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(54) **CLASPING STABILITY DEVICE AND CLASPING STABILIZED HAND TRUCK**

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Publication Classification

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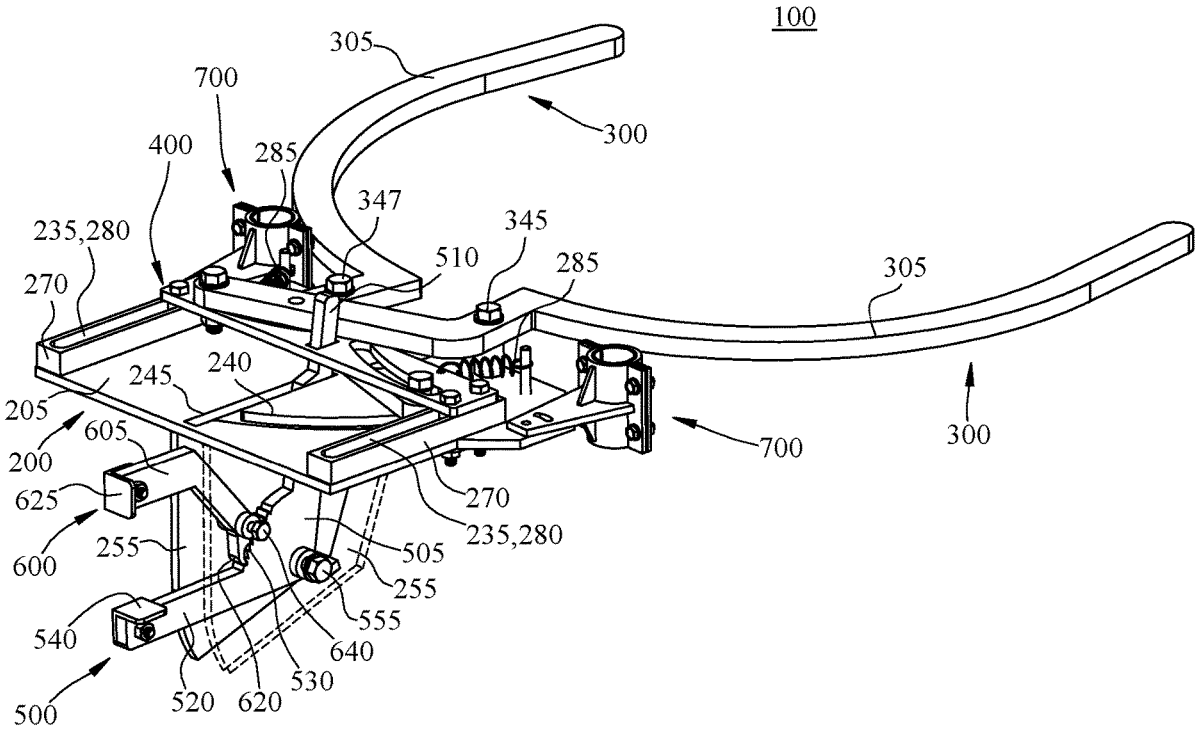
B62B 5/00	(2006.01)
B65G 7/04	(2006.01)

(52) **U.S. Cl.**

CPC ***B62B 1/142*** (2013.01); ***B62B 5/00*** (2013.01); ***B65G 7/04*** (2013.01)

(57) **ABSTRACT**

A clasping stability device and clasping stabilized hand truck provide a stable material handling platform safely operable by a single human operator from the rear of the hand truck, without having to use straps or ties. The clasping stability device may assist in loading material onto the hand truck at the source location, stabilize the material during transport, and assist in unloading the material from the hand truck at the destination location. The clasping mechanism may automatically lock into place once the clasping arms are closed to a sufficient degree to secure the material. The locking mechanism may remain locked, stabilizing the material during transport, until the locking mechanism is released. The clasping stability device provides a single stroke clasping and release mechanism that is engaged entirely from the rear of the hand truck.



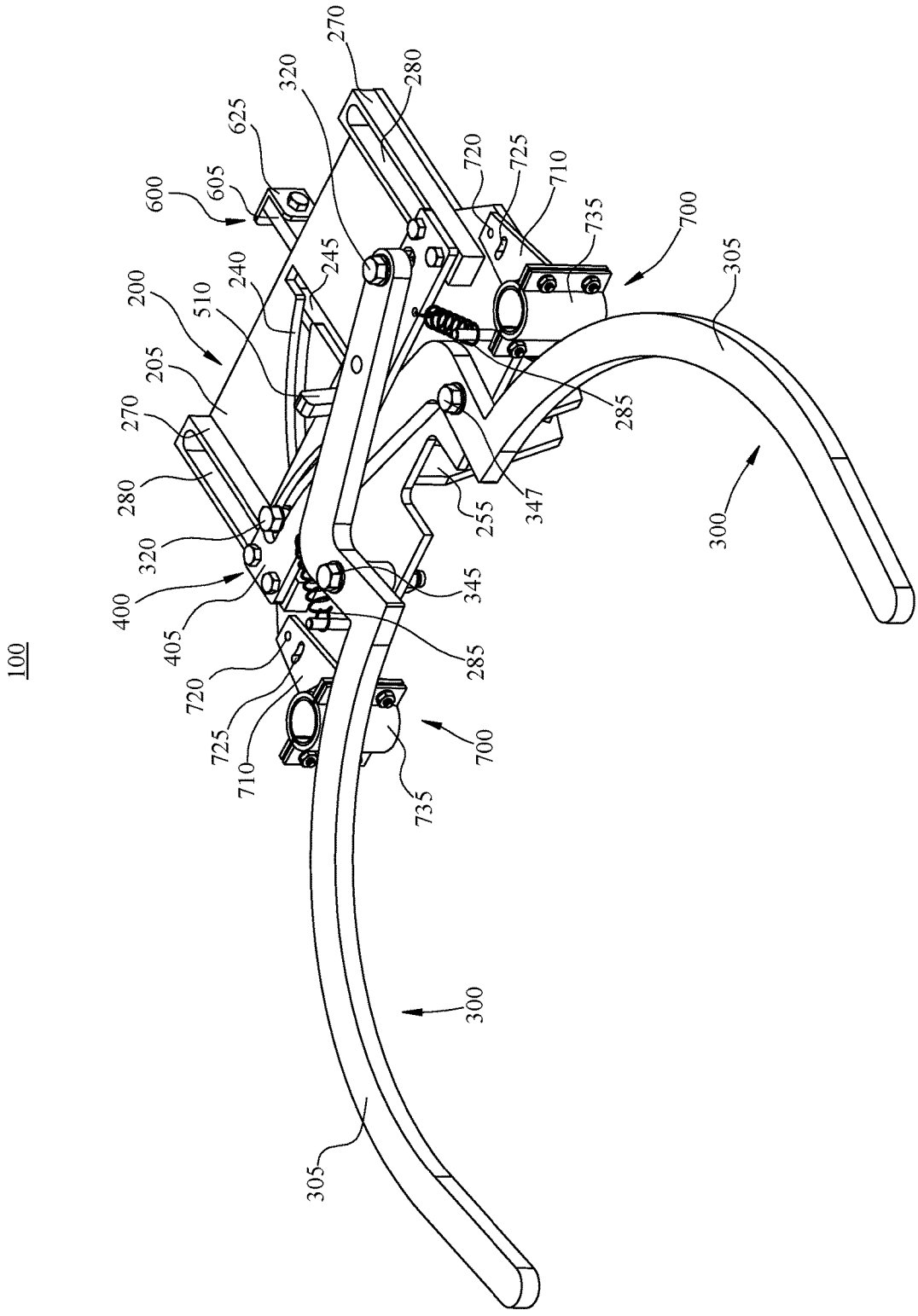

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FIG. 1A

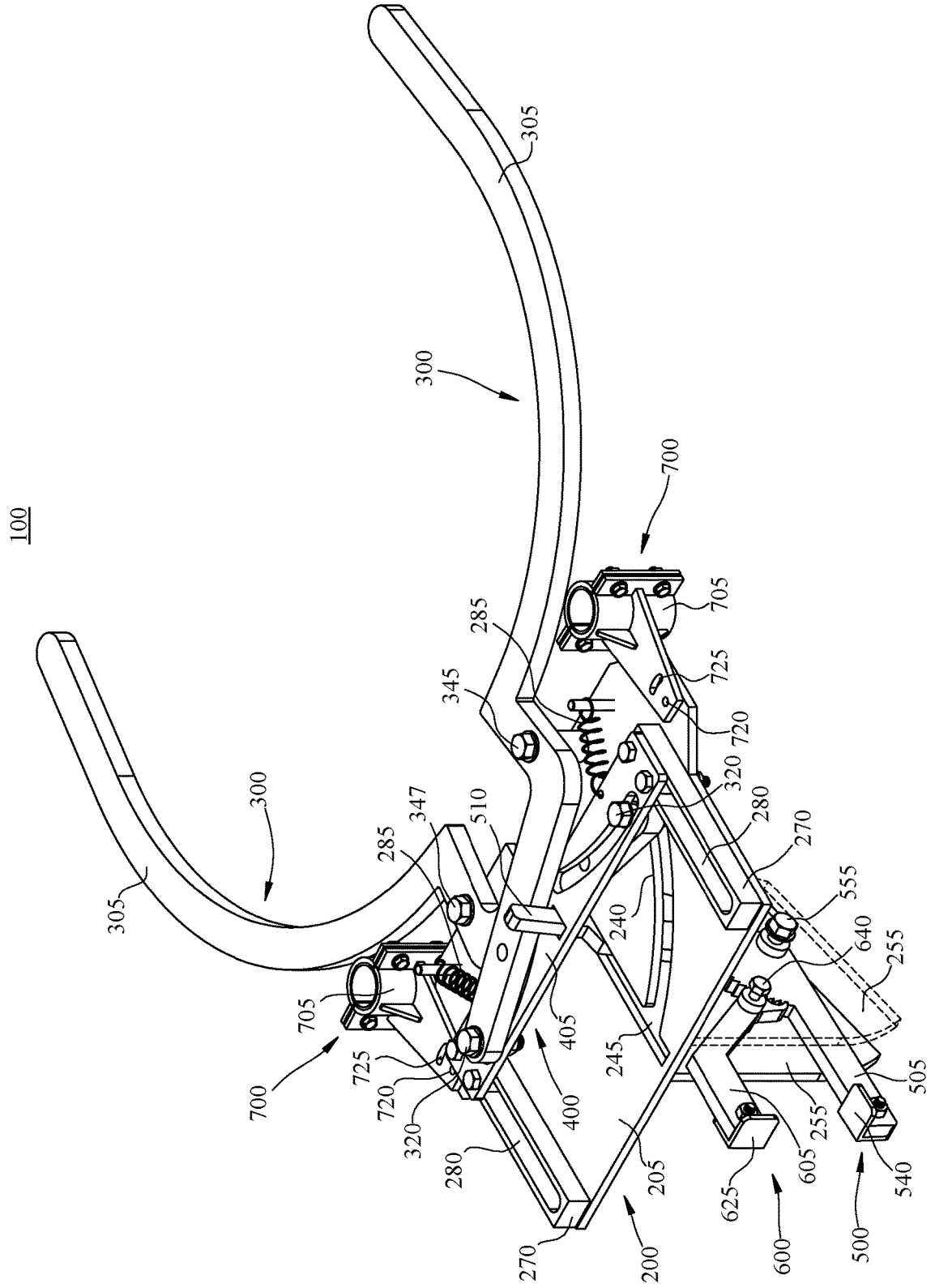
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FIG. 1B

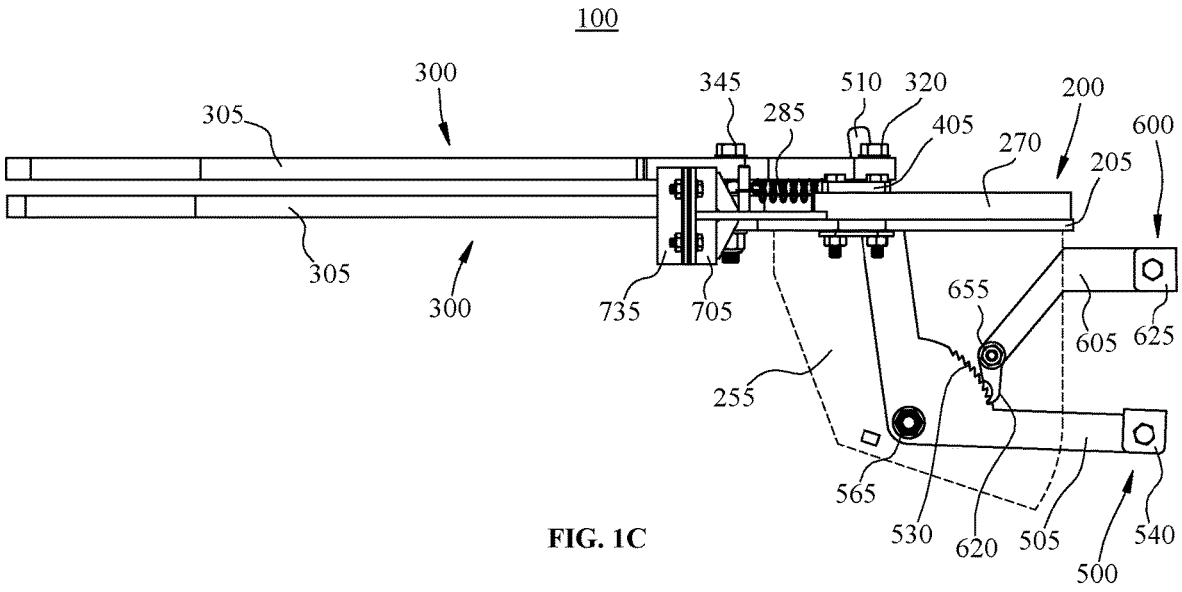
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FIG. 1C

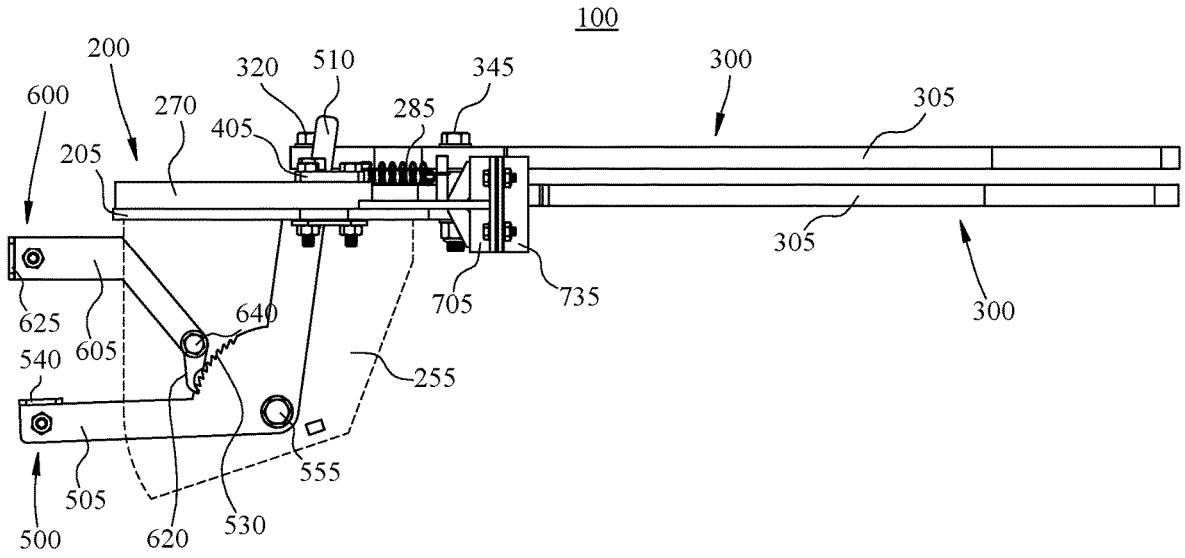
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FIG. 1D

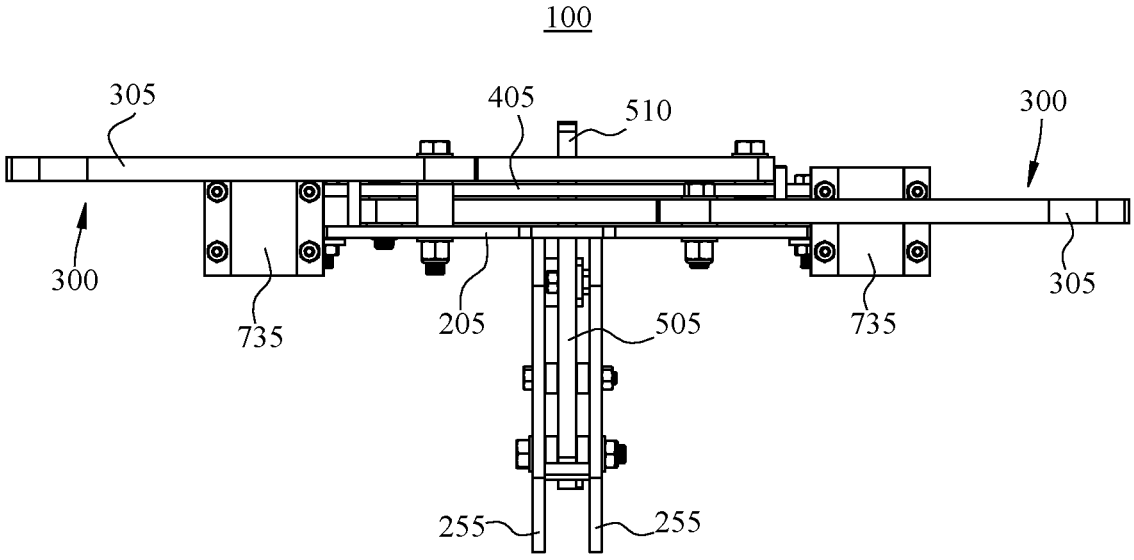
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FIG. 1E

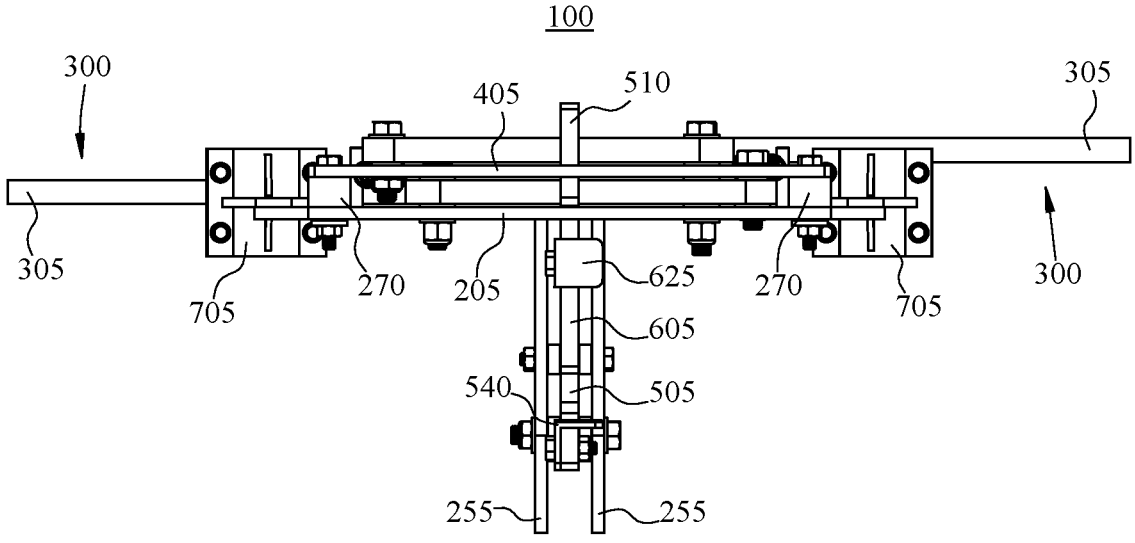
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FIG. 1F

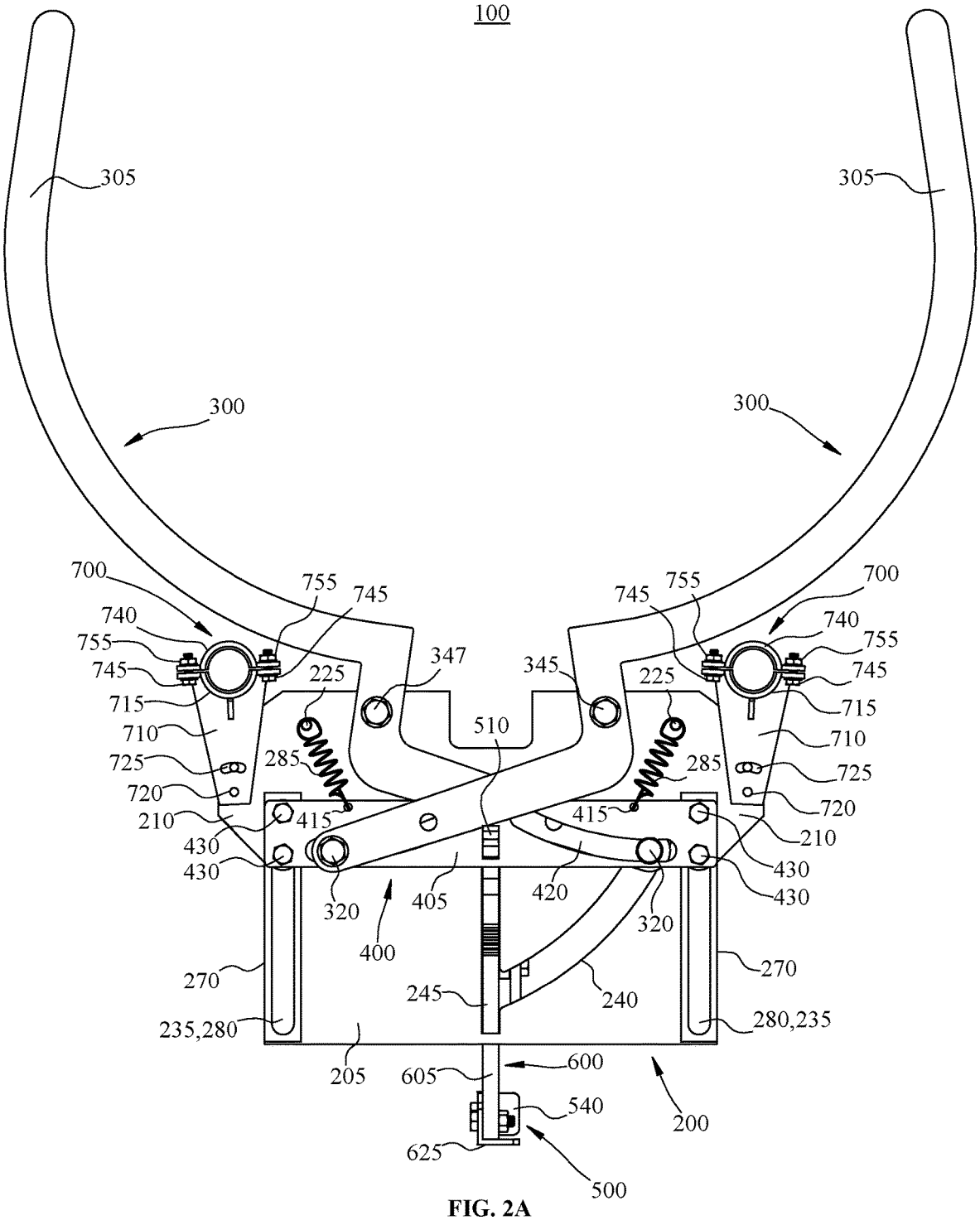
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FIG. 2A

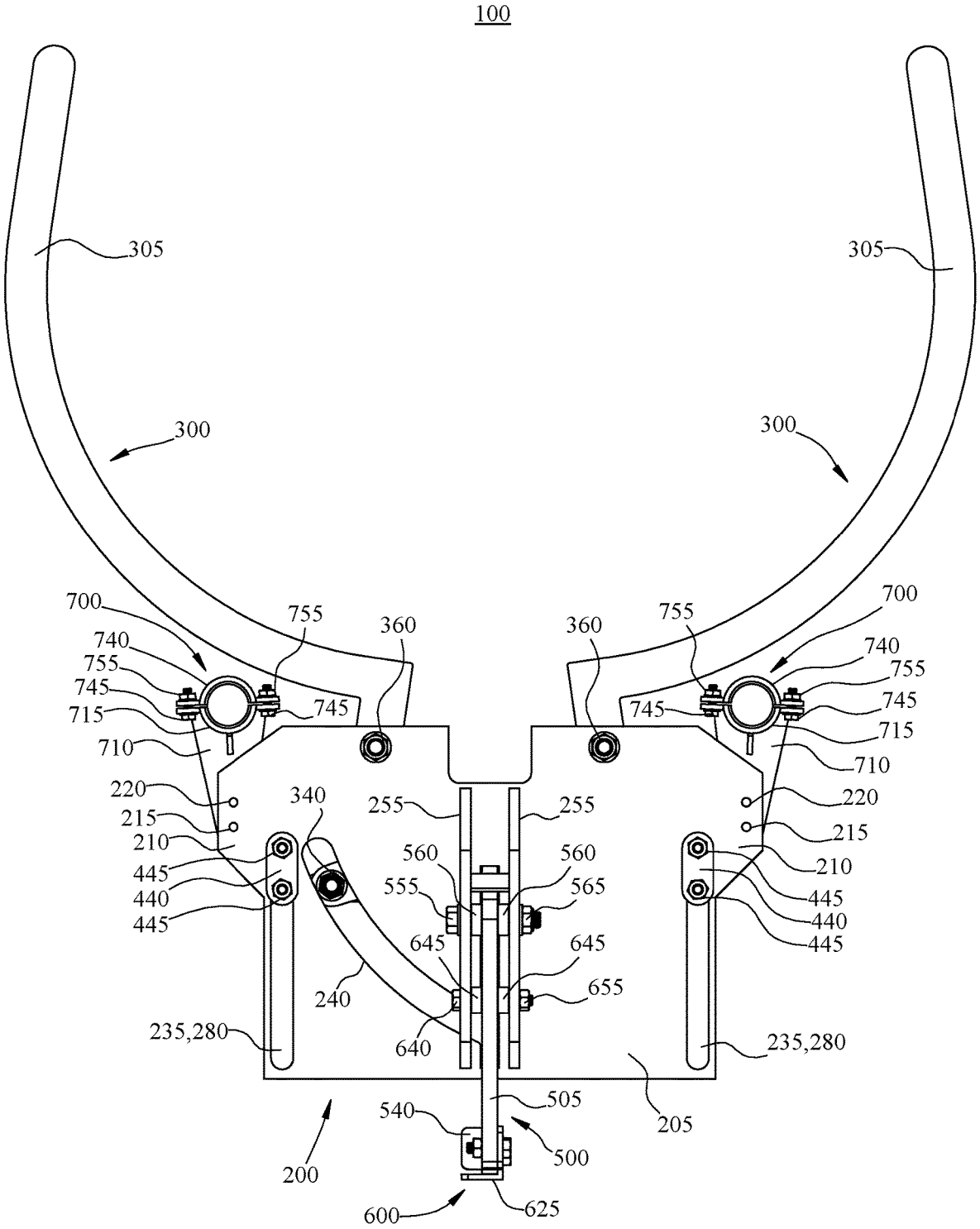
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FIG. 2B

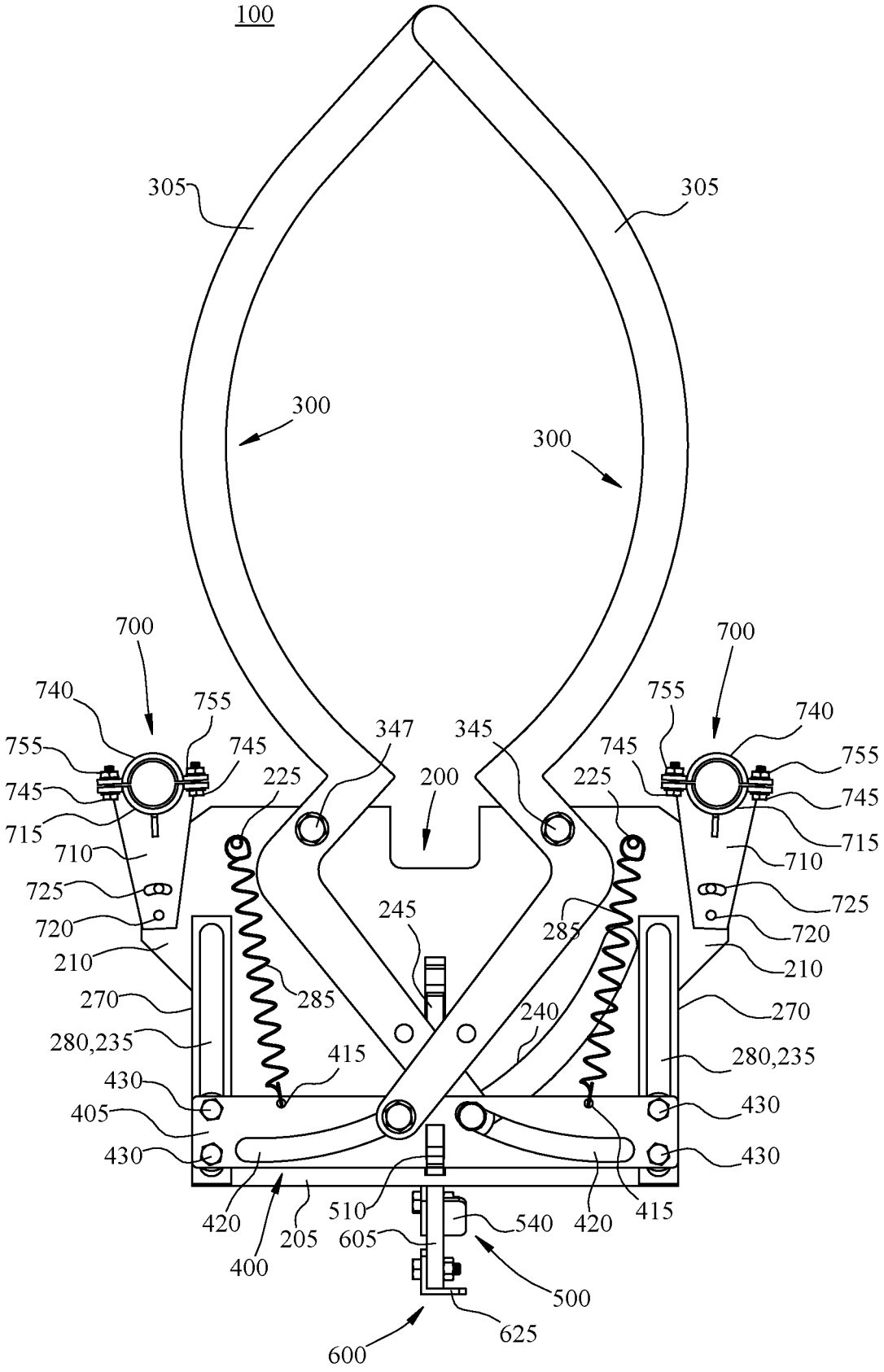
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FIG. 2C

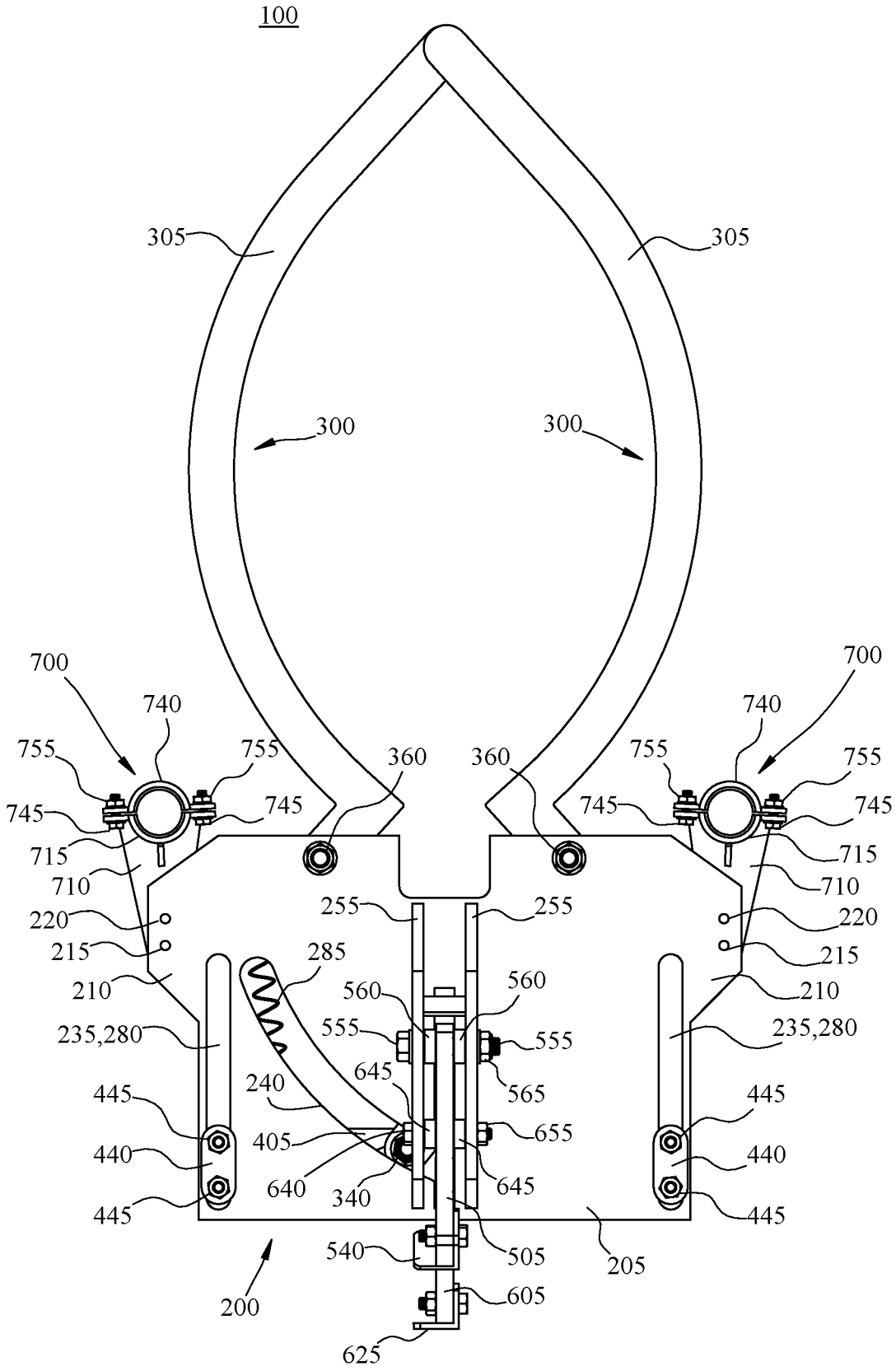
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FIG. 2D

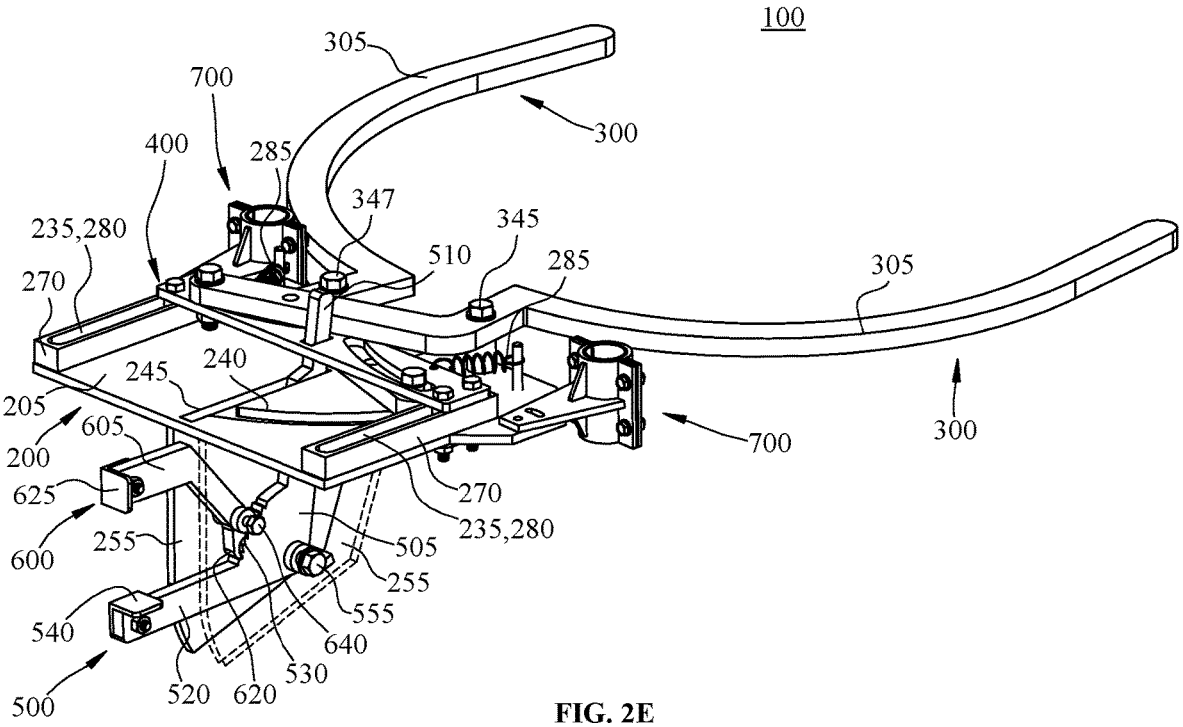
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FIG. 2E

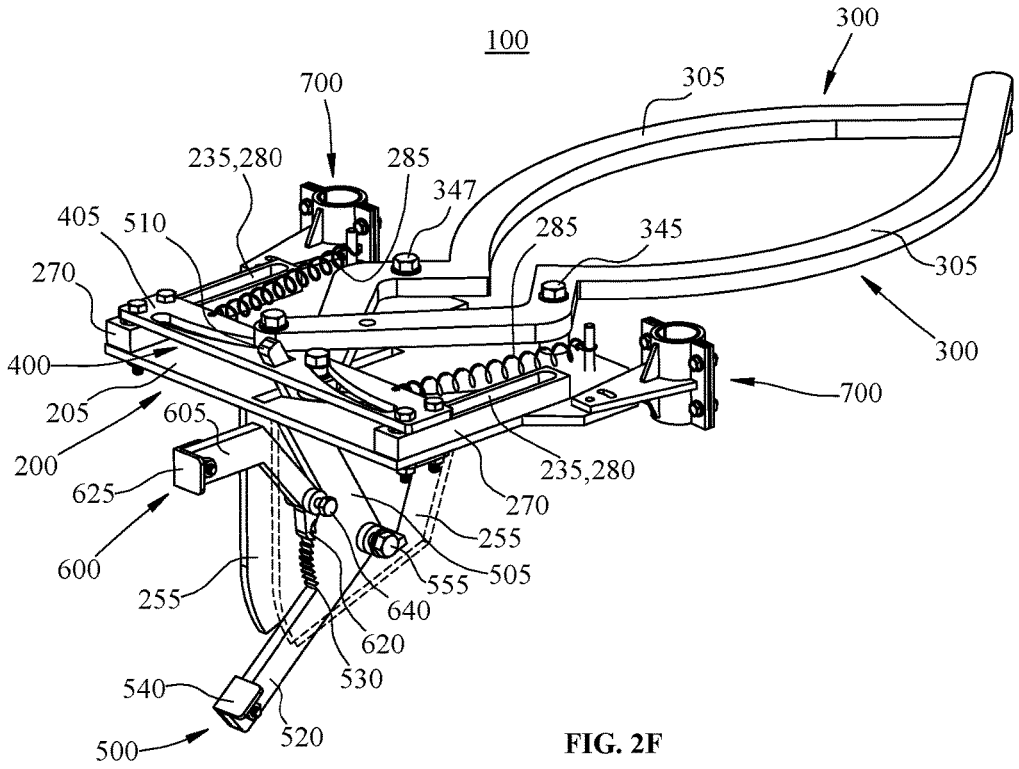
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FIG. 2F

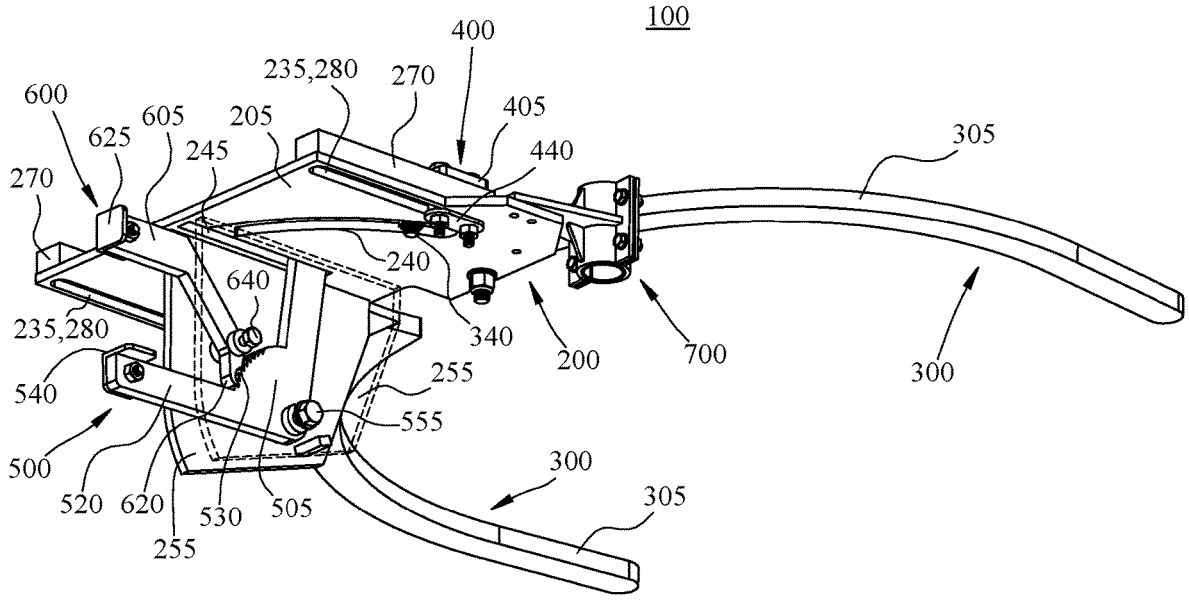
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FIG. 2G

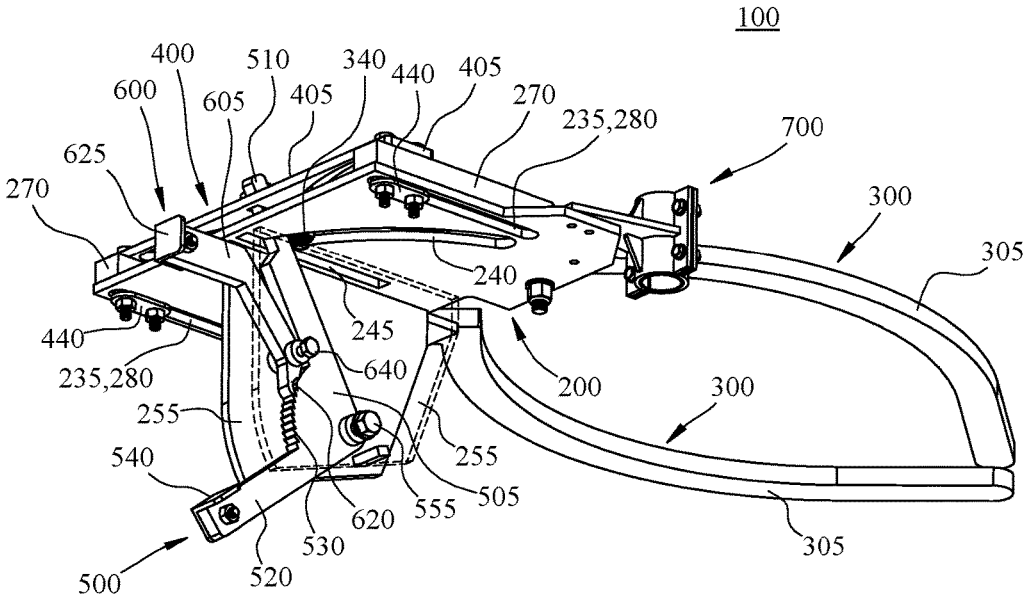
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FIG. 2H

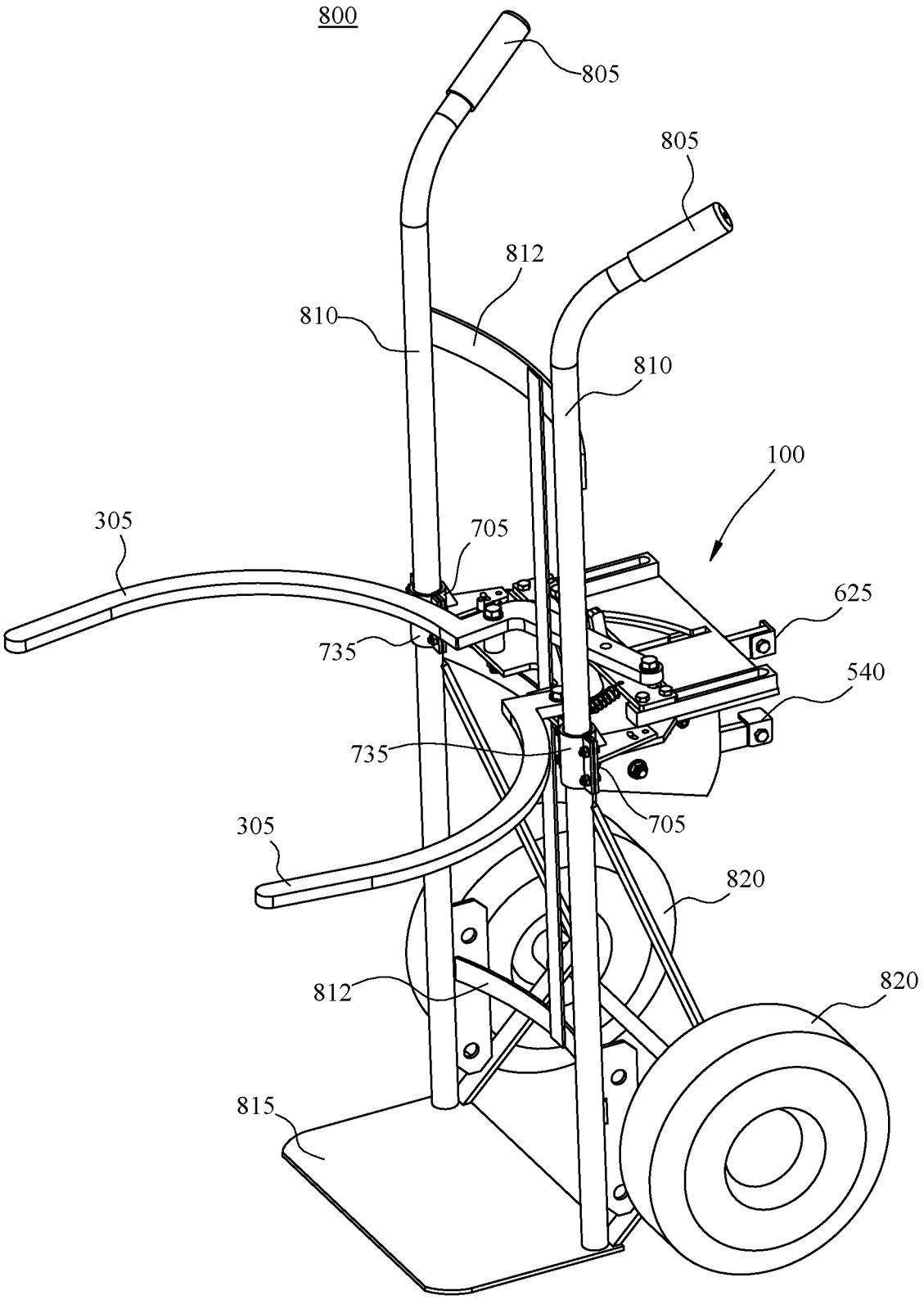
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FIG. 3A

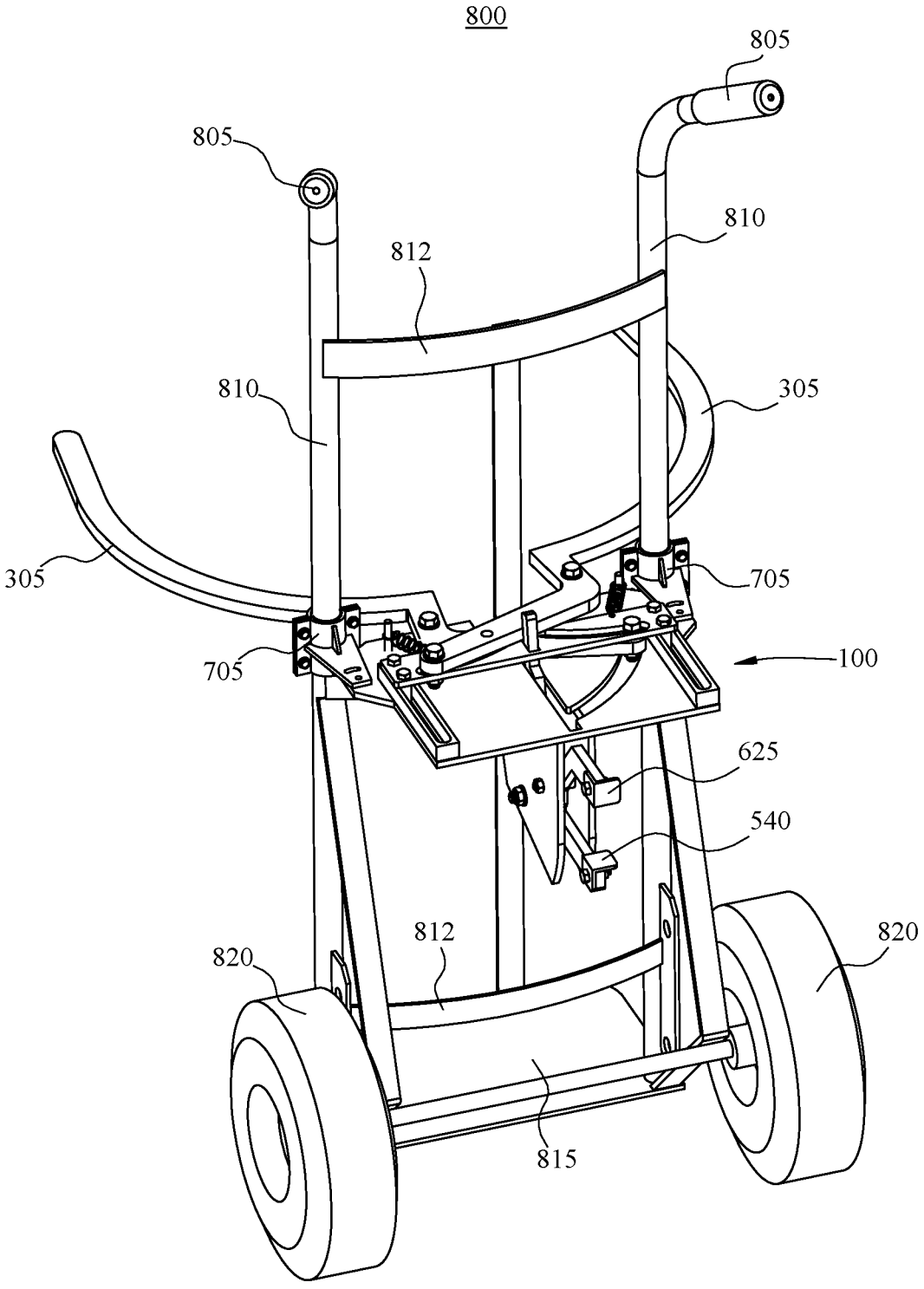
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FIG. 3B

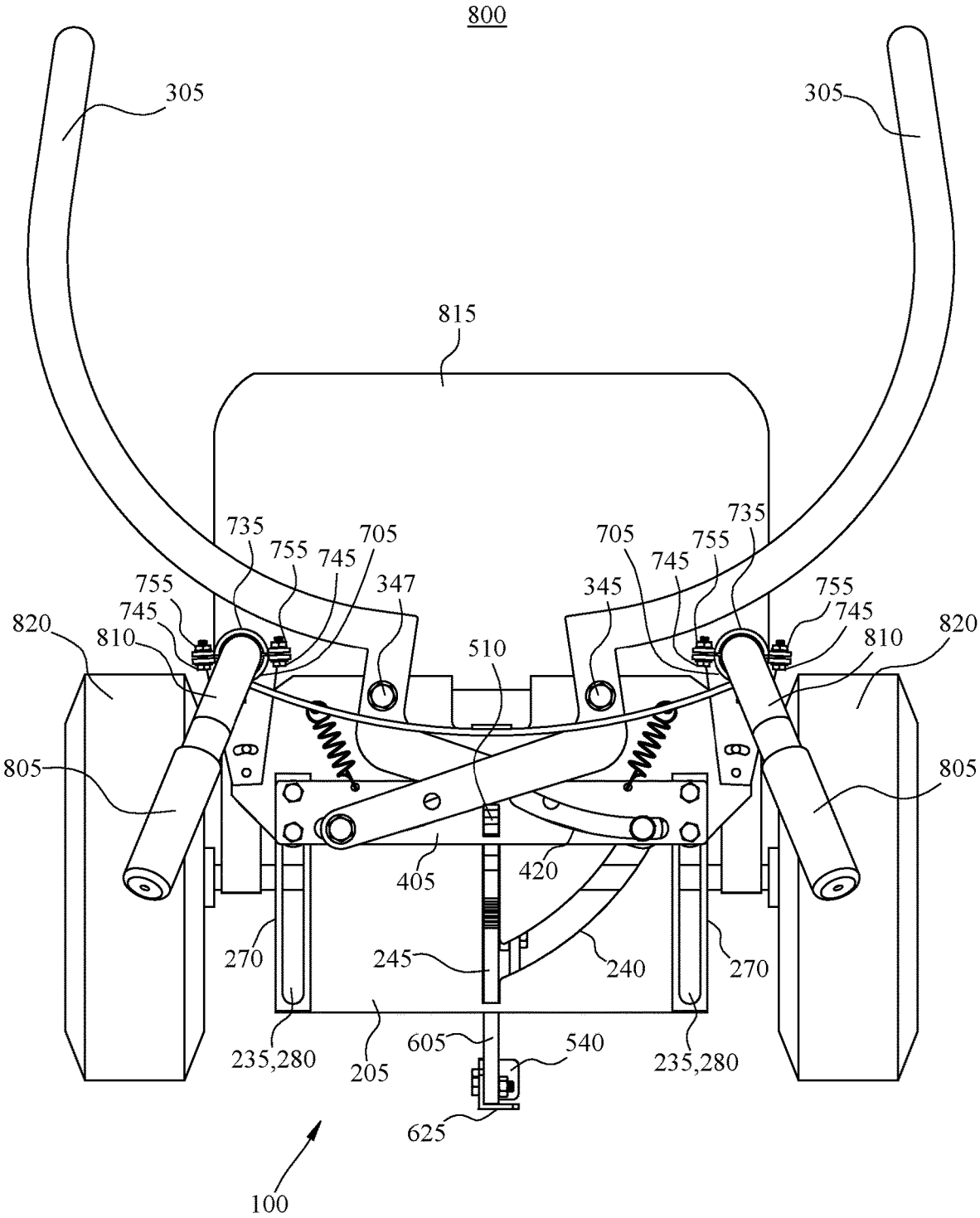
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FIG. 3C

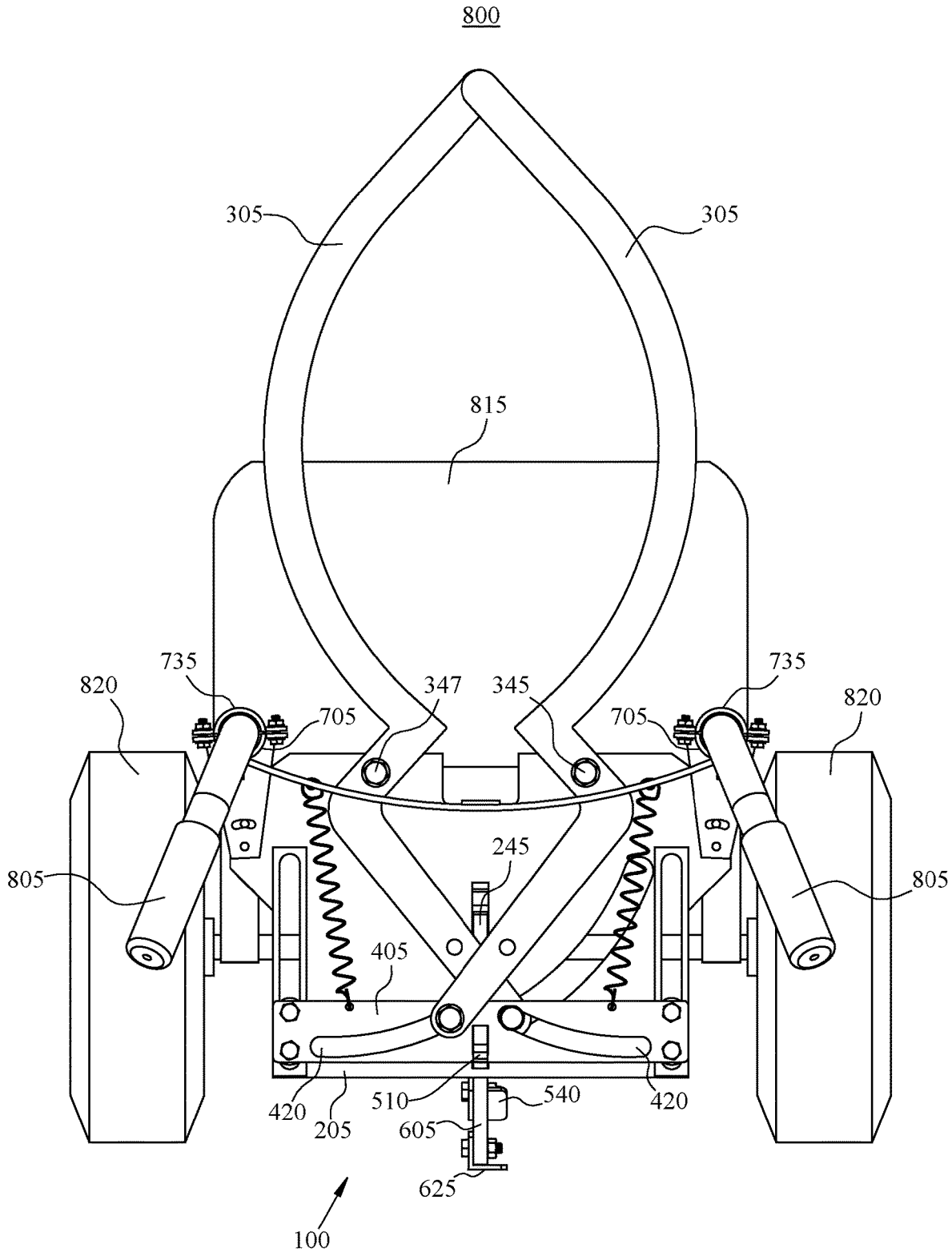
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FIG. 3D

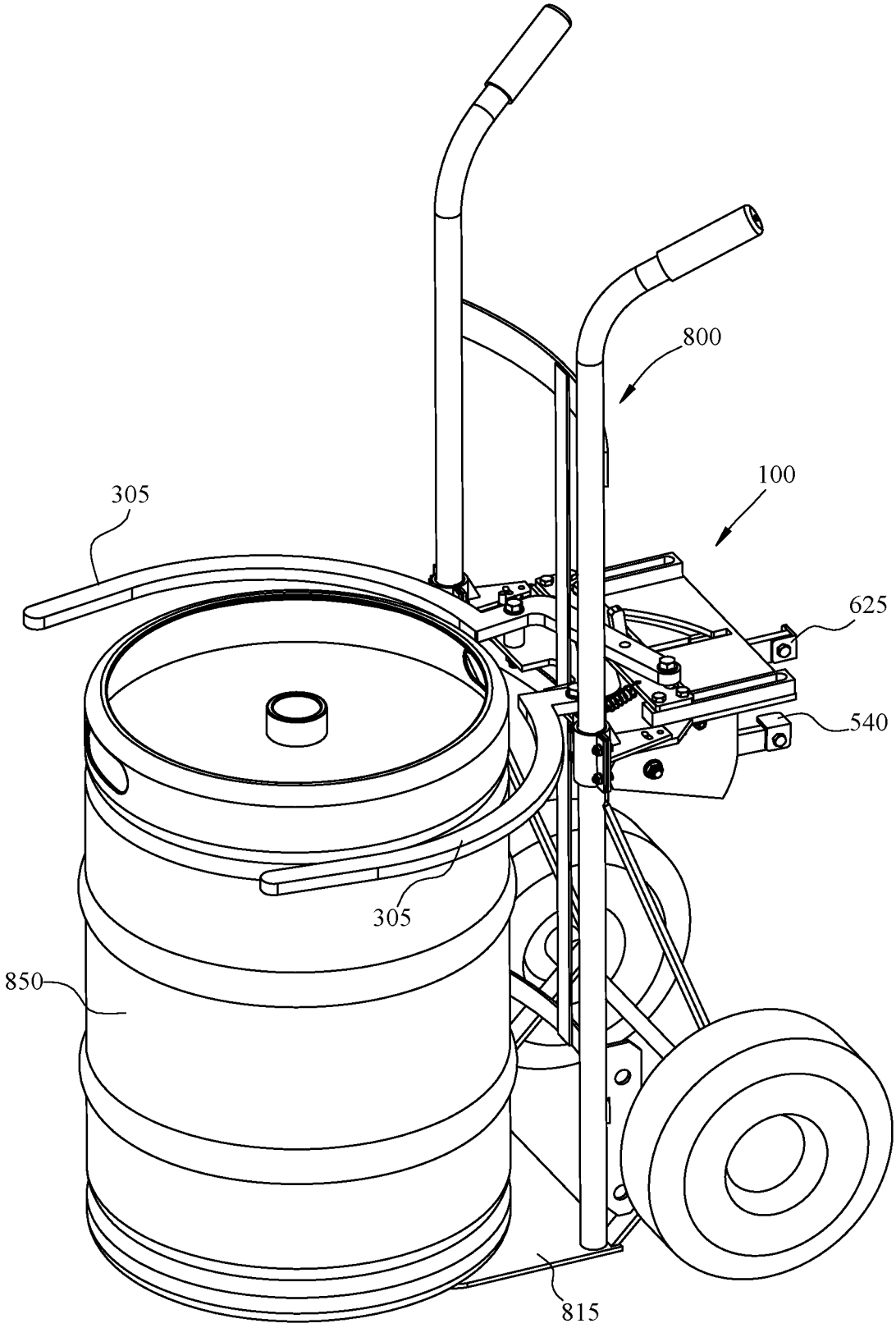

FIG. 4A

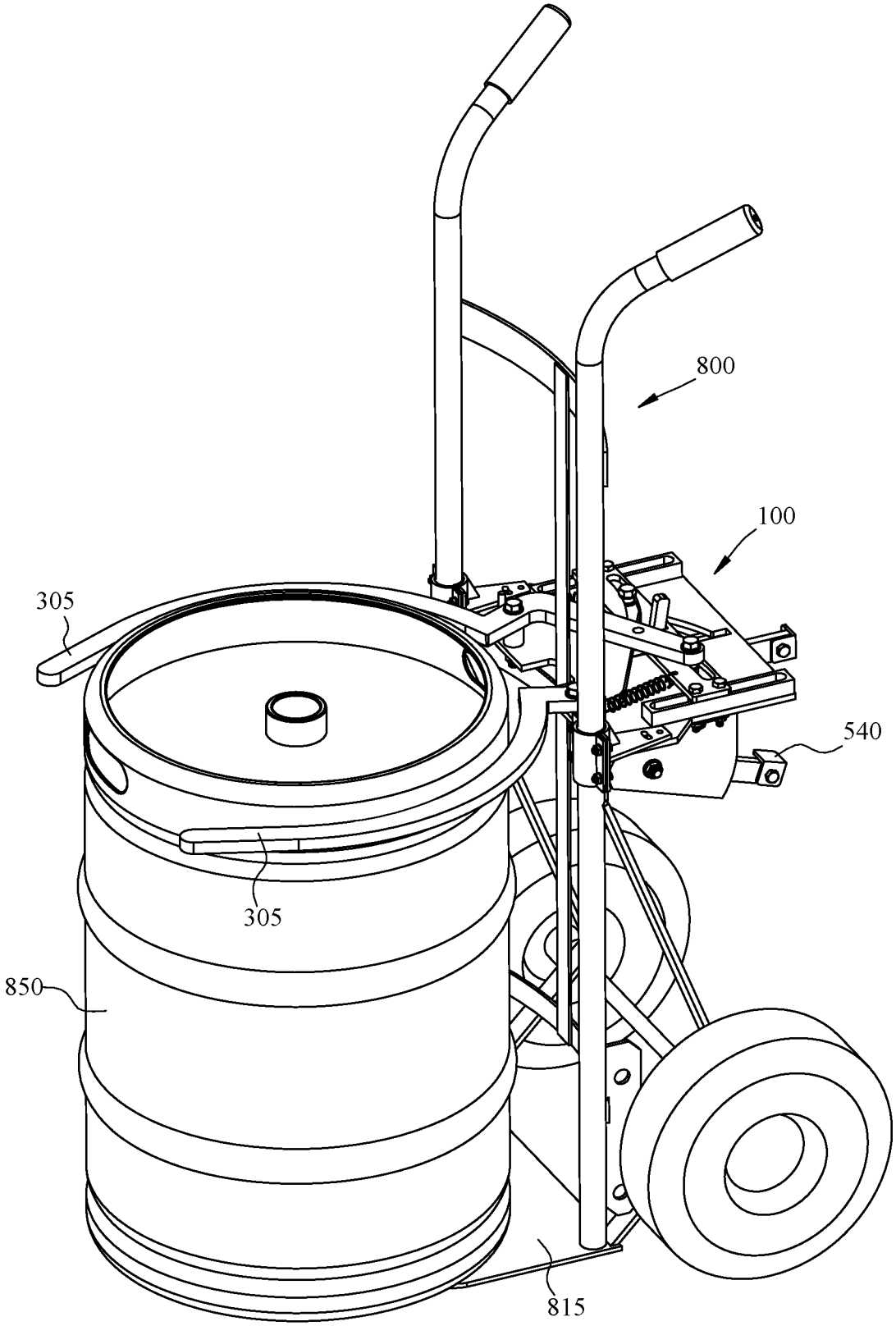

FIG. 4B

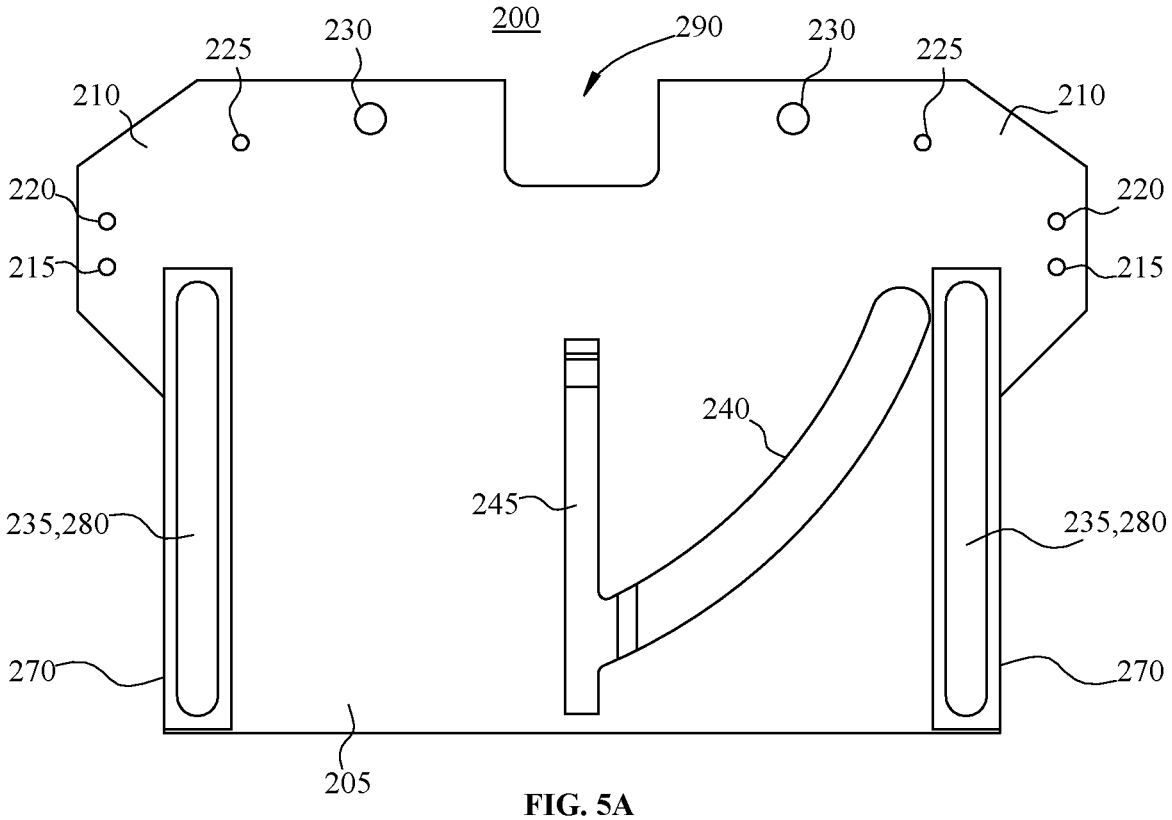
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FIG. 5A

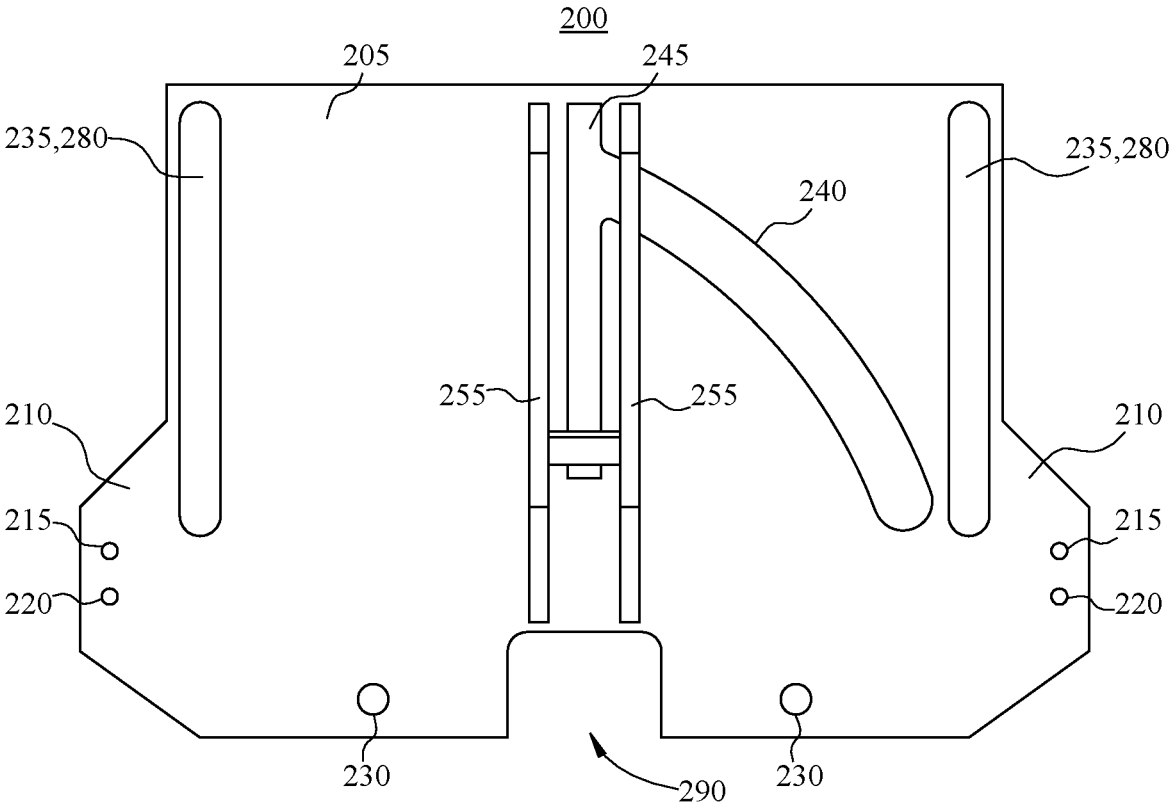
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FIG. 5B

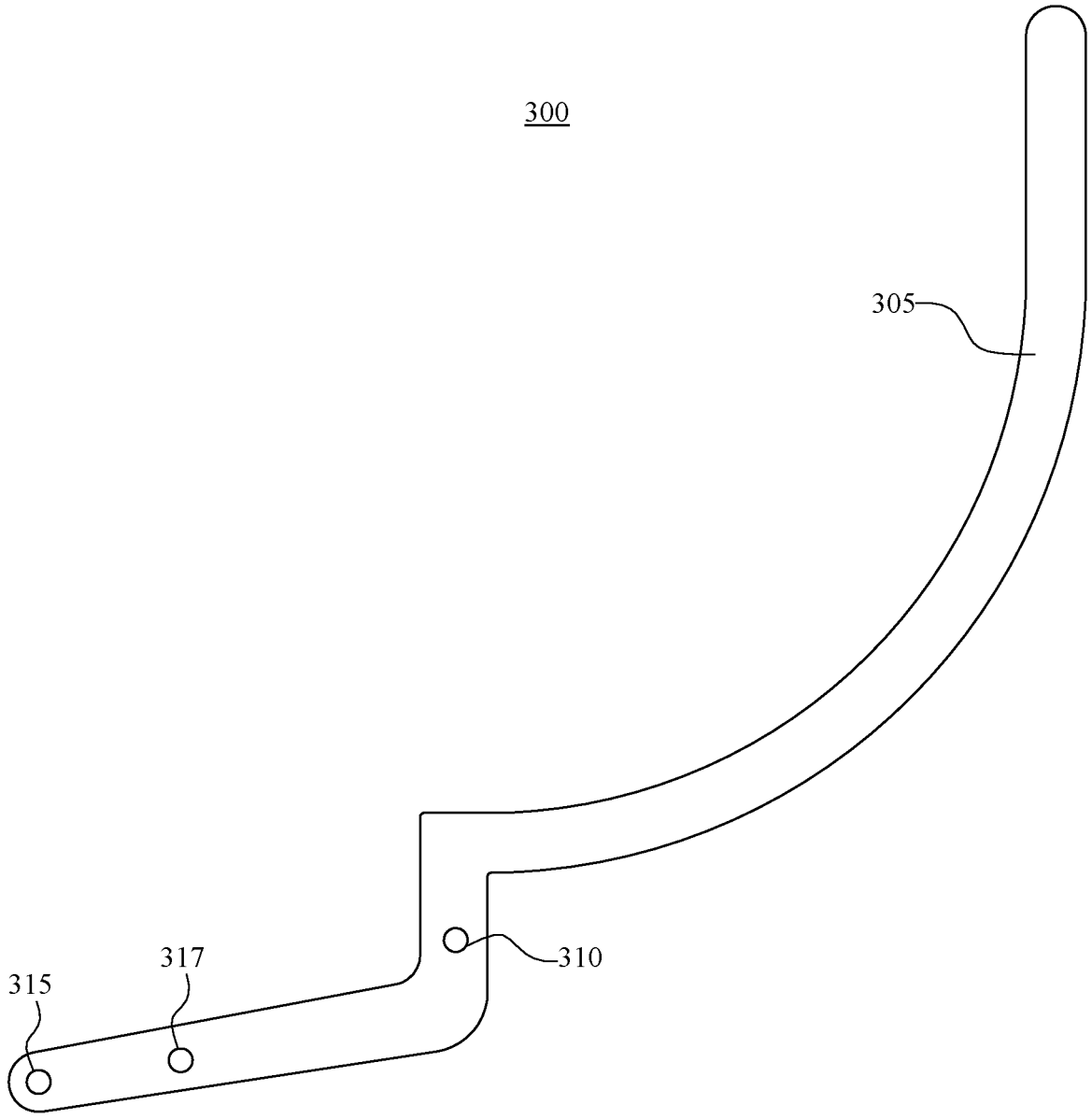

FIG. 5C

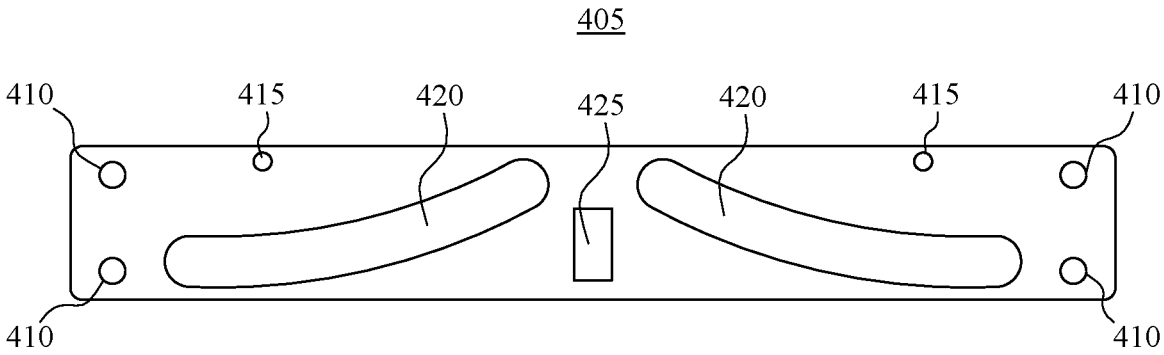

FIG. 5D

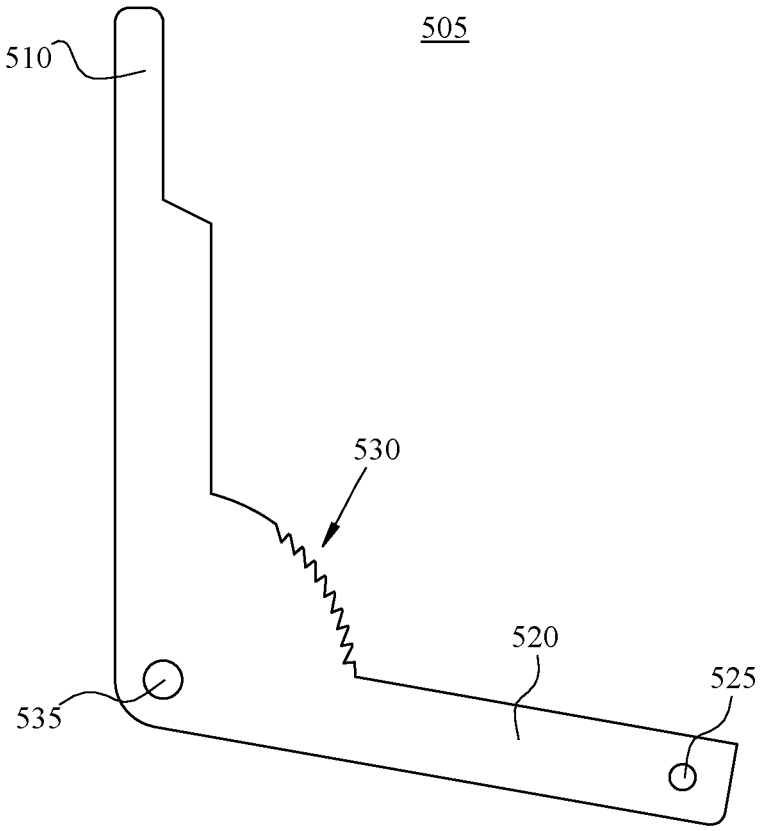

FIG. 5E

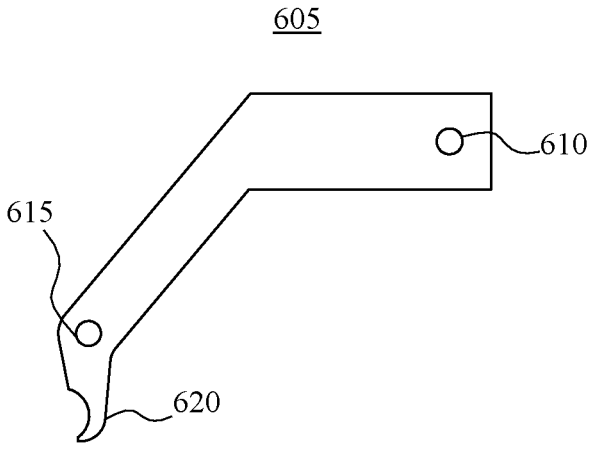

FIG. 5F

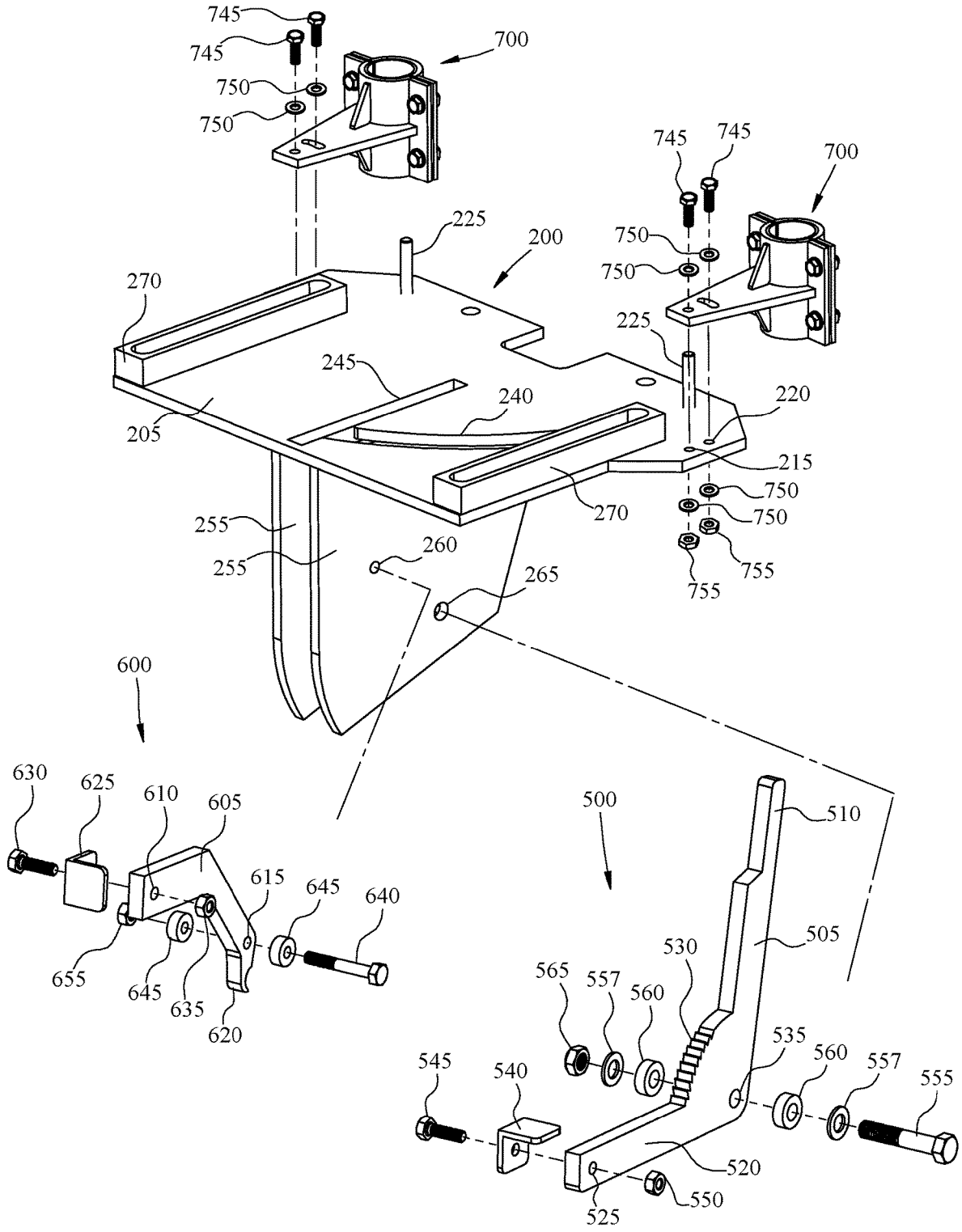
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FIG. 6A

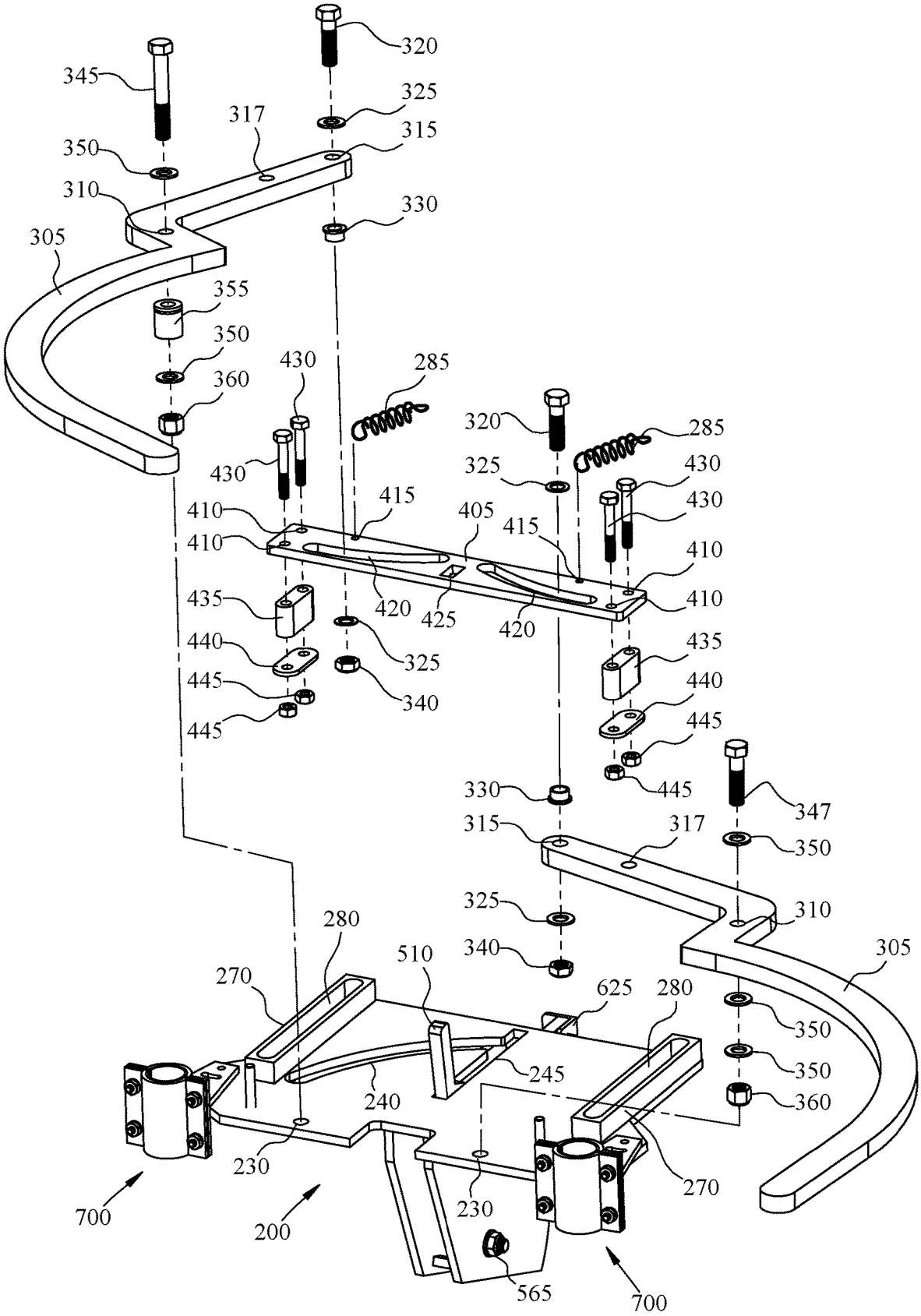
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FIG. 6B

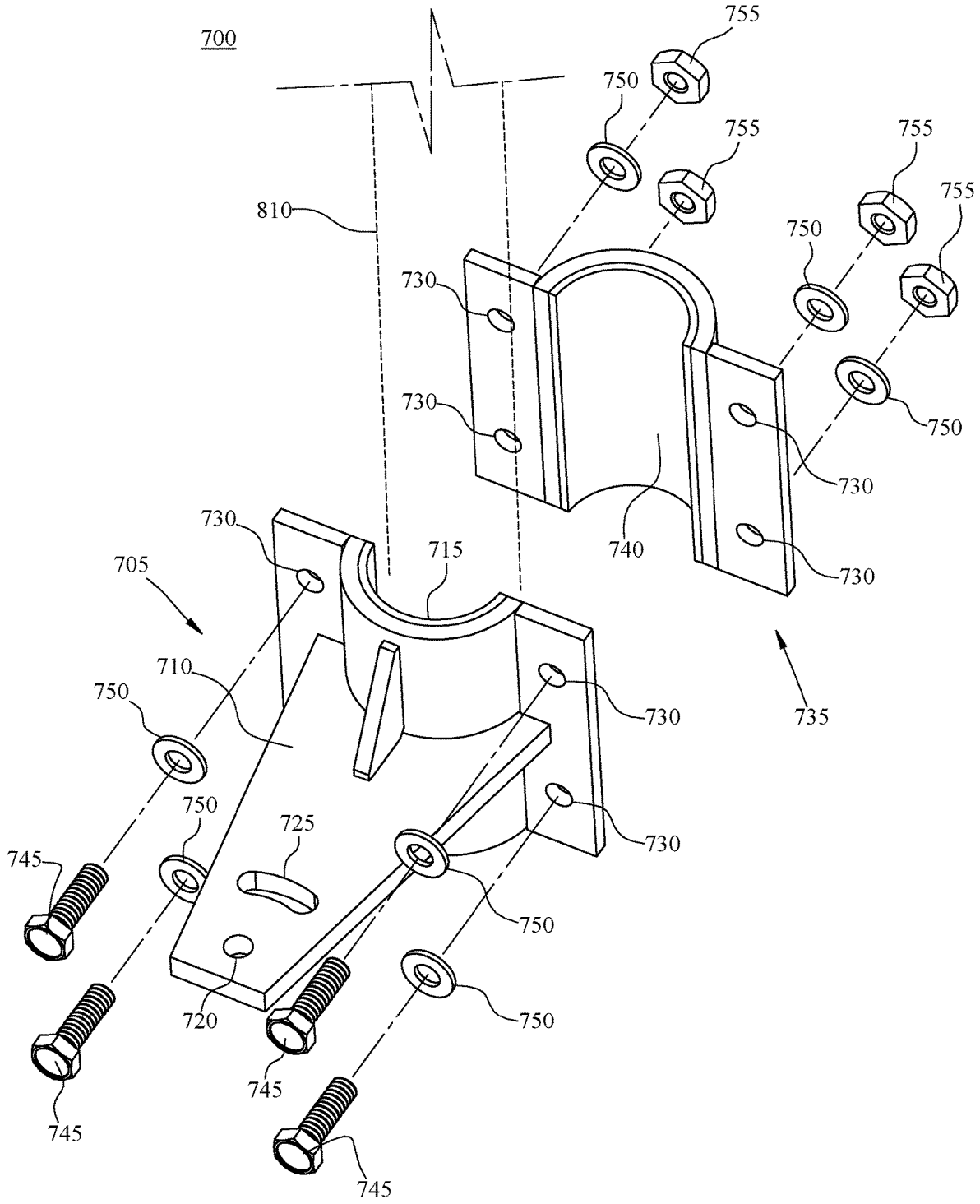
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FIG. 6C

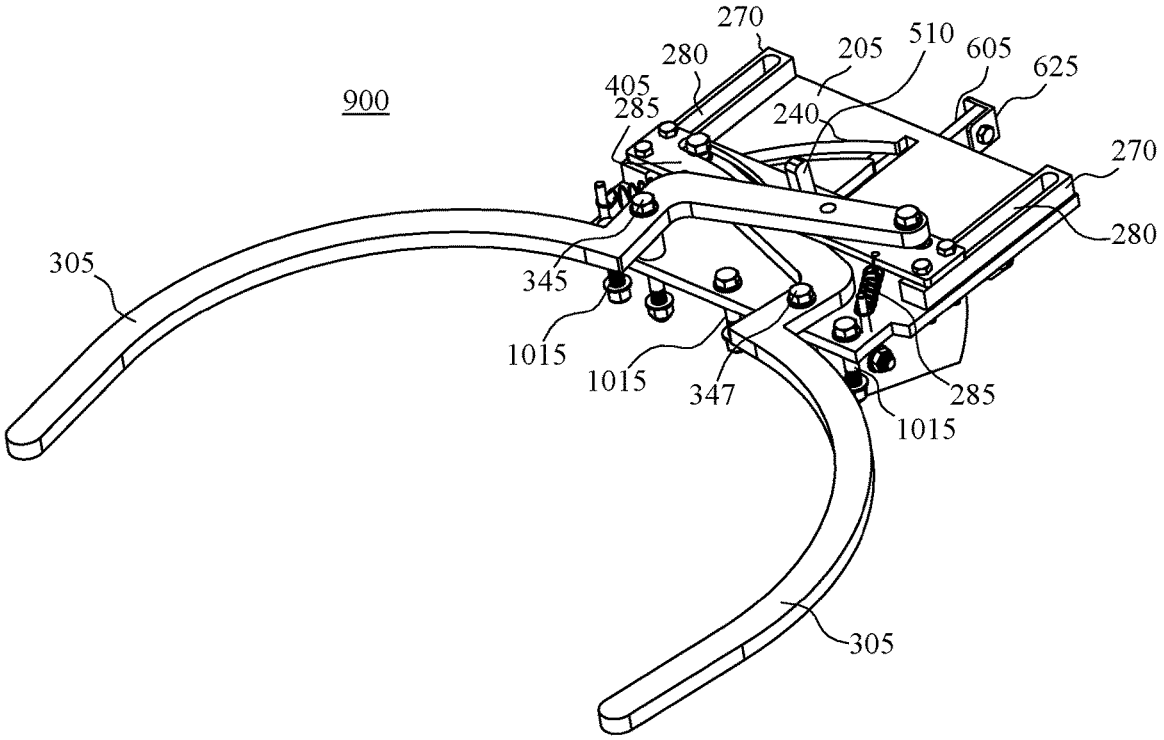
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FIG. 7A

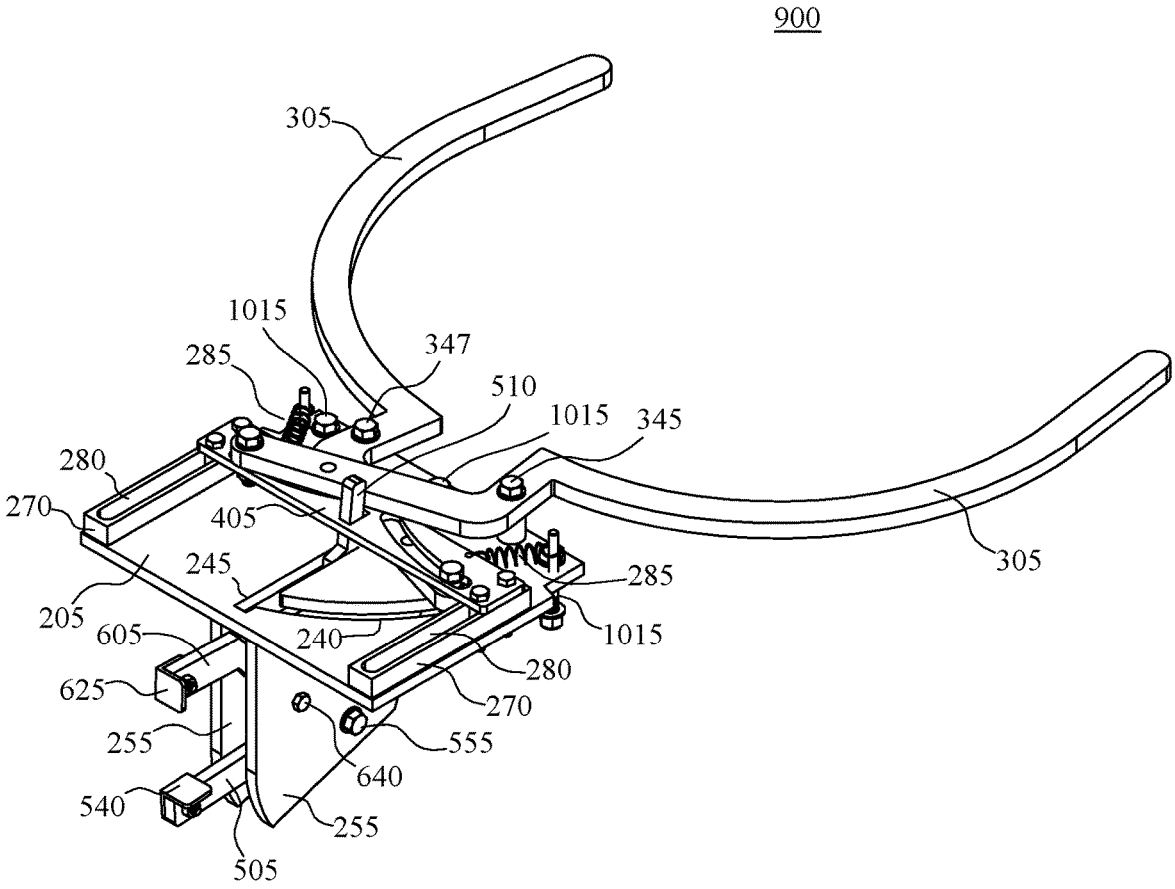
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FIG. 7B

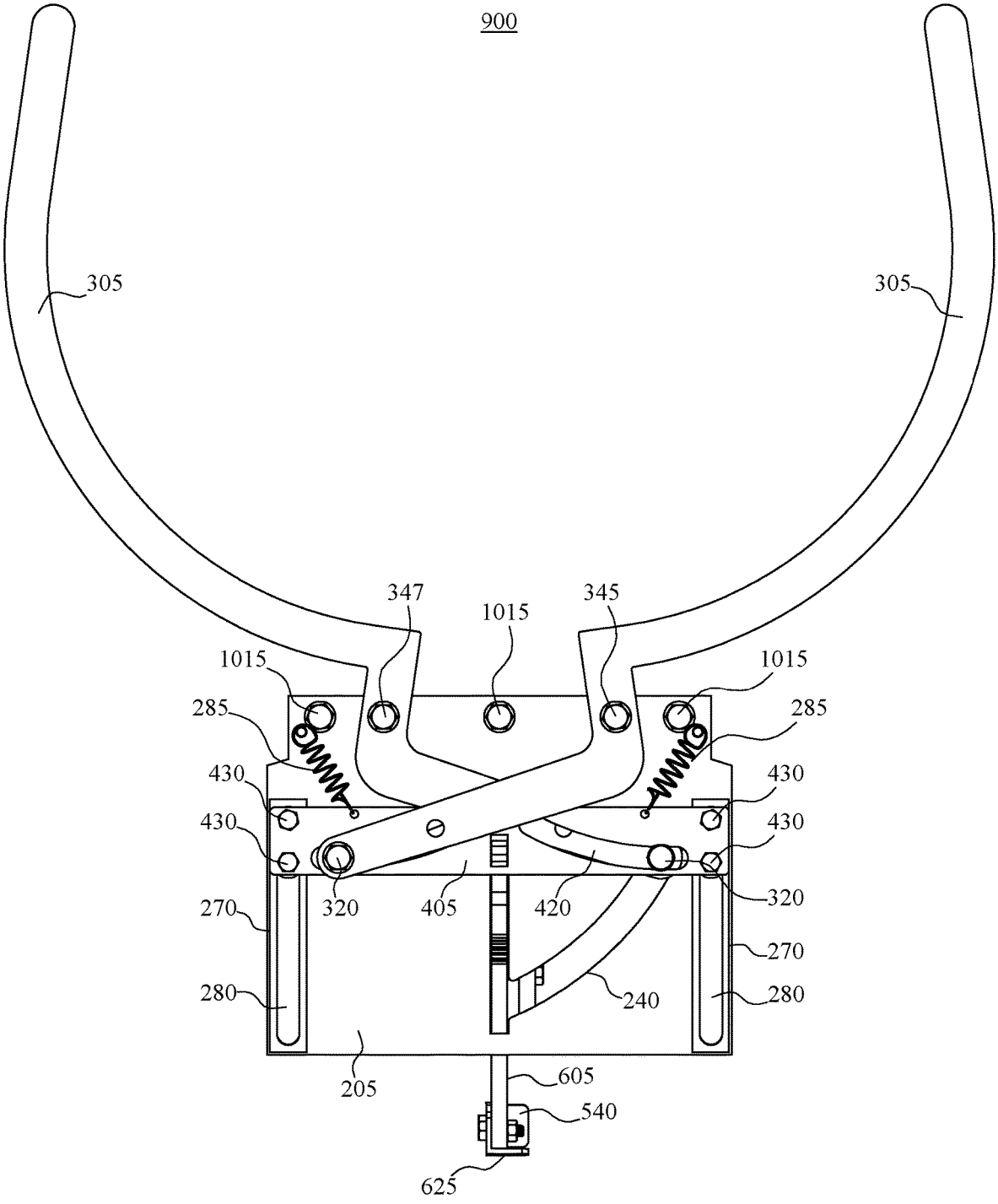
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FIG. 7C

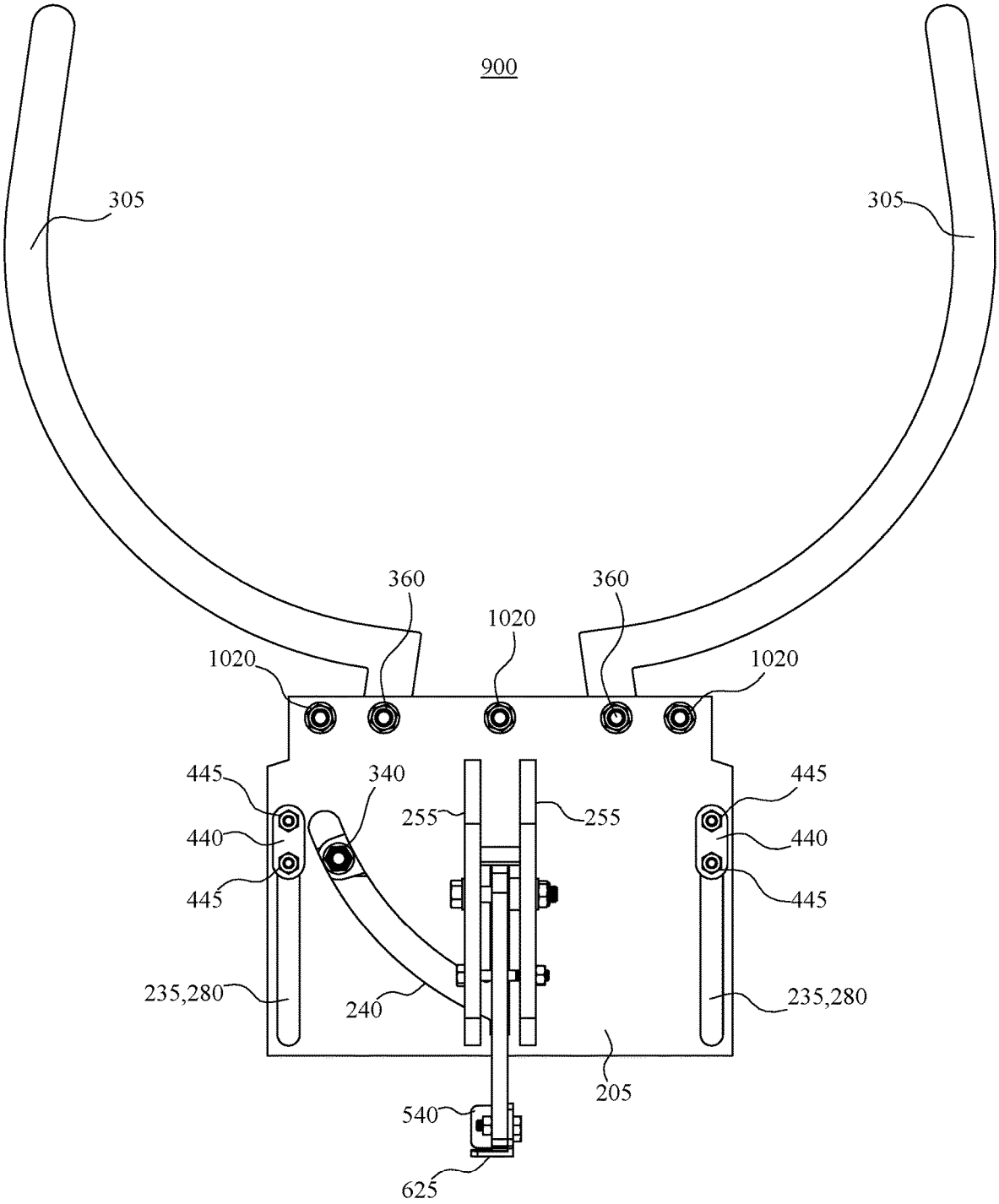
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FIG. 7D

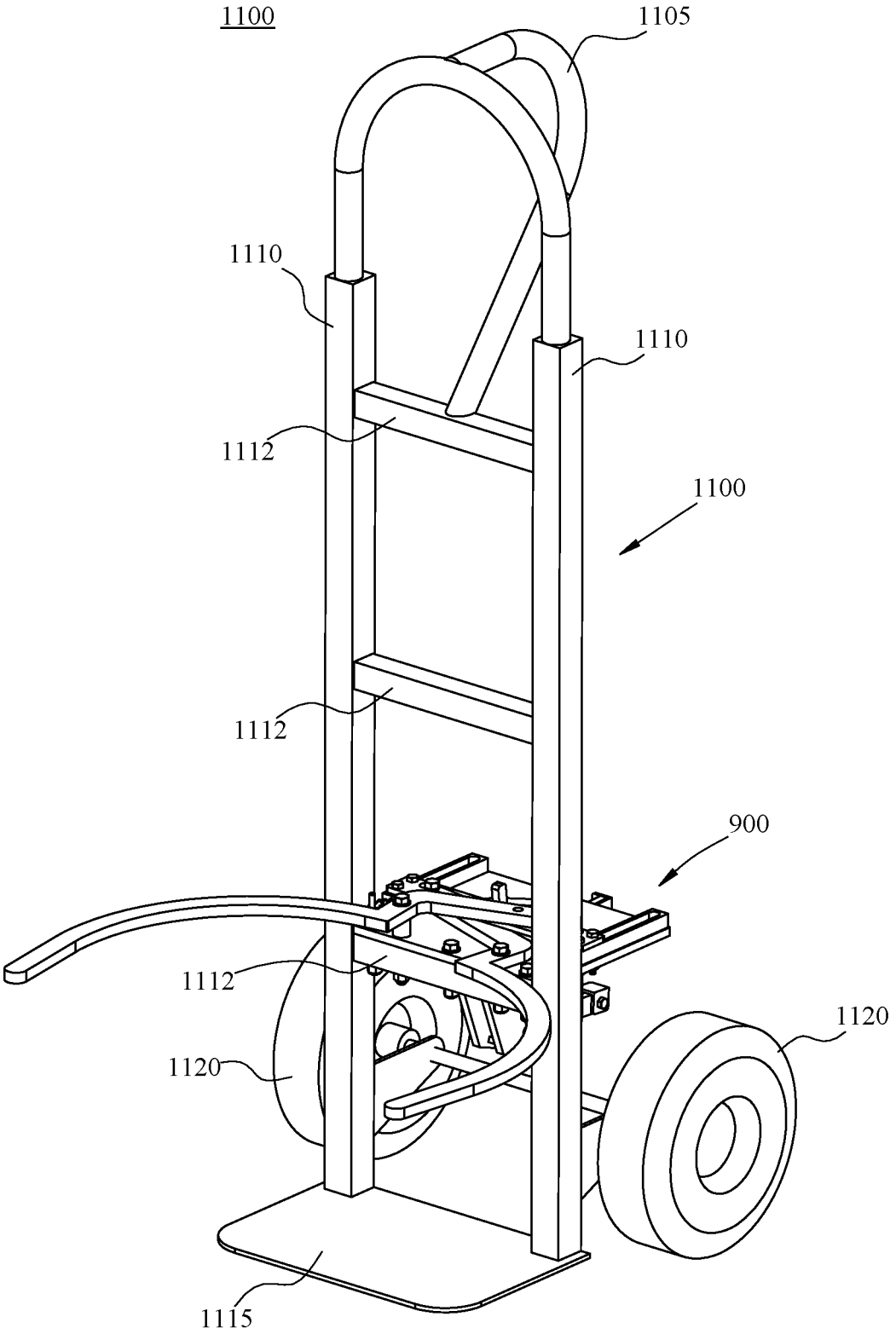

FIG. 8A

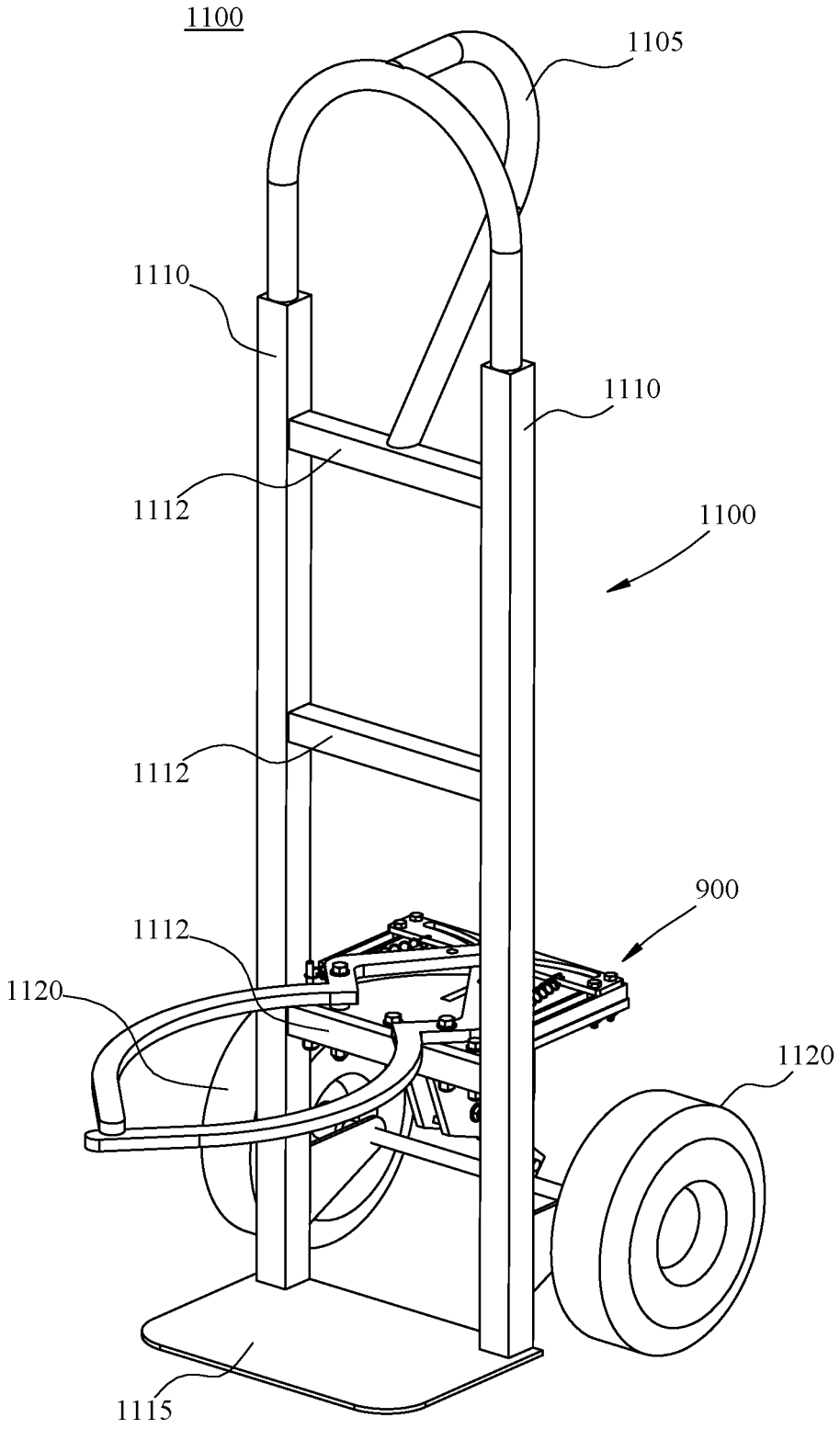

FIG. 8B

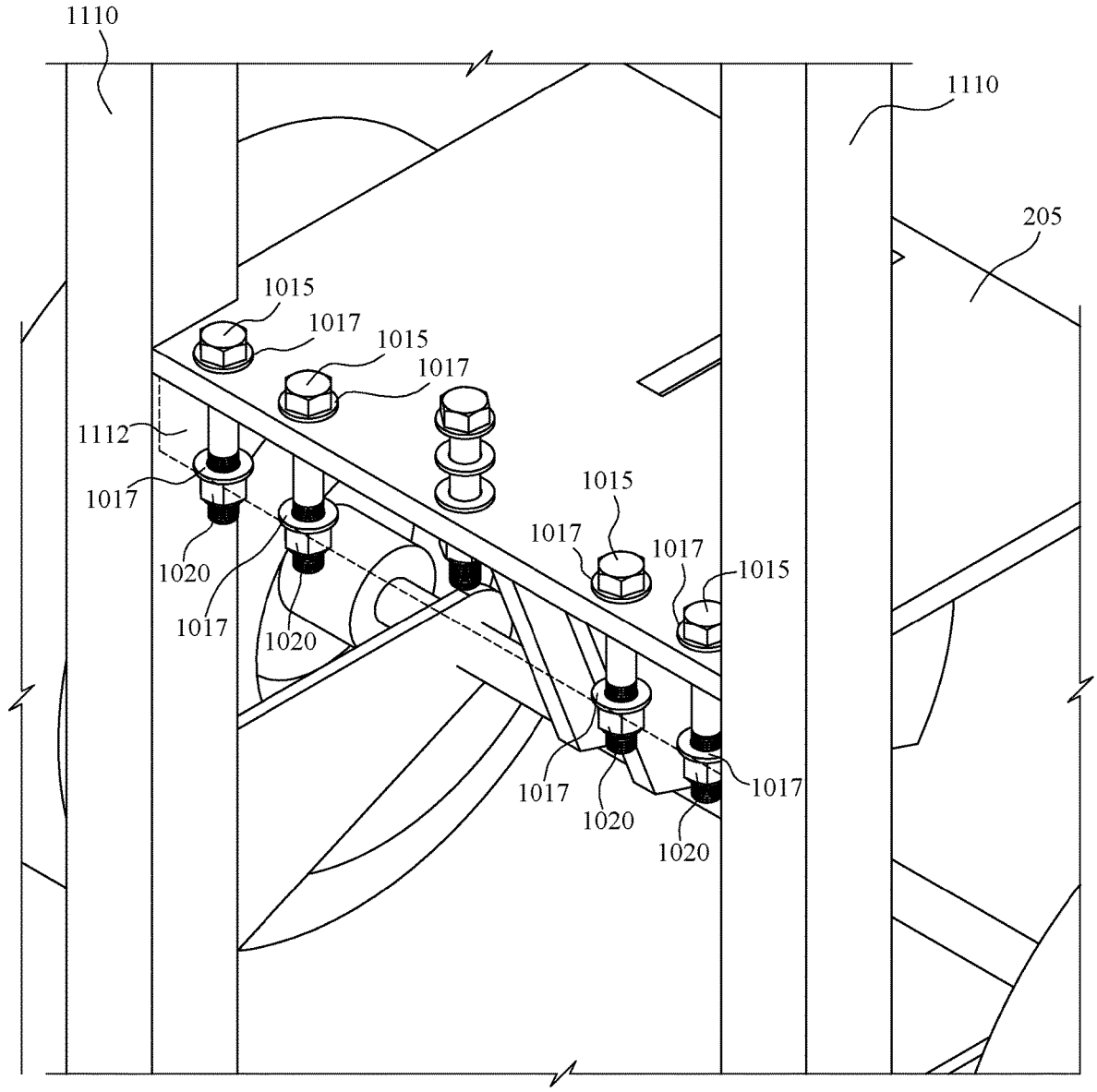
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FIG. 8C

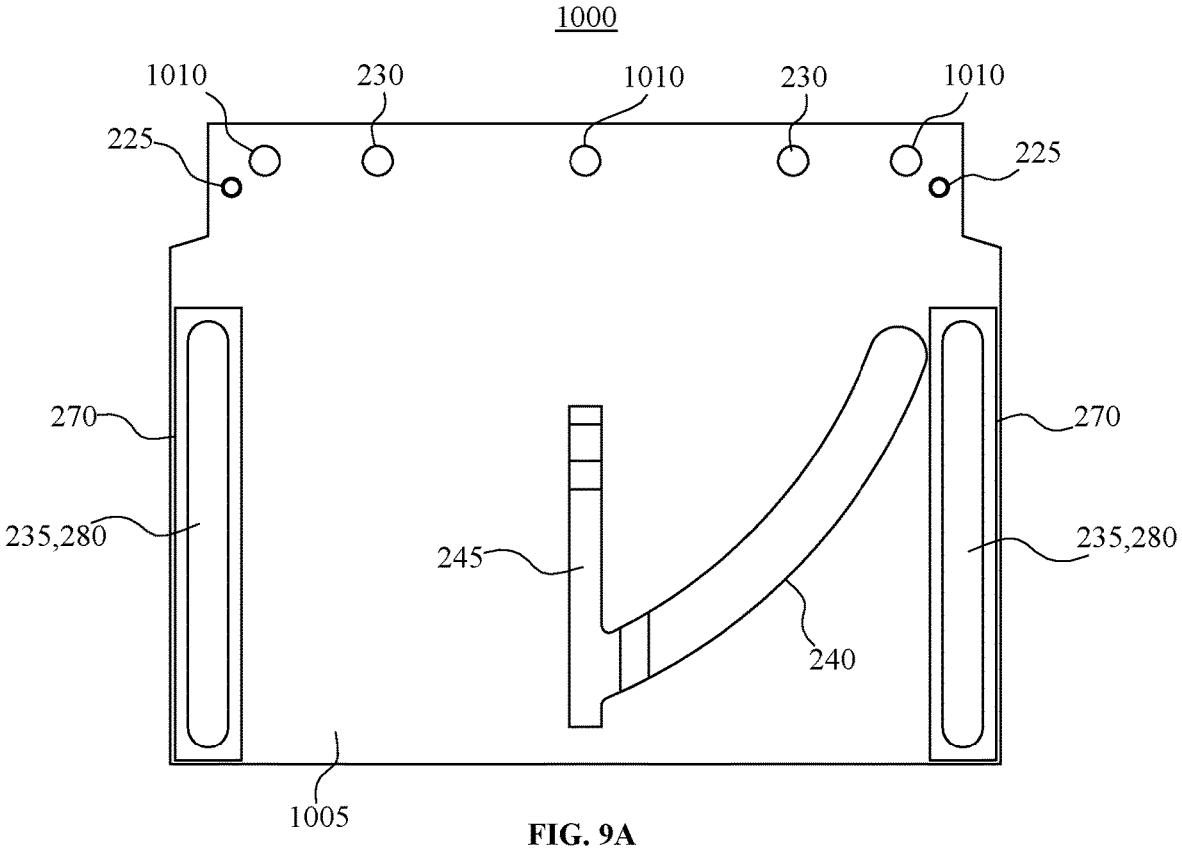
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FIG. 9A

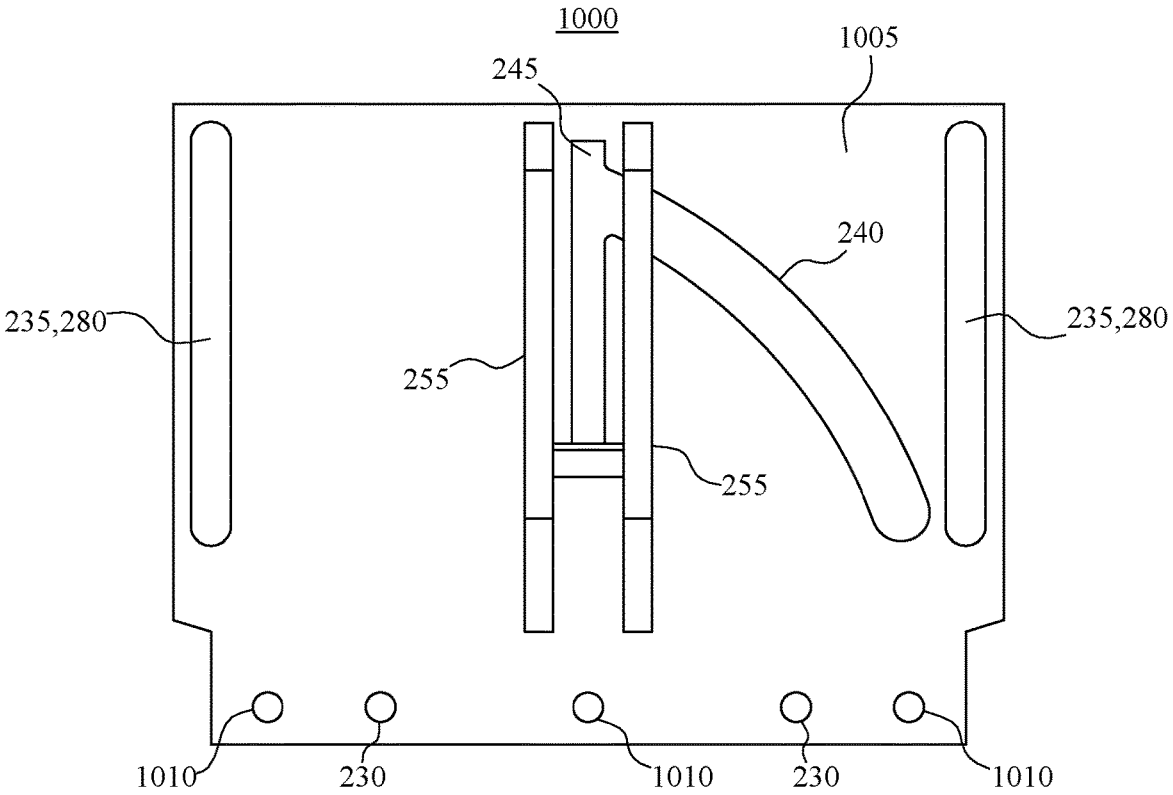
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FIG. 9B

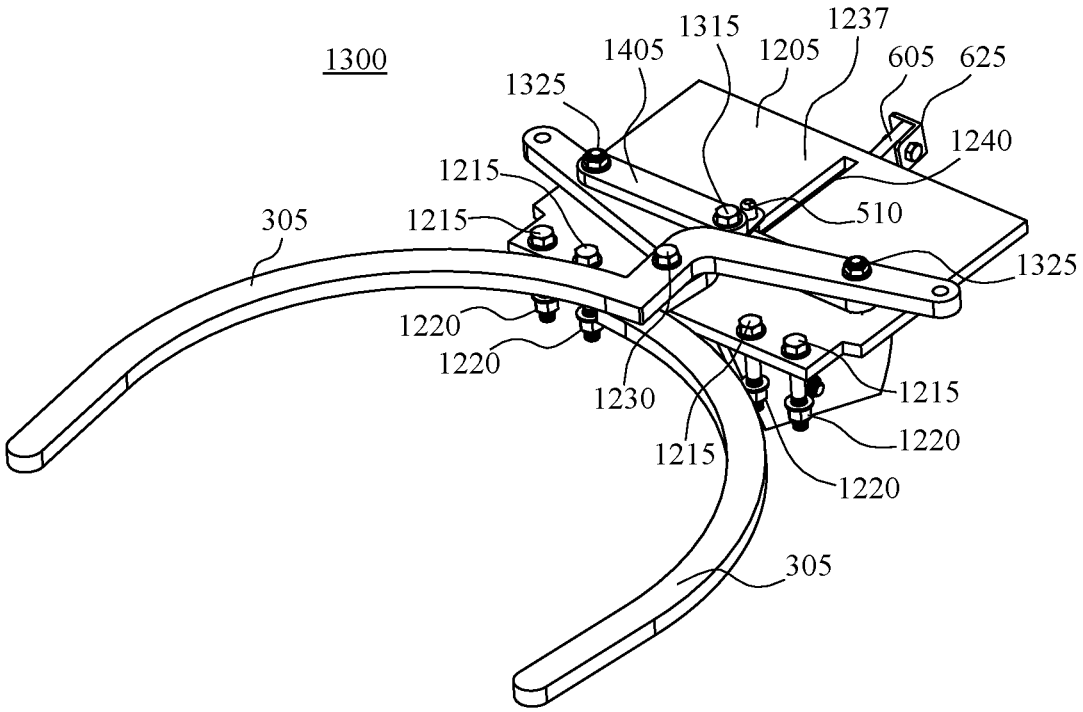

FIG. 10A

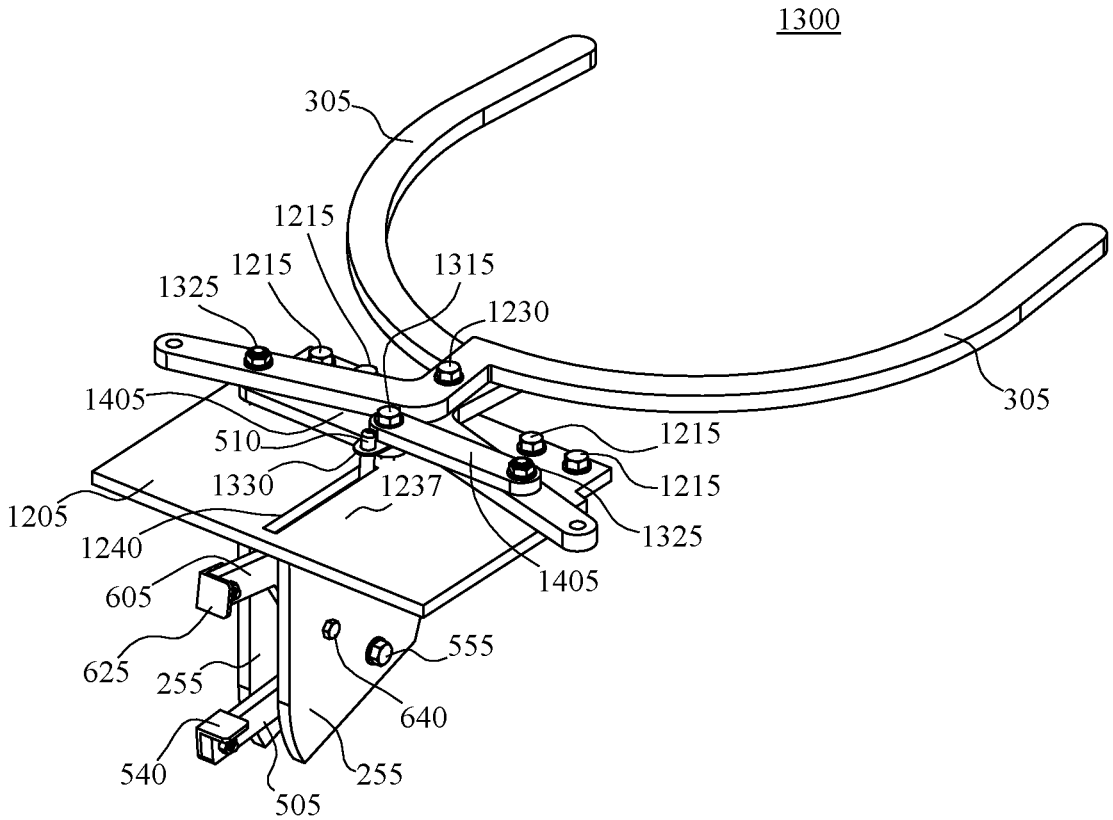

FIG. 10B

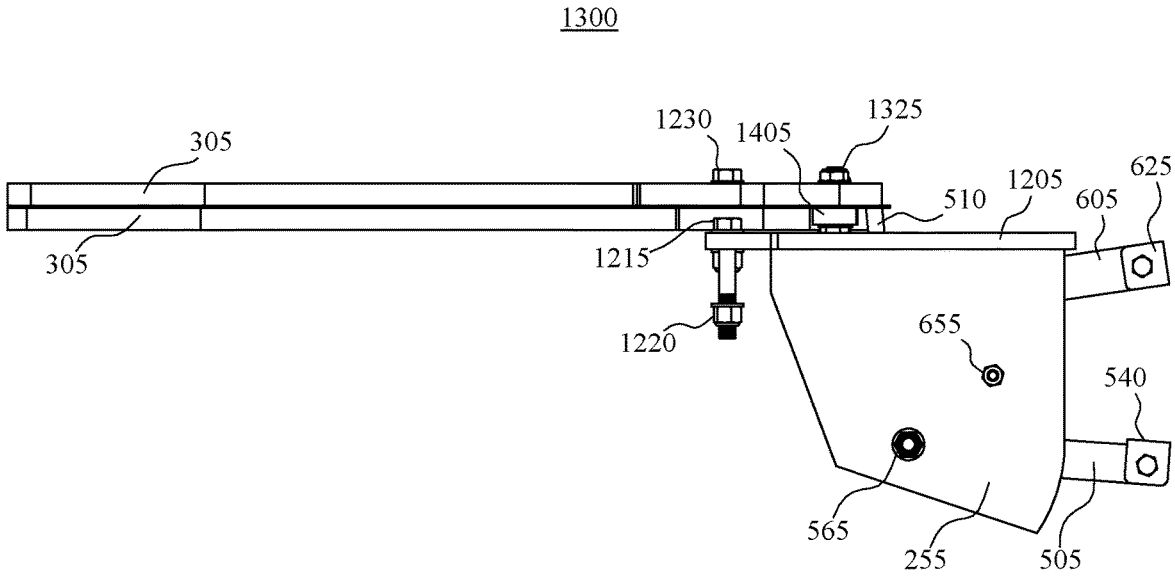

FIG. 10C

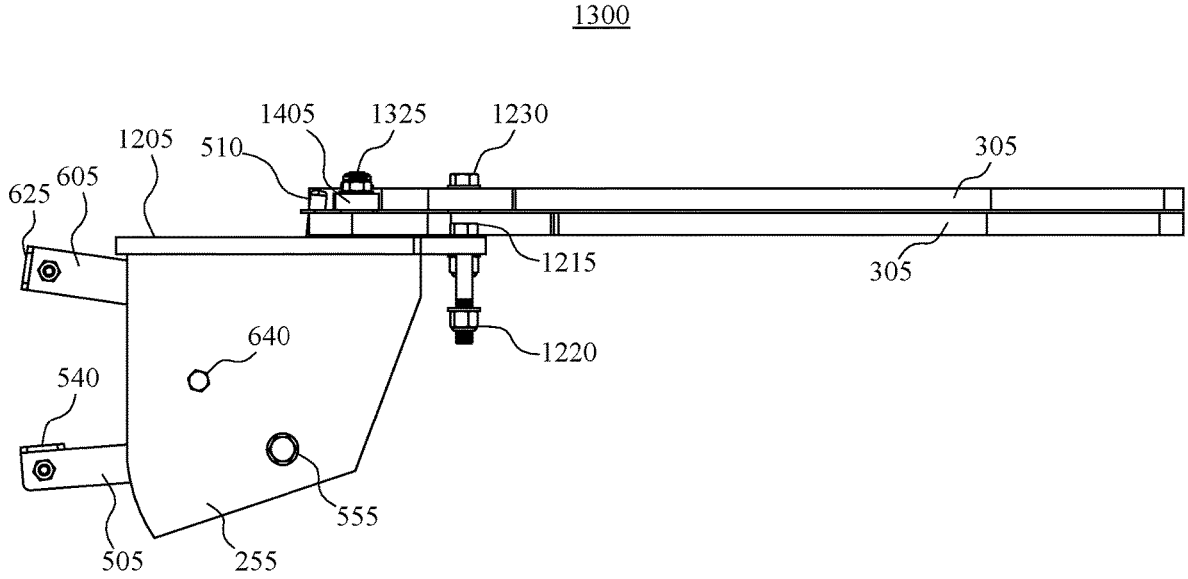

FIG. 10D

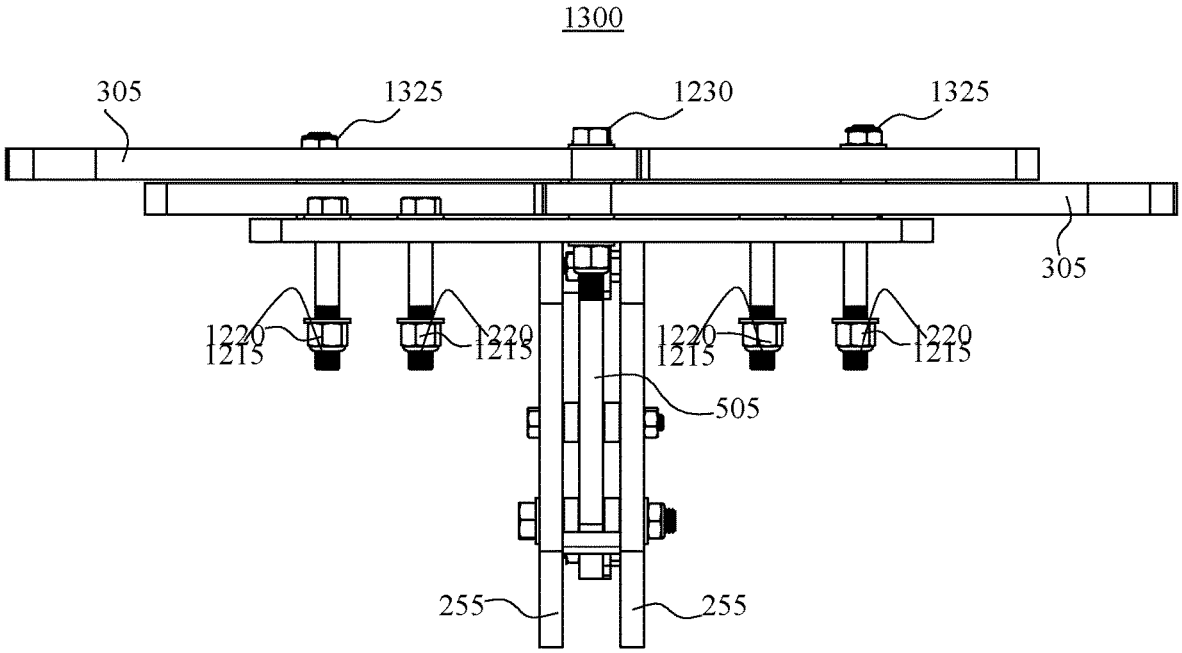

FIG. 10E

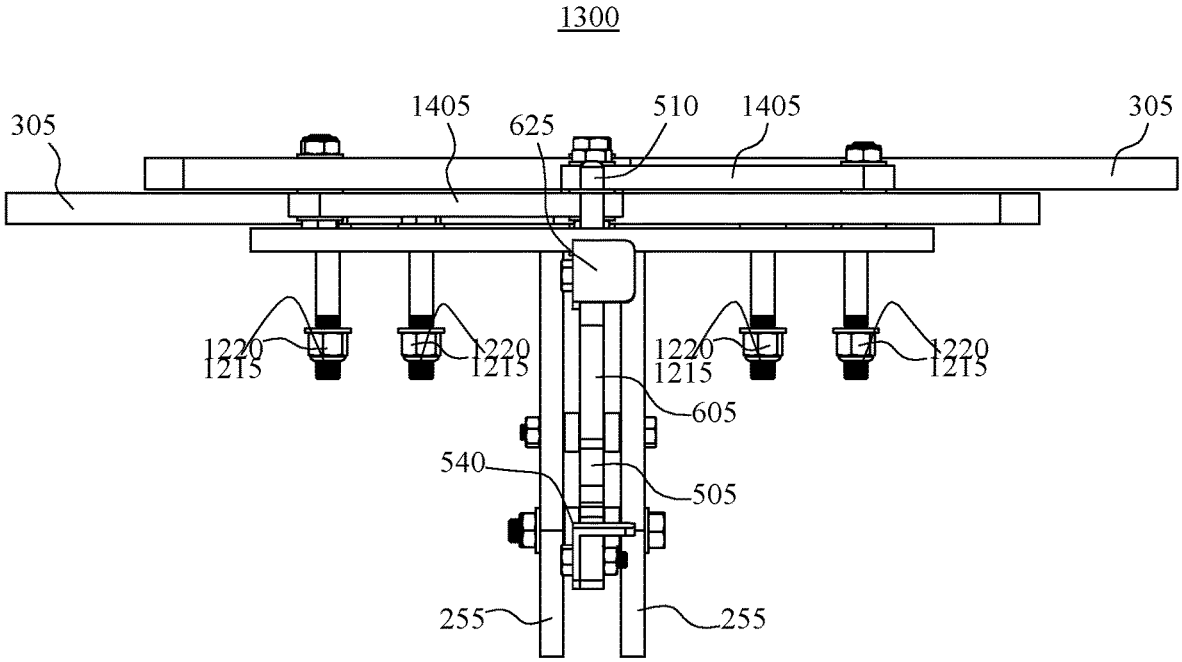

FIG. 10F

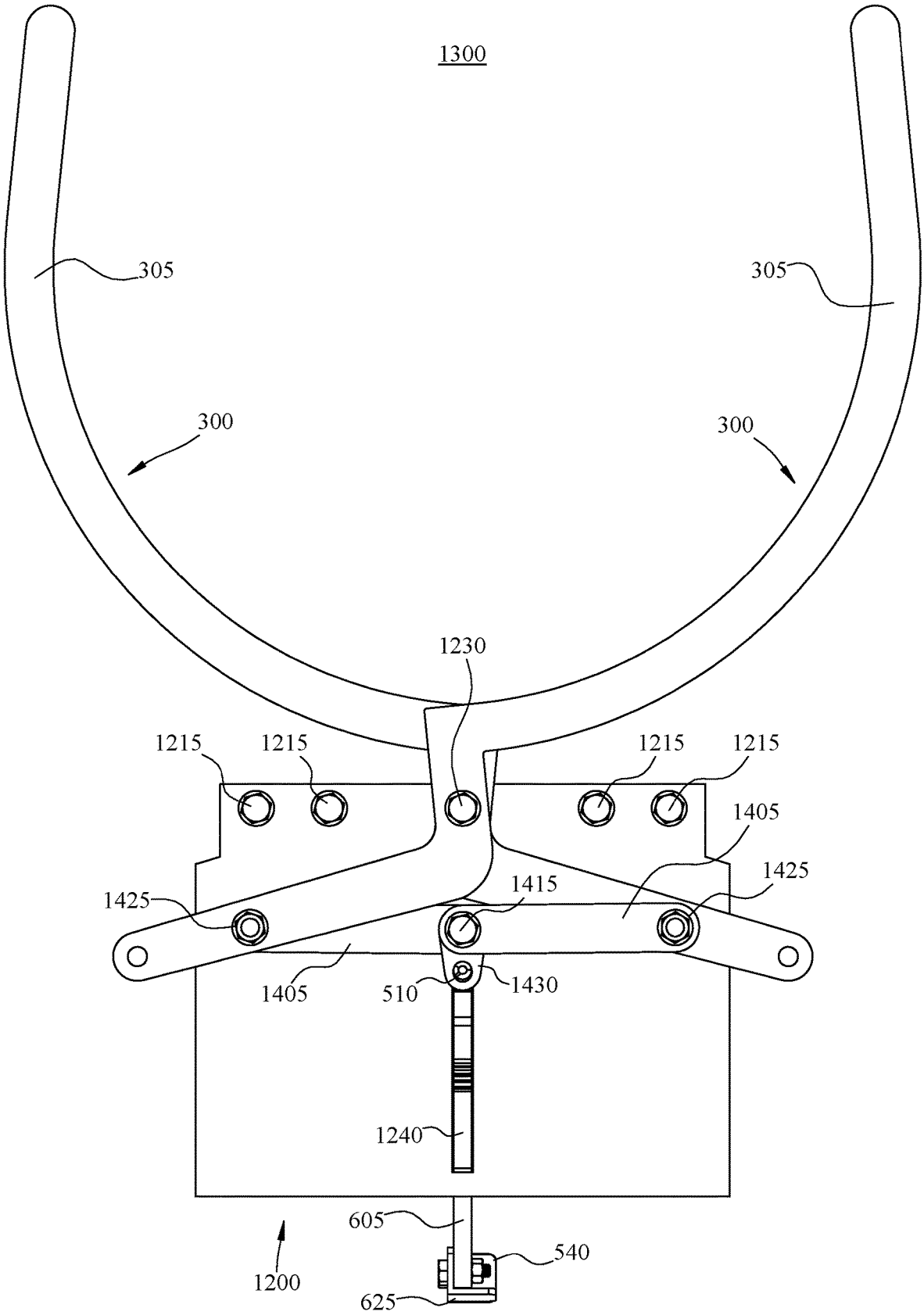
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FIG. 11A

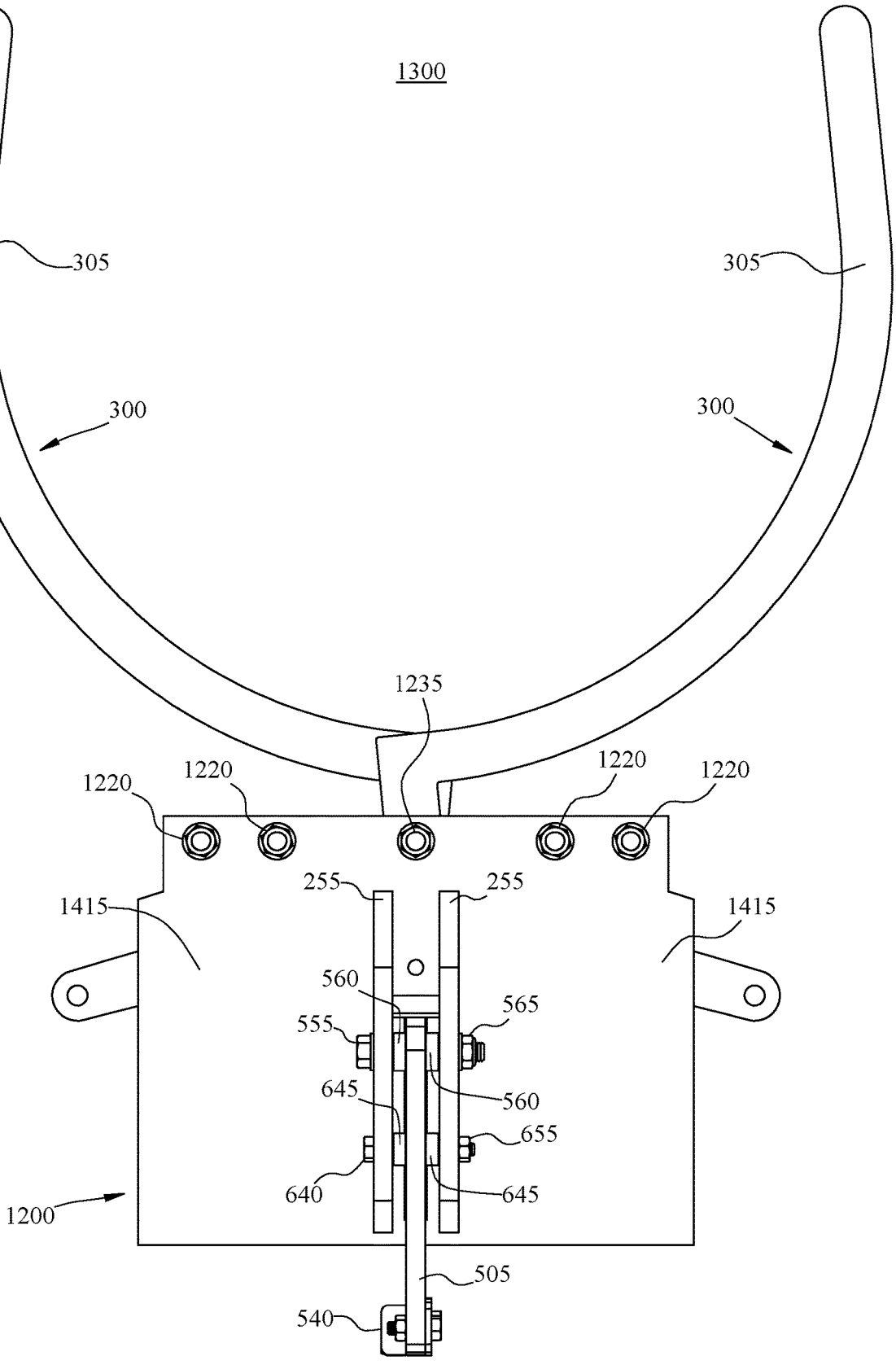
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FIG. 11B

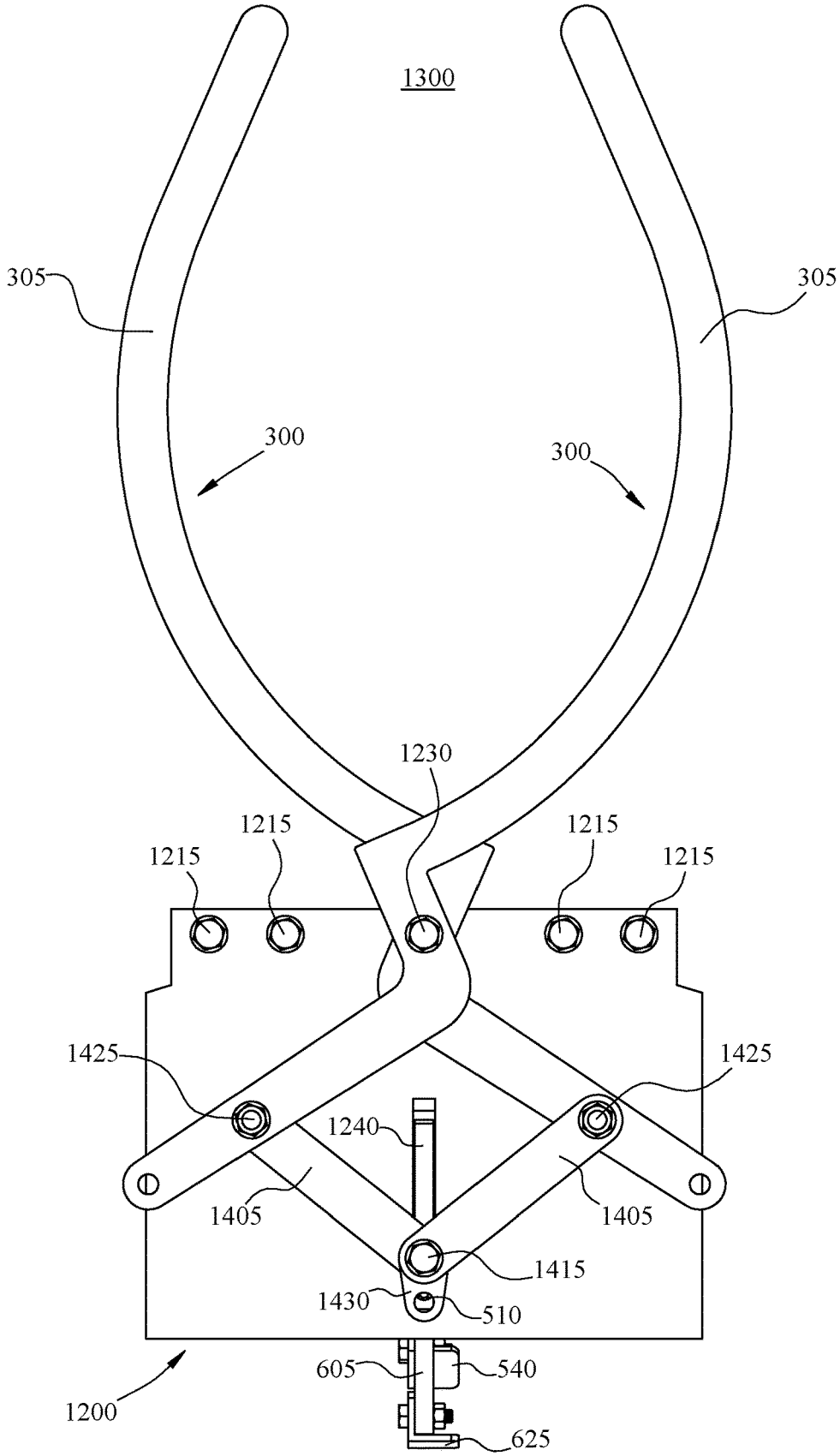
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FIG. 11C

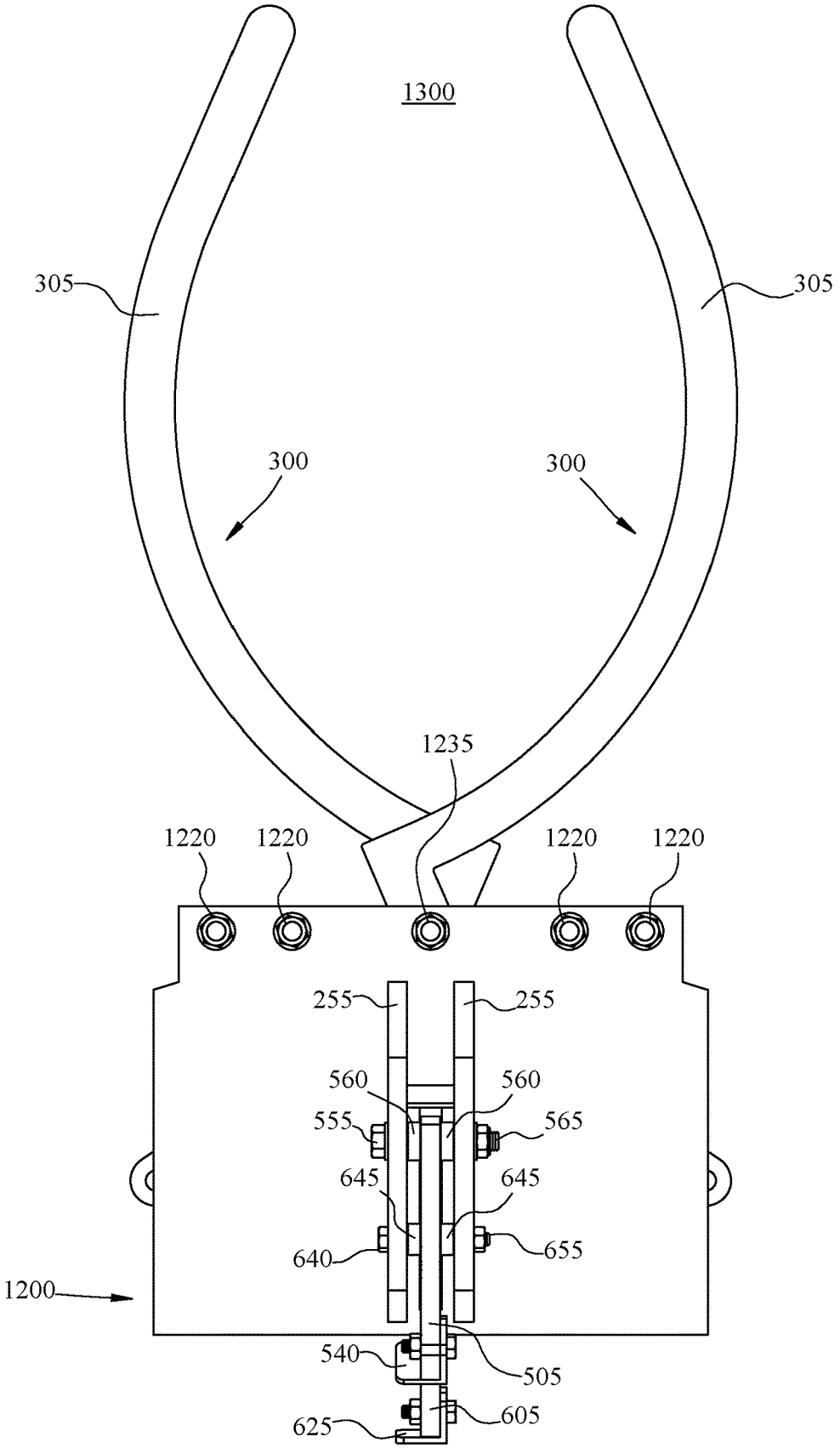
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FIG. 11D

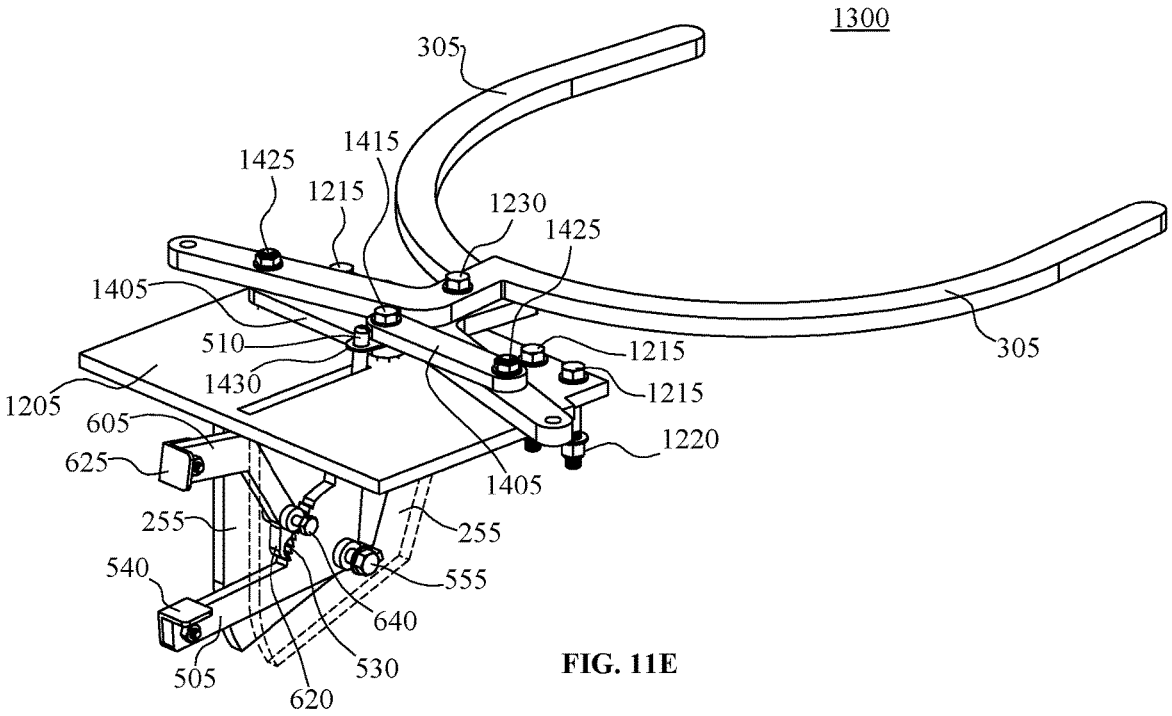

FIG. 11E

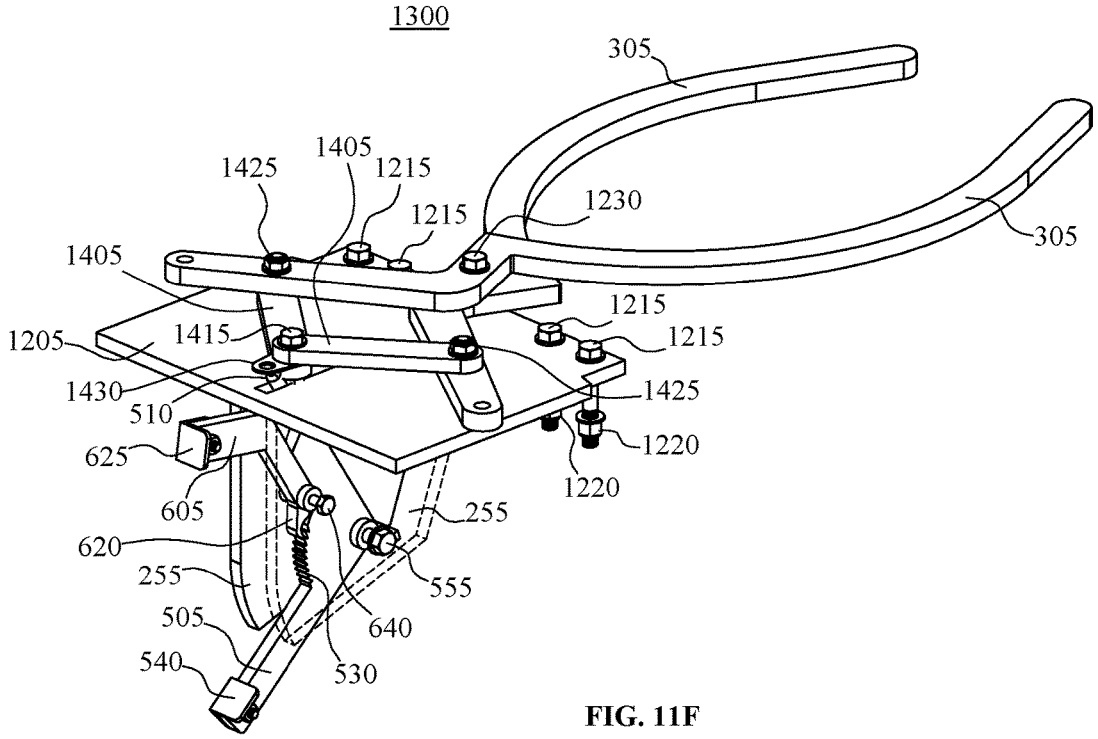

FIG. 11F

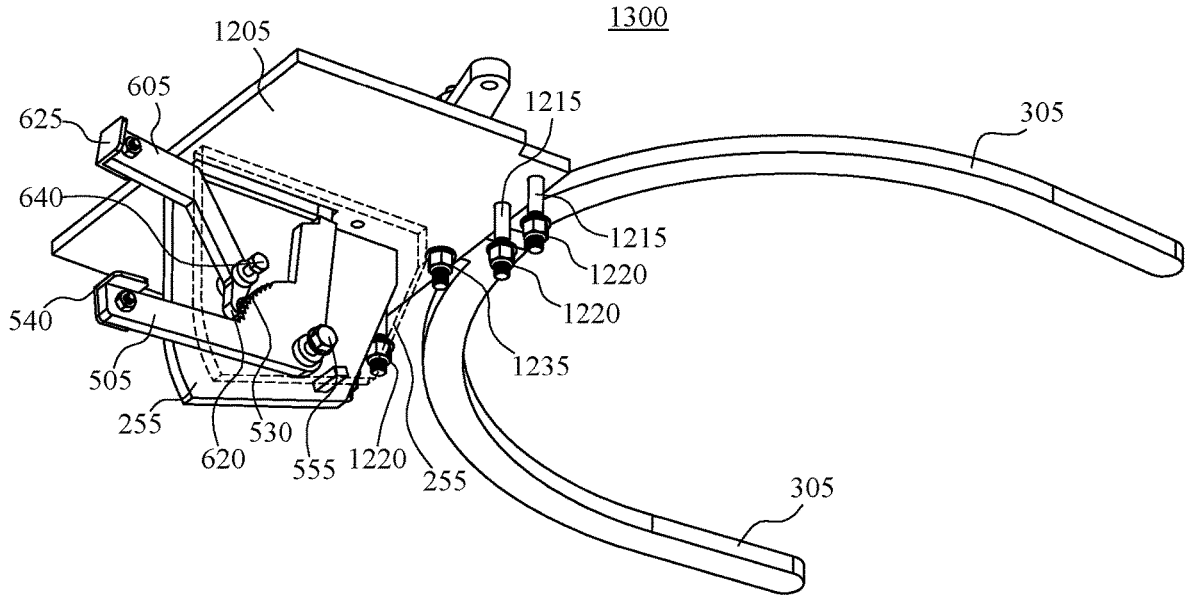

FIG. 11G

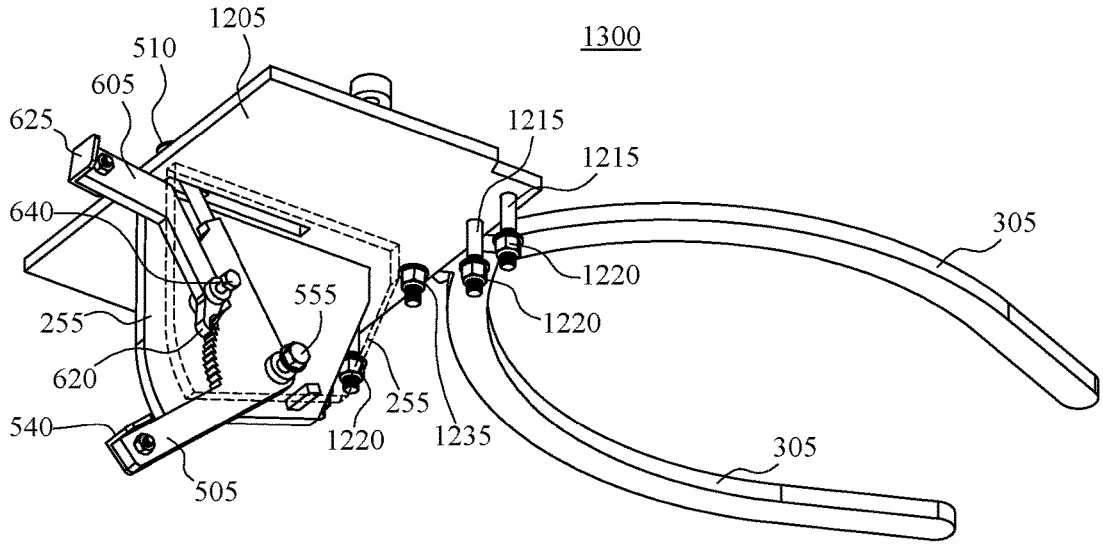

FIG. 11H

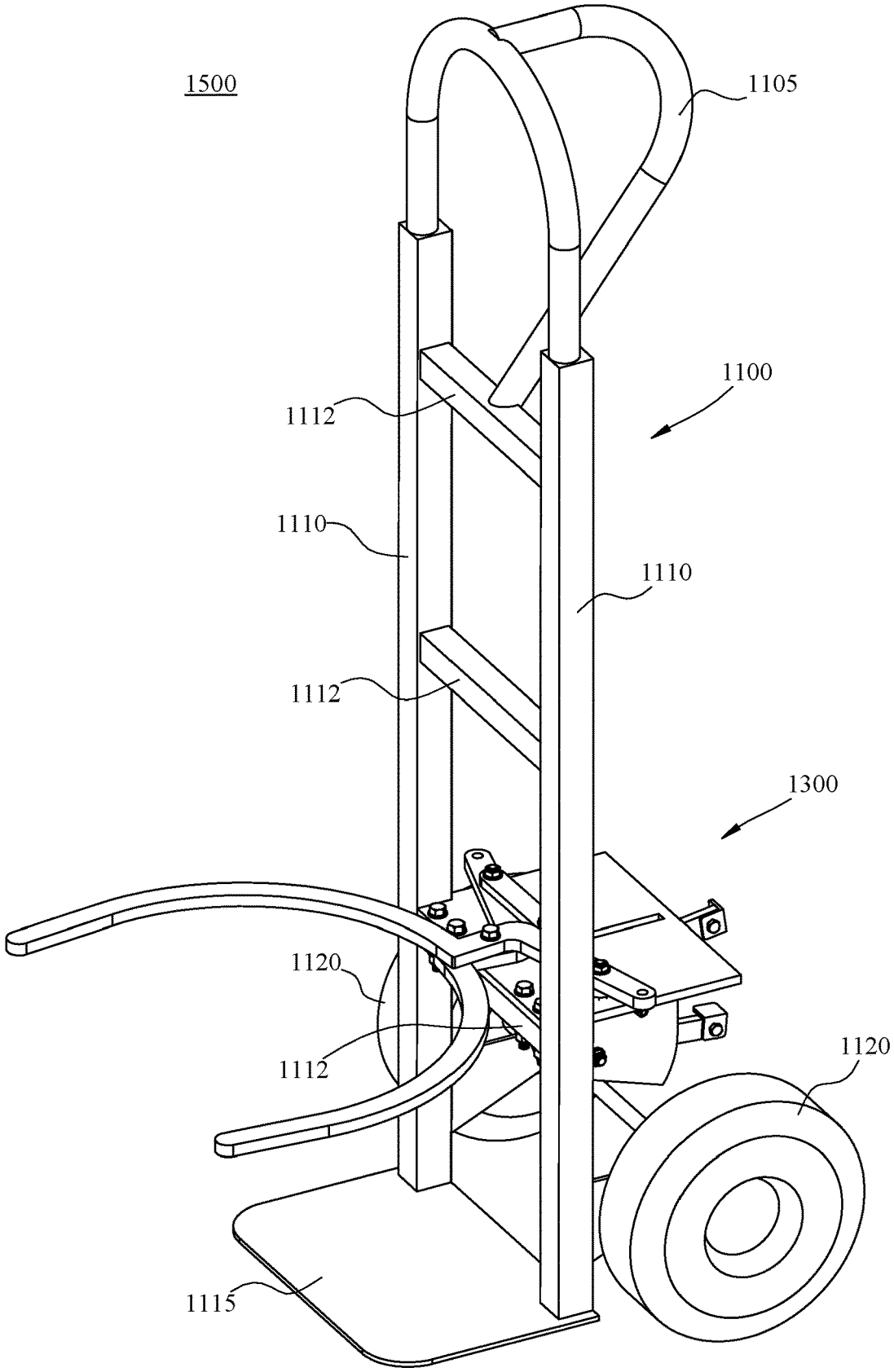

FIG. 12A

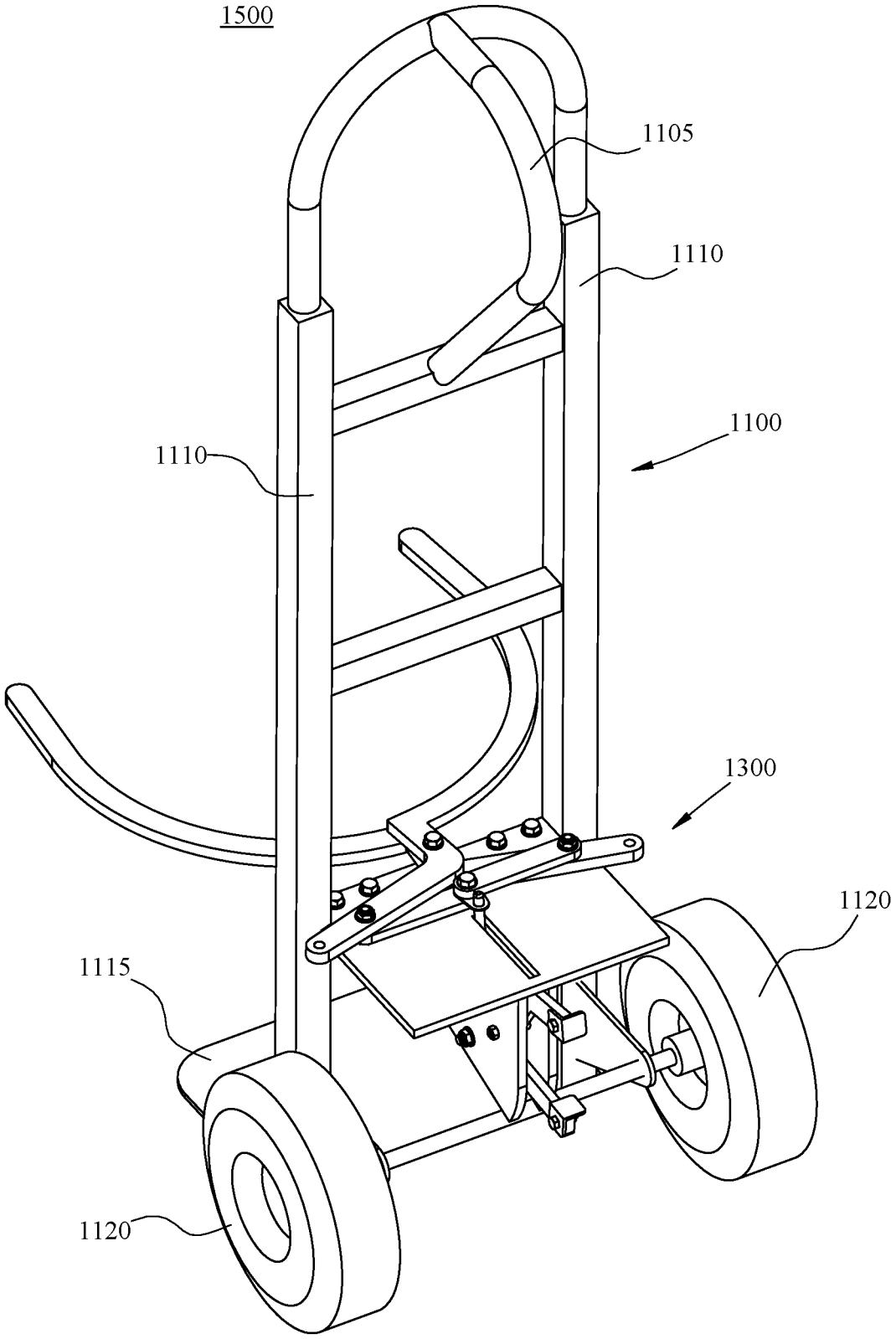

FIG. 12B

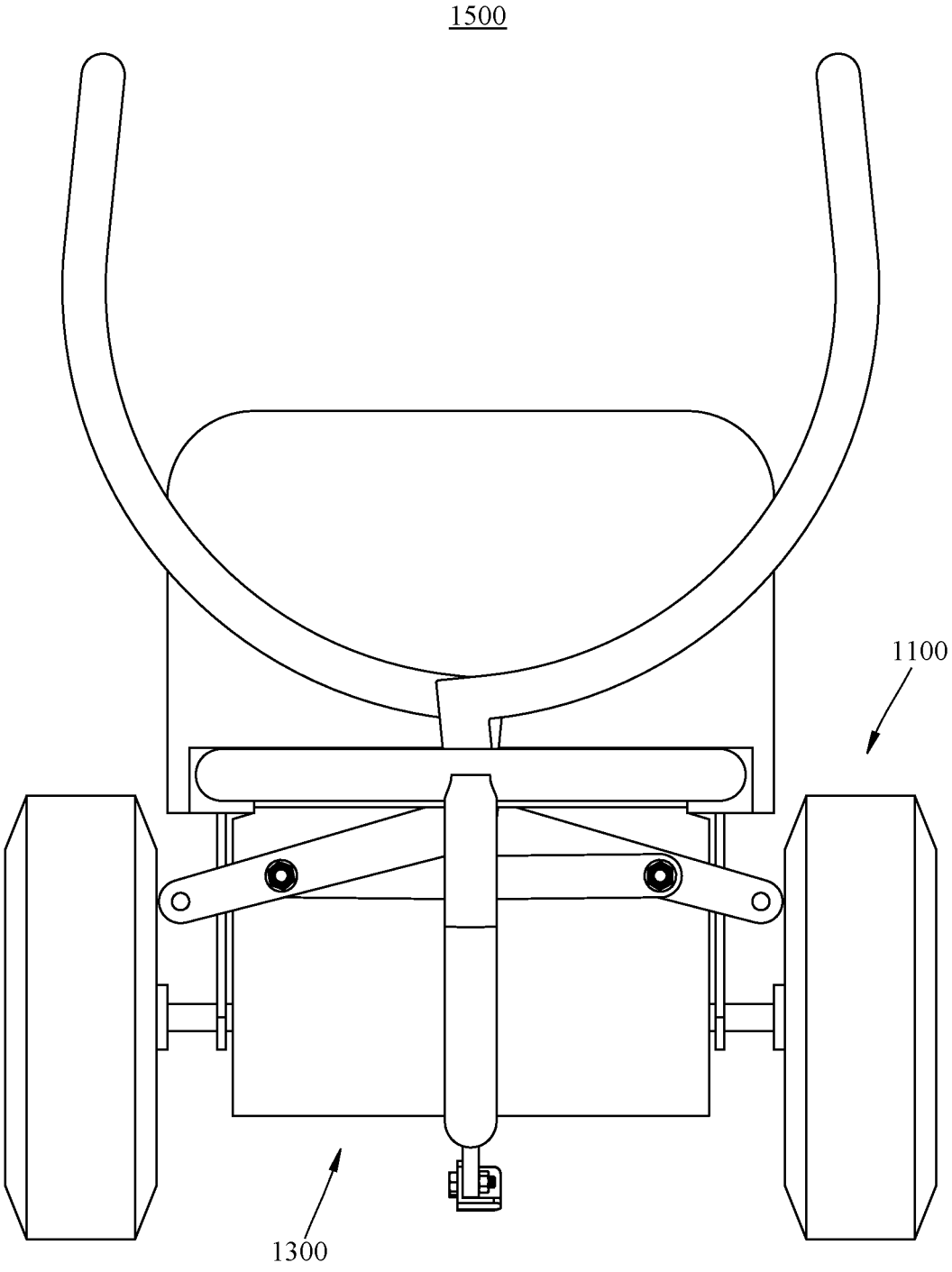

FIG. 12C

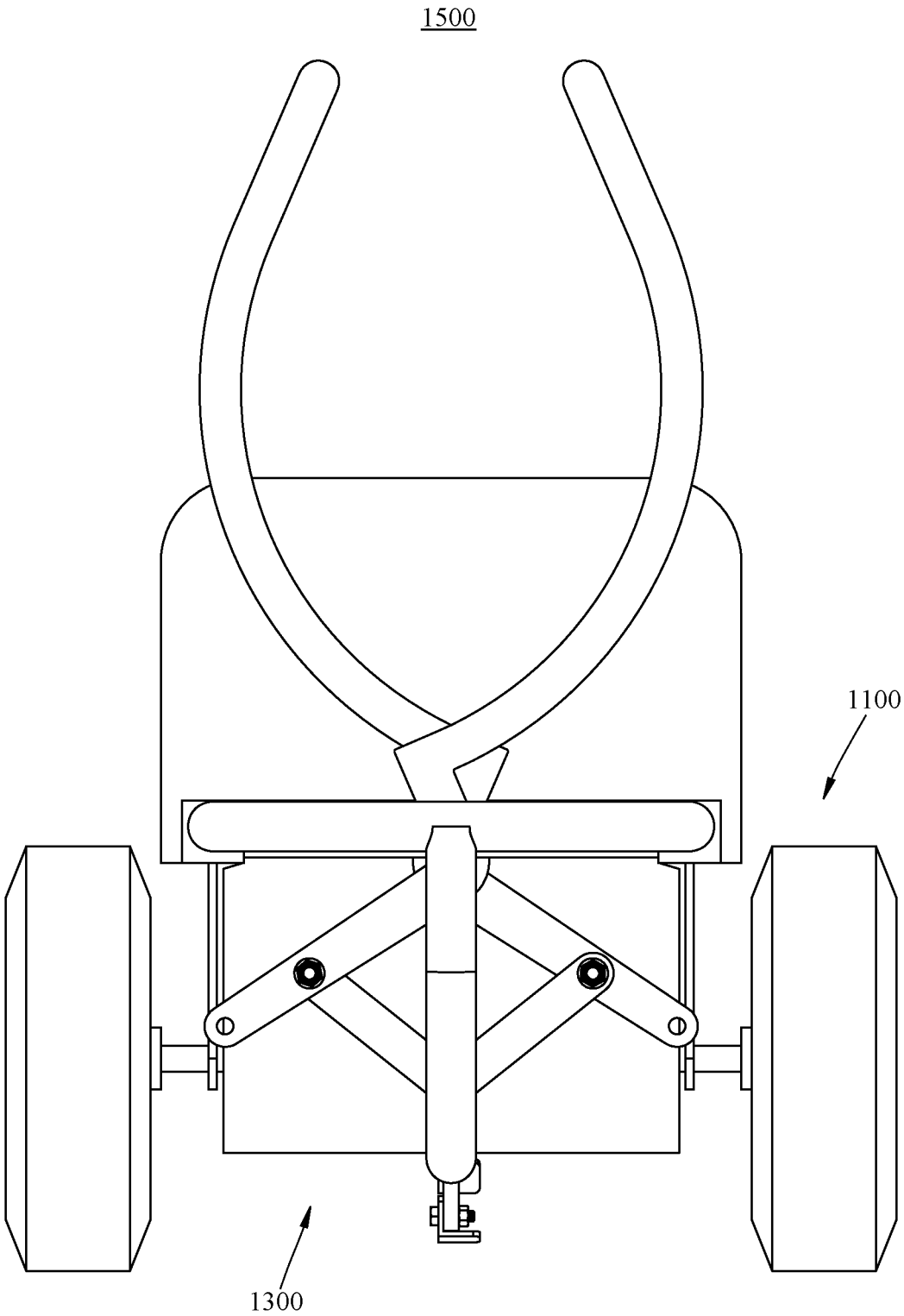

FIG. 12D

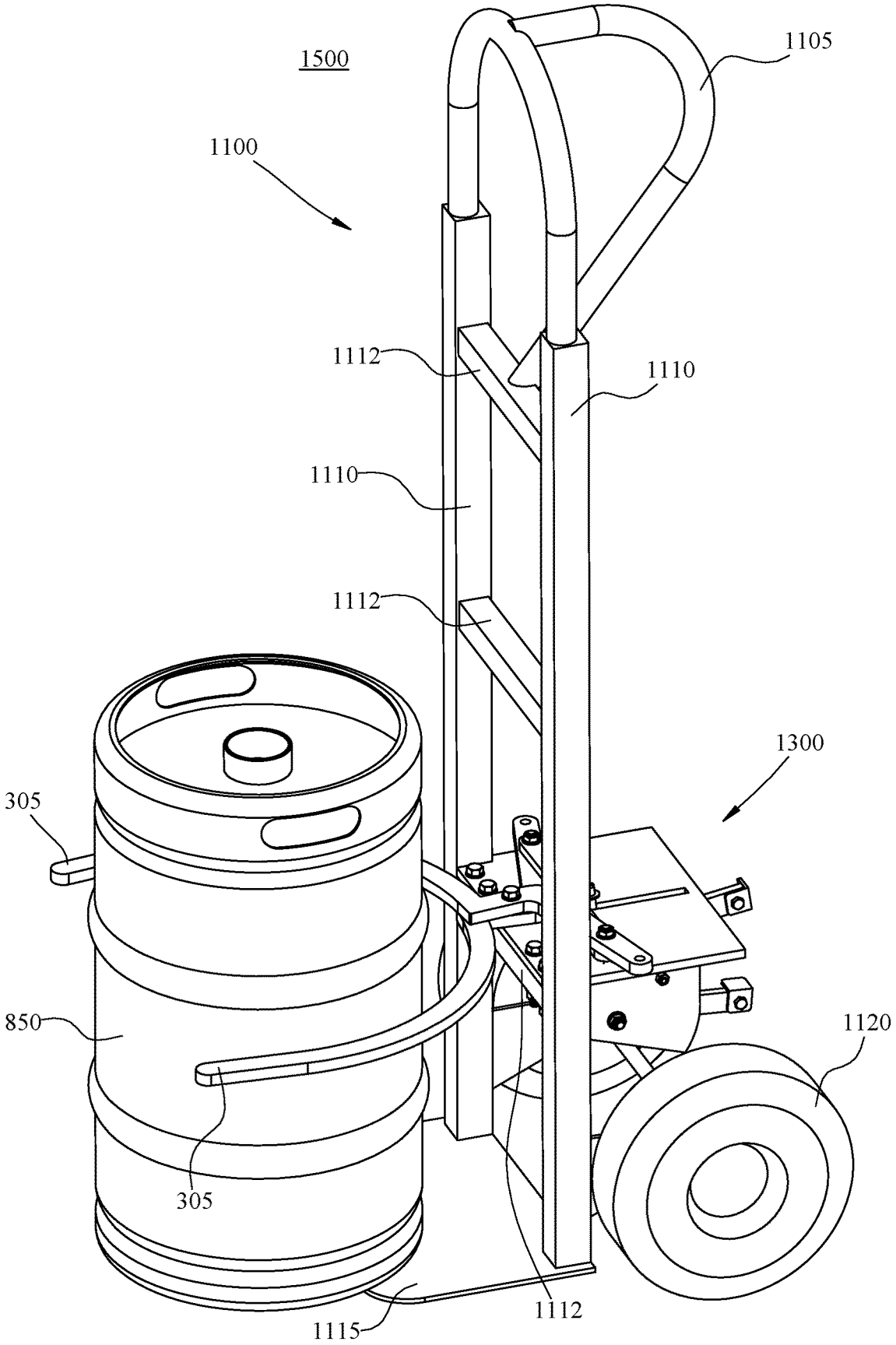
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FIG. 13A

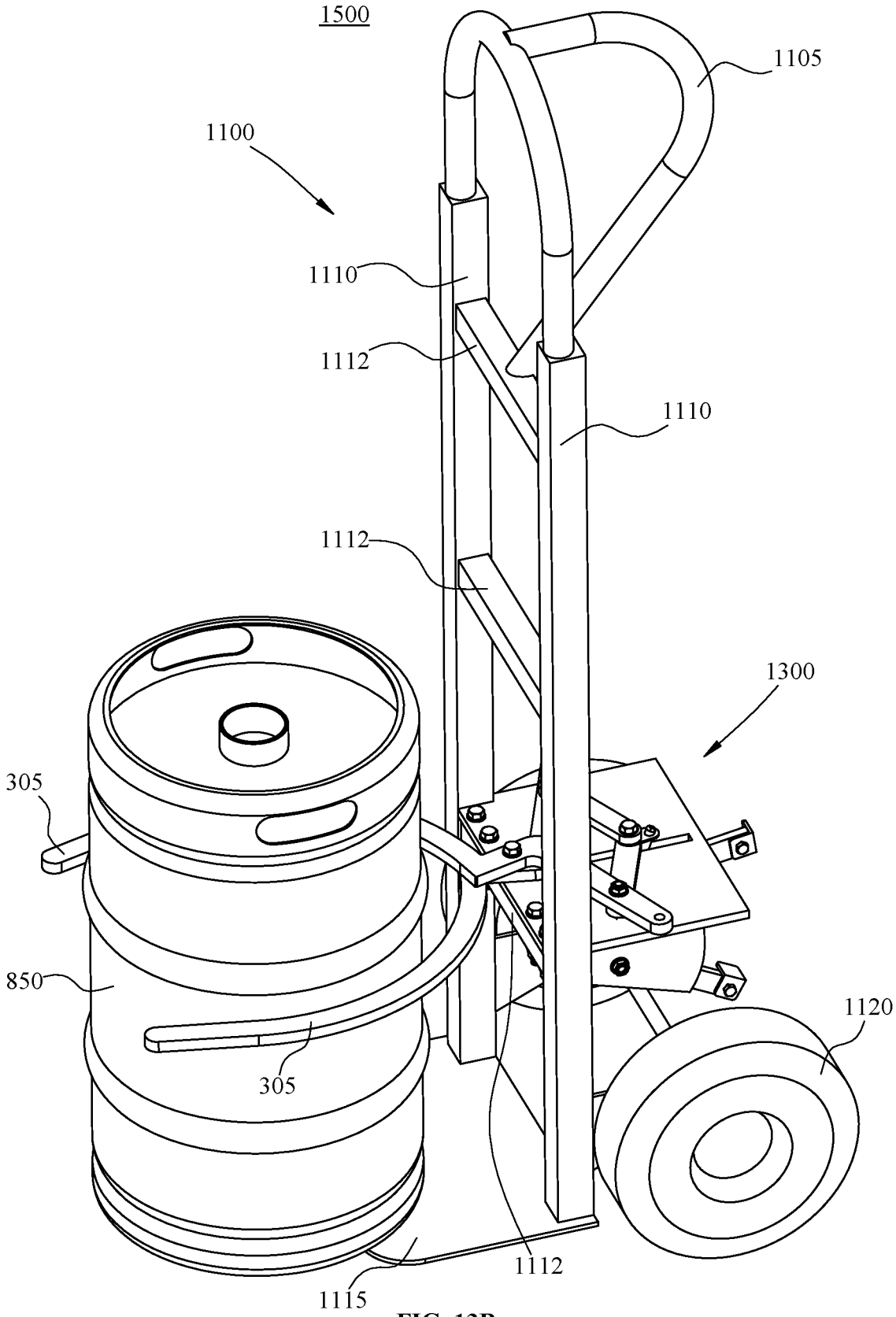
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FIG. 13B

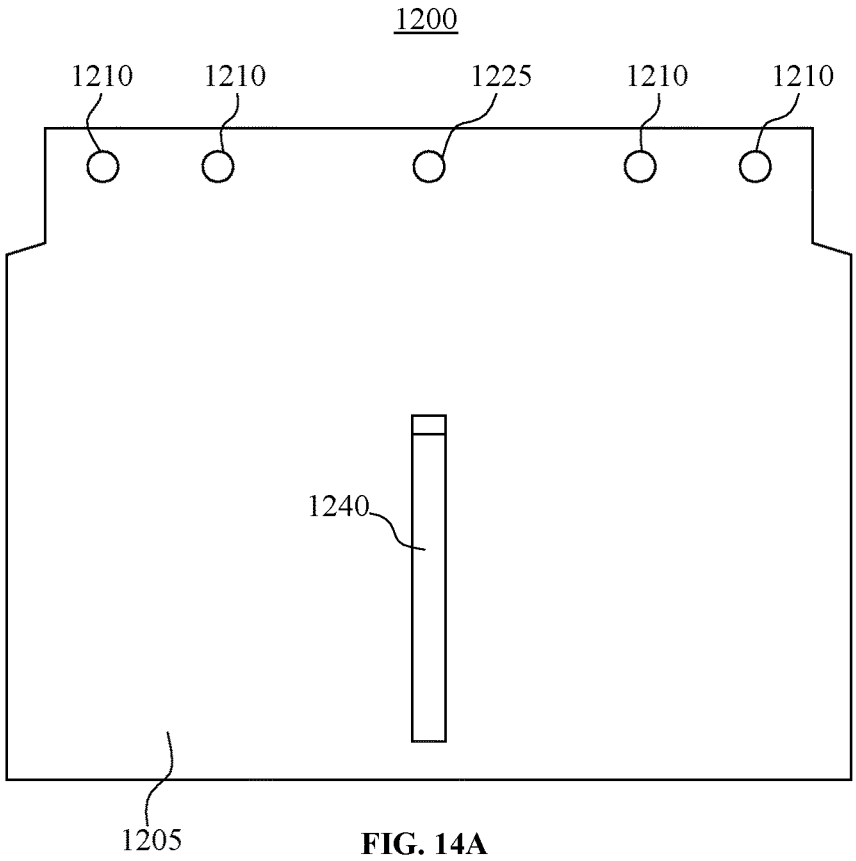

FIG. 14A

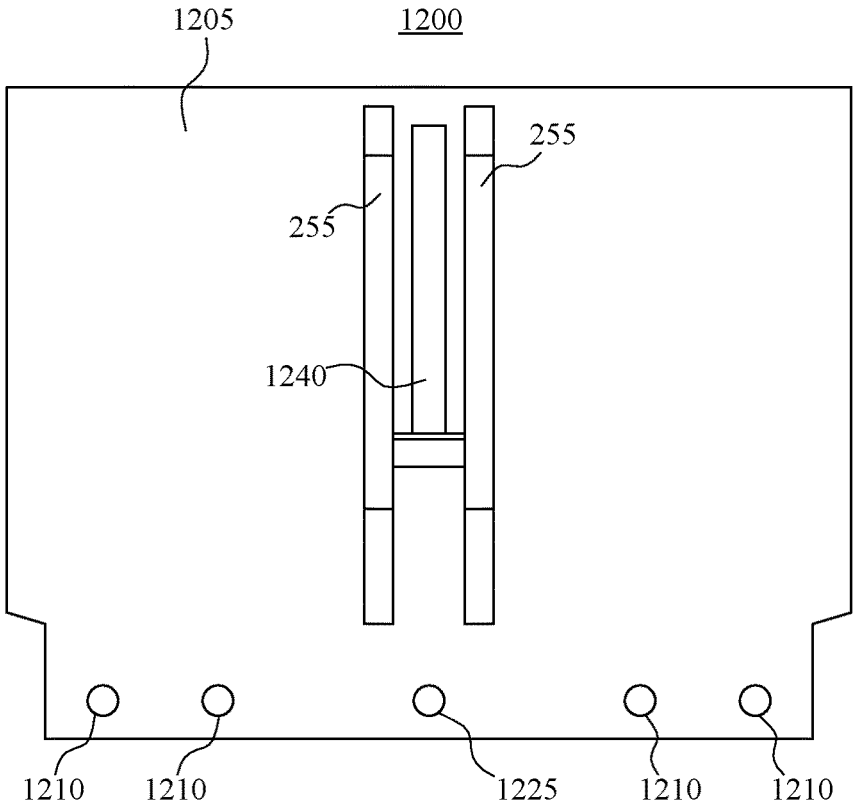

FIG. 14B

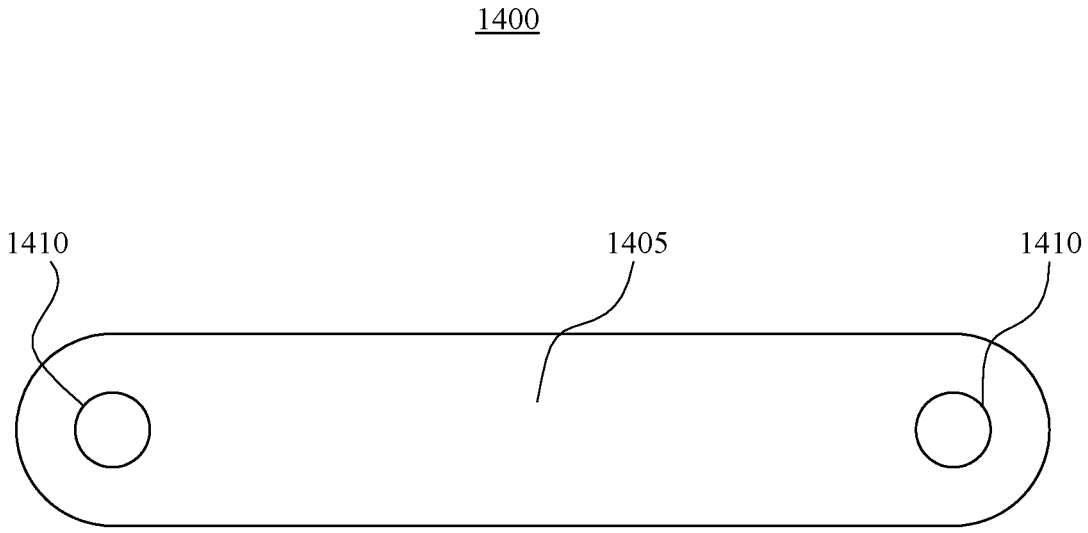

FIG. 14C

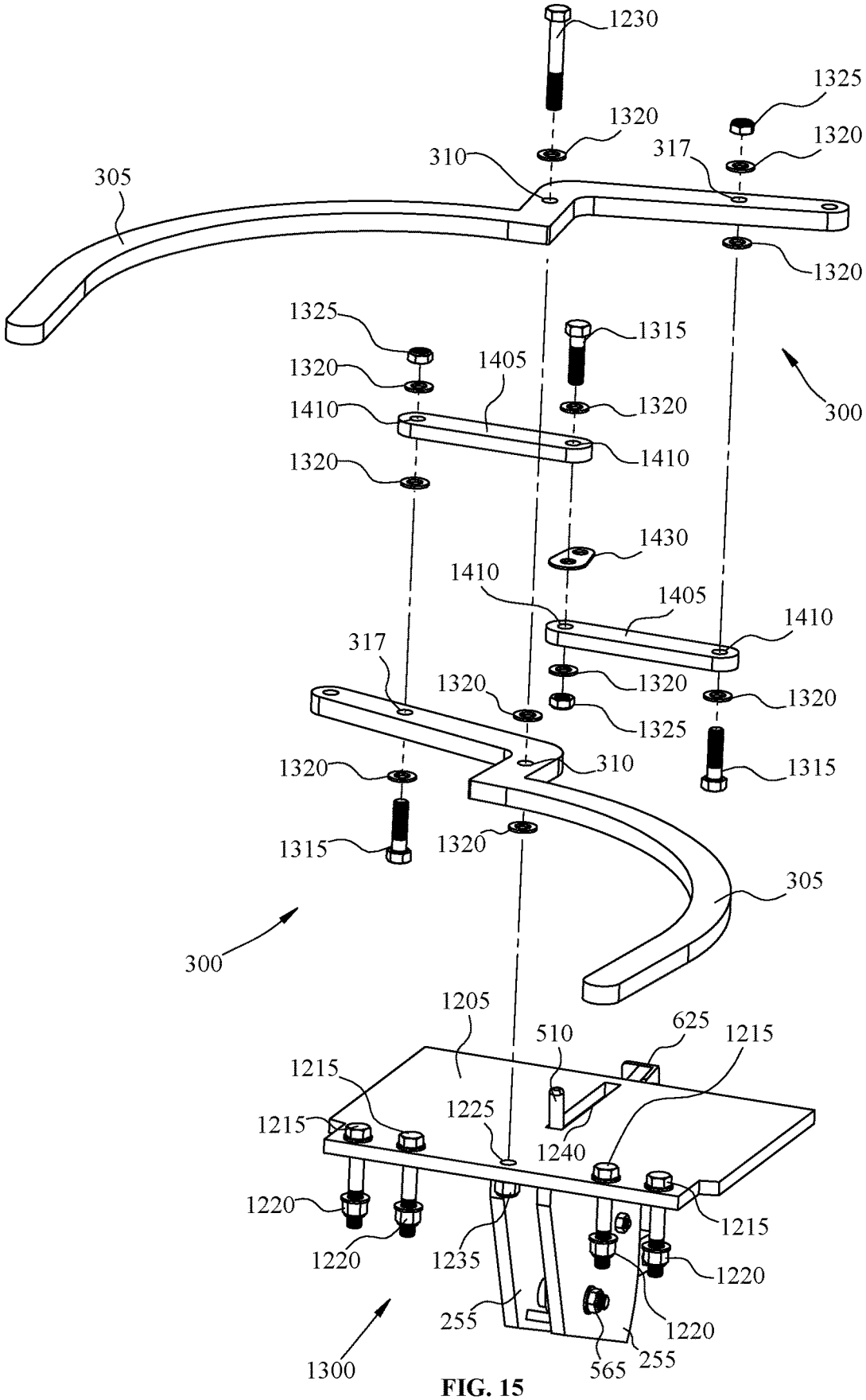
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FIG. 15

CLASPING STABILITY DEVICE AND CLASPING STABILIZED HAND TRUCK

BACKGROUND OF THE INVENTION

[0001] A hand truck is used to assist a human operator in moving material from one location to another. Hand trucks are particularly useful when the size, shape, or weight of the material make it difficult for the human operator to move it by hand. There are several different types of hand trucks in common use, including, for example, commercial hand trucks, bread tray hand trucks, pail hand trucks, pallet hand trucks, and pry lever hand trucks. Conventional hand trucks typically include one or more handles, a wheeled frame, and a front-facing nose plate that is used to support material placed thereon. The nose plate is typically angled slightly down to assist in loading the material onto the nose plate. The human operator will typically position the edge of the nose plate near the edge of the object, use a foot to push the bottom portion of the hand truck forward to wedge the nose plate under the material while simultaneously using a hand to pull the material backward onto the nose plate. Once the nose plate is positioned under the material, the human operator typically places one hand on the handle of the hand truck and the other hand on the material to stabilize it while the human operator uses a foot to break the hand truck backwards toward the human operator. In doing so, the nose plate is angled up such that the material is supported at least partially on one side by the wheeled frame and at least partially by the nose plate. The human operator then uses the one or more handles to wheel the hand truck and material to the destination location.

BRIEF SUMMARY OF THE INVENTION

[0002] According to one aspect of one or more embodiments of the present invention, a clasping stability device includes a pair of clasping arms each having a clasping portion, a pivoting attachment portion, and a rotating attachment portion, a base plate assembly having a base plate, a plurality of actuator travel positioner receivers disposed on top side of the base plate, and a plurality of pedal mounting plates disposed on a bottom side of the base plate, an actuator assembly having an actuator plate and a plurality of actuator travel positioners attached to a bottom side of the actuator plate, a pedal arm disposed in between the pedal mounting plates having an engagement portion, a pivot attachment portion, an index latch track, and an actuating portion, and a pedal latch disposed in between the pedal mounting plates having a release portion, a pivot attachment portion, and an index latch. The clasping arms are controllably closed by pushing the engagement portion of the pedal arm causing the pedal arm to travel such that the actuating portion of the pedal arm disposed within a cutout of the actuator plate causes the actuator plate assembly to travel in the actuator travel positioner receivers toward a rear of the base plate. The travel of the actuator plate assembly causes the rotating attachment portion of the clasping arms to travel within arcuate travel cutouts in the actuator plate while the pivot attachment portion of the clasping arms pivot causing the clasping arms to close. Upon release of the engagement portion the index latch engages the index latch track to stably retain a degree of closure of the clasping arms.

[0003] According to one aspect of one or more embodiments of the present invention, a clasping stabilized hand truck includes a hand truck having a plurality of longitudinal support members, and a clasping stability device removably attached to the hand truck by a plurality of clamping assemblies. Each clamping assembly includes a front member having a radiused portion and a rear member having a radiused portion. The front member is removably attached to the rear member such that the radiused portions secure the clasping stability device to the longitudinal support members of the hand truck. The clasping stability device includes a pair of clasping arms each having a clasping portion, a pivoting attachment portion, and a rotating attachment portion, a base plate assembly having a base plate, a plurality of actuator travel positioner receivers disposed on top side of the base plate, and a plurality of pedal mounting plates disposed on a bottom side of the base plate, an actuator assembly having an actuator plate and a plurality of actuator travel positioners attached to a bottom side of the actuator plate, a pedal arm disposed in between the pedal mounting plates having an engagement portion, a pivot attachment portion, an index latch track, and an actuating portion, and a pedal latch disposed in between the pedal mounting plates having a release portion, a pivot attachment portion, and an index latch. The clasping arms are controllably closed by pushing the engagement portion of the pedal arm causing the pedal arm to travel such that the actuating portion of the pedal arm disposed within a cutout of the actuator plate causes the actuator plate assembly to travel in the actuator travel positioner receivers toward a rear of the base plate. The travel of the actuator plate assembly causes the rotating attachment portion of the clasping arms to travel within arcuate travel cutouts in the actuator plate while the pivot attachment portion of the clasping arms pivot causing the clasping arms to close. Upon release of the engagement portion the index latch engages the index latch track to stably retain a degree of closure of the clasping arms.

[0004] According to one aspect of one or more embodiments of the present invention, a clasping stabilized hand truck includes a hand truck having a plurality of transverse support members, and a clasping stability device removably attached to the hand truck by a plurality of mounting bolts that secure the clasping stability device to the transverse support member of the hand truck. The clasping stability device includes a pair of clasping arms each having a clasping portion, a pivoting attachment portion, and a rotating attachment portion, a base plate assembly having a base plate, a plurality of actuator travel positioner receivers disposed on top side of the base plate, and a plurality of pedal mounting plates disposed on a bottom side of the base plate, an actuator assembly having an actuator plate and a plurality of actuator travel positioners attached to a bottom side of the actuator plate, a pedal arm disposed in between the pedal mounting plates having an engagement portion, a pivot attachment portion, an index latch track, and an actuating portion, and a pedal latch disposed in between the pedal mounting plates having a release portion, a pivot attachment portion, and an index latch. The clasping arms are controllably closed by pushing the engagement portion of the pedal arm causing the pedal arm to travel such that the actuating portion of the pedal arm disposed within a cutout of the actuator plate causes the actuator plate assembly to travel in the actuator travel positioner receivers toward a rear of the base plate. The travel of the actuator plate assembly causes the rotating attachment portion of the clasping arms to travel within arcuate travel cutouts in the actuator plate

while the pivot attachment portion of the clasping arms pivot causing the clasping arms to close. Upon release of the engagement portion the index latch engages the index latch track to stably retain a degree of closure of the clasping arms.

[0005] Other aspects of the present invention will be apparent from the following description and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. **1**A shows a front facing top-side perspective view of a clasping stability device in accordance with one or more embodiments of the present invention.

[0007] FIG. **1**B shows a rear facing top-side perspective view of the clasping stability device in accordance with one or more embodiments of the present invention.

[0008] FIG. **1**C shows a left-side elevation view of the clasping stability device in accordance with one or more embodiments of the present invention.

[0009] FIG. **1**D shows a right-side elevation view of the clasping stability device in accordance with one or more embodiments of the present invention.

[0010] FIG. **1**E shows a front elevation view of the clasping stability device in accordance with one or more embodiments of the present invention.

[0011] FIG. **1**F shows a rear elevation view of the clasping stability device in accordance with one or more embodiments of the present invention.

[0012] FIG. **2**A shows a top plan view of a clasping stability device in an opened state in accordance with one or more embodiments of the present invention.

[0013] FIG. **2**B shows a bottom plan view of the clasping stability device in the opened state in accordance with one or more embodiments of the present invention.

[0014] FIG. **2**C shows a top plan view of the clasping stability device in a closed state in accordance with one or more embodiments of the present invention.

[0015] FIG. **2**D shows a bottom plan view of the clasping stability device in the closed state in accordance with one or more embodiments of the present invention.

[0016] FIG. **2**E shows a rear facing top-side perspective view of the clasping stability device in the opened state in accordance with one or more embodiments of the present invention.

[0017] FIG. **2**F shows a rear facing top-side perspective view of the clasping stability device in the closed state in accordance with one or more embodiments of the present invention.

[0018] FIG. **2**G shows a rear facing bottom-side perspective view of the clasping stability device in the opened state in accordance with one or more embodiments of the present invention.

[0019] FIG. **211** shows a rear facing bottom-side perspective view of the clasping stability device in the closed state in accordance with one or more embodiments of the present invention.

[0020] FIG. **3**A shows a front facing top-side perspective view of a clasping stabilized hand truck in accordance with one or more embodiments of the present invention.

[0021] FIG. **3**B shows a rear facing top-side perspective view of the clasping stabilized hand truck in accordance with one or more embodiments of the present invention.

[0022] FIG. **3**C shows a top plan view of the clasping stabilized hand truck in an opened state in accordance with one or more embodiments of the present invention.

[0023] FIG. **3**D shows a top plan view of the clasping stabilized hand truck in a closed state in accordance with one or more embodiments of the present invention.

[0024] FIG. **4**A shows a front facing top-side perspective view of a clasping stabilized hand truck in an opened state showing an environment of use in accordance with one or more embodiments of the present invention.

[0025] FIG. **4**B shows a front facing top-side perspective view of the clasping stabilized hand truck in a closed state showing an environment of use in accordance with one or more embodiments of the present invention.

[0026] FIG. **5**A shows a top plan view of a base plate assembly of a clasping stability device in accordance with one or more embodiments of the present invention.

[0027] FIG. **5**B shows a bottom plan view of the base plate assembly of the clasping stability device in accordance with one or more embodiments of the present invention.

[0028] FIG. **5**C shows a top plan view of a clasping arm of the clasping stability device in accordance with one or more embodiments of the present invention.

[0029] FIG. **5**D shows a top plan view of an actuator plate of the clasping stability device in accordance with one or more embodiments of the present invention.

[0030] FIG. **5**E shows a right-side elevation view of a pedal arm of the clasping stability device in accordance with one or more embodiments of the present invention.

[0031] FIG. **5**F shows a right-side elevation view of a pedal latch of the clasping stability device in accordance with one or more embodiments of the present invention.

[0032] FIG. **6**A shows assembly of a portion of a clasping stability device in accordance with one or more embodiments of the present invention.

[0033] FIG. **6**B shows assembly of a portion of the clasping stability device in accordance with one or more embodiments of the present invention.

[0034] FIG. **6**C shows assembly of a portion of the clasping stability device in accordance with one or more embodiments of the present invention.

[0035] FIG. **7**A shows a front facing top-side perspective view of a clasping stability device in accordance with one or more embodiments of the present invention.

[0036] FIG. **7**B shows a rear facing top-side perspective view of the clasping stability device in accordance with one or more embodiments of the present invention.

[0037] FIG. **7**C shows a top plan view of a clasping stability device in an opened state in accordance with one or more embodiments of the present invention.

[0038] FIG. **7**D shows a bottom plan view of the clasping stability device in the opened state in accordance with one or more embodiments of the present invention.

[0039] FIG. **8**A shows a front facing top-side perspective view of a clasping stabilized hand truck in an opened state in accordance with one or more embodiments of the present invention.

[0040] FIG. **8**B shows a front facing top-side perspective view of the clasping stabilized hand truck in a closed state in accordance with one or more embodiments of the present invention.

[0041] FIG. **8**C shows a detail view of the attachment of the clasping stability device to the hand truck in accordance with one or more embodiments of the present invention.

[0042] FIG. **9**A shows a top plan view of a base plate of a clasping stability device in accordance with one or more embodiments of the present invention.

[0043] FIG. **9**B shows a bottom plan view of the base plate of the clasping stability device in accordance with one or more embodiments of the present invention.

[0044] FIG. **10**A shows a front facing top-side perspective view of a clasping stability device in accordance with one or more embodiments of the present invention.

[0045] FIG. **10**B shows a rear facing top-side perspective view of the clasping stability device in accordance with one or more embodiments of the present invention.

[0046] FIG. **10**C shows a left-side elevation view of the clasping stability device in accordance with one or more embodiments of the present invention.

[0047] FIG. **10**D shows a right-side elevation view of the clasping stability device in accordance with one or more embodiments of the present invention.

[0048] FIG. **10**E shows a front elevation view of the clasping stability device in accordance with one or more embodiments of the present invention.

[0049] FIG. **10**F shows a rear elevation view of the clasping stability device in accordance with one or more embodiments of the present invention.

[0050] FIG. **11**A shows a top plan view of a clasping stability device in an opened state in accordance with one or more embodiments of the present invention.

[0051] FIG. **11**B shows a bottom plan view of the clasping stability device in the opened state in accordance with one or more embodiments of the present invention.

[0052] FIG. **11**C shows a top plan view of the clasping stability device in a closed state in accordance with one or more embodiments of the present invention.

[0053] FIG. **11**D shows a bottom plan view of the clasping stability device in the closed state in accordance with one or more embodiments of the present invention.

[0054] FIG. **11**E shows a rear facing top-side perspective view of the clasping stability device in the opened state in accordance with one or more embodiments of the present invention.

[0055] FIG. **11**F shows a rear facing top-side perspective view of the clasping stability device in the closed state in accordance with one or more embodiments of the present invention.

[0056] FIG. **11**G shows a rear facing bottom-side perspective view of the clasping stability device in the opened state in accordance with one or more embodiments of the present invention.

[0057] FIG. **1111** shows a rear facing bottom-side perspective view of the clasping stability device in the closed state in accordance with one or more embodiments of the present invention.

[0058] FIG. **12**A shows a front facing top-side perspective view of a clasping stabilized hand truck in accordance with one or more embodiments of the present invention.

[0059] FIG. **12**B shows a rear facing top-side perspective view of the clasping stabilized hand truck in accordance with one or more embodiments of the present invention.

[0060] FIG. **12**C shows a top plan view of the clasping stabilized hand truck in an opened state in accordance with one or more embodiments of the present invention.

[0061] FIG. **12**D shows a top plan view of the clasping stabilized hand truck in a closed state in accordance with one or more embodiments of the present invention.

[0062] FIG. **13**A shows a front facing top-side perspective view of a clasping stabilized hand truck in an opened state showing an environment of use in accordance with one or more embodiments of the present invention.

[0063] FIG. **13**B shows a front facing top-side perspective view of the clasping stabilized hand truck in a closed state showing an environment of use in accordance with one or more embodiments of the present invention.

[0064] FIG. **14**A shows a top plan view of a base plate of a clasping stability device in accordance with one or more embodiments of the present invention.

[0065] FIG. **14**B shows a bottom plan view of the base plate of the clasping stability device in accordance with one or more embodiments of the present invention.

[0066] FIG. **14**C shows a top plan view of an actuator plate of the clasping stability device in accordance with one or more embodiments of the present invention.

[0067] FIG. **15** shows assembly of a portion of a clasping stability device in accordance with one or more embodiments of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0068] One or more embodiments of the present invention are described in detail with reference to the accompanying figures. For consistency, like elements in the various figures are denoted by like reference numerals. In the following detailed description of the present invention, specific details are described to provide a thorough understanding of the present invention. In other instances, aspects that are well-known to those of ordinary skill in the art are not described to avoid obscuring the description of the present invention.

[0069] An inherent problem with conventional hand trucks is that they lack stability with respect to the material they transport. Depending on its size, shape, and weight, the material may become unstable and move or even fall off the hand truck. The problem may be exacerbated by ground that is not level, obstructions in the path of travel, and shifting weight caused by movement of the hand truck during transport. This presents a risk to the operator and may give rise to more serious safety and environmental concerns when the material includes chemical, flammable, or hazardous materials.

[0070] The nose plate of a conventional hand truck is typically smaller in at least one dimension than the material it is used to transport. As such, the nose plate is only capable of supporting a portion of the material. The practical consequence of this is that the human operator must load the material and tilt the hand truck backwards to use the wheeled frame to provide additional support to the material during transport. Specifically, the human operator must position the edge of the nose plate of the hand truck near the edge of the material, push the hand truck forward with their foot to wedge the nose plate under the material, while simultaneously pulling the material towards to the rear of the nose plate with their hand. Once the nose plate is properly positioned under the material, the human operator must then tilt the hand truck backwards using one hand and one foot while simultaneously supporting the material with the other hand until it is at least partially supported on one side by the wheeled frame of the hand truck in the tilted-back position. Because the configuration and shape of the wheeled frame varies from hand truck to hand truck, the degree of support that the wheeled frame provides varies from design to design and also varies with the size, shape, and weight of the material. Once the hand truck is in the titled-back position,

the material is at least partially supported by the wheeled frame and the nose plate. The human operator may then attempt to transport the material to the desired location. However, there is little to no support for the material on at least four sides, and the material is prone to fall off the hand truck in any of the unsupported directions during transport.

[0071] In an effort to stabilize the material, various straps or ties may be used to secure the material to the hand truck. However, the use of straps or ties require the human operator to load the material as described above, then set the hand truck down on the nose plate, walk around to the front of the hand truck, and manually strap or tie down the material to the hand truck. The fact that the human operator cannot strap or tie down the material from the rear of the hand truck is problematic because some materials become unstable merely from setting the hand truck down, where the nose plate is typically angled slightly down. As such, straps and ties are not effective for materials that have a size, shape, or weight, such as, for example, large and heavy cylindrical-shaped materials, that make it difficult to secure to the hand truck from the front of the hand truck. Notwithstanding, the use of straps or ties slows down the transport operation considerably and increases costs.

[0072] Accordingly, in one or more embodiments of the present invention, a clasping stability device and clasping stabilized hand truck provide a stable material handling platform safely operable by a single human operator. The operator may safely and securely load, transport, and unload material entirely from the rear of the hand truck, without having to use straps or ties. The clasping stability device may assist in loading material onto the hand truck at the source location, stabilize the material during transport, and assist in unloading the material from the hand truck at the destination location. The clasping stability device includes a clasping mechanism that may assist in pulling material toward the rear of the nose plate of the hand truck, and onto the nose plate, while the clasping mechanism is closing. The clasping mechanism may lock into place once the clasping arms are closed to a sufficient degree to secure the material. The locking mechanism may be automatically engaged upon release of the engagement portion of the pedal arm of the clasping stability device. The locking mechanism may remain locked, stabilizing the material on the hand truck, during transport until the release portion of the pedal latch of the clasping stability device is engaged. The clasping mechanism may assist in releasing material toward the front of the nose plate while the clasping mechanism is opening. Advantageously, the clasping stability device provides a single stroke clasping mechanism that is engaged entirely from the rear of the hand truck and that automatically locks into place to secure the material to the hand truck. In addition, the clasping stability device provides a single stroke release mechanism that is also engaged entirely from the rear of the hand truck. The ability of a single human operator to safely load, transport, and unload material is substantially enhanced, and the time required is minimized. Moreover, the clasping stability device and clasping stabilized hand truck improve the safety of transporting chemical, flammable, and hazardous materials and well as materials that have a size, shape, or weight that is problematic for conventional hand trucks.

[0073] FIG. **1**A shows a front facing top-side perspective view of a clasping stability device **100** in accordance with one or more embodiments of the present invention. Clasping stability device **100** may include a secure clasping mechanism that may be used to stabilize material on a hand truck (not shown). Clasping stability device **100** may include a base plate assembly **200** and a pair of clasping arm assemblies **300** removably attached to base plate assembly **200**. Continuing, FIG. **1**B shows a rear facing top-side perspective view of clasping stability device **100** in accordance with one or more embodiments of the present invention. Clasping stability device **100** may also include an actuator assembly **400** that facilitates the clasping and release mechanisms of clasping arm assemblies **300**, a pedal arm assembly **500** that may controllably engage the clasping mechanism of clasping arms **300**, and a pedal latch assembly **600** that may engage the locking mechanism or release mechanism of clasping arm assemblies **300**. In the embodiment depicted, clasping stability device **100** may include a plurality of clamping assemblies **700** removably attached to base plate assembly **200**. Clamping assemblies **700** may be used to removably attach clasping stability device **100** to a hand truck (not shown). Base plate assembly **200** may include a base plate **205**, a plurality of actuator travel positioner receivers **270** disposed on a top side of base plate **205**, and a plurality of pedal mounting plates **255** disposed on a bottom side of base plate **205**.

[0074] Continuing, FIG. **1**C shows a left-side elevation view of clasping stability device **100** in accordance with one or more embodiments of the present invention. As shown in this view, pedal arm assembly **500** may be disposed below pedal latch assembly **600**, to enable the use of the human operator's foot to engage pedal arm **505** from the rear of a hand truck (not shown). Continuing, FIG. **1**D shows a right-side elevation view of the clasping stability device **100** in accordance with one or more embodiments of the present invention. Pedal arm **505** may include an actuating portion **510** that extends through a travel cutout (not shown) of base plate **205** and a cutout (not shown) of actuator plate **405**, as described in more detail herein. When pedal arm **505** is engaged by pushing down on foot pedal **540**, actuating portion **510** moves toward the rear of base plate **205**, causing actuator assembly **400** to travel (not shown) towards the rear of base plate **205**, and thereby causing clasping portions **305** of clasping arms **300** to close, as described in more detail herein. Upon release of foot pedal **540** of pedal arm **505**, pedal arm **505** will be stably locked into place by pedal latch **605**, securing the corresponding degree of closure of clasping arms **300**. As shown in this view, an upper clasping arm **300** may be disposed above actuator plate **405** and a lower clasping arm **300** may be disposed below actuator plate **405**, but above base plate **205**. Continuing, FIG. **1**E shows a front elevation view of clasping stability device **100** and FIG. **1**F shows a rear elevation view of clasping stability device **100** in accordance with one or more embodiments of the present invention.

[0075] FIG. **2**A shows a top plan view of a clasping stability device **100** in an opened state in accordance with one or more embodiments of the present invention. Base plate assembly **200** may include base plate **205** and a plurality of actuator travel positioner receivers **270** disposed on a top side of base plate **205**. Each actuator travel positioner receiver **270** may include a travel cutout **280** aligned with a corresponding travel cutout **235** formed in base plate **205**. Base plate **205** may include a travel cutout **245** for travel of actuating portion **510** of pedal arm **505** and

an arcuate travel cutout **240** for travel of lower clasping arm **300** (more specifically bolt **320** and nut **340** thereof).

[0076] Actuator assembly **400** may include actuator plate **405** and a plurality of actuator travel positioners (**435**, not shown in this view) attached to a bottom side of actuator plate **405** (via the bottom side of base plate **205**). Each actuator travel positioner (**435**, not shown in this view) may be attached to actuator plate **405** by one or more bolts **430** that extend through a top side of actuator plate **405** and the actuator travel positioner (**435**, not shown in this view) itself, that is secured on a bottom side of base plate **205** by a washer (**440**, not shown in this view) and one or more nuts (**445**, not shown in this view) that prevent each actuator travel positioner (**435**, not shown in this view) from coming out of its actuator travel positioner receiver **270**. The actuator travel positioners (**435**, not shown in this view) of actuator assembly **400** are capable of travel within actuator travel positioner receivers **270** of base plate assembly **200**, as described in more detail herein. Actuator plate **405** may also include a cutout (**425**, not shown in this view) to receive actuating portion **510** of the pedal arm (**505**, not shown in this view).

[0077] Each clasping arm assembly **300** may include a clasping portion **305**, a pivoting attachment portion (**310**, not shown in this view, corresponding to location of bolt **345** or **347**), a rotating attachment potion (**315**, not shown in this view, corresponding to location of bolt **320**), and various bolts and nuts. Pivoting attachment portion (**310**, not shown in this view) of upper clasping arm **300** may be removably attached to a front portion of base plate **205** by bolt **345**, but remain capable of pivoting. Similarly, pivoting attachment portion (**310**, not shown in this view) of lower clasping arm **300** may be removably attached to a front portion of base plate **205** by bolt **347**, but remain capable of pivoting. Rotating attachment portion (**315**, not shown in this view) of upper clasping arm **300** may be removably attached to a top side of actuator plate **405** by bolt **320** through an arcuate travel cutout (**420**, not shown in this view) formed in actuator plate **405**. The rotating attachment portion (**315**, not shown in this view) of lower clasping arm **300** may be removably attached to a bottom side of actuator plate **405** by bolt **320** that extends through the arcuate travel cutout **420** of actuator plate **405** and through the arcuate travel cutout **240** of base plate **205**. In the opened state depicted, a plurality of springs **285** may be used to bias actuator plate **405** toward the front of base plate **205** and, when locked into place, clasping arms **300** may remain in the open position, ready for engagement with material.

[0078] Arcuate travel cutout **240** of base plate **205** permits the compaction of base plate assembly **200**, clasping arms assembly **300**, and actuator assembly **400**, to reduce torsional forces and friction between moving parts. However, in certain embodiments, specifically those with lighter loads, actuator assembly **400** could be raised off base plate assembly **205** such that no cutout **240** would be required in base plate **205**.

[0079] Continuing, FIG. **2**B shows a bottom plan view of clasping stability device **100** in the opened state in accordance with one or more embodiments of the present invention. As shown in this view, a plurality of washers **440** and nuts **445** may be used to secure actuator travel positioners (**435**, not shown in this view) to a bottom side of the actuator plate (**405**, not shown in this view), from a bottom side of travel cutout **235** formed in base plate **205**, maintaining the actuator travel positioners (**435**, not shown in this view) of actuator assembly **400** within the actuator travel positioner receivers (**270**, not shown in this view) of base plate **205**, while the actuator travel positioners (**435**, not shown in this view) remain capable of travel between the front and rear of base plate **205**. In the view depicted, nut **340** secures bolt **320** of lower clasping arm **300** to actuator plate **405**, positioned such that it may travel in both the arcuate travel cutout (**420**, not shown in this view) of actuator plate **405** and the arcuate travel cutout **240** formed in base plate **205**. In this way, arcuate travel cutout **240** of base plate **205** permits travel of bolt **320** and nut **340** of lower clasping arm **300** while the clasping mechanism or release mechanism is engaged. Also shown in this view, the plurality of pedal mounting plates **255** attached to the bottom side of base plate **205**.

[0080] Continuing, FIG. **2**C shows a top plan view of clasping stability device **100** in a closed state in accordance with one or more embodiments of the present invention. When a human operator wishes to engage the clasping mechanism to close on material (not shown), the operator may depress foot pad **540** of the pedal arm (**505**, not shown in this view), where the extent to which it is depressed corresponds to the extent to which the clasping arms **300** close. The depression of foot pad **540** cases the pedal arm (**505**, not shown in this view) to pivot, such that actuating portion **510** of the pedal arm (**505**, not shown in this view) travels toward the rear of base plate **205**. The travel of actuating portion **510**, disposed within the cutout (**425**, not shown in this view) of actuator plate **405**, causes actuator assembly **400** to move toward the rear of base plate **205**. As actuator assembly **400** travels toward the rear, the rotating portions of clasping arms **300** rotate in their respective arcuate travel cutout **420** formed in actuator plate **405**. As the rotating attachment portions of clasping arms **300** rotate, the pivoting attachment portions of clasping arms **300** pivot, such that clasping portions **305** of clasping arms **300** begin to close. While not shown in this view, when the human operator releases foot pedal **540**, pedal latch **605** automatically latches onto pedal arm **505**, locking clasping arms **300** in their present degree of closure. In this way, clasping stability device **100** may provide stable clasping with any desired amount of closure from fully open to fully closed, thereby accommodating a large variety of materials.

[0081] In certain embodiments, clasping stability device **100** may be removably attached to existing hand trucks (not shown). A plurality of clamping assemblies **700** may be used to removably attach clasping stability device **100** to longitudinal support members (not shown) of the hand truck (not shown) that are typically tubular in shape. To accommodate variation in the space between longitudinal support members (not shown) of hand trucks (not shown), each clamping assembly **700** may include a rear mounting hole **720** to securely attach clamping assembly **700** to base plate **205** and an arcuate adjustment mounting hole **725** that permits the positioning of each clamping assembly **700** to fit a particular hand truck (not shown). In other embodiments, clasping stability device **100** may be attached to a hand truck (not shown) during the original equipment manufacturer ("OEM") build of the hand truck (not shown).

[0082] Continuing, FIG. **2**D shows a bottom plan view of clasping stability device **100** in the closed state in accordance with one or more embodiments of the present invention. The travel of actuator assembly **400** toward the rear of

base plate **205**, is shown by the travel of washers **440** and nuts **445** of the actuator travel positioners (**435**, not shown in this view) that have now moved toward the rear of base plate **205** in travel cutout **280** of actuator plate **405** and corresponding travel cutout **235** of base plate **205**. In addition, the travel of nut **340** of lower clasping arm **300** within the arcuate travel cutout **240** of base plate **205** is shown.

[0083] Continuing, FIG. **2**E shows a rear facing top-side perspective view of clasping stability device **100** in the opened state in accordance with one or more embodiments of the present invention. A portion of pedal arm assembly **500** and pedal latch assembly **600** may be disposed in between a pair of pedal mounting plates **255** disposed on a bottom side of base plate **205**. For purposes of illustration only, the right-side pedal mounting plate **255** is drawn transparent to more clearly show the interaction of pedal arm assembly **500** and pedal latch assembly **600**. Pedal arm assembly **500** may include a pedal arm **505** having an engagement portion **520**, a pivoting attachment portion (**535**, not shown in this view, corresponding to location of bolt **555**), an index latch track **530**, actuating portion **510**, and various nuts and bolts. Pedal latch assembly **600** may include a pedal latch **605** having a release portion (**610**, not shown in this view), a pivoting attachment portion (**615**, not shown in this view, corresponding to location of bolt **640**), an index latch **620**, and various nuts and bolts. In the opened state, actuating portion **510** of pedal arm **505** as well as actuator assembly **400** are positioned towards the front of base plate **205**, nearest clasping portions **305**. Index latch track **530** of pedal arm **505** may include an arcuate track of stairs disposed about the pivot point of pedal arm **505**. Index latch **620** of pedal latch **605** may have a complimentary shape to that of index latch track **530**, such that index latch **620** may engage each stair of index latch track **530** and securely maintain the position of pedal arm **505**.

[0084] Continuing, FIG. **2**F shows a rear facing top-side perspective view of clasping stability device **100** in the closed state in accordance with one or more embodiments of the present invention. When a human operator wishes to engage the clasping mechanism of clasping stability device **100**, the operator may depress foot pedal **540** of pedal arm **505**, causing pedal arm **505** to pivot about its pivoting attachment point (**535**, not shown in this view, corresponding to location of bolt **555**) such that actuating portion **510** of pedal arm **505** and actuator assembly **400** that it is disposed through, to travel toward the rear of base plate **205**, thereby causing clasping arms **300** to close in a corresponding amount. As foot pedal **540** is being depressed, index latch **620** travels through successive stairs of index latch track **530**, until such time as the operator disengages foot pedal **540**. At that point, index latch **620** securely maintains its position in index latch track **530**, maintaining the degree of closure of clasping arms **300**. Index latch **620** may have a complimentary shape to that of index latch track **530**, such that when index latch **620** engages index latch track **530**, index latch **620** is capable of maintaining the current position of clasping arms **300**. Showing a different angle, FIG. **2**G shows a rear facing bottom-side perspective view of clasping stability device **100** in the opened state and FIG. **211** shows a rear facing bottom-side perspective view of clasping stability device **100** in the closed state in accordance with one or more embodiments of the present invention.

[0085] FIG. **3**A shows a front facing top-side perspective view of a clasping stabilized hand truck **800** in accordance with one or more embodiments of the present invention. Clasping stabilized hand truck **800** may include one or more handles **805**, a plurality of longitudinal support members **810**, that are typically tubular in shape, a plurality of transverse support members **812**, a nose plate **815**, and a plurality of wheels **820**. The plurality of longitudinal support members **810** and transverse support members **812** form the wheeled frame of hand truck **800**. A pair of clamping assemblies **700** may be used to secure clasping stability device **100** to a pair of longitudinal support members **810** of hand truck **800**, at a desired height along the length of longitudinal support members **810**. In this way, clasping stability device **100** may be disposed at a suitable height to accommodate the size or shape of the material (not shown) intended to be transported. Continuing, FIG. **3**B shows a rear facing top-side perspective view of clasping stabilized hand truck **800** in accordance with one or more embodiments of the present invention. Because clasping stability device **100** includes controls disposed exclusively at the rear of device **100**, a human operator (not shown) may fully operate hand truck **800** from the rear, without having to walk around to the front, or use straps (not shown), or ties (not shown). Continuing, FIG. **3**C shows a top plan view of clasping stabilized hand truck **800** in an opened state and FIG. **3**D shows a top plan view of clasping stabilized hand truck **800** in a closed state in accordance with one or more embodiments of the present invention.

[0086] FIG. **4**A shows a front facing top-side perspective view of a clasping stabilized hand truck **800** in an opened state showing an environment of use in accordance with one or more embodiments of the present invention. Hand trucks are commonly used to transport tanks and containers that have a substantially cylindrical shape. These tanks and containers may vary in size, shape, and weight, and often present stability and safety problems for transport. In one or more embodiments of the present invention, a clasping stabilized hand truck **800** may safely transport tanks and containers in a safe and secure manner that protects the safety of the operator as well as the environment. In operative use, the operator may wheel hand truck **800** into position (not shown) in front of a large container **850**, with one or more hands on the one or more handles **805**. Hand truck **800** may be positioned in front of container **850** and then, using a foot, the operator may wedge the nose plate **815** under container **850**, while pushing hand truck **800** forward. Continuing, FIG. **4**B shows a front facing top-side perspective view of clasping stabilized hand truck **800** in a closed state showing an environment of use in accordance with one or more embodiments of the present invention. Once container **850** is well positioned with respect to nose plate **815**, the operator may use a foot to engage foot pedal **540** to close the clasping portion **305** of clasping arms **300** around container **850**. Once sufficient closure is achieved, the operator may remove the foot from foot pedal **540**, and pedal latch **605** may automatically latch pedal arm **505** into place, securing the degree of closure of clasping arms **300** and providing stable support for container **850**. Container **350** is now substantially supported such that it may be stably and securely transported from source to destination. Advantageously, the operator may perform all of these operations

from the rear of hand truck **800**, without having to walk to the front of hand truck **800**, and without the use of straps (not shown) or ties (not shown).

[0087] FIG. **5**A shows a top plan view of a base plate assembly **200** of a clasping stability device **100** in accordance with one or more embodiments of the present invention. Base plate assembly **200** includes base plate **205**, a plurality of actuator travel positioner receivers **270** disposed on a top side of base plate **205**, and a plurality of pedal mounting plates (**255**, not shown in this view) disposed on a bottom side of base plate **205**. Base plate **205** may also include a flared portion **210** to support clamping assemblies (**700**, not shown in this view). Base plate **205** may include, for each clamping assembly (e.g., **700**) a rear mounting hole **215** and an adjustment mounting hole **220**. Base plate **205** may also include a plurality of spring mounting posts **225**, and a plurality of pivoting attachment holes **230** for attachment of the clasping arms (e.g., **300**). The plurality of actuator travel positioner receivers **270** may include a trave cutout **280** that extends through to a corresponding travel cutout **235** formed in base plate **205**. Base plate **205** may include an arcuate travel cutout **240** for a lower clasping arm (e.g., **300**) and a travel cutout for the actuating portion (e.g., **510**) of the pedal arm (e.g., **500**). Continuing, FIG. **5**B shows a bottom plan view of the base plate assembly **200** of the clasping stability device **100** in accordance with one or more embodiments of the present invention. Base plate **205** includes a plurality of pedal mounting plates **255** disposed on the bottom-side of base plate **205**. In certain embodiments, base plate **205** may be composed of stainless steel. In other embodiments, base plate **205** may be composed of carbon steel. In still other embodiments, base plate **205** may be composed of aluminum. In still other embodiments, base plate **205** may be composed of any other metal or alloy. In still other embodiments, base plate **205** may be composed of plastic, composites, or any other lightweight material. One of ordinary skill in the art will recognize that the composition of material used to form base plate **205** may vary in accordance with one or more embodiments of the present invention.

[0088] FIG. **5**C shows a top plan view of a clasping arm **300** of a clasping stability device **100** in accordance with one or more embodiments of the present invention. Clasping arm assembly **300** includes a clasping portion **305**, a pivoting attachment portion **310**, a rotating attachment portion **315**, an optional rotating attachment portion **317**. Each of pivoting attachment portion **310**, rotating attachment portion **315**, and optional rotating attachment portion **317** may comprise a corresponding mounting hole for assembly. Clasping arm assembly **300** may also include bolts, washers, and nuts required for assembly that are not shown in this view. In certain embodiments, clasping arm **300** may be composed of stainless steel. In other embodiments, clasping arm **300** may be composed of carbon steel. In still other embodiments, clasping arm **300** may be composed of aluminum. In still other embodiments, clasping arm **300** may be composed of any other metal or alloy. In still other embodiments, clasping arm **300** may be composed of plastic, composites, or any other lightweight material. One of ordinary skill in the art will recognize that the composition of material used to form clasping arm **300** may vary in accordance with one or more embodiments of the present invention.

[0089] FIG. **5**D shows a top plan view of an actuator plate **405** of the clasping stability device **100** in accordance with one or more embodiments of the present invention. Actuator plate **405** may include a plurality of mounting holes **410** for one or more actuator travel positioners (**435**, not shown), a plurality of mounting holes **415** for attachment of a bias spring (**285**, not shown), a plurality of arcuate travel cutouts **420** for travel of the clasping arms (**300**, not shown), and a cutout **425** for the actuating portion (**510**, not shown) of the pedal arm (**500**, not shown). In certain embodiments, actuator plate **405** may be composed of stainless steel. In other embodiments, actuator plate **405** may be composed of carbon steel. In still other embodiments, actuator plate **405** may be composed of aluminum. In still other embodiments, actuator plate **405** may be composed of any other metal or alloy. In still other embodiments, actuator plate **405** may be composed of plastic, composites, or any other lightweight material. One of ordinary skill in the art will recognize that the composition of material used to form actuator plate **405** may vary in accordance with one or more embodiments of the present invention.

[0090] Continuing, FIG. **5**E shows a right-side elevation view of a pedal arm **505** of the clasping stability device **100** in accordance with one or more embodiments of the present invention. Pedal arm **505** may include an engagement portion **520**, a pivot attachment portion **535** corresponding to a mounting hole, an index latch track **530**, and an actuating portion **510**. Index latch track **530** may include a plurality of stairs disposed in an arcuate pattern about the pivot point of pivoting attachment portion **535**. A foot pedal (**540**, not shown) may be removable attached to mounting hole **525** of pedal arm **505**, for operator use. In certain embodiments, pedal arm **505** may be composed of stainless steel. In other embodiments, pedal arm **505** may be composed of carbon steel. In still other embodiments, pedal arm **505** may be composed of aluminum. In still other embodiments, pedal arm **505** may be composed of any other metal or alloy. In still other embodiments, pedal arm **505** may be composed of plastic, composites, or any other lightweight material. One of ordinary skill in the art will recognize that the composition of material used to form a pedal arm **505** may vary in accordance with one or more embodiments of the present invention.

[0091] FIG. **5**F shows a right-side elevation view of a pedal latch **605** of the clasping stability device **100** in accordance with one or more embodiments of the present invention. Pedal latch **605** may include a release portion **610**, a pivot attachment portion **615** corresponding to a mounting hole, and an index latch **620**. Index latch **620** may have a complimentary shape to that of the index latch track (**530**, not shown) of the pedal arm (**505**, not shown). In certain embodiments, pedal latch **605** may be composed of stainless steel. In other embodiments, pedal latch **605** may be composed of carbon steel. In still other embodiments, pedal latch **605** may be composed of aluminum. In still other embodiments, pedal latch **605** may be composed of any other metal or alloy. In still other embodiments, pedal latch **605** may be composed of plastic, composites, or any other lightweight material. One of ordinary skill in the art will recognize that the composition of material used to form a pedal latch **605** may vary in accordance with one or more embodiments of the present invention.

[0092] One of ordinary skill in the art will recognize that one or more of the components of clasping stability device **100** may be scaled to create a clasping stability device suitable for any specific application in accordance with one

or more embodiments of the present invention. In addition, one of ordinary skill in the art will recognize that one or more components of clasping stability device **100** may be composed of alternative materials to achieve one or more goals of a specific application in accordance with one or more embodiments of the present invention. For example, certain components that come into contact with material may be composed of aluminum so as to minimize the risk of sparking when handling chemical, flammable, or hazardous materials.

[0093] FIG. **6**A shows assembly of a portion of a clasping stability device **100** in accordance with one or more embodiments of the present invention. A foot pedal **625** may be attached to release portion **610** of pedal latch **605** by a bolt **630** that extends through a mounting hole of foot pedal **625** and mounting hole **610** of pedal latch **605** and secured in place by nut **635**. Pedal latch **605** may be disposed in between pedal mounting plates **255** of base plate **205**. Pivoting attachment portion **615** may be aligned with mounting holes **260** of pedal mounting plates **255**. A plurality of spacers **640** may be disposed on both sides of pivoting attachment portion **615** of pedal latch **605**, within pedal mounting plates **255**. A bolt **640** may be disposed through mounting hole **260** of pedal mounting plate **255**, spacer **645**, pivoting attachment portion **615** of pedal latch **605**, spacer **645**, mounting hole **260** of pedal mounting plate **255**, and secured in place by nut **655**. Similarly, a foot pedal **540** may be attached to engagement portion **520** of pedal arm **505** by a bolt **545** that extends through a mounting hole of pedal **540** and mounting hole **525** of pedal arm **505** and secured in place by nut **550**. Pedal arm **505** may be disposed in between pedal mounting plates **255** of base plate **205**, under pedal latch **605**. Actuating portion **510** may be disposed through cutout **245** of base plate **205** and pivoting attachment portion **535** may be aligned with mounting holes **265** of pedal mounting plates **255**. A plurality of spacers **560** may be disposed on both sides of pivoting attachment portion **535** of pedal arm **505**. A bolt **555** may be disposed through washer **557**, mounting hole **265** of mounting plate **255**, spacer **560**, pivoting attachment portion **535** of pedal arm **505**, spacer **560**, mounting hole **265** of mounting plate **255**, washer **557**, and secured in place by nut **565**.

[0094] Continuing, FIG. **6**B shows assembly of a portion of the clasping stability device **100** in accordance with one or more embodiments of the present invention. Rotating attachment portion **315** of upper clasping arm **305** may be attached to a top side of actuator plate **405**. Bolt **320** may be disposed through washer **325**, rotating attachment portion **315** of clasping arm **305**, arcuate travel cutout **420** of actuator plate **405**, spacer **330**, washer **325**, and secured by nut **340**. Pivoting attachment portion **310** of upper clasping arm **305** may be attached to a top side of base plate **205**. Bolt **345** may be disposed through washer **350**, pivoting attachment portion **310**, spacer **355**, mounting hole **230** of base plate **205**, washer **350**, and secured in place by nut **360**. Similarly, rotating attachment portion **315** of lower clasping arm **305** may be attached to a bottom side of actuator plate **405**. Bolt **320** may be disposed through washer **325**, arcuate travel cutout **420** of actuator plate **405**, spacer **330**, rotating attachment portion **315** of clasping arm **305**, arcuate travel cutout **240** of base plate **205**, washer **325** and secured in place by nut **340**. Pivoting attachment portion **310** of lower clasping arm **305** may be attached to a top side of base plate **205**. Bolt **347** may be disposed through washer **350**, pivoting attachment portion **310** of clasping arm **300**, washer **350**, mounting hole **230** of base plate **205**, washer **350**, and secured in place by nut **360**. For each actuator travel positioner **435**, a plurality of bolts **430** may be disposed through mounting holes **410** of actuator plate **405** and through actuator travel positioner **435** itself Actuator travel positioner **435** may be placed within travel cutout **280** of actuator travel positioner receiver **270** of base plate **205**, and a washer **440** may be disposed under the corresponding travel cutout **235** of base plate **205**, and bolts **430** may be secured in place with nuts **445**. Washer **440** may have a size that prevents it from fitting into travel cutouts **235** of base plate **205** or travel cutout **280** of actuator travel positioner receiver **270**. A first end of a bias spring **285** may be removably attached to spring mounting hole **415** of actuator plate **405** and a second end of bias spring **285** may be removably attached to spring mounting post **225** of base plate **205**.

[0095] Continuing, FIG. **6**C shows assembly of a portion of the clasping stability device **100** in accordance with one or more embodiments of the present invention. A plurality of clamping assemblies **700** may be used to secure a clasping stability device **100** to a hand truck (not shown). Each clamping assembly **700** may include a rear portion **705** that is removably attached to a front portion **735** around a tubular such as a longitudinal support member **810** of a hand truck (not shown). A plurality of bolts **745** may be disposed through washer **750**, mounting hole **730** of rear portion **705**, mounting hole **730** of front portion **735**, washer **750**, and secured in place by a plurality of nuts **755**. Each clamping assembly **700** may be removably attached to the base plate (**205**, not shown) by a bolt, washer, and nut (not shown) through rear mounting hole **720**. Adjustment mounting hole **725** may be used to adjust the positioning of clamping assembly **700** to fit a particular hand truck (not shown). The arcuate shape of adjustment mounting hole **725** allows the clamping assembly **700** to pivot on the rear mounting hole **720** and adjust the spacing between clamping assemblies **700**.

[0096] In one or more embodiments of the present invention, a clasping stability device may be directly mounted onto a transverse supporting member of a hand truck. In such embodiments, the base plate of the clasping stability device is directly mounted to the transverse supporting member and there is no need for clamping assemblies.

[0097] FIG. **7**A shows a front facing top-side perspective view of a clasping stability device **900** in accordance with one or more embodiments of the present invention. Clasping stability device **900** includes a plurality of direct mounting holes (**1010**, not shown) disposed on a front portion of base plate **205** for directly mounting clasping stability device **900** to a transverse support member (not shown) of a hand truck (not shown). Clasping stability device **900** may be substantially the same as clasping stability device **100** previously disclosed, with the only substantive difference being the use of direct mounting through the base plate **205** rather than using clamping assemblies (e.g., **700** of clasping stability device **100**). Continuing, FIG. **7**B shows a rear facing top-side perspective view of clasping stability device **900** and in accordance with one or more embodiments of the present invention. Continuing, FIG. **7**C shows a top plan view of clasping stability device **900** in an opened state in accordance with one or more embodiments of the present invention. In this view, a plurality of mounting bolts **1015**

that may be used to directly mount clasping stability device **900** to a transverse support member (not shown) of a hand truck (not shown) are shown instead of clamping assemblies (e.g., **700** of clasping stability device **100**). Continuing, FIG. **7**D shows a bottom plan view of clasping stability device **900** in the disengaged state in accordance with one or more embodiments of the present invention. In this view, a plurality of nuts **1020** for mounting bolts **1015**, typically disposed under a transverse support member (not shown) of a hand truck (not shown) are shown for purposes of illustration only.

[0098] FIG. **8**A shows a front facing top-side perspective view of a clasping stabilized hand truck **1100** in an opened state in accordance with one or more embodiments of the present invention. Clasping stabilized hand truck **1100** may include a handle **1105**, a plurality of longitudinal support members **1110**, a plurality of transverse support members **1112**, a nose plate **1115**, and a plurality of wheels **1120**. A clasping stability device **900** may be removably attached to hand truck **1100** by a plurality of bolts that directly attach clasping stability device **900** to a transverse support member **1112**. Continuing, FIG. **8**B shows a front facing top-side perspective view of clasping stabilized hand truck **1100** in a closed state in accordance with one or more embodiments of the present invention. Continuing, FIG. **8**C shows a detail view of the direct attachment of clasping stability device **900** to hand truck **1100** in accordance with one or more embodiments of the present invention. A bolt **1015** may be disposed through a washer **1017**, a mounting hole **1010** of base plate **205**, a mounting hole (not shown) drilled in transverse support member **1112**, a washer **1017**, and secured in place with nut **1020**.

[0099] FIG. **9**A shows a top plan view of a base plate assembly **1000** of a clasping stability device **900** in accordance with one or more embodiments of the present invention. Base plate **1105** of clasping stability device **900** is substantially the same as base plate **205** of clasping stability device **100** with the only substantive difference being the removal of the clamping assemblies (**700** of clasping stability device **100**) and the addition of direct mounting holes **1010** that are used to removably attach clasping stability device **900** to a transverse support member (not shown) of a hand truck (not shown). Continuing, FIG. **9**B shows a bottom plan view of the base plate **1000** of clasping stability device **900** in accordance with one or more embodiments of the present invention.

[0100] In one or more embodiments of the present invention, a clasping stability device may use alternative clasping or release mechanisms that may be suitable for different applications or designs.

[0101] FIG. **10**A shows a front facing top-side perspective view of a clasping stability device **1300** in accordance with one or more embodiments of the present invention. Clasping stability device **1300** may include a secure clasping mechanism that may be used to stabilize material on a hand truck (not shown). Clasping stability device **1300** may include a base plate assembly **1200** and a pair of clasping arm assemblies **300** removably attached to base plate assembly **1200**. Continuing, FIG. **10**B shows a rear facing top-side perspective view of clasping stability device **1300** in accordance with one or more embodiments of the present invention. Clasping stability device **1300** may also include a plurality of actuator plates **1405** that facilitates the clasping and release mechanism of clasping arm assemblies **300**, a pedal arm assembly **500** that may controllably engage the clasping mechanism of clasping arms **300**, and a pedal latch assembly **600** that may lock or release the clasping mechanism of clasping arm assemblies **300**. In the embodiment depicted, clasping stability device **1300** may be directly mounted via a plurality of mounting holes **1210** in base plate **1205** to a hand truck (not shown). Base plate assembly **1200** may include a base plate **1205** and a plurality of pedal mounting plates **255** disposed on a bottom side of base plate **1205**.

[0102] Continuing, FIG. **10**C shows a left-side elevation view of clasping stability device **1300** in accordance with one or more embodiments of the present invention. As shown in this view, pedal arm assembly **500** may be disposed below pedal latch assembly **600**, to enable the use of the human operator's foot to engage pedal arm **505** from the rear of a hand truck (not shown). Continuing, FIG. **10**D shows a right-side elevation view of clasping stability device **1300** in accordance with one or more embodiments of the present invention. Pedal arm **505** may include an actuating portion **510** that extends through base plate **205** and actuator plates **1405**, as discussed in more detail herein. When pedal arm **505** is engaged by pushing down on foot pedal **540**, actuating portion **510** moves toward the rear of base plate **1205**, causing the attached ends of actuator plates **1405** to travel towards the rear of base plate **1205**, and thereby causing clasping portion **305** of clasping arms **300** to close, as discussed in more detail herein. Upon release of foot pedal **540** of pedal arm **505**, pedal arm **505** will be stably locked into place by pedal latch **605**, securing the corresponding degree of closure of clasping arms **300**. As shown in this view, an upper clasping arm **300** may be disposed above a lower clasping arm **300**. Continuing, FIG. **10**E shows a front elevation view of clasping stability device **1300** in accordance with one or more embodiments of the present invention. Continuing, FIG. **10**F shows a rear elevation view of clasping stability device **1300** in accordance with one or more embodiments of the present invention.

[0103] FIG. **11**A shows a top plan view of a clasping stability device **1300** in an opened state in accordance with one or more embodiments of the present invention. Base plate assembly **1200** may include base plate **1205**, an arcuate travel cutout **1237** for a lower clasping arm **300**, and a travel cutout **1240** for an actuating portion **510** of a pedal arm **505**. A pivoting attachment portion **310** of an upper clasping arm **300** may be aligned with a pivoting attachment portion **310** of a lower clasping arm **300** and secured to base plate **1205** with a bolt **1230**. A rotating attachment portion (**317**, not shown in this view) of upper clasping arm **300** may be attached to a first end **1410** of a first actuating plate **1405**. A rotating attachment portion (**317**, not shown in this view) of lower clasping arm **300** may be attached to a first end **1410** of second actuating plate **1405**. A top side of a second end **1410** of first actuating plate **1405** may be aligned and attached to a bottom side of a second end **1410** of second actuating plate **1405** by a bolt **1415**, with a slip attachment **1430** disposed in between first actuating plate **1405** and second actuating plate **1405**. Slip attachment **1430** may include a cutout for actuating portion **510**.

[0104] Continuing, FIG. **11**B shows a bottom plan view of clasping stability device **1300** in the opened state in accordance with one or more embodiments of the present invention. Base plate **1205** may include a plurality of pedal mounting plates **255** attached to the bottom side of base plate **1205**. Continuing, FIG. **11**C shows a top plan view of

clasping stability device **1300** in a closed state in accordance with one or more embodiments of the present invention. When a human operator wishes to engage the clasping mechanism to close on material (not shown), the operator may depress foot pad **540** of the pedal arm (**505**, not shown in this view), the extent to which it is depressed corresponding to the extent to which the clasping arms **300** close. The depression of foot pad **540** cases the pedal arm (**505**, not shown in this view) to pivot, such that actuating portion **510** of the pedal arm (**505**, not shown in this view) travels toward the rear of base plate **1205**. The travel of actuating portion **510** causes the attached ends (by bolt **1415**) of actuator plates **1405** to travel towards the rear of base plate **1205**. As the rotating attachment portions of clasping arms **300** rotate, the pivoting attachment portions of clasping arms **300** pivot, such that clasping portions **305** of clasping arms **300** begin to close. While not shown in this view, when the human operator releases foot pedal **540**, pedal latch **605** latches onto pedal arm **505**, locking clasping arms **300** in their present degree of closure. In this way, clasping stability device **1300** may provide stable clasping with any desired amount of closure from fully open to fully closed, thereby accommodating a large variety of materials. In certain embodiments, clasping stability device **1300** may be removably attached to existing hand trucks (not shown). A plurality of bolts **1215** may be used to removably attach clasping stability device **1300** to a transverse support member (not shown) of the hand truck (not shown). Continuing, FIG. **11**D shows a bottom plan view of clasping stability device **1300** in the closed state in accordance with one or more embodiments of the present invention.

[0105] Continuing, FIG. **11**E shows a rear facing top-side perspective view of clasping stability device **1300** in the opened state in accordance with one or more embodiments of the present invention. A portion of pedal arm assembly **500** and pedal latch assembly **600** may be disposed in between a pair of pedal mounting plates **255** disposed on a bottom side of base plate **1205**. For purposes of illustration only, the right-side pedal mounting plate **255** is transparent to more clearly show the interaction of pedal arm assembly **500** and pedal latch assembly **600**. Pedal arm assembly **500** may include a pedal arm **505** having an engagement portion **520**, a pivoting attachment portion (**535**, not shown in this view), an index latch track **530**, and actuating portion **510**. Pedal latch assembly **600** may include a pedal latch **605** having a release portion (**610**, not shown in this view), a pivoting attachment portion (**615**, not shown in this view), and an index latch **620**. In the opened state, actuating portion **510** of pedal arm **505** may be positioned towards the front of base plate **1205**. Index latch track **530** of pedal arm **505** may include an arcuate track of stairs disposed about the pivot point of pedal arm **505**. Index latch **620** of pedal latch **605** may have a complimentary shape to that of index latch track **530**, such that index latch **620** may engage each stair of index latch track **530** and securely maintain the position of pedal arm **505**.

[0106] Continuing, FIG. **11**F shows a rear facing top-side perspective view of clasping stability device **1300** in the closed state in accordance with one or more embodiments of the present invention. When a human operator wishes to engage the clasping mechanism of clasping stability device **1300**, the operator may depress foot pedal **540** of pedal arm **505**, causing pedal arm **505** to pivot about its pivoting attachment point (**535**, not shown in this view) such that actuating portion **510** of pedal arm **505** to travel toward the rear of base plate **1205**, thereby causing clasping arms **300** to close in a corresponding amount. As foot pedal **540** is being depressed, index latch **620** travels through successive stairs of index latch track **530**, against the force of bias springs **285**, until such time as the operator disengages foot pedal **540**. At that point, index latch **620** securely maintains its position in index latch track **530**, maintaining the degree of closure against the force of bias springs **285**. Index latch **620** may have a complimentary shape to that of index latch track **530**, such that when index latch **620** engages index latch track **530**, index latch **620** is capable of maintaining the current position of clasping arms **300**. Showing a different angle, FIG. **11**G shows a rear facing bottom-side perspective view of clasping stability device **1300** in the opened state and FIG. **1111** shows a rear facing bottom-side perspective view of clasping stability device **1300** in the closed state in accordance with one or more embodiments of the present invention.

[0107] FIG. **12**A shows a front facing top-side perspective view of a clasping stabilized hand truck **1500** in accordance with one or more embodiments of the present invention. Clasping stabilized hand truck **1500** may include a hand truck **1100** having one or more handles **1105**, a plurality of longitudinal support members **1110** that are typically rectangular in shape, a plurality of transverse support members **1112**, a nose plate **1115**, and a plurality of wheels **1120**. The plurality of longitudinal support members **1110** and transverse support members **1112** form the wheeled frame of hand truck **1500**. Clasping stability device **1300** may be directly attached to a transverse support member **1112**. Continuing, FIG. **12**B shows a rear facing top-side perspective view of clasping stabilized hand truck **1500** in accordance with one or more embodiments of the present invention. Because the clasping stability device **1300** includes controls disposed at the rear of the device **1300**, a human operator (not shown) may fully operate hand truck **1500** from the rear, without having to walk around to the front or use straps (not shown) or ties (not shown). Continuing, FIG. **12**C shows a top plan view of clasping stabilized hand truck **1500** in an opened state and FIG. **12**D shows a top plan view of clasping stabilized hand truck **1500** in a closed state in accordance with one or more embodiments of the present invention.

[0108] FIG. **13**A shows a front facing top-side perspective view of a clasping stabilized hand truck **1500** in an opened state showing an environment of use in accordance with one or more embodiments of the present invention. Hand trucks are commonly used to transport tanks and containers that have a substantially cylindrical shape. These tanks and containers vary in size, shape, and weight, and often present problems for transport. In one or more embodiments of the present invention, a clasping stabilized hand truck **1500** may safely transport tanks and containers in a safe manner that protects the safety of the operator as well as the environment. In operative use, the operator may wheel hand truck **1500** into position in front of material, such as, for example, a large container **850**, with one or more hands on the one or more handles **1105**. Hand truck **1500** may be positioned in front of container **850** and then, using a foot, the operator may wedge the nose plate **1115** under container **850** while pushing hand truck **1500** forward. Continuing, FIG. **13**B shows a front facing top-side perspective view of clasping stabilized hand truck **1500** in a closed state showing an

environment of use in accordance with one or more embodiments of the present invention. Once container **850** is well positioned with respect to nose plate **1115**, the operator may use a foot to engage foot pedal **540** to close clasping arms **300** around container **850**. Once sufficient closure is achieved, the operator may remove the foot from the foot pedal **540**, and pedal latch **605** may latch pedal arm **505** into place, securing the degree of closure of clasping arms **300**, providing stable support for container **850**. Advantageously, the operator is able to perform all of these operations from the rear of hand truck **1500**, without having to walk to the front of hand truck **800**, and without the use of straps (not shown) or ties (not shown).

[0109] FIG. **14**A shows a top plan view of a base plate **1200** of a clasping stability device **1300** in accordance with one or more embodiments of the present invention. Base plate assembly **1200** includes base plate **1205** and a plurality of pedal mounting plates **255** disposed on a bottom side of base plate **1205**. Base plate **205** may include a travel cutout for the actuating portion (e.g., **510**) of the pedal arm (e.g., **500**). Continuing, FIG. **14**B shows a bottom plan view of base plate **1200** of clasping stability device **1300** in accordance with one or more embodiments of the present invention. Base plate **1205** includes a plurality of pedal mounting plates **255** disposed on the bottom-side of base plate **1205**. In certain embodiments, base plate **1205** may be composed of stainless steel. In other embodiments, base plate **1205** may be composed of carbon steel. In still other embodiments, base plate **1205** may be composed of aluminum. In still other embodiments, base plate **1205** may be composed of any other metal or alloy. In still other embodiments, base plate **1205** may be composed of plastic, composites, or any other lightweight material. One of ordinary skill in the art will recognize that the composition of material used to form base plate **1205** may vary in accordance with one or more embodiments of the present invention.

[0110] Continuing, FIG. **14**C shows a top plan view of an actuator plate **1405** of clasping stability device **1300** in accordance with one or more embodiments of the present invention. Actuator plate **1405** includes a first attachment end **1410** and a second attachment end **1410**. In certain embodiments, actuator plate **1405** may be composed of stainless steel. In other embodiments, actuator plate **1405** may be composed of carbon steel. In still other embodiments, actuator plate **1405** may be composed of aluminum. In still other embodiments, actuator plate **1405** may be composed of any other metal or alloy. In still other embodiments actuator plate **1405** may be composed of plastic, composites, or any other lightweight material. One of ordinary skill in the art will recognize that the composition of material used to form actuator plate **1405** may vary in accordance with one or more embodiments of the present invention.

[0111] FIG. **15** shows assembly of a clasping stability device **1300** in accordance with one or more embodiments of the present invention. A bolt **1230** may be disposed through a washer **1320**, pivoting attachment portion **310** of an upper clasping arm **300**, washer **1320**, pivoting attachment portion **310** of a lower clasping arm **300**, washer **1320**, mounting hole **1225** of base plate **1205**, and secured in place by nut **1235**. A bolt **1315** may be disposed through a washer **1320**, first end **1410** of first actuating plate **1405**, washer **1320**, rotating attachment portion **317**, washer **1320**, and secured by nut **1325**. A bolt **1315** may be disposed through a washer **1320**, rotating attachment portion **317** of lower clasping arm **300**, washer **1320**, first end **1410** of second actuator plate **1405**, washer **1320**, and secured by nut **1325**. A second end **1410** of first actuator plate **1405** may be attached to a second end **1410** of second actuator plate **1405**. A bolt **1315** may be disposed through a washer **1320**, second end **1410** of second actuator plate **1405**, slip attachment **1430**, second end **1410** of first actuator plate **1405**, washer **1320**, and secured by nut **1325**.

[0112] Advantages of one or more embodiments of the present invention may include one or more of the following:

[0113] In one or more embodiments of the present invention, a clasping stability device provides a stable material handling platform safely operable by a single human operator. The human operator may load and secure the material to the hand truck entirely from the rear without the use of straps or ties.

[0114] In one or more embodiments of the present invention, a clasping stability device eases loading material onto a hand truck at the source location, stabilizes the material during transport, and eases unloading the material from the hand truck at the destination location.

[0115] In one or more embodiments of the present invention, a clasping stability device includes a clasping mechanism that assists in pulling material toward the rear of the nose plate of the hand truck, and onto the nose plate, while the clasping mechanism is closing.

[0116] In one or more embodiments of the present invention, a clasping stability device includes a clasping mechanism that locks into place once the clasping arms are closed to a sufficient degree to secure the material. The locking mechanism is automatically engaged upon release of the engagement portion of the pedal arm. The locking mechanism remains locked stabilizing the material on the hand truck until the release portion of the pedal latch is engaged.

[0117] In one or more embodiments of the present invention, a clasping stability device includes a clasping mechanism that assists in releasing material toward the front of the nose plate while the clasping mechanism is opening.

[0118] In one or more embodiments of the present invention, a clasping stability device provides a single stroke clasping mechanism that automatically locks.

[0119] In one or more embodiments of the present invention, a clasping stability device provides a single stroke release mechanism.

[0120] In one or more embodiments of the present invention, a clasping stability device improves the safety of a hand truck operated by a single human operator.

[0121] In one or more embodiments of the present invention, a clasping stability device does not require an external power source and does not require substantial strength on the part of the human operator. The clasping mechanism uses leverage on an inverted index latch track to reduce the amount of force required to engage the clasping mechanism.

[0122] In one or more embodiments of the present invention, a clasping stability device improves the safety of transporting chemicals, flammable materials, hazardous materials, kegs, tanks, barrels, and other substantially cylindrical objects.

[0123] In one or more embodiments of the present invention, a clasping stability device may be composed of lightweight materials or spark-resistant materials.

[0124] In one or more embodiments of the present invention, a clasping stability device may be retrofitted onto an

existing hand truck having either tubular longitudinal support members or a rectangular transverse support member. Alternatively, the clasping stability device may be integrated with a new hand truck build.

[0125] While the present invention has been described with respect to the above-noted embodiments, those skilled in the art, having the benefit of this disclosure, will recognize that other embodiments may be devised that are within the scope of the invention as disclosed herein. Accordingly, the scope of the invention should only be limited by the appended claims.

What is claimed is:

1. A clasping stability device comprising:

a pair of clasping arms each comprising a clasping portion, a pivoting attachment portion, and a rotating attachment portion;

a base plate assembly comprising a base plate, a plurality of actuator travel positioner receivers disposed on top side of the base plate, and a plurality of pedal mounting plates disposed on a bottom side of the base plate;

an actuator assembly comprising an actuator plate and a plurality of actuator travel positioners attached to a bottom side of the actuator plate;

a pedal arm disposed in between the pedal mounting plates comprising an engagement portion, a pivot attachment portion, an index latch track, and an actuating portion; and

a pedal latch disposed in between the pedal mounting plates comprising a release portion, a pivot attachment portion, and an index latch,

wherein the clasping arms are controllably closed by pushing the engagement portion of the pedal arm causing the pedal arm to travel such that the actuating portion of the pedal arm disposed within a cutout of the actuator plate causes the actuator plate assembly to travel in the actuator travel positioner receivers toward a rear of the base plate, and

wherein the travel of the actuator plate assembly causes the rotating attachment portion of the clasping arms to travel within arcuate travel cutouts in the actuator plate while the pivot attachment portion of the clasping arms pivot causing the clasping arms to close and upon release of the engagement portion the index latch engages the index latch track to stably retain a degree of closure of the clasping arms.

2. The clasping stability device of claim **1**, further comprising a plurality of bias springs each having a first end removably attached to the base plate and a second end removably attached to the actuator plate.

3. The clasping stability device of claim **2**, wherein the clasping arms are opened by pushing the release portion of the pedal latch to disengage the index latch from the index latch track and the plurality of bias springs causes the actuator plate assembly to travel in the actuator travel positioner receivers toward a front of the base plate.

4. The clasping stability device of claim **3**, wherein the travel of the actuator plate towards the front of the base plate causes the rotating attachment portion of the clasping arms to travel within arcuate travel cutouts in the actuator plate while the pivot attachment portion of the clasping arms pivot causing the clasping arms to open.

5. The clasping stability device of claim **1**, further comprising a plurality of clamping assemblies removably attached to the base plate.

6. The clasping stability device of claim **5**, wherein each clamping assembly comprises a front member having a radiused portion that is removably attached a rear member having a radiused portion, such that the radiused portions of the front member and rear members secure the clasping stability device to a longitudinal support member of a hand truck.

7. The clasping stability device of claim **1**, wherein the base plate comprises a plurality of direct mounting holes for directly attached the clasping stability device to a transverse support member of a hand truck.

8. A clasping stabilized hand truck comprising:

a hand truck comprising a plurality of longitudinal support members; and

a clasping stability device removably attached to the hand truck by a plurality of clamping assemblies wherein each clamping assembly comprises a front member having a radiused portion and a rear member having a radiused portion, and wherein the front member is removably attached to the rear member such that the radiused portions secure the clasping stability device to the longitudinal support members of the hand truck,

wherein the clasping stability device comprises:

a pair of clasping arms each comprising a clasping portion, a pivoting attachment portion, and a rotating attachment portion,

a base plate assembly comprising a base plate, a plurality of actuator travel positioner receivers disposed on top side of the base plate, and a plurality of pedal mounting plates disposed on a bottom side of the base plate,

an actuator assembly comprising an actuator plate and a plurality of actuator travel positioners attached to a bottom side of the actuator plate,

a pedal arm disposed in between the pedal mounting plates comprising an engagement portion, a pivot attachment portion, an index latch track, and an actuating portion; and

a pedal latch disposed in between the pedal mounting plates comprising a release portion, a pivot attachment portion, and an index latch,

wherein the clasping arms are controllably closed by pushing the engagement portion of the pedal arm causing the pedal arm to travel such that the actuating portion of the pedal arm disposed within a cutout of the actuator plate causes the actuator plate assembly to travel in the actuator travel positioner receivers toward a rear of the base plate, and

wherein the travel of the actuator plate assembly causes the rotating attachment portion of the clasping arms to travel within arcuate travel cutouts in the actuator plate while the pivot attachment portion of the clasping arms pivot causing the clasping arms to close and upon release of the engagement portion the index latch engages the index latch track to stably retain a degree of closure of the clasping arms.

9. The clasping stabilized hand truck of claim **8**, wherein the clasping stability device further comprises a plurality of bias springs each having a first end removably attached to the base plate and a second end removably attached to the actuator plate.

10. The clasping stabilized hand truck of claim **9**, wherein the clasping arms of the clasping stability device are opened by pushing the release portion of the pedal latch to disengage the index latch from the index latch track and the plurality

of bias springs causes the actuator plate assembly to travel in the actuator travel positioner receivers toward a front of the base plate.

11. The clasping stabilized hand truck of claim **10**, wherein the travel of the actuator plate towards the front of the base plate causes the rotating attachment portion of the clasping arms to travel within arcuate travel cutouts in the actuator plate while the pivot attachment portion of the clasping arms pivot causing the clasping arms to open.

12. The clasping stabilized hand truck of claim **8**, further comprising a plurality of clamping assemblies removably attached to the base plate.

13. The clasping stabilized hand truck of claim **12**, wherein each clamping assembly comprises a front member having a radiused portion that is removably attached a rear member having a radiused portion, such that the radiused portions of the front member and rear members secure the clasping stability device to a longitudinal support member of a hand truck.

14. The clasping stabilized hand truck of claim **8**, wherein the base plate comprises a plurality of direct mounting holes for directly attached the clasping stability device to a transverse support member of a hand truck.

15. A clasping stabilized hand truck comprising:

a hand truck comprising a plurality of transverse support members; and

a clasping stability device removably attached to the hand truck by a plurality of mounting bolts that secure the clasping stability device to the transverse support member of the hand truck,

wherein the clasping stability device comprises:

a pair of clasping arms each comprising a clasping portion, a pivoting attachment portion, and a rotating attachment portion,

a base plate assembly comprising a base plate, a plurality of actuator travel positioner receivers disposed on top side of the base plate, and a plurality of pedal mounting plates disposed on a bottom side of the base plate,

an actuator assembly comprising an actuator plate and a plurality of actuator travel positioners attached to a bottom side of the actuator plate,

a pedal arm disposed in between the pedal mounting plates comprising an engagement portion, a pivot attachment portion, an index latch track, and an actuating portion; and

a pedal latch disposed in between the pedal mounting plates comprising a release portion, a pivot attachment portion, and an index latch,

wherein the clasping arms are controllably closed by pushing the engagement portion of the pedal arm causing the pedal arm to travel such that the actuating portion of the pedal arm disposed within a cutout of the actuator plate causes the actuator plate assembly to travel in the actuator travel positioner receivers toward a rear of the base plate, and

wherein the travel of the actuator plate assembly causes the rotating attachment portion of the clasping arms to travel within arcuate travel cutouts in the actuator plate while the pivot attachment portion of the clasping arms pivot causing the clasping arms to close and upon release of the engagement portion the index latch engages the index latch track to stably retain a degree of closure of the clasping arms.

16. The clasping stabilized hand truck of claim **15**, wherein the clasping stability device further comprises a plurality of bias springs each having a first end removably attached to the base plate and a second end removably attached to the actuator plate.

17. The clasping stabilized hand truck of claim **16**, wherein the clasping arms of the clasping stability device are opened by pushing the release portion of the pedal latch to disengage the index latch from the index latch track and the plurality of bias springs causes the actuator plate assembly to travel in the actuator travel positioner receivers toward a front of the base plate.

18. The clasping stabilized hand truck of claim **17**, wherein the travel of the actuator plate towards the front of the base plate causes the rotating attachment portion of the clasping arms to travel within arcuate travel cutouts in the actuator plate while the pivot attachment portion of the clasping arms pivot causing the clasping arms to open.

19. The clasping stabilized hand truck of claim **15**, further comprising a plurality of clamping assemblies removably attached to the base plate.

20. The clasping stabilized hand truck of claim **19**, wherein each clamping assembly comprises a front member having a radiused portion that is removably attached a rear member having a radiused portion, such that the radiused portions of the front member and rear members secure the clasping stability device to a longitudinal support member of a hand truck.

21. The clasping stabilized hand truck of claim **15**, wherein the base plate comprises a plurality of direct mounting holes for directly attached the clasping stability device to a transverse support member of a hand truck.

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