



US 20210362762A1

(19) **United States**(12) **Patent Application Publication**  
**Lawson**(10) **Pub. No.: US 2021/0362762 A1**(43) **Pub. Date: Nov. 25, 2021**(54) **UTILITY CART**(71) Applicant: **ARCELORMITTAL**, Luxembourg  
(LU)(72) Inventor: **Leland Lawson**, Bakersfield, CA (US)(21) Appl. No.: **16/487,160**(22) PCT Filed: **Mar. 1, 2018**(86) PCT No.: **PCT/IB2018/051237**

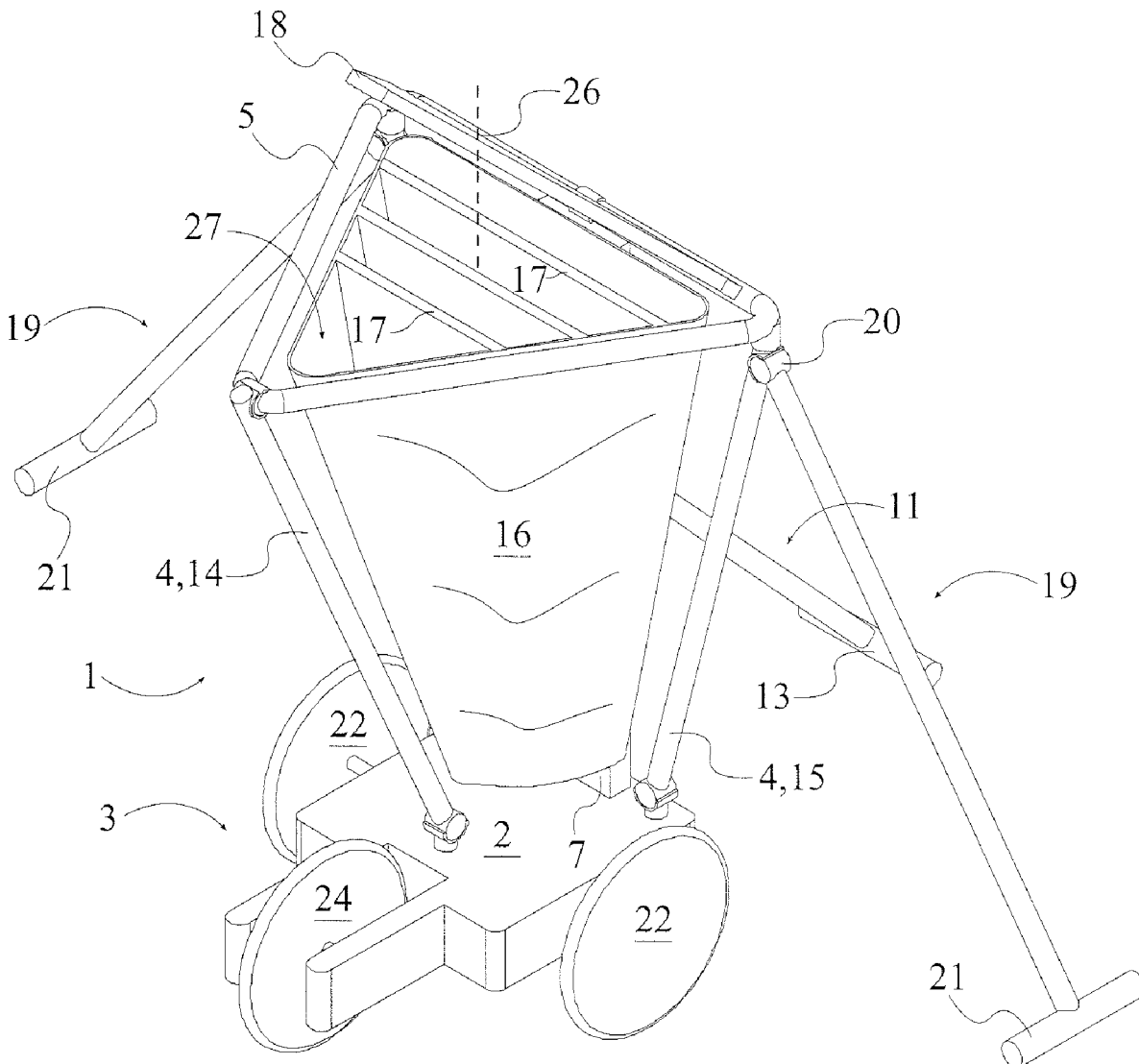
§ 371 (c)(1),

(2) Date: **Aug. 20, 2019****Publication Classification**(51) **Int. Cl.**  
**B62B 3/02** (2006.01)  
**B62B 3/10** (2006.01)  
**B62B 3/12** (2006.01)(52) **U.S. Cl.**CPC ..... **B62B 3/02** (2013.01); **B62B 3/106**  
(2013.01); **B62B 2202/22** (2013.01); **B62B**  
**2205/30** (2013.01); **B62B 3/12** (2013.01)

(57)

**ABSTRACT**

A utility cart is an apparatus that allows a user to easily carry and access items which are placed inside of the utility car. The utility cart includes a carriage, a base, and a wheel assembly. The carriage further includes a plurality of elongated supports and a closed-shape frame. The plurality of elongated supports and the closed-shape frame define a funnel-like structural shape of the carriage which allows a user to easily access items which are placed inside of the utility cart. The base provides a structural foundation for the utility cart and the wheel assembly is integrated into the base. The wheel assembly provides a conveyance means which allows the utility cart to be translated along the ground or other surface.



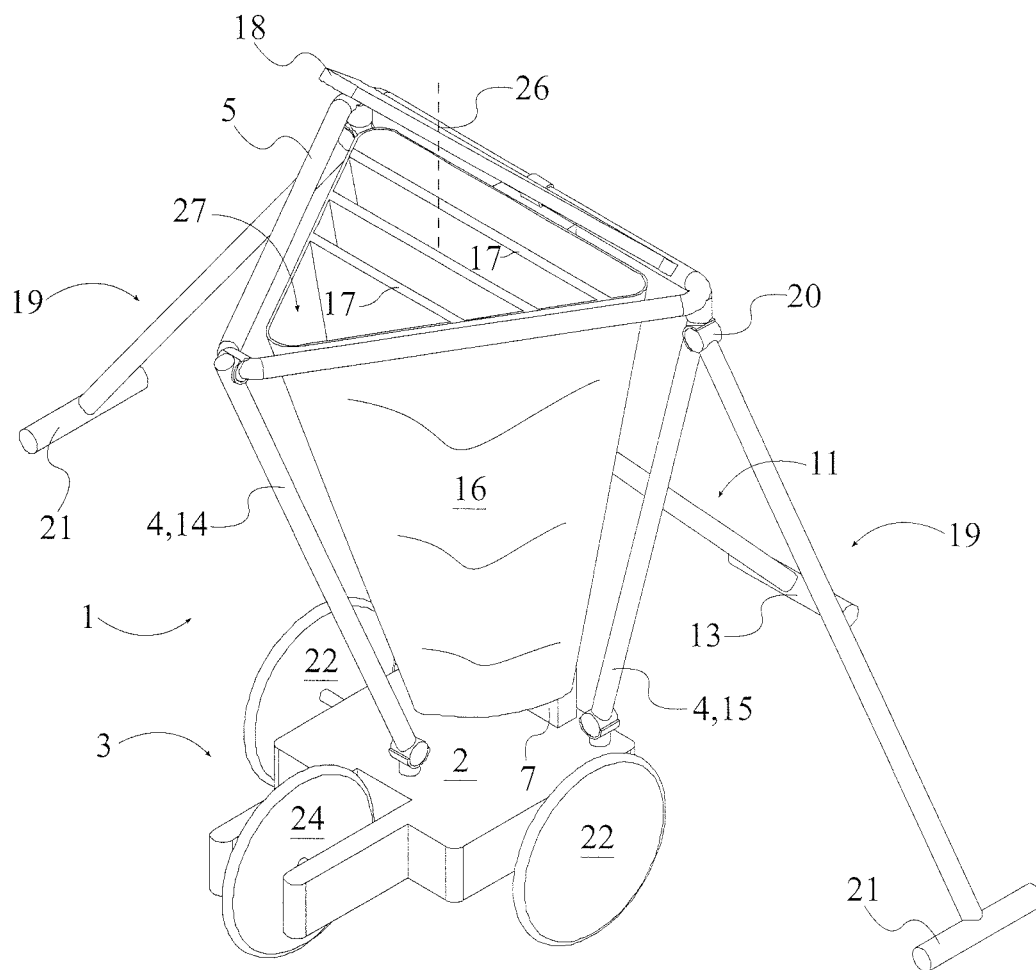


FIG. 1

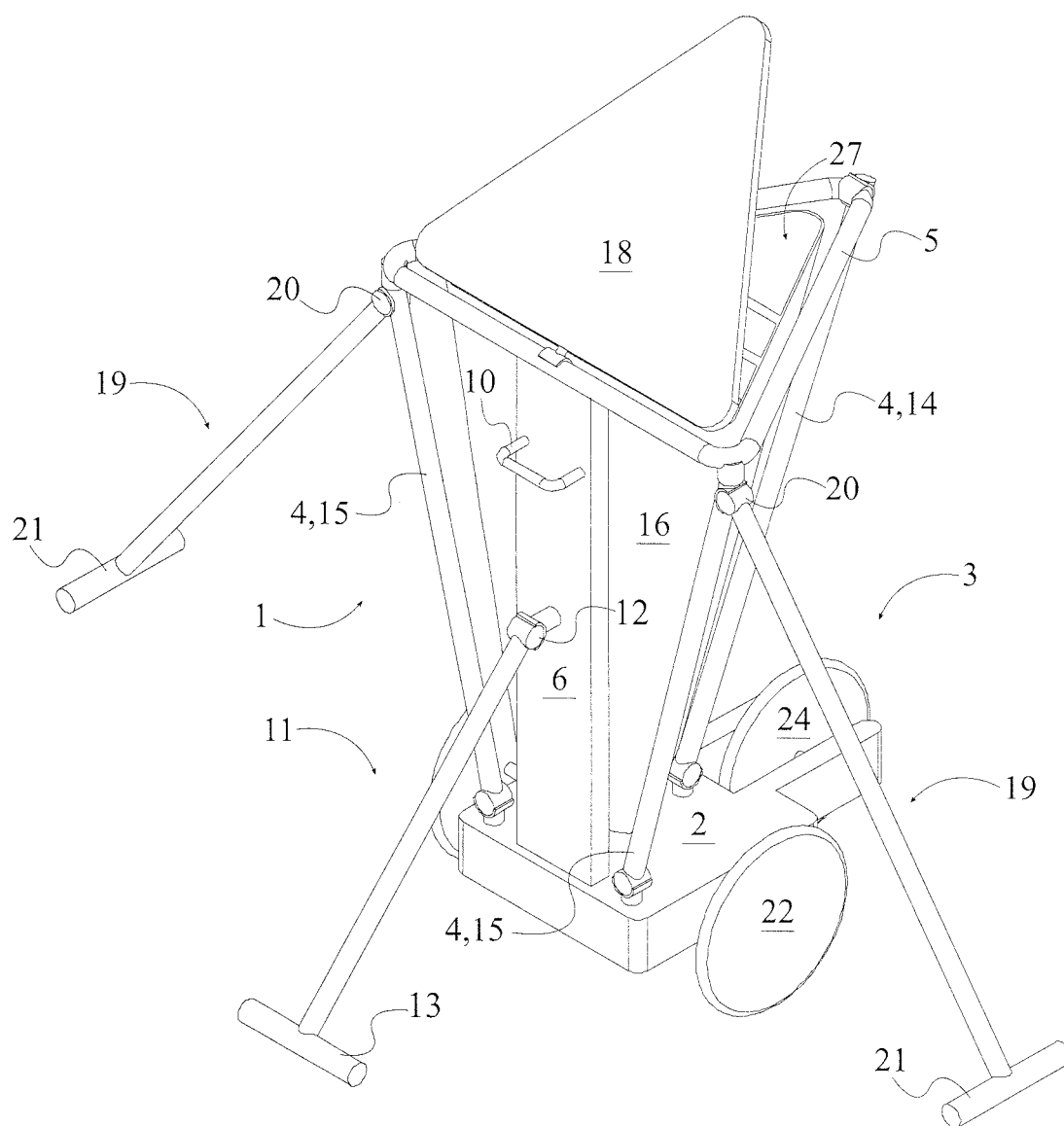


FIG. 2

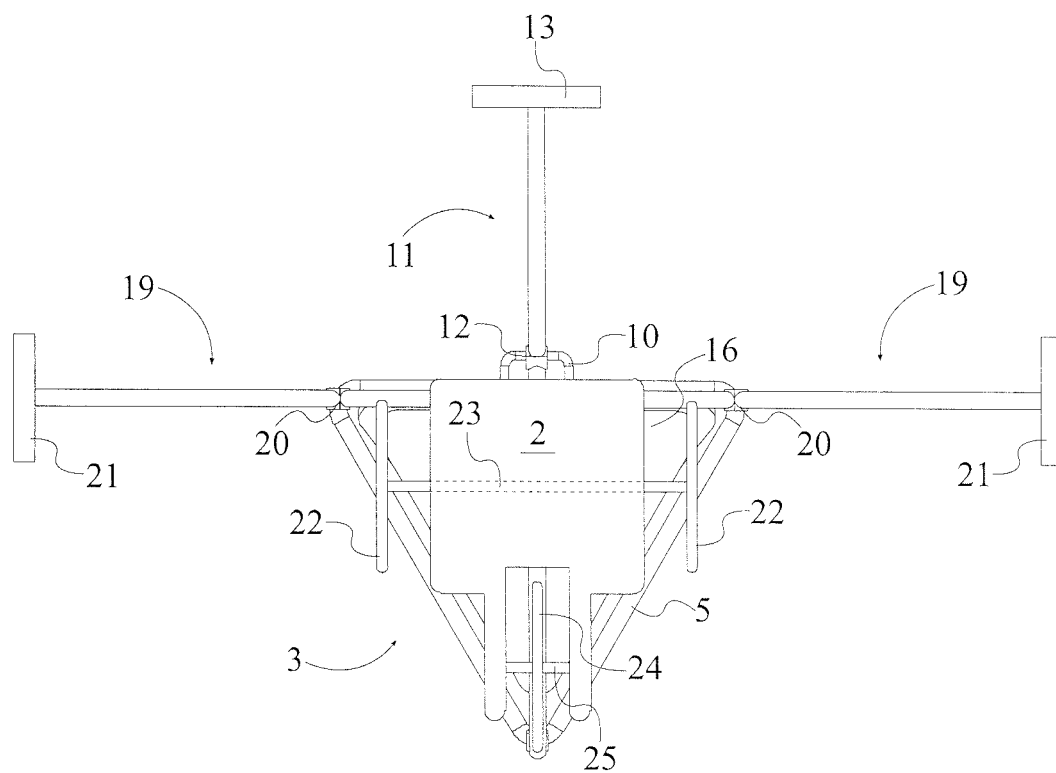


FIG. 3

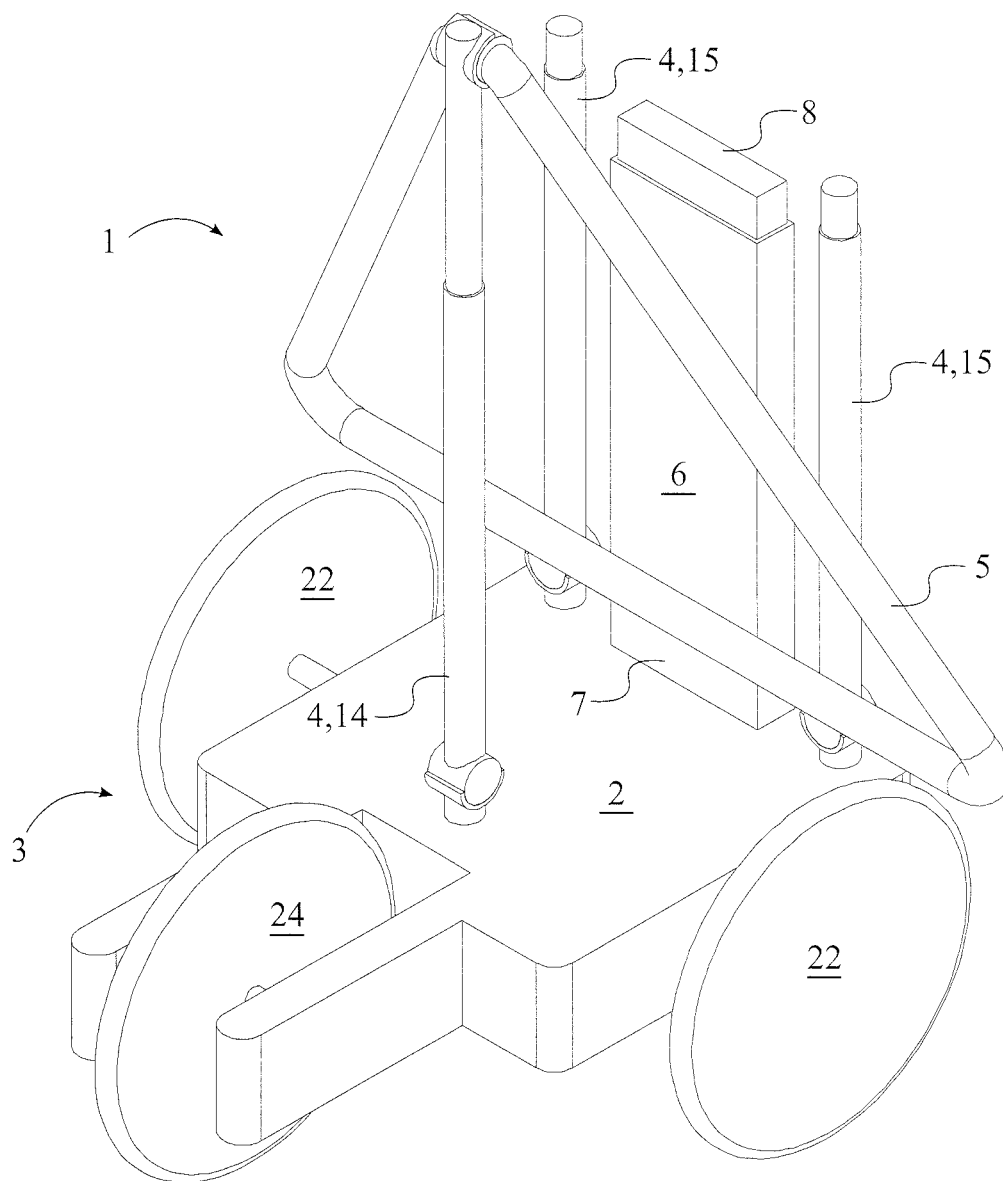


FIG. 4

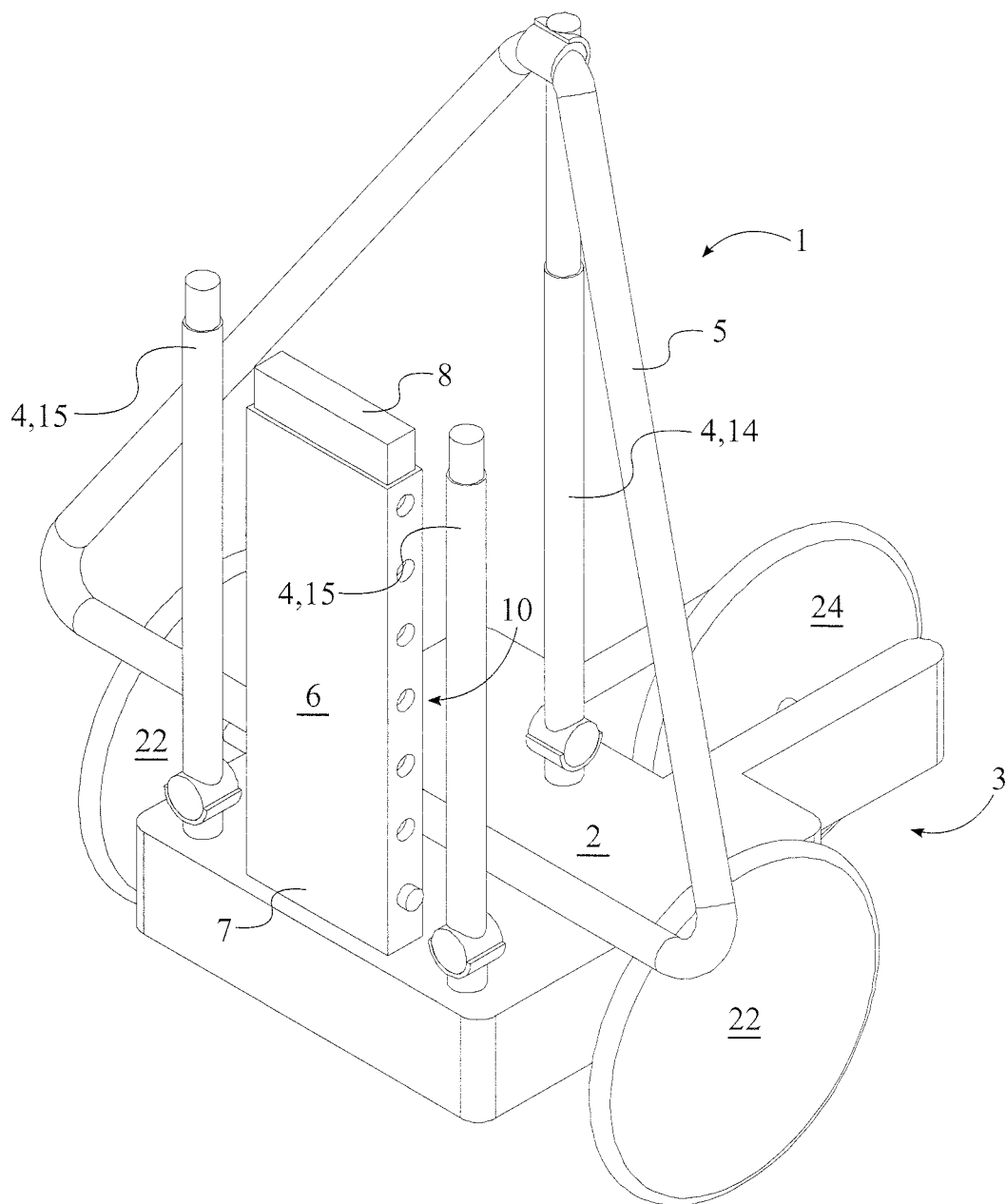


FIG. 5

## UTILITY CART

[0001] The current application claims a priority to the U.S. Provisional Patent application Ser. No. 62/465,641 filed on Mar. 1, 2017.

## FIELD OF THE INVENTION

[0002] The present invention relates generally to a utility cart. More particularly, the present invention is a wheeled utility cart with a tapered design allowing a user to easily carry and access items that are placed inside. The present invention may additionally be collapsible for storage purposes.

## BACKGROUND OF THE INVENTION

[0003] There are various carts that allow an individual to easily carry multiple items. These various carts include a storage means where an individual can place items. The storage means is typically an open container that includes a rectangular shape. A major problem, with conventional storage means, is that it is difficult for a person to access the items within the cart. In more detail, a person must lift the items placed inside the storage means which can difficult if the item is of substantial weight. Additionally, conventional carts are bulky and, as a result, are cumbersome to store.

[0004] It is therefore an objective of the present invention to provide a wheeled utility cart with a tapered design which allows the user to easily carry and access items that are placed inside. The present invention may additionally be collapsible allowing the user to easily store the present invention. The present invention includes a main body that is funnel-shaped which allows items within to be easily accessed with significantly less effort. The present invention includes supports which are telescopic providing a collapsibility aspect to the present invention for easy storage. The present invention additionally includes a support plate, various embodiments of kickstands, and a bag. The support plate allows the use to control the center weight of the present invention. The various embodiments of the kickstands allow the present invention to be rested on its side. The bag provides a receptacle to receive items.

## BRIEF DESCRIPTION OF THE DRAWINGS

[0005] FIG. 1 is a front perspective of the present invention.

[0006] FIG. 2 is a rear perspective of the present invention.

[0007] FIG. 3 is a bottom view of the present invention.

[0008] FIG. 4 is a front perspective view of the present invention displaying the telescopic aspect of the plurality of elongated supports and the support plate.

[0009] FIG. 5 is a rear perspective view of the present invention displaying the telescopic aspect of the plurality of elongated supports and the support plate.

## DETAIL DESCRIPTIONS OF THE INVENTION

[0010] All illustrations of the drawings are for the purpose of describing selected versions of the present invention and are not intended to limit the scope of the present invention.

[0011] In reference to FIGS. 1 through 5, the present invention is a wheeled utility cart that allows a user to easily carry and access items and that may be collapsible for easy storage. The present invention can be used for garden work,

house work, and grocery shopping. The present invention comprises a carriage 1, a base 2, and a wheel assembly 3. The carriage 1 provides a durable, structural frame that includes a funnel shape allowing the user to easily access and store items from and into the present invention. The carriage 1 comprises a plurality of elongated supports 4 and a closed-shape frame 5. The plurality of elongated supports 4 and the closed-shape frame 5 form the funnel-like shape of the present invention. The base 2 provides a structural foundation which acts as a link between the carriage 1 and the wheel assembly 3. The inside of the base 2 may be used to store accessories and devices such as electronics. The wheel assembly 3 provides a conveyance means allowing the user to easily push or pull the present invention across any surface.

[0012] The general configuration of the aforementioned components allows the user to easily carry and access items. Additionally, the present invention provides a collapsible utility cart for easy storage and the design of the invention allows the present invention to be easily maneuvered in tight spaces. With reference to FIG. 1, the base 2 is terminally mounted to the plurality of elongated supports 4. The closed-shape frame 5 is terminally mounted to the plurality of elongated supports 4, opposite the base 2. The arrangement of the plurality of elongated supports 4, the closed-shape frame 5, and the base 2 stabilizes the plurality of elongated supports 4 to prevent the plurality of elongated supports 4 from moving and therefore, defining the structural shape of the carriage 1. The plurality of elongated supports 4 is radially distributed about a center axis 26 of the closed-shape frame 5 in order to maintain the same size and shape between the plurality of elongated supports 4 and the closed-shape frame 5. The carriage 1 tapers from the closed-shape frame 5 to the base 2 to create a funnel-like shape allowing a user to easily place and retrieve items into and from the present invention. The wheel assembly 3 is integrated into the base 2. The arrangement of the wheel assembly 3 allows the wheel assembly 3 to be oriented towards the ground or other surface on which the present invention can be pulled or pushed.

[0013] With reference to FIG. 2, the present invention may further comprise a support plate 6. The support plate 6 allows the user to control the center weight of the present invention. The support plate 6 is an optional feature of the present invention. The support plate 6 may be implemented in a variety of sizes, shapes, and composition to meet the preferences and needs of the user. For example, the support plate 6 may have a larger thickness than the plurality of elongated supports 4. The support plate 6 comprises a fixed edge 7 and a free edge 8. The fixed edge 7 is attached onto the base 2. The arrangement between the fixed edge 7 and the base 2 allows the user to readily attach or detach the support plate 6 from the base 2 when desired. The fixed edge 7 can be attached to base 2 by any fastening means. The free edge 8 is oriented towards the closed-shape frame 5. The arrangement of the free edge 8 allows the support plate 6 to control the center weight of the present invention by balancing the weight between the closed-shape frame 5 and the base 2. The support plate 6 is positioned in between two adjacent supports from the plurality of elongated supports 4.

[0014] With reference to FIGS. 4 and 5, the present invention may further comprise a locking mechanism 9. The support plate 6 is configured to be telescopic between the fixed edge 7 and the free edge 8 allowing the user to adjust

the height of the support plate 6 or the relative distance between the support plate 6 and the base 2. The height-adjustment aspect of the support plate 6 allows the user to adjust the center weight of the present invention. The locking mechanism 9 is operatively integrated within the support plate 6, where in the locking mechanism 9 is used to fix a total height of the support plate 6 between the fixed edge 7 and the free edge 8. The locking mechanism 9 may be any locking means including, but not limited to, latches, adjustable bolts, and camming mechanisms.

**[0015]** With reference to FIG. 2, the present invention may further comprise a handle 10. The handle 10 provides a leverage means for the user to push or pull the present invention when moving across a surface. The handle 10 is an elongated cylindrical structure which acts a grasping element for the user's hands. The handle 10 is connected onto the support plate 6 and is oriented away from the carriage 1. The handle 10 is positioned offset from the closed-shape frame 5 for easier access to the user.

**[0016]** With reference to FIG. 2, the present invention may further comprise a plate kickstand 11. The plate kickstand 11 allows the user to rest the present invention sideways. The plate kickstand 11 comprises a distal end 13 and a proximal end 12. The distal end 13 of the plate kickstand 11 is a structure of any shape composed of friction material which allows the plate kickstand 11 from slipping when pressed against the ground or another surface. The proximal end 12 is hingedly connected onto the support plate 6. This allows the user to fold the plate kickstand 11 in a closed or open state. The open state is when the plate kickstand is positioned adjacent to the ground or other surface which allows the present invention to be rested sideways. The closed state is when the plate kickstand 11 is positioned adjacent against the present invention which allows the present invention to be moved along the ground or other surface. The distal end 13 is oriented away from the carriage 1. The arrangement of the distal end 13 allows the plate kickstand 11 to be folded against the ground or other surface. The proximal end 12 is positioned offset from the closed-shape frame 5 in order to optimally support the weight of the present invention. The plate kickstand 11 can optionally be used as leverage means to pull or push the present invention.

**[0017]** With reference to FIGS. 4 and 5, each of the plurality of elongated supports 4 is configured to be a telescopic support allowing the carriage 1 to be positioned into a collapsed configuration. The plurality of elongated supports 4 comprises a primary support 14 and a plurality of secondary supports 15. The primary support 14 is hingedly connected to the closed-shape frame 5. The arrangement between the primary support 14 and the closed-shape frame 5 allows the closed-shape frame 5 to be folded against the primary support 14 when the carriage 1 is in the collapsed configuration. Each of the plurality of secondary supports 15 is detachably attached to the closed-shape frame 5 to allow the plurality of secondary supports 15 to be detached from the closed-shape frame 5 in order to collapse the carriage 1. Each of the plurality of secondary supports 15 is hingedly connected to the base 2. This allows the plurality of secondary supports 15 to be oriented at an angle with respect to the center axis 26 of the closed-shape frame 5. Due to the primary support 14 and each of the plurality of secondary supports 15 being hingedly connected to the base, the present invention can be adjusted to allow the user to easily maneuver the present invention in tight spaces.

**[0018]** With reference to FIG. 1, the present invention may further comprise a bag 16. The bag 16 acts as a storage device in order to receive and store items. The bag 16 is mounted within the carriage 1. An opening 27 of the bag 16 being positioned adjacent to the closed-shape frame 5. The arrangement between the bag 16 and the closed-shape frame 5 prevents items from falling out of the present invention.

**[0019]** With reference to FIGS. 1 and 2, the present invention may further comprise a plurality of dividers 17 and a lid 18. The plurality of dividers 17 is mounted within the bag 16. The plurality of dividers 17 allows the user to organize the items placed inside the bag 16. The plurality of dividers 17 may be disturbed horizontally along the bag 16. The arrangement of the plurality of dividers 17 prevents the dividers from accidentally being removed from the bag 16 when the user is removing items from the bag 16. The plurality of dividers 17 is positioned offset from each other in order to provide sufficient space for storage. The lid 18 is positioned adjacent to the opening 27 of the bag 16. The lid 18 is hingedly connected to the closed-shape frame 5 which allows the lid 18 to be folded over the opening of the bag 16. The lid 18 provides a cover which allows the user to protect items placed inside the present invention. The lid 18 further prevents items from falling out from the present invention.

**[0020]** With reference to FIG. 2, the present invention may further comprise a plurality of support kickstands 19. Each of the plurality of support kickstands 19 comprises a proximal end 20 and a distal end 21. The proximal end 20 for each of the plurality of support kickstands 19 is hingedly and laterally connected to a corresponding support from the plurality of elongated supports 4. The arrangement between the proximal end 20 of each of the plurality of support kickstands 19 and the corresponding support of the plurality of elongated supports 4 allows the plurality of support kickstands 19 to be folded in an open or closed state. The open state is when the plate kickstand is positioned adjacent to the ground or other surface which allows the present invention to be rested sideways. The closed state is when the plate kickstand is positioned adjacent against the present invention which allows the present invention to be moved along the ground or other surface. The distal end 21 for each of the plurality of kickstands 19 being oriented away from the carriage 1. The arrangement of the distal end 21 of the plurality of kickstands 19 and the carriage 1 allows the plurality of kickstands 19 to be folded against the ground or other surface. The proximal end 20 for each of the plurality of kickstands 19 is positioned adjacent from the closed-shape frame 5 in order for the plurality of kickstands 19 to be optionally used as a leverage means to push or pull the present invention.

**[0021]** With reference to FIG. 3, the wheel assembly 3 comprises a first wheel axle 23 and at least two wheels 22. The first wheel axle 23 traverses through the base 2. The at least two wheels 22 are positioned opposite to each other along the first wheel axle 23. The at least two wheels 22 are rotatably mounted to the first wheel axle 23. The arrangement between the first wheel axle 23 and the at least two wheels 22 allows present invention to translate along the ground or other surface.

**[0022]** With reference to FIG. 3, the wheel assembly 3 may further comprise a stabilizing wheel 24 and a second wheel axle 25. Similar to the first wheel axle 23, the second wheel axle 25 traverses through the base 2. Additionally, the second wheel axle 25 is positioned parallel and offset to the



first wheel axle **23**. The stabilizing wheel **24** is positioned in between the at least two wheels **22**. The stabilizing wheel **24** is rotatably mounted to the second wheel axle **25**. The stabilizing wheel **24** allows the present invention to stand upright. The arrangement of the stabilizing wheel **24** and the second wheel axle **25** allows the present invention to properly stabilizing with respect to the at least two wheels **22**.

**[0023]** In another embodiment of the present invention, the support plate **6** may be used as a door which allows a user to enter the inside of the present invention. The present invention may include a seat or similar means which allows the user to sit down when inside of the present invention. The present invention can be fitted in between automobile seats if needed. The present invention can naturally unload items when oriented sideways as well as when the present invention is upright. The tapered design of the carriage **1** allows a user to easily unload items or material from the present invention into another container by tilting the present invention sideways.

**[0024]** Although the invention has been explained in relation to its preferred embodiment, it is to be understood that many other possible modifications and variations can be made without departing from the spirit and scope of the invention as hereinafter claimed.

What is claimed is:

**1.** A utility cart comprises:

a carriage;

a base;

a wheel assembly;

the carriage comprises a plurality of elongated supports and a closed-shape frame;

the base being terminally mounted to the plurality of elongated supports;

the closed-shape frame being terminally mounted to the plurality of elongated supports, opposite the base;

the plurality of elongated support being radially distributed about a center axis of the closed-shape frame;

the carriage tapering from the closed-shape frame to the base;

the wheel assembly being integrated into the base;

**2.** The utility cart as claimed in claim **1** comprises:

a support plate;

the support plate comprises a fixed edge and a free edge;

the fixed edge being attached onto the base;

the free edge being oriented towards the closed-shape frame;

the support plate being positioned in between two adjacent supports from the plurality of elongated supports;

**3.** The utility cart as claimed in claim **2** comprises:

a locking mechanism;

the support plate being configured to be telescopic between the fixed edge and the free edge;

the locking mechanism being operatively integrated within the support plate, wherein the locking mechanism is used to fix a total length of the support plate between the fixed edge and the free edge;

**4.** The utility cart as claimed in claim **2** comprises:

a handle;

the handle being connected onto the support plate;

the handle being oriented away from the carriage;

the handle being positioned offset from the closed-shape frame;

**5.** The utility cart as claimed in claim **2** comprises:

a plate kickstand;

the plate kickstand comprises a distal end and a proximal end;

the proximal end being hingedly connected onto the support plate;

the distal end being oriented away from the carriage;

the proximal end being positioned offset from the closed-shape frame;

**6.** The utility cart as claimed in claim **1** comprises:

each of the plurality of elongated supports being configured to be a telescopic support;

the plurality of elongated supports comprises a primary support and a plurality of secondary supports;

the primary support being hingedly connected to the closed-shape frame;

each of the plurality of secondary supports being detachably attached to the closed-shape frame;

each of the plurality of secondary supports being hingedly connected to the base;

**7.** The utility cart as claimed in claim **1** comprises:

a bag;

the bag being mounted within the carriage;

an opening of the bag being positioned adjacent to the closed-shape frame;

**8.** The utility cart as claimed in claim **7** comprises:

a plurality of dividers;

the plurality of dividers being mounted within the bag;

the plurality of dividers being positioned offset from each other;

**9.** The utility cart as claimed in claim **7** comprises:

a lid;

the lid being hingedly connected to the closed-shape frame;

the lid being positioned adjacent to the opening of the bag;

**10.** The utility cart as claimed in claim **1** comprises:

a plurality of support kickstands;

each of the plurality of support kickstands comprises a proximal end and a distal end;

the proximal end for each of the plurality of support kickstands being hingedly and laterally connected to a corresponding support from the plurality of elongated supports;

the distal end for each of the plurality of support kickstands being oriented away from the carriage;

the proximal end for each of the plurality of support kickstands being positioned adjacent from the closed-shape frame;

**11.** The utility cart as claimed in claim **1** comprises:

the wheel assembly comprises a first wheel axle and at least two wheels;

the first wheel axle traversing through the base;

the at least two wheels being rotatably mounted to the first wheel axle;

the at least two wheels being positioned opposite to each other along the first wheel axle;

**12.** The utility cart as claimed in claim **11** comprises:

the wheel assembly further comprises a stabilizing wheel and a second wheel axle;

the second wheel axle traversing through the base;

the second wheel axle being positioned parallel and offset  
from the first wheel axle;  
the stabilizing wheel being positioned in between the at  
least two wheels;  
the stabilizing wheel being rotatably mounted to the  
second wheel axle;

\* \* \* \* \*