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(54) A TRAINING APPARATUS

(57) There is described a mannequin base for use as a training apparatus with a ball, the mannequin base comprising a (first) rebound panel comprising an external face operable to contact with and rebound the ball, and an attachment portion operable to form an attachment with a mannequin body. The mannequin base is operable to be arranged so that the external face of the (first) rebound panel is in a substantially vertical position operable to receive and rebound the ball along a substantially horizontal plane and wherein the attachment portion is operable to hold the mannequin body in a substantially vertical position. Also described is a mannequin body and a kits of parts comprising the mannequin base and mannequin body.

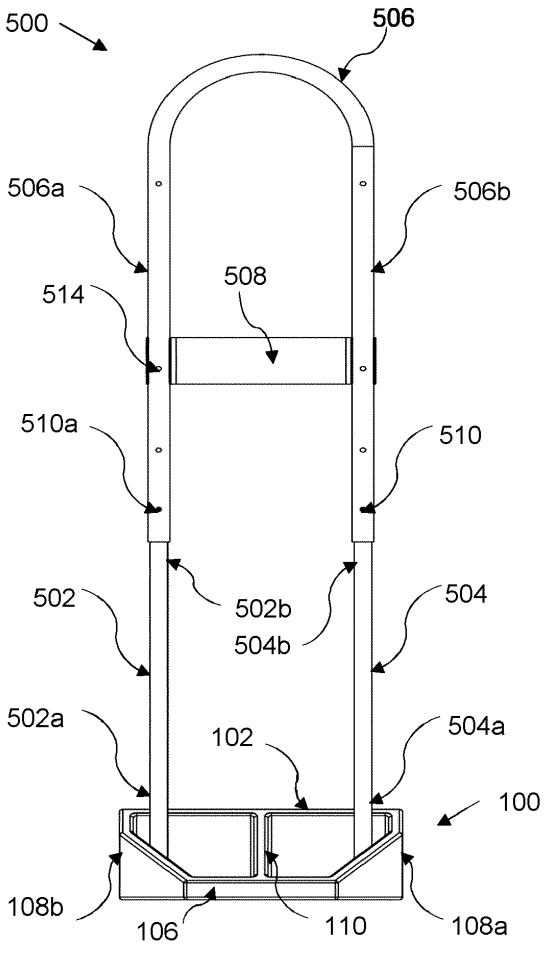

Figure 3a

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Description

FIELD

[0001] The present invention relates to a training apparatus, in particular to a mannequin training apparatus to practice a ball sport, such as football.

BACKGROUND

[0002] Athletic events and training sessions often utilise various forms of equipment. Speed and agility equipment is used in athletic training to improve skills such as speed, balance, and footwork. The equipment may include mannequins or rebound boards. Such equipment can be used in training exercises to help train the player to improve ball control and make quick changes in direction, while maintaining appropriate body positions. For example, mannequins can be arranged in various patterns such as a zig-zag pattern or a slalom pattern where the player runs around the mannequins or through a course. Mannequins can also be used to mimic another player or can behave as an obstacle. Such equipment can also be arranged in front of a goal in order to help train the player to improve ball manipulation and precision. Rebound boards can be used to practice ball control such as ball passing and retrieval or volleying, helping the player to better anticipate passes and improve reactions.

[0003] Unfortunately, mannequins can be oddly sized, heavy, and have complicated storage and transportation. For example, mannequins typically have a fixed length making them difficult to transport, and can be bulky, heavy and expensive to manufacture.

[0004] Rebound boards are typically light in weight comprising a rebound panel supported by collapsible support arms made of lightweight materials. However, due to their lightweight nature, such boards can be liable to break, and may not maintain their position on the training ground or require securing to the ground by, for example, spikes, which can cause damage to the surface.

[0005] Such training equipment discussed above has limited functionality or no utility in combination with other exercise equipment.

[0006] Therefore, there is a need for multifunctional training or exercise equipment that is convenient to store, transport and use, as well as being simple to manufacture.

[0007] It is an aim of aspects of the present invention to address one or more of the above mentioned or other problems.

SUMMARY

[0008] According to a first aspect of the present invention, there is provided a mannequin base for use as a training apparatus with a ball, the mannequin base comprising:

a. a (first) rebound panel comprising an external face operable to contact with and rebound the ball, and
b. an attachment portion operable to form an attachment with a mannequin body,

wherein the mannequin base is operable to be arranged so that the external face of the (first) rebound panel is in a substantially vertical position operable to receive and rebound the ball along a substantially horizontal plane and wherein the attachment portion is operable to hold the mannequin body in a substantially vertical position.

[0009] The mannequin base may be operable to be arranged so that an external face of a rebound panel is in a substantially vertical position, operable to receive and rebound the ball along a substantially horizontal plane, and further be operable to be arranged so that an external face of a rebound panel is in a vertically off-set position, operable to receive the ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane.

[0010] The mannequin base may be operable to be arranged in a first position wherein the external face of the (first) rebound panel is in a substantially vertical position operable to receive and rebound a ball along a substantially horizontal plane and the attachment portion is operable to hold the mannequin body in a substantially vertical position, and the mannequin base may also be operable to be arranged in a second position wherein the external face of the (first) rebound panel is in a vertically off-set position, operable to receive a ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane.

[0011] According to a second aspect of the present invention, there is provided a rebound device for use as a training apparatus with a ball, the device comprising:

a. a (first) rebound panel comprising an external face operable to contact with and rebound the ball,

wherein the rebound device is operable to be arranged so that the external face of the (first) rebound panel is in a substantially vertical position operable to receive and rebound the ball along a substantially horizontal plane.

[0012] The rebound device may be operable to be arranged so that an external face of a rebound panel is in a substantially vertical position operable to receive and rebound the ball along a substantially horizontal plane, and further be operable to be arranged so that an external face of a rebound panel is in a vertically off-set position operable to receive the ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane.

[0013] The rebound device may be operable to be arranged in a first position wherein the external face of the (first) rebound panel is in a substantially vertical position operable to receive and rebound the ball along a substantially horizontal plane, and the rebound device may also be operable to be arranged in a second position

wherein the external face of the (first) rebound panel is in a vertically off-set position, operable to receive the ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane.

[0014] Hereinafter, references made to 'mannequin base' or 'base' refers to 'mannequin base' or 'rebound device' as applicable, unless otherwise stated.

[0015] The (first) rebound panel may comprise any suitable material, such as rubber, metal, plastic and/or wood. The (first) rebound panel may comprise rubber. The use of rubber may advantageously provide the rebound panel with the desired weight and durability, while being cost efficient.

[0016] The (first) rebound panel may be formed of at least 50% rubber by weight of the (first) rebound panel, such as at least 75%, such as at least 90%.

[0017] The (first) rebound panel may have an average thickness of at least 10 cm, such as at least 15 cm, or at least 20 cm. The (first) rebound panel may have an average thickness of up to 50 cm, such as up to 40 cm, or up to 30 cm.

[0018] The external face of the (first) rebound panel may be any suitable shape such as square, rhombus, rectangular, rhomboid and/or trapezoid. The external face of the (first) rebound panel may be substantially rectangular. The external face of the (first) rebound panel may be substantially planar.

[0019] The external face of the (first) rebound panel may have an average height of at least 10 cm, such as at least 12 cm, or at least 15 cm. The external face of the (first) rebound panel may have an average height of up to 30 cm, such as up to 25 cm, or up to 20 cm.

[0020] The external face of the (first) rebound panel may have an average width of at least 30 cm, such as at least 40 cm, or at least 50 cm. The external face of the (first) rebound panel may have an average width of up to 100 cm, such as up to 80 cm, or up to 60 cm.

[0021] The external face of the (first) rebound panel may provide a rebound return (according to the Rebound Return Test) of at least 40% of the drop distance, such as at least 50%, such as at least 60%.

[0022] When the mannequin base is rested on a level support surface (such as level ground), the external face of the (first) rebound panel may be substantially vertical relative to the level support surface and, the attachment portion may be operable to hold the mannequin body in a substantially vertical position.

[0023] When the external face of the (first) rebound panel is in a substantially vertical position operable to receive and rebound a ball along a substantially horizontal plane, the (first) rebound panel may be considered to be arranged in a 'ground-return' configuration.

[0024] When the mannequin base is rested on a level support surface (such as level ground), the external face of the (first) rebound panel may be vertically off-set relative to the level support surface.

[0025] When the external face of the (first) rebound panel is in a vertically off-set position, operable to receive a ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane, the (first) rebound panel may be considered to be arranged in an 'air-return' configuration.

[0026] The vertically off-set plane of the external face of the (first) rebound panel may be off-set at an angle of at least 10° to the vertical plane, such as at least 15°, or at least 20°. The vertically off-set plane of the external face of the rebound panel may be off-set at an angle of up to 50° to the vertical plane, such as up to 40°, or up to 30°.

[0027] Movement of the mannequin base from the first position, wherein the external face of the (first) rebound panel is in a substantially vertical position operable to receive and rebound a ball along a substantially horizontal plane and, wherein the attachment portion is operable to hold the mannequin body in a substantially vertical position, to the second position wherein the external face of the (first) rebound panel is in a vertically off-set position, operable to receive a ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane may comprise rotation of the base about the longitudinal or lateral axis of the base.

[0028] Movement of the base from the first to the second position may comprise inversion of the base, for example so that the previous bottom face of the base in the first position becomes the top face in the second position. Movement of the base from the first to the second position may comprise rotating the base substantially at least 180° about the longitudinal or lateral axis of the base, such as rotating the external face of the (first) rebound panel substantially at least 200° such as at least 220° or at least 240°.

[0029] The (first) rebound panel comprising an external face in a substantially vertical position operable to receive and rebound a ball along a substantially horizontal plane in the first position, and the (first) rebound panel comprising an external face in a vertically off-set position, operable to receive a ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane in the second position may be the same (first) rebound panel.

[0030] The external face of the (first) rebound panel may be configured by the user to be in a substantially vertical position operable to receive and rebound a ball along a substantially horizontal plane in the first position or may be configured by the user to be in a vertically off-set position, operable to receive a ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane.

[0031] Advantageously, the mannequin base may be operable to provide an external face of a rebound panel that can be configured in a 'ground-return' configuration and/or in an 'air-return' configuration. This enables the user to train with a single compact mannequin base that provides multi-functionality which can be selected depending on the training being carried out. As such, the user only needs to purchase, store and transport a single

training aid that can be used in an array of training exercises due to its multi-functional properties.

[0032] The (first) rebound panel may be a support member operable to assist with supporting the external face of the (first) rebound panel in use, such as when configured in the first and/or second position and, optionally, assist with supporting the mannequin body in position. The (first) rebound panel support member may be a front rebound panel support member.

[0033] The mannequin base may comprise a rear support member operable to assist with supporting the external face of the (first) rebound panel in use, such as when configured in the first and/or second position and, optionally, assist with supporting the mannequin body in position.

[0034] The rear support member may be spaced from the (first) rebound panel. Optionally, the rear support member and the (first) rebound panel may be on opposing sides of the mannequin body attachment portion. The rear support member and the (first) rebound panel may be spaced in a substantially parallel configuration. The rear support member and rebound panel may be configured such that their mid-points are substantially opposed.

[0035] The (first) rebound panel may be a support member operable to assist with supporting the mannequin base in use, such as when configured in the first and/or second position and, optionally, assist with supporting the mannequin body in position.

[0036] The rear support member may comprise any suitable material, such as rubber, metal, plastic and/or wood. The rear support member may comprise rubber.

[0037] The rear support member may be formed of at least 50% rubber by weight of the rear support member, such as at least 75%, such as at least 90%.

[0038] The rear support member may have an average height that is at least 10% of the average height of the (first) rebound panel, such as at least 30%, such as at least 50%. The rear support member may have an average height that is up to 200% of the average height of the (first) rebound panel, such as up to 150%, such as up to 100%.

[0039] The rear support member may have an average width that is at least 25% of the average width of the (first) rebound panel, such as at least 50%, such as at least 75%. The rear support member may have an average width that is up to 200% of the average width of the (first) rebound panel, such as up to 150%, such as up to 100.

[0040] The (first) rebound panel may be spaced at any suitable distance from the rear support member. The (first) rebound panel may be spaced at least 20 cm from the rear support member, such as at least 25 cm, such as at least 30 cm. The (first) rebound panel may be spaced up to 50 cm from the rear support member, such as up to 45 cm, such as up to 40 cm.

[0041] The internal volume extending between the peripheral edges of the (first) rebound panel and the peripheral edges of the rear support member may be at least 20% void space, i.e. the free of mass fixedly attached to the base, such as at least 50% void space or at least 80% void space.

[0042] The high proportion of void space enables the mannequin base to be manufactured with less material, thereby providing an economic advantage, while ensuring the base is easily transportable and can provide sufficient rigidity.

[0043] The mannequin base may further comprise a linking support member that connects the rear support member and the (first) rebound panel and assists with supporting the rebound panel in position.

[0044] The mannequin base may comprise at least two linking support members, such as at least three. The mannequin base may comprise at least two side linking support members connected toward opposing ends of the (first) rebound panel and the rear support member, respectfully.

[0045] The mannequin base may comprise a first side linking support member connected toward a first end of the (first) rebound panel and toward a first end of the rear support member. Suitably, the first ends of the (first) rebound panel and the rear support member are toward the same end of the base. The mannequin base may comprise a second side linking support member connected toward a second end of the (first) rebound panel and toward a second end of the rear support member. Suitably, the second ends of the (first) rebound panel and the rear support member are toward the same end of the base.

[0046] The (first) rebound panel, rear support member and first and second side linking support members may be integrally manufactured to form a continuous structure.

[0047] The mannequin base may comprise an intermediate linking support member, such as an intermediate linking support member arranged between the first and second side linking support members.

[0048] The intermediate linking support member may extend from substantially the mid-point of the (first) rebound panel, and optionally extend to substantially the mid-point of the rear support member.

[0049] The intermediate linking supporting member provides support toward the mid-point of the (first) rebound panel, thereby improving the efficiency of the rebound return of the mannequin base, while enabling a reduction in material use.

[0050] The top face of a side and/or intermediate linking support member may be horizontally off-set, for example so as to slope downwardly from the top face of the (first) rebound panel to the top face of the rear support member. The top face of a side and/or intermediate linking support member may be horizontally off-set at an angle of at least 10° to the horizontal plane, such as at least 20°, or at least 30°. The top face of a side and/or intermediate linking support member may slope at an angle of up to 60° to the horizontal plane, such as up to 50°, or up to 40°.

[0051] A side and/or intermediate linking support mem-

ber may have an average thickness of at least 10 cm, such as at least 15 cm, or at least 20 cm. A side and/or intermediate linking support member may have an average thickness of up to 50 cm, such as up to 40 cm, or up to 30 cm.

[0052] A side and/or intermediate linking support member may comprise any suitable material, such as rubber, metal, plastic and/or wood. A side and/or intermediate linking support member may comprise rubber.

[0053] A side and/or intermediate linking support member may be formed of at least 50% rubber, such as at least 75%, such as at least 90%.

[0054] The mannequin base may further comprise a crosslinking support member that extends longitudinally along the base and connects at least two linking support members. The crosslinking support member may be arranged between the (first) rebound panel and the rear support member.

[0055] The crosslinking support member may connect the first and second side linking support members toward a midpoint thereof. The crosslinking support member may connect the intermediate linking support member to the first and second side linking support members toward a mid-point thereof.

[0056] The crosslinking support member may have an average thickness of at least 10 cm, such as at least 15 cm, or at least 20 cm. The crosslinking support member may have an average thickness of up to 50 cm, such as up to 40 cm, or up to 30 cm.

[0057] The crosslinking support member may comprise any suitable material, such as rubber, metal, plastic and/or wood. The crosslinking support member may comprise rubber.

[0058] The crosslinking support member may be formed of at least 50% rubber, such as at least 75%, such as at least 90%.

[0059] The mannequin body attachment portion of the mannequin base may be operable to receive an attachment portion of the mannequin body so as to be operable to hold the mannequin body in a substantially vertical position.

[0060] When the mannequin base is rested on a level support surface (such as on level ground) in a first position, the attachment portion, such as the first and second attachment portions, may comprise a substantially vertically extending bore arranged to receive an attachment portion of a mannequin body and hold the mannequin body in a substantially vertical position relative to the level support surface of mannequin base.

[0061] The mannequin body attachment portions of the mannequin base may comprise at least two attachment portions. The at least two mannequin body attachment portions may be substantially opposed along the longitudinal axis of the mannequin base, and/or may be arranged toward the lateral mid-point of the mannequin base.

[0062] The mannequin body attachment portion may comprise a bore operable to receive an attachment portion of the mannequin body. The first and second attachment portions may each comprise at least one bore.

[0063] The mannequin body attachment portion may be attached to an internal face of the base, such as an internal face of a linking support member, such as a side linking support member. The attachment portion may be arranged on the external face of the base, such as an external face of a linking support member. The attachment portion may be arranged through a linking support member, such as a crosslinking support member.

[0064] The mannequin base may comprise a mannequin base attachment member operable to form an attachment with a further mannequin base. The mannequin base attachment member may comprise a coupling member, such as a discrete coupling member. The coupling member may be operable to be received into an aperture in the mannequin base attachment member of the mannequin base. The coupling member may be operable to form an attachment between a first and second mannequin base.

[0065] The mannequin base attachment member may comprise at least one attachment portion, such as at least two. The at least two mannequin body attachment portions may be substantially opposed along the longitudinal axis of the mannequin base, and/or may be arranged toward a lateral end-point of the mannequin base.

[0066] The mannequin base attachment portion may comprise an aperture operable to receive a coupling member, such as at least two, such as at least three, such as at least four apertures each operable to receive a coupling member.

[0067] Advantageously, the mannequin base attachment portion enables the user to link multiple mannequin bases together to create a rebound base and/or extension of mannequin bodies of a customised length depending on the training requirements.

[0068] The rebound panel, the rear support member, the intermediate linking support member, the side linking support members, the crosslinking support member, the mannequin body attachment portions, and/or the mannequin base attachment portions, when present, may be integrally manufactured. The mannequin base may be integrally formed.

[0069] The mannequin base may comprise a second rebound panel comprising an external face operable to contact with and rebound a ball.

[0070] The rear support member may be a second rebound panel comprising an external face operable to contact with and rebound a ball.

[0071] The mannequin base may comprise a first rebound panel and a second rebound panel, each panel comprising an external face operable to contact with and rebound the ball, wherein the mannequin base is operable to be arranged so that the external face of the first rebound panel is in a substantially vertical position operable to receive and rebound a ball along a substantially horizontal plane, the external face of the second rebound panel is in a vertically off-set position, operable to receive

the ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane, and the mannequin body attachment portion is operable to hold the mannequin body in a substantially vertical position.

[0072] Advantageously, the mannequin base may be operable to provide an external face of a first rebound panel that may be configured in a 'ground-return' configuration and an external face of a second rebound panel that may be configured in an 'air-return' configuration. This enables the mannequin base to be used as a dual-functional training base wherein the first and second rebound panel can be used at the same time by different users.

[0073] The mannequin base may comprise a first rebound panel and a second rebound panel, each panel comprising an external face operable to contact with and rebound the ball, wherein the mannequin base is operable to be arranged so that the external face of the first and second rebound panels are in a substantially vertical position operable to receive and rebound a ball along a substantially horizontal plane, and the mannequin body attachment portion is operable to hold the mannequin body in a substantially vertical position.

[0074] The rebound device may comprise a first rebound panel and a second rebound panel, each panel comprising an external face operable to contact with and rebound the ball, wherein the rebound device is operable to be arranged so that the external face of the first rebound panel is in a substantially vertical position operable to receive and rebound the ball along a substantially horizontal plane, the external face of the second rebound panel is in a vertically off-set position, operable to receive the ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane.

[0075] The rebound device may comprise a first rebound panel and a second rebound panel, each panel comprising an external face operable to contact with and rebound the ball, wherein the rebound device is operable to be arranged so that the external face of the first and second rebound panels are in a substantially vertical position operable to receive and rebound a ball along a substantially horizontal plane.

[0076] Advantageously, the rebound device may be operable to provide an external face of a first and second rebound panel that may be configured in a 'ground-return' configuration. This enables the mannequin base to be used as a dual-functional training base wherein the first and second rebound panel can be used at the same time by different users.

[0077] Hereinafter, references made to 'mannequin base' or 'base' refers to 'mannequin base' or 'rebound device' as applicable, unless otherwise stated.

[0078] The second rebound panel may comprise any suitable material, such as rubber, metal, plastic and/or wood. The second rebound panel may comprise rubber.

[0079] The second rebound panel may be formed of at least 50% rubber by weight of the second rebound panel, such as at least 75%, such as at least 90%.

[0080] The rubber of the mannequin base/(first) rebound panel/rear support member/side and/or intermediate linking support member/crosslinking support member/second rebound panel may be operable to be moulded into the sections required by the present invention. The rubber may have a mass density of at least 1,000 kg/m^3 and/or of up to 2,000 kg/m^3.

[0081] The second rebound panel may have an average thickness of at least 10 cm, such as at least 15 cm, or at least 20 cm. The second rebound panel may have an average thickness of up to 50 cm, such as up to 40 cm, or up to 30 cm.

[0082] The external face of the second rebound panel may be any suitable shape such as square, rhombus, rectangular, rhomboid and/or trapezoid. The external face of the second rebound panel may be substantially rectangular. The external face of the second rebound panel may be substantially planar.

[0083] The external face of the second rebound panel may have an average height of at least 10 cm, such as at least 12 cm, or at least 15 cm. The external face of the second rebound panel may have an average height of up to 30 cm, such as up to 25 cm, or up to 20 cm.

[0084] The external face of the second rebound panel may have an average width of 30 cm, such as at least 40 cm, or at least 50 cm. The external face of the second rebound panel may have an average width of up to 100 cm, such as up to 80 cm, or up to 60 cm.

[0085] The external face of the second rebound panel may provide a rebound return (according to the Rebound Return Test) of at least 40% of the drop distance, such as at least 50%, such as at least 60%.

[0086] When the mannequin base is arranged on a level support surface (such as level ground), the external face of the second rebound panel may be substantially vertical relative to the level support surface and, the mannequin body attachment portion may be operable to hold the mannequin body in a substantially vertical position.

[0087] When the external face of the second rebound panel is in a substantially vertical position operable to receive and rebound a ball along a substantially horizontal plane, the second rebound panel may be considered to be arranged in a 'ground-return' configuration.

[0088] When the mannequin base is rested on a level support surface (such as level ground), the external face of the second rebound panel may vertically off-set relative to the level support surface and, the mannequin body attachment portion may be operable to hold the mannequin body in a substantially vertical position.

[0089] When the external face of the second rebound panel is in a vertically off-set position operable to receive a ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane, the second rebound panel may be considered to be arranged in an 'air-return' configuration.

[0090] The vertically off-set plane of the external face of the second rebound panel may be off-set at an angle of at least 10° to the vertical plane, such as at least 15°,

or at least 20°. The vertically off-set plane of the external face of the second rebound panel may be off-set at an angle of up to 50° to the vertical plane, such as up to 40°, or up to 30°.

[0091] The top face of a side and/or intermediate linking support member may extend substantially along a horizontal plane from the top face of the first rebound panel to the top face of the second rebound panel.

[0092] The first and/or second rebound panel may be a support member operable to assist with supporting the first and/or second rebound panel when configured in the first and/or second position and, optionally, the mannequin body in position.

[0093] The mannequin base may have a weight of at least 1 kg, such as at least 5 kg, or at least 10 kg. The mannequin base may have a weight of up to 30 kg, such as up to 25 kg, or up to 20 kg.

[0094] The weight of the mannequin base may be selected to ensure the mannequin base remains stationary when in use without the need to be secured to the support surface.

[0095] Advantageously, the mannequin base can be used as training equipment with a ball to improve players' coordination, ball control and reactions. The 'ground-return' and "air-return' configurations allow the base to be used to mimic another teammate and/or opponent.

[0096] The 'ground-return' configuration allows the player to work on passing and reserving the ball as well as shooting from the ground and/or from the air (i.e., as a volley).

[0097] According to a third aspect of the present invention, there is provided a mannequin body for use as training apparatus comprising:

c. a first support member;

d. a second support member, and

e. a linking member

wherein the linking member is operable to form an adjustable attachment with the first and second support members so that the linking member is operable to move from a first configuration with the first and second support members wherein the mannequin body has a first height, to a second configuration with the first and second support members wherein the mannequin body has a second height that is different to the first height.

[0098] The first and second support members of the mannequin body may be substantially linear.

[0099] The first and second support members may have a substantially cylindrical cross section. The first and second support members may be substantially hollow.

[0100] The first and second support members may comprise any suitable material, such as rubber, metal, plastic and/or wood. The first and second support members may comprise metal.

[0101] The first and second support members may have an average diameter of at least 10 mm, such as at least 20 mm, or at least 30 mm. The first and second support members may have an average diameter of up to 100 mm, such as up to 90 mm, or up to 80 mm.

[0102] The first and second support members may comprise a first end and a second end.

[0103] The first end of the first and second support members may comprise attachment members operable to form a reversible attachment to a mannequin base. The first end of the first and second support members may comprise projections operable to be received and held by the mannequin body attachment portions of a mannequin base. The projections may be arranged along substantially the same vertical axis as the support member such that when the projections attach with the mannequin body attachment portions of a mannequin base rested on a level support surface (such as on level ground), the mannequin body is arranged in a substantially vertical position relative to the level support surface.

[0104] The support member may comprise at least two projections, such as at least four projections, such as at least six projections.

[0105] The linking member may comprise a first end and a second end. The first and second ends of the linking member may be laterally spaced and substantially parallel to each other. The linking member may be integrally manufactured.

[0106] The linking member may have a substantially cylindrical cross section. The linking member may be hollow.

[0107] The linking member may comprise any suitable material, such as rubber, metal, plastic and/or wood. The linking member may comprise metal.

[0108] The linking member may have an average diameter of at least 10 mm, such as at least 20 mm, or at least 30 mm. The linking member may have an average diameter of up to 100 mm, such as up to 90 mm, or up to 80 mm.

[0109] The second end of the first and second support members may be operable to reversibly attach to the linking member. The second end of the first and second support members may be operable to reversibly attach to opposite ends of the linking member, such as the first and second ends of the linking member.

[0110] The first and second support members and the linking member may be operable to be arranged in a telescopic configuration to form an adjustable attachment configuration.

[0111] In a telescopic configuration the second end of the first and second support members may have received into an end of the linking member, or an end of the linking member may be received into the second end of the support member.

[0112] The linking member, and/or the second end of the first and/or second support member, may comprise at least two apertures, such as at least four apertures, such as at least six apertures, such as at least eight ap-

ertures.

[0113] The linking member, and/or the second end of the first and/or second support member, may comprise at least one outwardly biased projection.

[0114] The aperture may be operable to engage the outwardly biased projection such that the projection extends into the aperture.

[0115] The adjustable attachment configuration operable to reversibly attach the first and second support members to the linking member may comprise an outwardly biased projection arranged in the first and/or second support member or the linking member, and an aperture arranged in the respective other member wherein when the aperture is arranged over the outwardly biased projection the projection moves outwardly to extend into the aperture and form an attachment between the support member and the linking member.

[0116] The first and second end of the linking member may comprise an outwardly biased projection and the first and second support members may comprise at least one aperture, operable to receive the outwardly biased knob.

[0117] The adjustable attachment configuration may be operable to adjust the height of the mannequin body along its longitudinal axis. The mannequin body may have at least one adjustable height, such as at least two adjustable heights, such as at least four adjustable heights.

[0118] The mannequin body may have a minimum height of at least 120 cm, such as at least 140 cm. The mannequin body may have a maximum height of up to 170 cm, such as up to 160 cm.

[0119] The mannequin's adjustable height enables the mannequin body to be efficiently adjusted depending on the intended use, or depending on the requirements of the user. Such a variable height mannequin body according to the present invention may also be manufactured at lower cost and provide improved resilience in use. Further, the adjustable height configuration enables the support members and linking member to be separated into discrete parts such that the mannequin base can be easily dismantled, providing improved transport and storage.

[0120] The mannequin body may be operable to be held by the mannequin base in a substantially vertical position. The mannequin body may comprise at least one body panel, such as at least two, such as at least three.

[0121] The body panel may comprise any suitable material, such as rubber, metal, plastic and/or wood. The body panel may comprise rubber.

[0122] The body panel may be any suitable shape, such as square, rhombus, rectangular, rhomboid or trapezoid. The body panel may be rectangular. The body panel may be planar. The body panel may comprise cut away portions.

[0123] The body panel may be operable to reversibly connect the first and second support members and/or the linking member, such as the first and second end of the linking member.

[0124] The body panel may extend between the sides of the mannequin body.

[0125] The body panel may comprise a panel extending between, and optionally past, opposing sides of the mannequin body.

[0126] The body panel may comprise at least two portions. The body panel may comprise a first portion attached to a first side of the mannequin body (such as to the first support member or toward a first end of the liking portion) and may comprise a second portion attached to a second side of the mannequin body (such as to the second support member or toward a second end of the liking portion). The body panel portion may be operable to rotate around the part of the mannequin body to which it is attached. For example, a first body panel portion may be operable to attach to the first end of the linking member or the first support member and a second body panel portion may be operable to attach to the second end of the linking member or the second support member, wherein the first body panel portion may be operable to rotate around the first end of the linking member or the first support member and the second body panel portion may be operable to rotate around the second end of the linking member or the second support member.

[0127] The two or more body panel portions may be connected together by an elastic attachment portion.

[0128] According to a fourth aspect of the present invention, there is provided a kit of parts for a mannequin comprising a mannequin base according to the first aspect of the present invention and a mannequin body comprising an attachment portion operable to engage with the attachment portion of the mannequin base so as to hold the mannequin body in a substantially vertical position.

[0129] The mannequin body may be according to the third aspect of the present invention.

[0130] Advantageously, the base can provide ground rebound functionality in combination with the use of a mannequin body to provide a multifunctional training device that is convenient to store, transport and use, as well as being simple to manufacture.

[0131] As used herein, unless otherwise stated, the term 'substantially horizontal' may mean at an angle of up to 9° off-set from horizontal, such as 5° or 2°.

[0132] As used herein, unless otherwise stated, the term 'horizontally off-set' may mean at an angle of at least 10° off-set from horizontal, such as 20° or 30°.

[0133] As used herein, unless otherwise stated, the term 'substantially vertical' may mean at an angle of up to 9° off-set from vertical, such as 5° or 2°.

[0134] As used herein, unless otherwise stated, the term 'vertically off-set' may mean at an angle of at least 10° off-set from vertical, such as 20° or 30°.

[0135] As used herein, unless otherwise stated, the term 'substantially the mid-point' with respect to the rebound panel, or rear support members may mean the middle distance along the length of the longitudinal axis of the rebound panel or support member ±10% of the

length of the longitudinal axis of the panel or member.

[0136] As used herein, the term 'average' means mean average, unless otherwise stated.

[0137] Rebound Return Test. The mannequin base was clamped in place such that the external face of the rebound panel is horizontal to level ground. A maximum pressure filled ball (Adidas AL RIHLA COMPETITION BALL 2022 replica World Cup ball (FIFA quality PRO certified)) was dropped under gravity onto the horizontal rebound panel from a vertical distance relative to the external face of the rebound panel at a height of 1 m. The distance that the ball rebounded back in the vertical plane was then measured as a percentage of the 1 m drop to give the rebound return.

[0138] Singular encompasses plural and vice versa. For example, although reference is made herein to "a" rebound panel, "a" mannequin body, and the like, one or more of each of these and any other components can be used.

[0139] The terms "comprising" and "comprises" as used herein are synonymous with "including", "includes" or "containing", "contains", and are inclusive or open-ended and do not exclude additional, non-recited members, elements or method steps.

[0140] Additionally, although the present invention has been described in terms of "comprising", the invention as detailed herein may also be described as "consisting essentially of" or "consisting of".

[0141] As used herein, the term "and/or," when used in a list of two or more items, means that any one of the listed items can be employed by itself or any combination of two or more of the listed items can be employed. For example, if a list is described as comprising group A, B, and/or C, the list can comprise A alone; B alone; C alone; A and B in combination; A and C in combination, B and C in combination; or A, B, and C in combination.

[0142] Where ranges are provided in relation to a genus, each range may also apply additionally and independently to any one or more of the listed species of that genus.

[0143] Attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

[0144] All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

[0145] Each feature disclosed in this specification (including any accompanying claims, abstract and drawings) may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

[0146] The invention is not restricted to the details of the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

[0147] All of the features contained herein may be combined with any of the above aspects and in any combination.

BRIEF DESCRIPTION OF DRAWINGS

[0148] For a better understanding of the invention, and to show how embodiments of the same may be carried into effect, reference will now be made, by way of example, to the accompanying diagrammatic drawings in which:

Figures 1a and 1c show a perspective view of a mannequin base according to a first embodiment of the present invention. Figures 1b, 1d and 1e show a back, side and bottom plan view of a mannequin base according to a first embodiment of the present invention, respectively.

Figures 2a and 2d show a back plan view of a mannequin body according to a first embodiment of the present invention. Figures 2b and 2c show a partially exploded back plan view of a mannequin body and base, respectively, according to a first embodiment of the present invention.

Figures 3a and 3b show a back and side plan view of a mannequin base and body according to a first embodiment of the present invention, respectively. Figure 3c shows a perspective view of a mannequin base and body connection according to a first embodiment of the present invention.

Figures 4a and 4b show a perspective view of a mannequin base according to a second embodiment of the present invention. Figures 4c and 4d show a side and back plan view of a mannequin base according to a second embodiment of the present invention, respectively.

Figures 5a and 5b show a back and side plan view of a mannequin base and body according to a second embodiment of the present invention, respectively. Figure 5c shows a perspective view of a mannequin base and body connection according to a second embodiment of the present invention.

Figures 6a and 6c show a perspective view of a mannequin base according to a third embodiment of the present invention. Figures 6b, 6d and 6e show a

front, side and bottom plan view of a mannequin base according to a third embodiment of the present invention, respectively.

Figures 7a and 7d show a front plan view of a mannequin body according to a third embodiment of the present invention. Figures 7b and 7c show a partially exploded front plan view of a mannequin body according to a third embodiment of the present invention.

Figures 8a and 8b show a front and side plan view of a mannequin base and body according to a third embodiment of the present invention. Figure 8c shows a perspective view of a mannequin base and body connection according to a third embodiment of the present invention.

Figure 9 shows a perspective view of a mannequin base according to a fourth embodiment of the present invention, connected to a second mannequin base also according to a fifth embodiment of the present invention.

DESCRIPTION OF EMBODIMENTS

[0149] Referring to Figures 1a to 1e, there is shown a first embodiment of a mannequin base 100. Mannequin base 100 is formed of rebound panel 102 having an external face 104, rear support member 106, side linking support members 108a, 108b, and intermediate linking support member 110.

[0150] Elongate linear rear support member 106 and planar rectangular rebound panel 102 are spaced in a substantially parallel configuration in mannequin base 100 with the mid-points opposed. Rebound panel 102 is spaced 50 cm from rear support member 106. The bottom edges of rear support member 106 and rebound panel 102 are on the same horizontal plane. Rebound panel 102, and external face 104, have an average height and width of 20 cm and 35 cm, respectively. Rear support member 106 has an average height that is 21% of the average height of the rebound panel and has an average width that is 75% of the average width of the rebound panel.

[0151] Rebound panel 102 and rear support member 106 have an average thickness of 30 cm.

[0152] Rear support member 106 and rebound panel 102 are connected through side linking support members 108a, 108b and intermediate linking support member 110.

[0153] Linking support members 108a, 108b and 110 are each spaced laterally apart along rear support member 106 and rebound panel 102. Intermediate linking support member 110 is arranged between first and second side linking support members 108a, 108b.

[0154] Opposing ends of side linking support members 108a, 108b are attached to rear support member 106 and rebound panel 102. The ends of linking support members 108a, 108b, 110 are attached to respective opposing ends of rebound panel 102 and rear support member 106.

[0155] Side linking support members 108a, 108b comprise two linear portions. Side linking support members 108a, 108b have an average thickness of 30 cm.

[0156] The top face of side linking support members 108a, 108b are attached to respective opposing ends of rebound panel 102a and rear support member 106. The top face of side linking support members 108a, 108b slope downwardly from the top face of rebound panel 102 to the top face of rear support member 106 at an angle of 62° to the vertical plane.

[0157] The bottom face of side linking support members 108a, 108b are attached to respective opposing ends of rebound panel 102a and rear support member 106. The bottom face of side linking support members 108a, 108b extends along a horizontal plane from the bottom face of rebound panel 102 to the bottom face of rear support member 106.

[0158] Intermediate linking support member 110 is linear. Intermediate linking support member 110 has an average thickness of 30 cm.

[0159] Intermediate linking support member 110 extends from the mid-point of rebound panel 102 to the mid-point of rear support member 106. The ends of intermediate linking support member 110 are attached to respective opposing ends of rebound panel 102 and rear support member 106.

[0160] The top face of intermediate linking support member 110 slopes downwardly from the top face of rebound panel 102 to the top face of rear support member 106 at an angle of 62° to the vertical plane. The bottom face of intermediate linking support member 110 extends along a horizontal plane from the bottom face of rebound panel 102 to the bottom face of rear support member 106.

[0161] Mannequin base 100 further comprises first and second mannequin body attachment portions 112a, 112b as shown in Figures 1c and 1e.

[0162] First attachment portion 112a is attached to the internal face of side linking support member 108a and the second attachment portion 112b is attached to the internal face of side linking support member 108b. First and second attachment portions 112a, 112b are opposed along the longitudinal axis of mannequin base 100 and are arranged toward the lateral mid-point of mannequin base 100. First and second attachment portions 112a, 112b each comprise a vertically extending bore 116 arranged to receive and hold a portion of a mannequin body, such as mannequin body 500.

[0163] Turning now to Figure 1d, when mannequin base 100 is rested on a level support surface (such as on level ground) in a first arrangement, mannequin base 100 is arranged such that attachment portions 112a, 112b are operable to receive and hold a mannequin body, such as mannequin body 500, in a substantially vertical position relative to the level support surface of manne-

quin base 100, and wherein external face 104 of rebound panel 102 is in a substantially vertical position relative to the level support surface of mannequin base 100, operable to receive and rebound a ball along a substantially horizontal plane.

[0164] Upon rotation of mannequin base 100 at rotation of 242° around longitudinal axis Y (so as to turn the mannequin base over), such that mannequin base 100 is rested on a level support surface (such as on level ground) in a second arrangement, mannequin base 100 is arranged such that external face 104 of rebound panel 102 is in a vertically off-set position relative to the level support surface of mannequin base 100, at an angle of around 118° relative to the vertical, operable to receive a ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane.

[0165] Rebound panel 102, rear support member 106, first and second side linking support members 108a, 108b, and first and second attachment portions 112a, 112b are formed of the same rubber material and are integrally manufactured.

[0166] Referring to Figures 2a to 2d, there is shown a first embodiment of a mannequin body 500. Mannequin body 500 is formed of first support member 502, second support member 504, linking member 506 and body panel 508.

[0167] Referring now to Figure 2c, first and second support members 502, 504 are linear and extend along a longitudinal axis.

[0168] First support member 502 comprises first end 502a and second end 502b. Second support member 504 comprises first end 504a and second end 504b.

[0169] The first end of first and second support members 502a, 504a are operable to reversibly attach to a mannequin base, such as mannequin base 100.

[0170] The second end of first support member 502b comprises outwardly biased knob 512a. The second end of second support member 504b comprises outwardly biased knob 512b.

[0171] Referring now to Figure 2b, linking member 506 comprises first end 506a and second end 506b. First and second ends of linking member 506a, 506b are laterally spaced and are substantially parallel to each other. Linking member 506 is integrally manufactured.

[0172] First and second ends of linking member 506a, 506b comprise apertures 514 operable to engage the outwardly biased knobs on the first and second support members 512a, 512b. Apertures 514 on first and second support members 512a, 512b are configured to be arranged at the same height on the second end of both first and second support members 502b, 504b.

[0173] In a first height arrangement shown in Figure 2d, the first and second ends of linking member 506a, 506b, receive the second end of the first and second support members 502b, 504b such that the apertures 514 of the first and second ends of linking member 506a, 506b engage with the outwardly biased knobs on the first and second support members 512a, 512b to form a first adjustable attachment configuration 510a. In this first arrangement, the first and second support members 502, 504 are laterally spaced and are substantially parallel to each other. The first and second support members 502, 504 and the first and second ends of linking member 506a, 506b are substantially linear to one another. This first adjustable attachment configuration 510a provides mannequin body 500 with a first height.

[0174] In a second height arrangement shown in Figure 2d, the first and second ends of linking member 506a, 506b, receive the second end of the first and second support members 502b, 504b such that the apertures 514 of the first and second ends of linking member 506a, 506b engage with the outwardly biased knobs on the first and second support members 512a, 512b to form a second adjustable attachment configuration 510b. In this second arrangement, the first and second support members 502, 504 are laterally spaced and are substantially parallel to each other. The first and second support members 502, 504 and the first and second ends of linking member 506a, 506b are substantially linear to one another. This second adjustable attachment configuration 510b provides mannequin body 500 with a second height, different to the first height.

[0175] In a third height arrangement shown in Figure 2d, the first and second ends of linking member 506a, 506b, receive the second end of the first and second support members 502b, 504b such that the apertures 514 of the first and second ends of linking member 506a, 506b engage with the outwardly biased knobs on the first and second support members 512a, 512b to form a second adjustable attachment configuration 510c. In this second arrangement, the first and second support members 502, 504 are laterally spaced and are substantially parallel to each other. The first and second support members 502, 504 and the first and second ends of linking member 506a, 506b are substantially linear to one another. This third adjustable attachment configuration 510c provides mannequin body 500 with a third height, different to the first and second height.

[0176] In a fourth height arrangement shown in Figure 2d, the first and second ends of linking member 506a, 506b, receive the second end of the first and second support members 502b, 504b such that the apertures 514 of the first and second ends of linking member 506a, 506b engage with the outwardly biased knobs on the first and second support members 512a, 512b to form a second adjustable attachment configuration 510d. In this second arrangement, the first and second support members 502, 504 are laterally spaced and are substantially parallel to each other. The first and second support members 502, 504 and the first and second ends of linking member 506a, 506b are substantially linear to one another. This fourth adjustable attachment configuration 510d provides mannequin body 500 with a fourth height, different to the first, second and third height.

[0177] Body panel 508 comprises a single panel and is reversibly attached to the first and second ends of link-

ing member 506a, 506b, such as to connect the first and second ends of linking member 506a, 506b together.

[0178] Referring to Figures 3a and 3b, there is shown a first embodiment of a kit of parts comprising a mannequin base 100 as described above and a mannequin body 500, as described above.

[0179] Figure 3c shows the connection between mannequin base 100 and mannequin body 500. Bore 116 of the first and second attachment portions 112a, 112b of mannequin base 100 are arranged to receive the first end of the first and second support members 502a, 504a of mannequin body 500. Turning now to Figure 3b, when mannequin base 100 is rested on a level support surface (such as on level ground) in a first arrangement, mannequin base 100 is arranged such that attachment portions 112a, 112b receive and hold the first and second support members 502a, 504a of mannequin body 500, in a substantially vertical position relative to the level support surface of mannequin base 100, and wherein external face 104 of rebound panel 102 is in a substantially vertical position relative to the level support surface of mannequin base 100, operable to receive and rebound a ball along a substantially horizontal plane.

[0180] Referring to Figures 4a to 4d, there is shown a second embodiment of a mannequin base 200. Mannequin base 200 is formed of rebound panels 202a, 202b having an external face 204a, 204b, side linking support members 208a, 208b, and intermediate linking support member 210.

[0181] Planar rectangular rebound panels 202a, 202b are spaced in a substantially parallel configuration in mannequin base 200 with the mid-points opposed. Rebound panel 202a is spaced 50 cm from rebound panel 202b. The bottom and top edges of rebound panel 202a and rebound panel 202b are on the same horizontal and vertical plane. Rebound panels 202a, 202b and respective external faces 204a, 204b have an average height and width of 20 cm and 35 cm, respectively.

[0182] Rebound panels 202a and 202b have an average thickness of 30 cm.

[0183] Rebound panel 202a and rebound panel 202b are connected through side linking support members 208a, 208b and intermediate linking support member 210.

[0184] Linking support members 208a, 208b and 210 are each spaced laterally apart along rebound panel 202a and rebound panel 202b. Intermediate linking support member 210 is arranged between first and second side linking support members 208a, 208b. Linking support members 208a, 208b and 210 each run substantially parallel to each other.

[0185] Opposing ends of each linking support member 208a, 208b, 210 are attached to rebound panel 202a and rebound panel 202b. The ends of linking support members 208a, 208b, 210 are attached to respective opposing ends of rebound panels 202a and rebound panel 202b.

[0186] Side linking support members 208a, 208b are linear. Side linking support members 208a, 208b have an average thickness of 30 cm.

[0187] The top face of side linking support members 208a, 208b are attached to respective opposing ends of rebound panel 202a and rebound panel 202b. The top face of side linking support members 208a, 208b extend along a horizontal plane from the top face of rebound panel 202a to the top face of rebound panel 202b.

[0188] The bottom face of side linking support members 208a, 208b are attached to respective opposing ends of rebound panel 202a and rebound panel 202b. The bottom face of side linking support members 208a, 208b extend along a horizontal plane from the bottom face of rebound panel 202a to the bottom face of rebound panel 202b.

[0189] Intermediate linking support member 210 is linear. Intermediate linking support member 210 has an average thickness of 30 cm.

[0190] Intermediate linking support member 210 extends from the mid-point of rebound panel 202a to the mid-point of rebound panel 202b. The top face of intermediate linking support member 210 extends along a horizontal plane from the top face of rebound panel 202a to the top face of rebound panel 202b. The bottom face of intermediate linking support member 210 extends along a horizontal plane from the bottom face of rebound panel 202a to the bottom face of rebound panel 202b.

[0191] Mannequin base 200 further comprises first and second mannequin body attachment portions 212a, 212b as shown in Figures 4b and 4d. First attachment portion 212a is attached to the internal face of side linking support member 208a and the second attachment portion 212b is attached to the internal face of side linking support member 208b. First and second attachment portions 212a, 212b are opposed along the longitudinal axis of mannequin base 200 and are arranged toward the lateral mid-point of mannequin base 200. First and second attachment portions 212a, 212b each comprise a vertically extending bore 216 arranged to receive and hold a portion ofa mannequin body, such as mannequin body 500.

[0192] Turning now to Figure 4c, when mannequin base 200 is rested on a level support surface (such as on level ground), mannequin base 200 is arranged such that attachment portions 212a, 212b are operable to receive and hold a mannequin body, such as mannequin body 500, in a substantially vertical position relative to the level support surface of mannequin base 200, and wherein external face 204a of rebound panel 202a and external face 204b of rebound panel 202b are in a substantially vertical position relative to the level support surface of mannequin base 200, operable to receive and rebound a ball along a substantially horizontal plane.

[0193] Rebound panel 202a, rebound panel 202b, first and second side linking support members 208a, 208b, and first and second attachment portions 212a, 212b are formed of the same rubber material and are integrally manufactured.

[0194] Referring to Figures 5a to 5c, there is shown a

second embodiment of a kit of parts comprising a mannequin base 200 as described above and a mannequin body 500 as described above.

[0195] Figures 5c to 5e show the connection between mannequin base 200 and mannequin body 500. Bore 216 of first and second attachment portions 212a, 212b of mannequin base 200 are arranged to receive the first end of the first and second support members 502a, 504a of mannequin body 500.

[0196] Turning now to Figure 5c, when mannequin base 200 is rested on a level support surface (such as on level ground), mannequin base 200 is arranged such that attachment portions 212a, 212b receive and hold the first and second support members 502a, 504a of mannequin body 500, in a substantially vertical position relative to the level support surface of mannequin base 200, and wherein external faces 204a, 204b of respective rebound panels 202a, 202b are in a substantially vertical position relative to the level support surface of mannequin base 200, operable to receive and rebound a ball along a substantially horizontal plane.

[0197] Referring to Figures 6a to 6e, there is shown a third embodiment of a mannequin base 300. Mannequin base 300 is formed of rebound panels 302a, 302b having an external face 304a, 304b, side linking support members 308a, 308b, intermediate linking support member 310, crosslinking support member 318 and top linking support member 314.

[0198] Planar rectangular rebound panels 302a, 302b and crosslinking support member 318 are each spaced laterally in mannequin base 300 with the mid-points opposed. Rebound panel 302a is spaced 50 cm from rebound panel 302b. Crosslinking support member 318 is arranged between rebound panels 302a, 302b. The bottom edges of rebound panel 302a, rebound panel 302b and crosslinking support member 318 are on the same horizontal and vertical plane. Rebound panels 302a, 302b and external faces 304a, 304b have a height and width of 20 cm and 35 cm, respectively.

[0199] Rebound panels 302a, 302b and crosslinking support member 218 have an average thickness of 30 cm.

[0200] Rebound panel 302a, rebound panel 302b and crosslinking support member 318 are connected through side linking support members 308a, 308b, intermediate linking support member 310 and top linking support member 314.

[0201] Side linking support members 308a, 308b and intermediate linking support member 310 are each spaced laterally apart along rebound panels 302a, 302b and crosslinking support member 318. Intermediate linking support member 310 is arranged between first and second side linking support members 308a, 308b. Linking support members 308a, 308b and 310 each run substantially parallel to each other.

[0202] Opposing ends of each linking support member 308a, 308b, 310 are attached to rebound panel 302a and rebound panel 302b. The mid-point of each linking support member 308a, 308b, 310 are attached to crosslinking support member 318. The ends of side linking support members 308a, 308b are attached to respective opposing ends of the rebound panel 302a and rebound panel 302b.

[0203] Side linking support members 308a, 308b are linear. Side linking support members 308a, 308b have an average thickness of 30 cm.

[0204] The top face of side linking support members 308a, 308b are attached to respective opposing ends of the rebound panel 302a and rebound panel 302b.

[0205] The bottom face of side linking support members 308a, 308b are attached to respective opposing ends of the rebound panel 302a and rebound panel 302b. The bottom face of side linking support members 308a, 308b extend along a horizontal plane from the bottom face of rebound panel 302 to the bottom face of rear support member 306.

[0206] Intermediate linking support member 310 is linear. Intermediate linking support member 310 has an average thickness of 30 cm.

[0207] Intermediate linking support member 310 extends from the mid-point of rebound panel 302 to the mid-point of rear support member 306. The bottom face of intermediate linking support member 310 extends along a horizontal plane from the bottom face of rebound panel 302a to the bottom face of rebound panel 302b.

[0208] Top linking support member 314 is arranged atop rebound panel 302a, rebound panel 302a, crosslinking support member 318, side linking support members 308a, 308b, and intermediate linking support member 310. Top linking support member 314, rebound panel 302a, rebound panel 302b and side linking support members 308a, 308b form an enclosed cavity when the mannequin base is rested on a level support surface, such as level ground. Top linking support member 310 has an average thickness of 30 cm.

[0209] Mannequin base 300 further comprises first and second attachment portions 312a, 312b as shown in Figures 6c and 6e. First and second attachment portions 312a, 213b are arranged on the external face of top linking support member 314 and through the interior of crosslinking support member 318. First and second attachment portions 312a, 312b are opposed along the longitudinal axis of mannequin base 300 and are arranged toward the lateral mid-point of the mannequin base 300. First and second attachment portions 312a, 312b each comprise a bore 316 arranged to receive and hold a portion of a mannequin body, such as mannequin body 600.

[0210] Turning now to Figure 6d, when mannequin base 300 is rested on a level support surface (such as on level ground), mannequin base 300 is arranged such that attachment portions 312a, 312b are operable to receive and hold a mannequin body, such as mannequin body 600, in a substantially vertical position relative to the level support surface of mannequin base 300, and wherein external face 304a of rebound panel 302a are in a substantially vertical position relative to the level sup-

port surface of mannequin base 300, operable to receive and rebound a ball along a substantially horizontal plane, and wherein external face 304b of rebound panel 302b are in a vertically off-set position relative to the level support surface of mannequin base 300 at an angle or around 25° to the vertical, operable to receive a ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane.

[0211] Rebound panels 302a, 302b, side linking support members 308a, 308b, intermediate linking support member 310, crosslinking support member 318, top linking support member 314, and first and second attachment portions 312a, 312b are formed of the same rubber material and are integrally manufactured.

[0212] Referring to Figures 7a to 7d, there is shown a third embodiment of a mannequin body 600. Mannequin body 600 is formed of first support member 602, second support member 604, linking member 606, first body panel 608a and second body panel 608b.

[0213] Referring now to Figure 7c, first and second support members 602, 604 are linear and extend along a longitudinal axis.

[0214] First support member 602 comprises first end 602a and second end 602b. Second support member 604 comprises first end 604a and second end 604b.

[0215] The first end of the first and second support members 602a, 604a are operable to reversibly attach to a mannequin base, such as mannequin base 300.

[0216] The first end of the first and second support members 602a, 604a comprise projections 618 operable to be received by a mannequin base, such as mannequin base 300. Projections 618 are arranged in a substantially parallel plane to first and second support members 602, 604 such that when mannequin body 600 attaches to a mannequin base, such as mannequin base 300, rested on a level support surface (such as on level ground), mannequin body 600 is arranged in a substantially vertical position relative to the level support surface.

[0217] The second end of first support member 602b comprises resiliently outwardly biased knob 612a. The second end of second support member 604b comprises resiliently outwardly biased knob 612b.

[0218] Referring now to Figure 7b, linking member 606 comprises first end 606a and second end 606b. First and second ends of linking member 606a, 606b are laterally spaced and are substantially parallel to each other. Linking member 606 is integrally manufactured.

[0219] First and second ends of linking member 606a, 606b comprise apertures 614 operable to engage the outwardly biased knobs on the first and second support members 612a, 612b. Apertures 614 on first and second support members 612a, 612b are configured to be arranged at the same height on the second end of both first and second support members 602b, 604b.

[0220] In a first height arrangement shown in Figure 7d, the first and second ends of linking member 606a, 606b, receive the second end of the first and second support members 602b, 604b such that the apertures 614 of the first and second ends of linking member 606a, 606b engage with the outwardly biased knobs on the first and second support members 612a, 612b to form a first adjustable attachment configuration 610a. In this first arrangement, the first and second support members 602, 604 are laterally spaced and are substantially parallel to each other. The first and second support members 602, 604 and the first and second ends of linking member 606a, 606b are substantially linear to one another. This first adjustable attachment configuration 610a provides mannequin body 600 with a first height.

[0221] In a second height arrangement shown in Figure 7d, the first and second ends of linking member 606a, 606b, receive the second end of the first and second support members 602b, 604b such that the apertures 614 of the first and second ends of linking member 606a, 606b engage with the outwardly biased knobs on the first and second support members 612a, 612b to form a second adjustable attachment configuration 610b. In this second arrangement, the first and second support members 602, 604 are laterally spaced and are substantially parallel to each other. The first and second support members 602, 604 and the first and second ends of linking member 606a, 606b are substantially linear to one another. This second adjustable attachment configuration 610b provides mannequin body 600 with a second height, different to the first height.

[0222] In a third height arrangement shown in Figure 7d, the first and second ends of linking member 606a, 606b receive the second end of the first and second support members 602b, 604b such that the apertures 614 of the first and second ends of linking member 606a, 606b engage with the outwardly biased knobs on the first and second support members 612a, 612b to form a second adjustable attachment configuration 610c. In this second arrangement, the first and second support members 602, 604 are laterally spaced and are substantially parallel to each other. The first and second support members 602, 604 and the first and second ends of linking member 606a, 606b are substantially linear to one another. This third adjustable attachment configuration 610c provides mannequin body 600 with a third height, different to the first and second height.

[0223] In a fourth height arrangement shown in Figure 7d, the first and second ends of linking member 606a, 606b, receive the second end of the first and second support members 602b, 604b such that the apertures 614 of the first and second ends of linking member 606a, 606b engage with the outwardly biased knobs on the first and second support members 612a, 612b to form a second adjustable attachment configuration 610d. In this second arrangement, the first and second support members 602, 604 are laterally spaced and are substantially parallel to each other. The first and second support members 602, 604 and the first and second ends of linking member 606a, 606b are substantially linear to one another. This fourth adjustable attachment configuration 610d provides mannequin body 600 with a fourth height,

different to the first, second and third height.

[0224] First body panel 608a comprises two discrete panels 608a1, 608a2 reversibly attached to the first and second ends of linking member 606a, 606b, respectively. Discrete panels 608a1, 608a2 are connected by elastic connection 620 such as to connect the discrete portions attached to first and second ends of the linking member 606a, 606b together.

[0225] Second body panel 608b comprises a single panel and is reversibly attached to the first end of the first and second support members 602a, 604a, such as to connect the first end of the first and second support members 602a, 604a together.

[0226] Referring to Figures 8a to 8c, there is shown a third embodiment of a kit of parts comprising a mannequin base 300 as described above and a mannequin body 600 as described above.

[0227] Figure 8c shows the connection between mannequin base 300 and mannequin body 600. Bore 316 of first and second attachment portions 312a, 312b of mannequin base 300 are arranged to receive projections 618 of first and second support members 602a, 604a of mannequin body 600.

[0228] Turning now to Figure 8b, when mannequin base 300 is rested on a level support surface (such as on level ground) in a first arrangement, mannequin base 300 is arranged such that attachment portions 312a, 312b receive and hold projections 618 of first and second support members 602a, 604a of mannequin body 600, in a substantially vertical position relative to the level support surface of mannequin base 300, and wherein external face 304a of rebound panel 302a are in a substantially vertical position relative to the level support surface of mannequin base 300, operable to receive and rebound a ball along a substantially horizontal plane, and wherein external face 304b of rebound panel 302b are in a vertically off-set position relative to the level support surface of mannequin base 300 operable to receive a ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane.

[0229] Referring to Figure 9, there is shown a fifth embodiment of a mannequin base 400. Mannequin base 400 is formed of mannequin base 300, and further comprises first and second mannequin base attachment portions 420a, 420b.

[0230] First and second attachment portions 420a, 420b are arranged on the external face of top linking support member 414 and through the interior of side linking support member 418. First and second attachment portions 420a, 420b are opposed along the longitudinal axis of mannequin base 400 and are arranged toward the along the side edge of top linking support member 414. First and second attachment portions 420a, 420b each comprise four bores 422 arranged to receive and hold a portion of coupling member 424.

[0231] The coupling member is operable to connect mannequin base 400 to a second mannequin base, such as mannequin base 400.

Claims

1. A mannequin base for use as a training apparatus with a ball, the mannequin base comprising:

   a. a (first) rebound panel comprising an external face operable to contact with and rebound the ball, and
   b. an attachment portion operable to form an attachment with a mannequin body,

   wherein the mannequin base is operable to be arranged so that the external face of the (first) rebound panel is in a substantially vertical position operable to receive and rebound the ball along a substantially horizontal plane and wherein the attachment portion is operable to hold the mannequin body in a substantially vertical position.

2. A mannequin base according to claim 1, wherein the mannequin base is operable to be arranged so that an external face of a rebound panel is in a substantially vertical position, operable to receive and rebound the ball along a substantially horizontal plane, and further be operable to be arranged so that an external face of a rebound panel is in a vertically off-set position, operable to receive the ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane.

3. A mannequin base according to claim 1, wherein the mannequin base is operable to be arranged in a first position wherein the external face of the (first) rebound panel is in a substantially vertical position operable to receive and rebound a ball along a substantially horizontal plane and the attachment portion is operable to hold the mannequin body in a substantially vertical position, and the mannequin base may also be operable to be arranged in a second position wherein the external face of the (first) rebound panel is in a vertically off-set position, operable to receive a ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane.

4. A mannequin base according to any of claims 1 to 3, wherein the (first) rebound panel comprises rubber.

5. A mannequin base according to any preceding claim, wherein the external face of the (first) rebound panel has an average height of at least 10 cm and/or an average height of up to 30 cm; and/or wherein the external face of the (first) rebound panel has a rebound return (according to the Rebound Return Test) of at least 40% of the drop distance; and/or wherein the vertically off-set plane of the external face of the (first) rebound panel is off-set at an angle

of at least 10° to the vertical plane and/or the vertically off-set plane of the external face of the rebound panel is off-set at an angle of up to 50° to the vertical plane.

6. A mannequin base according to any preceding claim, wherein movement of the mannequin base from the first position, wherein the external face of the (first) rebound panel is in a substantially vertical position operable to receive and rebound a ball along a substantially horizontal plane and, wherein the attachment portion is operable to hold the mannequin body in a substantially vertical position, to the second position wherein the external face of the (first) rebound panel is in a vertically off-set position, operable to receive a ball along a substantially horizontal plane and rebound the ball along a horizontally off-set plane may comprise rotation of the base about the longitudinal or lateral axis of the base; and/or wherein the mannequin base comprises a rear support member operable to assist with supporting the external face of the (first) rebound panel in use, and, optionally, assist with supporting the mannequin body in position, optionally, the rear support member and the (first) rebound panel are on opposing sides of the mannequin body attachment portion; and/or wherein the internal volume extending between the peripheral edges of the (first) rebound panel and the peripheral edges of the rear support member is at least 20% void space.

7. A mannequin base according to any preceding claim, wherein the mannequin base further comprises a linking support member that connects the rear support member and the (first) rebound panel and assists with supporting the rebound panel in position and/or wherein the (first) rebound panel, rear support member and first and second side linking support members are integrally manufactured.

8. A mannequin base according to claim 7, wherein the base comprises an intermediate linking support member extending from substantially the mid-point of the (first) rebound panel, and optionally, extending to substantially the mid-point of the rear support member.

9. A mannequin base according to any preceding claim, wherein the mannequin body attachment portion comprises a bore operable to receive an attachment portion of a mannequin body; and/or wherein the mannequin body attachment portions of the mannequin base comprise at least two attachment portions, each comprising a bore.

10. A mannequin base according to any preceding claim, wherein the mannequin base comprises a mannequin base attachment member operable to form an attachment with a further mannequin base; and/or wherein the rear support member comprises a second rebound panel comprising an external face operable to contact with and rebound a ball; and/or wherein the external face of the second rebound panel has a rebound return (according to the Rebound Return Test) of at least 40% of the drop distance.

11. A mannequin body for use as training apparatus comprising:

a. a first support member;
b. a second support member, and
c. a linking member

wherein the linking member is operable to form an adjustable attachment with the first and second support members so that the linking member is operable to move from a first configuration with the first and second support members wherein the mannequin body has a first height, to a second configuration with the first and second support members wherein the mannequin body has a second height that is different to the first height.

12. A mannequin body according to claim 11, wherein a first end of the first and second support members comprises an attachment member operable to form a reversible attachment to a mannequin base, such as mannequin base according to any one of claims 1 to 10.

13. A mannequin body according to claim 11 or 12, wherein a second end of the first and second support members are operable to reversibly attach to opposite ends of the linking member, such as first and second ends of the linking member; and/or wherein the first and second support members and the linking member are operable to be arranged in a telescopic configuration to form an adjustable attachment configuration.

14. A mannequin body according to any of claims 11 to 13, wherein the mannequin body comprises at least one body panel operable to further restrict the passage of a ball through the mannequin body; optionally wherein the body panel is operable to reversibly connect to the first and second support members and/or the linking member.

15. A kit of parts for a mannequin comprising a mannequin base according to any of claims 1 to 10 and a mannequin body comprising an attachment portion operable to engage with the attachment portion of the mannequin base so as to hold the mannequin body in a substantially vertical position, such as a mannequin body according to any of claims 11 to 14.

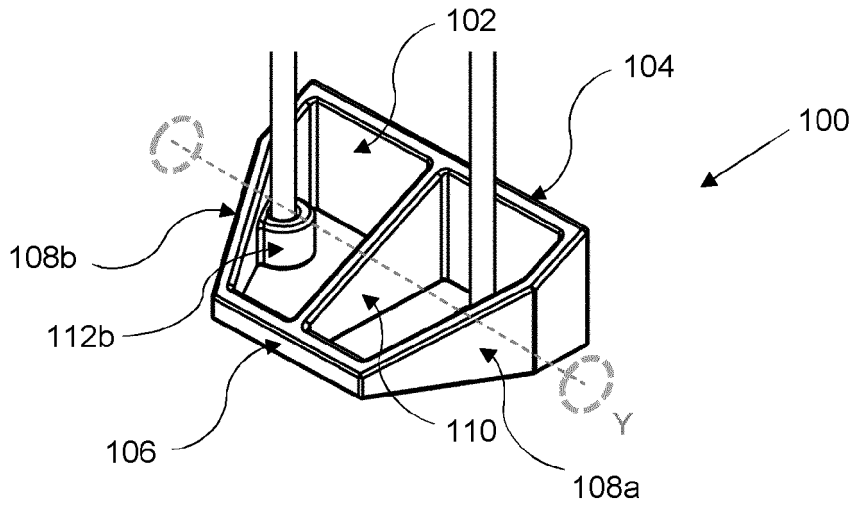

Figure 1a

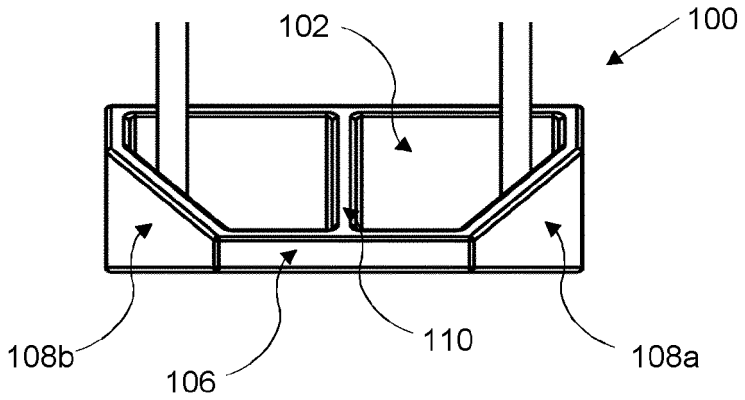

Figure 1b

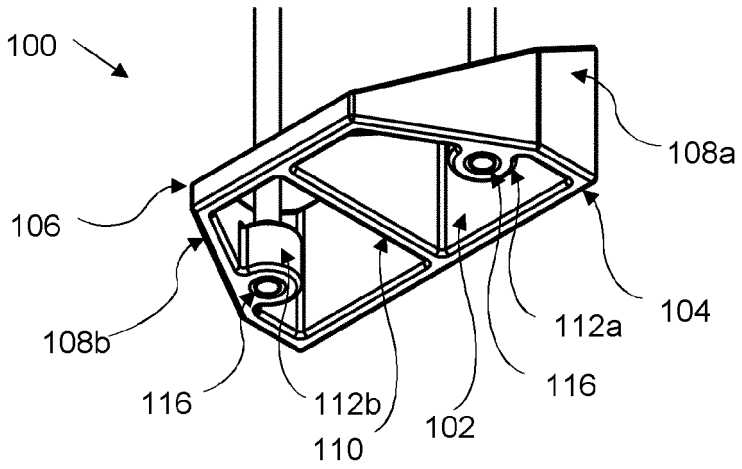

Figure 1c

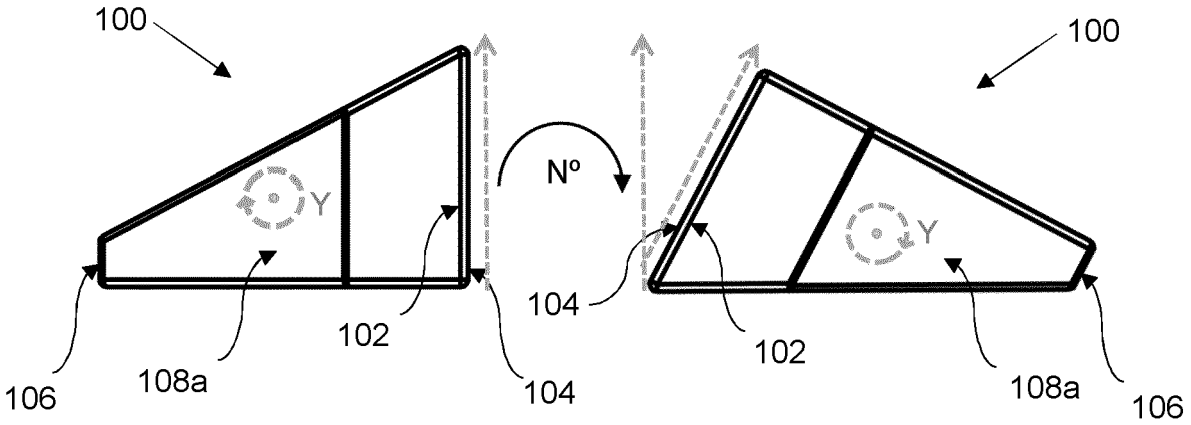

Figure 1d

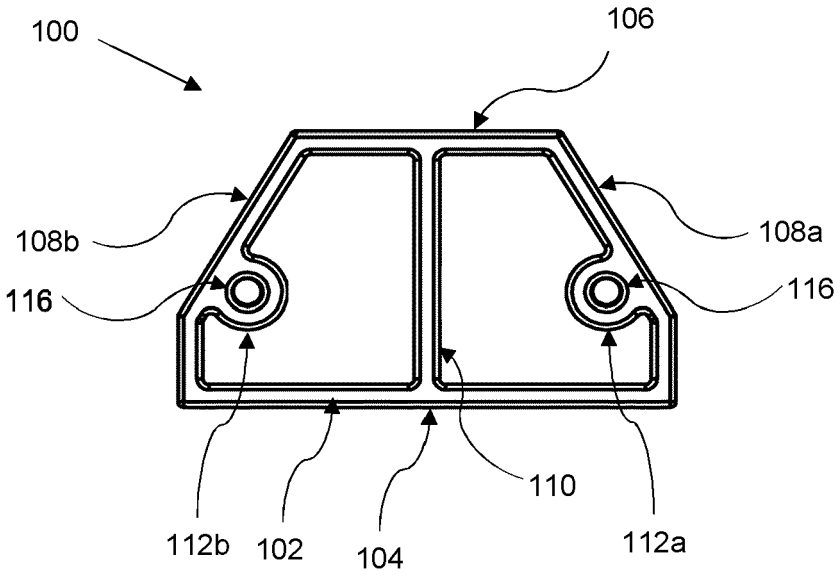

Figure 1e

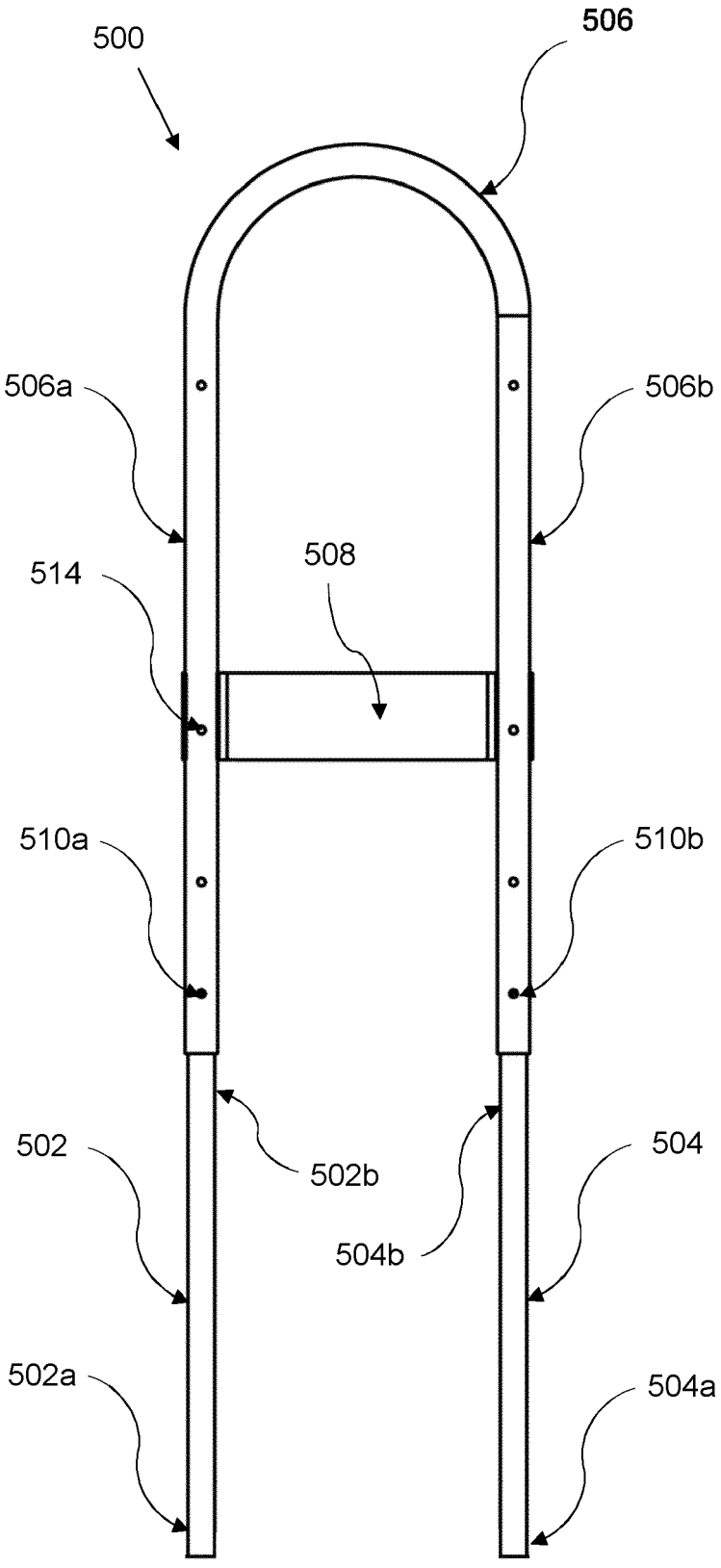
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Figure 2a

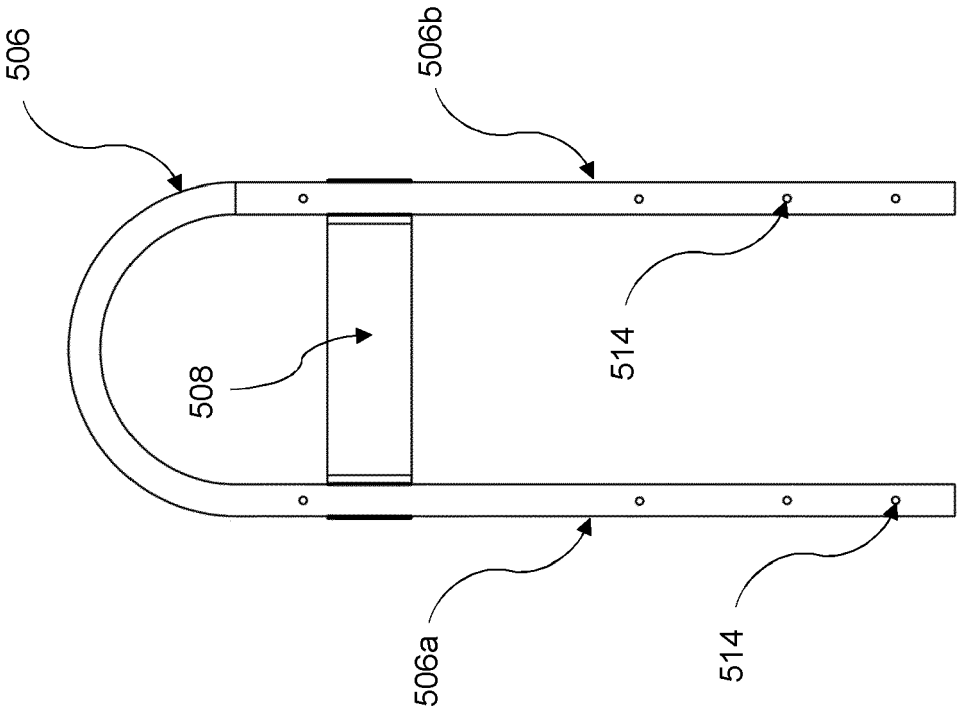

Figure 2b

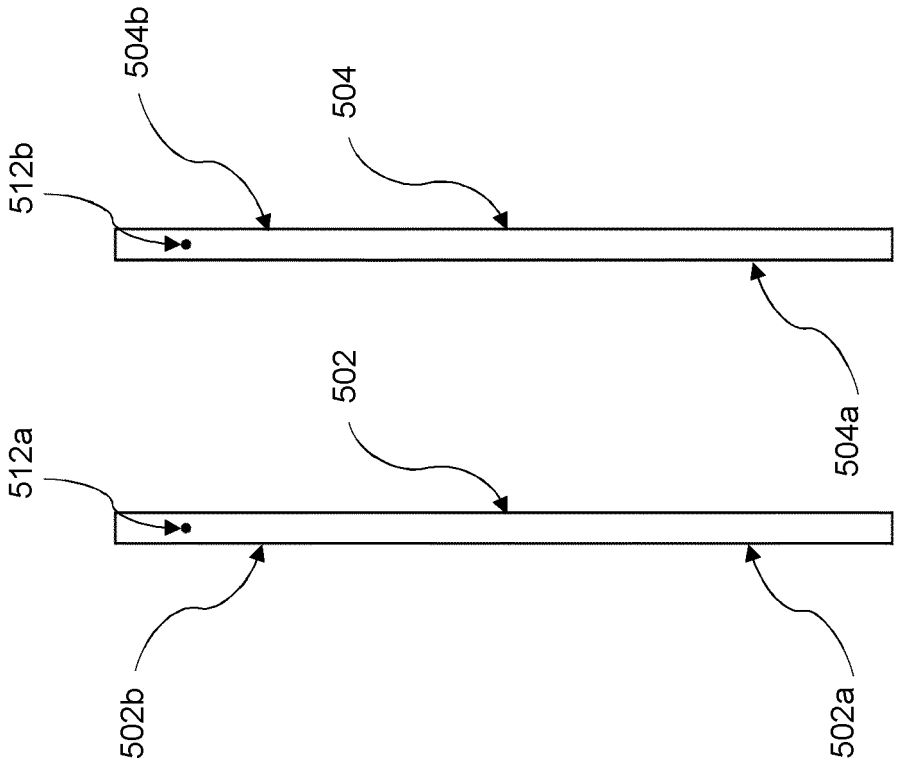

Figure 2c

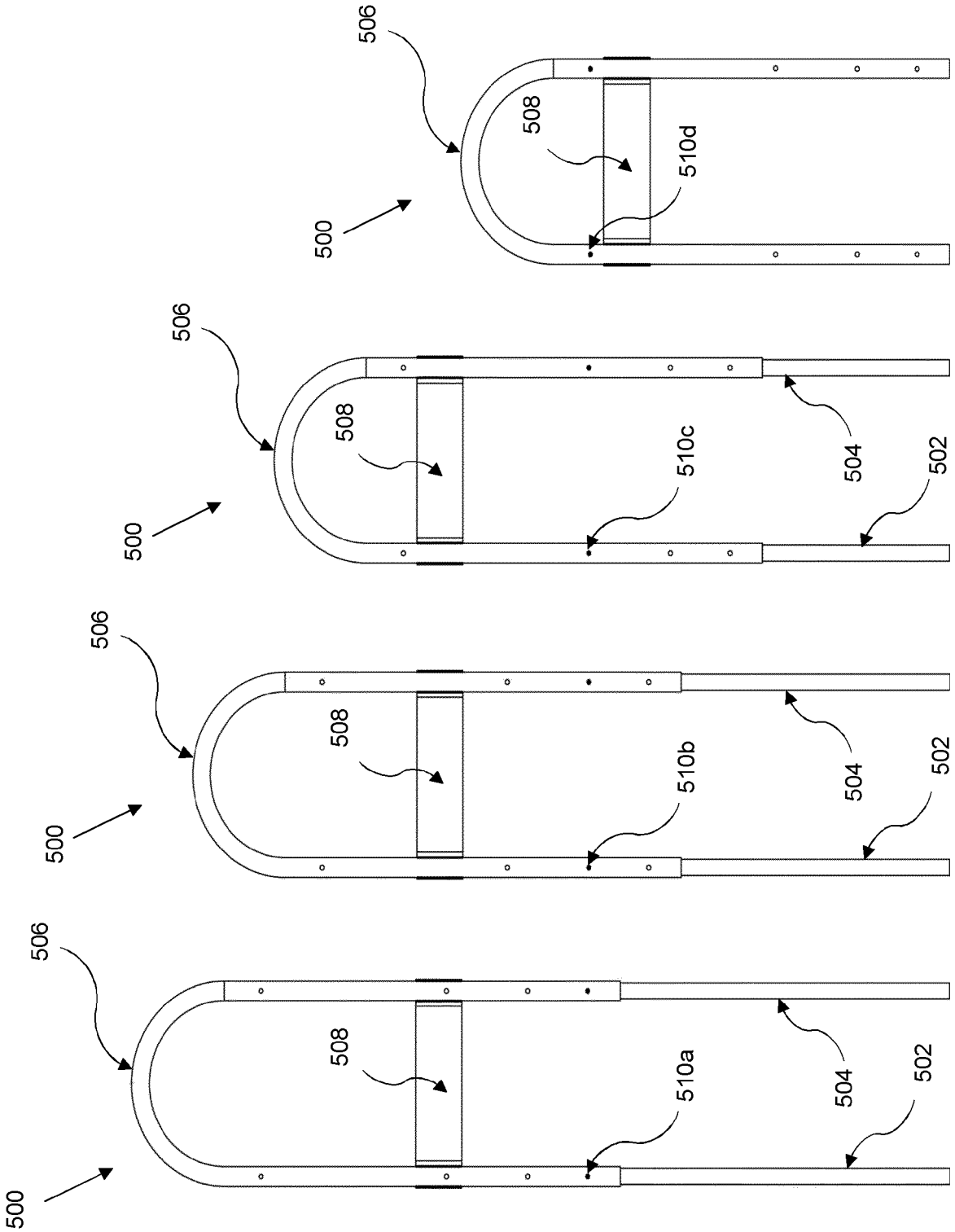
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Figure 2d

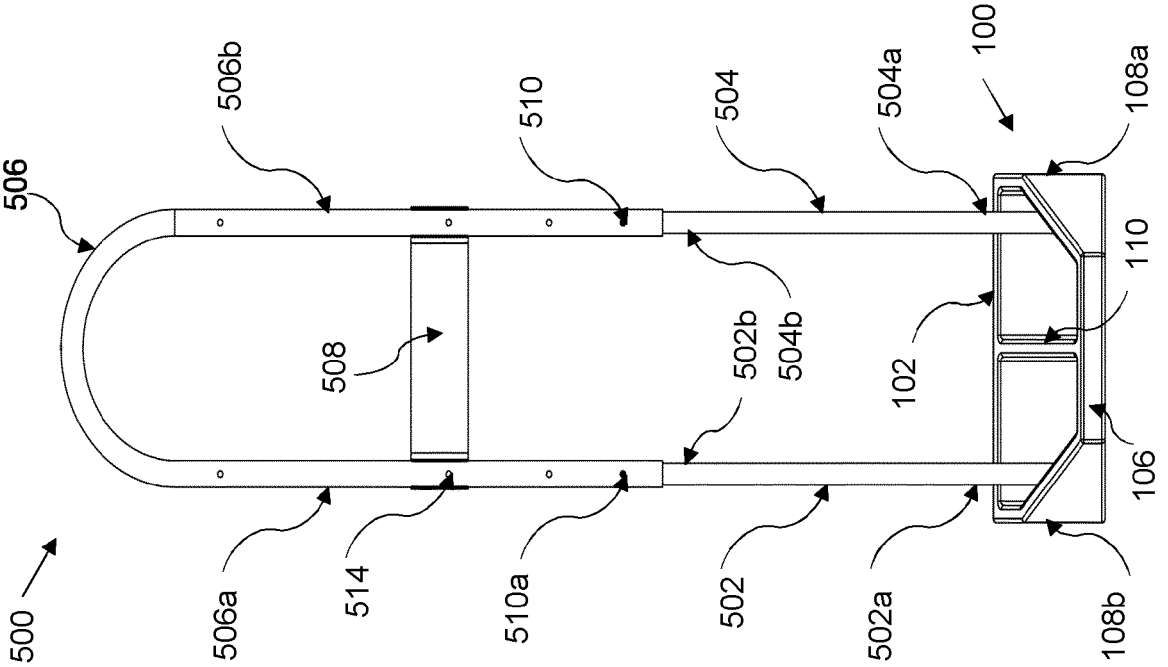

Figure 3a

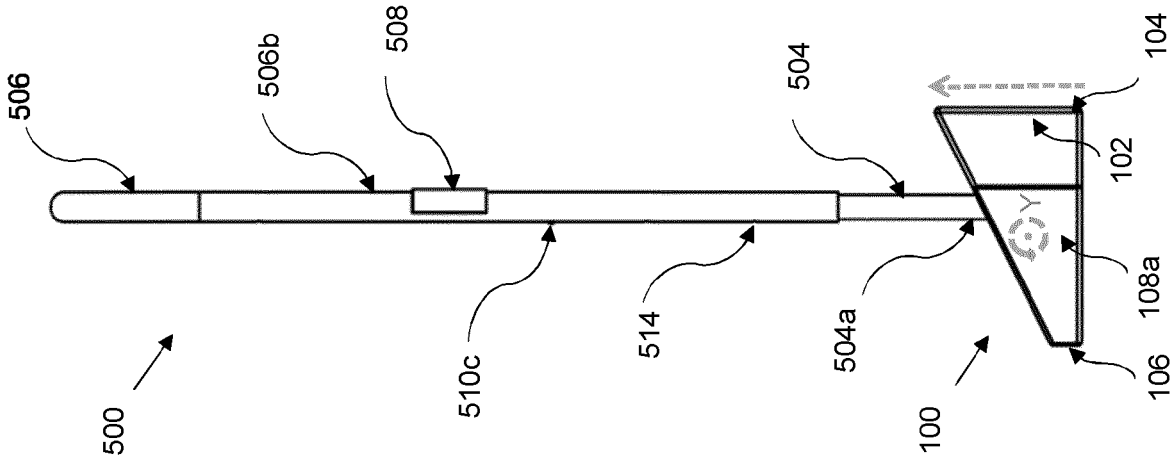

Figure 3b

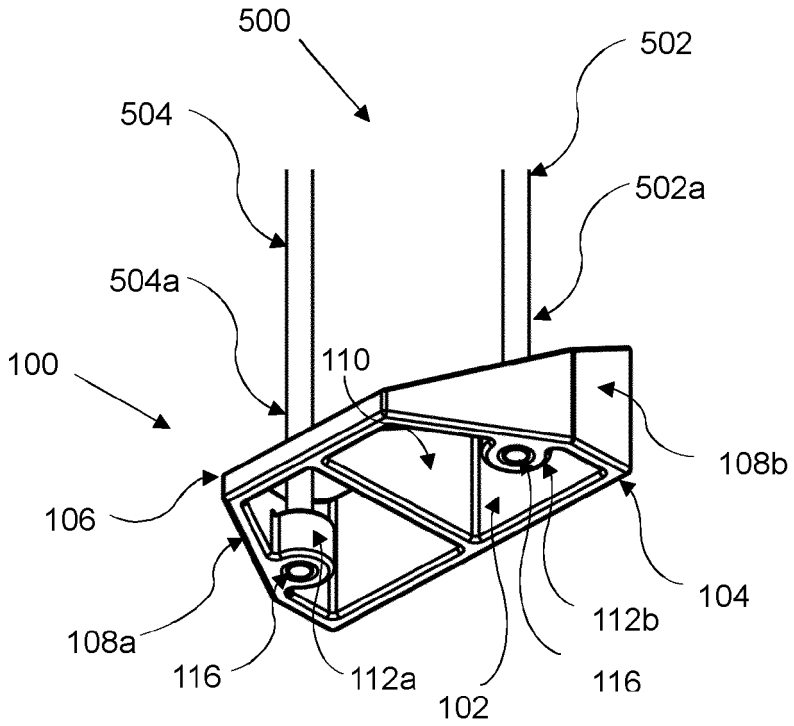

Figure 3c

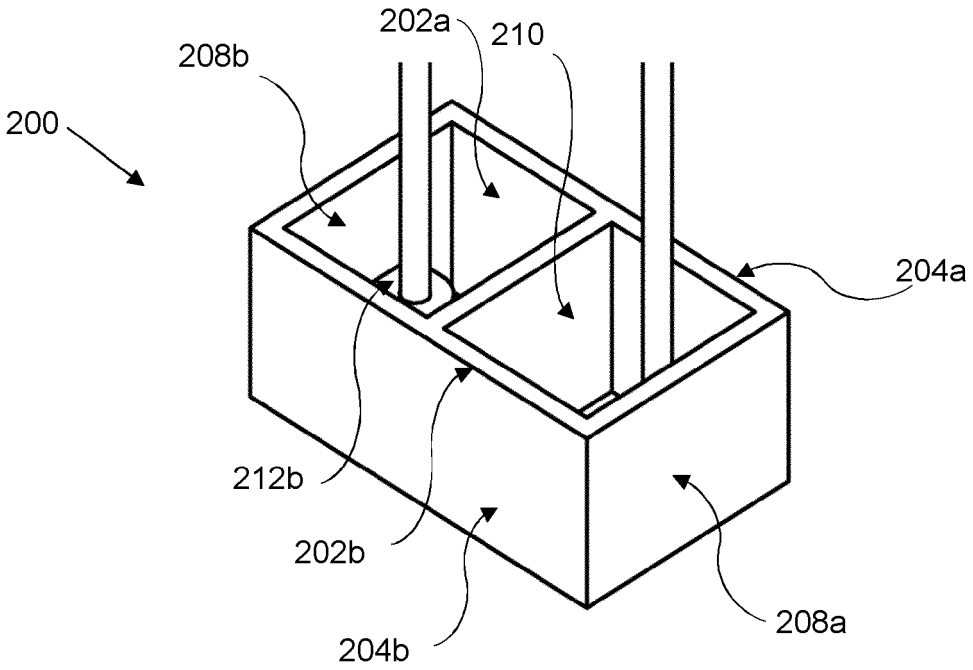

Figure 4a

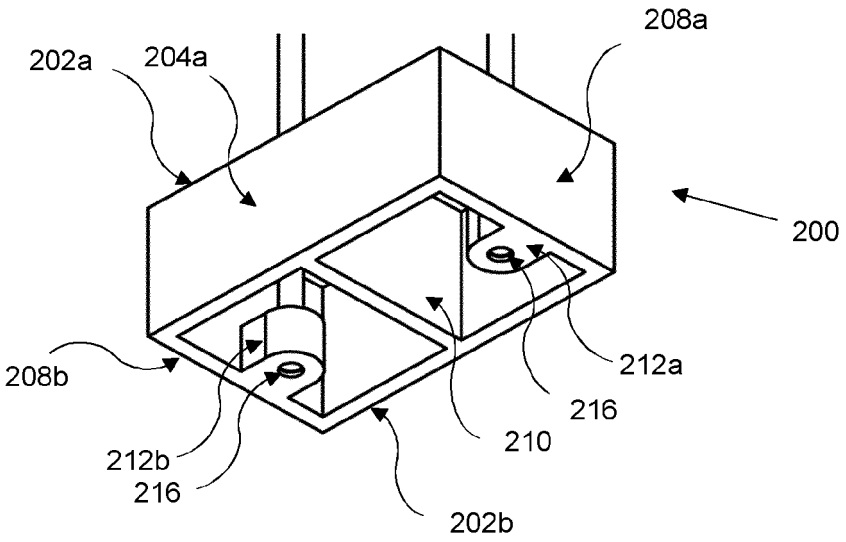

Figure 4b

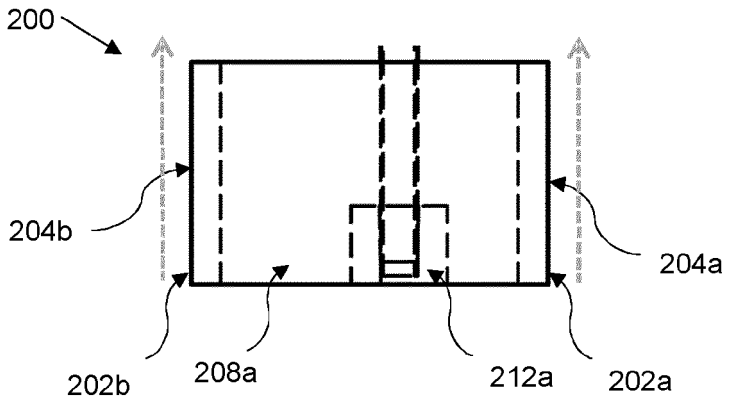

Figure 4c

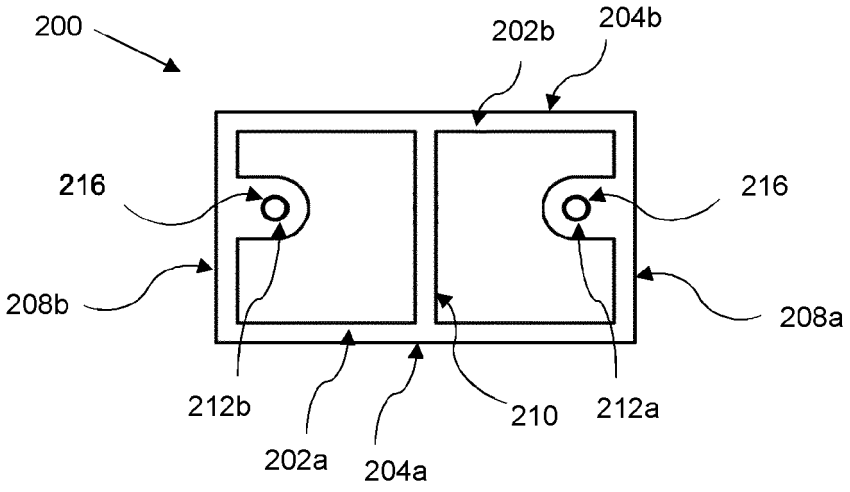

Figure 4d

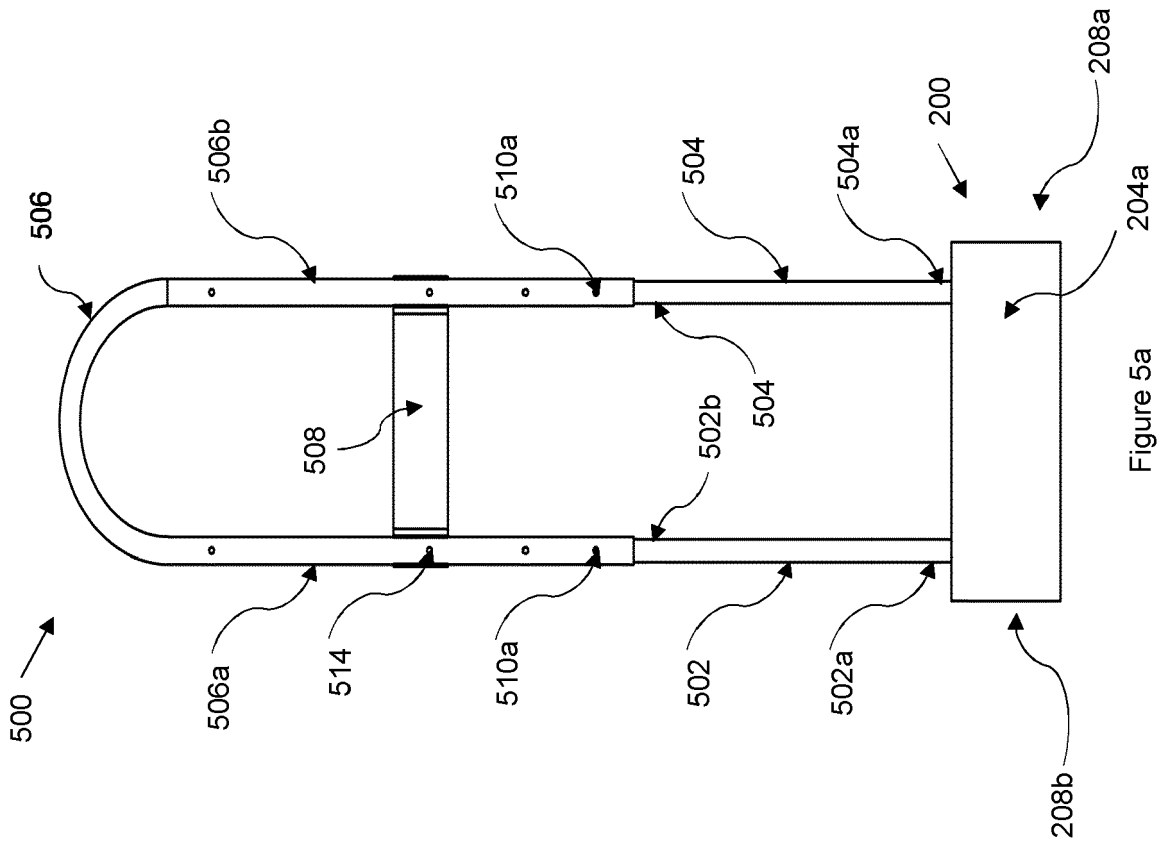

Figure 5a

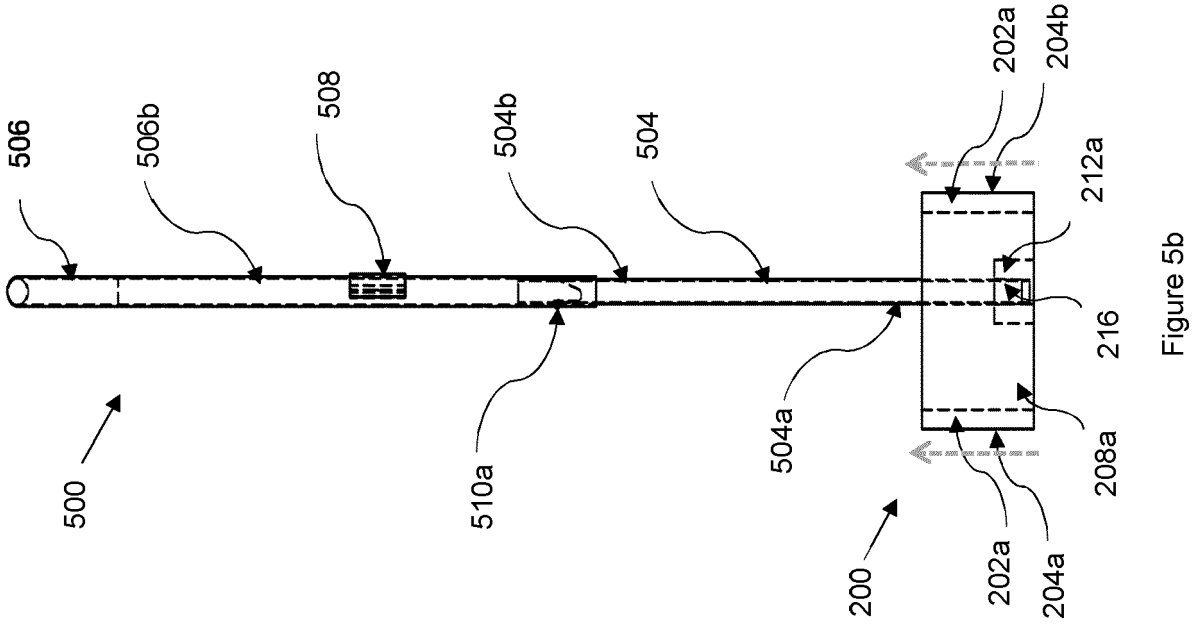

Figure 5b

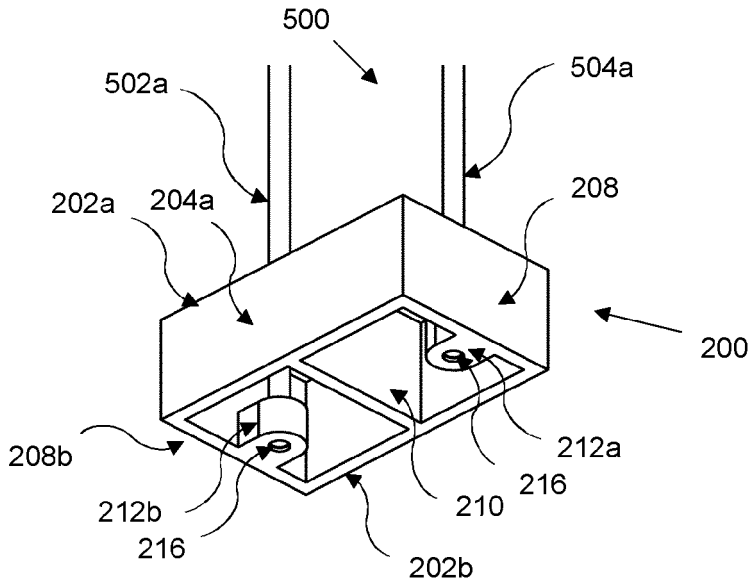

Figure 5c

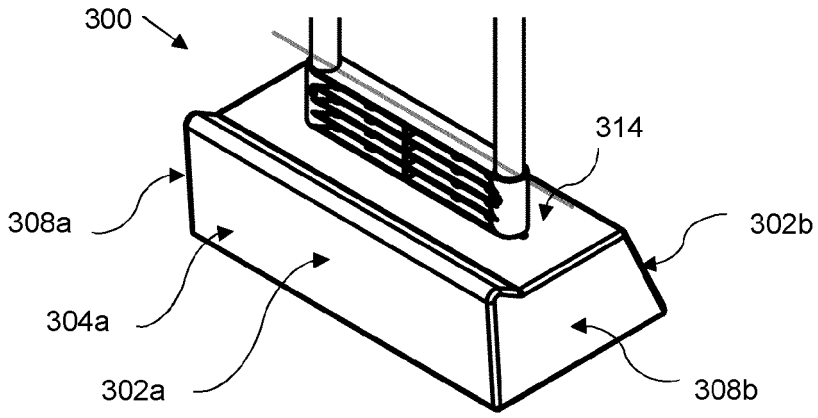

Figure 6a

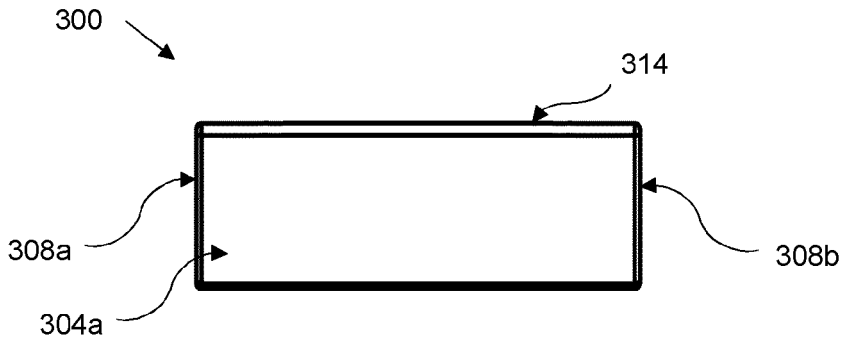

Figure 6b

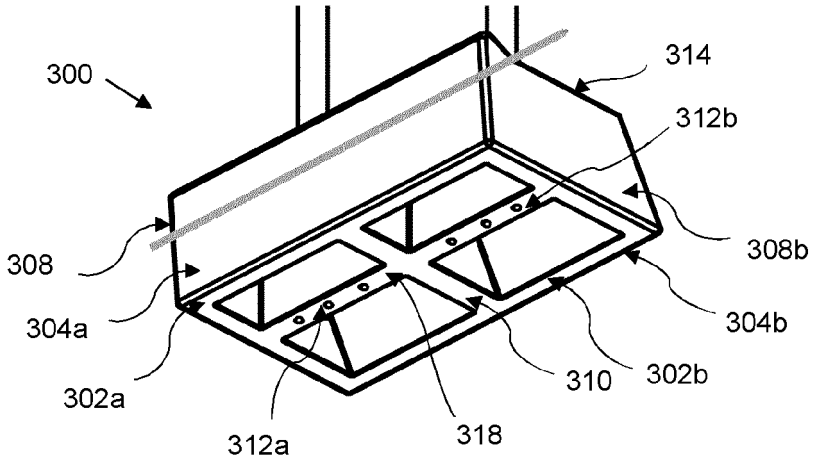

Figure 6c

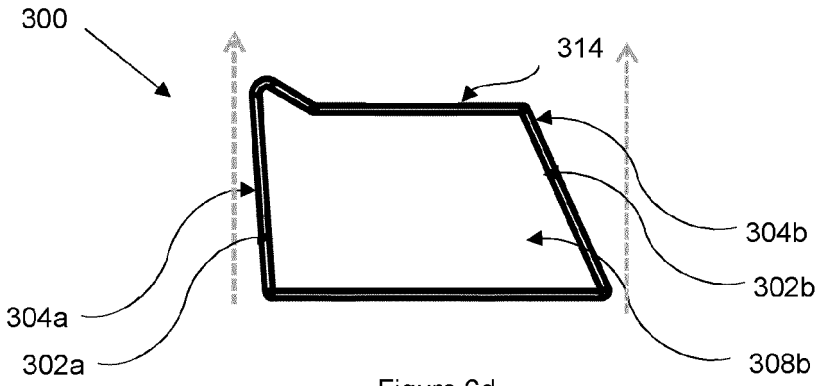

Figure 6d

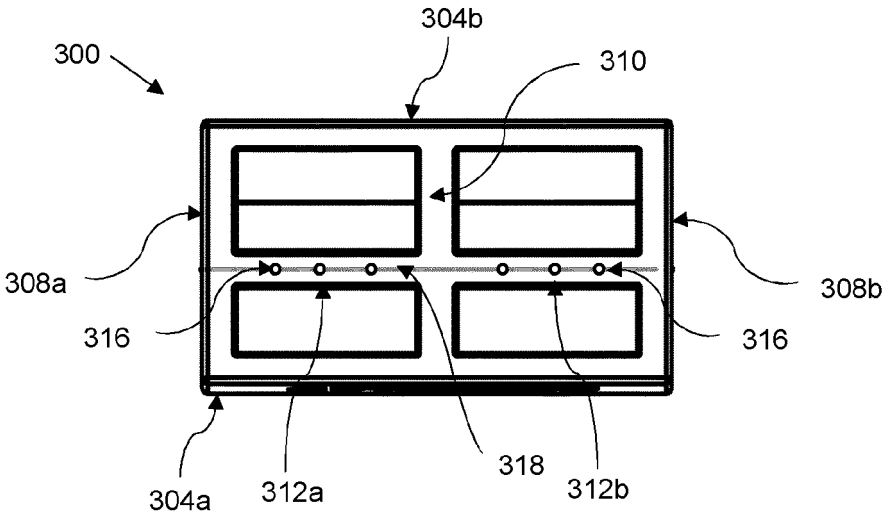

Figure 6e

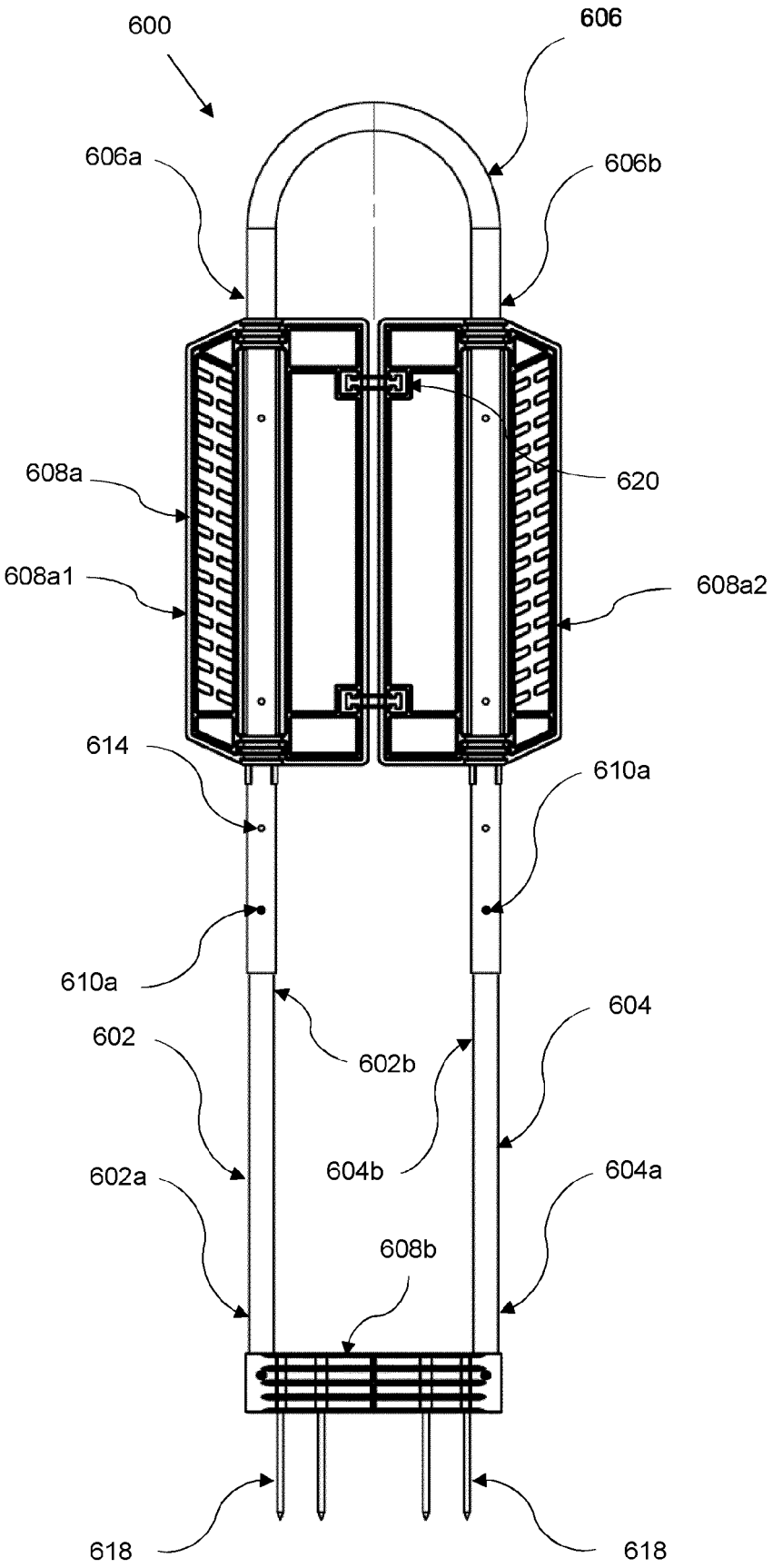
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Figure 7a

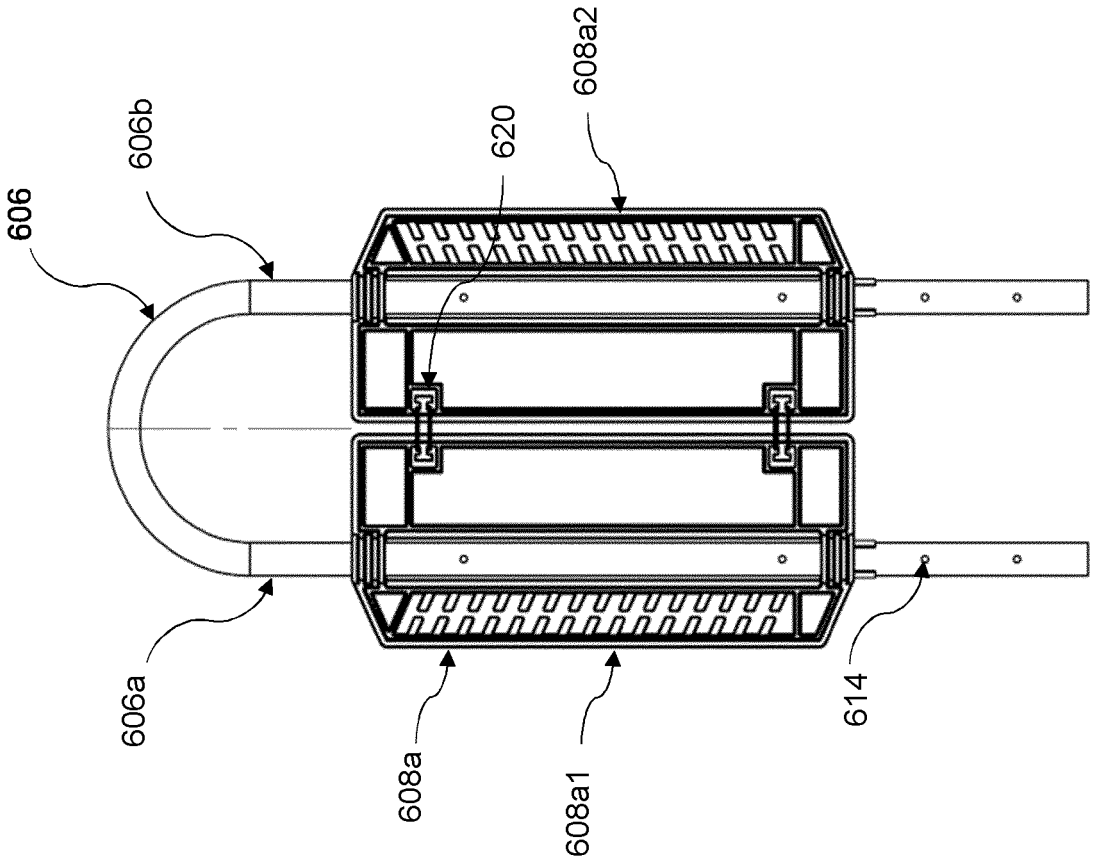

Figure 7b

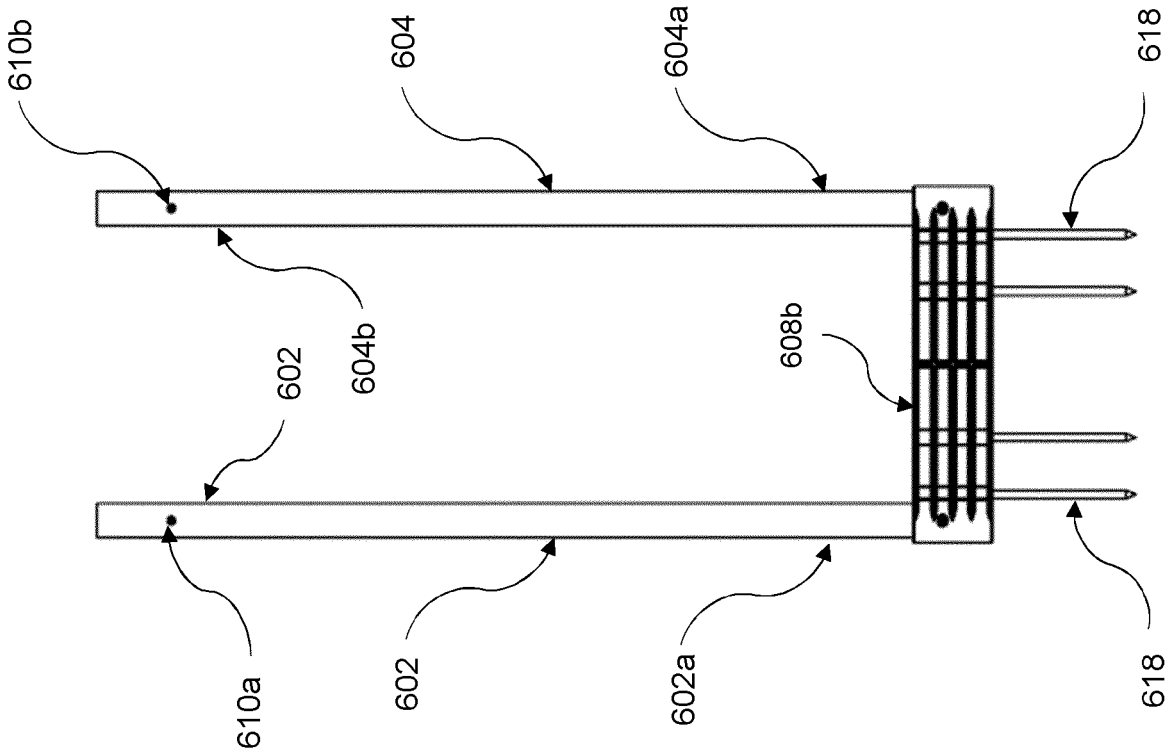

Figure 7c

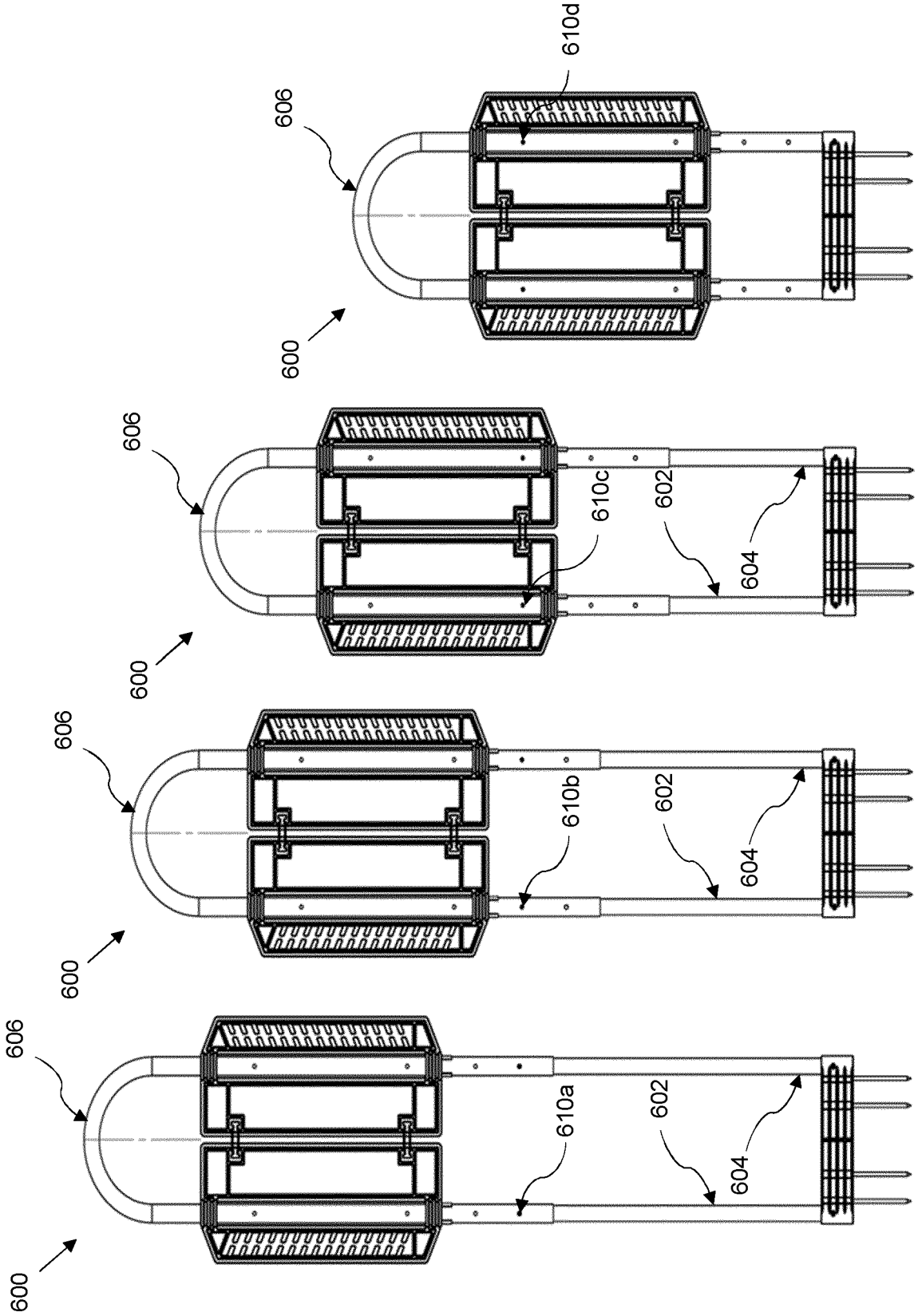
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Figure 7d

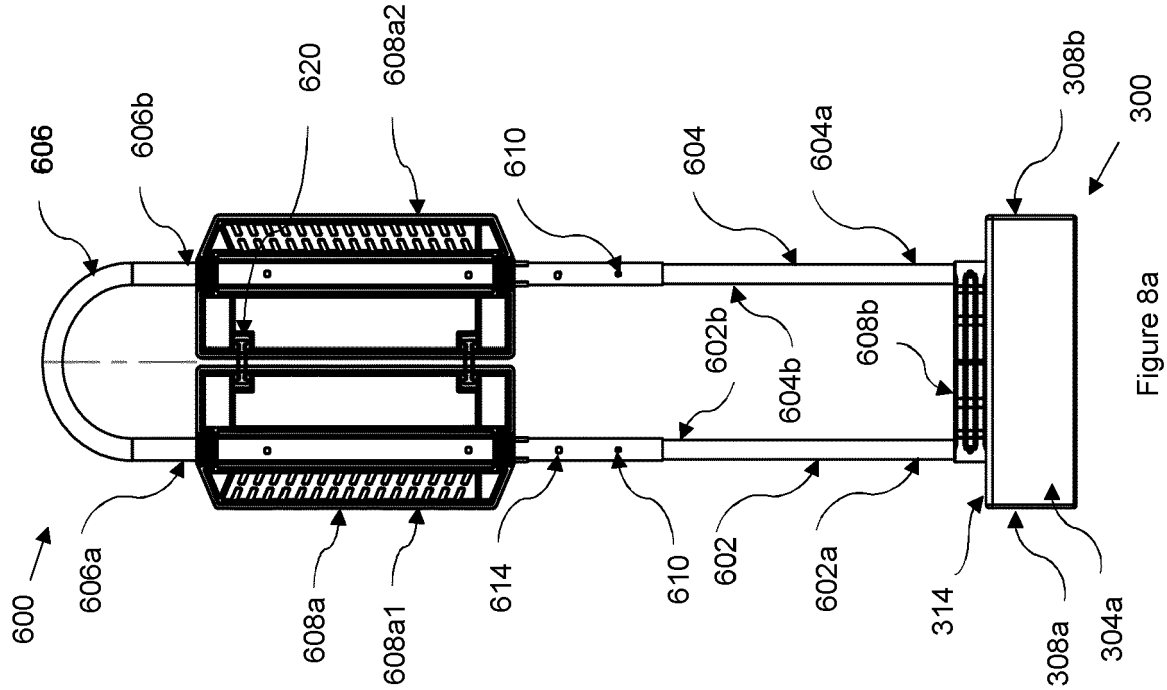

Figure 8a

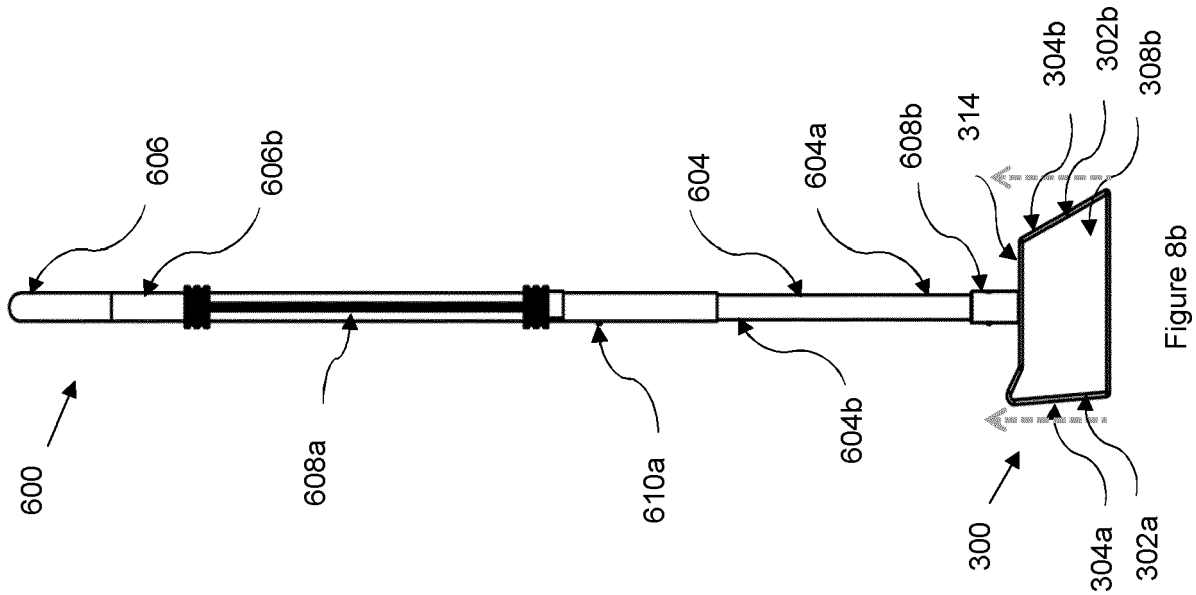

Figure 8b

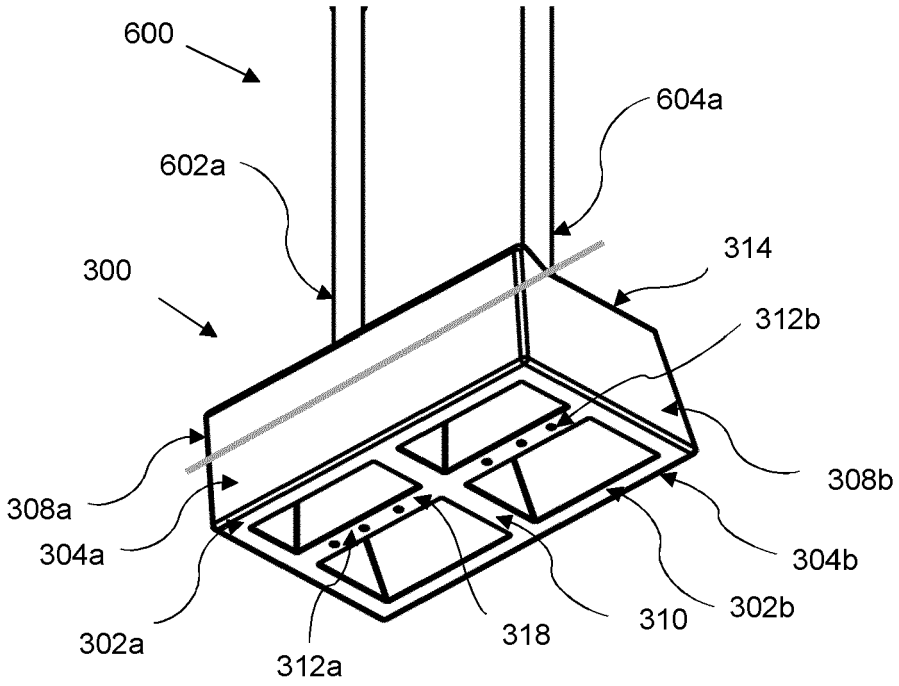

Figure 8c

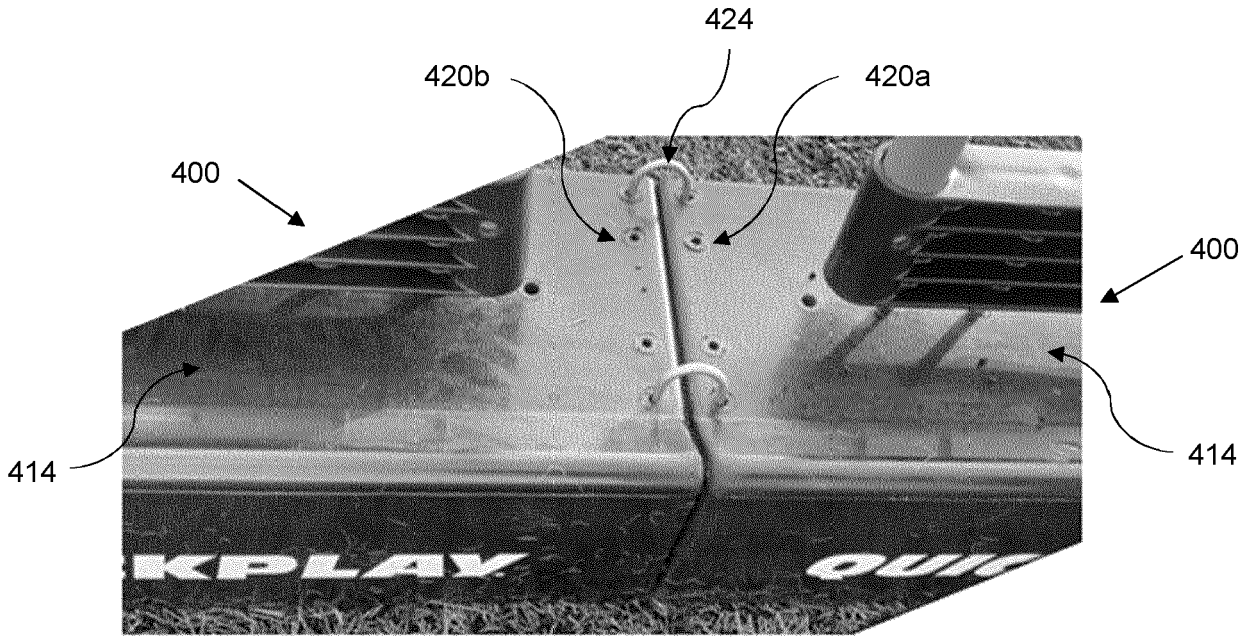

Figure 9