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Miller

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(54) **ANIMAL ISOLATOR**

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(51) **Int. Cl.**
A01K 1/00 (2006.01)

(52) **U.S. Cl.** **119/510**; 119/512; 119/752

(58) **Field of Classification Search** 119/502, 119/510, 512, 513, 751, 752, 453
See application file for complete search history.

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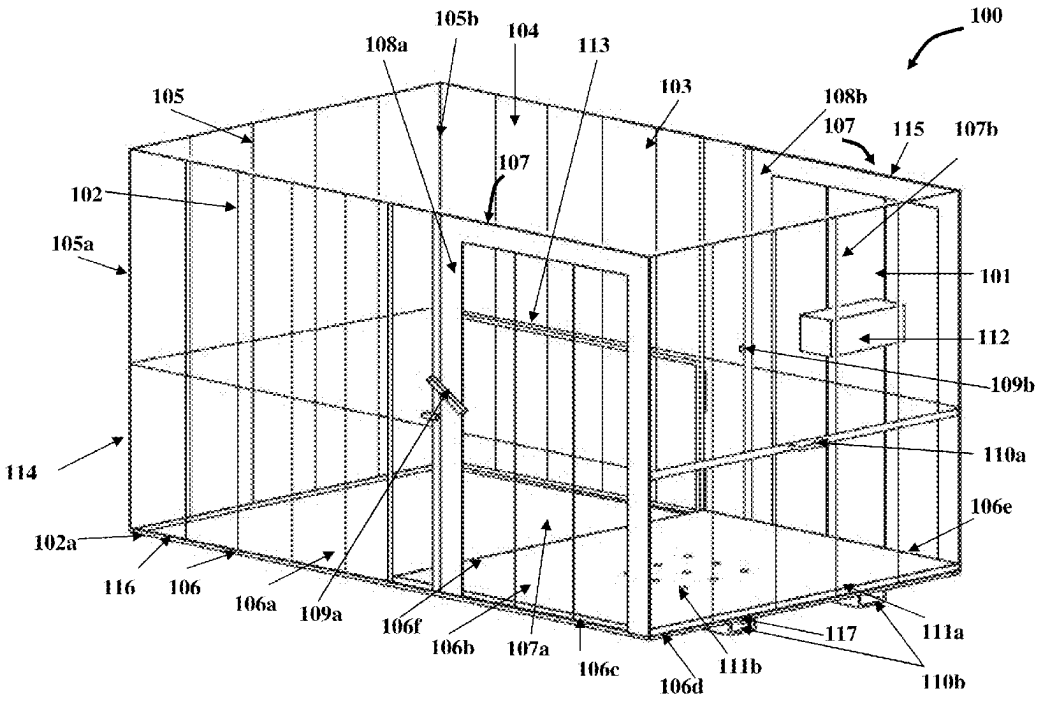
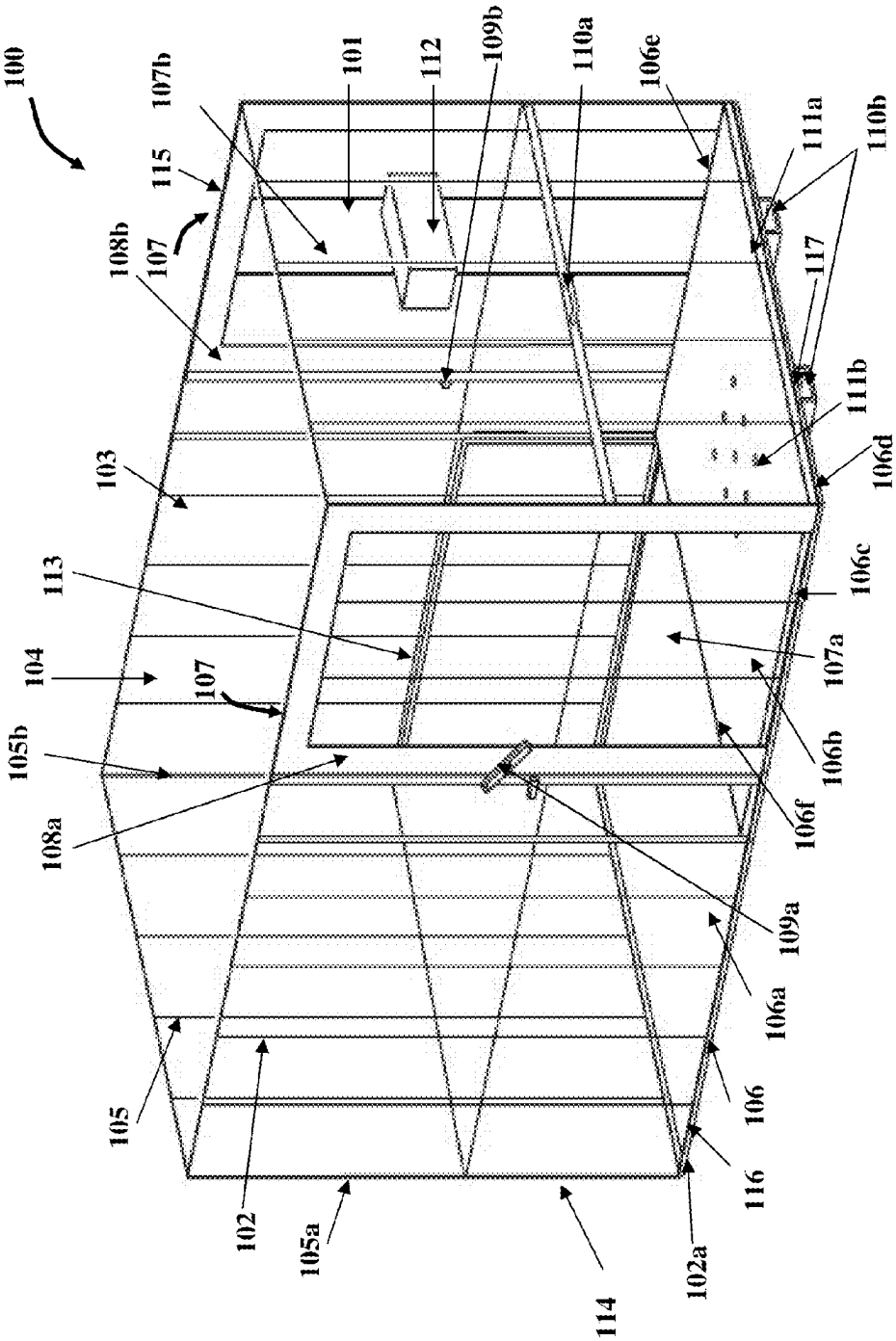
(57) **ABSTRACT**

Disclosed herein is an animal isolator and method for isolating one or more animals from a herd. The animal isolator comprises a meshing enclosure for confining the animals. The meshing enclosure comprises a front wall, a rear wall, and a pair of opposing side walls, a partially closed base partially closing a first end of the open ended enclosure, a vehicle mounting assembly, and a gate. The meshing enclosure is detachably attached to the rear end or the front end of a vehicle using the vehicle mounting assembly and is raised above ground surface. The vehicle is driven through the herd. The meshing enclosure is then lowered over the animals and the animals are captured through the opening of the partially closed base. The captured animals are driven onto the platform and are confined to a region defined by the platform using the gate.

7 Claims, 12 Drawing Sheets

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105
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116
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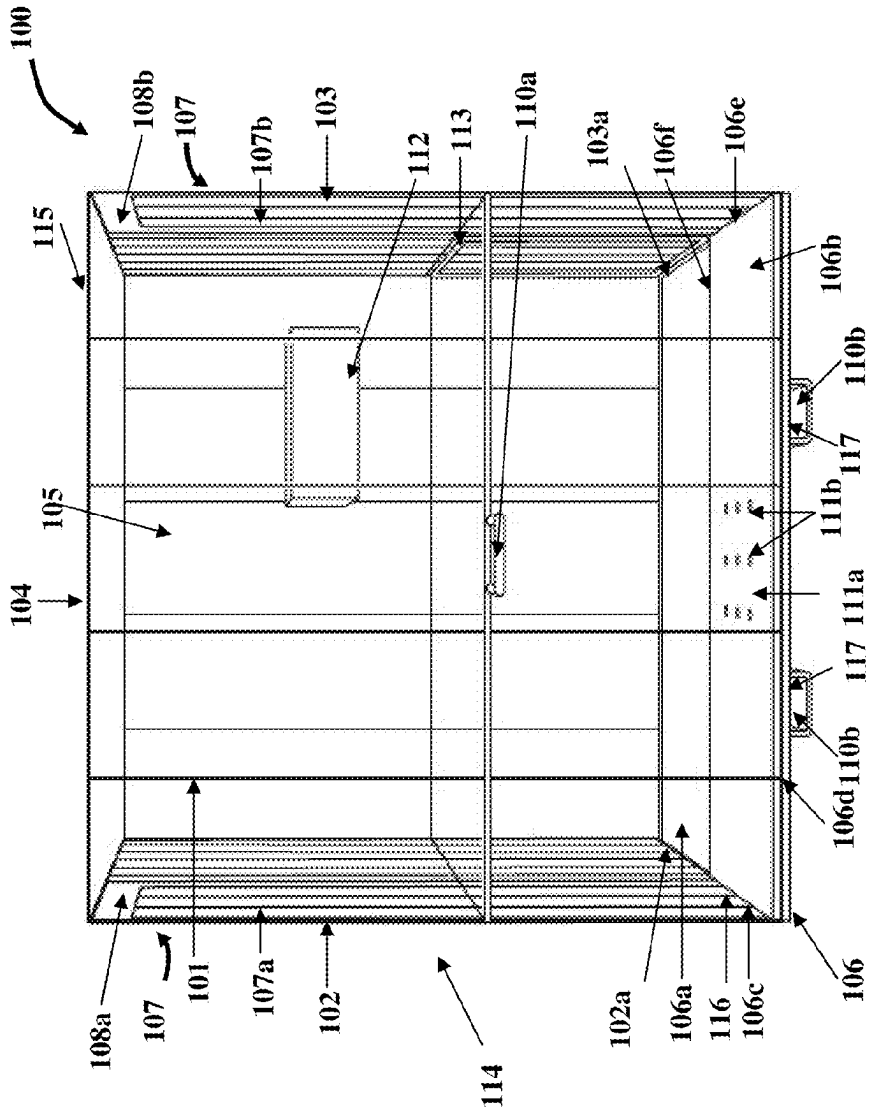
105a
114
102a

FIG. 1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114
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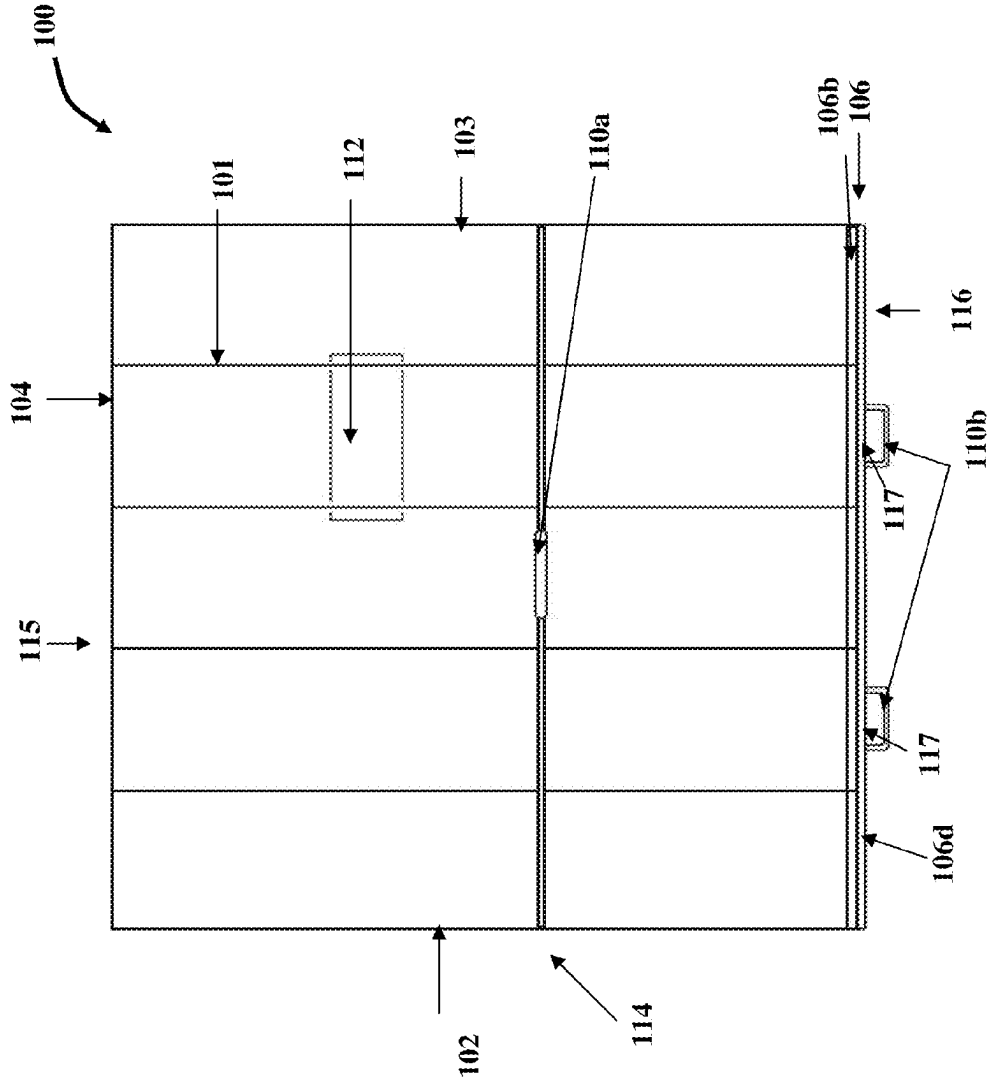
106c

FIG. 2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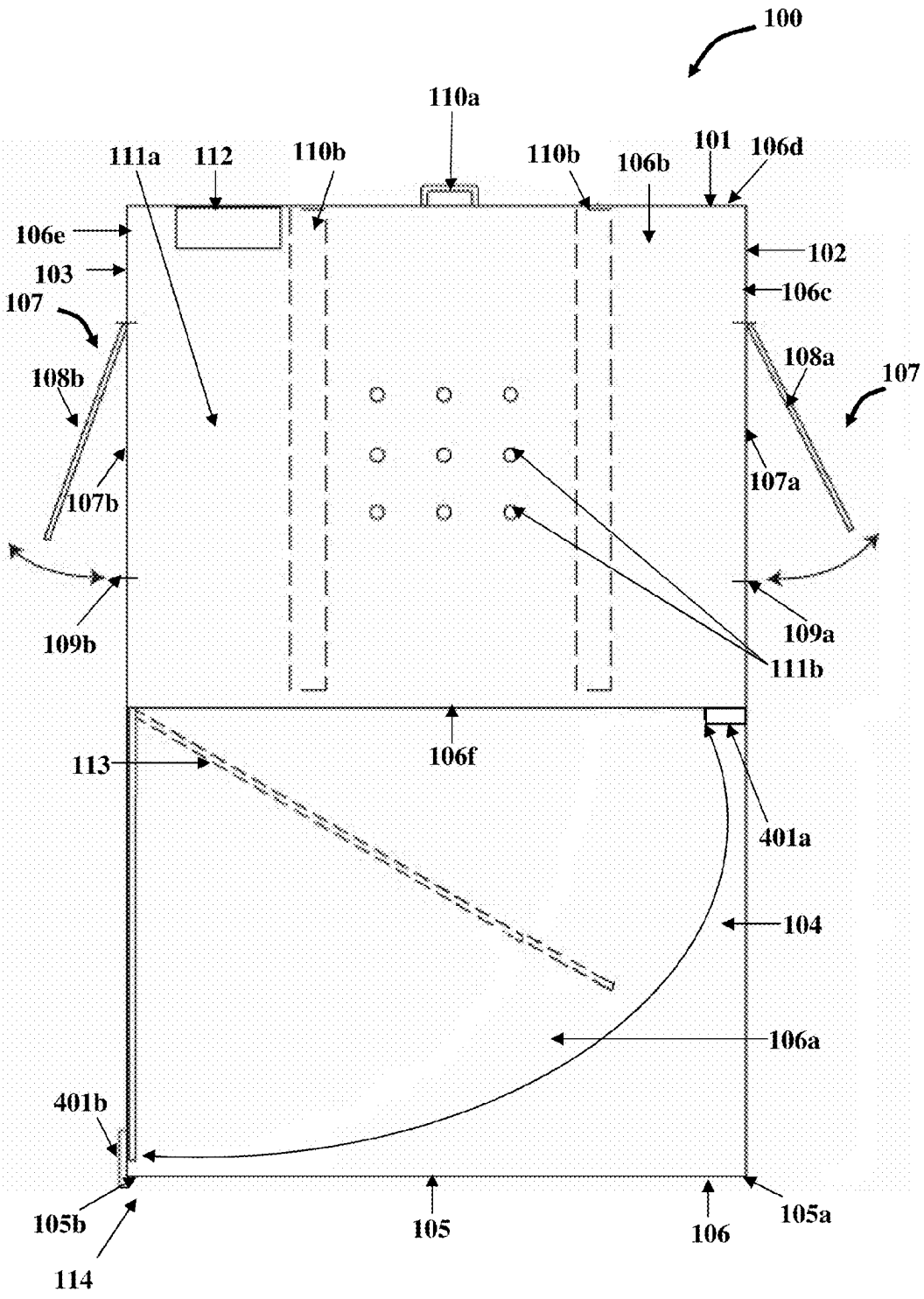
117
106d
102
114

FIG. 3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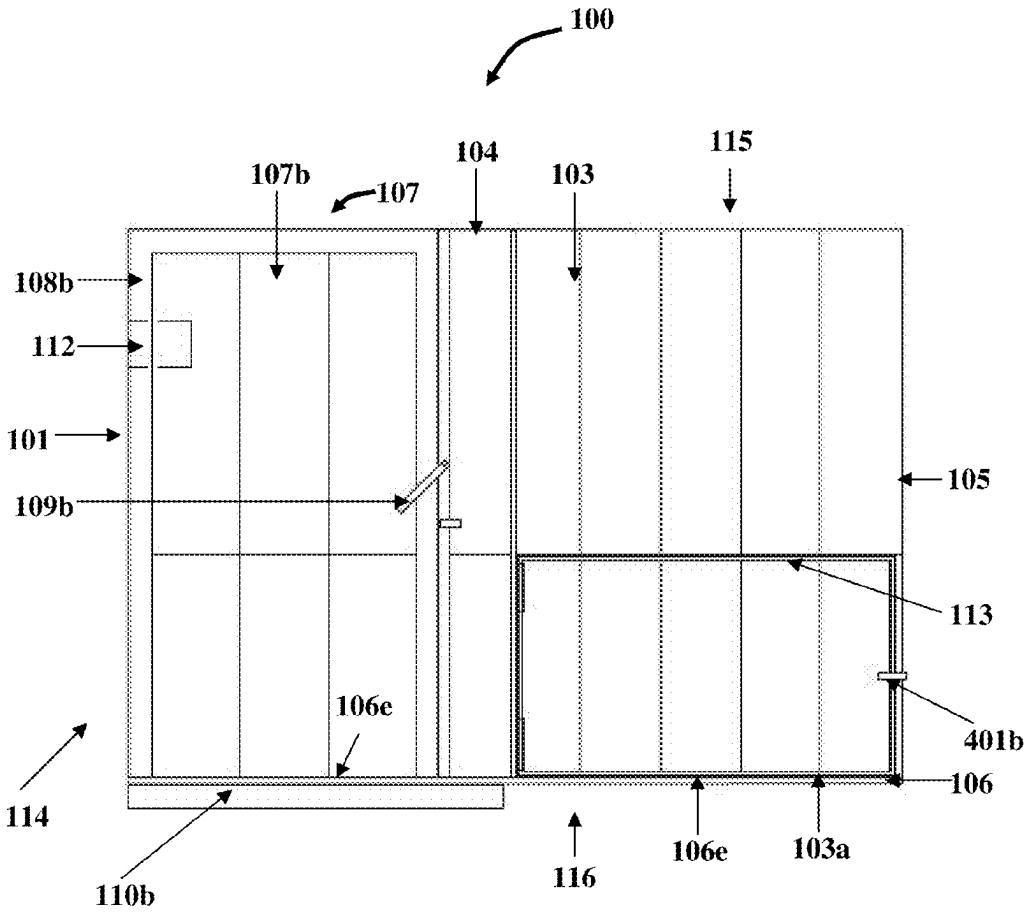
108b
107a
107b
109b
109a
111b
106f
113
401a
104
106a
401b
105b
105
106
105a
114

FIG. 4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401b
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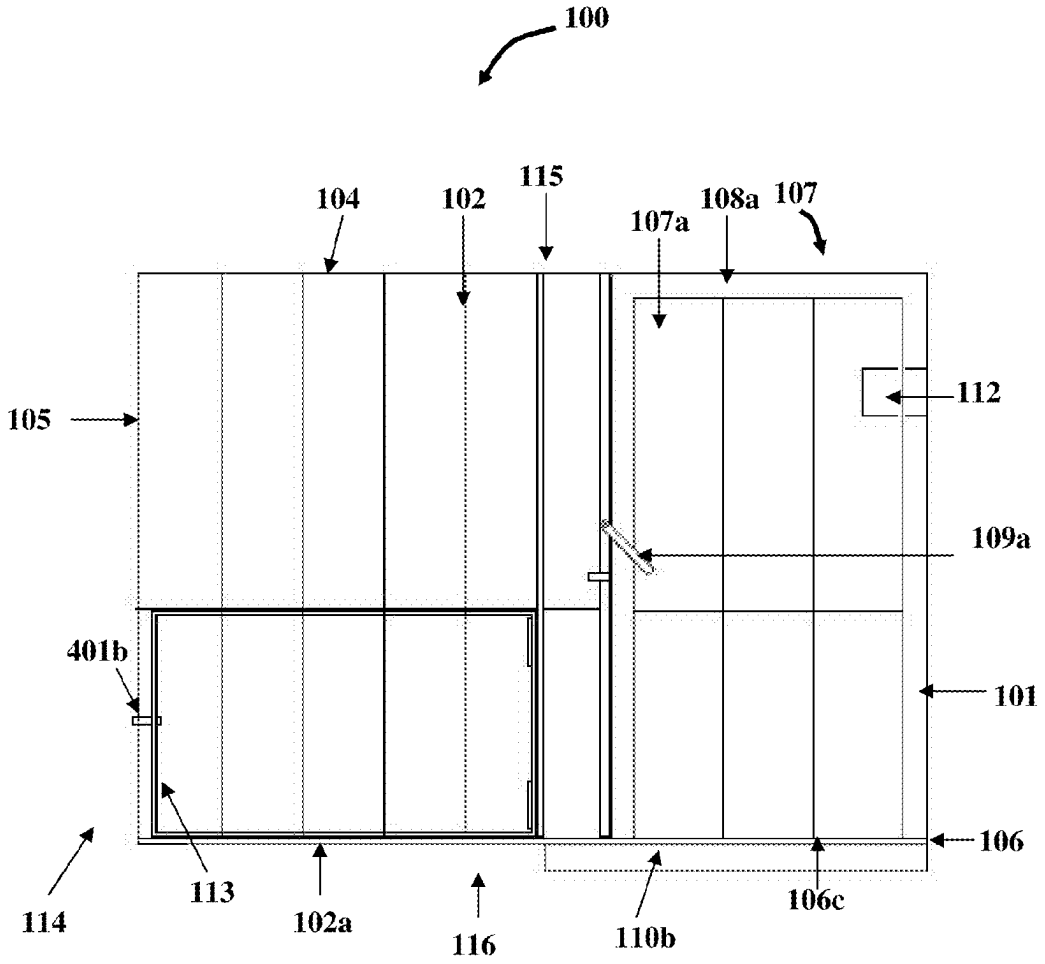
106e
103a

FIG. 5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104
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101
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113
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102a
116
110b
106c

FIG. 6

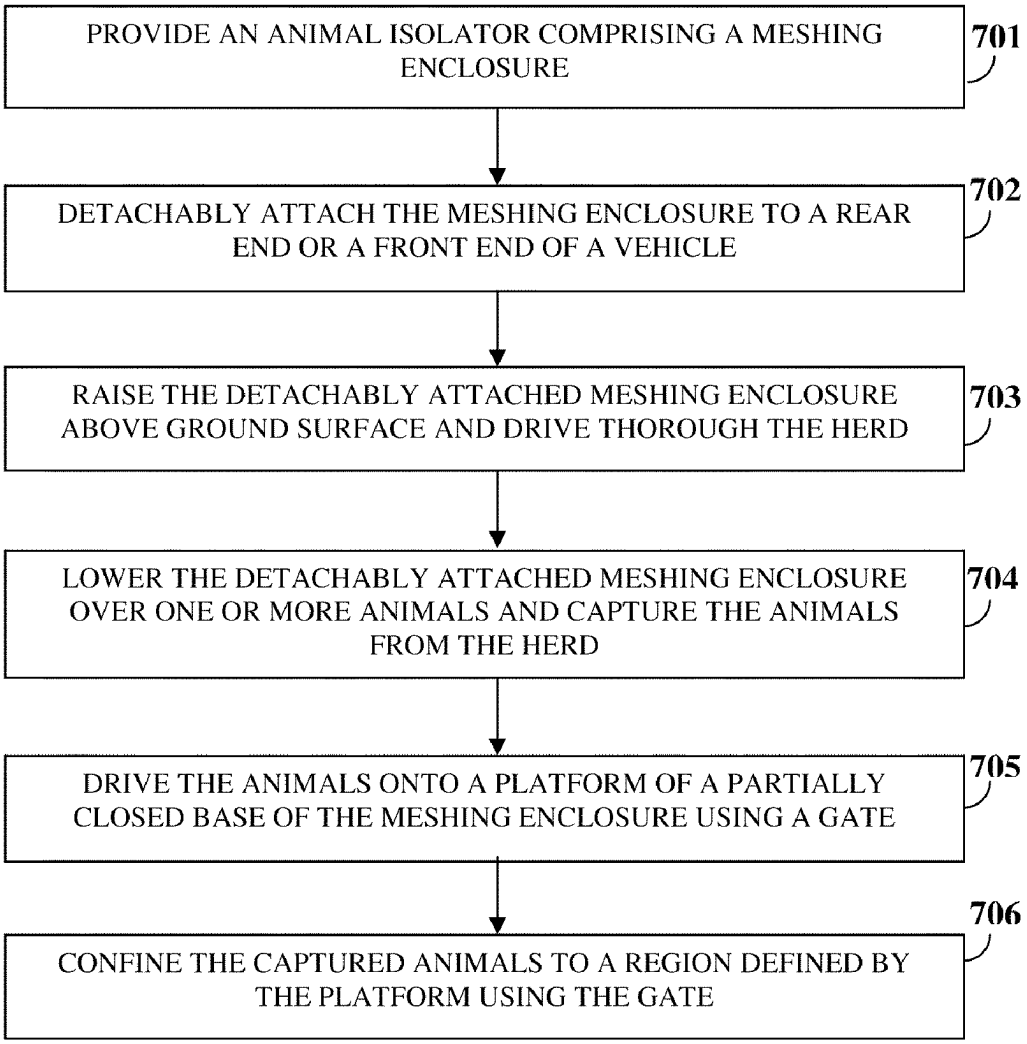
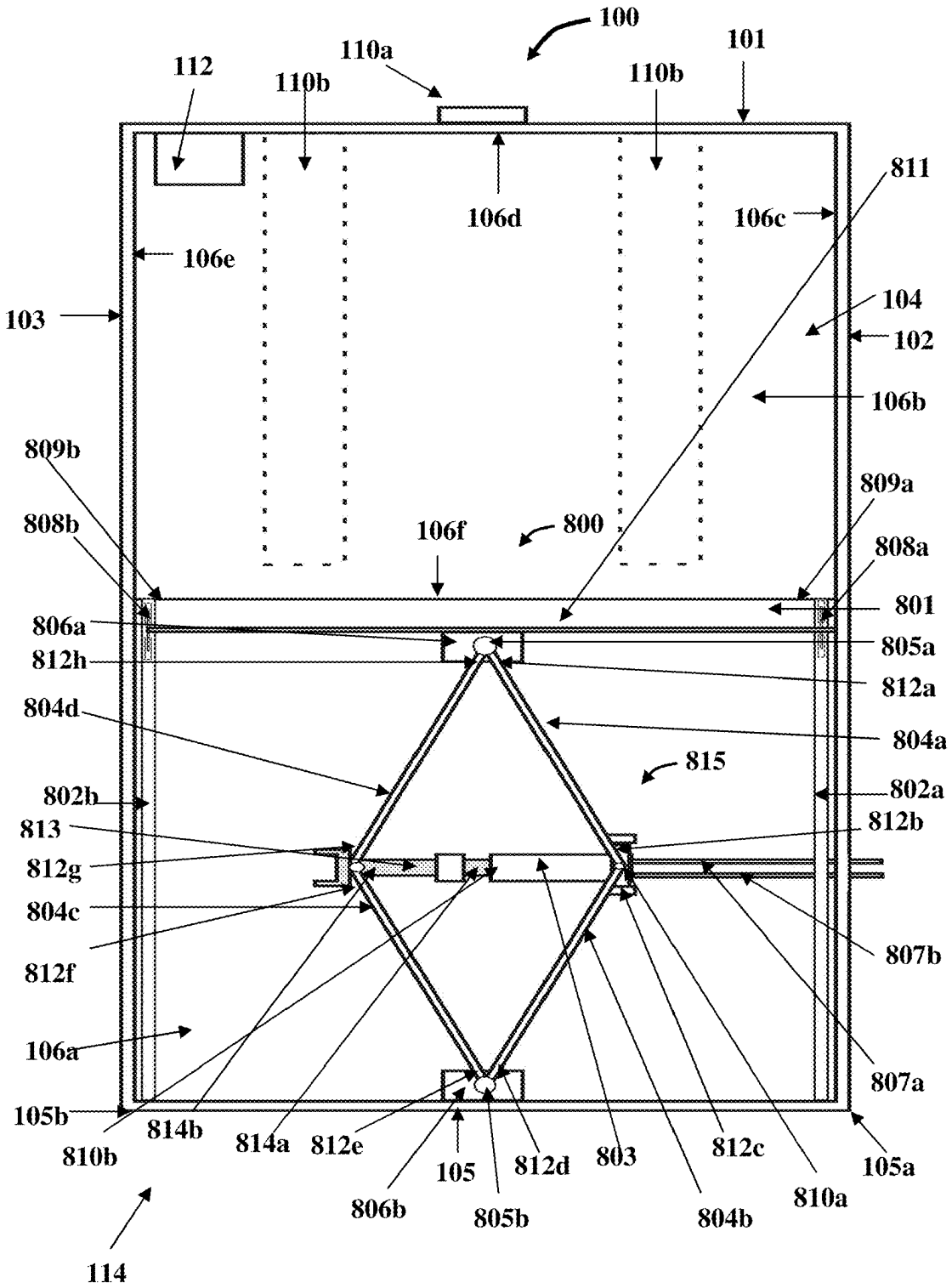

PROVIDE AN ANIMAL ISOLATOR COMPRISING A MESHING ENCLOSURE
701
DETACHABLY ATTACH THE MESHING ENCLOSURE TO A REAR END OR A FRONT END OF A VEHICLE
702
RAISE THE DETACHABLY ATTACHED MESHING ENCLOSURE ABOVE GROUND SURFACE AND DRIVE THOROUGH THE HERD
703
LOWER THE DETACHABLY ATTACHED MESHING ENCLOSURE OVER ONE OR MORE ANIMALS AND CAPTURE THE ANIMALS FROM THE HERD
704
DRIVE THE ANIMALS ONTO A PLATFORM OF A PARTIALLY CLOSED BASE OF THE MESHING ENCLOSURE USING A GATE
705
CONFINE THE CAPTURED ANIMALS TO A REGION DEFINED BY THE PLATFORM USING THE GATE
706

FIG. 7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800
808a
801
806a
805a
812h
812a
804d
804a
815
802b
802a
813
812b
812g
804c
812f
807b
106a
807a
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814a
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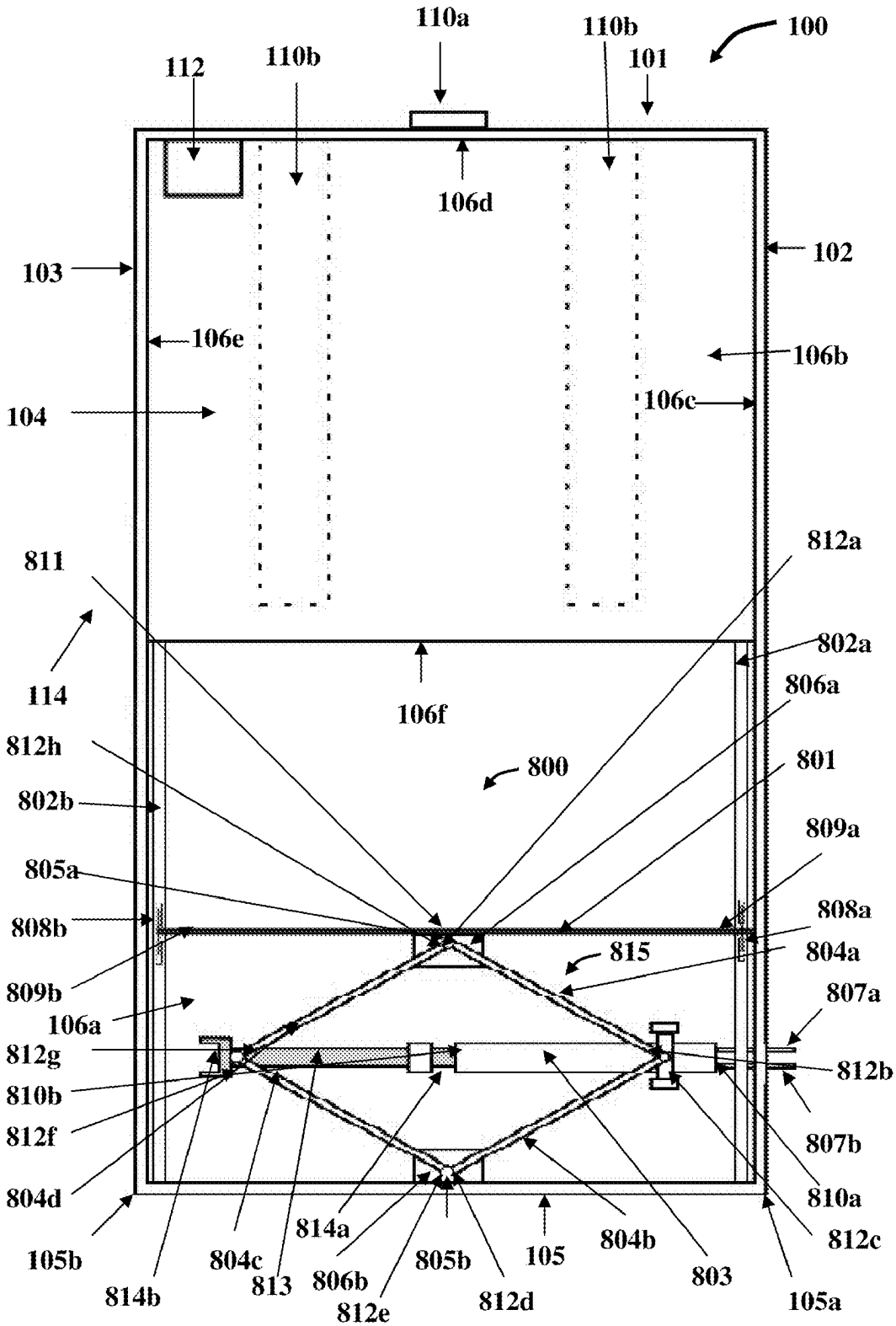
803
812c
105a
810b
806b
805b
804b
810a
114

FIG. 8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112
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101
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812h
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801
802b
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805a
808a
808b
815
804a
809b
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106a
812g
812b
810b
807b
812f
810a
804d
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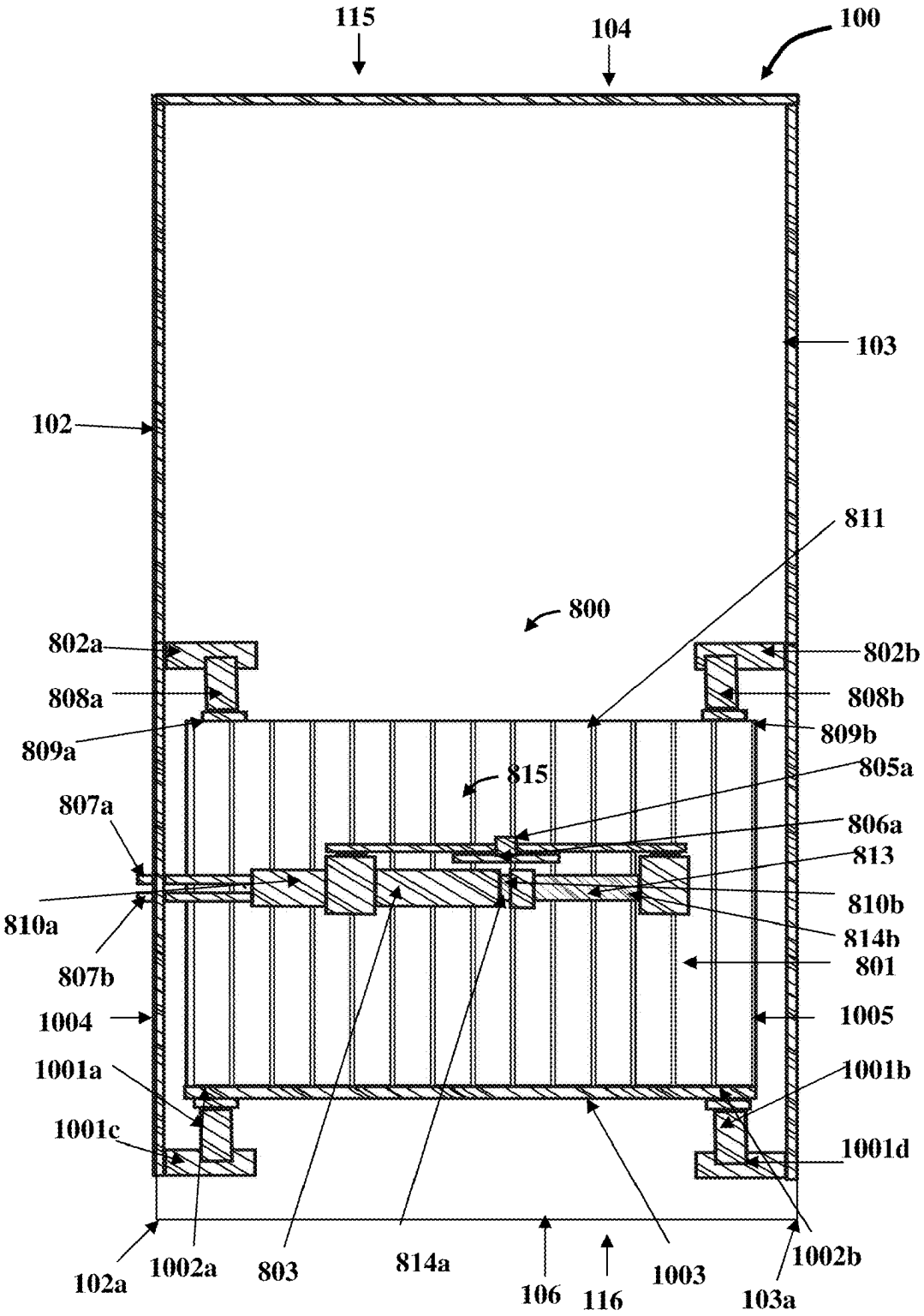
814b
813
806b
812d
105a
812e

FIG. 9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807b
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803
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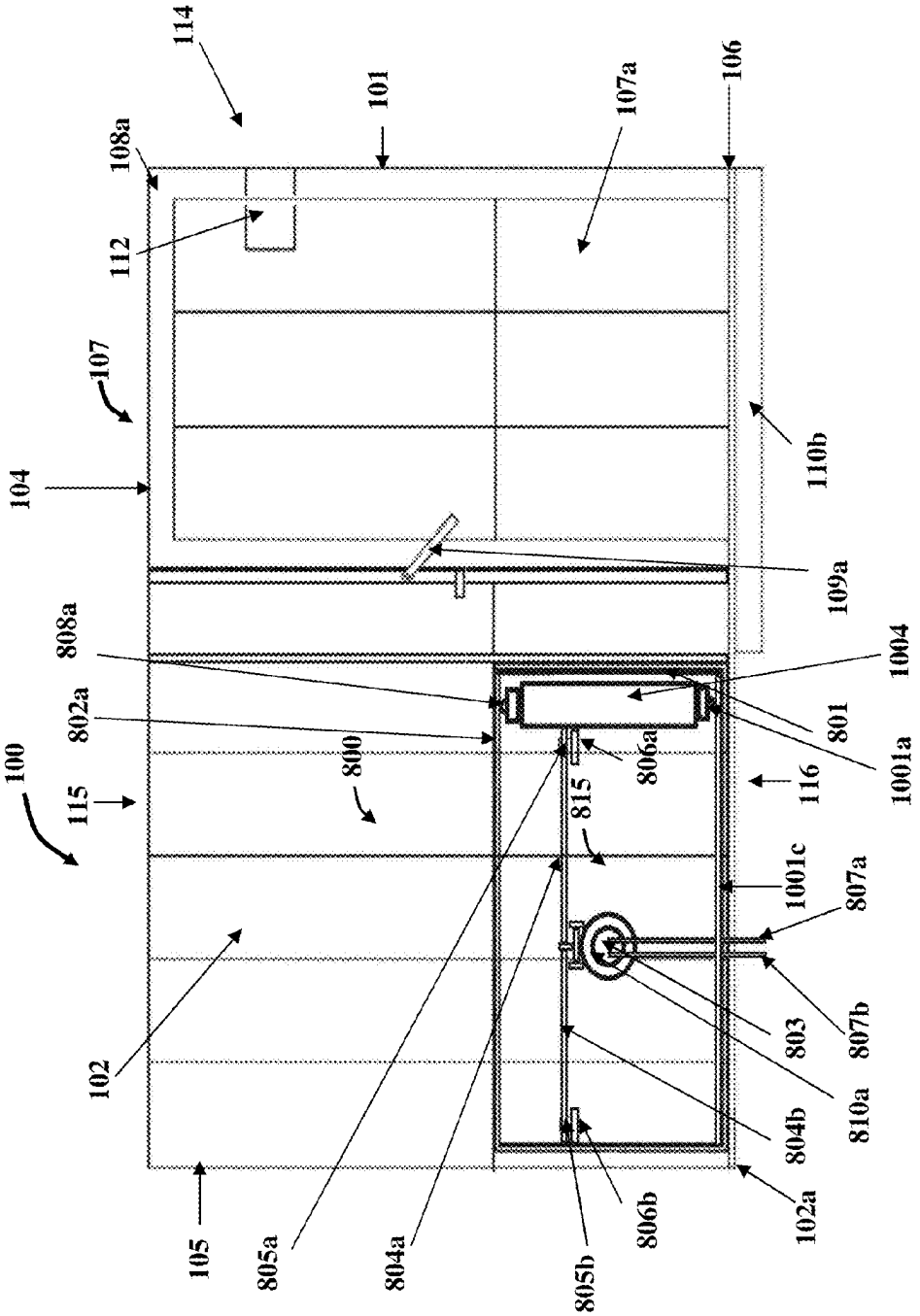
106
116
1003
1002b
103a

FIG. 10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806a
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805b
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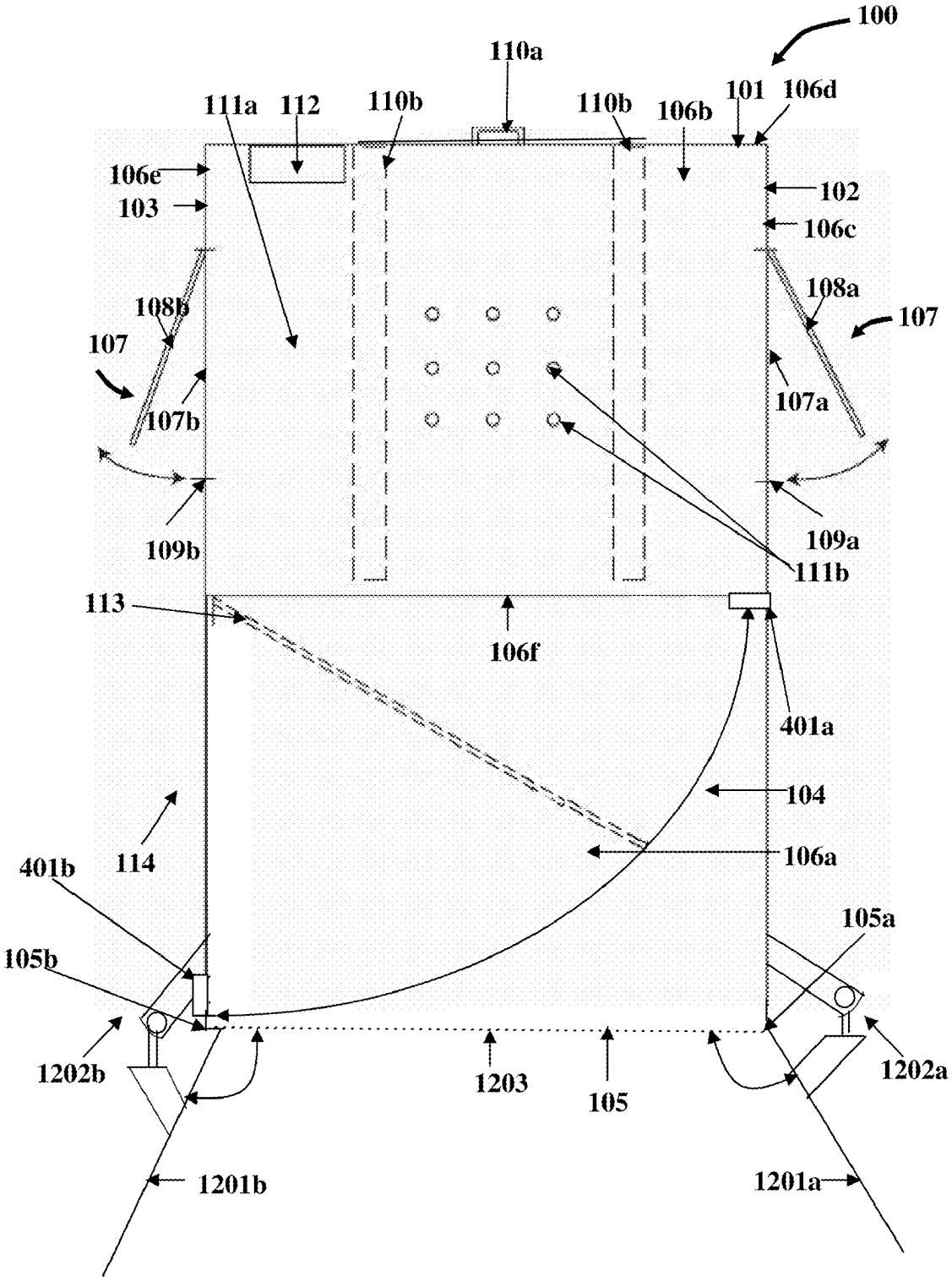
FIG. 11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109b
109a
111b
113
106f
401a
104
114
106a
401b
105a
105b
1202b
1203
105
1202a
1201b
1201a

FIG. 12

ANIMAL ISOLATOR

BACKGROUND

The apparatus and method disclosed herein, in general, relates to animal husbandry. More particularly, the apparatus and method disclosed herein relates to isolating one or more animals from a herd using an animal isolator.

Typically, in animal husbandry, animals are required to be isolated from a herd of animals for vaccination and for other medical reasons. The possessiveness of animals for their off-spring generally elicits violent reactions from the animals towards a person attempting to isolate the off-spring from the herd. Consequently, medical procedures and animal rearing processes that require isolating the animal off spring from the herd are hindered due to aggressive reactions from the animals.

The conventional techniques used for isolating animals include manual isolation which requires a significant amount time, effort and risk to a person who tries to isolate the off-spring. The off-spring, for example, a calf is conventionally isolated from the mother cow using a permanent fence or pens. However this technique requires a farmer performing the isolation to drive away the mother cow outside the fenced area and in the process the farmer is unprotected and is often attacked by the mother cow. There is a need for an isolation device mounted on a vehicle without requiring manual segregation and that allows isolation of the calf from the mother cow in a safe manner.

Hence, there is an unmet need for an animal isolator that facilitates the process of isolating one or more animals from the herd.

SUMMARY OF THE INVENTION

This summary is provided to introduce a selection of concepts in a simplified form that are further described in the detailed description of the invention. This summary is not intended to identify key or essential inventive concepts of the claimed subject matter, nor is it intended for determining the scope of the claimed subject matter.

The animal isolator and method disclosed herein addresses the above stated need for facilitating the process of isolating one or more animals form a herd. The animal isolator disclosed herein comprises a meshing enclosure for confining the animals. The meshing enclosure comprises a front wall, a rear wall, a pair of opposing side walls, and a partially closed base. The opposing side walls comprise a first side wall and a second side wall. The front wall, the rear wall, and the opposing side walls define an open ended enclosure. A tool box may be detachably attached to the front wall of the meshing enclosure.

The partially closed base partially closes a first end of the open ended enclosure. The meshing enclosure may comprise a ceiling for closing a second end of the open ended enclosure. The partially closed base comprises a platform and an opening to a ground surface. One or more animals are captured through the opening and driven onto the platform. The platform defines at least four edges on a periphery of the platform, such that two of the edges adjoin the first side wall and the second side wall, another one of the edges adjoins the front wall, and another one of the edges is exposed to the opening to the ground surface. The platform comprises multiple first drain holes for draining liquid matter from the platform for maintaining hygiene inside the animal isolator. A padding may be positioned over a top surface of the platform for providing comfort to the animals. The padding comprises

multiple second drain holes corresponding to the first drain holes for draining the liquid matter from the platform.

The meshing enclosure further comprises a gate for confining the animals to a region defined by the platform. In an embodiment, the gate extends from the first side wall to the second side wall in a closed position for confining the animals to the region defined by the platform. In this embodiment, the gate is pivotally hinged to the second side wall. A latch is provided on the first side wall for fastening the gate to the first side wall in the closed position. In another embodiment, the gate is a sliding gate extending from the first side wall to the second side wall. The sliding gate slides back and forth in a region defined by the opening to the ground surface in the meshing enclosure. In an embodiment, the sliding gate is controlled using a sliding assembly. The sliding assembly comprises one or more tracks, one or more rollers, and a hydraulic assembly. The sliding gate slides due to the rolling of the rollers along the tracks. The tracks can be mounted inside or outside the meshing enclosure. When the tracks are mounted outside the meshing enclosure, a horizontal clearance that runs along the entire length of each of the tracks is provided to allow forward and backward movement of the gate to track attachment. When mounted inside the meshing enclosure, shielding is positioned on one or more of the tracks for preventing the limbs of the animals from getting caught in the tracks by rendering the tracks inaccessible to the animals. In an embodiment, the shielding provided on the tracks is retractable.

The meshing enclosure further comprises an access unit for providing access for a user into the meshing enclosure. The access unit comprises one or more openings and one or more doors. The openings of the access unit are provided on sections of the opposing side walls adjoining two of the edges of the platform. The doors are operable to close the openings of the access unit. Each of the doors is pivotally hinged to one of the opposing side walls.

The animal isolator further comprises a vehicle mounting assembly for detachably attaching the meshing enclosure to a rear end or a front end of a vehicle. The vehicle mounting assembly comprises multiple tubular structures and an attachment unit. The tubular structures are disposed on a lower surface of the platform of the partially closed base. The tubular structures are provided for inserting, for example, multiple adjustable width forks of the rear end or the front end of a fork loader into the tubular structures for detachably attaching the meshing enclosure to the vehicle. Each of the tubular structures defines a front edge aligned with an edge common to the platform and the front wall. The attachment unit is provided on the front wall for detachably attaching the meshing enclosure to the rear end or the front end of the vehicle. The attachment unit comprises, for example, a hook or a clamp. When the vehicle has been hooked to the meshing enclosure using the attachment unit and the adjustable width forks of the vehicle are inserted into the tubular structures, the meshing enclosure can then be raised above ground surface and driven towards the herd.

The meshing enclosure further comprises an opening at the rear wall and a first wing and a second wing for guiding the animals into the meshing enclosure through the opening at the rear wall. The first wing is pivotally hinged to a first edge common to the first side wall and the rear wall. The second wing is pivotally hinged to a second edge common to the second side wall and the rear wall. A first hydraulic controller attached to the first side wall and the first wing controls the pivotal movement of the first wing. A second hydraulic controller attached to the second side wall and the second wing controls the pivotal movement of the second wing. Further-

more, a cattle squeeze may be provided within the meshing enclosure for restricting movement of the animals inside the meshing enclosure.

A user of the animal isolator detachably attaches the meshing enclosure to the rear end or the front end of the vehicle using the vehicle mounting assembly and raises the meshing enclosure above the ground surface. The user drives the vehicle through the herd, lowers the meshing enclosure over one or more animals from the herd, and captures the animals through the opening to the ground surface in the partially closed base of the meshing enclosure for isolating the animals from the herd. The user then drives the captured animals onto the platform and confines the captured animals to a region defined by the platform in the meshing enclosure using the gate. The user may then treat the animals confined to the meshing enclosure with medication, vaccines, etc. or haul the animals to another place for treatment.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing summary, as well as the following detailed description of the invention, is better understood when read in conjunction with the appended drawings. For the purpose of illustrating the invention, exemplary constructions of the invention are shown in the drawings. However, the invention is not limited to the specific methods and instrumentalities disclosed herein.

FIG. **1** exemplarily illustrates an isometric view of an animal isolator.

FIG. **2** exemplarily illustrates a front perspective view of the animal isolator.

FIG. **3** exemplarily illustrates a front view of the animal isolator.

FIG. **4** exemplarily illustrates a top view of the animal isolator.

FIG. **5** exemplarily illustrates a right side view of the animal isolator.

FIG. **6** exemplarily illustrates a left side view of the animal isolator.

FIG. **7** illustrates a method of isolating one or more animals from a herd using an animal isolator.

FIG. **8** exemplarily illustrates a top view of the animal isolator comprising a sliding gate in a closed position.

FIG. **9** exemplarily illustrates a top view of the animal isolator comprising the sliding gate in a partially open position.

FIG. **10** exemplarily illustrates a vertical cross sectional view of the animal isolator comprising the sliding gate.

FIG. **11** exemplarily illustrates a left side view of the animal isolator comprising the sliding gate.

FIG. **12** exemplarily illustrates a top view of the animal isolator comprising a pair of wings pivotally hinged to a first edge and a second edge of the rear wall.

DETAILED DESCRIPTION OF THE INVENTION

FIG. **1** exemplarily illustrates an isometric view of an animal isolator **100**. The animal isolator **100** disclosed herein isolates one or more animals from a herd. The animal isolator **100** comprises a meshing enclosure **114** for confining one or more animals. The meshing enclosure **114** is, for example, of a rectangular parallelepiped shape. The meshing enclosure **114** is, for example, made of a metallic substance. The meshing enclosure **114** comprises a front wall **101**, a rear wall **105**, a pair of opposing side walls **102** and **103**, and a partially closed base **106**. The opposing side walls **102** and **103** comprise a first side wall **102** and a second side wall **103**. The front wall **101**, the rear wall **105**, and the opposing side walls **102** and **103** define an open ended enclosure. In an embodiment, a ceiling **104** is provided on the top of the meshing enclosure **114**. The ceiling **104** closes a second end **115** of the open ended enclosure.

The partially closed base **106** partially closes a first end **116** of the open ended enclosure. The partially closed base **106** comprises a platform **106***b* and an opening **106***a* to a ground surface. One or more animals are captured through the opening **106***a* and driven onto the platform **106***b*. The platform **106***b* defines at least four edges **106***c*, **106***d*, **106***e*, and **106***f* on a periphery of the platform **106***b*, such that two of the edges **106***c* and **106***e* adjoin the first side wall **102** and the second side wall **103** respectively, another one of the edges **106***d* adjoins the front wall **101**, and another one of the edges **106***f* is exposed to the opening **106***a* to the ground surface.

The platform **106***b* comprises multiple first drain holes (not shown) for draining liquid matter from the platform **106***b* for maintaining hygiene inside the animal isolator **100**. A padding **111***a* is optionally positioned over a top surface of the platform **106***b* for providing comfort to the animals. The padding **111***a* is, for example, made of an elastic material. The elastic material is, for example, rubber. The padding **111***a* comprises multiple second drain holes **111***b* corresponding to the first drain holes for draining the liquid matter from the platform **106***b*.

The animal isolator **100** further comprises a vehicle mounting assembly **110***a* and **110***b* for detachably attaching the meshing enclosure **114** to a rear end or a front end of a vehicle. The vehicle mounting assembly **110***a* and **110***b* comprises multiple tubular structures **110***b* and an attachment unit **110***a*. The tubular structures **110***b* are disposed on the lower surface of the platform **106***b* of the partially closed base **106**. The tubular structures **110***b* are provided for inserting, for example, multiple adjustable width forks of the rear end or the front end of a fork loader into the tubular structures **110***b*, for detachably attaching the meshing enclosure **114** to the fork loader. Each of the tubular structures **110***b* defines a front edge **117** aligned with an edge **106***d* common to the platform **106***b* and the front wall **101**.

The attachment unit **110***a* is provided on the front wall **101** for detachably attaching the meshing enclosure **114** to the rear end or the front end of the vehicle. FIG. **2** exemplarily illustrates a front perspective view of the animal isolator **100**. FIG. **3** exemplarily illustrates a front view of the animal isolator **100**. As exemplarily illustrated in FIGS. **1-3**, the attachment unit **110***a* comprises, for example, a hook or a clamp. When the vehicle has been hooked to the meshing enclosure **114** using the attachment unit **110***a* and the adjustable width forks are inserted into the tubular structures **110***b*, the meshing enclosure **114** can then be raised above ground surface and driven towards the herd. A tool box **112**, as illustrated in FIGS. **1-6**, FIGS. **8-9**, and FIGS. **11-12**, may be provided in the meshing enclosure **114**. The tool box **112** is detachably attached to the front wall **101** of the meshing enclosure **114**.

As exemplary illustrated in FIGS. **4-6**, the meshing enclosure **114** further comprises an access unit **107** for providing access to a user into the meshing enclosure **114**. The access unit **107** comprises one or more openings **107***a* and **107***b* and one or more doors **108***a* and **108***b*. The openings **107***a* and **107***b* are provided on sections of the opposing side walls **102** and **103** adjoining two of the edges **106***c* and **106***e* of the platform **106***b*. The doors **108***a* and **108***b* are operable to close the openings **107***a* and **107***b*. Each of the doors **108***a* and **108***b* is pivotally hinged to one of the opposing side walls **102** and **103**. A top view of the animal isolator **100** is exemplarily

illustrated in FIG. **4**. A right side view of the animal isolator **100** is exemplarily illustrated in FIG. **5**. A left side view of the animal isolator **100** is exemplarily illustrated in FIG. **6**. The doors **108***a* and **108***b* are detachably attached to the opposing side walls **102** and **103** via latches **109***a* and **109***b* respectively.

The meshing enclosure **114** further comprises a gate **113** for confining the animals to a region defined by the platform **106***b*. In an embodiment, the gate **113** has selectable open and closed positions. In this embodiment, the gate **113**, when in the closed position and as illustrated in FIG. **4**, extends from the first side wall **102** to the second side wall **103**. The gate **113**, when in the open position, is parallel to the second side wall **103** as illustrated by FIG. **1**. The gate **113** is pivotally hinged to the second side wall **103** for movement between the open and closed positions. A first latch **401***a* is provided on the first side wall **102** for fastening the gate **113** to the first side wall **102** in a closed position and a second latch **401***b* is provided on the second side wall **103** for fastening the gate **113** to the second side wall **103** in an open position.

In another embodiment, the gate is a sliding gate **801** extending from the first side wall **102** to the second side wall **103** and perpendicular to the partially closed base **106**. The sliding gate **801** slides back and forth between the rear wall **105** and the edge **106***f* of the platform **106***b* exposed to the opening **106***a* to the ground surface, in a region defined by the opening **106***a* to the ground surface in the meshing enclosure **114**. The sliding gate **801** comprises an upper edge **811**, a lower edge **1003**, and a pair of opposing edges **1004** and **1005** forming a closed geometry as exemplarily illustrated in FIG. **10**. The upper edge **811** of the sliding gate **801** is parallel to the partially closed base **106** of the meshing enclosure **114** and comprises a first end **809***a* adjacent to the first side wall **102** and a second end **809***b* adjacent to the second side wall **103**. The lower edge **1003** is parallel to the partially closed base **106** of the meshing enclosure **114** and comprises a third end **1002***a* adjacent to the first side wall **102** and a fourth end **1002***b* adjacent to the second side wall **103**.

A sliding assembly **800** controls the movement of the sliding gate **801**. The sliding assembly **800** comprises multiple tracks **802***a*, **802***b*, **1001***c*, and **1001***d*, multiple rollers **808***a*, **808***b*, **1001***a*, and **1001***b*, and a hydraulic assembly **815**. The arrangement of the sliding assembly **800** in the animal isolator **100** is exemplarily illustrated in the FIGS. **8-11**. A top view of the animal isolator **100** comprising a sliding gate **801** in a closed position is exemplarily illustrated in FIG. **8**. A top view of the animal isolator **100** comprising the sliding gate **801** in a partially open position is exemplarily illustrated in FIG. **9**. A vertical cross sectional view of the animal isolator **100** comprising the sliding gate **801** is exemplarily illustrated in FIG. **10**. A left side view of the animal isolator **100** comprising the sliding gate **801** is exemplarily illustrated in FIG. **11**.

The tracks **802***a*, **802***b*, **1001***c*, and **1001***d* extend from the rear wall **105** to an edge corresponding to an edge **106***f* of the platform **106***b* exposed to the opening **106***a* to the ground surface as exemplarily illustrated in FIGS. **8-10**. The tracks **802***a*, **802***b*, **1001***c*, and **1001***d* comprise a first track **802***a* adjacent to the first end **809***a* of the upper edge **811** of the sliding gate **801**, a second track **802***b* adjacent to the second end **809***b* of the upper edge **811** of the sliding gate **801**, a third track **1001***c* adjacent to the third end **1002***a* of the lower edge **1003** of the sliding gate **801**, and a fourth track **1001***d* adjacent to the fourth end **1002***b* of the lower edge **1003** of the sliding gate **801** as exemplarily illustrated in FIG. **10**. The first track **802***a*, the second track **802***b*, the third track **1001***c*, and the fourth track **1001***d* are parallel to the opposing side walls **102** and **103** and the partially closed base **106**. The first track **802***a* and the second track **802***b* are exemplarily illustrated in FIGS. **8-9**. The third track **1001***c* and the fourth track **1001***d* are exemplarily illustrated in FIG. **10**. The first track **802***a* and the third track **1001***c* are attached to the first side wall **102**, and the second track **802***b* and the fourth track **1001***d* are attached to the second side wall **103** as exemplarily illustrated in FIG. **10**.

Although FIGS. **8-11** illustrate the tracks **802***a*, **802***b*, **1001***c*, and **1001***d* on the inside of the opposing side walls **102** and **103**, the tracks **1001***c*, and **1001***d* may also be positioned on the outside of the opposing side walls **102** and **103**. In this embodiment, the third track **1001***c* is attached to a first lower edge **102***a* of the first side wall **102** and the fourth track **1001***d* is attached to a second lower edge **103***a* of the second side wall **103**. The third track **1001***c* and the fourth track **1001***d* are disposed below the partially closed base **106** of the meshing enclosure **114**.

The sliding assembly **800** further comprises a shielding (not shown) positioned on one or more of the tracks **802***a*, **802***b*, **1001***c*, and **1001***d* for preventing the animals from getting caught in the tracks **802***a*, **802***b*, **1001***c*, and **1001***d* by rendering the tracks **802***a*, **802***b*, **1001***c*, and **1001***d* inaccessible to the animals. In an embodiment, the shielding is retractable.

As exemplarily illustrated in FIG. **10**, the rollers **808***a*, **808***b*, **1001***a*, and **1001***b* comprise a first roller **808***a*, a second roller **808***b*, a third roller **1001***a*, and a fourth roller **1001***b*. The first roller **808***a* is attached to the first end **809***a* of the upper edge **811** of the sliding gate **801** and is rollably positioned in the first track **802***a*. The second roller **808***b* is attached to the second end **809***b* of the upper edge **811** of the sliding gate **801** and is rollably positioned in the second track **802***b*. The third roller **1001***a* is attached to the third end **1002***a* of the lower edge **1003** of the sliding gate **801** and is rollably positioned in the third track **1001***c*. The fourth roller **1001***b* is attached to the fourth end **1002***b* of the lower edge **1003** of the sliding gate **801** and is rollably positioned in the fourth track **1001***d*.

As exemplarily illustrated in FIGS. **8-11**, the hydraulic assembly **815** drives the sliding gate **801**. The hydraulic assembly **815** comprises a hydraulic cylinder **803** horizontally disposed and parallel to the sliding gate **801**, a piston **813**, and a set of bars **804***a*, **804***b*, **804***c*, and **804***d*. The hydraulic cylinder **803** comprises an inlet hose **807***a* and an outlet hose **807***b* connected to a first end **810***a* of the hydraulic cylinder **803** for allowing a hydraulic fluid to enter and exit respectively from the hydraulic cylinder **803**. The piston **813** is concentric with and moves along the length of the hydraulic cylinder **803**. A first end **814***a* of the piston **813** is fitted into a second end **810***b* of the hydraulic cylinder **803**.

The set of bars **804***a*, **804***b*, **804***c*, and **804***d* comprises a first bar **804***a*, a second bar **804***b*, a third bar **804***c*, and a fourth bar **804***d*. A first end **812***a* of the first bar **804***a* and a second end **812***h* of the fourth bar **804***d* are bolted together using a first swivel bolt **805***a*. A first end **812***e* of the third bar **804***c* and a second end **812***d* of the second bar **804***b* are bolted together using a second swivel bolt **805***b*. A second end **812***b* of the first bar **804***a* and a first end **812***c* of the second bar **804***b* are connected to the first end **810***a* of the hydraulic cylinder **803**. A first end **812**g of the fourth bar **804***d* and a second end **812***f* of the third bar **804***c* are connected to a second end **814***b* of the piston **813**. The first swivel bolt **805***a* is supported by a first swivel plate **806***a* attached to the sliding gate **801**. The second swivel bolt **805***b* is supported by a second swivel plate **806***b* attached to the rear wall **105**.

In an embodiment of the animal isolator **100**, the meshing enclosure **114** comprises an opening **1203** at the rear wall **105**

as exemplarily illustrated in FIG. **12**. FIG. **12** exemplarily illustrates a top view of the animal isolator **100** comprising a pair of wings **1201***a* and **1201***b* pivotally hinged to a first edge **105***a* and a second edge **105***b* of the rear wall **105**. The pair of wings **1201***a* and **1201***b* comprises a first wing **1201***a* and a second wing **1201***b* for guiding the animals into the meshing enclosure **114** through the opening **1203** at the rear wall **105**. The first wing **1201***a* is pivotally hinged to a first edge **105***a* common to the first side wall **102** and the rear wall **105**. The second wing **1201***b* is pivotally hinged to a second edge **105***b* common to the second side wall **103** and the rear wall **105**.

The animal isolator **100** further comprises a first hydraulic controller **1202***a* and a second hydraulic controller **1202***b*. The first hydraulic controller **1202***a* is attached to the first side wall **102** and the first wing **1201***a* for controlling the pivotal movement of the first wing **1201***a*. The second hydraulic controller **1202***b* is attached to the second side wall **103** and the second wing **1201***b* for controlling the pivotal movement of the second wing **1201***b*. Controlling the operation of the first hydraulic controller **1202***a* and the second hydraulic controller **1202***b* can be performed by connecting the first hydraulic controller **1202***a* and the second hydraulic controller **1202***b* to a hydraulic system (not shown) powered by the vehicle and controlled by a hydraulic remote (not shown). The first hydraulic controller **1202***a* and the second hydraulic controller **1202***b* work in tandem for controlling the pivotal movement of the first wing **1201***a* and the pivotal movement of the second wing **1201***b* respectively.

In an embodiment of the animal isolator **100**, the meshing enclosure **114** comprises a cattle squeeze (not shown) for restricting the movement of the animals inside the meshing enclosure **114**. Restricting the movement of the animals by the cattle squeeze enables administering vaccinations to the animals, tagging the animals, treatment of the animals by a veterinarian, and other animal husbandry purposes. The animals are allowed to exit the animal isolator **100** by opening the gate **113**. The cattle squeeze is, for example, located at the gate **113** of the animal isolator **100**. The cattle squeeze is, for example, a standard cattle squeeze comprising a cattle squeeze frame (not shown) and a pair of opposing side panels (not shown) pivoted on a base frame (not shown). The side panels are spaced apart from each other for defining an enclosure within the cattle squeeze frame. The cattle squeeze frame comprises a rear portion (not shown) adjacent to the side panels for allowing an animal to enter the cattle squeeze. The cattle squeeze frame further comprises a front portion (not shown) adjacent to the side panels for allowing the animals to exit the cattle squeeze. The cattle squeeze frame is mounted on the inner side of the first wing **1201***a* of the animal isolator **100** as exemplarily illustrated in FIG. **12**. One of the side panels are in the immediate vicinity of the first wing **1201***a*. The opposite side panel is secured to the second wing **1201***b* using one or more quick latch mechanisms (not shown) when the cattle squeeze is used for holding an animal. In an embodiment, the cattle squeeze frame is mounted on the outer side of the first wing **1201***a* of the animal isolator **100**. In another embodiment, the cattle squeeze frame is mounted on the second wing **1201***b* of the animal isolator **100**.

As exemplarily illustrated in FIG. **12**, the first wing **1201***a* and the second wing **1201***b* are closed for allowing the quick latch mechanism (not shown) to secure the cattle squeeze (not shown). The cattle squeeze, for example comprises a pre-catch position, a hold position, and a release position. In the pre-catch position, the side panels pivot towards the outside of the enclosure, allowing the animals to enter the enclosure through the opening **1203** in the rear wall **105** as illustrated in FIG. **12**. In the hold position, a pair of squeeze bars (not shown), each positioned at either side of the front portion, captures the neck portion of the animal as the head of the animal passes through the front portion. The side panels pivot towards the inside of the enclosure, restricting the movement of the animal. The hold position of the cattle squeeze allows securing the animal within the enclosure for treatment. In the release position, the side panels are pivoted towards the outside of the enclosure and the squeeze bars release the head of the animal, allowing the animal to exit the cattle squeeze. In an embodiment, the cattle squeeze is positioned near the gate **113**.

FIG. **7** illustrates a method of isolating one or more animals from a herd using an animal isolator **100**. An animal isolator **100** comprising a meshing enclosure **114**, a vehicle mounting assembly **110***a* and **110***b*, and a gate **113** or **801** is provided **701**. The animal isolator **100** is illustrated and described in the detailed description of FIGS. **1-6** and FIGS. **8-12**. A user detachably attaches **702** the meshing enclosure **114** to the rear end or the front end of a vehicle using the vehicle mounting assembly **110***a* and **110***b*. The user then raises **703** the detachably attached meshing enclosure **114** above the ground surface sufficient to capture the animals and drives the vehicle through the herd. The user then lowers **704** the detachably attached meshing enclosure **114** over the animals from the herd and captures one or more animals through an opening **106***a* to the ground surface in the partially closed base **106** of the detachably attached meshing enclosure **114** for isolating one or more animals from the herd.

The user then drives **705** the captured animals onto the platform **106***b* using the gate **113** or **801** of the detachably attached meshing enclosure **114** and confines **706** the captured animals to a region defined by the platform **106***b* in the meshing enclosure **114** using the gate **113** or **801**, thereby isolating the animals from the herd. In an embodiment where the gate is the sliding gate **801** controlled by the sliding assembly **800**. The sliding assembly **800** is explained in the detailed description of FIGS. **8-11**. After driving the animals onto the platform **106***b*, the user draws the hydraulic fluid out of the hydraulic cylinder **803** via the outlet hose **807***b* for reducing the hydraulic pressure inside the hydraulic cylinder **803** which allows the piston **813** to move into the hydraulic cylinder **803** due to the reduced pressure. The first bar **804***a* and the fourth bar **804***d* exert force onto the sliding gate **801** when the piston **813** moves. The exerted force moves the sliding gate **801** towards the edge **106***f* of the platform **106***b* exposed to the opening **106***a* to the ground surface **106***a* by rolling of the rollers **808***a*, **808***b*, **1001***a*, and **1001***b* along the tracks **802***a*, **802***b*, **1001***c*, and **1001***d*. The sliding gate **801** reaches the edge **106***f* of the platform **106***b* exposed to the opening **106***a* to the ground surface **106***a*, thereby confining the animals driven onto the platform **106***b* to the region defined by the platform **106***b*.

In the embodiment of the animal isolator **100** as exemplarily illustrated in FIG. **12**, the user detachably attaches the meshing enclosure **114** to the front end of the vehicle. The user opens the first wing **1201***a* and the second wing **1201***b* for guiding the animals into the meshing enclosure **114** though the opening **1203** at the rear wall **105**. The user drives the animals into the meshing enclosure **114** through the opening **1203** at rear wall **105**. The user then closes the first wing **1201***a* and the second wing **1201***b* using the first hydraulic controller **1202***a* and the second hydraulic controller **1202***b* as exemplarily illustrated in FIG. **12**. The user drives the animals onto the platform **106***b* and closes the gate **113** to confine the animals to the region defined by the platform

106*b*. The user may then restrict the movement of the animals inside the meshing enclosure **114** using the cattle squeeze (not shown).

The user may then treat the animals confined in the meshing enclosure **114** with medication, vaccines, etc. or may haul the animals to another place for treatment. The user treats the isolated animals using the tool box **112** provided inside the meshing enclosure **114**.

Isolating animals using the animal isolator **100** facilitates the processes involved in animal husbandry requiring isolating one or more calves from the herd. Further, using the animal isolator **100** ensures the safety of the user by preventing direct confrontation of the user with the herd during the process of isolating the young ones from the herd. The animal isolator **100** is used for isolating calves from a herd of mother cows. A first user detachably attaches the animal isolator **100** to the rear end of a vehicle, for example, a fork lift or a fork loader by inserting the forks of the fork lift into the tubular structures **110***b* and hooking the fork lift to the attachment unit **110***a* of the vehicle mounting assembly **110***a* and **110***b*. The user then drives the animal isolator **100** through the herd comprising multiple cows and multiple calves. On encountering the calves, the user raises the meshing enclosure **114** above the ground surface sufficient to allow the calf to be captured through opening **106***a*. The user then lowers the detachably attached meshing enclosure **114** over the calves from the herd and captures one or more calves through the opening **106***a* at the ground surface.

A second user may enter the meshing enclosure **114** through one of the doors **108***a* and **108***b* and drives the captured calves onto the platform **106***b* in the meshing enclosure **114**. The second user closes the gate **113** for confining the calves to the region defined by the platform **106***b*. Meanwhile, the first user drives away the herd for ensuring the safety of the first user and the calves. The calves are thereby isolated from the herd and the second user treats the isolated calves on the platform **106***b* inside the meshing enclosure **114** without being interrupted by violent reactions from the mother. After the treatment, the calves are let out of the meshing enclosure **114** by lowering the meshing enclosure **114** onto the ground surface, opening the gate **113**, allowing the calves to get down from the platform **106***b*, and raising the meshing enclosure **114** once the calves get down onto the ground surface.

The foregoing examples have been provided merely for the purpose of explanation and are in no way to be construed as limiting of the present invention. While the invention has been described with reference to various embodiments, it is understood that the words, which have been used herein, are words of description and illustration, rather than words of limitation. Further, although the invention has been described herein with reference to particular means, materials and embodiments, the invention is not intended to be limited to the particulars disclosed herein; rather, the invention extends to all functionally equivalent structures, methods and uses, such as are within the scope of the appended claims. Those skilled in the art, having the benefit of the teachings of this specification, may effect numerous modifications thereto and changes may be made without departing from the scope and spirit of the invention in its aspects.

I claim:

1. A method of isolating one or more animals from a herd, comprising the steps of:

providing an animal isolator comprising:

a meshing enclosure for confining said one or more animals, comprising:

a front wall, a rear wall, and a pair of opposing side walls comprising a first side wall and a second side wall, wherein said front wall, said rear wall, and said opposing side walls define an open ended enclosure;

a partially closed base partially closing a first end of said open ended enclosure, wherein said partially closed base comprises a platform and an opening to said ground surface, wherein said platform defines at least four edges on a periphery of said platform, wherein two of said edges adjoin said first side wall and said second side wall, another one of said edges adjoins said front wall, and another one of said edges is exposed to said opening to said ground surface;

a vehicle mounting assembly comprising:

a plurality of tubular structures disposed on a lower surface of said platform of said partially closed base, wherein each of said tubular structures defines a front edge aligned with an edge common to said platform and said front wall; and

an attachment unit provided on said front wall for detachably attaching said meshing enclosure to one of a rear end and a front end of said vehicle; and

a gate for confining said one or more animals to a region defined by said platform, wherein said gate extends from said first side wall to said second side wall;

detachably attaching said meshing enclosure to one of said rear end and said front end of a vehicle using said vehicle mounting assembly;

raising said detachably attached meshing enclosure above ground surface and driving said vehicle through said herd;

lowering said detachably attached meshing enclosure over said one or more animals from said herd and capturing said one or more animals through said opening in said partially closed base of said detachably attached meshing enclosure for isolating said one or more animals from said herd;

driving said captured one or more animals onto said platform by advancing said gate towards said platform, wherein said gate traverses a region defined by said opening to said ground surface to drive said captured one or more animals onto said platform in said meshing enclosure; and

confining said captured one or more animals to a region defined by said platform in said meshing enclosure using said gate;

whereby said confinement of said captured one or more animals in said detachably attached meshing enclosure isolates said captured one or more animals from said herd.

2. The method of claim **1**, wherein said confined one or more animals are treated in said meshing enclosure.

3. The method of claim **1**, further comprising the step of inserting one or more adjustable width forks of one of said rear end of said vehicle and said front end of said vehicle into said tubular structures of said vehicle mounting assembly for detachably attaching said meshing enclosure to said vehicle.

4. The method of claim **1**, wherein the step of driving said animals onto said platform comprises the steps of:

providing a first wing, a second wing, and an opening at said rear wall of said meshing enclosure for guiding said one or more animals into said meshing enclosure through said opening at said rear wall, wherein said first wing is pivotally hinged to a first edge common to said first side wall and said rear wall, wherein said second wing is pivotally hinged to a second edge common to said second side wall and said rear wall;

opening said first wing and said second wing for guiding said one or more animals into said meshing enclosure;

driving said one or more animals into said meshing enclosure through said opening at said rear wall;

closing said first wing and said second wing; and

driving said one or more animals onto said platform.

5. The method of claim **4**, wherein a first hydraulic controller is attached to said first side wall and said first wing for controlling pivotal movement of said first wing, and wherein a second hydraulic controller is attached to said second side wall and said second wing for controlling pivotal movement of said second wing.

6. A method of isolating one or more animals from a herd, comprising the steps of:

providing an animal isolator comprising:

a meshing enclosure for confining said one or more animals, comprising:

a front wall, a rear wall, and a pair of opposing side walls comprising a first side wall and a second side wall, wherein said front wall, said rear wall, and said opposing side walls define an open ended enclosure;

a partially closed base partially closing a first end of said open ended enclosure, wherein said partially closed base comprises a platform and an opening to said ground surface, wherein said platform defines at least four edges on a periphery of said platform, wherein two of said edges adjoin said first side wall and said second side wall, another one of said edges adjoins said front wall, and another one of said edges is exposed to said opening to said ground surface;

a vehicle mounting assembly comprising:

a plurality of tubular structures disposed on a lower surface of said platform of said partially closed base, wherein each of said tubular structures defines a front edge aligned with an edge common to said platform and said front wall; and

an attachment unit provided on said front wall for detachably attaching said meshing enclosure to one of a rear end and a front end of said vehicle; and

a gate for confining said one or more animals to a region defined by said platform, wherein said gate is pivotally hinged to said second side wall, wherein said gate extends from said first side wall to said second side wall in a closed position;

detachably attaching said meshing enclosure to one of said rear end and said front end of a vehicle using said vehicle mounting assembly;

raising said detachably attached meshing enclosure above ground surface and driving said vehicle through said herd;

lowering said detachably attached meshing enclosure over said one or more animals from said herd and capturing said one or more animals through said opening in said partially closed base of said detachably attached meshing enclosure for isolating said one or more animals from said herd;

driving said captured one or more animals onto said platform by closing said gate, wherein said gate substantially traverses a region defined by said opening to said ground surface to drive said captured one or more animals to said platform in said meshing enclosure; and

confining said captured one or more animals to a region defined by said platform in said meshing enclosure using said gate;

whereby said confinement of said captured one or more animals in said detachably attached meshing enclosure isolates said captured one or more animals from said herd.

7. The method of claim **6**, wherein a latch is provided on said first side wall for fastening said gate to said first side wall in said closed position.

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