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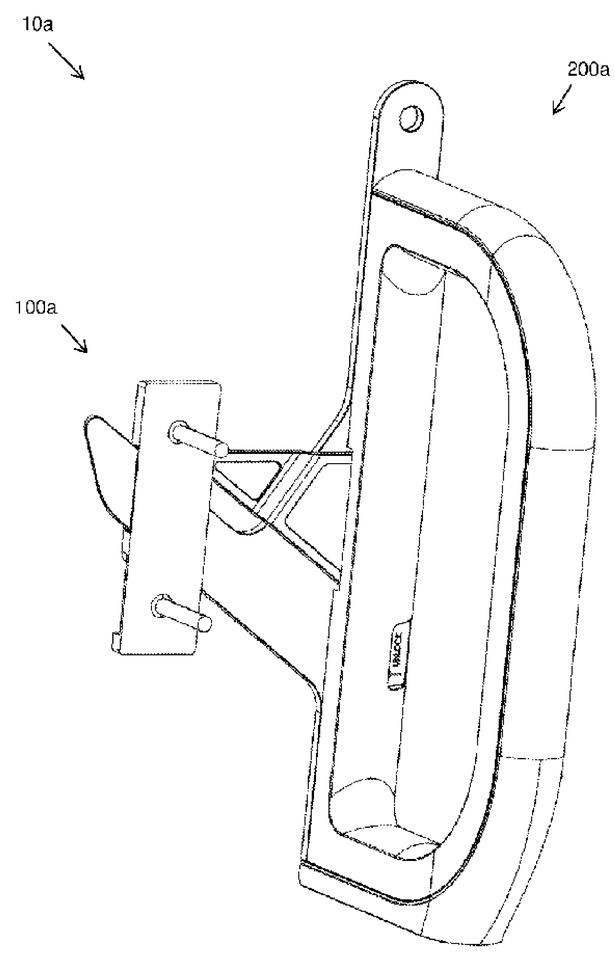

Figure 1

(57) Abstract: An artwork handling system including: a bracket having a body being configured to be attached to an artwork, the body having an aperture extending at least partway therethrough; a handling tool, wherein one or more parts forming the aperture are adapted to: transfer weight of the artwork to the handling tool that is inserted into the aperture from a side of the artwork, the side extending transversely to a front surface displaying an artwork area; and assist in holding the artwork with the handling tool.

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AN ARTWORK HANDLING SYSTEM

RELATED APPLICATION

[0001] This application is based on and claims priority to Australian provisional patent application No 2020903555 filed on 1 October 2020, the content of which is incorporated by reference in its entirety.

FIELD OF THE INVENTION

[0002] The invention relates to an artwork handling system. In particular, the invention relates, but is not limited, to a handling system for installing, displaying and shipping artworks. The invention also relates to a method for handling artworks.

BACKGROUND TO THE INVENTION

[0003] Reference to background art herein is not to be construed as an admission that such art constitutes common general knowledge in Australia or elsewhere.

[0004] Global sales of art across the world reached 67 billion US dollars in 2018. As part of protecting and shipping artworks, the commercial art market spends in excess of five billion US dollars per year. However, despite the significant value of some artworks, and the money spent protecting and shipping artworks, fine art logistics is still an antiquated industry. Artworks are still gripped by hand during packing, shipping and installation. This exposes the artworks to a high level of risk, as further outlined below. This level of risk is compounded by: i) the fragility of artworks which are often weaken by age; ii) the cultural and monetary value of some artworks/artefacts; and iii) most artworks being irreplaceable if damaged or destroyed.

[0005] Art handlers are normally directed by the custodians of the artwork to wear gloves during handling. Some artworks require powder-free nitrile

(latex) gloves for safe handling, whilst others may require cotton gloves, a combination of both (ie, nitrile underneath cotton) or other microfiber gloves. Handlers may confuse which glove to wear and, for example, natural oils excreted by hands may permeate cotton gloves, transferring indelible marks (called 'accretions' by conservators) to the artwork surface. In other cases, handlers might use entirely unsafe gloves for handling artworks (eg, rubber coated work gloves etc.) or no gloves at all.

[0006] Another potential risk art handlers pose is wearing gloves that are not clean. Gloves may pick up foreign particles during use that may damage an artwork. For example, during installation or handling of an artwork, art handlers may wipe their brow or hair with their gloved hands, thereby picking up oils and particles which will be transferred to the artwork as they re-apply their grip.

[0007] The nature of particular artworks also makes installation difficult and prone to risk. For instance, unframed artworks (eg, paintings on canvas) typically require the sides of the artwork to be held as the reverse face is substantially in direct contact with the wall during installation and displaying. The sides of the artwork are considered part of the artwork, and often painted, meaning direct pressure is applied to the artwork which can easily mark or deform the artwork. Whilst handling the sides of the artwork, pressure may also be applied to the face of the art work, which is particularly sensitive to damage. It is also especially common to grip the base of an artwork during installation which, in the same manner to handling the side of an artwork, may result in pressing a palm, thumb or finger against the face of the artwork during movement and rotation of the artwork. Furthermore, gripping the rear face of an artwork is a leading cause of damage as, whilst gripping the support frame, fingers and knuckles may press against (for example) the canvas – causing cracks in the painted surface. Art handlers gripping the base of the artwork may also lean their torso and head toward the face of the artwork, exposing it to extreme danger of being pressed or knocked.

[0008] Separately, art handlers are not required to have accreditation (in the same way a conservator or preparator is). It is an unregulated industry, and the focus and skill required to safely handle these objects is not currently assessable, nor is their work always carefully supervised. This again compounds the issues surrounding the safe handling and installation of artworks.

[0009] Another problem with present handling practices is that during packing, installation or movement of an artwork, the artwork is often rested on foam blocks. Museums, galleries, art shippers and artist's studios may use unsafe materials to construct the blocks and they also store the blocks in uncontrolled environments, where they pick up dirt and other particles which are then transferred to the surface of the artwork. Art handlers also often 'kick' the blocks into place underneath artworks, transferring particles from their footwear onto the blocks and, in turn, onto the artwork.

[0010] Major museums will sometimes have a 'painting cart' (usually a steel, A-frame platform on wheels) where paintings may be placed during movement and installation. The surface of the base of the cart, where paintings rest, is often upholstered with standard (non archival) carpet. The carts may also pick up dirt and other particles which are then transferred to the artwork.

[0011] Shipping or transporting artworks also poses further challenges. For example, unframed artworks are usually shipped in wooden travel frames, typically housed within an additional (outer) wooden crate, each custom built to fit the dimensions of the artwork. When the artwork is a painting (eg, on canvas, stretched around a wooden frame), the reverse of the frame is often fitted with several travel attachments (for example Oz Clips®) such that they extend from the artwork to the travel frame, ensuring that the artwork is secured within the frame and that there is no contact with the face or sides of the artwork.

[0012] However, products currently available for handling and transporting artworks face certain shortfalls. For example, some designs rely on the limited strength capacity of a small 'pin' which connects the two brass components together. This is susceptible to failure even while securing moderate artwork loads (especially during 'topple events' whereby the crate falls 'face first' and the travel attachment is exposed to peak forces). Other 'perforated rail' products rely on a 'securing screw' to attach to the artwork mounted module, which features a threaded aperture to receive this fastener. This reduces the available thickness of the rail and artwork mounted module, thereby reducing its capacity for load bearing. This also increases the overall thickness of the attachment system, whereby it becomes a conspicuous attachment which distracts the viewer and further prevents the artwork from being installed flush to the wall. Similarly, whilst some clips can be rotated to hide behind the painting once installed, meaning theoretically that they do not need to be removed for the work to be installed, they are made from thick gauge brass and therefore leave a 1/4” gap between the artwork and the wall, and are also clearly visible from the sides. As this creates an unappealing visual aspect in displaying artworks, artists or curators will often ensure that clips are removed before installation and then refitted when the work is removed and packed. Repeated removal and reattachment of clips can cause screw points to wear, and may cause clips to fail during transit.

[0013] If the unframed 2D artwork does not allow for such travel attachments to be installed, they are secured within the travel frame or crate by foam blocks, cut to fit the exact dimensions of the corners and sides of the artwork and, therefore, hold it in place within the travel frame during transit. As with foam blocks for resting the artwork, these are not always constructed out of the correct materials. The foam blocks also place pressure on the artworks and, as the travel frames are often exposed to impact during shipping, the foam blocks can create permanent marks along the artwork. These marks may also occur when the works are lifted from the travel frame, and inserted back into it, over an artworks' journey.

[0014] With the above in mind, the present inventor has developed an improved artwork handling system.

SUMMARY OF INVENTION

[0015] In one form, although not necessarily the only or broadest form, the invention resides in a bracket for an artwork handling system, the bracket including:

a body being configured to be attached to an artwork, the body having an aperture extending at least partway therethrough,

wherein one or more parts forming the aperture are adapted to:

transfer weight of the artwork to a handling tool that is inserted into the aperture from a side of the artwork, the side extending transversely to a front surface displaying an artwork area; and

assist in holding the artwork with the handling tool.

[0016] In an embodiment, the aperture extends diagonally across the body.

[0017] In an embodiment, the aperture is configured to releasably engage with the handling tool in a manner that allows holding the artwork without the assistance of a separate structure.

[0018] In an embodiment, the aperture is configured to suitably retain the handling tool, whilst holding the artwork, without the assistance of one or more fasteners.

[0019] In an embodiment, the aperture extends substantially across a lateral portion of the body.

[0020] In an embodiment, the aperture extends partway through a thickness of the body.

[0021] In an embodiment, the aperture is in the form of a channel.

[0022] In an embodiment, the aperture includes an open portion and a substantially closed portion that opposes the open portion.

[0023] In an embodiment, the closed portion is configured to be positioned adjacent the artwork whilst the open portion is positioned further away from the artwork.

[0024] In an embodiment, the aperture includes an opening to receive the handling tool that extends transversely to the open portion and/or the substantially closed portion.

[0025] In an embodiment, the aperture has an axis therethrough that defines a sliding direction for the handling tool.

[0026] In an embodiment, the one or more parts forming the aperture are substantially flat wall(s) in a direction defined by the axis.

[0027] In an embodiment, the handling tool is configured to slide through the aperture in a substantially linear manner.

[0028] In an embodiment, the aperture is configured to receive the handling tool whilst the artwork is adjacent a wall.

[0029] In an embodiment, the artwork includes a rear surface that extends transversely to the side.

[0030] In an embodiment, the rear surface includes part of an exposed artwork frame.

[0031] In an embodiment, the artwork includes four sides that extend transversely to the front surface and the rear surface.

[0032] In an embodiment, the thickness of the body is less than approximately 4 mm.

[0033] In an embodiment, the thickness of the body is less than approximately 6 mm.

[0034] In an embodiment, the colour of the body has a matt finish.

[0035] In an embodiment, the body includes a safety device to assist with retaining the handling tool.

[0036] In an embodiment, the safety device is in the form of a safety catch.

[0037] In an embodiment, the safety device includes two safety devices located either side of the aperture.

[0038] In an embodiment, the safety device forms a hole that is in communication with the aperture.

[0039] In an embodiment, the body includes a holding part. In an embodiment, the holding part is configured to be connect to a wall.

[0040] In an embodiment, the holding part is in the form of a shackle.

[0041] In an embodiment, the body includes a transport attachment.

[0042] In an embodiment, the transport attachment is configured to be connected to a transporting fixture.

[0043] In an embodiment, the transporting fixture includes a hole to receive part of the transport attachment.

[0044] In an embodiment, the body is integrally formed with an artwork frame.

[0045] In an embodiment, the aperture is located in a moving part.

[0046] In an embodiment, the moving part is configured to move from a first position to a second position in order to allow the handling tool to be received by the aperture.

[0047] In an embodiment, the moving part is biased towards the first position.

[0048] In another form the invention resides in a handling tool for an artwork handling system, the handling tool including:

an engaging portion that is configured to engage with one or more parts forming an aperture of a bracket that is connected to an artwork, the one or more parts being adapted to transfer weight of the artwork to the engaging portion; and

a holding portion connected to the engaging portion, the holding portion assisting in holding the artwork,

wherein the engaging portion is configured to be inserted into the aperture from a side of the artwork, the side extending transversely to a front surface displaying an artwork area.

[0049] In an embodiment, the holding portion is configured to extend transversely away from the engaging portion.

[0050] In an embodiment, the holding portion is releasably connected to the engaging portion.

[0051] In an embodiment, the holding portion includes a positioning portion that engages with a positioning part of the engaging portion to set its orientation.

[0052] In an embodiment, the positioning portion and the positioning part include one or more splines.

[0053] In an embodiment, the holding portion is configured to be rotated to predetermined angle(s) relative to the engaging portion.

[0054] In an embodiment, the holding portion includes a positioning lock that assists with locking the holding portion to the engaging portion.

[0055] In an embodiment, the engaging portion includes a member defining an engaging axis and the holding portion is located substantially to one side of the engaging axis.

[0056] In an embodiment, the position of the holding portion assists in avoiding engagement of a user's hand with a wall when installing the artwork.

[0057] In an embodiment, the member has a forward face and a rear face and the holding portion provides a gripping portion to one side of the forward face.

[0058] In an embodiment, the holding portion extends substantially perpendicular to the engaging portion.

[0059] In an embodiment, the engaging axis is configured to substantially coincide with a central axis of the aperture.

[0060] In an embodiment, the holding portion forms a handle portion that allows a user's hand to extend through an opening to grip part of the holding portion.

[0061] In an embodiment, the holding portion includes a flat base to assist in resting the holding portion on a ground surface.

[0062] In an embodiment, the holding portion forms a block for holding the artwork above a floor.

[0063] In an embodiment, the handling tool includes a safety mechanism that releasably engages the bracket to avoid inadvertent release of the engaging portion from the aperture.

[0064] In an embodiment, the safety mechanism includes a safety release to release a portion of the safety mechanism from a safety catch associated with the bracket.

[0065] In an embodiment, the safety mechanism is biased by a spring.

[0066] In an embodiment, the safety mechanism rotates about a pivot point.

[0067] In an embodiment, the safety mechanism includes a safety latch to one side of the pivot point and the safety release to another side of the pivot point.

[0068] In an embodiment, the safety mechanism forms part of the member.

[0069] In an embodiment, the member is configured to rotate from a first position to a second position.

[0070] In an embodiment, the member in the first position is configured for engagement with the aperture.

[0071] In an embodiment, the member rotating to the second position allows the member to further align with the holding portion.

[0072] In another form, the invention resides in an artwork handling system including:

a bracket having a body being configured to be attached to an artwork, the body having an aperture extending at least partway therethrough;

a handling tool,

wherein one or more parts forming the aperture are adapted to:

transfer weight of the artwork to the handling tool that is inserted into the aperture from a side of the artwork, the side extending transversely to a front surface displaying an artwork area; and

assist in holding the artwork with the handling tool.

[0073] In embodiment, the bracket is herein as described.

[0074] In an embodiment, the handling tool is herein as described.

[0075] In an embodiment, the artwork handling system includes a mounting bracket to assist with mounting the bracket onto a surface.

[0076] In an embodiment, the mounting bracket includes an elongate hole to assist with adjusting the mounting bracket on the surface.

[0077] In an embodiment, the artwork handling system includes a transporting fixture for assisting in transporting the artwork.

[0078] In an embodiment, the transporting fixture moves from a first position to a second position in order to lock the bracket in place.

[0079] In an embodiment, the transporting fixture includes a member that is configures to receive part of the handling tool in order to connected it to a transport container.

[0080] In another form the invention resides in a method for handling an artwork, the method including the steps of:

moving a handling tool into an aperture of a bracket from a side of an artwork, the bracket being connect to the artwork and the side extending transversely to a front surface displaying an artwork area;

transferring weight of the artwork to the handling tool through one or more parts forming the aperture; and

holding the artwork with the handling tool.

[0081] In an embodiment, the step of moving the handling tool into the aperture includes sliding part of the handling tool diagonally across the bracket.

[0082] In an embodiment, the method further includes engaging a safety mechanism of the handling tool with the bracket in order to avoid inadvertent release of the handling tool from the aperture.

[0083] In an embodiment, the step of transferring weight of the artwork to the handling tool through the one or more parts forming the aperture includes holding a portion of the handling tool that extends transversely to an engaging portion that is engaging with the aperture.

[0084] In an embodiment, the step of holding the portion of the handling tool that extends transversely to the engaging portion includes moving a user's hand through an opening to grip part of the holding portion.

[0085] In an embodiment, the step of holding the artwork with the handling tool includes abutting the handling tool against a wall whilst installing the artwork.

[0086] In an embodiment, the method further includes hanging the artwork from the bracket.

[0087] In an embodiment, the step of holding the artwork with the handling tool includes positioning the artwork into a transport container.

[0088] In an embodiment, the method further includes securing the artwork in the transport container with the assistance of the bracket.

[0089] In an embodiment, the method further includes rotating part of the handling tool from a first position to a second position to allow the handling tool to be removed from the transport container.

[0090] In a further embodiment, the method further includes fixing the handling tool to the transport container for transportation.

[0091] Further features and advantages of the present invention will become apparent from the following detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

[0092] By way of example only, preferred embodiments of the invention will be described more fully hereinafter with reference to the accompanying figures, wherein:

Figure 1 illustrates a perspective view of an artwork handling system, according to an embodiment of the invention;

Figure 2 illustrates a front view of a bracket of the artwork handling system shown in Figure 1;

Figure 3 illustrates a rear view of the bracket shown in Figure 2;

Figure 4 illustrates a side view of the bracket shown in Figure 2;

Figure 5 illustrates a rear view of the artwork handling system shown in Figure 1;

Figure 6 illustrates a top view of the artwork handling system shown in Figure 1;

Figure 7 illustrates a perspective view of a handling tool of the artwork handling system shown in Figure 1;

Figure 8 illustrates a front view of a further artwork handling system, according to an embodiment of the invention;

Figure 9 illustrates a rear view of the further artwork handling system shown in Figure 8;

Figure 10 illustrates a front view of another artwork handling system, according to an embodiment of the invention;

Figure 11 illustrates a rear view of the artwork handling system shown in Figure 10;

Figure 12 illustrates a rear view of a handling tool in a first configuration, according to an embodiment of the invention;

Figure 13 illustrates a rear view of the handling tool in Figure 12 in a second configuration;

Figure 14 illustrates a side sectional view of a bracket in a first configuration, according to an embodiment of the invention;

Figure 15 illustrates a side sectional view of the bracket in Figure 14 in a second configuration that is engaged with a handling tool;

Figure 16 illustrates a rear view of a further bracket, according to an embodiment of the invention;

Figure 17 illustrates a front view of the further bracket shown in Figure 16;

Figure 18 illustrates a rear view of a separate handling tool engaging the further bracket in Figure 16;

Figure 19 illustrates a side view of the separate handling tool engaging the further bracket in Figure 16;

Figure 20 illustrates a further handling tool in the form of a footing device, according to an embodiment of the invention;

Figure 21 illustrates a rear view of a fixed bracket, according to an embodiment of the invention;

Figure 22 illustrates a front view of the fixed bracket shown in Figure 21;

Figure 23 illustrates a rear view of another fixed bracket, according to an embodiment of the invention;

Figure 24 illustrates a front view of the other fixed bracket shown in Figure 23;

Figure 25 illustrates a rear view of a keyhole bracket, according to an embodiment of the invention;

Figure 26 illustrates a front view the keyhole bracket shown in Figure 25;

Figure 27 illustrates a rear view of a hanging bracket, according to an embodiment of the invention;

Figure 28 illustrates a front view of the hanging bracket shown in Figure 27;

Figure 29 illustrates a front view of an adjustable mount, according to embodiment of the invention;

Figure 30 illustrates a side view of the adjustable mount shown in Figure 29;

Figure 31 illustrates a rear view of a mounting bracket, according to an embodiment of the invention;

Figure 32 illustrates a side view of the mounting bracket shown in Figure 31;

Figure 33 illustrates the mounting bracket shown in Figure 31 aligning with a transporting fixture, according to an embodiment of the invention;

Figure 34 illustrates the mounting bracket, shown in Figure 31, in a locked position with the transporting fixture;

Figure 35 illustrates the mounting bracket shown in Figure 31 aligning with a linear transporting fixture, according to an embodiment of the invention;

Figure 36 illustrates the mounting bracket, shown in Figure 31, in a locked position with the linear transporting fixture;

Figures 37 illustrates a further transporting fixture, according to an embodiment of the invention;

Figures 38 to 41 illustrate use of a retaining fastener, according to an embodiment of the invention;

Figure 42 illustrates a perspective view of a further artwork handling system, according to an embodiment of the invention;

Figure 43 illustrates a sectional view and a separate side view of a bracket shown in Figure 42;

Figure 44 illustrates a front view of a holding portion shown in Figure 42;

Figure 45 illustrates a top sectional view of an engaging portion shown in Figure 42;

Figure 46 illustrates a side sectional view of the engaging portion shown in Figure 42;

Figure 47 illustrates a perspective view of an additional artwork handling system, according to an embodiment of the invention;

Figure 48 illustrates a sectional view and a separate top view of a bracket shown in Figure 47;

Figure 49 illustrates a front view of a holding portion shown in Figure 47;

Figure 50 illustrates a top sectional view of an engaging portion shown in Figure 47;

Figure 51 illustrates a side sectional view of the engaging portion shown in Figure 47;

Figures 52 to 54 illustrate a sectional view of a safety mechanism, during use, according to a further embodiment of the invention;

Figures 55 to 58 illustrate a sectional view of an engaging portion, during use, according to a further embodiment of the invention; and

Figure 59 illustrates an artwork frame using an artwork handling system, according to an embodiment of the invention.

DETAILED DESCRIPTION

[0093] Figure 1 illustrates an artwork handling system 10a including a bracket 100a and a handling tool 200a, according to embodiment of the invention. In this regard, the use of a reference numeral followed by a lower case letter typically indicates alternative embodiments of a general element

identified by the reference numeral in this specification. Thus for example bracket 100a is similar to but not identical to bracket 100b. Further, references to an element identified only by the numeral refer to all embodiments of that element. Thus for example a reference to bracket 100 is intended to include both the bracket 100a and the bracket 100b.

[0094] The bracket 100a is shown further in Figures 2 to 4. The bracket includes a body 110a. The body 110a is substantially rectangular. On this basis, the body 110a has a lateral direction and a longitudinal direction. The thickness of the body 110a in this embodiment is approximately 4mm. This thickness allows the body 110a to be substantially inconspicuous whilst an artwork is being displayed. The body 110a is a matt colour, preferably black. The body 110a is also made from titanium but, as will be appreciated by a person skilled in the art, other materials such as steel may be used.

[0095] The body 110a includes an aperture 120a. The aperture 120a includes a central axis 121a. The aperture 120a extends from one longitudinal side of the body 110a to another longitudinal side. The aperture 120a extends diagonally across the body 110a. In this regard, the axis 121a extends transversely to the longitudinal and lateral sides of the body 110a. The aperture 120a forms a channel across the body 110a and extends partway through the thickness of the body 110a. Accordingly, the aperture 120a includes an open end 122a and a close end 123a. The closed portion 123a forms part of a wall that is configured to connect/abut with an artwork. The aperture 120a includes openings 124a at either end, adjacent the longitudinal sides of the body 110a.

[0096] Further parts forming the aperture include two side walls 125a. The side walls 125a are substantially flat and extend diagonally across the body 110a. The side walls 125a extend perpendicularly from at least one side of the body 110a. Transverse walls 126a extend from the side walls 125 to partially close the open portion 122a. The ends of the transverse walls 126a assist in providing guidance to the handling tool 200a. To this end, as further outlined below, the axis 121a provides a sliding direction for the handling tool 200a.

[0097] The bracket 100a further includes a safety device 130a. The safety device 130a assists with retaining the handling tool 200a. The safety device includes a catch 132a. As shown in further detail in Figure 3, the body includes two catches 132 to allow the bracket to be orientated in an up or down position on one side of the artwork. In further embodiments, the bracket 100a may be designed to be located on either a left or right side of the artwork.

[0098] The bracket 100a also includes an attaching portion 140a. The attaching portion 140a in this embodiment includes holes 142a. The holes 142a are configured to receive fasteners 144a. In this regard, it will be appreciated further from Figure 6 that the fasteners 144a can be connected to a rear surface of an artwork. Accordingly, the brackets 100a are normally located adjacent sides of the artwork. To handle the artwork, the handling tool 200a is therefore inserted into the aperture 120a from a side of the artwork. That is, the handling tool 200a is inserted from a side, behind the artwork, whereby the side extends transversely (ie, in a non-parallel manner) to a front surface displaying the artwork area. In other words, the handling tool 200a moves through an imaginary plane extending perpendicular to the front of the artwork to allow it to engage with the aperture 120a. This is outlined in greater detail below. This design avoids having to touch the front or sides of the artwork, meaning there is no user contact with the artwork whatsoever.

[0099] Figures 5 to 7 illustrate the handling tool 200a according to an embodiment of the invention. The handling tool 200a includes an engaging portion 210a. The engaging portion 210a is configured to engage with the aperture 120a. That is, the engaging portion 210a comprises a member 212a that is configured to slide into engagement with the aperture 120a. The member 212a extends in a diagonal manner relative to a horizontal plane. The angle of the member 212a assists in (amongst other things): i) reducing the moment forces on the member 212a; ii) preventing the member 212a from inadvertently releasing from the aperture 120a whilst an artwork is being carried due to the weight of the artwork thereon; and iii) ensuring the artwork

is fixed in place during shipping, including when the artwork is inverted (which would not necessarily be the case with a straight/vertical member). The member 212a is configured to extend laterally though one side of the aperture 120a to another side thereof.

[00100] The member 212a includes a tapered edge 214a. The tapered edge 214a assists in inserting the member 212a into the aperture 120a. The member 212a also includes guiding surfaces 215a. The guiding surfaces 215a assist in forming a ridge along the member 212a. The guiding surfaces 215a are configured to engage with the end portions of transverse walls 126a to assist with guiding movement of the engaging portion 210a within the aperture 120a. Parts of the member 212a, adjacent the guiding surfaces 215a, engage with the transverse walls 126 to prevent the member 212a from exiting the aperture through the open portion 126a. The engaging portion 210a moves along the engaging axis 216a as it engages with the aperture 120a. In this regard, the engaging axis 216a coincides with the axis 121a whilst the member 212a slides along part(s) forming the aperture 120a.

[00101] The handling tool 200a further includes a safety mechanism 220a. The safety mechanism 220a is configured to releasably engage the safety device 130a to avoid inadvertent release of the engaging portion 210a from the aperture 130a. The safety mechanism 220a includes a safety latch 222a. The safety latch 222a is biased by a spring that assists in moving the safety latch 222a into engagement with the safety catch 132a. That is, the spring rotates the safety latch 222a towards a retaining position such that, in response to the safety latch 222a moving over the safety catch 132a, the safety latch 222a is forced into the retaining position. To release the safety latch 222a from its retaining position, the safety release 224a is engaged to allow the safety latch 222a to rotate to a release position. With the safety mechanism 220a in the release position, the engaging portion 210a may be removed from the aperture 130a.

[00102] The holding portion 230a assists a user in holding the artwork. As shown further in Figure 6, the holding portion 230a extends away from its connection with the engaging portion 210a along extending axis 231a. That is, the holding portion 230a extends transversely away from the engaging portion 210a. This leaves the holding portion 230a located substantially to one side of the engaging axis 216. To further elaborate, the engaging member 212a includes a forward face 217a and a rear face 218a and the holding portion is located to one side of the forward face 217a. This is shown more clearly in Figure 6 and effectively the engaging portion 210a / holding portion 230a form an 'L' shape. In other words, the engaging portion 210a extends substantially perpendicular to the holding portion 230a. As outlined further below, this shape assists a user in avoiding: i) their hand engaging / being crushed against a wall; ii) having to touch the artwork during handling; and iii) accidental or inadvertent contact with the artwork.

[00103] As shown further in Figure 7, the holding portion 230a includes a gripping portion 232a. The gripping portion 232a in this embodiment includes a rubber coating for ergonomic purposes. The gripping portion 232a forms a 'D shape' to allow a user's hand to extend through opening 233a to suitably grip the gripping portion 232a. The holding portion 230a also includes a base portion 234a that is substantially flat. The base portion 234a can be rested on a ground surface during handling the artwork if required.

[00104] The holding portion 230a further includes a mounting portion 236a. The mounting portion 236a includes a hole. The mounting portion 236a is configured to connect to a transportation container. In this regard, the handling tool 200a is adapted to assist with transportation of an artwork by providing a suitable connection between the artwork and the transportation container. In further embodiments, as outlined below, the handling tool may be removed for transportation.

[00105] During use, brackets 100a are connected to a rear surface of an artwork, using the fasteners 144a, adjacent the left and right sides of the

artwork. The bracket 100a is configured for the right side of the artwork but it would be appreciated that, in further embodiments, it may be adapted to the left side. The apertures 120a are positioned such that the axes 121a converge towards a middle portion of the artwork thereabove. With the brackets 100a in place, the member 212a may be inserted into the apertures 120a, from the left/right sides of the artwork, in order to begin handling the artwork. As the member 212a moves / slides through the aperture 120a it is guided by (amongst other things) the guiding surfaces 215a of the member 212a. At a suitable point, the member 212a also includes a stop to prevent further insertion into the aperture 120a. Following this, the safety mechanism 220a is engaged with the safety device 130a.

[00106] With the above in mind, it will be appreciated that the member 212a moves along aperture 120a whilst a user typically holds the holding portion 230a. Touching the artwork is not required. Once the member 212a is engaged with the aperture 120a at a suitable point, users may lift the artwork from both sides of the artwork. Following this, the artwork may be, for example, installed on a wall for display. Due to the structure of the holding portion 230a, relative to the member 212a, the users may install the work on a wall without having, for instance, their hand(s) collide with the wall as they wrap their hand(s) around a handling tool. This assists in more easily installing the artwork in a safe manner. Similarly, whilst the artwork is removed from a wall and placed into a transporting container (or removed), the handling tool 200a can suitably be used to avoid contact with the artwork whilst maintaining a safe and ergonomic grip of the artwork.

[00107] Figures 8 and 9 illustrate a further artwork handling system 10b, according to an embodiment of the invention. The further artwork handling system 10b includes the same bracket 100a but some slight modifications have been made to the handling tool 200b. In particular, the safety mechanism 220b is formed with the member 212b. The safety mechanism 220b includes safety latch 222b. The safety latch 222b extends from a portion of the member 212b. Extending from the safety latch 222b is the safety release 224b. By

pressing on the safety release 224b, it would be appreciated that the safety latch 222b will resiliently flex to a position that allows it to release from the safety catch 132a. This simplifies the safety mechanism 220b, if required.

[00108] Figures 10 and 11 illustrate another artwork handling system 10c, according to an embodiment of the invention. The artwork handling system 10c includes bracket 100a. The safety device 130a is configured to receive safety latch 222c of the handling tool 200c. The safety latch 222c is a relatively thin member that is resiliently flexible. The safety latch 222c may be made from, for example, a (spring) steel. In order to release the safety latch 222c from the safety catch 132c, the safety release 224c is pressed, which allows the safety latch 222c to rotate / flex to a position where it can be released from the safety catch 132c.

[00109] Figures 12 and 13 illustrate a further artwork handling system 10d including the bracket 100a and a different handling tool 200d. The handling tool 200d includes an engaging portion 210a that is able to move, relative to the handling portion 230d, in order to adjust the relative angle thereto. This allows the handling tool 200d to form a thinner profile, if required, in order to assist in (for example) removing the handling tool 200d from the bracket in the confines of a transportation container. To further elaborate, the member 212d may rotate from a first position, where it is configured to engage with the aperture 120a of the bracket 100a (as shown in Figure 12), to a second position where it largely aligns with the holding portion 230d. This allows the handling portion 230d to move a shorter linear distance to disengage the member 212d from the aperture 120a.

[00110] Figures 14 and 15 illustrate an artwork handling system 10e where bracket 100e is integrated into an artwork frame 2e. The bracket 100e is located on a rear/side surface of the artwork frame 2e (or artwork). The front surface of the artwork includes an artwork area. The artwork area includes visual arts. The visual arts form the key area observed by observers when the artwork is displayed.

[00111] The bracket 100e includes a moving part 128e contained within a housing. The moving part 128e may be biased towards one side of the housing / artwork frame 2e. The moving part 128e includes an aperture (not shown) to receive a member 212e of the handling tool 200e. For ease of illustration, other parts of the handling tool (eg, the holding portion) are not shown. As demonstrated further in Figure 15, the member 212e can move through the aperture of the bracket 100e, from a lower side of the artwork, and move the moving part 128e out from the frame 2e. In the position shown in Figure 15, the handling tool 200e may be used to handle the artwork to position it on a wall or in a transportation container. Upon removing the member 212e from the aperture, the moving part 128e may move back into its initial position shown in Figure 14. This allows an even lower profile bracket 100e that may be installed almost flush on a wall, meaning the bracket 100e is almost invisible whilst the artwork is being displayed. In further embodiment, it would also be appreciated that, for example, the member 212e may be inserted through a side of the frame 2e in order to engage with the bracket 100e.

[00112] Figures 16 and 17 illustrate a further bracket 100f for the artwork handling systems 10f. The bracket 100f includes an aperture 120f that extends straight (ie, not diagonally) across the bracket 100f. The aperture 120f therefore includes walls 125f that extend perpendicularly across the bracket 100f, relative to the longitudinal sides of the bracket 100f. The bracket 100f is configured to be connected adjacent a lower side of an artwork, on the back side of an artwork frame 2f (shown substantially as transparent). That is, the handling tool 200f is inserted from a (lower) side 3f of the artwork whereby the side 3f extends transversely to a front surface displaying the artwork area 4f. The artwork area 4f extends over the frame 2f. This allows the artwork to be lifted from the bottom edge / portion thereof, which is particularly helpful for large artworks where multiple people may be needed to carry the artwork. To this end, the front face of the bracket 100f, shown in Figure 17, is abutted against the rear of the artwork frame 2f. The holes 142f of the attaching

portion 140f are used to receive fasteners (eg, countersunk screws etc) to fix the bracket 100f to the artwork frame. When the bracket 100f is attached to the artwork, the axis 121f of the aperture extends in a vertical direction.

[00113] The bracket 100f also includes safety devices 130f. The safety devices 130f are located on either side of the bracket 100f to allow the bracket 100f to be located in either orientation, along a lower portion of the artwork frame, to receive a safety mechanism 220f of the handling tool 200f. The design of the bracket 100f prevents user error in the form of installing the bracket 100f in the wrong orientation. In comparison to other safety devices, the safety devices 130f include substantially straight walls, parallel to the axis 121f, supporting the safety catches 132f.

[00114] The handling tool 200f is shown further in Figures 18 and 19. The engaging member 212f of the handling tool 200f includes a radiused edge 214f that forms a taper. The safety latch 222f of the safety mechanism 220f extends transversely from the member 212f in order to be in a position to engage the safety catch 132f. The holding portion 230f extends perpendicularly (ie, an example of a transverse angle) away from the engaging member 212f in one plane, as shown in Figure 19, but aligns with the engaging member 212f in another plane, as shown in Figure 18. As evident in Figure 19, this allows the holding member 230f, and particularly the gripping portion 232f, to be located to one side of the engaging axis 216f. The handling tool 200f also includes a base portion 234f that provides a foot for the artwork. This allows the artwork to be rested on the ground with the base portion 234f acting as a foot. The gripping portion 232f and/or the base portion 234f may be made of, for example, a suitable rubber.

[00115] Figure 20 illustrates another handling tool 200g in the form of a chock-type device that assists in providing a footing to stand an artwork, for example, adjacent a wall during handling. The holding device 200g includes an engaging portion 210g that is configured to engage with the aperture 120f of bracket 100f. The holding device 200g therefore provides an engaging axis

216g. Located to one side of the engaging axis 216g is the holding portion 230g. The holding portion 230g provides a suitable base portion 234g (eg, a rubber stopper) that assists holding an artwork thereabove. As will be appreciated, more than two holding devices 200g can be used to stabilise an artwork in order to rest it above a ground surface with the assistance of the base portions 234g. In a similar manner to the other holding device 200, the holding device 200g positions the artwork at least 100mm above the ground when rested on the base portion 234g. This assists alleviating risk associated with, for example, flooding around the artwork.

[00116] Figures 21 and 22 illustrate a further bracket 100h that is configured to be fixed to an artwork. The bracket 100h includes similar features to the bracket 100a (eg, aperture 120f, safety device 130f etc). However, in comparison to bracket 100a, the bracket 100h does not include an attachment portion 140h involving releasable fasteners. Rather, the front surface of the bracket 100h, shown in Figure 22, is fixed to the artwork with an adhesive. The adhesive may include a glue, solder, brazing etc. to ensure the bracket 100h is rigidly attached to the artwork. This is useful in situations where fasteners are not able to be fitted to the artwork structure because of, for instance, substrate depth or material constraints. In this regard, Figures 23 and 24 illustrate a similar bracket 100i to bracket 100h, but the aperture 120i is akin to aperture 120f of the bracket 100f. That is, the aperture 120i extends perpendicularly across the bracket 100f from the longitudinal sides thereof. The attachment portion 140i is substantially the same as attachment portion 140h in that parts of the face of the bracket 100i are fixed to the artwork frame.

[00117] Figures 25 and 26 illustrate a bracket 100j that provides an additional feature compared to bracket 100a. In particular, the bracket 100j includes a holding part 150j. The holding parts 150j are located on either end of the bracket 100j to allow it to be biorientable, on the right side of an artwork. The holding part 150j in this embodiment is in the form of a keyhole 152j. The keyhole 152j is configured to receive a pin with an enlarged end portion, as discussed further below.

[00118] Figure 27 and 28 illustrate another bracket 100k where the holding part 150k is in the form of a loop 152k. As will be appreciated by a person skilled in the art, the bracket 100k may be for the right side of an artwork but a further embodiment may be configured for the left side of the artwork.

[00119] To hang the holding parts 150 from a wall (for example), the mounting bracket 300, shown in Figures 29 and 30, may be used as part of the artwork handling system 10. The mounting bracket 300 includes a retaining portion 310. The retaining portion 310 includes an enlarged end portion 312 that assists retaining the holding parts 150. The end portion 312 is supported via a pin 314. The holding parts 150 may suitable engage with the retaining portion 310 to hang artworks.

[00120] The mounting bracket 300 also includes an adjusting portion 320 in the form of an indented hole. The adjusting portion 320 allows the position of the mounting bracket to be adjusted, relative to a fastener, when it is position on a wall. This adjustment assists in suitably hanging the artwork. Furthermore, this avoids having to drill multiple holes in a wall and, in comparison to drilling holes next to each other, the adjusting portion 320 provides finer increments of adjustment.

[00121] Figures 31 and 32 illustrate a further bracket 100l. The further bracket 100l includes a number of features that are similar to bracket 100a (ie, aperture 120l, safety device 130l, attaching portion 140l etc.). However, the bracket 100l further includes a transport attachment 160l. The transport attachment 160l includes a retaining part 162l that is supported by supporting member 164l. The retaining part 162l is configured to interact with transporting fixture, as further outlined below.

[00122] Figures 33 and 34 illustrate the retaining part 162 interacting with a transporting fixture 400a. The transporting fixture 400a is configured to be installed into a transporting container (not shown) and may form part of the artwork handling system 10. The transporting fixture 400a includes a plate 410a that is configured to rotate. The plate 410a includes a hole 412a in the

form of a keyhole that extends radially around the plate 410a. The hole 412a is configured to receive the retaining part 162l, as shown in Figure 33. To secure the artwork to the transporting container, the plate 410a rotates, trapping part of the hole 412a between the retaining part 162l and another part of the bracket 100l (as shown in Figure 34). Following this, the artwork cannot be lifted from the transport container, securing it thereto. In order to release the artwork from the transport container, the plate 410a is rotated back to its initial position, shown in Figure 33, where the retaining part 162l may be release from the plate 410a.

[00123] Another transporting fixture 400b is shown in Figures 35 and 36. The transporting fixture 400b includes a plate 410b that is substantially rectangular. The plate 410b includes a hole 412b that is in the form of a keyhole. The keyhole extends in a linear direction across the plate 410b. The transporting fixture 400b is configured to move from a first position, shown in Figure 35, to a second position shown in Figure 36. More specifically, the retaining part 162l of the bracket 100l is received into the larger section of the hole 412b in the first position (shown in Figure 35). The plate 410b is the slid into the second position, shown in Figure 36, to secure the bracket 100l (and artwork) to the transportation container. It will be appreciated that by locking the plate 410b between the retaining part 162l, and opposing face of the bracket 100l, the artwork is secured to the transportation container. To release the artwork from the container, the plate 410b is moved to the first position and then the artwork can be raised.

[00124] Figure 37 illustrates a further transporting fixture 400c. The transporting fixture 400c includes an elongate member 420c in the form of a bolt. The elongate member includes a base portion 422c that is configured to be fixed to a transportation crate. The elongate member 420c is configured to the mounting portion 236a of the handling tool 200a thereover. This assists in installing the handling tool 200a in a transportation crate when it is engaged with the bracket 100a connected to the artwork. In particular, the mounting portion 236a is located adjacent the base portion 422c. Following this, a

retaining fastener 430c is moved over the member 420c to retain the mounting portion between the fastener 430c and the base portion 422c.

[00125] Figures 38 to 41 illustrate in further detail use of fastener 430c. In particular, the fastener 430c includes an inserting portion 432c and a biasing portion 434c. The inserting portion 432c includes a hole 433c. The biasing portion 434c includes a spring 435c. In response to inserting the inserting portion 432c into a position that aligns with a hole in the biasing portion 434c, the fastener 430c may be moved over the member 420c (as shown in Figure 40). When the fastener 430c is moved to a suitable position to retain the mounting portion 236a, pressure on the inserting portion 432c may be released, and the spring 435a will bias the inserting portion 432c against the member 420c. This prevents the fastener 430c from further movement, until the inserting portion 432c is reengaged, allowing the fastener 430c to fix the mounting portion 236a in place.

[00126] Figure 42 illustrates a further artwork handling system 10m. The artwork handling system 10m includes a bracket 100m and a handling tool 200m. The bracket 100m is further shown in Figure 43 where a sectional view is illustrated on the left and a side view is illustrated on the right. The bracket 100m includes an aperture 120m. The aperture 120m extends in a straight direction across the bracket 100m. That is, the side walls 125m extend perpendicularly to the outer longitudinal sides of the bracket 100m. As further outlined below, this allows the bracket 100m to be located and used on any side of the artwork (eg, the top, bottom and lateral sides). In other words, different brackets are not required for each side – the bracket 100m can be suitably used on any side of the artwork (bearing in mind the holding part 150m may or may not be required depending on its position). As further detailed below, the bracket 100m being located on any side also assists with transporting the artwork and, if required, resting the artwork on a ground surface during, for instance, installation.

[00127] The bracket 100m includes two safety devices 130m. Having two safety devices 130m, either side of the middle portion of the bracket 100m, assists in allowing the bracket to be used on any side of the artwork. The safety devices 130m include a safety catch 132m. The safety catch 132m in this embodiment includes a protrusion extending into an opening.

[00128] The bracket 100m also includes attaching portions 140m that assist with connecting the bracket to the artwork. The attaching portions 140m each form a hole. The holding parts 150m also assist with connecting the artwork to, for example, a wall. The holding parts 150m include a D-shape part in this embodiment.

[00129] The handling tool 200m is shown further in Figures 44 to 46. The handling tool 200m includes an engaging portion 210m and a holding portion 230m. The engaging portion 210m is releasably connected to the holding portion 230m. The engaging portion 210m is shown further in Figures 45 and 46. The engaging portion 210m includes a member 212m that is configured to engage with aperture 120m to assist with holding the artwork. The member 212m is substantially rectangular.

[00130] The handling tool 200m includes two safety mechanisms 220m. The safety mechanisms 220m each include a safety latch 222m. The safety latches 222m are located either side of the member 212m. The member 212m is therefore located centrally between the safety latches 222m. The safety mechanisms 220m pivot about a point. To one side of the point is the safety latches 222m that are configured to respectively engage the safety catches 132m (to avoid inadvertent disengagement of the handling tool 200m form the bracket 100m). To another side of the point is a safety release 224m. The safety release 224m forms two tabs. The safety mechanisms 220m pivot in a plane that is substantially parallel with a front surface of the artwork.

[00131] The pivot points of the safety mechanisms 220m are biased by a spring member 223m. The spring member 223m biases the safety latches 222m towards one another. In response to the safety latches 222m moving

through the safety devices 130m, the safety latches 222m are configured to rotate over the safety catches 132m and then pivot (back) to a position locking them in place with the safety catches 132m. To release the safety latches 222m, the tabs of the safety release 224m are moved towards each other, allowing the safety latches 222m to move to a position where they suitably disengage from the safety catches 132m and are able to be removed from the safety devices 130m.

[00132] The engaging portion 210m includes mounting portions 236m that may assist, for instance, during transportation. The mounting portions 236m form two holes either side of the member 212m. The engaging portion 210m also includes a positioning part 225m. As detailed further below, the positioning part 225m is configured to receive the holding portion 230m at a predetermined orientation. The positioning part 225m includes an opening. The opening includes a plurality of splines. The positioning part 225m also includes a locking portion. The holding portion 230m may be released before transportation to facilitate packaging requirements. In addition, the engaging portion 210m includes one or more base portions 228m. The base portions 228m can be used as feet in, for example, staging the artwork or resting the artwork during installation. The base portions 228m may include rubber (to act as rubber feet).

[00133] As shown in Figure 44, the holding portion 230m includes a gripping portion 232m and a base portion 234m. A key aspect of the holding portion 230m is the position portion 237m. The positioning portion 237m includes a plurality of splines. The positioning portion 237m is configured to engage with the positioning part 225m. The interaction of the splines assist in setting a relative angle between the engaging portion 210m and the holding portion 230m. That is, various angles between the engaging portion 210m and the holding portion 230m portion may be set at predetermined angles. This allows the holding portion 230m to be used on any side of the artwork and facilitates ambidextrous operation. This also assists ensuring the holding portion 230m can be positioned to avoid contact with the artwork (sides or

face), especially in instances where the artwork may be of a significant depth (eg, setting the holding portion 230m on an angle set outward from the artwork ensures the gripping portion 232m can be grasped without a user's hand coming into contact with the artwork). Further, if required, the holding portion 230m can be set in an upright position (perpendicular to the bracket aperture 120m) during transport, where the crate clearance around the artwork is insufficient to allow for their retention at an outward angle. In addition, the shape of the gripping portion 232m, whereby it includes an upper, lower and side gripping part facilitates holding the gripping portion 232m in the various positions around the different sides of the artwork.

[00134] In order to avoid the holding portion 230m from inadvertently releasing from the engaging portion 210m, the holding portion 230m also includes a positioning lock 238m. The positioning lock 238m includes a ball release mechanism. A ball engages with the locking portion in the positioning part 225m when the positioning portion 237m reaches a certain location in the positioning part 225m. In order to release positioning lock 238m, the position release 239m is pushed. This retracts the ball and allows the holding portion 230m to be removed from the engaging portion 210m.

[00135] Figure 47 illustrates an additional artwork handling system 10n. The artwork handling system 10n includes a bracket 100n and a handling tool 200n. The bracket 100n is further shown in Figure 48 where a sectional view is illustrated on the left and a top view is illustrated on the right. The bracket 100n includes an aperture 120n. The aperture 120n extends in a straight, lateral direction across the bracket 100n. The aperture 120n includes side walls 125n and transverse walls 126n. One of the transverse walls 126n includes a safety device 130n. The safety device 130n is therefore in communication with part of the aperture 120n in this embodiment. The safety device 130n is substantially in the form of a (square) hole. With the aperture 120n and safety device 130n in mind, this allows the bracket 100n to be located and used on any side of the artwork. The holding part 150n also assists in holding the artwork.

[00136] The handling tool 200n is shown further in Figures 49 to 51. Similar to the handling tool 200m, the handling tool 200n includes an engaging portion 210n and a holding portion 230n. The engaging portion 210n is releasably connected to the holding portion 230n. The engaging portion 210n is shown further in Figures 50 and 51. The engaging portion 210n includes a member 212n that is configured to engage with aperture 120n to assist with holding the artwork. The member 212n is substantially planar and forms a rectangle.

[00137] The handling tool 200n includes safety mechanism 220n. The safety mechanism 220n extends along a central axis of the member 212n. The safety mechanism 220n pivots about a point. The point is biased by a spring 223n. This results in a safety latch 222n being located to one side of the pivot and a safety release 224n being located to another side of the pivot. The safety latch 222n includes a protrusion that is configured to extend beyond a face of the member 212n. In this regard, as the member 212n is inserted into the aperture 120n, the safety mechanism 220n will rotate in a first direction to allow the member 212n to be inserted into the aperture 120n. In response to the safety latch 222n moving across the safety device 130n, the safety latch 222n will rotate in a second direction such that the safety latch 222n latches with the safety device 130n. The spring 223n assists in rotating the safety latch 222n into the safety device 130n (as evident in Figure 51).

[00138] When the safety latch 222n is engaged with the safety device 130n, this prevents the member 212n inadvertently disengaging from the aperture 120n. When releasing the member 212n is required, the safety release 224n is pressed. This in turn will rotate the safety latch 222n to a position where the member 212n may be removed from the aperture 120n without the latch 222n substantially interfering.

[00139] The engaging portion 210n includes mounting portions 236n that may assist, for example, during transportation. The mounting portions 236n form two holes either side of the member 212n. The holding portion 230n is typically released during transportation. The engaging portion 210n also

includes a portion 228n. The base portion 228n can be used as a foot in, for example, staging the artwork or resting the artwork during installation. The base portion 228n may include an elastic material (such as rubber). In addition, the engaging portion 210n includes a positioning part 225n. The positioning part 225n includes two openings. The openings include a plurality of splines. As outlined further below, the positioning part 225n is configured to receive the holding portion 230m at one or more predetermined orientations.

[00140] As shown in Figure 49, the holding portion 230n includes a gripping portion 232n and a base portion 234n. A key aspect of the holding portion 230n is the position portions 237n. The positioning portions 237m include a plurality of splines. The positioning portions 237n are respectively configured to engage with the positioning part 225m from one end. The interaction of the splines, at either end, assist in setting a relative angle between the engaging portion 210n and the holding portion 230n. This allows the holding portion 230n to be used on any side of the artwork and facilitates ambidextrous operation (along with the other advantages mentioned with regard to holding portion 230m). The positioning portions 237n take the form of captive plugs that can move in order to suitably engage the positioning part 225n. In further embodiment, the positioning portions 237n may form push-to-engage / push-to-release plugs.

[00141] Figures 52 to 54 illustrate a further engaging portion 210p. The engaging portion 210p may be used with, for instance, the bracket 100n and the holding portion 230n. In comparison to the engaging portion 210n, the engaging portion 210p includes a differently arranged safety latch 222p, spring 223p and safety release 224p.

[00142] Figure 52 illustrates the engaging portion 210p in a latched position. The spring 223p holds the safety latch 222p in a locked position. Pressing on the safety release 224p in this position does not result in any movement of the safety latch 222p due to the position of it outer legs. In Figure 53, the safety release 224p is rotated to an unlatched position. If pressure is released from

the safety release 224p at this point, the spring 223p will return the safety release 224p to the latched position shown in Figure 53. In order to disengage the safety latch 222p (as shown in Figure 54), force is applied onto the safety release 224p towards the spring 223p. This results in the safety latch 222p disengaging from, for example, the safety device 130m. When the force is released from the safety release 224, the spring 223p returns the safety release 224p to its initial position and allows the safety latch 222p returns to its position shown in Figure 52.

[00143] Figures 55 to 58 illustrates a further engagement portion 210q. The engagement portion 210q may be used with, for example, the holding portion 230m and bracket 100q. The engagement portion 210q includes two members 212q that are configured to engage with aperture 120q of bracket 100q. The members 212q assist with holding the artwork. The members 212q include the safety latches 222q in this embodiment (or vice versa). The members 212q are biased away from one another by spring 223q.

[00144] As shown in Figures 55 and 56, as taper 216q engages with the aperture 120q, the members 212q are forced towards each other. This allows the members 212q, together with the safety latches 222q, to pass through the aperture 120q. The stopping member 227q initially prevents the member 212q from moving apart through an upstanding member. As shown in Figures 57 and 58, as the safety latches 222q pass the aperture 120q, they are able to rotate and lock behind a portion of the bracket 100q. This occurs when the stopping portion 227q interacts with the bracket 100q and is forced backwards, allowing the safety latches 222q to open in the manner shown in Figure 58. In this position, the members 212q firmly engage with the side walls of the aperture 120q and the artwork may be lifted.

[00145] In response to having to remove the members 212q, a safety release 224q is moved in a direction away from the members 212q. Following this, crank portions 226q can be rotated inwards. As a result of the crank portions 226q rotating inwards, the safety latches 222q rotate inwards. This

allows the safety latches 222q to be retracted through the aperture 120q in order to remove the members 212q.

[00146] Figure 59 illustrates an artwork system 10r in use with an artwork frame 2r. The artwork system 10r includes brackets 100r and handling tools 200r. The brackets 100r and handling tools 200r can be substantially the same as any one of brackets 100a-q and tools 200a-q. The brackets 100r are connected to a rear surface of the frame 2r. The opposite (front) surface of the frame 2r includes the artwork area. As evident in Figure 59, the brackets 100r are located in a position such that the handling tools 200r can access the brackets 100r from a side of the artwork. The engaging portion 210r, along the lower and upper side, are shown as footings / transport attachments but can also include a holding portion for carrying the artwork.

[00147] As outlined above, the artwork handling system 10 provides a number of advantages including:

i) a methodology and means by which artworks can be installed, packed and transported without any contact whatsoever with the critical areas of the artwork (eg, the front surface displaying the artwork and the sides of the artwork). This avoids the irreparable damage and destruction of artworks often caused during handling, including: a) cracks, indents or abrasions in the artworks surface caused by fingers, knuckles or palms of art handlers pressing against the artwork surface; b) dirt or oils transferred to the artwork by unclean or incorrect handling gloves; c) accretions or abrasions caused by handlers bodies coming into contact with artwork surfaces (particularly for larger artworks / base grip positions); and d) abrasions and wear during transit caused by packing materials in contact with artwork surfaces;

ii) eliminating environmental waste generated by the tens of millions of disposable single use gloves used each year, and waste from the usage of foam 'staging' blocks;

iii) superior ergonomics for art handlers, resulting in less chance of injury / RSI;

iv) superior strength and performance when used as a transportation attachment compared to other products on the market;

vv) a design which meets the refined aesthetic requirements specific to the field of visual art: namely, the brackets are thin in profile, ensuring a) that they are inconspicuous once installed and do not distract the viewer from the artwork; b) the artwork may be installed close to flush to the installation wall (artists and curators often wish to minimise the gap between the wall and the artwork); and c) the option to leave the brackets 100 on the artwork and avoid the need to frequently install and remove the brackets 100;

vi) a suitable solution to rest the artworks via the handling tools 200 or engaging portions 210m, 210n, which avoids having to use blocks that may be dirty and contaminate the artwork;

vii) only nominal training is required to use the system 10, making it suitable for various stakeholders; and

viii) separate fasteners (eg, screws etc) are not required to connect the brackets 100 to the handling tools 200.

[00148] In this specification, adjectives such as first and second, left and right, top and bottom, and the like may be used solely to distinguish one element or action from another element or action without necessarily requiring or implying any actual such relationship or order. Where the context permits, reference to an integer or a component or step (or the like) is not to be interpreted as being limited to only one of that integer, component, or step, but rather could be one or more of that integer, component, or step etc.

[00149] The above description of various embodiments of the present invention is provided for purposes of description to one of ordinary skill in the related art. It is not intended to be exhaustive or to limit the invention to a

single disclosed embodiment. As mentioned above, numerous alternatives and variations to the present invention will be apparent to those skilled in the art of the above teaching. Accordingly, while some alternative embodiments have been discussed specifically, other embodiments will be apparent or relatively easily developed by those of ordinary skill in the art. The invention is intended to embrace all alternatives, modifications, and variations of the present invention that have been discussed herein, and other embodiments that fall within the spirit and scope of the above described invention.

[00150] In this specification, the terms 'comprises', 'comprising', 'includes', 'including', or similar terms are intended to mean a non-exclusive inclusion, such that a method, system or apparatus that comprises a list of elements does not include those elements solely, but may well include other elements not listed.

Claims

1. A bracket for an artwork handling system, the bracket including:

a body being configured to be attached to an artwork, the body having an aperture extending at least partway therethrough,

wherein one or more parts forming the aperture are adapted to:

transfer weight of the artwork to a handling tool that is inserted into the aperture from a side of the artwork, the side extending transversely to a front surface displaying an artwork area; and

assist in holding the artwork with the handling tool.

2. The bracket of claim 1, wherein the aperture is configured to receive the handling tool whilst the artwork is adjacent a wall.

3. The bracket of claim 1 or 2, wherein the aperture is in the form of a channel.

4. The bracket of any one of claims 1 to 3, wherein the aperture has an axis therethrough that defines a sliding direction for the handling tool.

5. The bracket of claim 4, wherein the one or more parts forming the aperture are substantially flat wall(s) in a direction defined by the axis.

6. The bracket of any one of the preceding claims, wherein the aperture is configured to suitably retain the handling tool, whilst holding the artwork, without the assistance of one or more fasteners.

7. The bracket of any one of the preceding claims, wherein the artwork includes four sides that extend transversely to the front surface and a rear surface.

8. The bracket of any one of the preceding claims, wherein the thickness of the body is less than approximately 6 mm.

9. The bracket of any one of the preceding claims, wherein the body includes a safety device to assist with retaining the handling tool.

10. The bracket of claim 9, wherein the safety device includes two safety devices located either side of the aperture.

11. A handling tool for an artwork handling system, the handling tool including:

an engaging portion that is configured to engage with one or more parts forming an aperture of a bracket that is connected to an artwork, the one or more parts being adapted to transfer weight of the artwork to the engaging portion; and

a holding portion connected to the engaging portion, the holding portion assisting in holding the artwork,

wherein the engaging portion is configured to be inserted into the aperture from a side of the artwork, the side extending transversely to a front surface displaying an artwork area.

12. The handling tool of claim 11, wherein the holding portion is configured to extend transversely away from the engaging portion.

13. The handling tool of claim 11 or 12, wherein the holding portion is releasably connected to the engaging portion.

14. The handling tool of any one of claims 11 to 13, wherein the holding portion includes a positioning portion that engages with a positioning part of the engaging portion to set its orientation.

15. The handling tool of claim 14, wherein the positioning portion and the positioning part include one or more splines.

16. The handling tool of any one of claims 11 to 15, wherein the holding portion includes a positioning lock that assists with locking the holding portion to the engaging portion.

17. The handling tool of any one of claims 11 to 16, wherein the engaging portion includes a member defining an engaging axis and the holding portion is located substantially to one side of the engaging axis.

18. The handling tool of any one of claims 11 to 17, wherein the position of the holding portion assists in avoiding engagement of a user's hand with a wall when installing the artwork.

19. The handling tool of any one of claims 11 to 18, wherein the handling tool includes a safety mechanism that releasably engages the bracket to avoid inadvertent release of the engaging portion from the aperture.

20. The handling tool of claim 19, wherein the safety mechanism includes a safety release to release a portion of the safety mechanism from a safety catch associated with the bracket.

21. The handling tool of claim 19 or 20, wherein the safety mechanism is biased by a spring.

22. The handling tool of any one of claims 19 to 21, wherein the safety mechanism rotates about a pivot point.

23. An artwork handling system including:

a bracket as claimed in any one of claims 1 to 10; and

a handling tool as claimed in any one of claims 11 to 22.

24. The artwork handling system of claim 23, wherein the system includes a transporting fixture for assisting in transporting the artwork.

25. A method for handling an artwork, the method including the steps of:

moving a handling tool into an aperture of a bracket from a side of an artwork, the bracket being connect to the artwork and the side extending transversely to a front surface displaying an artwork area;

transferring weight of the artwork to the handling tool through one or more parts forming the aperture; and

holding the artwork with the handling tool.

26. The method of claim 25, wherein the step of moving the handling tool into the aperture includes sliding part of the handling tool across the bracket.

27. The method of claim 25 or 26, wherein the method further includes engaging a safety mechanism of the handling tool with the bracket in order to avoid inadvertent release of the handling tool from the aperture.

28. The method of any one of claims 25 to 27, wherein the step of transferring weight of the artwork to the handling tool through the one or more parts forming the aperture includes holding a portion of the handling tool that extends transversely to an engaging portion that is engaging with the aperture.

29. The method of any one of claims 25 to 28, wherein the step of holding the portion of the handling tool, which extends transversely to the engaging portion, includes moving a user's hand through an opening to grip part of the holding portion.

30. The method of any one of claims 25 to 29, wherein the step of holding the artwork with the handling tool includes abutting the handling tool against a wall whilst installing the artwork.

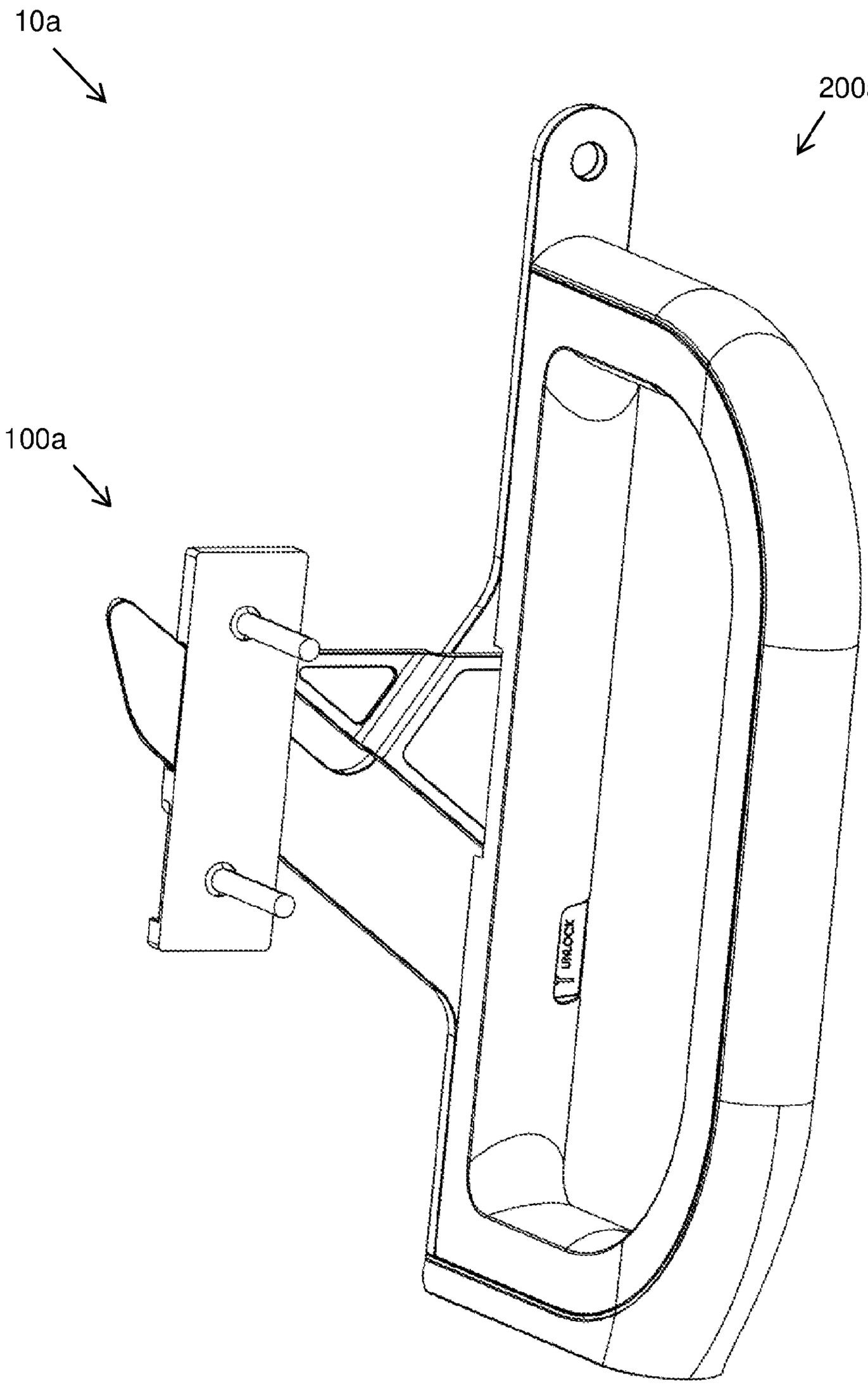


Figure 1

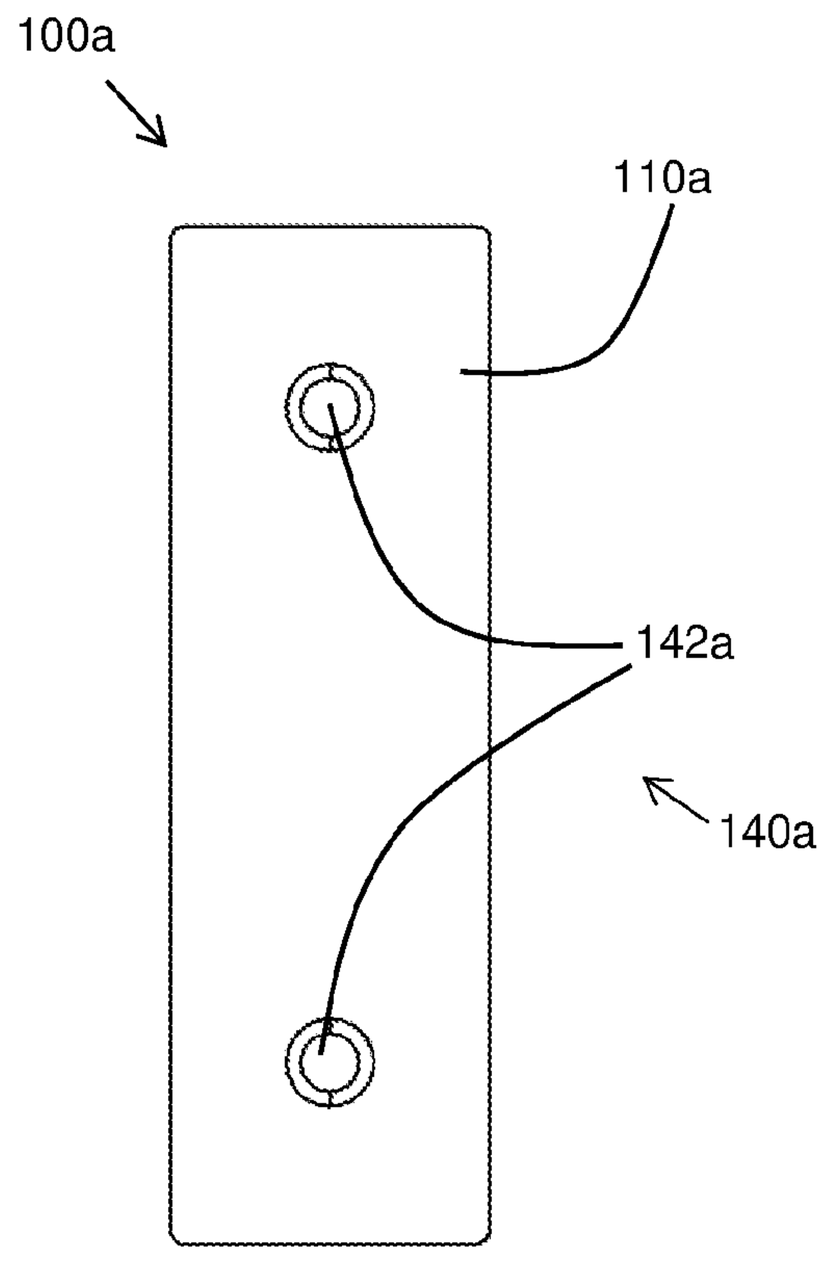
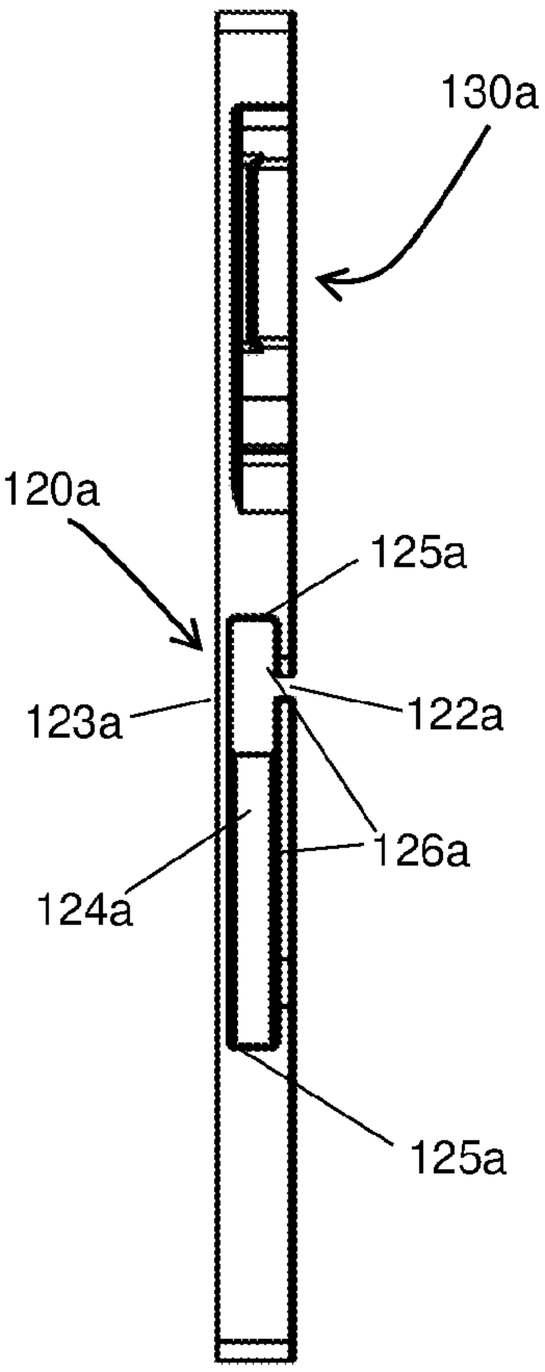


Figure 2



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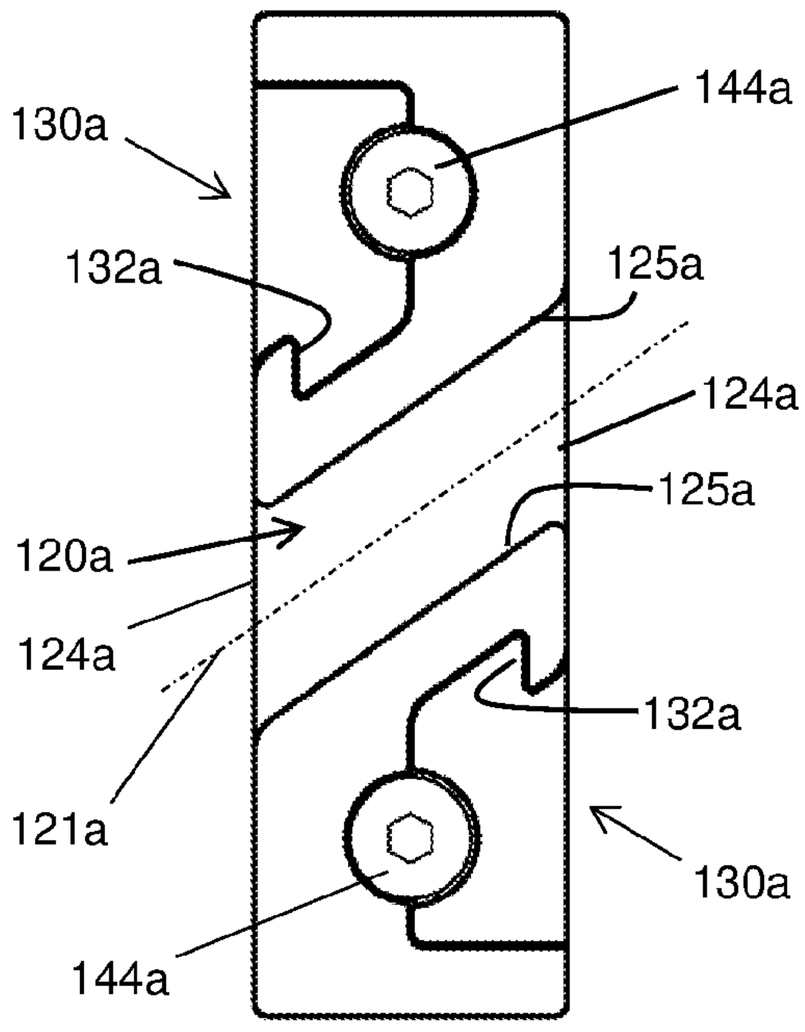

Figure 3

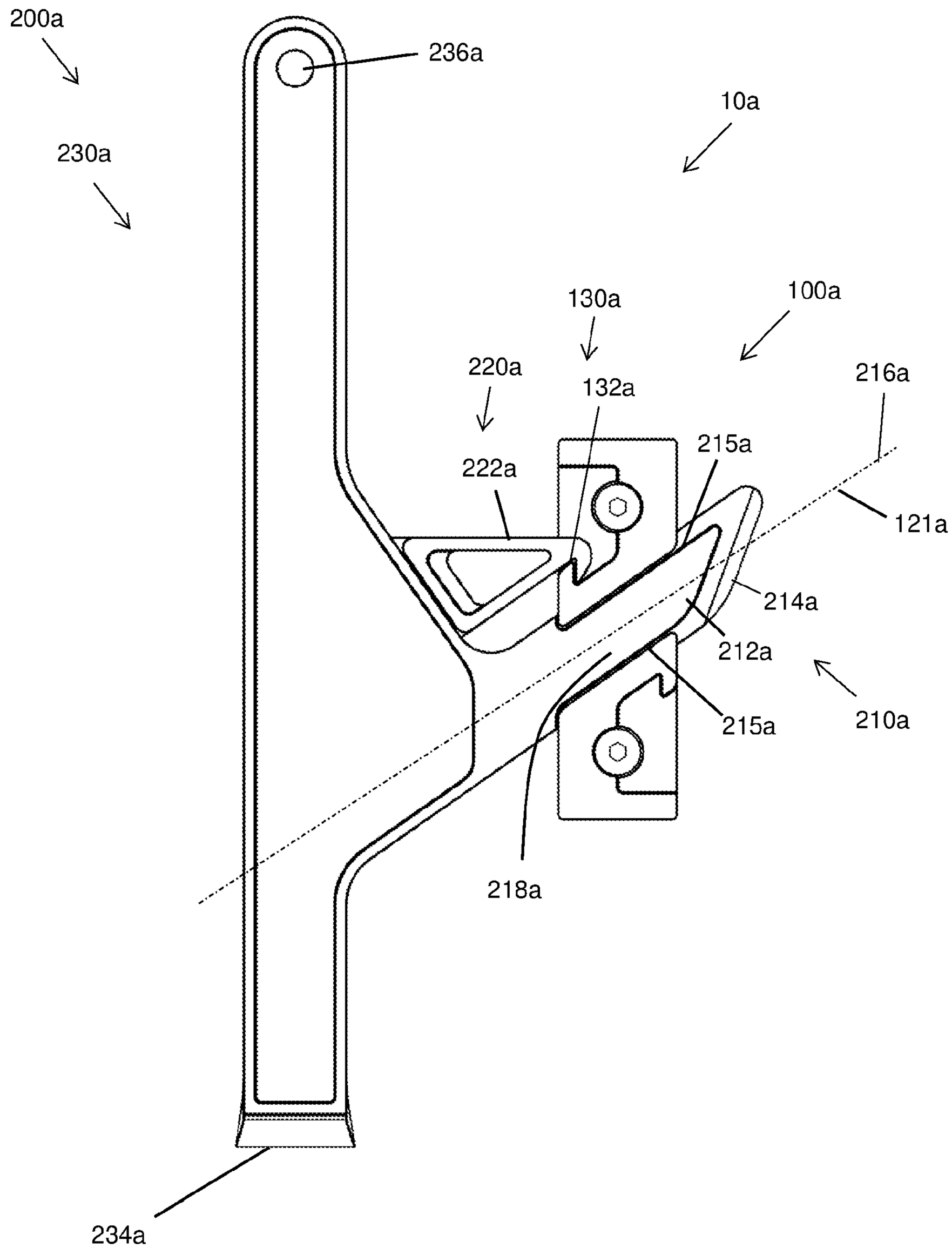
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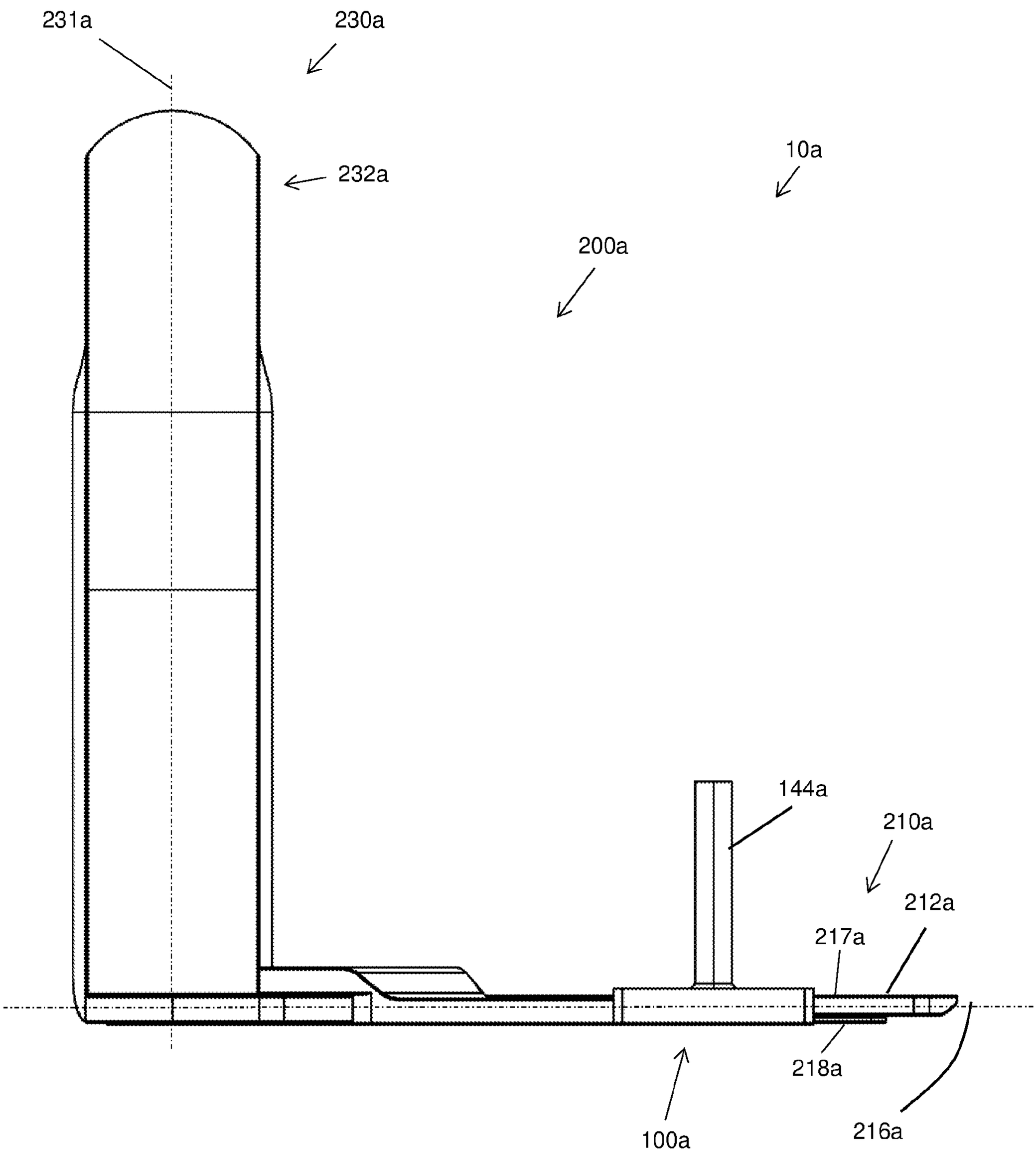
Figure 5



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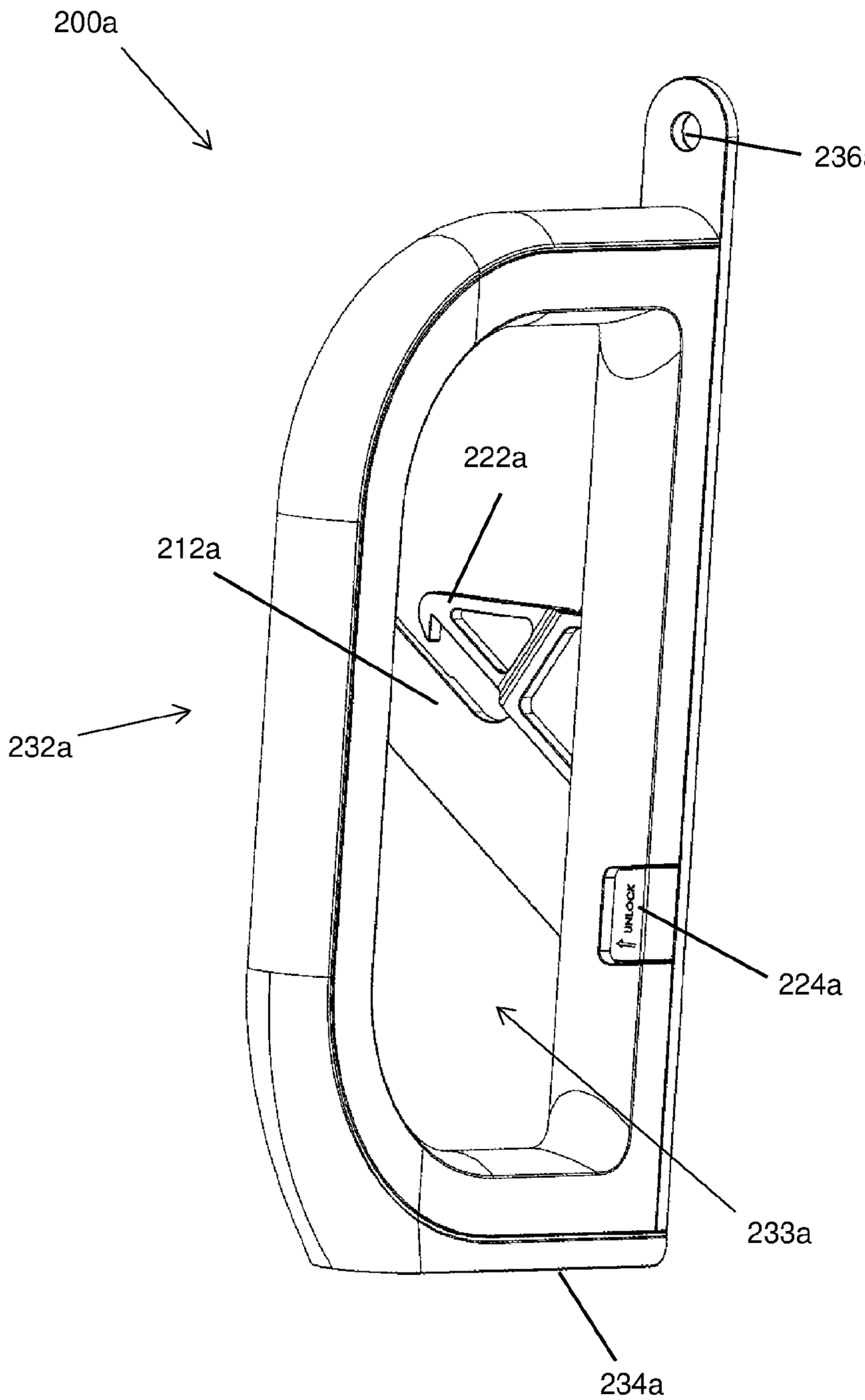

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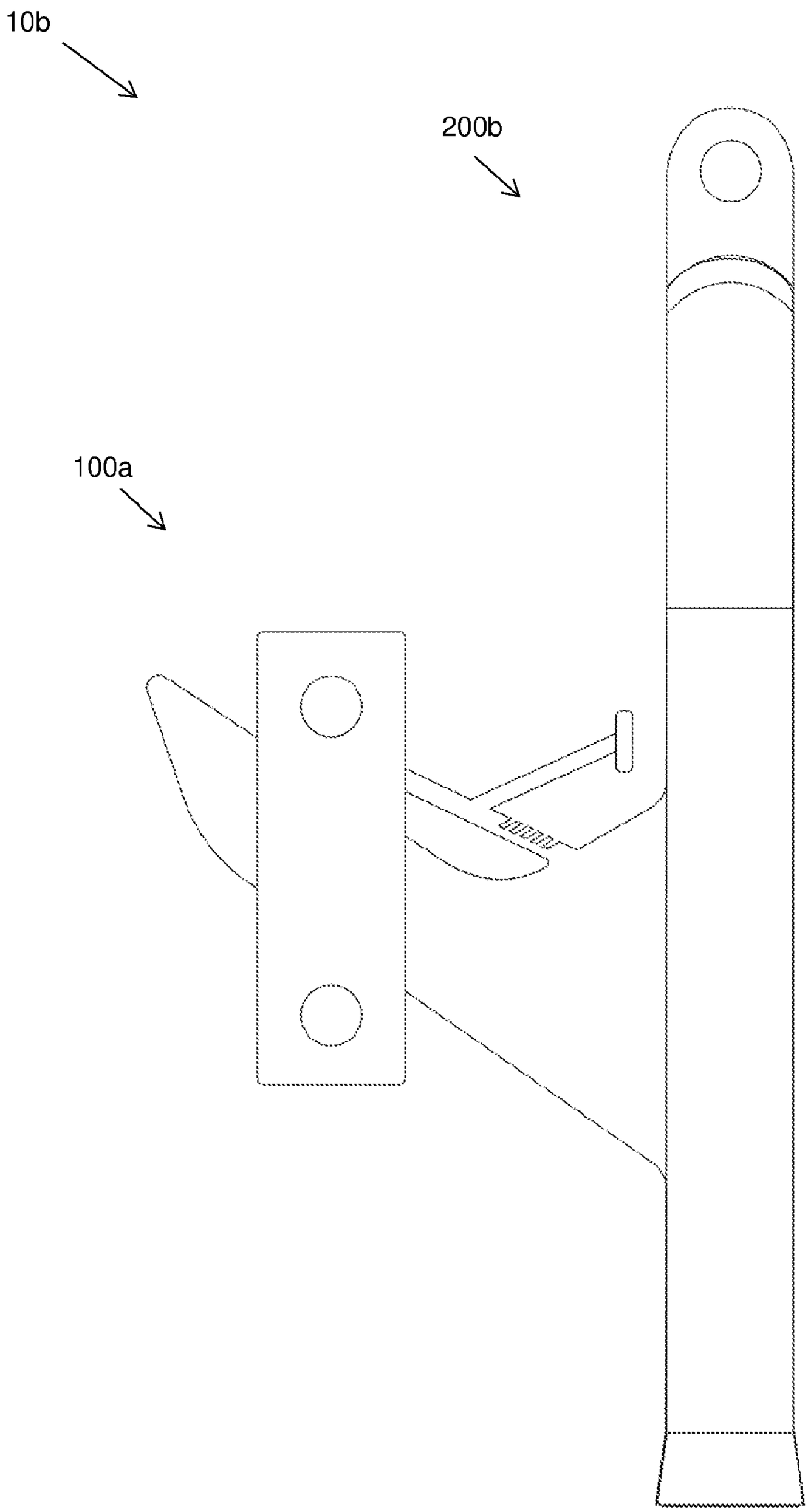

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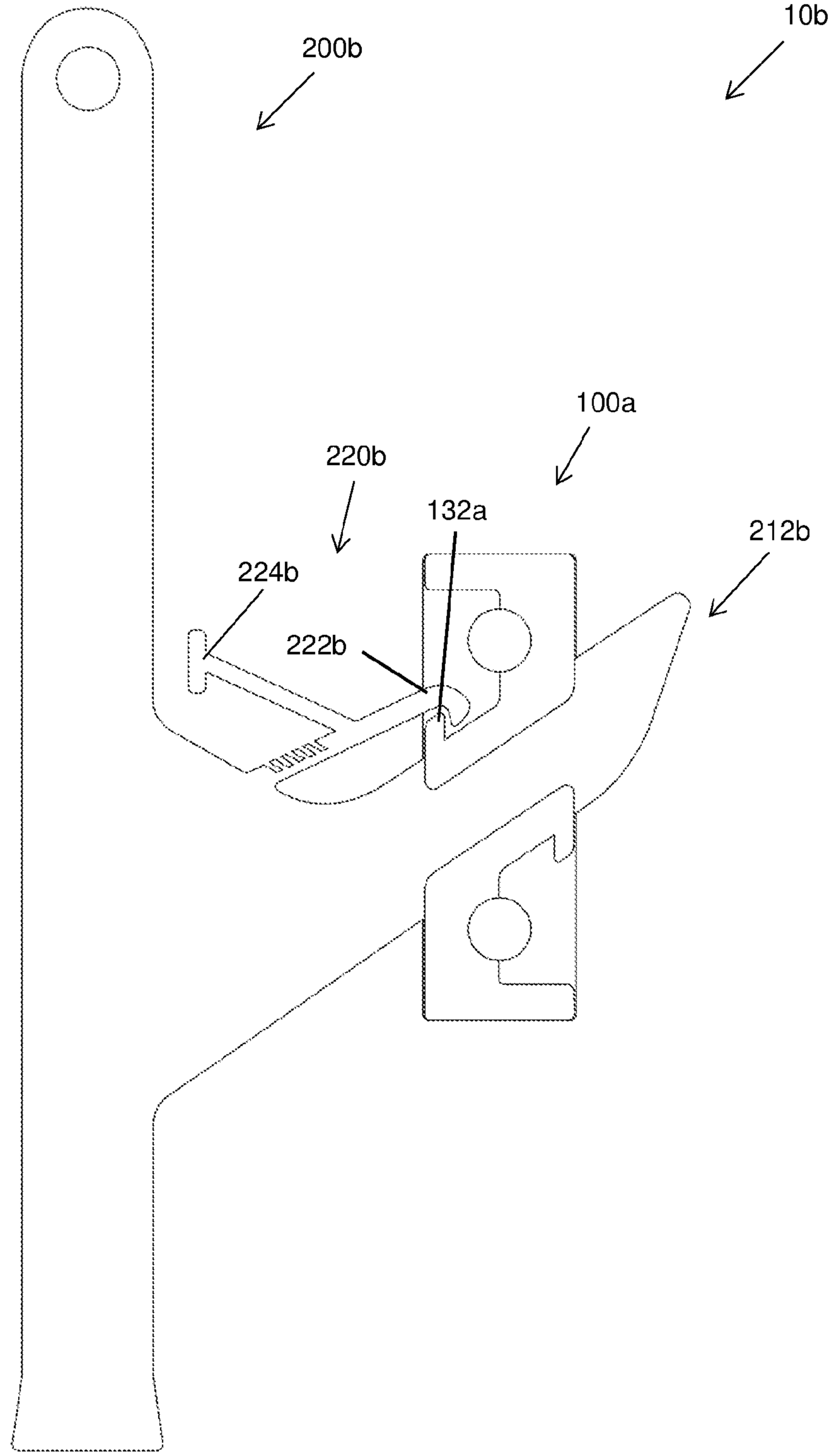

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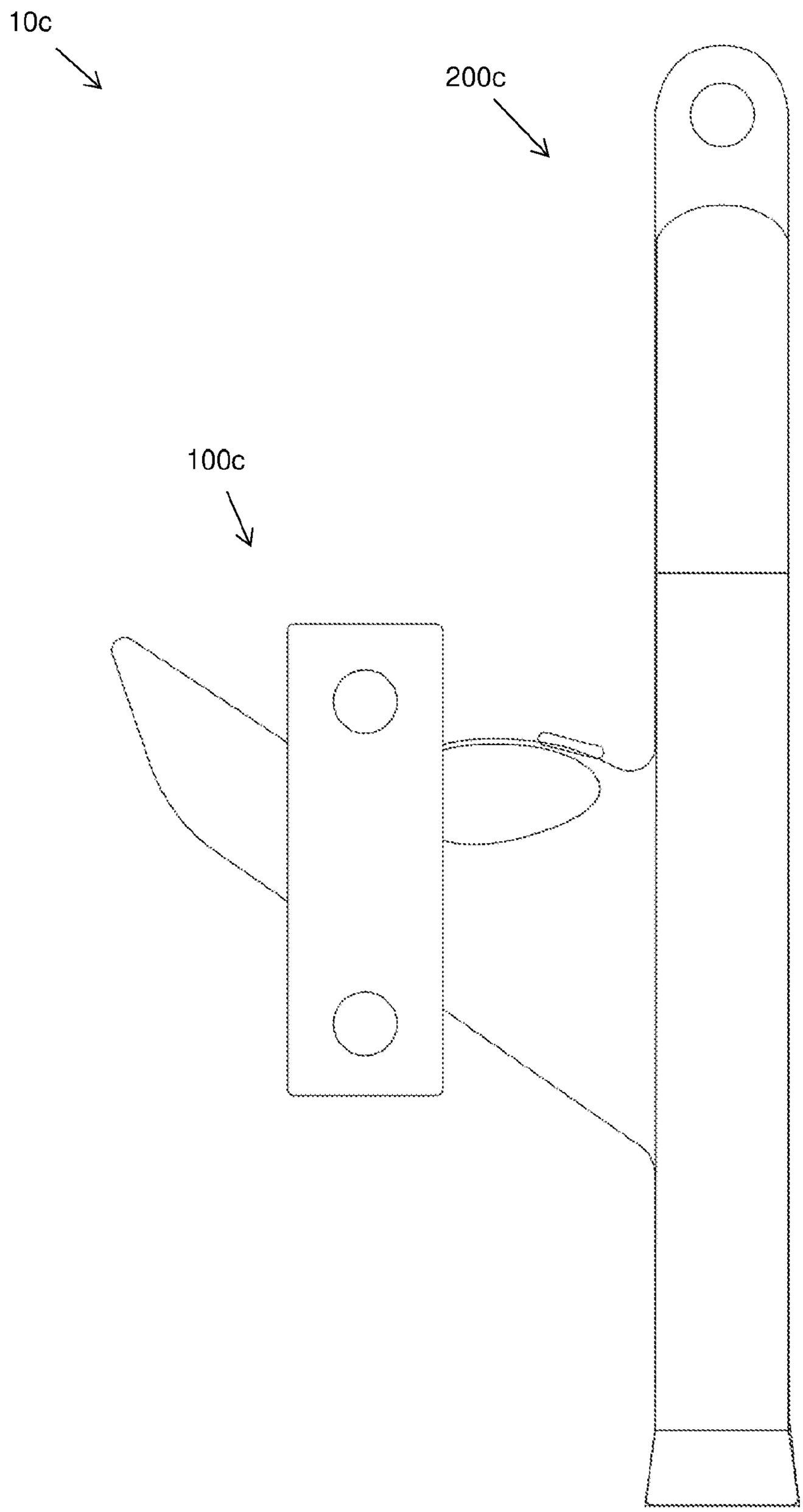

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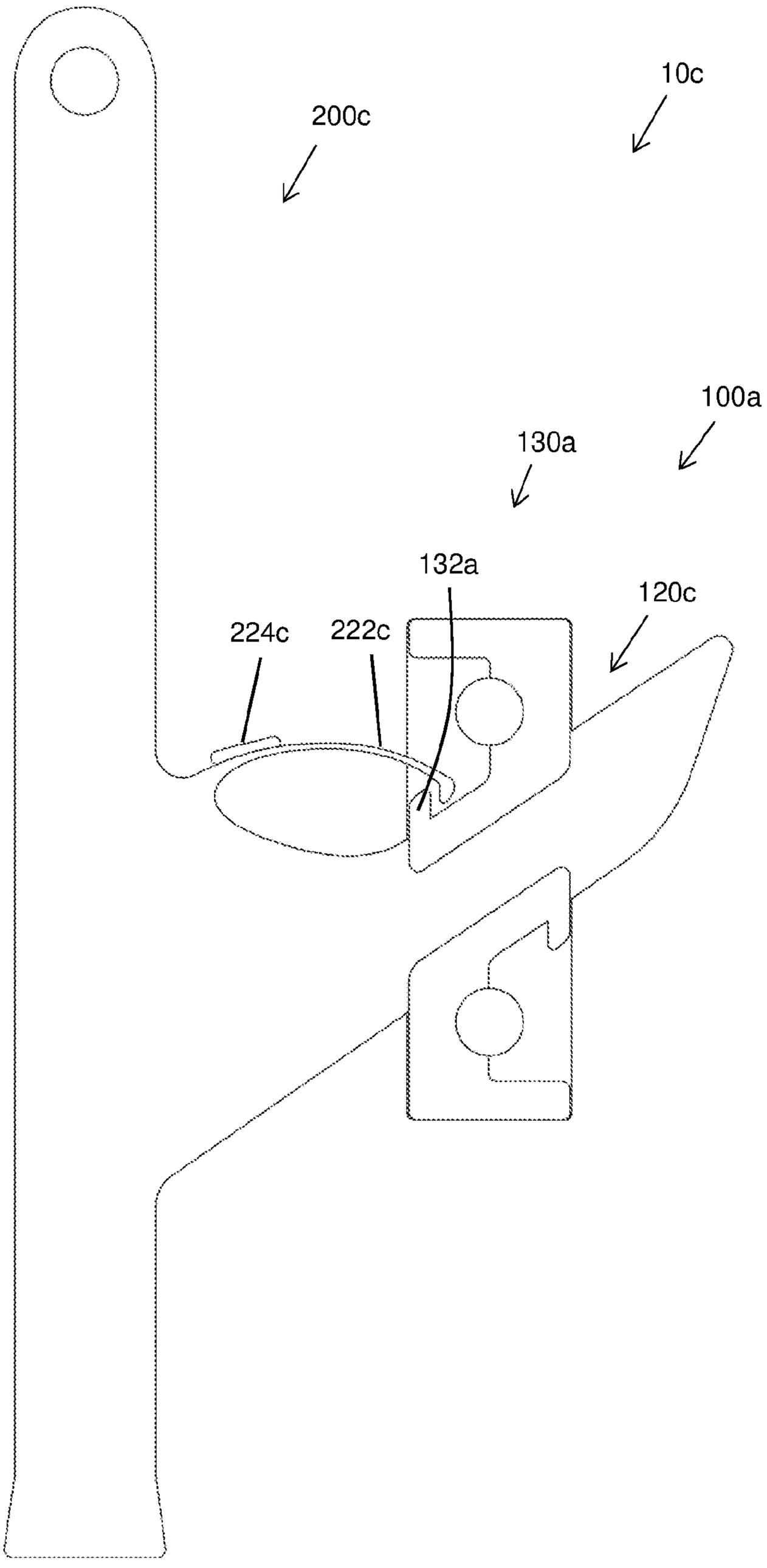

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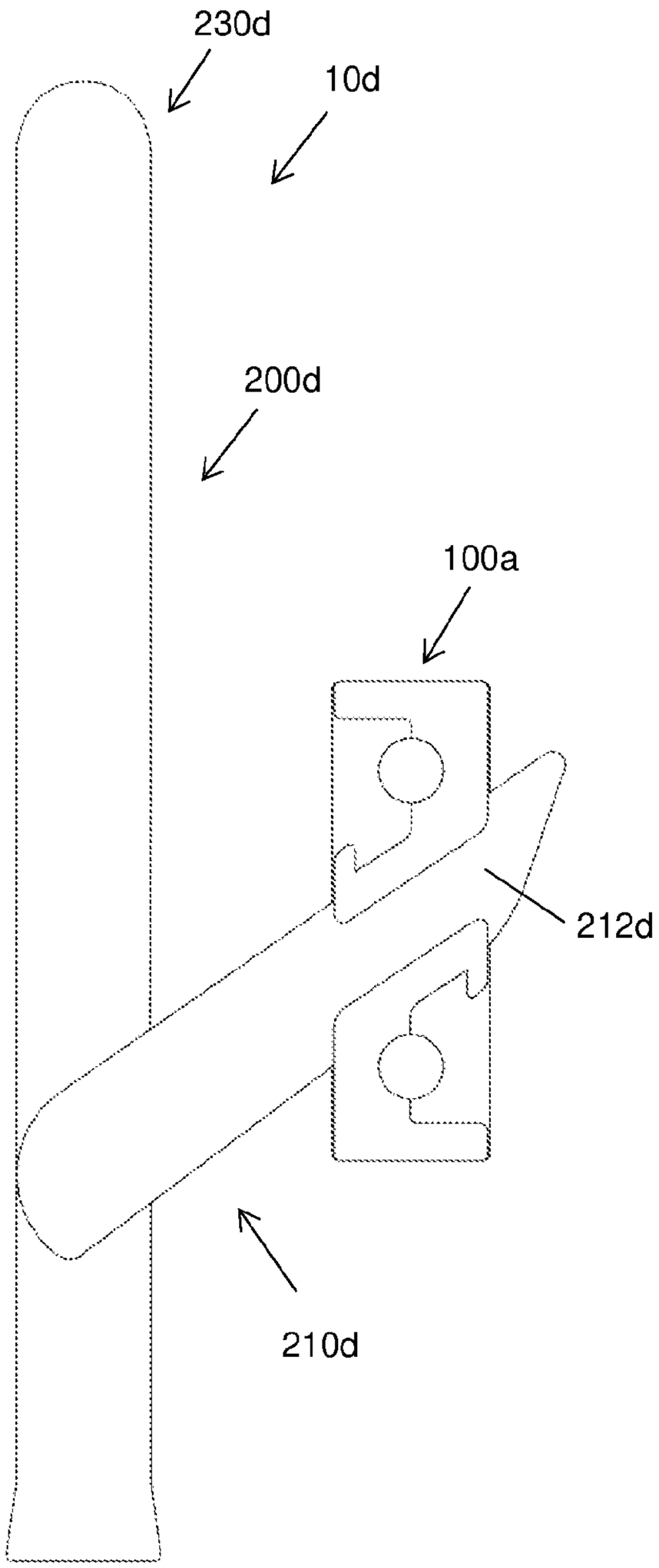

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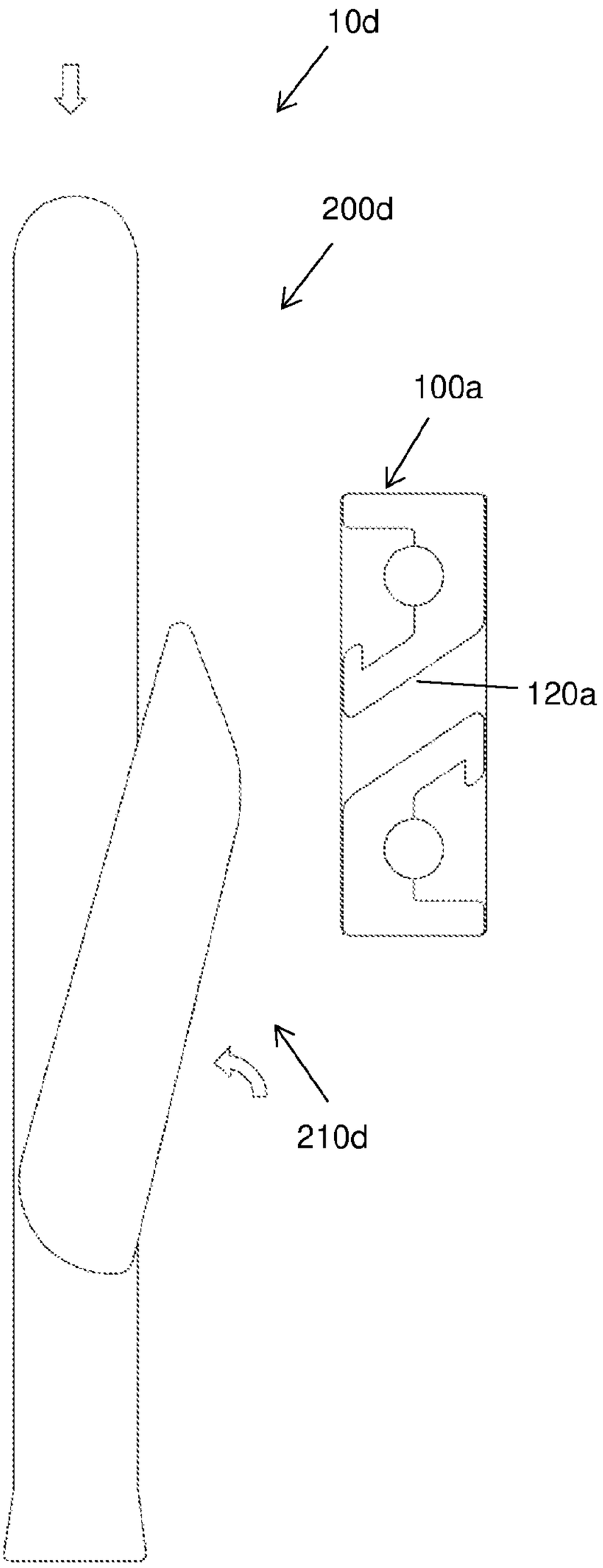

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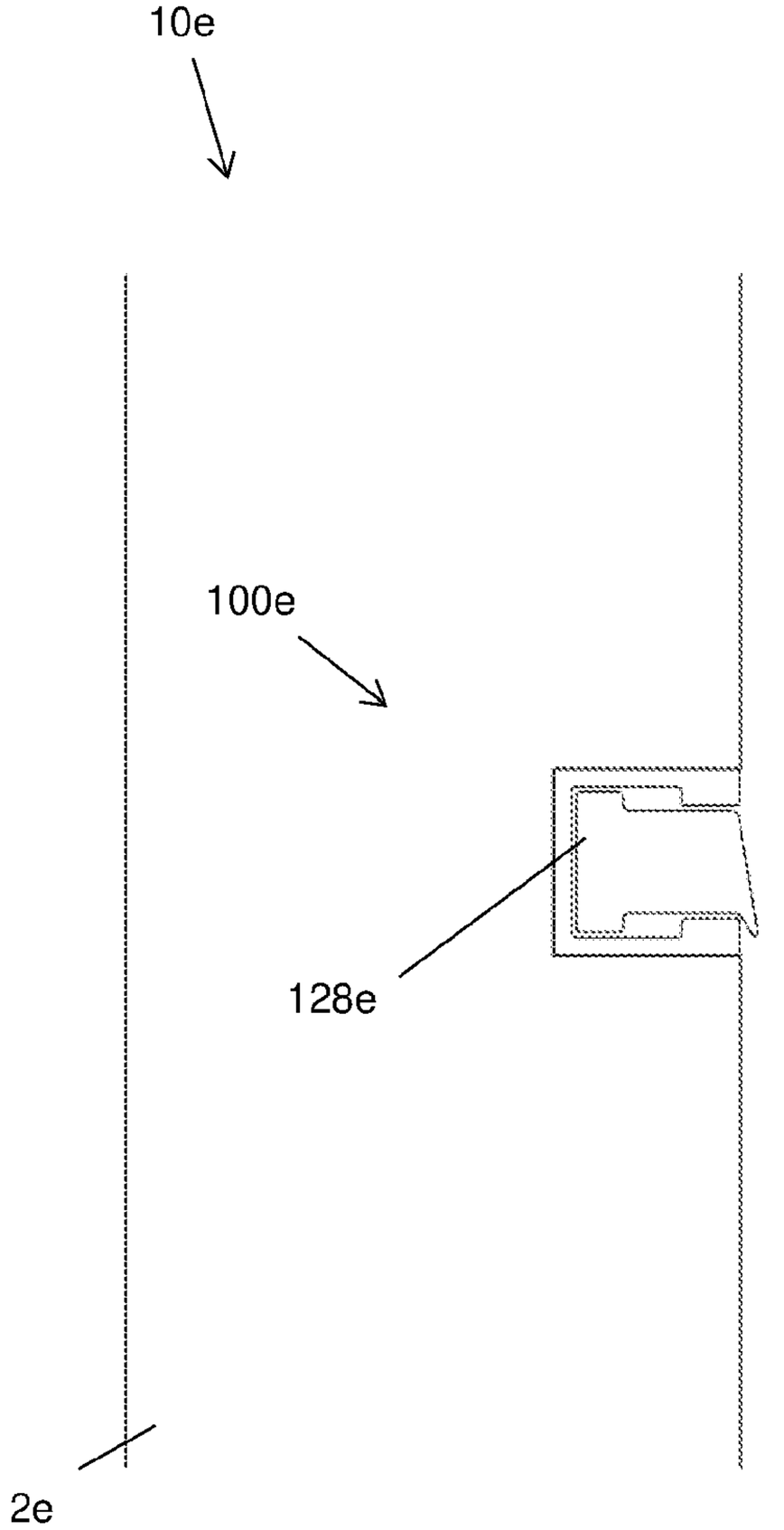

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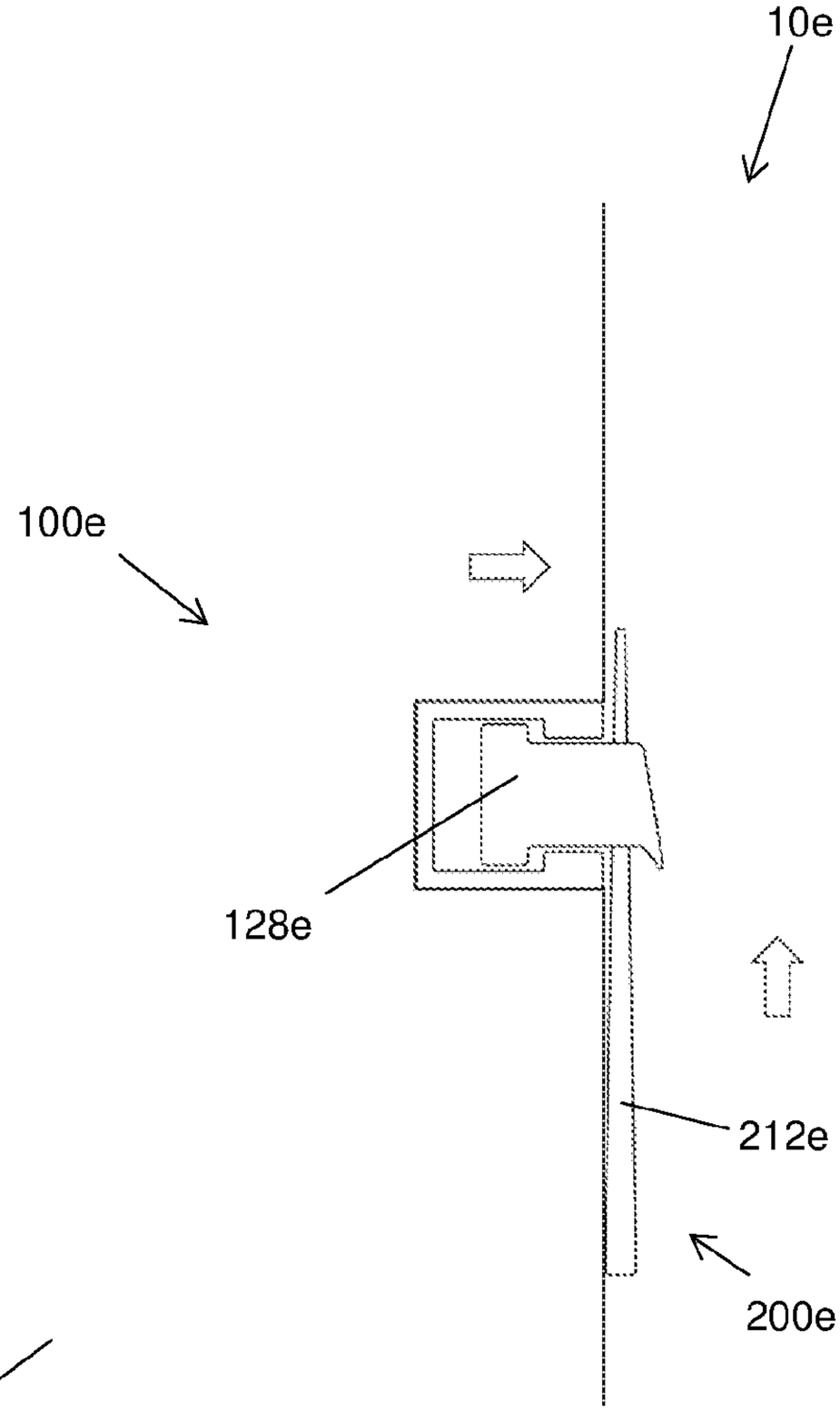

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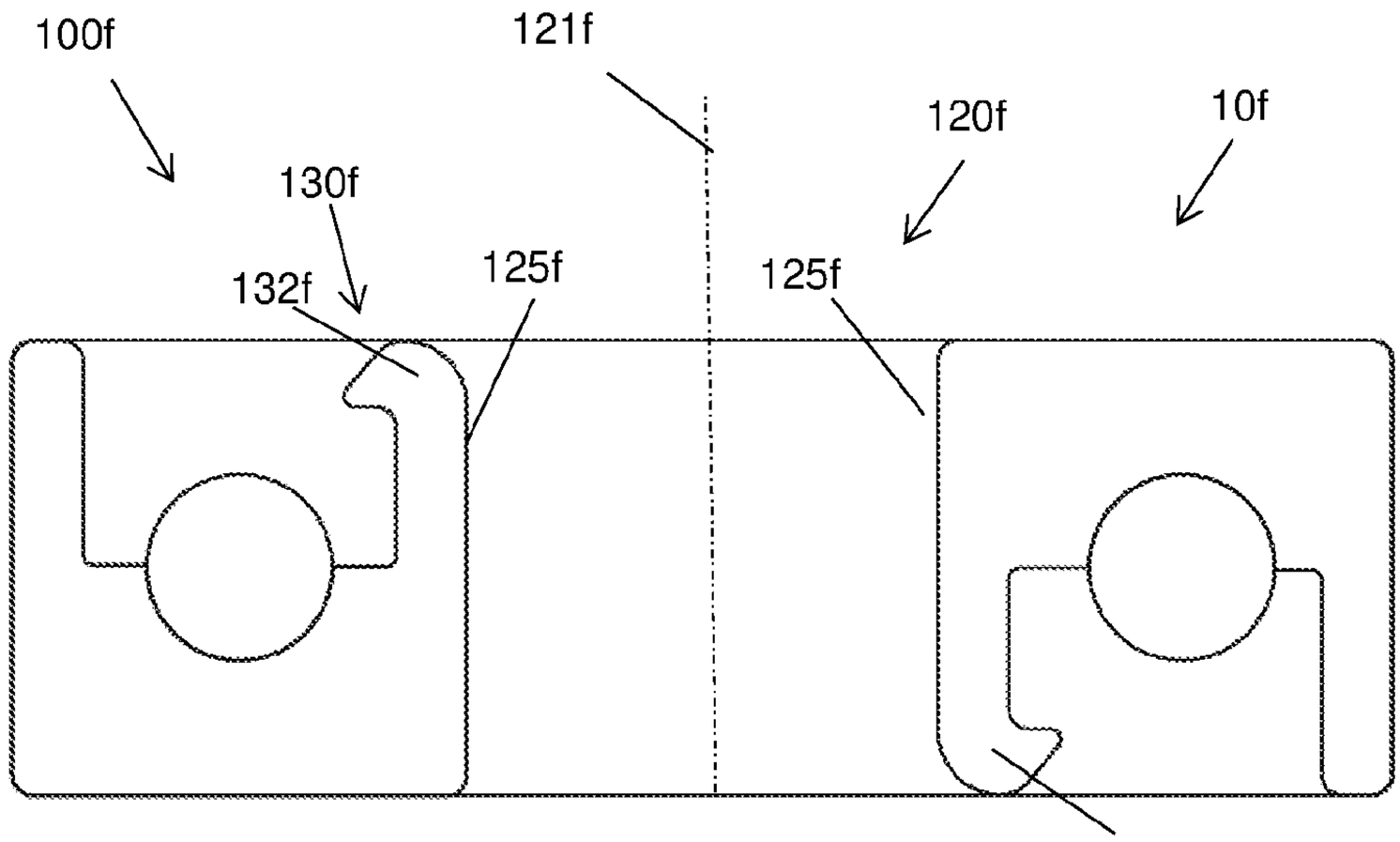

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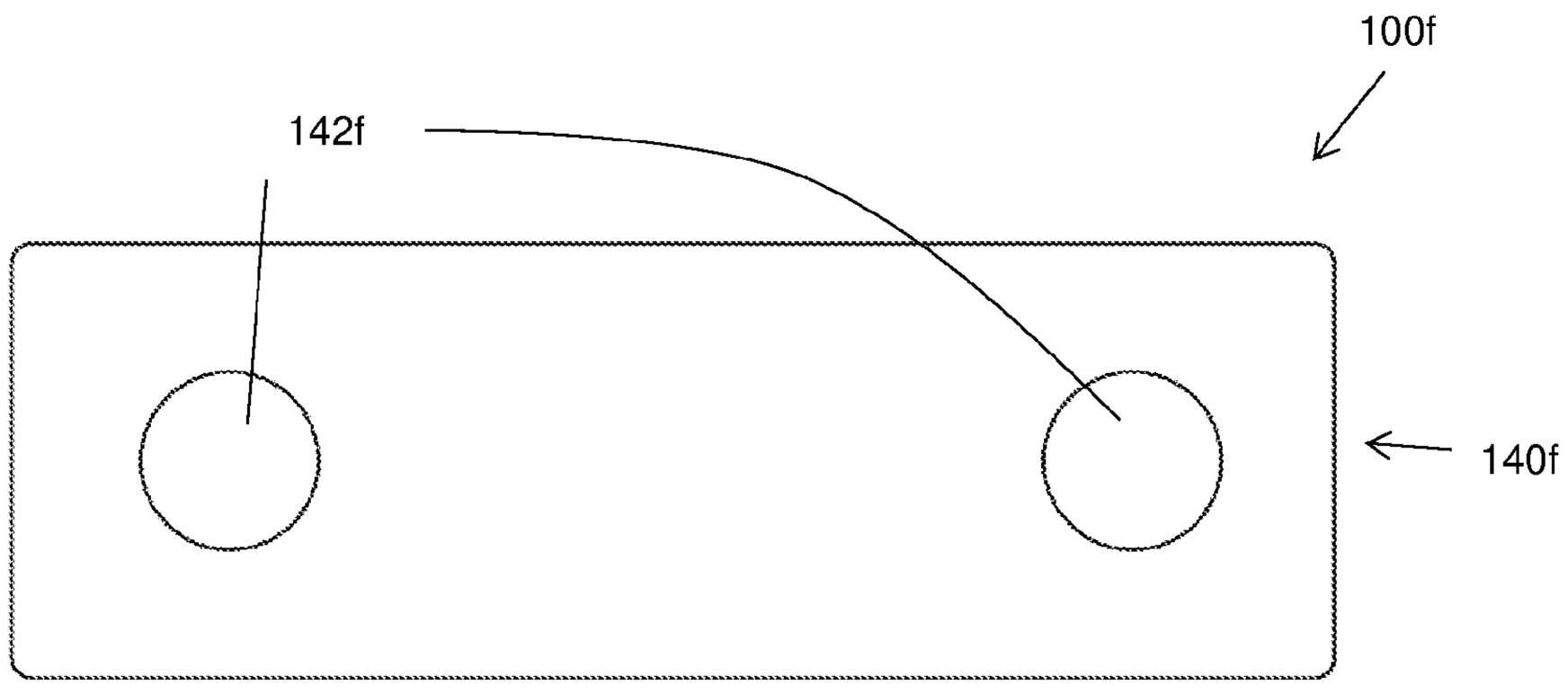

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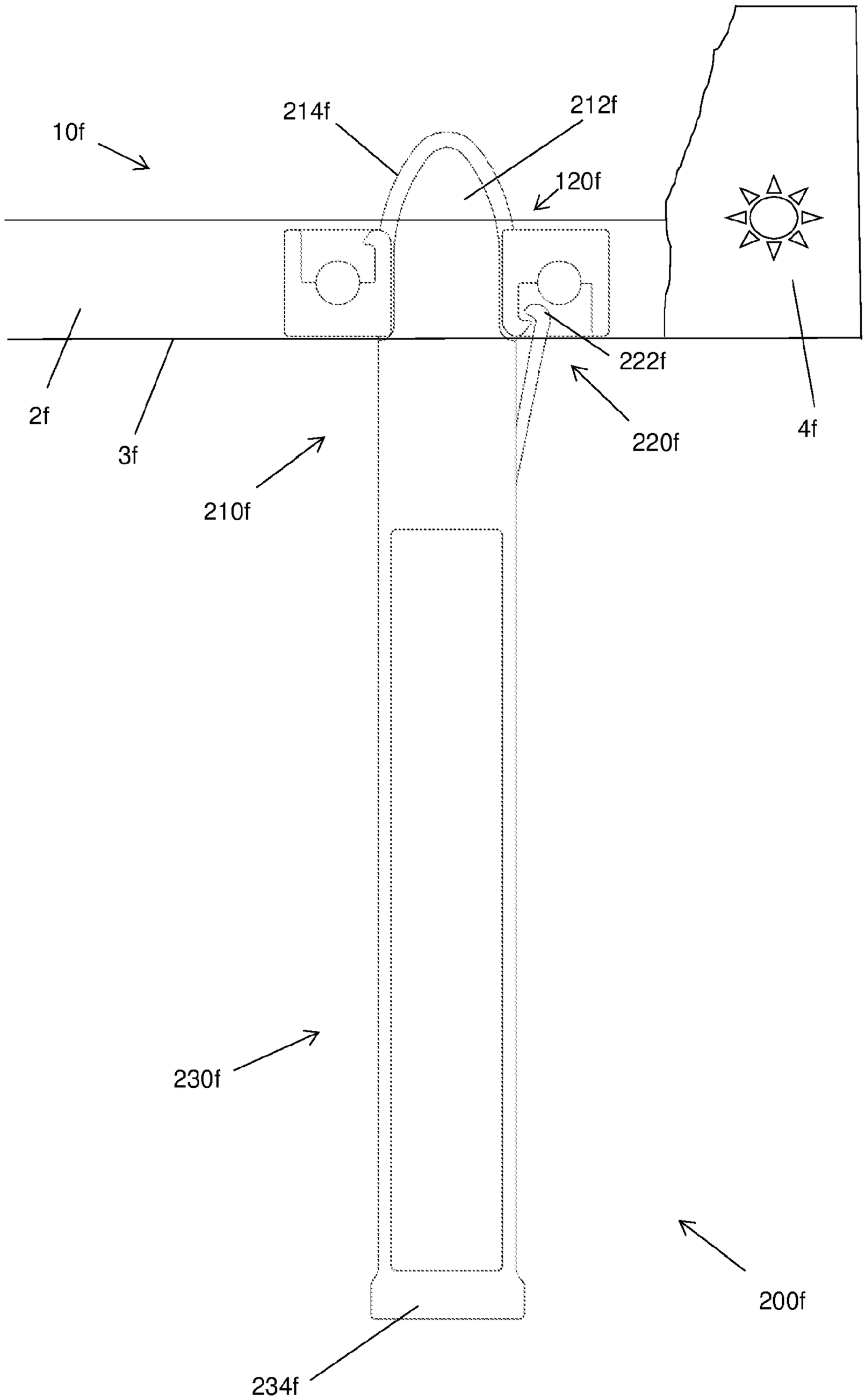

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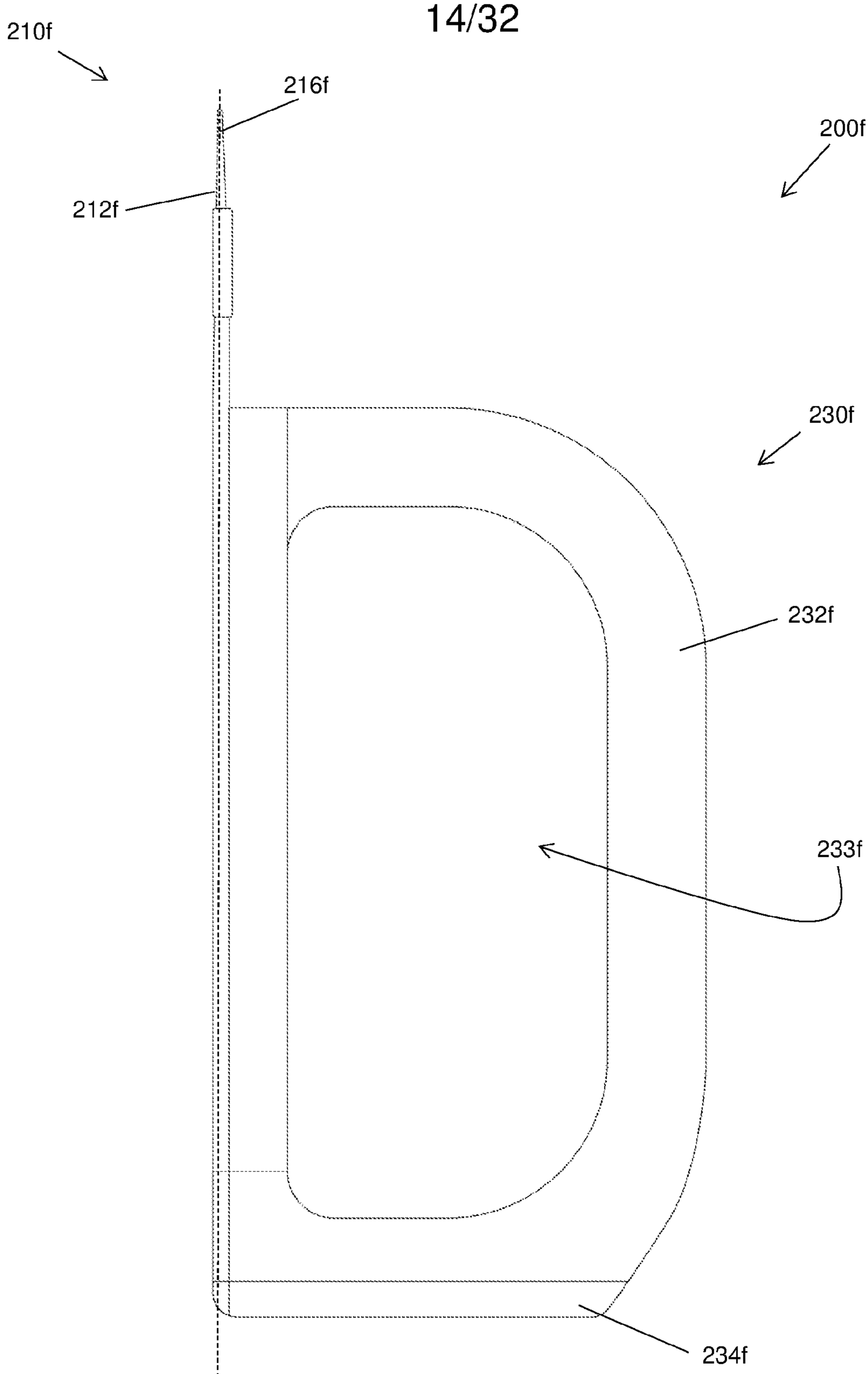

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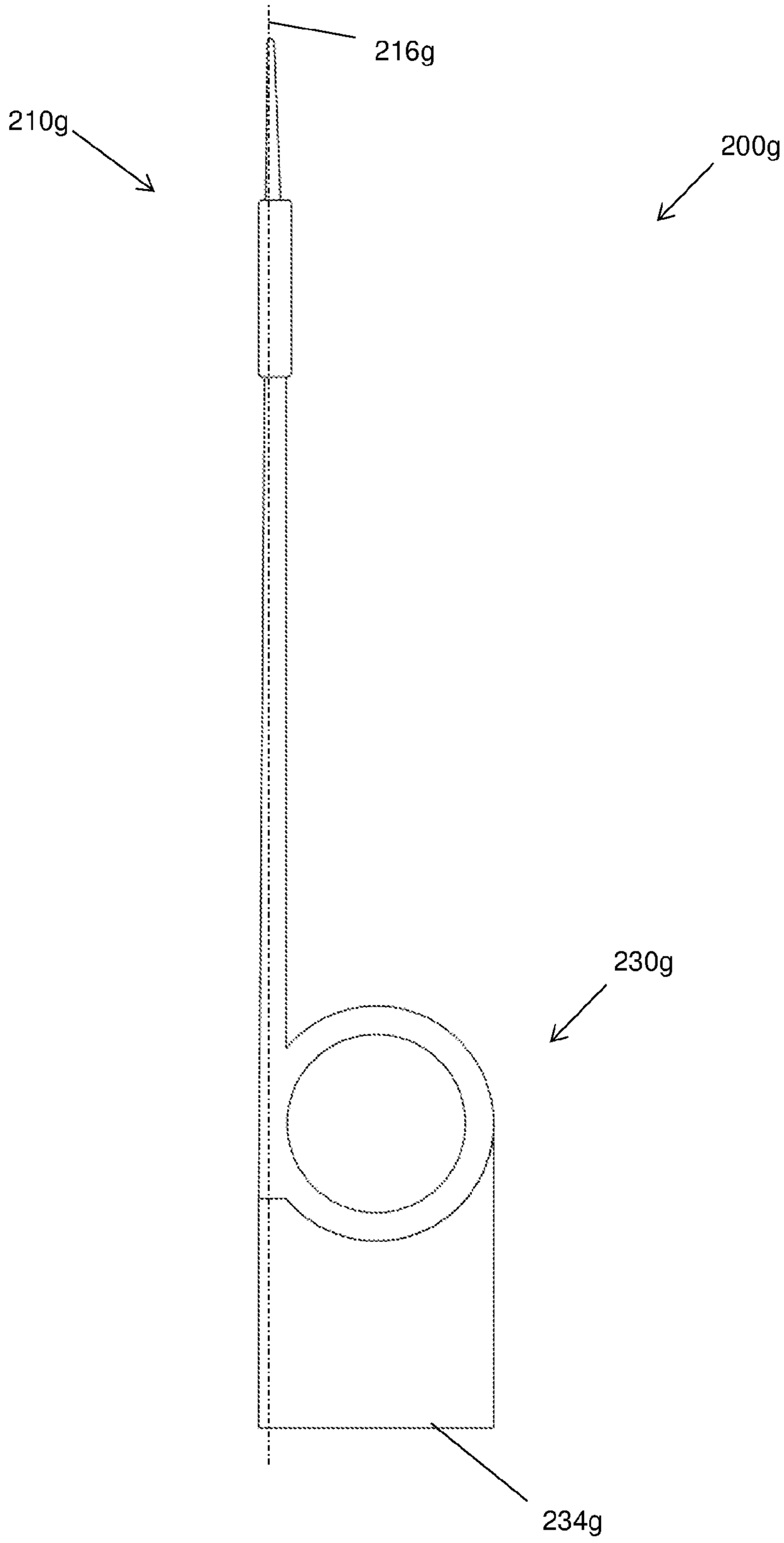

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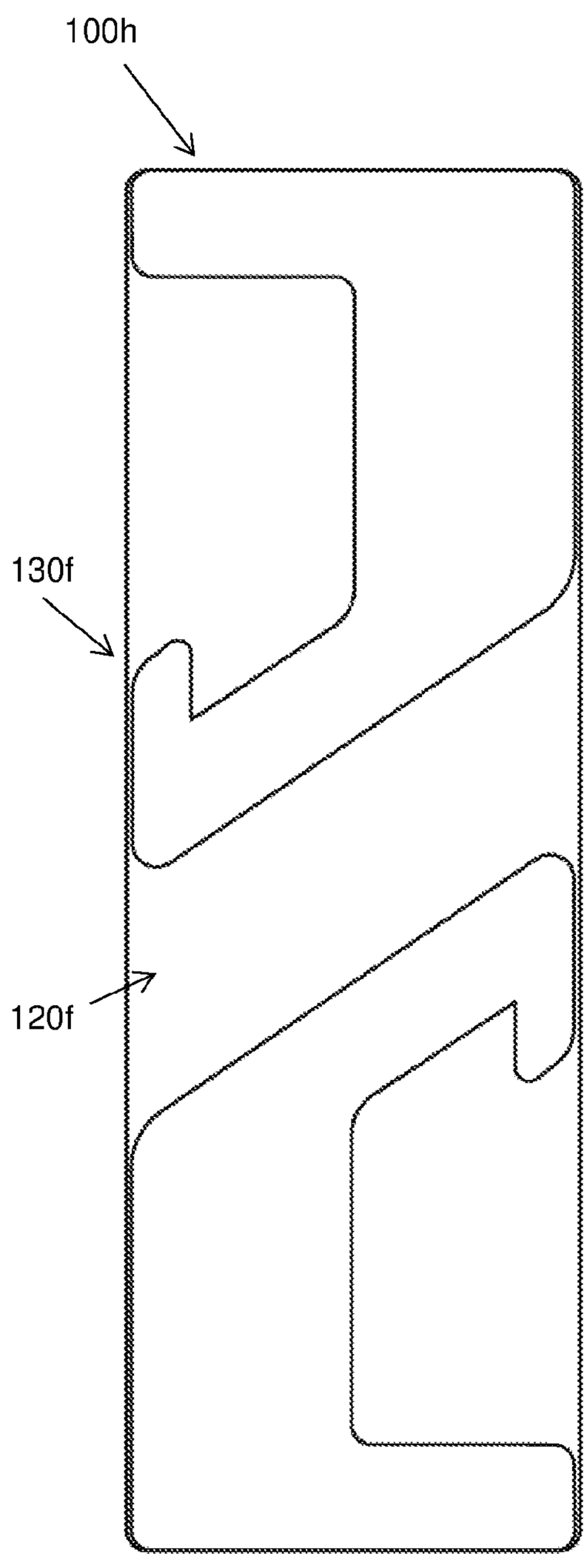

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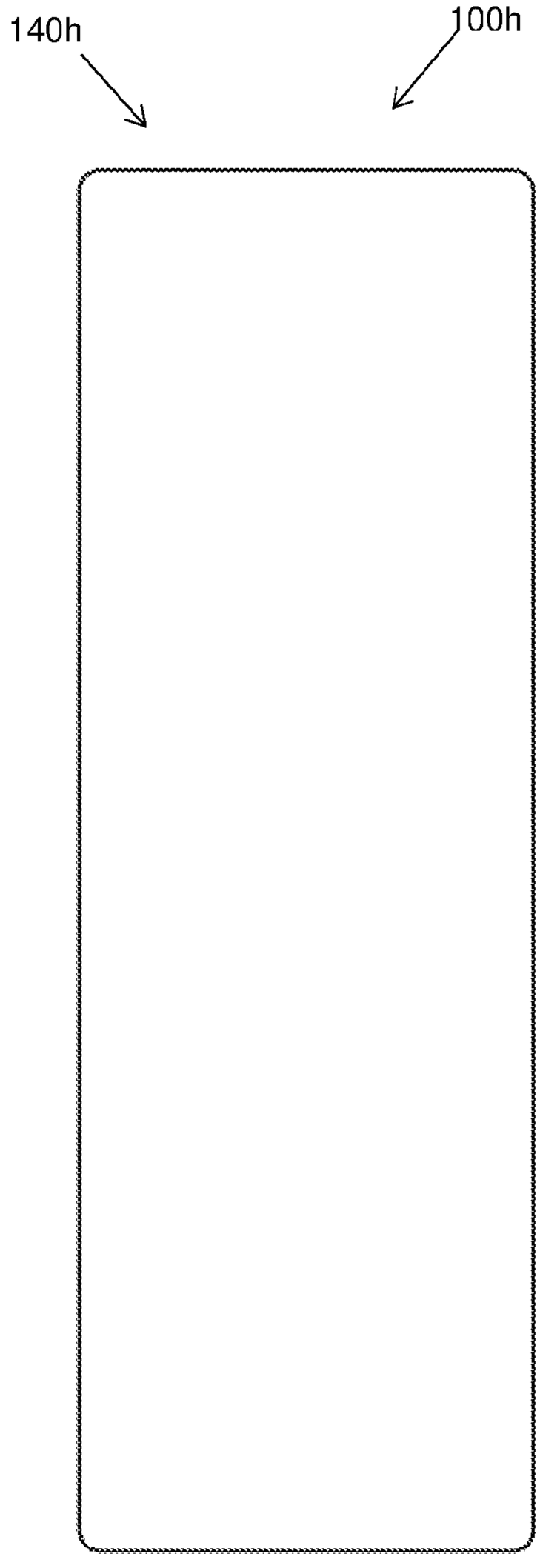

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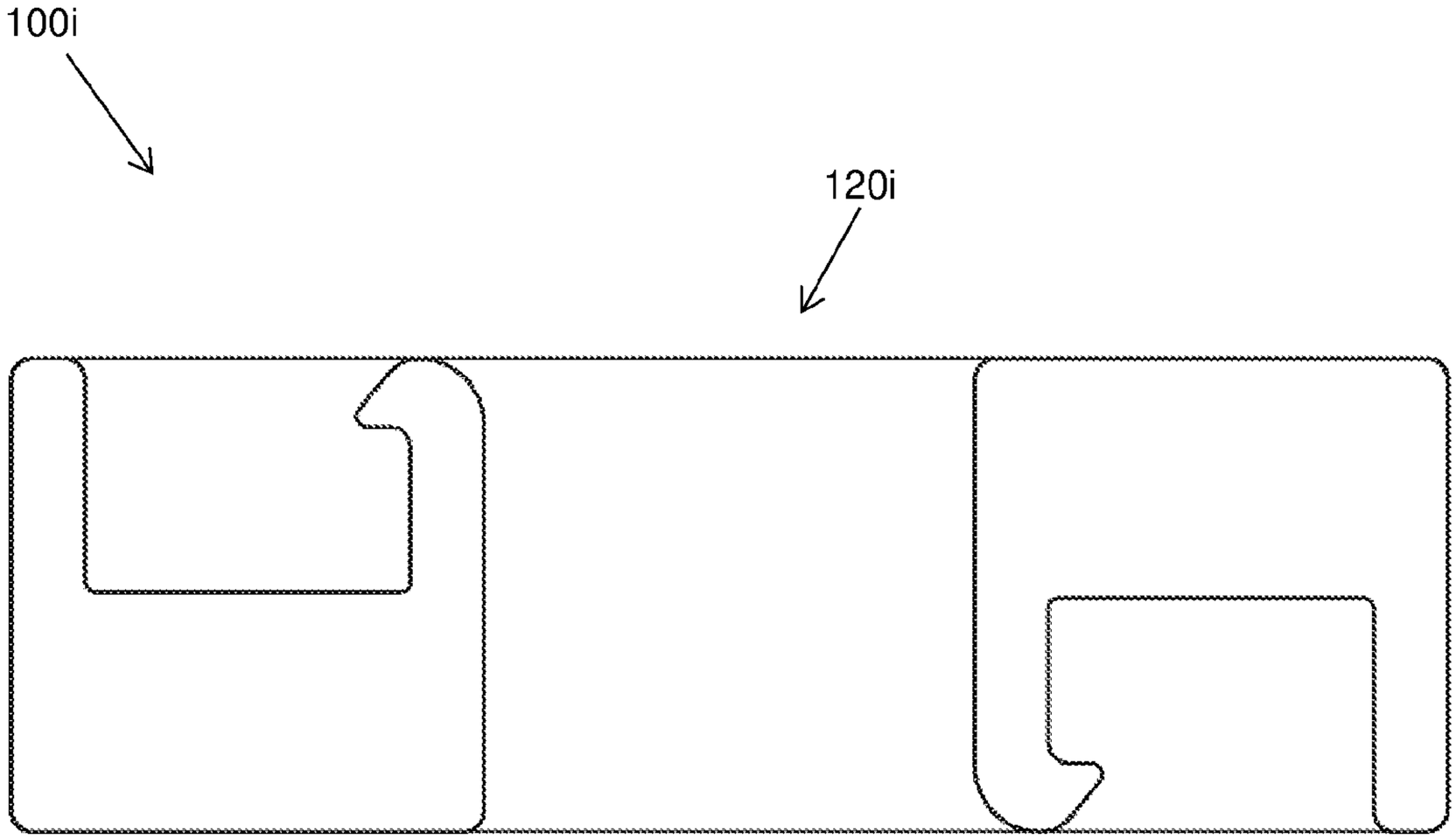

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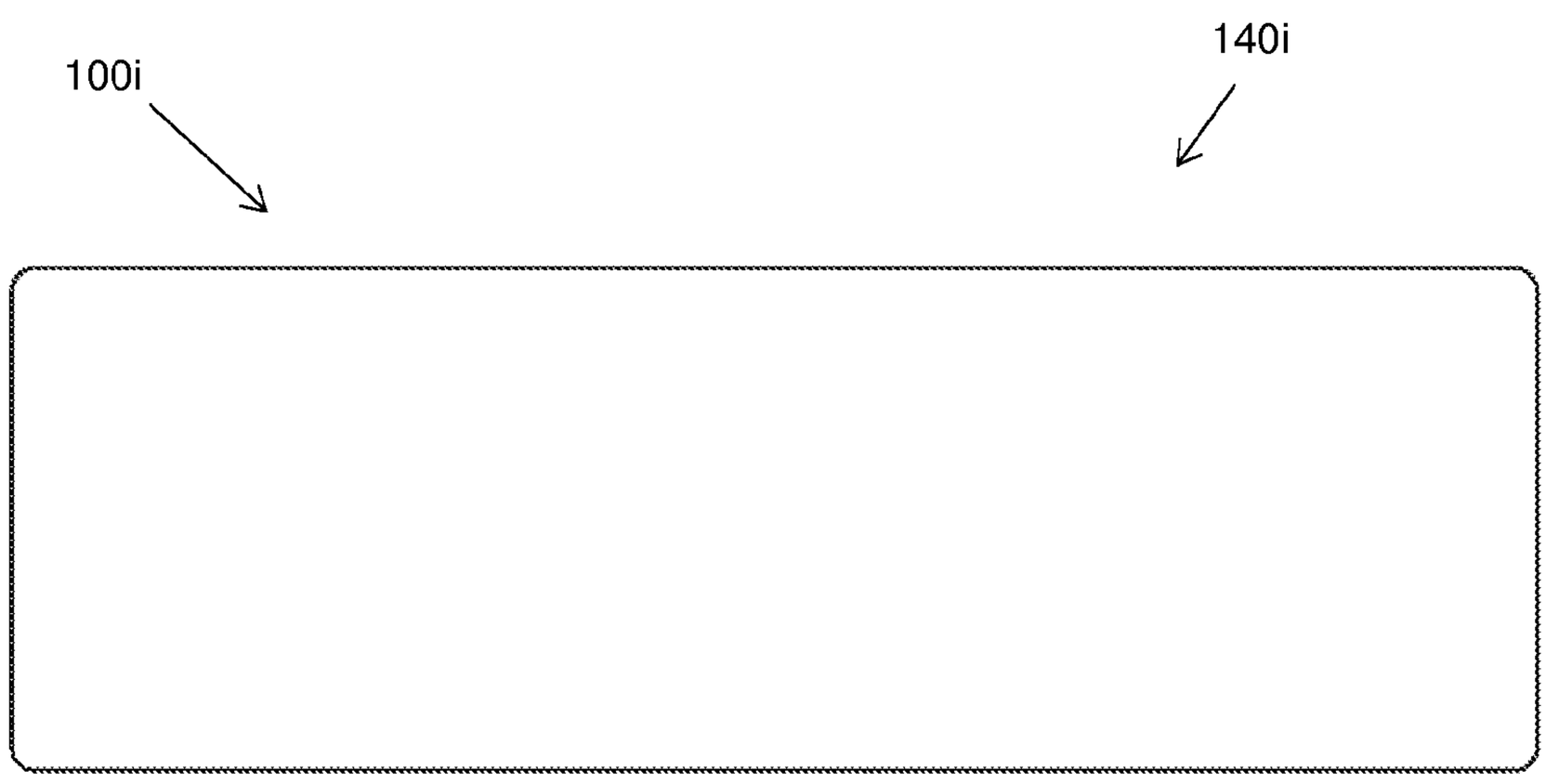

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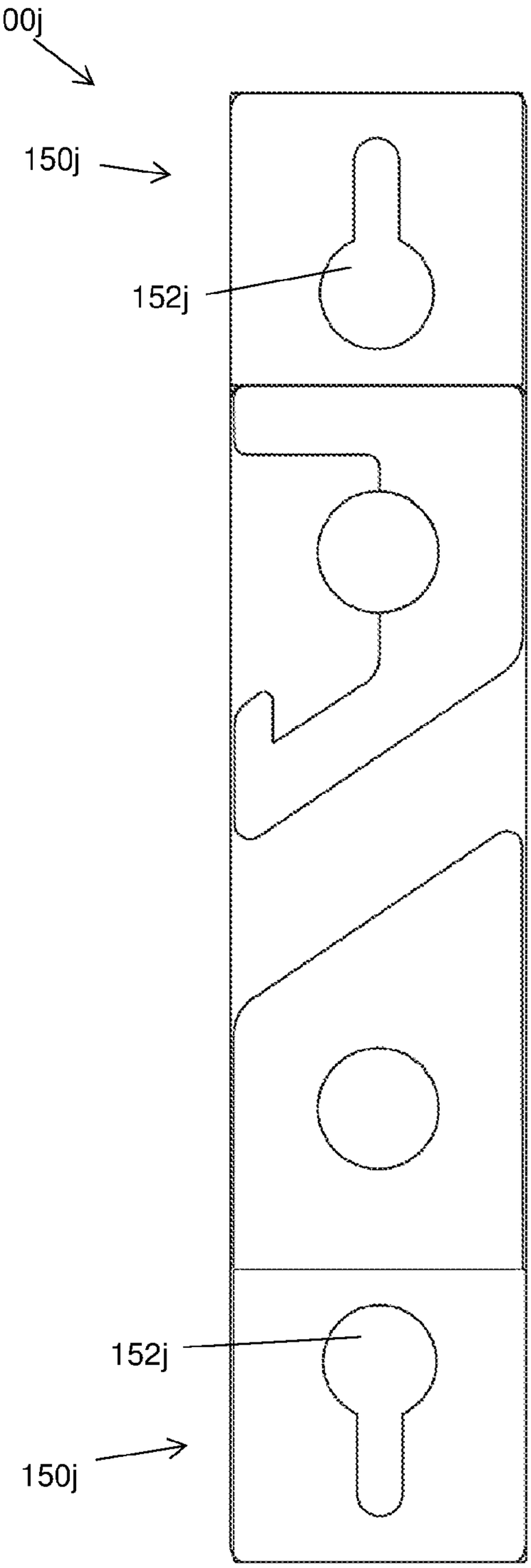

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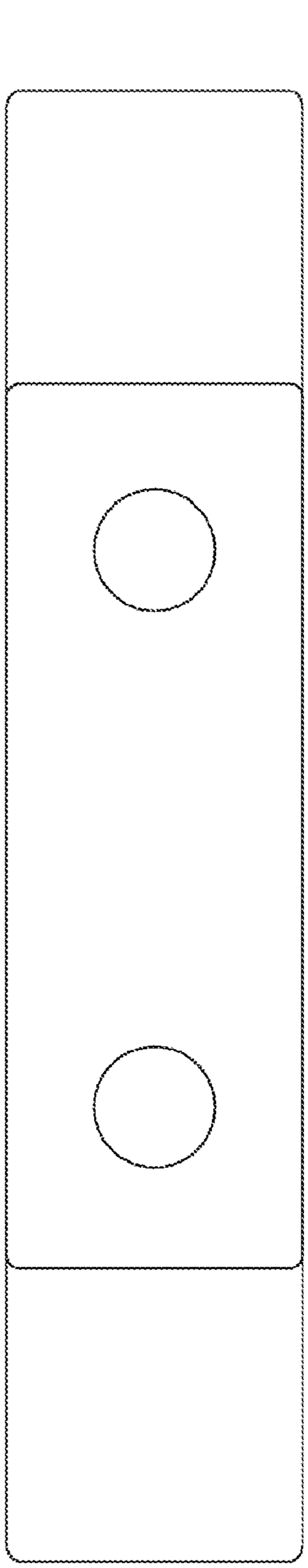

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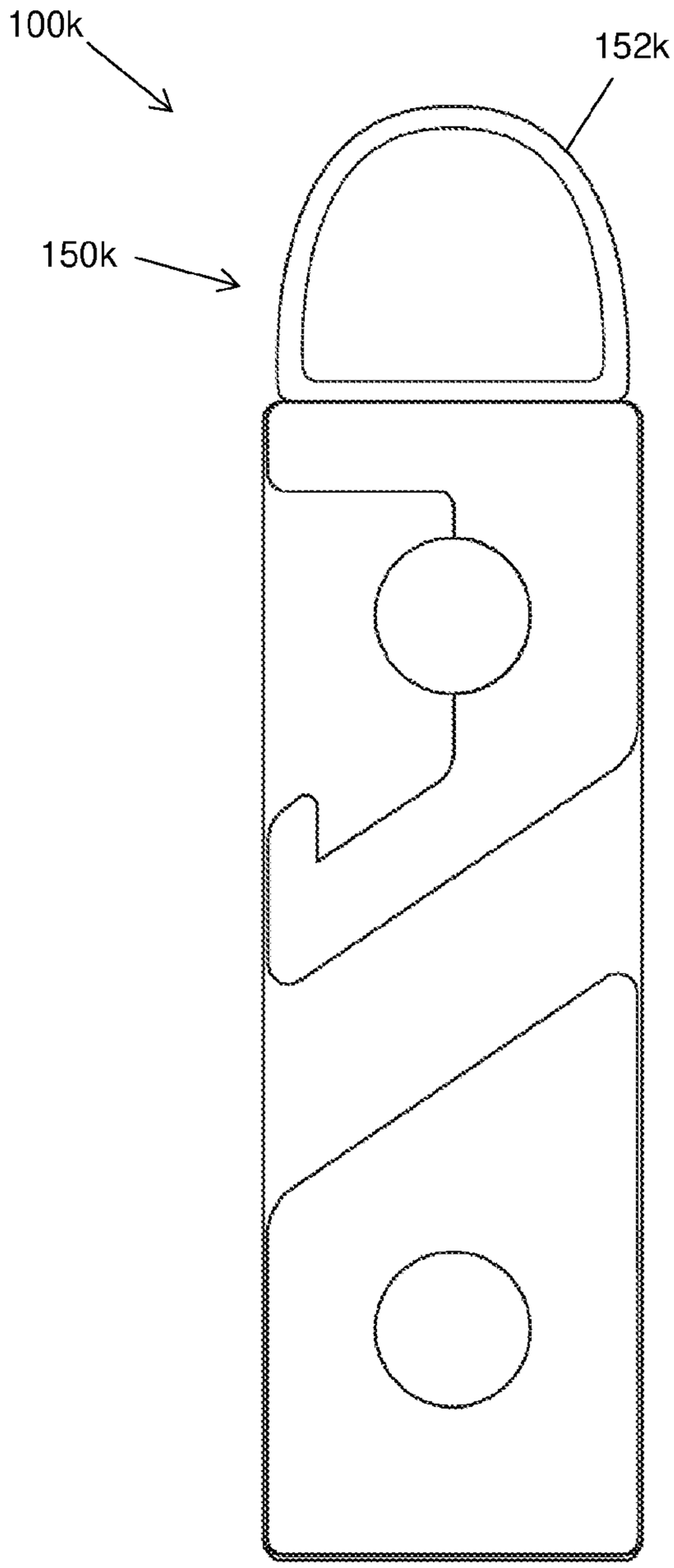

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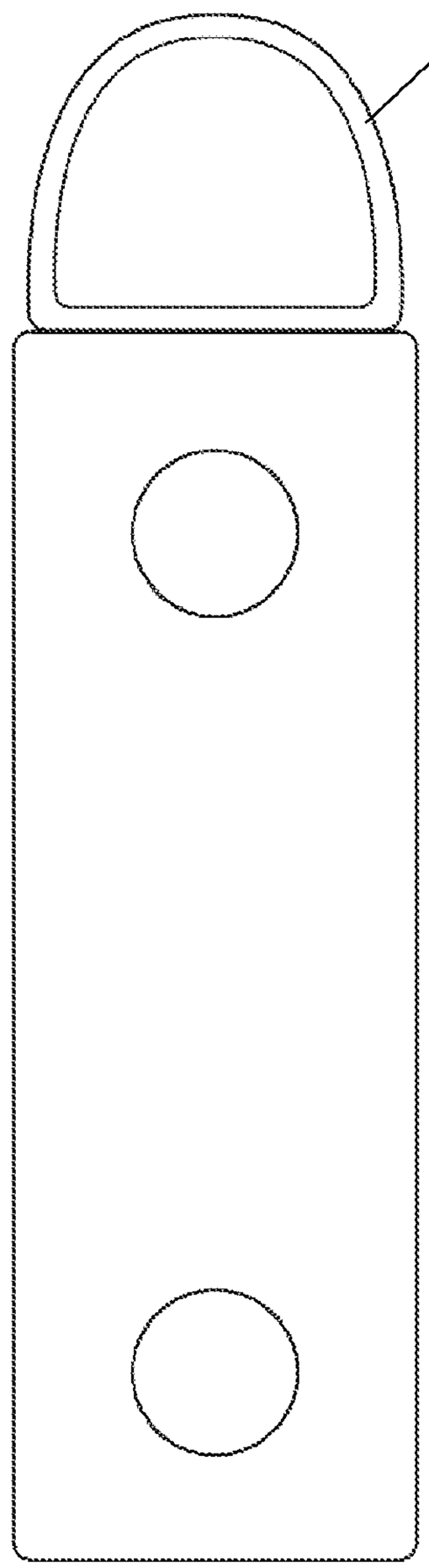

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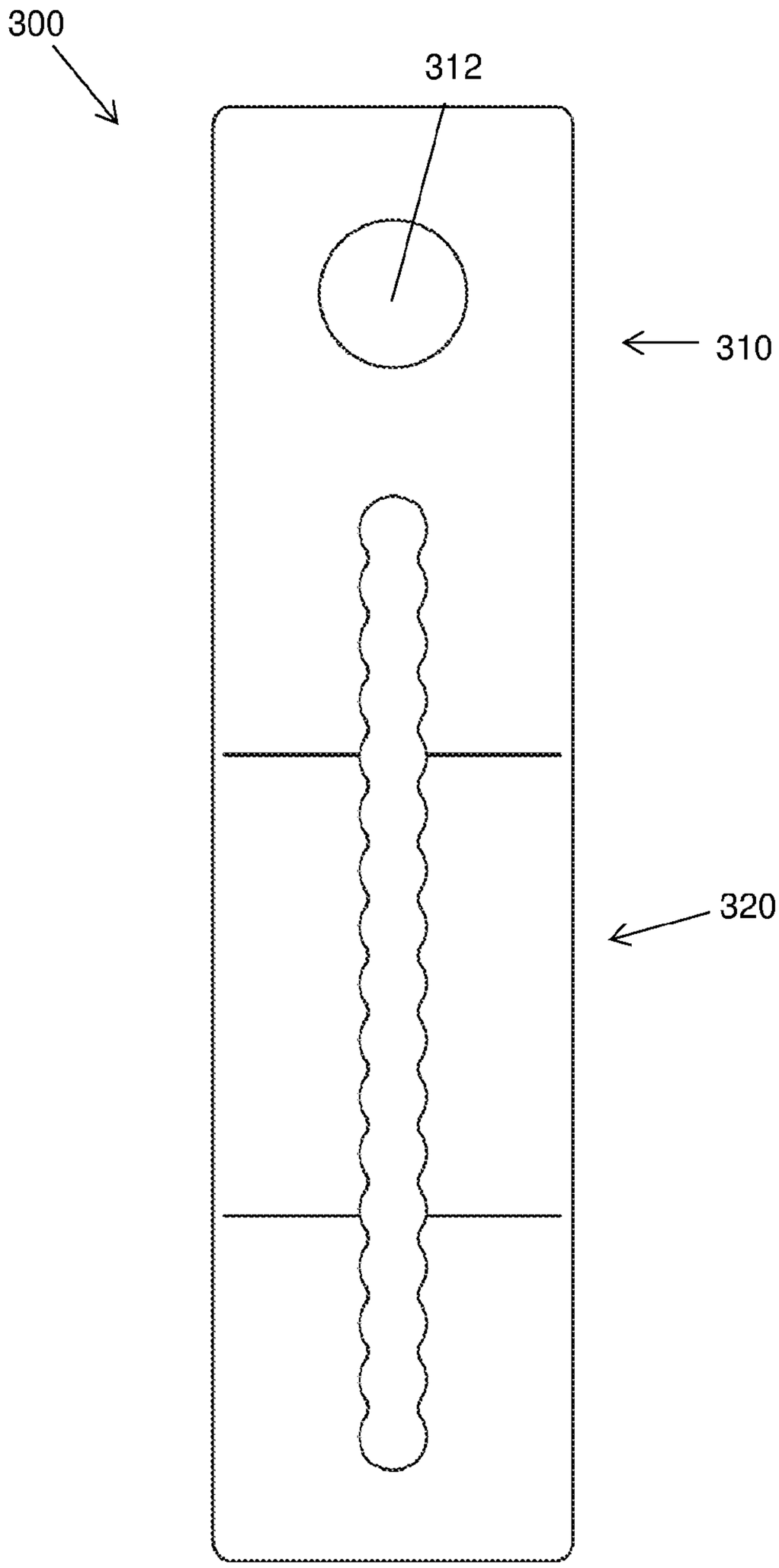

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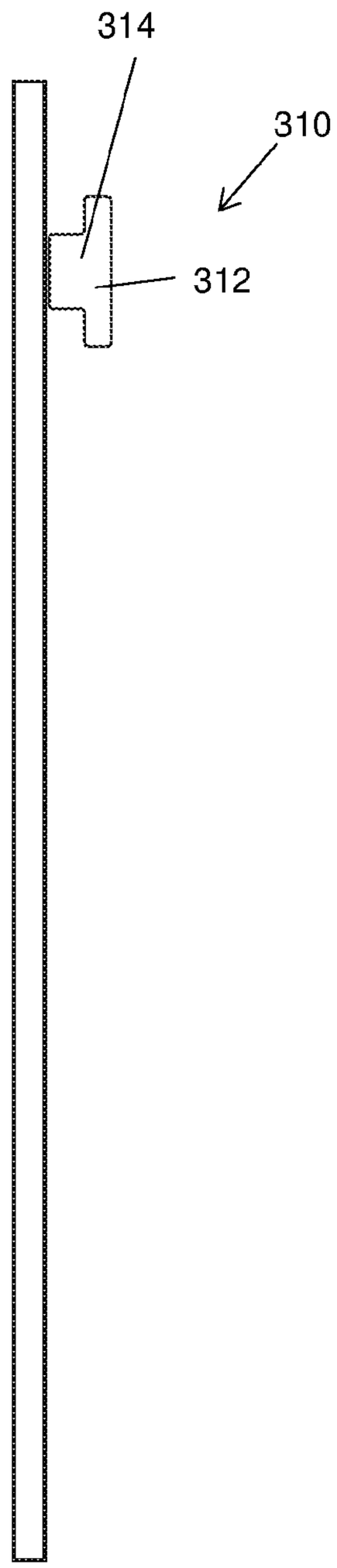

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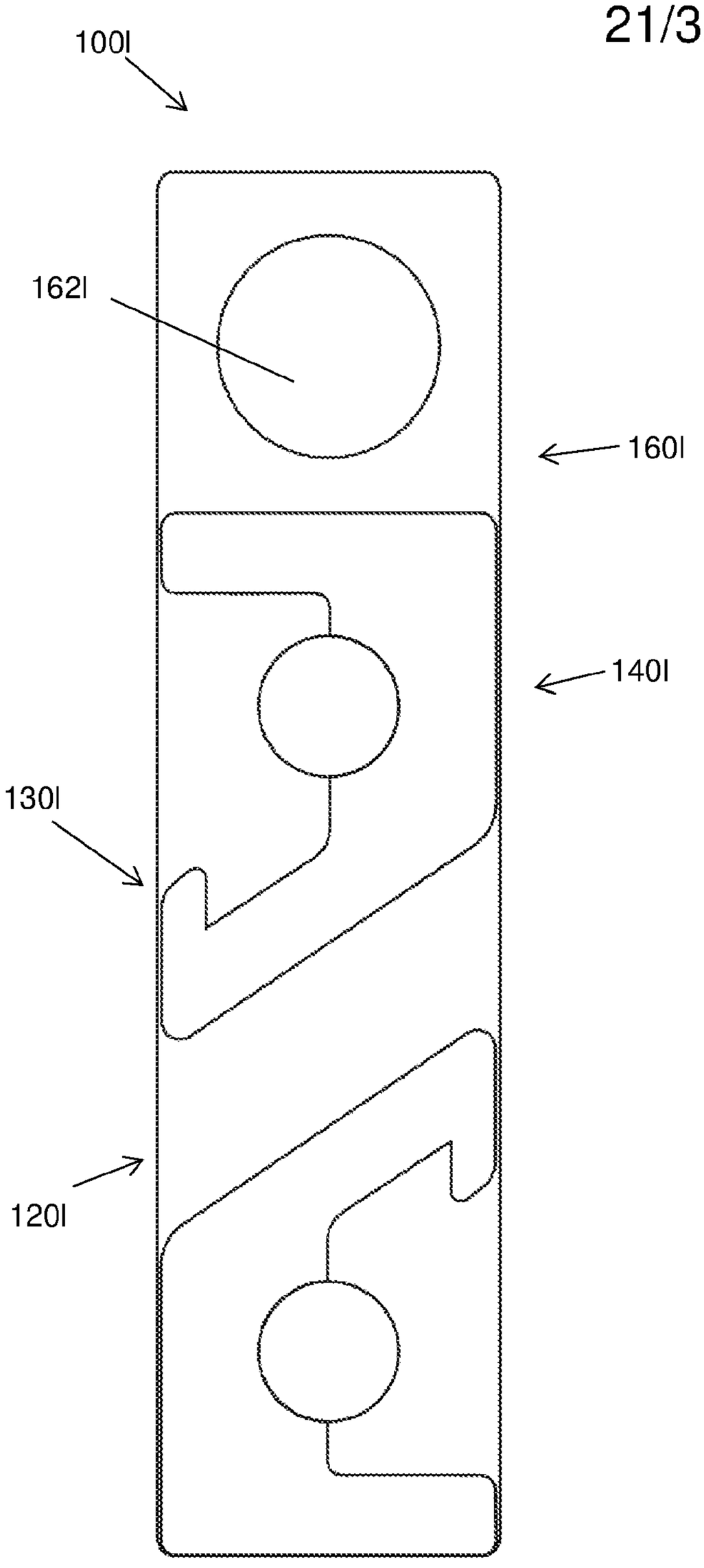

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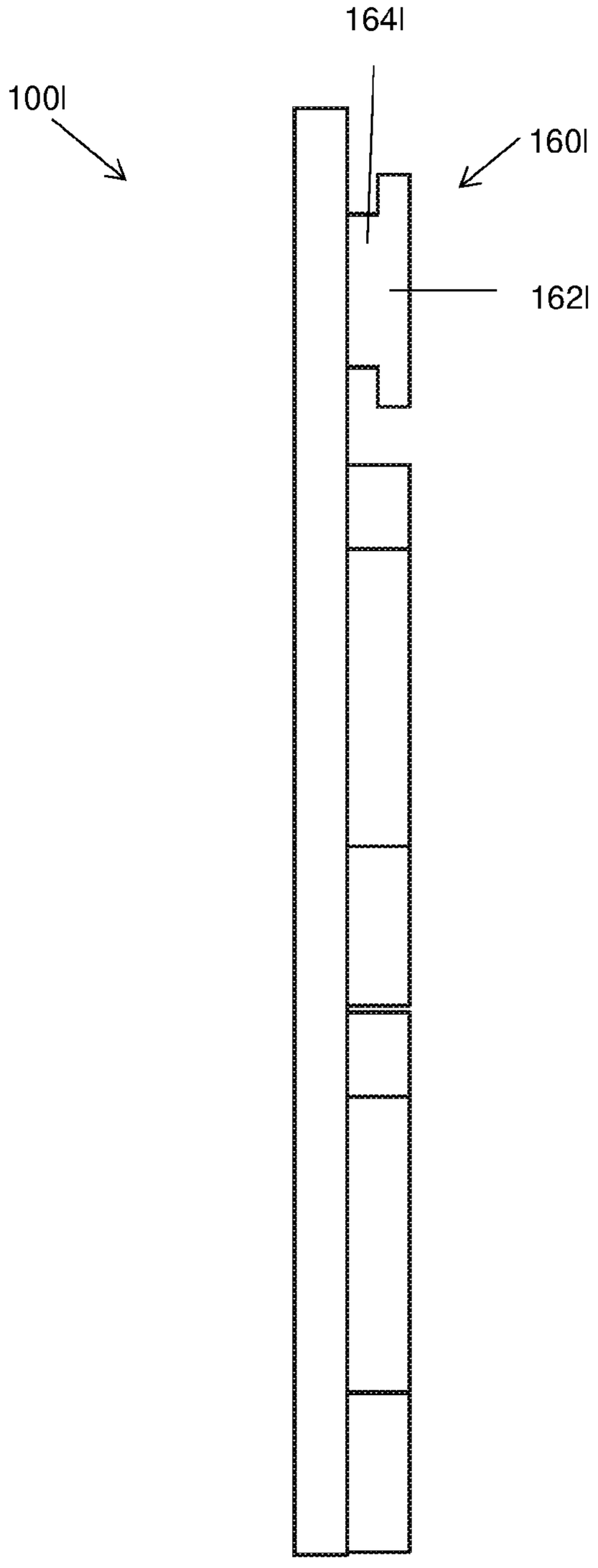

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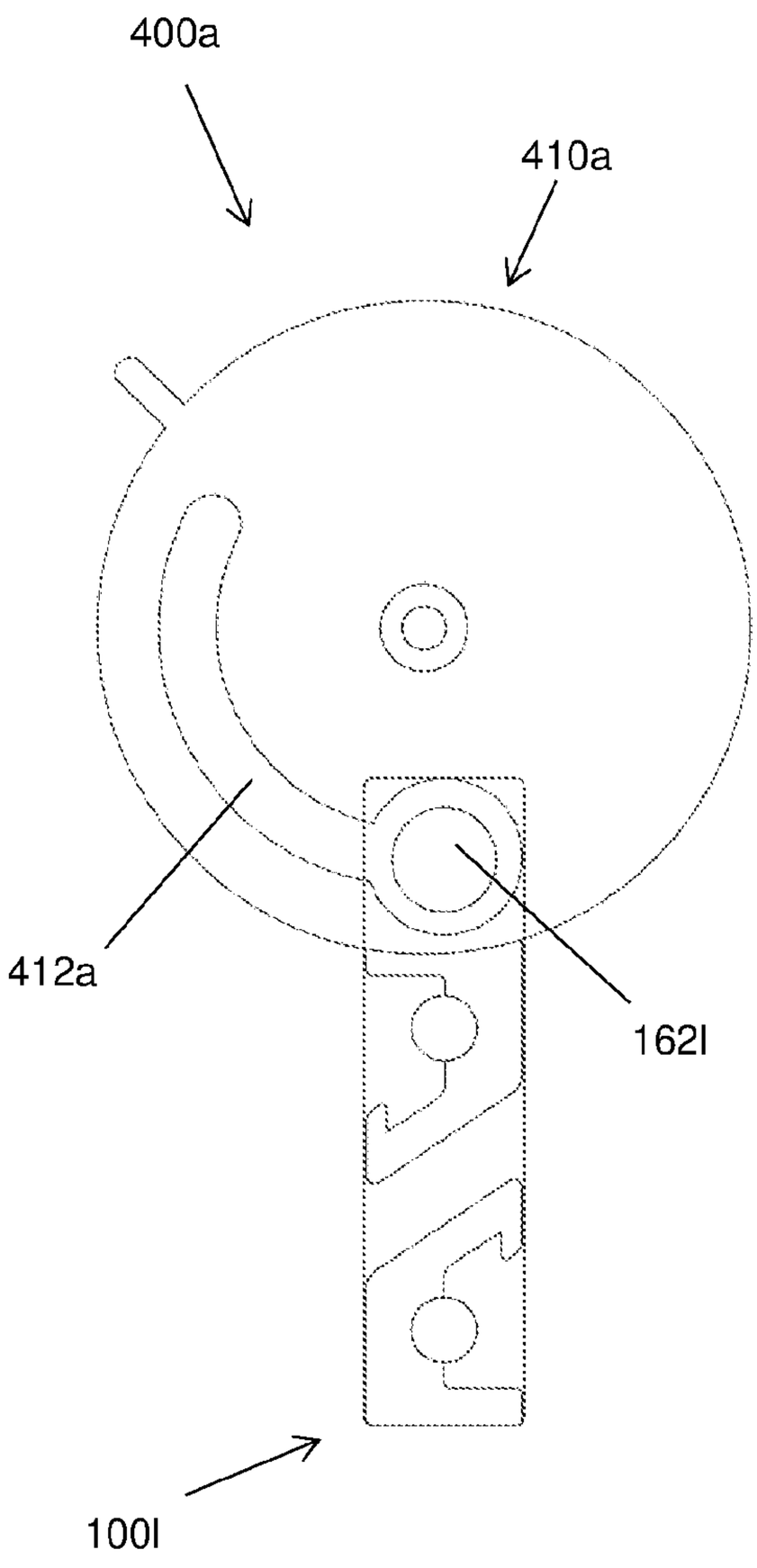

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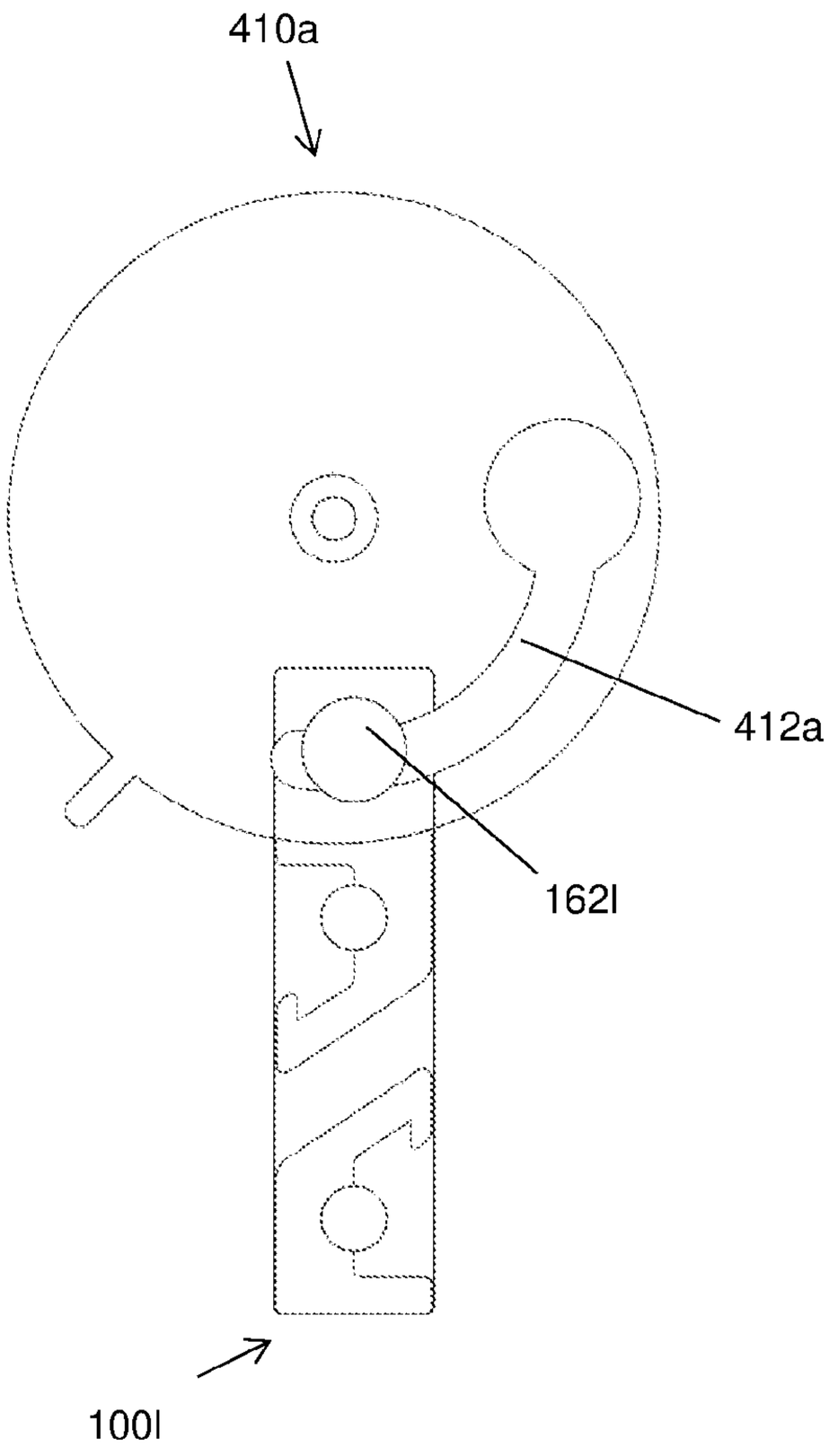

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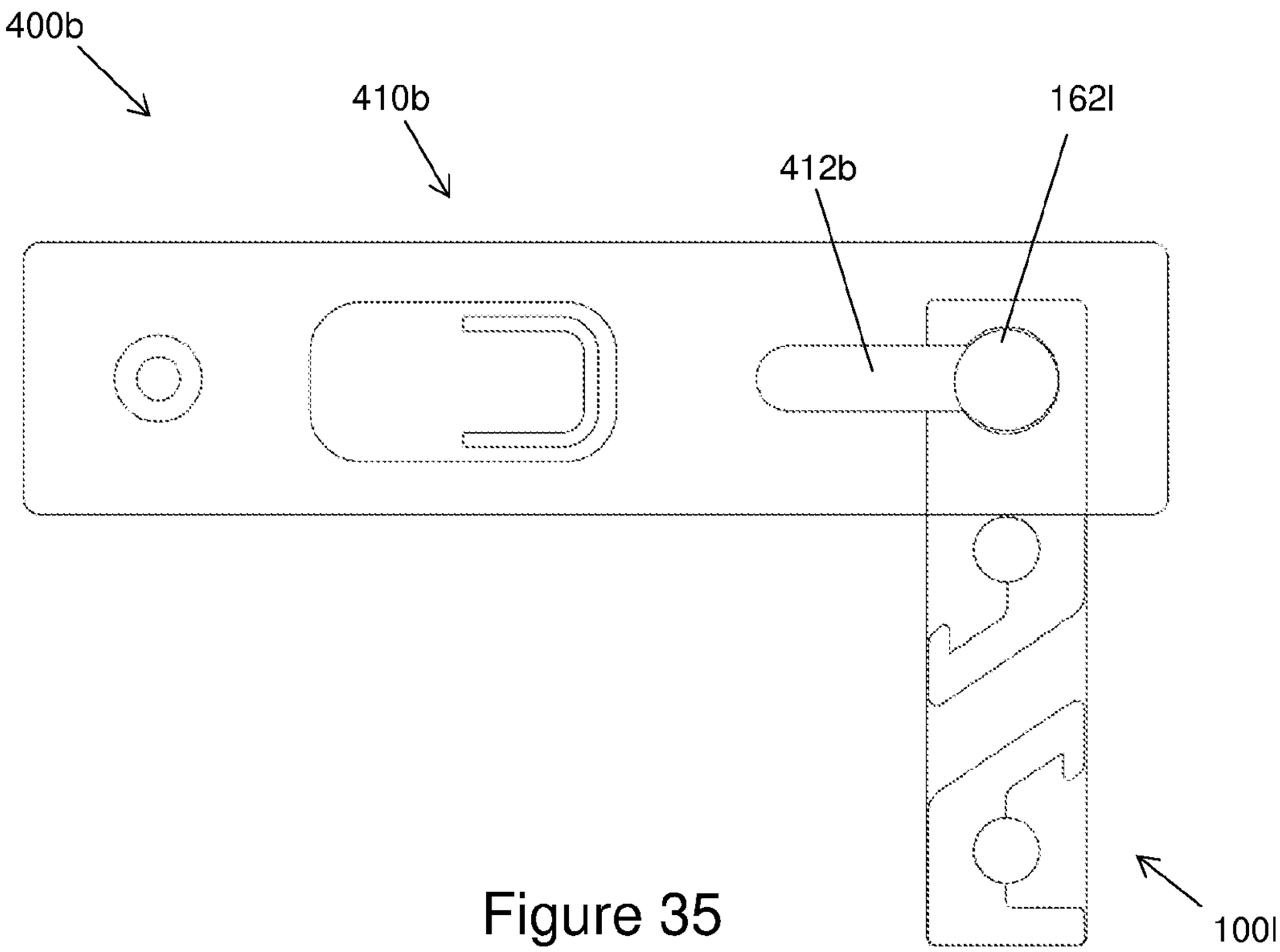

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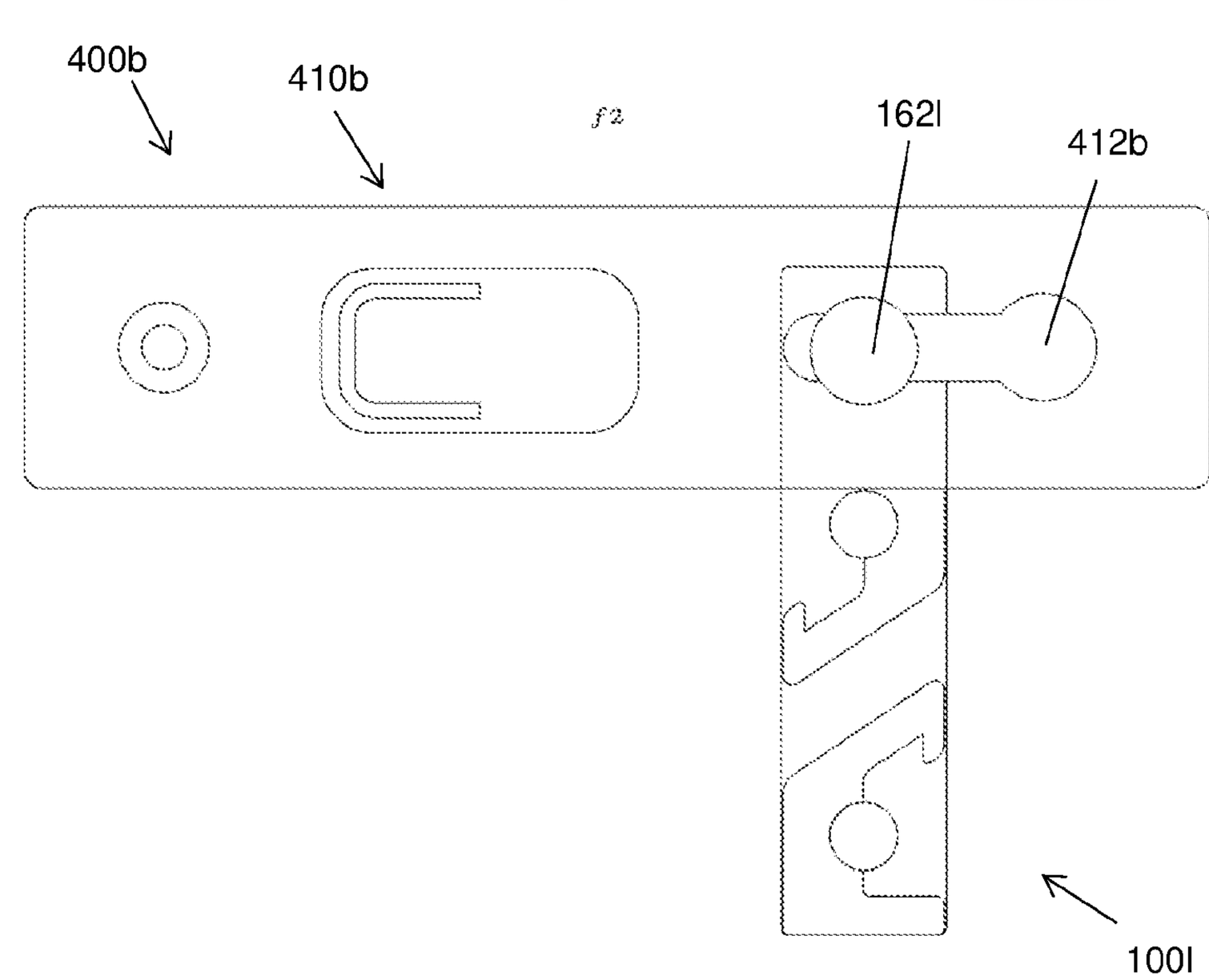

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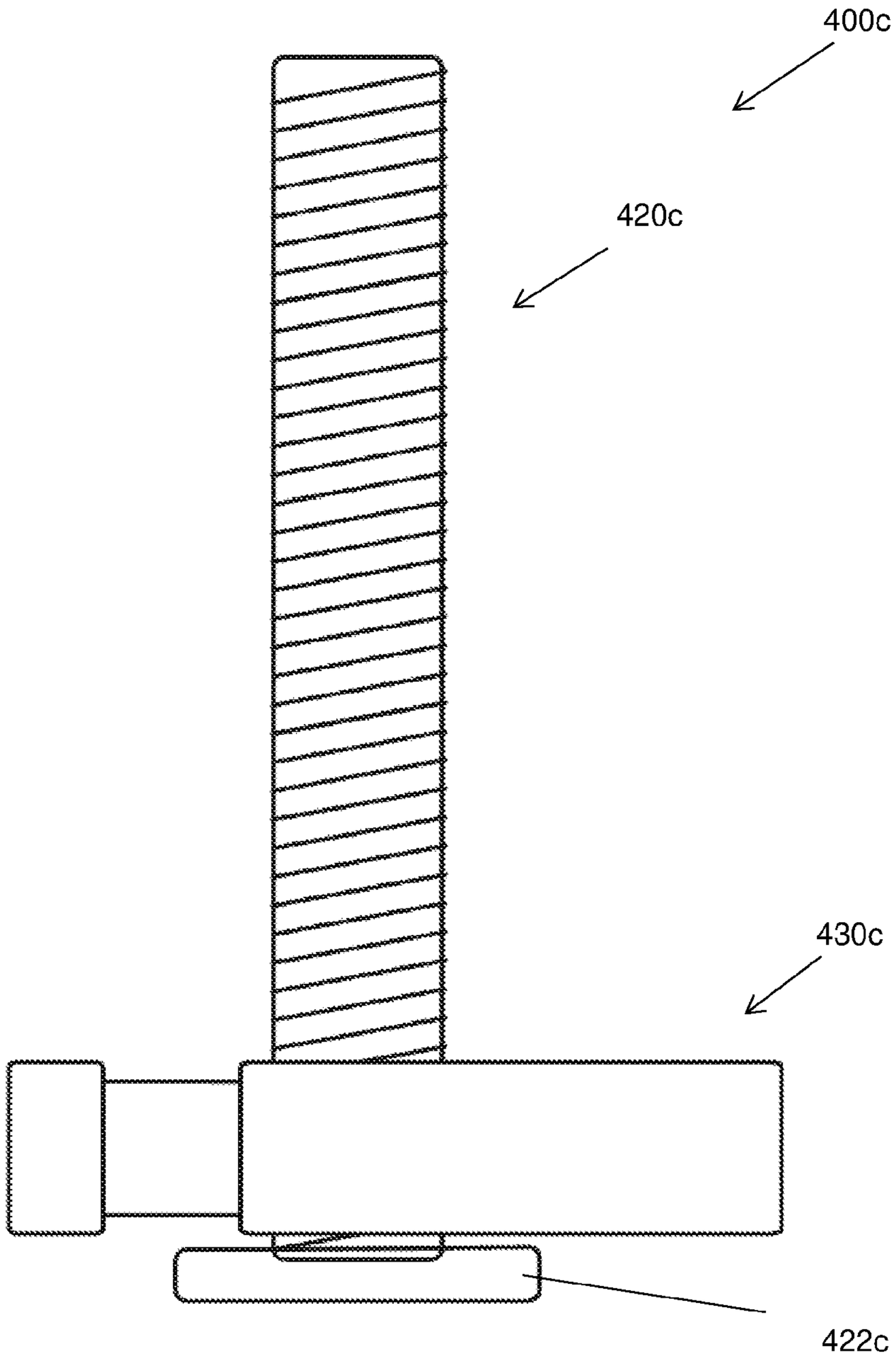

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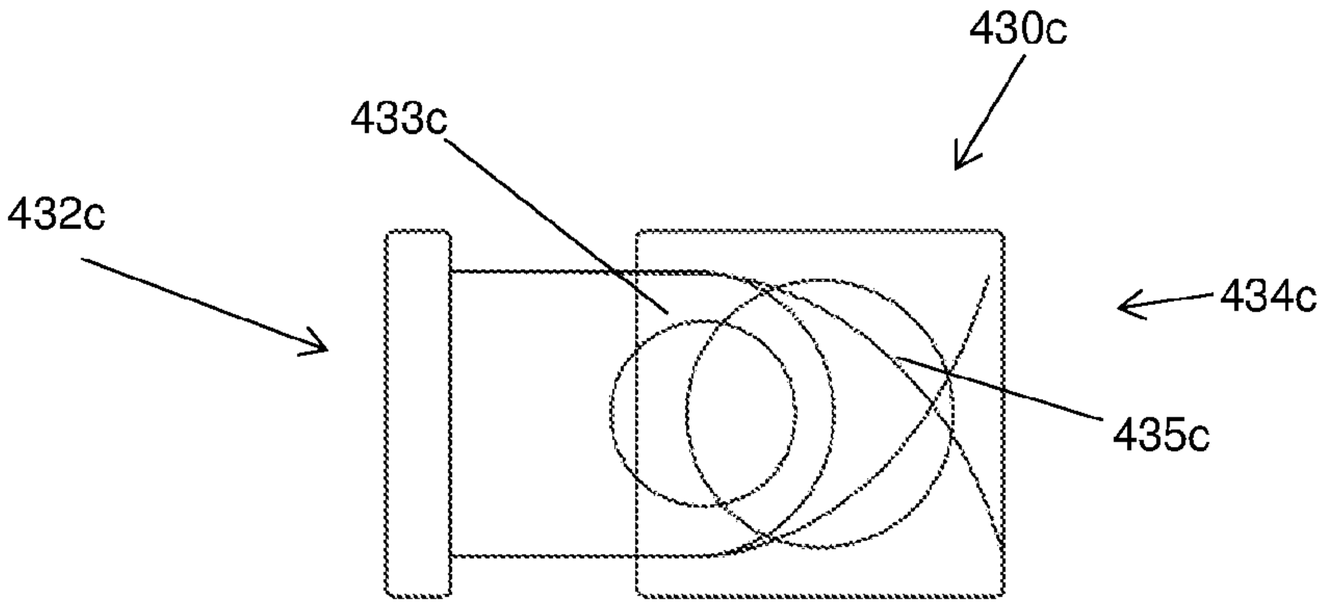

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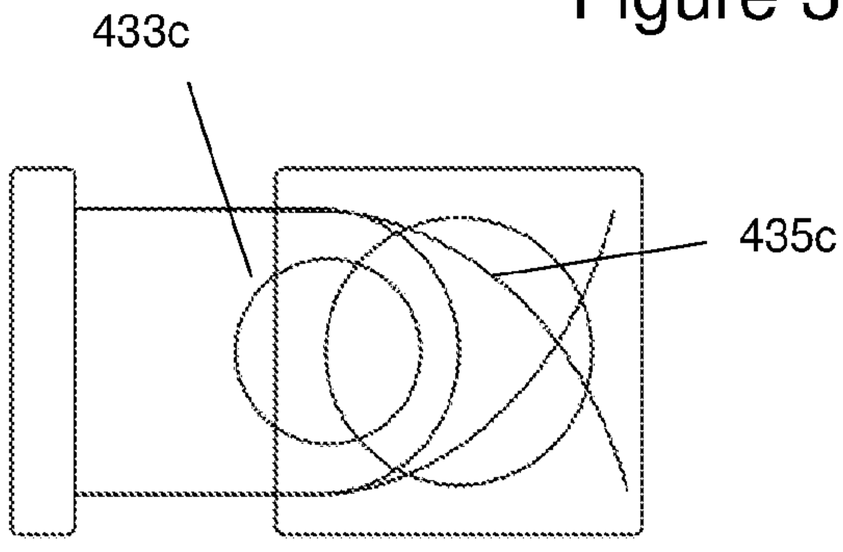

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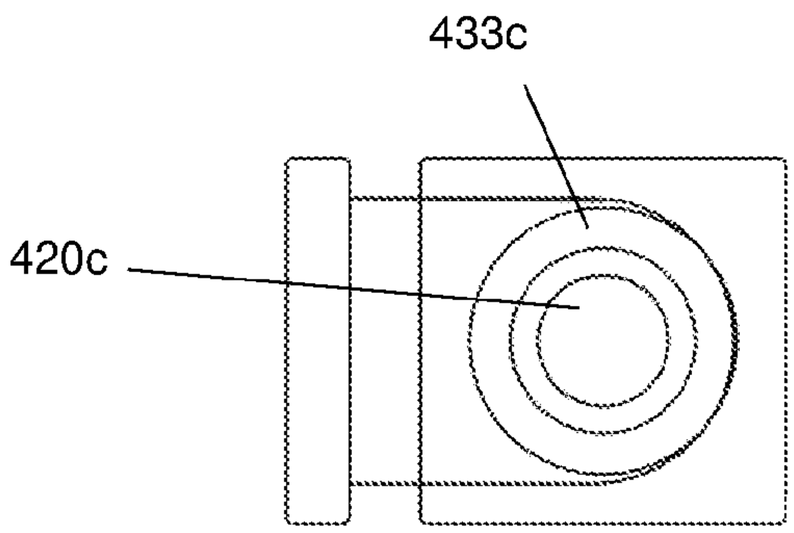

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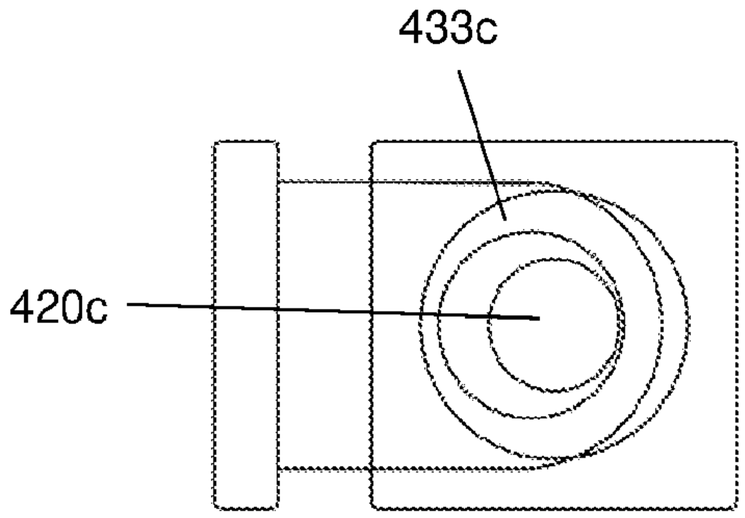

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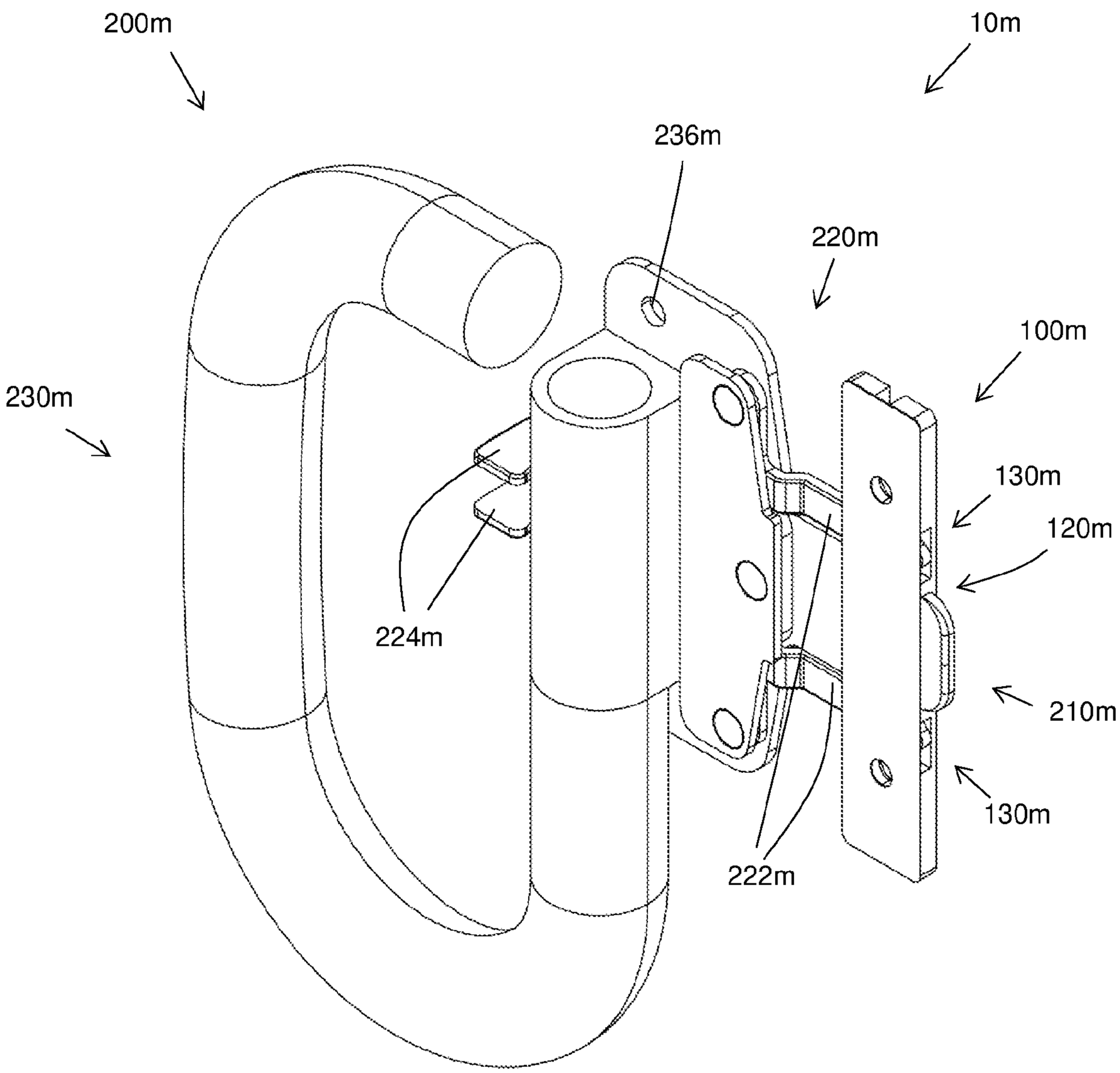

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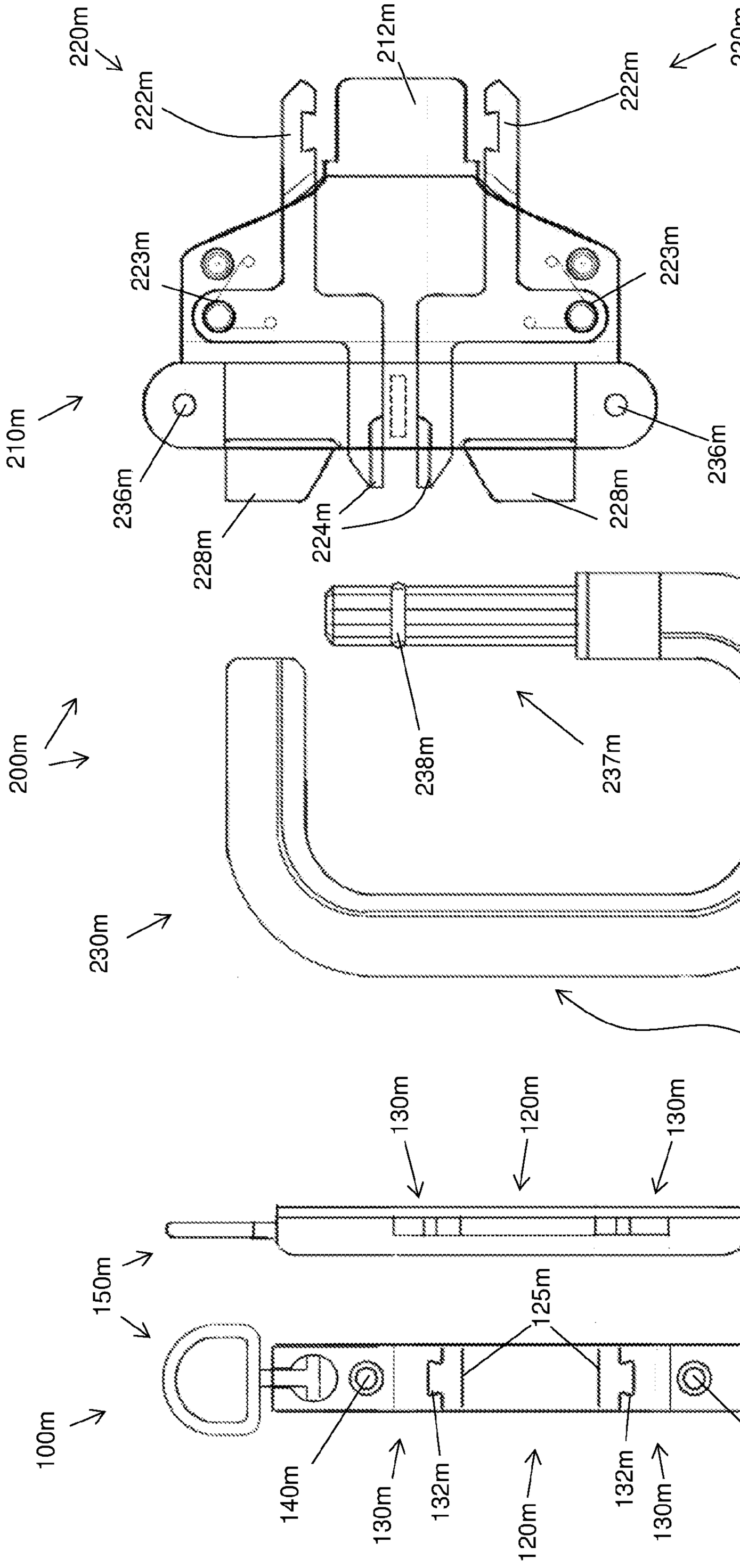

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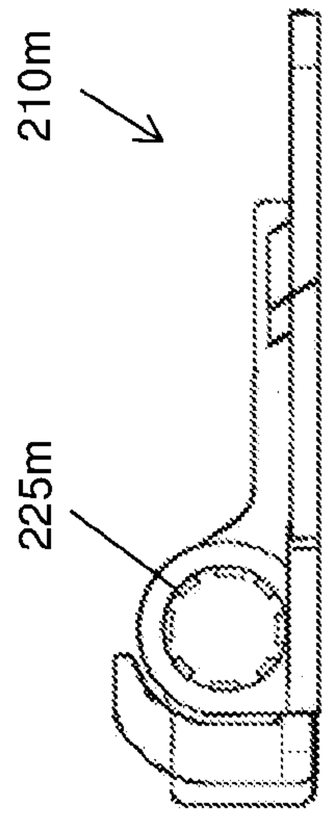
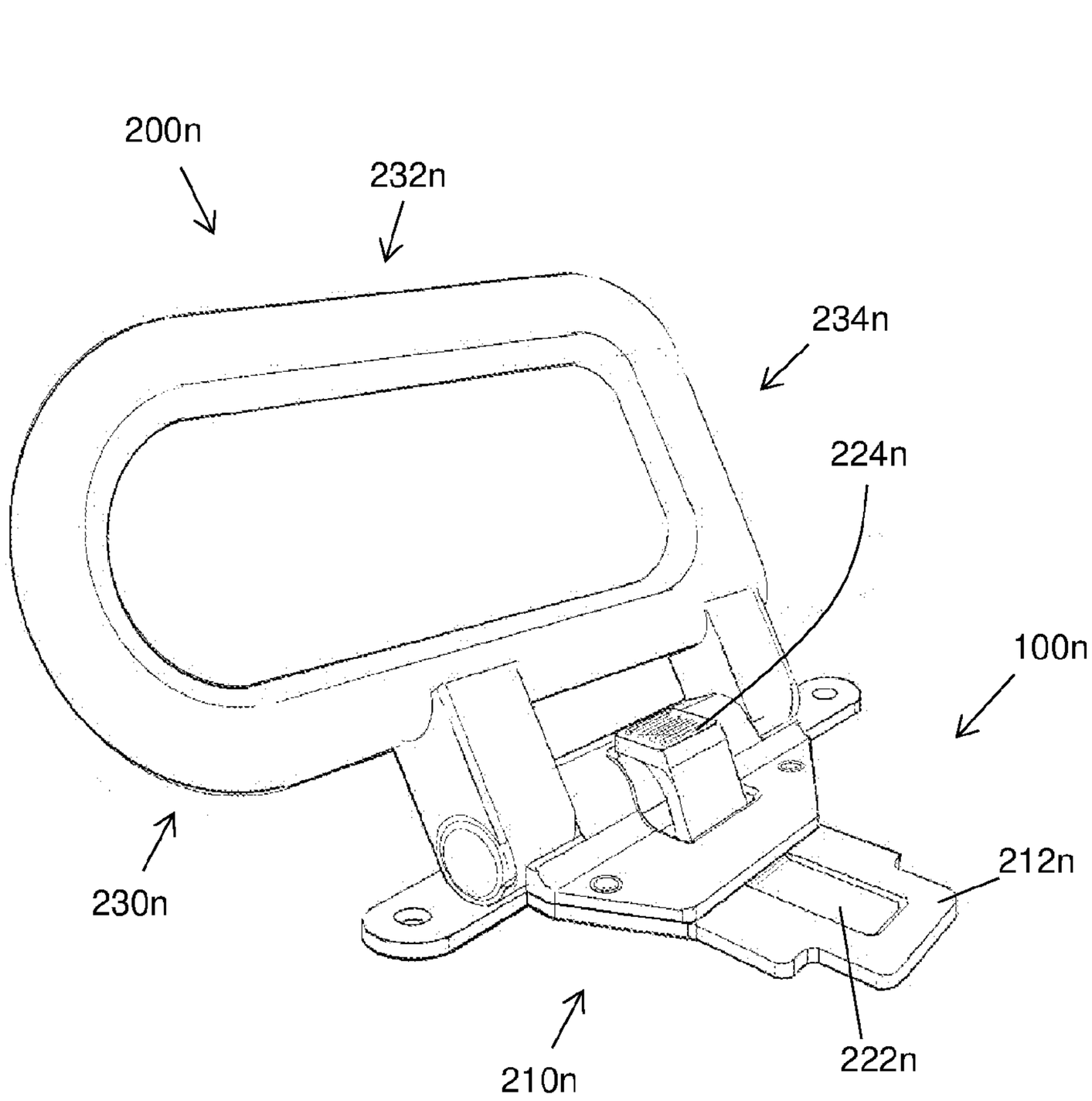


Figure 45

Figure 46

Figure 43



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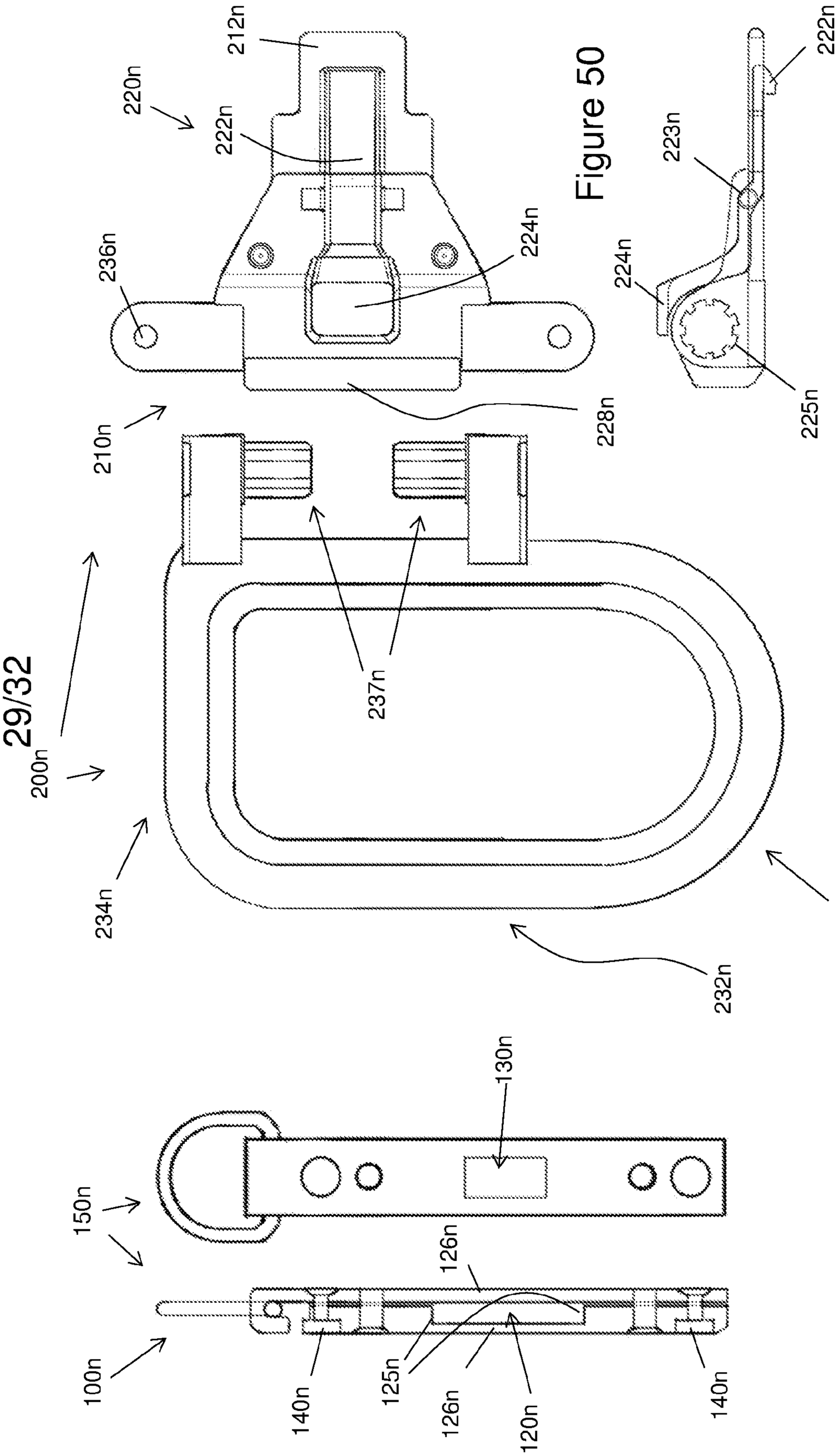
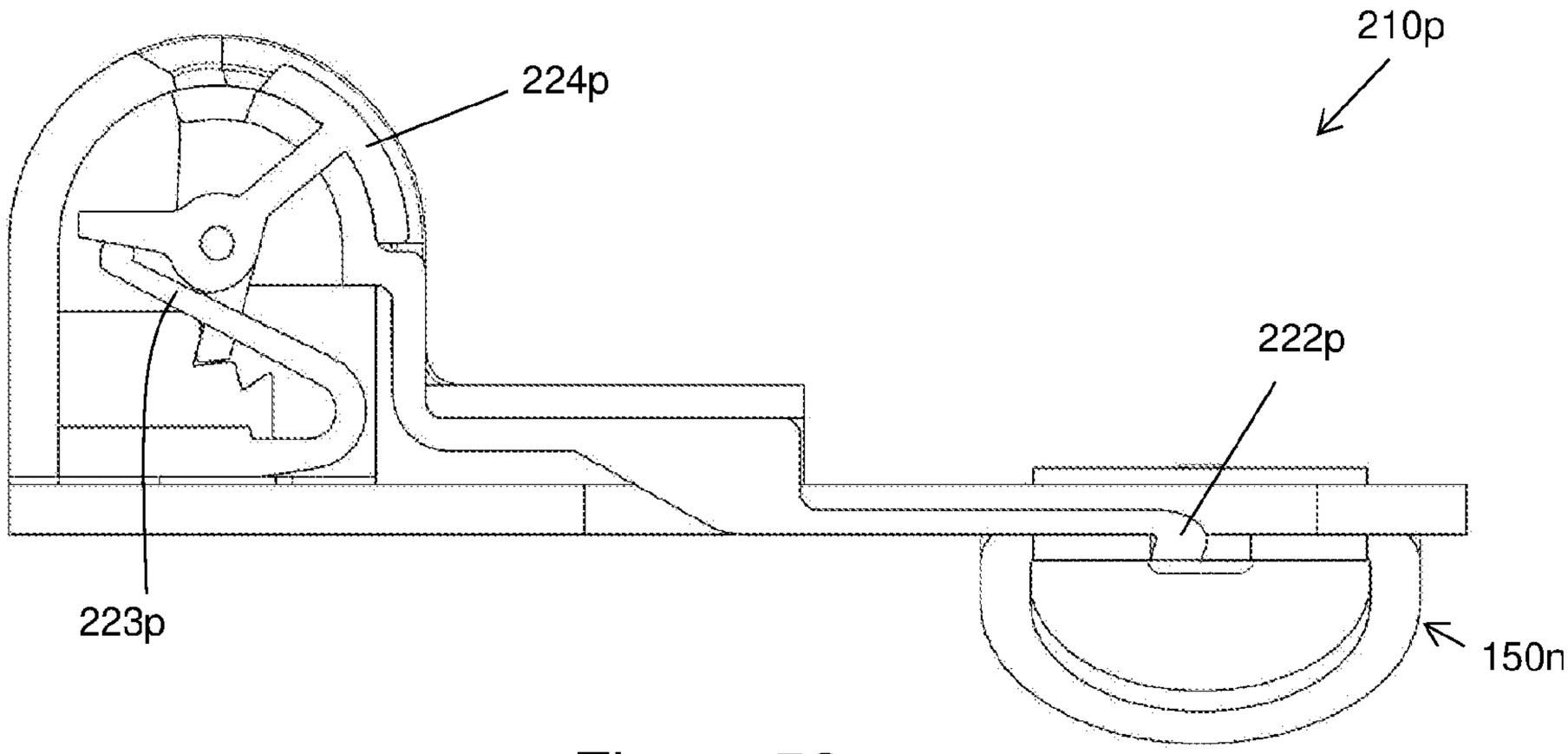


Figure 48

Figure 49

Figure 50

Figure 51



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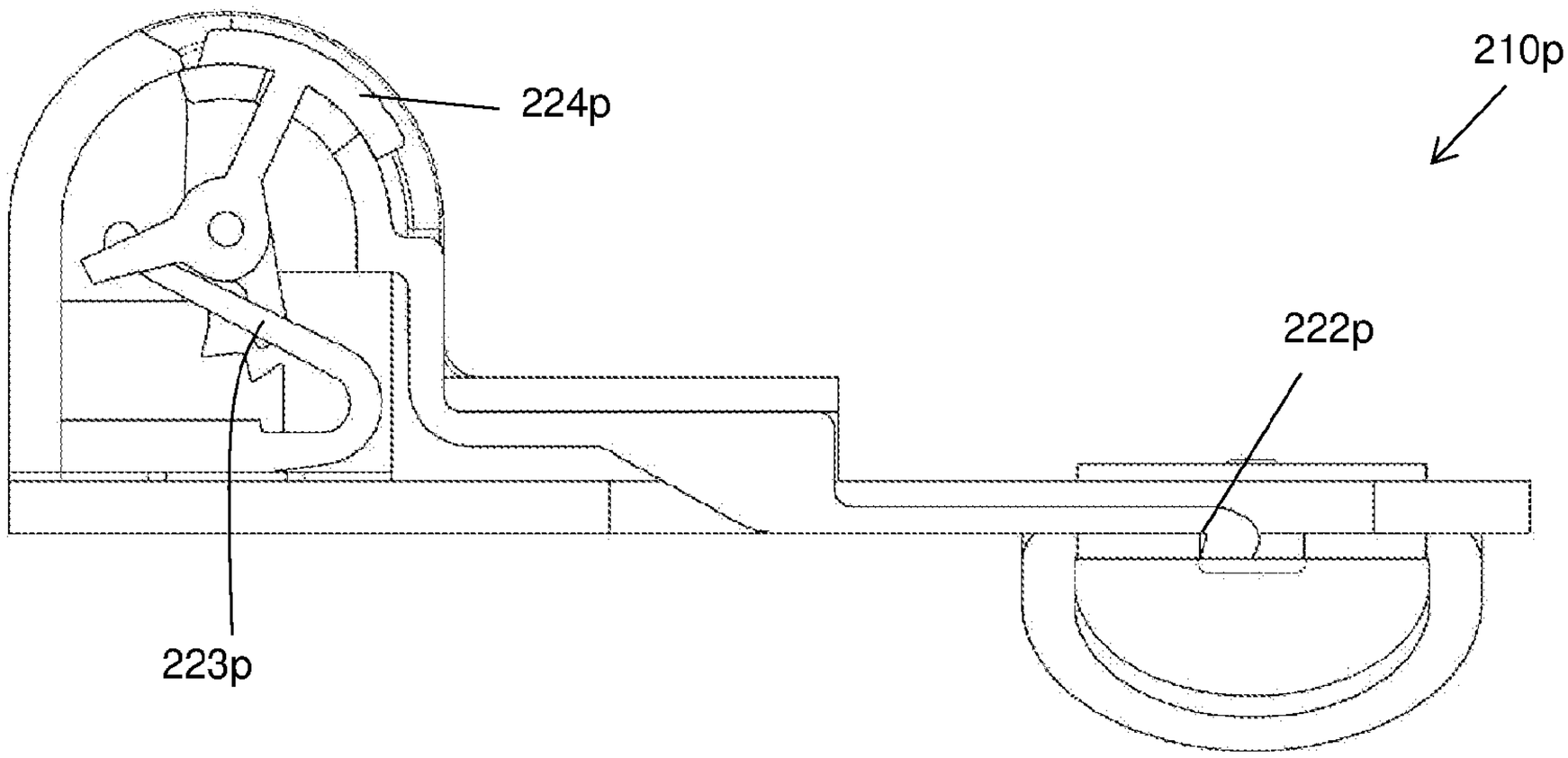

Figure 53

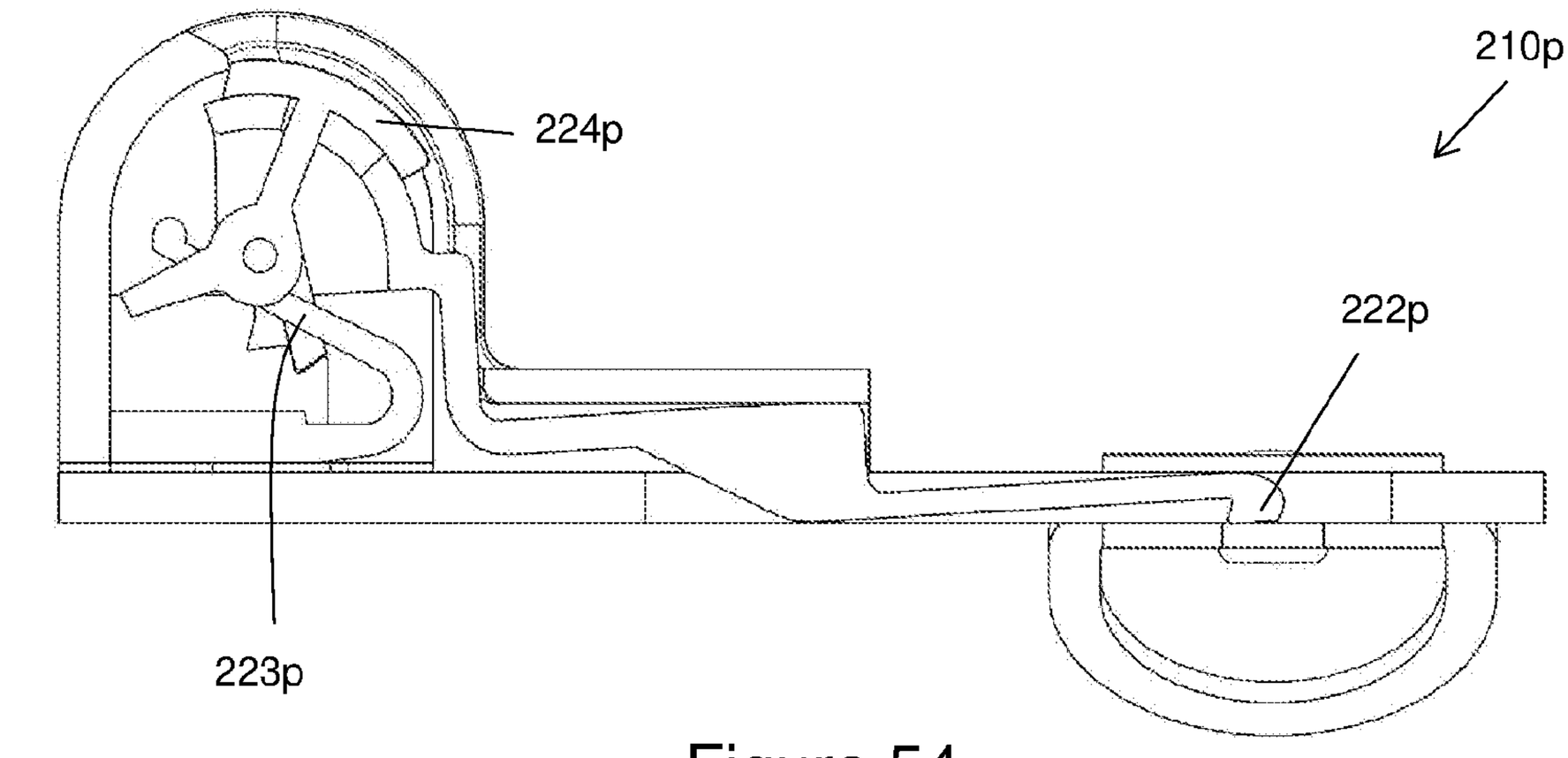

Figure 54

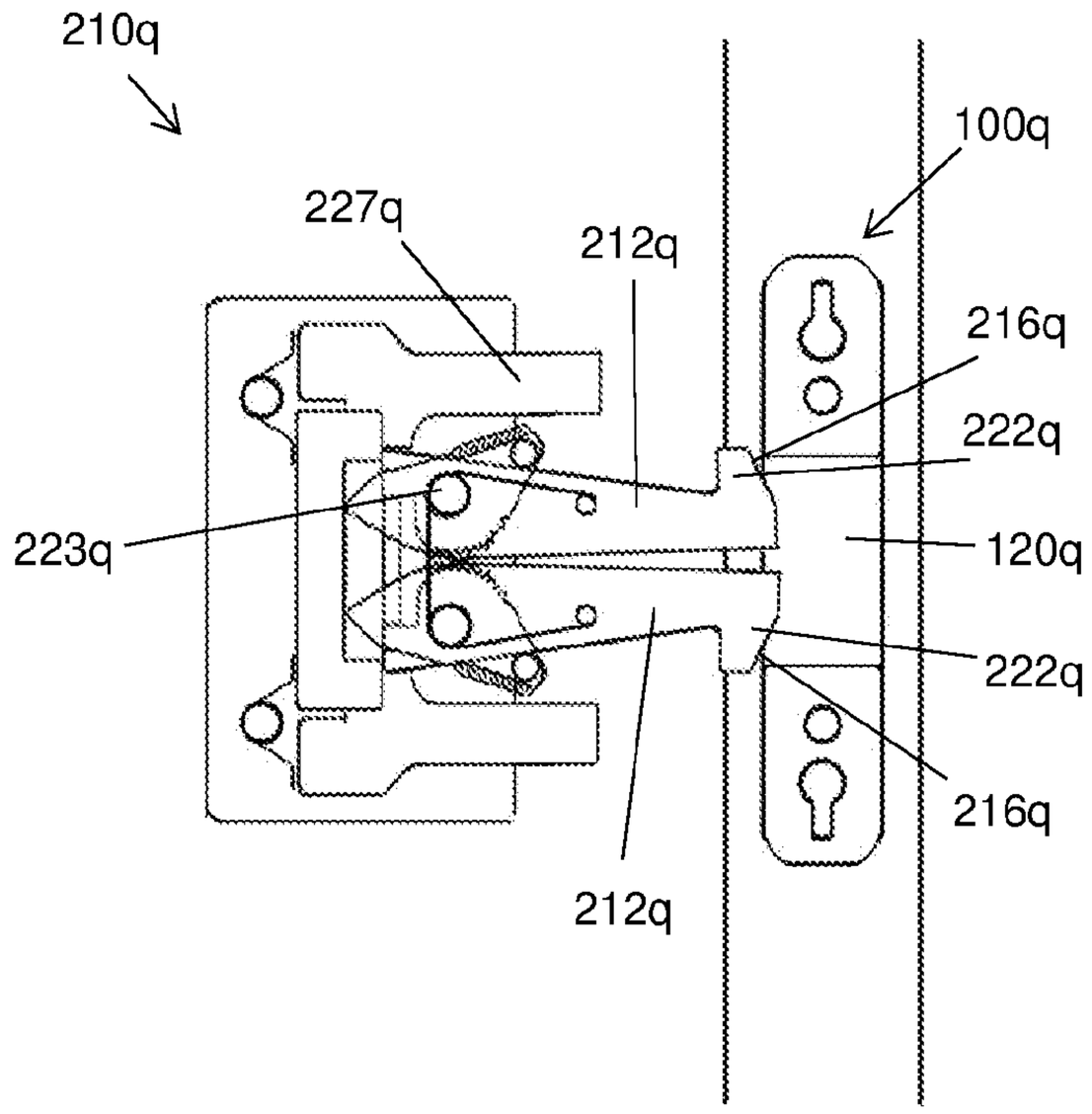

Figure 55

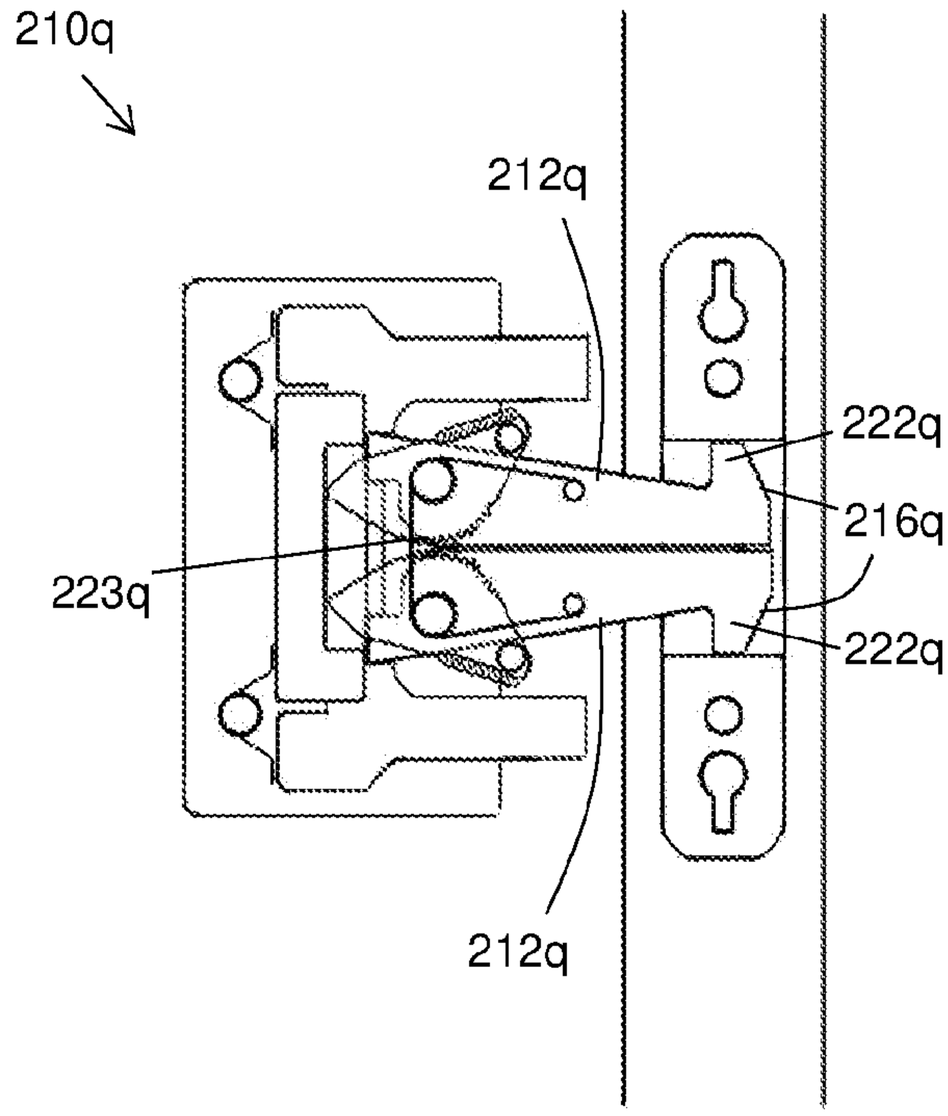

Figure 56

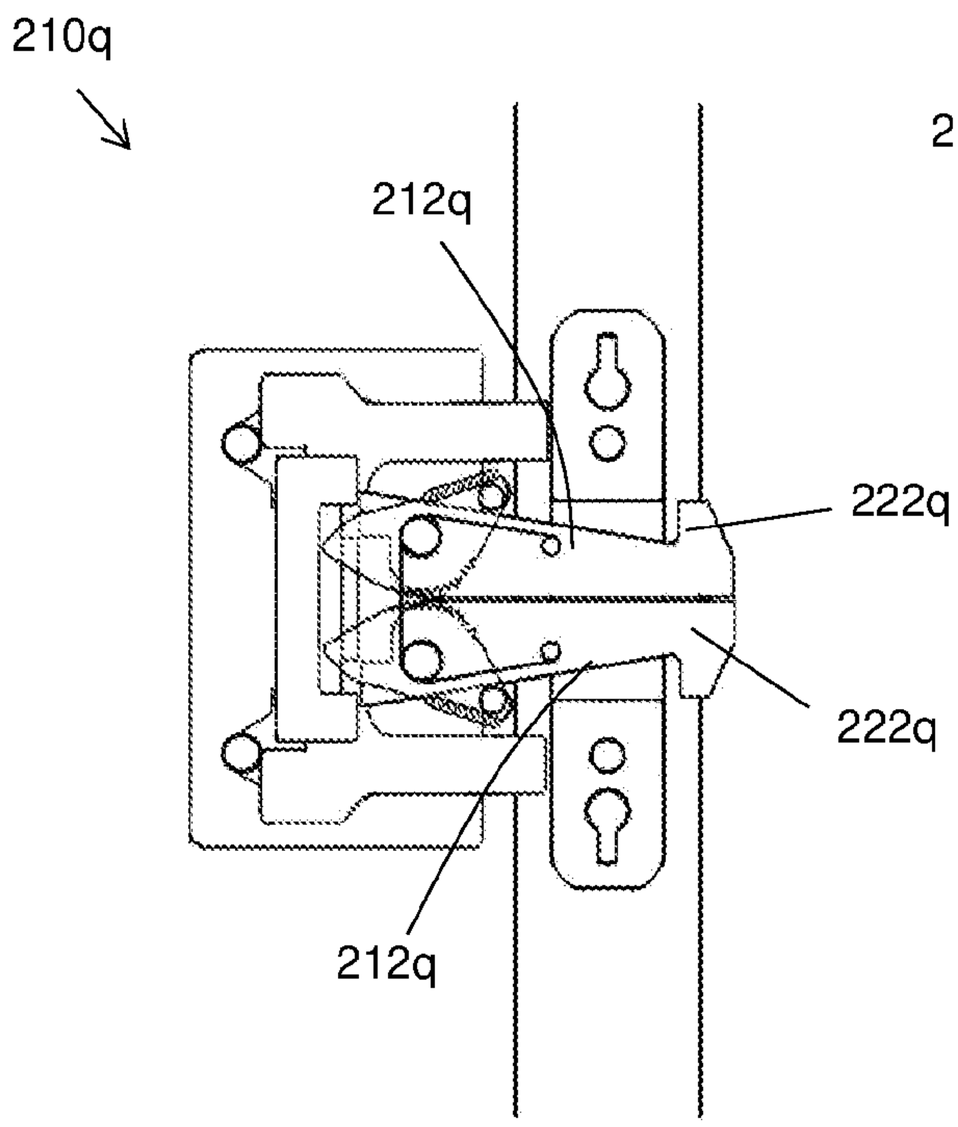

Figure 57

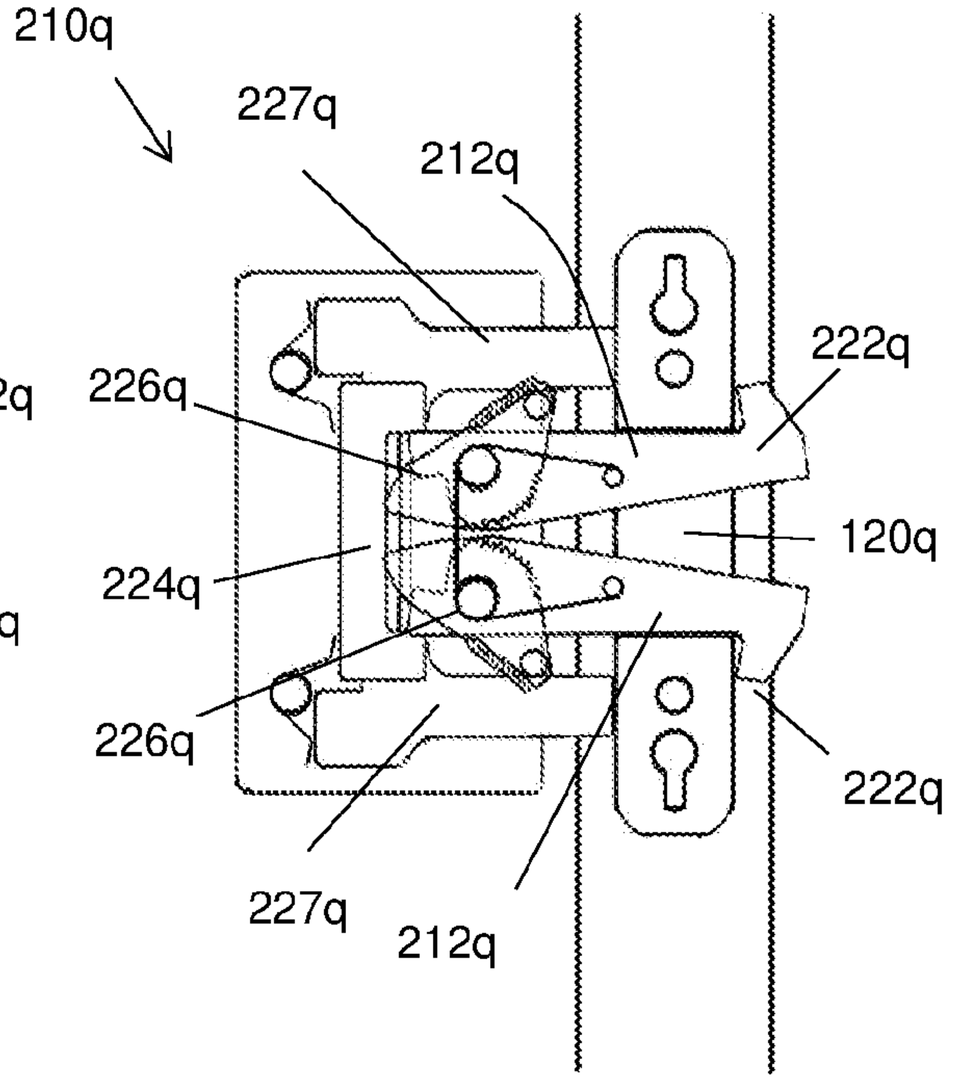

Figure 58

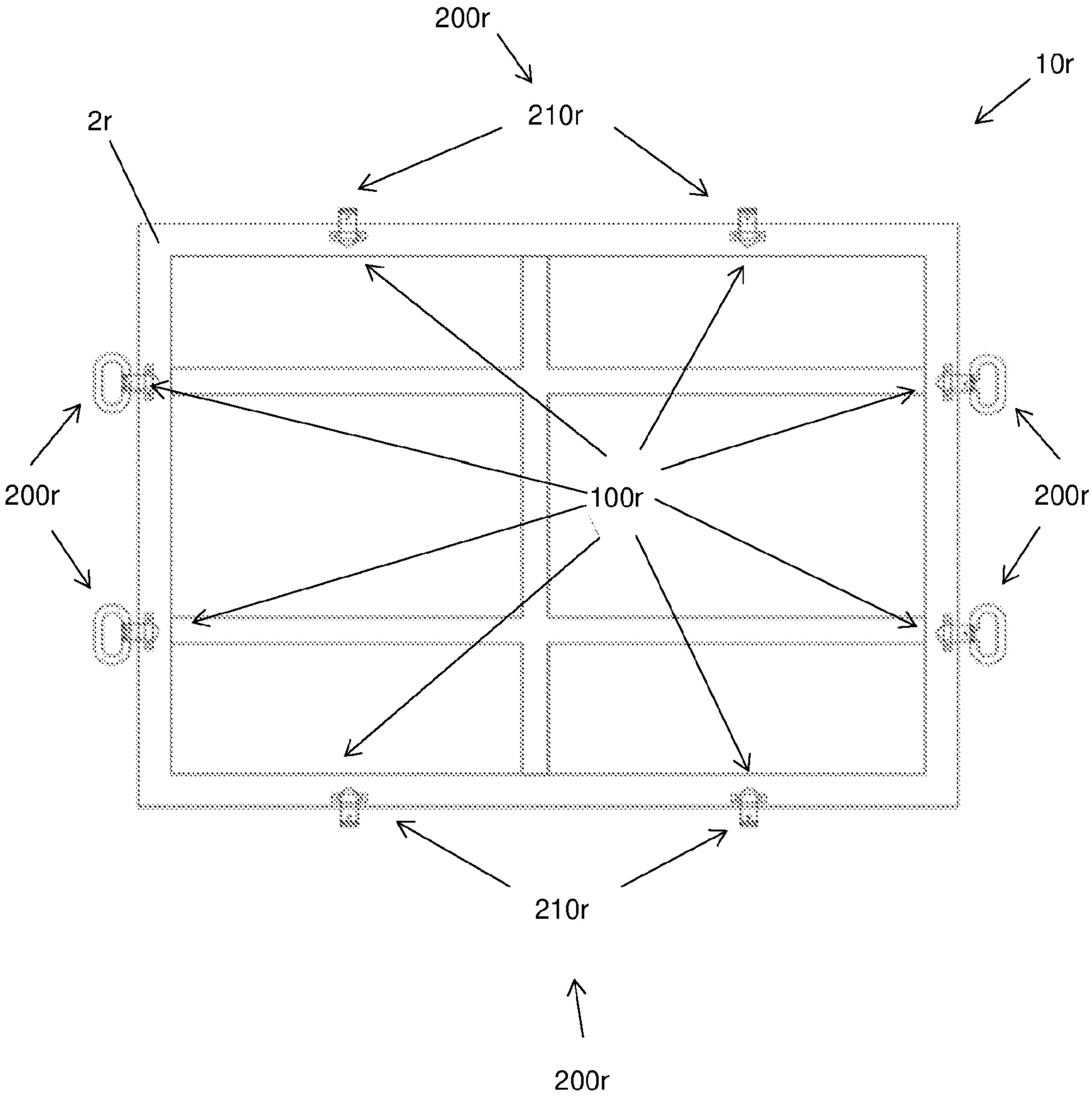

Figure 59