and attachment means 46 attached to the running gear 45. The running gear 45 is a hook shown in its closed state in Figure 12a. In this state, the running gear 45 is securely attached to the rope 44.

[0083] Figure 12b shows another state of the gliding system 43 of Figure 12a in which the hook of the running gear 45 is released and opens by means of the weight of the running gear 45, the attachment means 46 or a user being held by the attachment means 46.

[0084] In the open state of the hook of the running gear 45 shown in Figure 12b, the running gear 45 detaches from the rope 44, such that the user is no longer suspended from above by the gliding system 43.

[0085] Figure 13 shows another example of a hybrid amusement slide 51. The slide 51 comprises a sliding trail 52 and a gliding system 53. The gliding system 53 comprises a rope 54, a running gear 55 and attachment means 56.

[0086] The running gear 55 is a loop wound about the rope 54 and connected to the attachment means 56. The attachment means 56 can be a non-bendable or rigid member, such as a pipe or a rod. At the end of the attachment means 56 opposite to the loop 55, a ring 57 for

accommodating the user U is attached to the attachment means 56.

[0087] In general, the gliding system might enable a rocking or swinging movement of the user about an axis perpendicular to the guide means. The rocking or swinging movement is in particular back and forth. This can be achieved by an articulated joint, for example between the running gear and the attachment means. In the examples shown in Figures 11, 12 and 13, the swinging or rocking movement is enabled by the running gear 35, 45, 55 pivoting about or inside the guide means.

Claims

1. A hybrid amusement slide (1, 11, 21) defining a movement path of a user (U) from a first point to a second point, comprising a sliding trail (2, 12, 22) for supporting the user (U) from below and a gliding system (3, 13, 23) including a guide means (4, 14, 24, 34) for suspending the user (U) from above.

2. The hybrid amusement slide (1, 11, 21) of claim 1, wherein each part of the movement path has at least one of the sliding trail (2, 12, 22) and the gliding system (3, 13, 23).

3. The hybrid amusement slide (1, 11, 21) of claim 1 or 2, wherein a vertical distance between the sliding trail (2, 12, 22) and the gliding system (3, 13, 23) varies along the movement path.

4. The hybrid amusement slide (1, 11, 21) of any one of claims 1 to 3, wherein the hybrid amusement slide (1, 11, 21) is configured such that the user (U) can disengage from the gliding system (3, 13, 23).

5. The hybrid amusement slide (1, 11, 21) of any one of claims 1 to 4, wherein the hybrid amusement slide (1, 11, 21) is configured such that the user (U) can engage with the gliding system (3, 13, 23).

6. The hybrid amusement slide (1, 11, 21) of any one of claims 1 to 5, further comprising a drive system configured to drive the user (U).

7. The hybrid amusement slide (1, 1, 21) of any one of claims 1 to 6, further comprising a track switch for diverting the movement path.

8. The hybrid amusement slide (1, 11, 21) of any one of claims 1 to 7, wherein the hybrid amusement slide (1, 11, 21) comprises a vehicle (7, 17) for accommodating the user (U).

9. The hybrid amusement slide (1, 11, 21) of claim 8, wherein the vehicle (7, 27) comprises a running gear (5) for running along the guide means (4, 14, 24, 34).

10. The hybrid amusement slide (1, 11, 21) of claim 9, wherein the guide means (4, 14, 24) has a hollow core for guiding the running gear (5) and an end of the guide means (34) has a funnel-shaped (34a) opening to guide the running gear (35) of the vehicle into the guide means (34).

11. The hybrid amusement slide (1, 11, 21) of any one of claims 8 to 10, wherein the vehicle (7, 17) comprises a contact part configured to be in contact with the sliding trail (2, 12, 22) and being releasable from the rest of the vehicle.

12. The hybrid amusement slide (11) of any one of claims 1 to 7, wherein the hybrid amusement slide (11) comprises a harness (16a) for accommodating the user (U).

13. The hybrid amusement slide (11) of claim 12, wherein the harness (16a) comprises a hook and the gliding system comprises a rope (44) to which the hook of the harness is engageable.

14. The hybrid amusement slide (1, 11, 21) of any one of claims 1 to 13, wherein there is a part of the movement path at which there is no sliding trail (2, 12, 22), but a guide means (4, 14, 24).

15. The hybrid amusement slide (1, 11, 21) of claim 14, wherein, along the movement path, the hybrid amusement slide (1, 11, 21) first comprises a section with a guide means (4, 14, 24) only and then a section with a sliding trail (2, 12, 22) only.

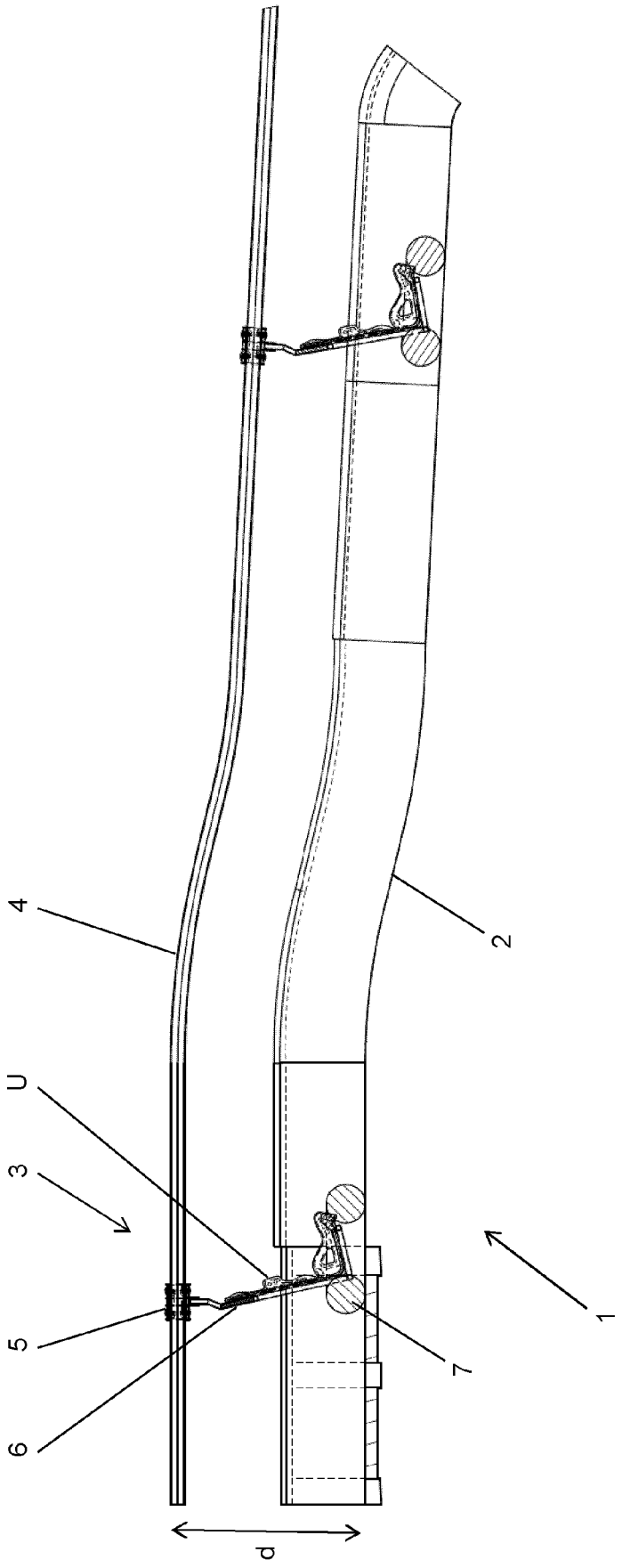

Figure 1

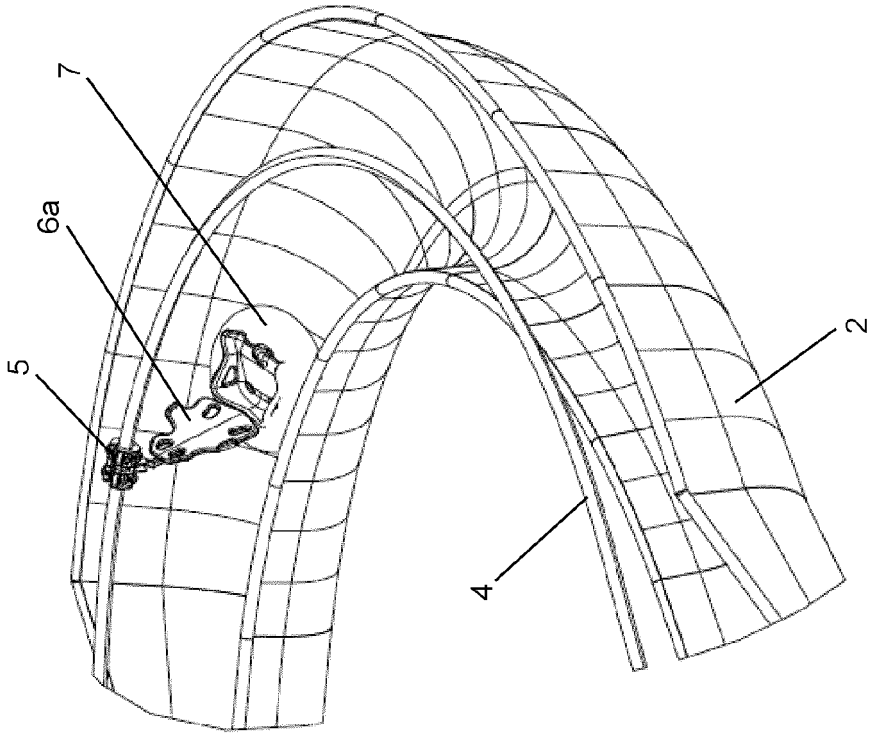

Figure 2a

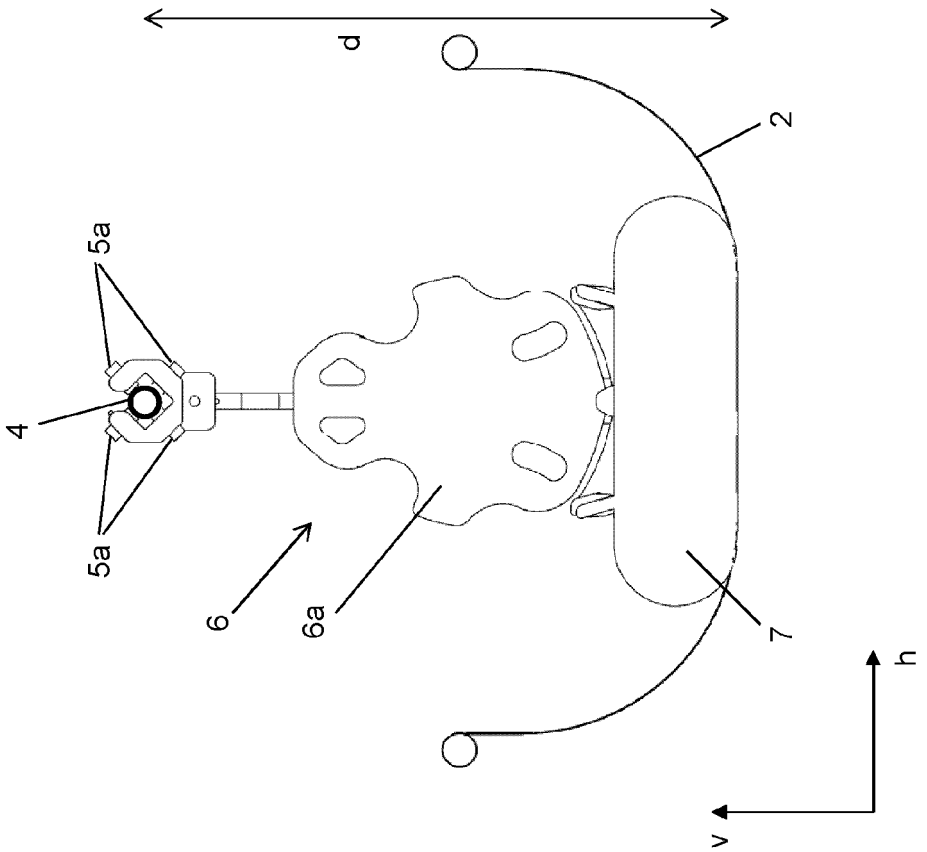

Figure 2

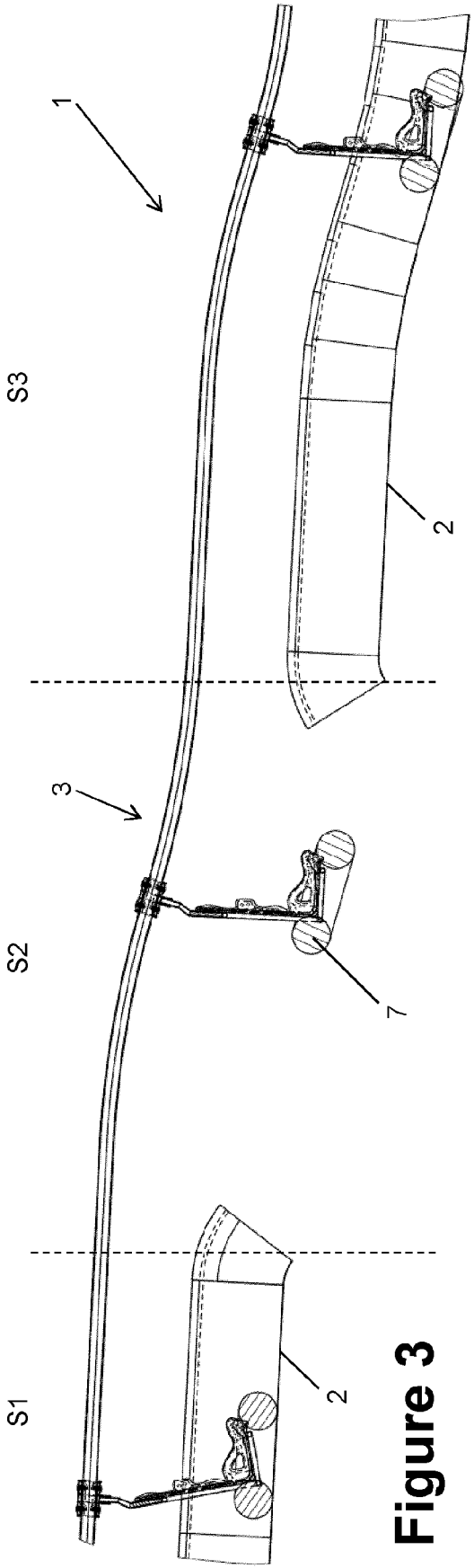

Figure 3

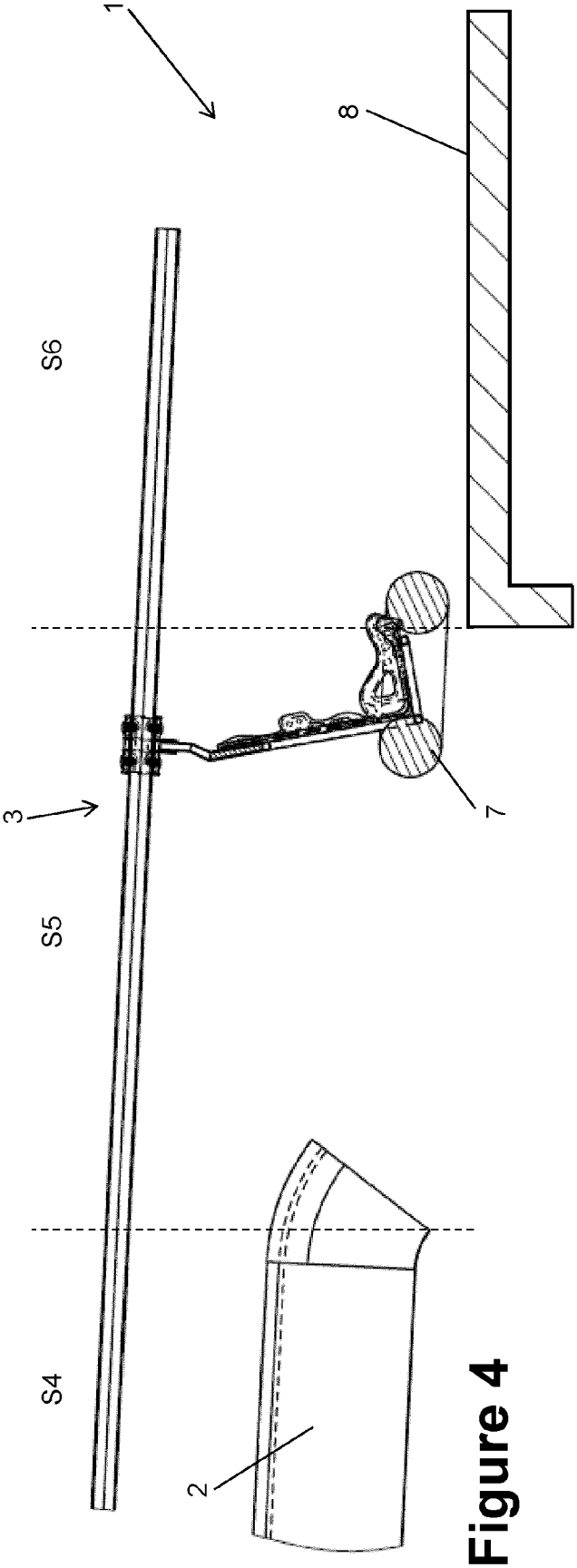

Figure 4

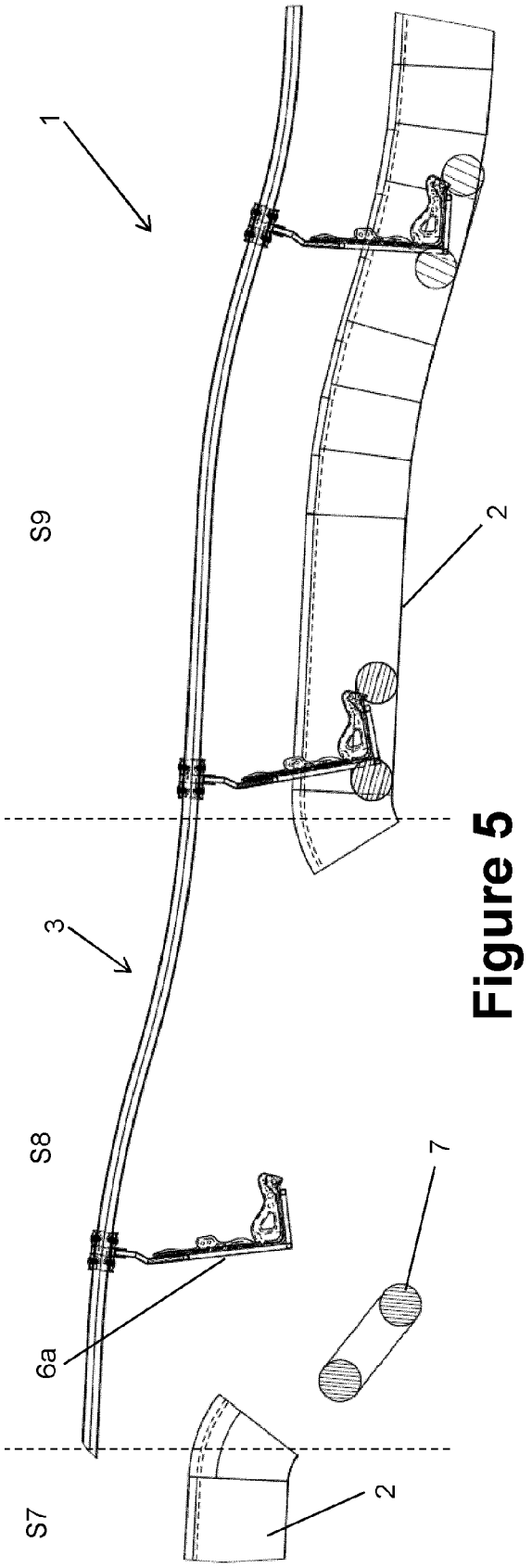

Figure 5

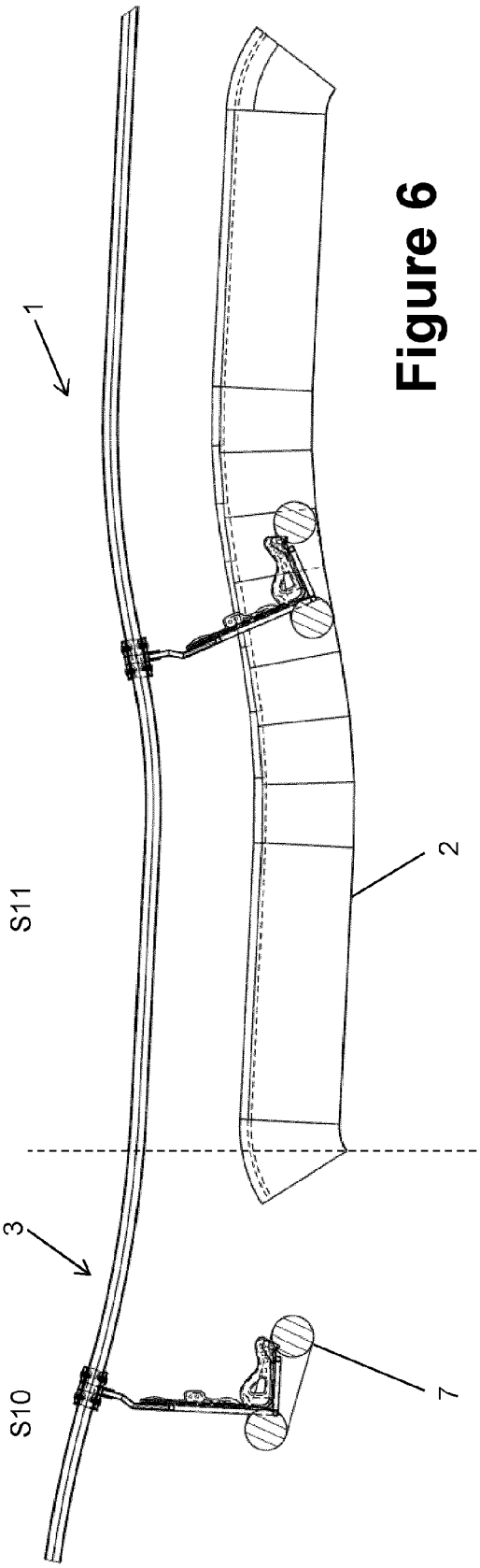

Figure 6

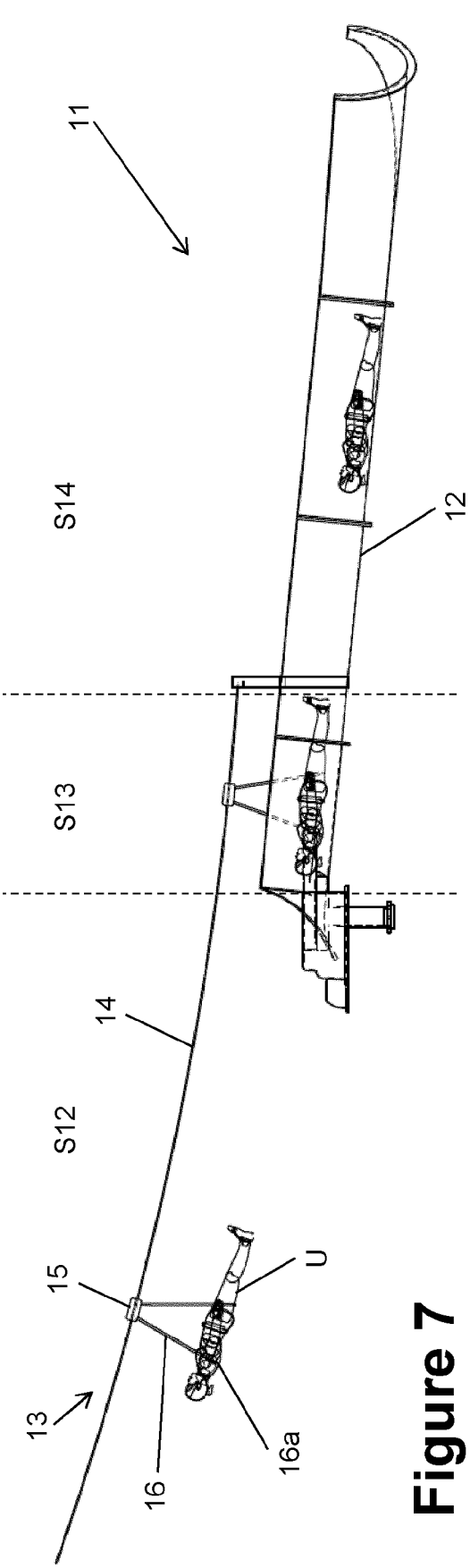

Figure 7

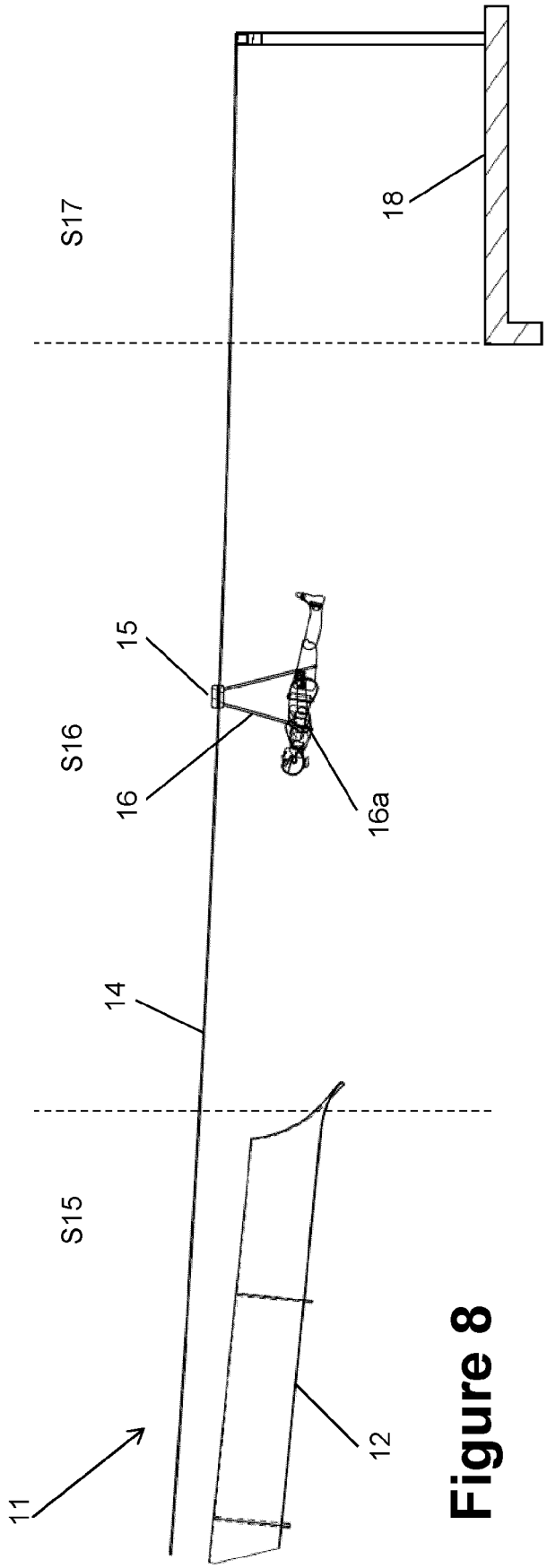

Figure 8

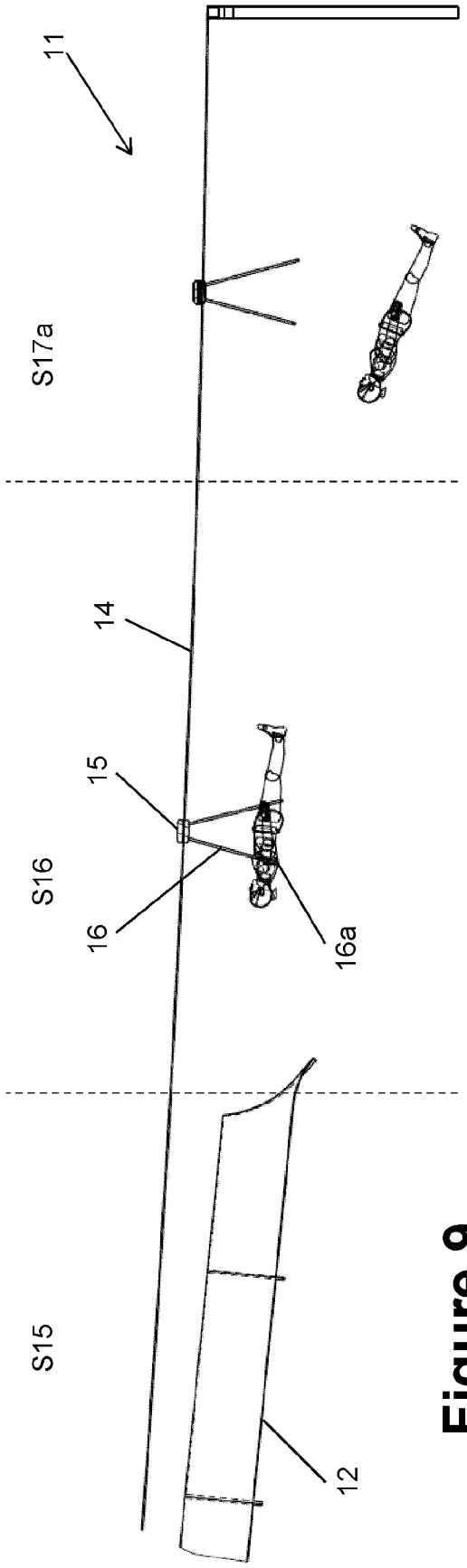

Figure 9

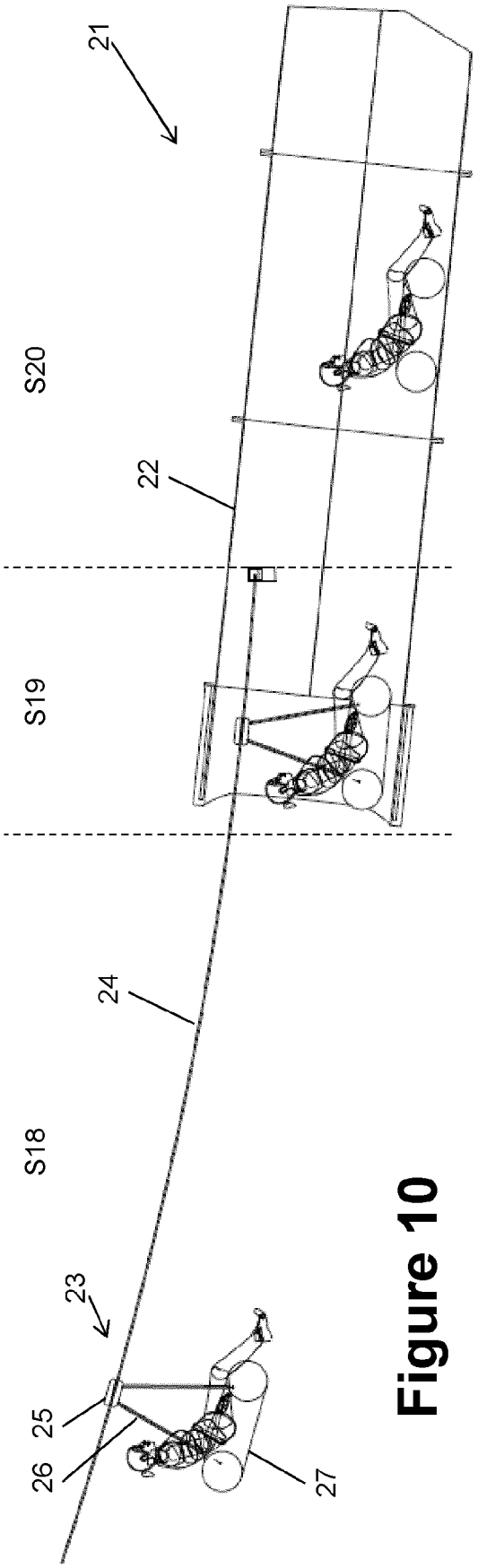

Figure 10

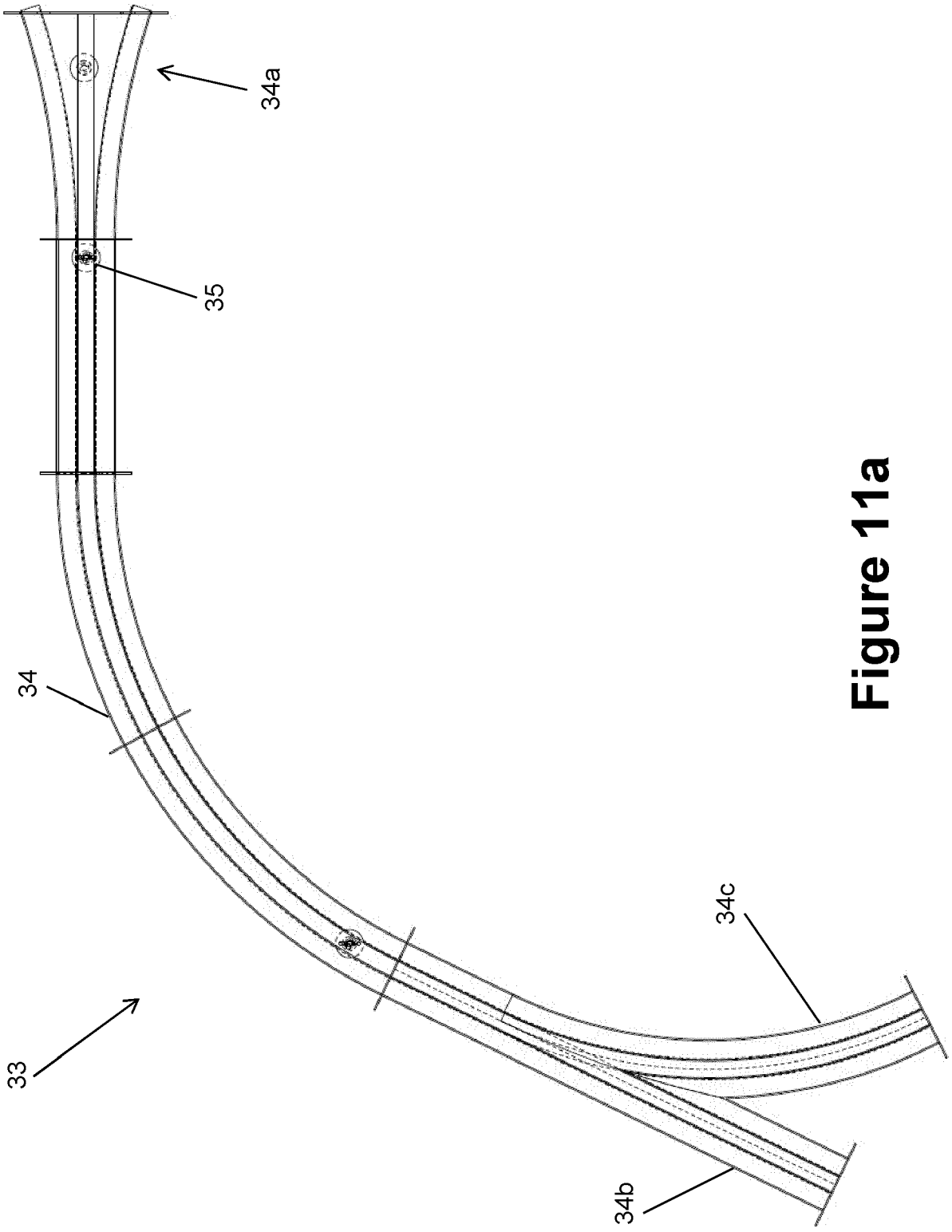

Figure 11a

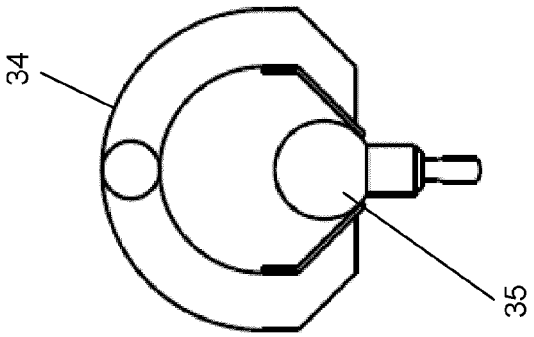

Figure 11c

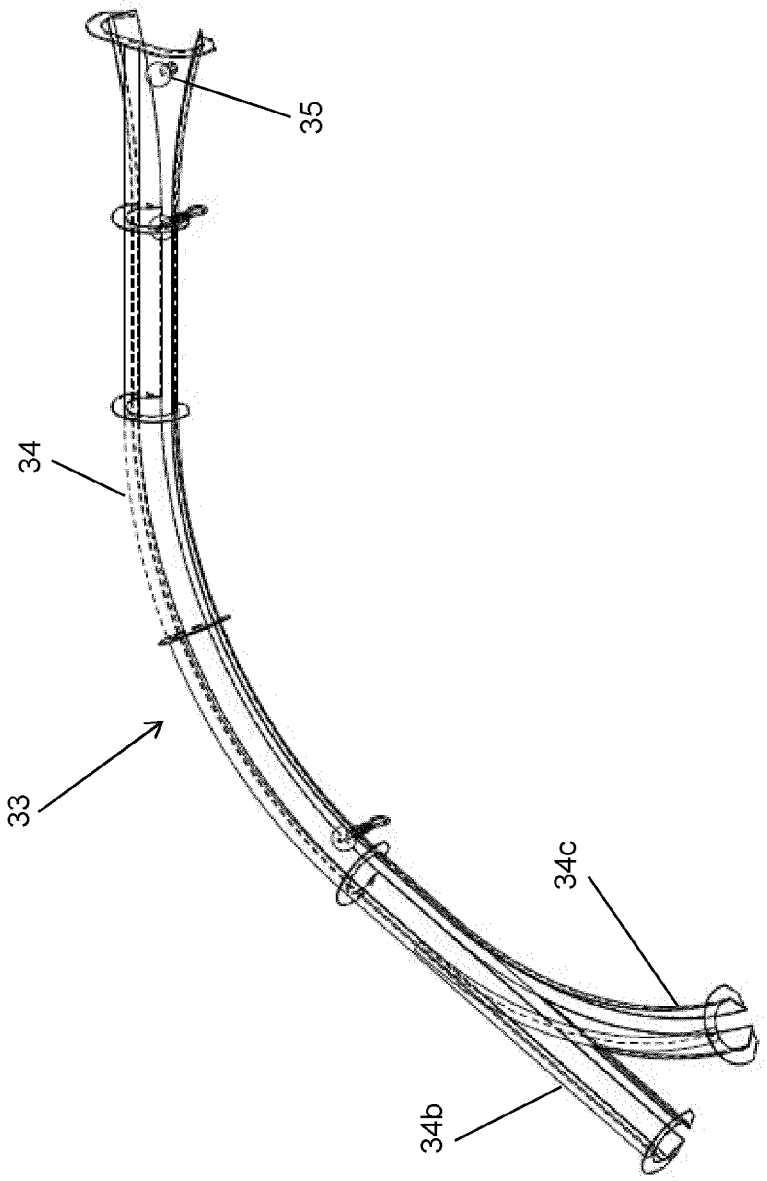

Figure 11b

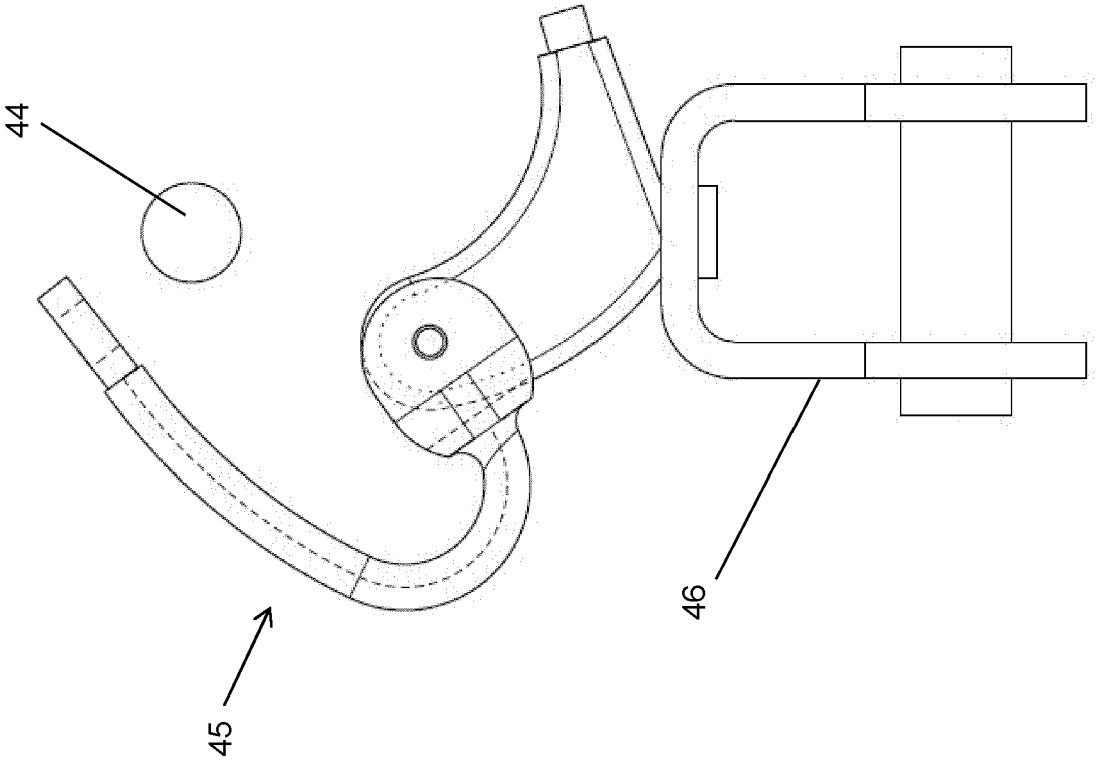

Figure 12b

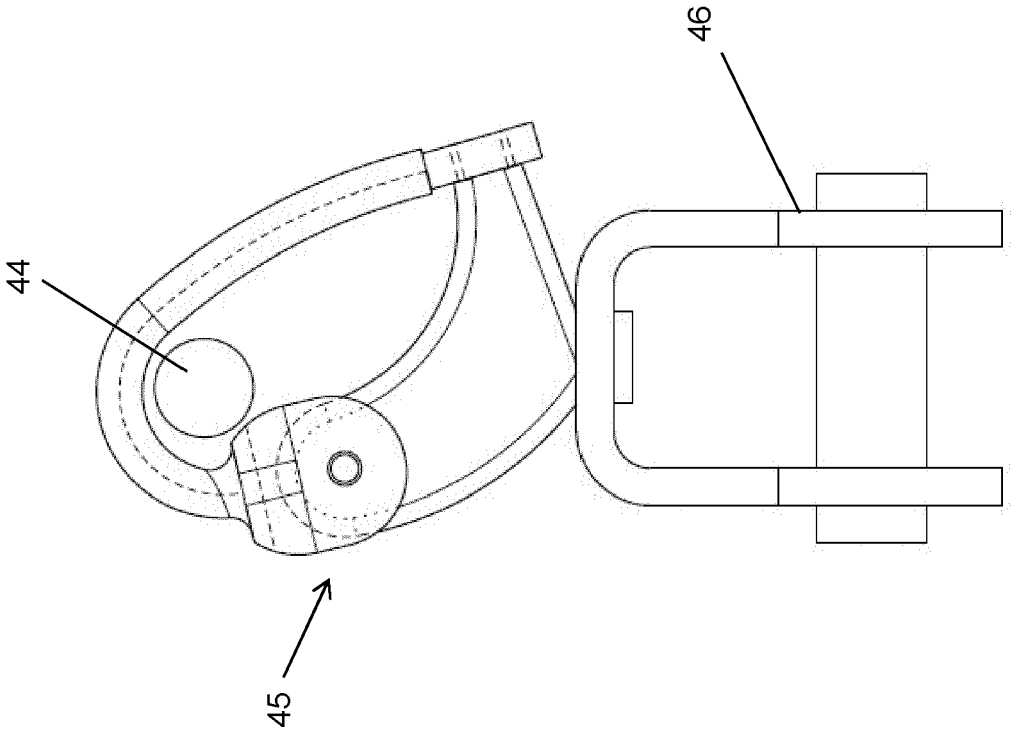

Figure 12a

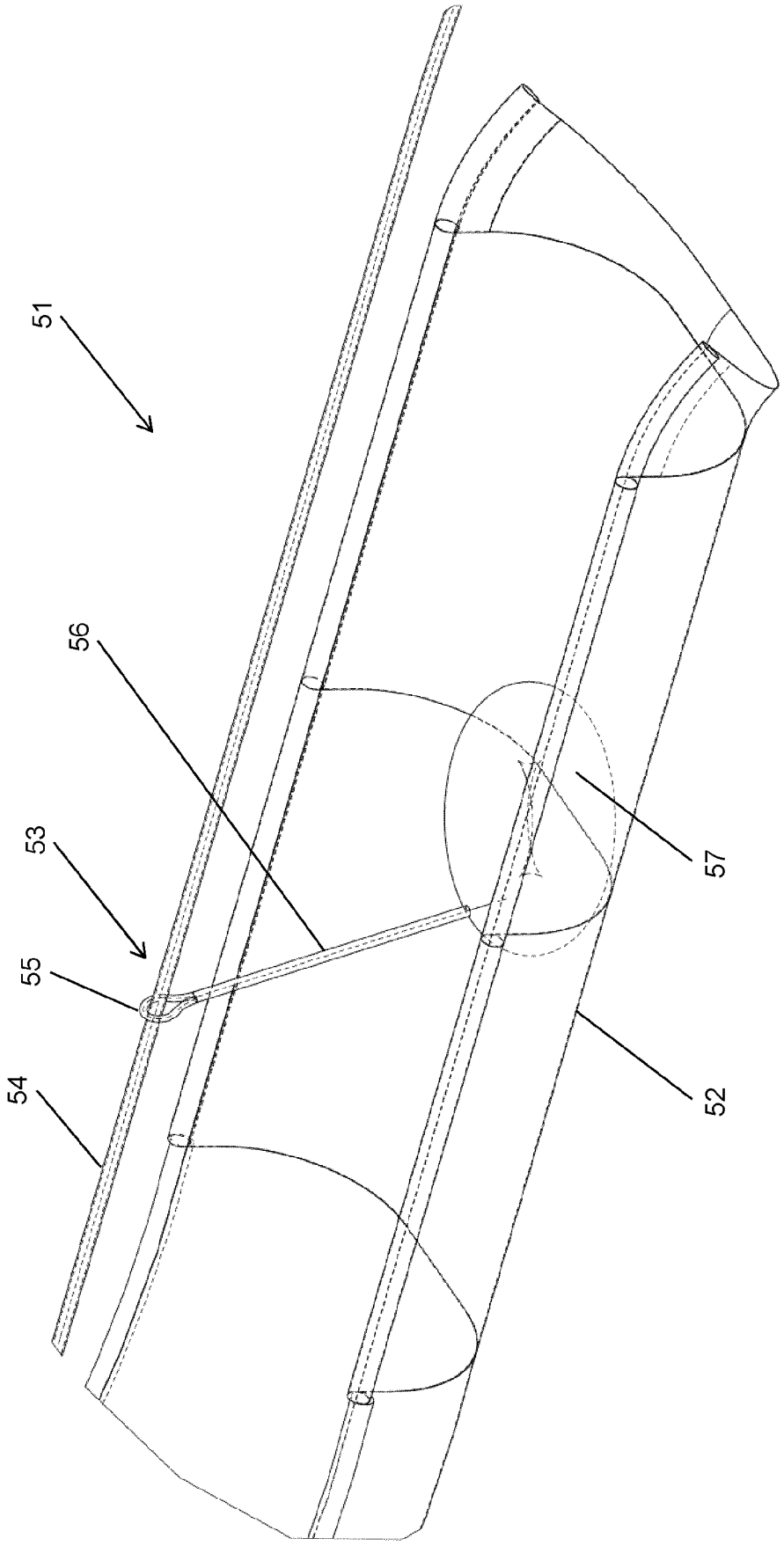

Figure 13

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EUROPEAN SEARCH REPORT

Application Number
EP 22 15 1168

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	24 June 2022	Turmo, Robert

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24-06-2022

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