

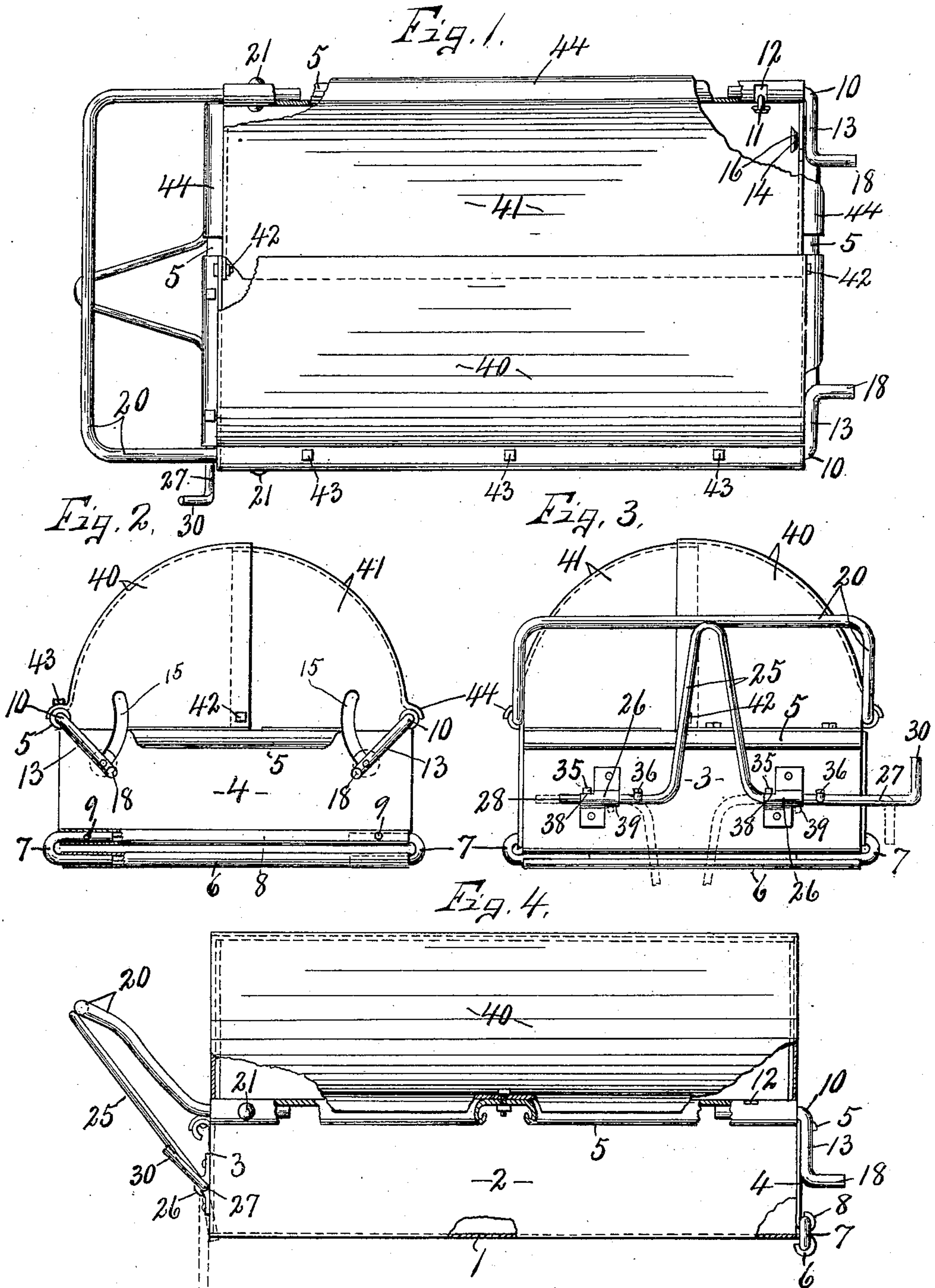
H. A. VELING.

PUSH CART.

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934,244.

Patented Sept. 14, 1909.



Witnesses

*W. Heape*  
*H. E. Chase*

Inventor

*H. A. Veling*

By

*Howard P. Driscoll*

Attorney.



# UNITED STATES PATENT OFFICE.

HENRY A. VELING, OF ONEIDA, NEW YORK.

## PUSH-CART.

934,244.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed March 9, 1908. Serial No. 419,964.

*To all whom it may concern:*

Be it known that I, HENRY A. VELING, of Oneida, in the county of Madison, in the State of New York, have invented new and useful Improvements in Push-Carts, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to certain improvements in push carts and refers more particularly to the body or box and to certain novel details of construction associated therewith.

One of the objects of my present invention is to provide the box with a folding leg or standard with specific means for locking it in its operative or inoperative position.

Another object is to provide the box with a swinging end board and with separately movable locking members hinged to the sides of the box and engaging in concentric slots in the end board.

A still further object is to provide the box with cover sections, one of which is movable relatively to the other so that practically half the box may be open while the other half remains closed.

A still further object is to make the vertical end board of slightly less depth than the depth of the box so that its lower edge is spaced apart some distance from the bottom of said box to allow any accumulation of water therein to drain off.

Other objects and uses will be brought out in the following description.

In the drawings—Figures 1, 2, 3 and 4 are respectively a top plan, rear and front end views, and a side elevation of a push cart body embodying the various features of my invention, portions of the top and body being broken away in Figs. 1 and 4 while portions of the hinge connections of the movable end piece are shown in section in Fig. 2.

In carrying out the objects stated I provide a substantially rectangular box composed of a bottom —1—, opposite sides —2—, front and rear end pieces —3— and —4—, all of which parts are preferably formed of sheet metal but may be formed of any other suitable material but when formed of sheet metal the upper edges of the sides and ends are usually overturned outwardly to form reinforcing rolls or flanges —5— which materially strengthen the side and end pieces against buckling or lateral strains, it being understood that the

lower edges of said sides and ends are firmly united to each other while the front end is rigidly secured to the sides and bottom. The rear end, however, is hinged along its lower edge to the rear end of the bottom and for this purpose the latter is provided with an underturned roll or flange —6— in the opposite ends of which are pivoted the lower arms of two U-shaped hinge members —7—, the upper arms of which normally overlie the bottom some distance above the same and are secured in a suitable upturned roll or flange —8— extending along the lower edge of and forming a reinforcing flange for the movable end piece —4— and at the same time the hinge pieces —7— serve to hold the lower edge of the rear end piece a slight distance above the bottom of the body to leave an open space for the drainage of any water which may accumulate on the bottom of the box. These U-shaped hinge members —7— enter a short distance into the outer ends of the rolls or flanges —6— and —8— respectively, and their upper arms are rigidly secured by suitable fastening means as rivets —9— to the roll or flange —8— thereby connecting said hinge pieces to the rear end piece and enabling said end piece to swing rearwardly and downwardly upon the lower arms of the hinge member —7— in the bearing or roll —6— so that when the end piece is open it hangs wholly below the bottom of the box, it being understood that the hinge pieces —7— are of considerably less length than the transverse width of the box to economize in material and at the same time afford ample bearing for supporting the swinging end piece.

In order to lock the rear end board in its closed position and to permit it to be opened when desired, I provide a pair of separately movable rock shafts —10— which are comparatively short and are journaled in the rear ends of the opposite rolls or flanges —5— at the sides of the box, each rock shaft being provided with a radially projecting stud —11— which rides in a slot —12— in the adjacent portion of the roll or flange —5— to retain the rock shafts in operative position against undue endwise movement or withdrawal from their bearings.

The rear ends of the rock shafts —10— extend a slight distance beyond the rear end of the box and are provided with lateral



offsets or crank arms —13— movable across the rear face of the adjacent ends of the end piece —4— and are provided with forwardly projecting studs —14— which ride in suitable slots —15— concentric with the axis of the rock shaft —10—, said slots terminating a short distance below the upper edge of the rear end board to form stops for limiting the downward movement of the crank arms —13— and the studs —14— although the upper ends of the slots are open at the top edge of the end board to permit the lugs or studs —14— to be elevated out of interlocking engagement with said end board. These crank arms —13— and studs —14— serve to lock and unlock the hinged end board in and from its operative position.

The inner ends of the studs are provided with heads —16— of greater diameter than the width of the slots so as to engage the inner face of the rear end board and thereby hold the same against undue inward movement when locked in operative position, the crank arms —13— being provided at their free ends with rearwardly bent hand pieces —18— by which they may be manipulated to move the studs —14— into and out of their respective slots for locking or unlocking the end boards.

The opposite or front end of the box is provided with a suitable handle by which the vehicle may be manipulated, said handle consisting of in this instance a U-shaped rod or bar —20— having its extremities inserted into the adjacent ends of the rolls —5— and secured thereto by suitable fastening means as rivets —21— best seen in Fig. 4.

It is clear from the foregoing description that the side rolls or flanges —5— not only serve as a means for reinforcing and strengthening the sides of the box but also serve as bearings for the rock shafts —10— and ends of the handle bar —20— but in both instances the rock shafts and handle bar extend only a comparatively short distance into their respective rolls or bearings just sufficient to secure firmness and without waste of stock.

A vertically swinging V-shaped leg or standard —25— has its opposite ends deflected laterally in opposite directions and journaled in suitable bearings —26— which are secured to the front end —3— of the box at opposite sides of the longitudinal center thereof so that the V-shaped leg —25— plays in a plane between the bearings —26—, while its opposite ends as —27— and —28— extend some distance through and beyond their respective bearings to allow limited axial movement thereof, one of the ends as —27— terminating in a suitable offset or handle —30— by which the leg or standard may be rocked in its bearing to and from its operative position. The object of this leg

or standard is to rest upon the ground and thereby support the front end of the body against downward movement when the vehicle is at rest and it is, therefore, of sufficient length to extend downwardly some distance below the bottom of the box when adjusted for use but is adapted to be folded upwardly against the intermediate portion of the handle bar —20— when not in use as best seen in Figs. 1, 3 and 4, the operative position being shown by dotted lines in Figs. 3 and 4.

In order that the leg or standard —25— may be held in both its operative and inoperative positions, I provide each end —27— and —28— with a pair of lugs —35— and —36— spaced some distance apart on opposite ends of their respective bearings —26—, which latter are formed with shoulders —38— and —39— for interlocking engagement respectively with the lugs —35— and —36—, said shoulders being parallel with the swinging axis of the leg or standard —25— and are usually arranged in different radial planes at an angle corresponding to the arc of movement of the leg from one extreme to its other extreme position.

The distance between the lugs or shoulders —35— and —36— is greater than the width of the corresponding bearing —26— to permit the leg or standard —25— to be adjusted endwise to throw the lugs —35— and —36— out of interlocking engagement with either of the shoulders —38— or —39— and thereby permit the leg to be rocked from one extreme position to the other. For example, when the leg or standard —25— is folded upwardly to the position shown in Figs. 1, 3 and 4, it is moved axially toward the right hand to bring the lugs —35— above and in interlocking engagement with the shoulders —38—.

When it is desired to adjust the leg or standard for use in supporting the front end of the body, it is moved a sufficient distance to disengage the lugs —35— from the shoulders —38— whereupon it may be rocked downwardly to a vertical position wholly below its swinging axis, and then again further adjusted toward the left hand to bring the lugs —36— beneath and into interlocking engagement with the shoulders —39— thereby holding the leg or standard in its adjusted position.

The shoulders —38— and —39— of the bearings —26— are disposed at an angle with each other corresponding to the arc of movement of the leg or standard —25— and the shoulders —35— and —36— are disposed at a corresponding angle so that when the leg or standard is rocked to one position and moved endwise to one position, one of said lugs at one side of the bearing will be interlocked with the corresponding set of shoul-



ders and when moved to its operative position and shifted axially in the opposite position, the other set of lugs will be brought into interlocking engagement with the adjacent set of shoulders.

Another feature of my invention is the provision of a suitable top or cover constituting a part of the box and composed of a fixed section —40— and a movable section —41—, both of said sections forming together a semicylindrical cover made up of two quarter sections of a cylinder, the movable section —41— being hinged at —42— near the bottom of the meeting edges to the ends of the fixed section —40— which latter is secured to the top edges of one side and the front end of the box proper by suitable fastening means as bolts —43— while the movable side —41— is arranged to telescope with the section —40— and is provided at its side and end edges with flanges —44— which rest upon the corresponding flanges —5— of the adjacent side and end of the box.

The outer faces of these top sections —40— and —41— are concentric with the swinging axis of the section —41— the latter being movable inside of the fixed section —40— somewhat in the manner of a cylinder top desk.

In order that the locking members —13— for the swinging end board —2— may be moved outwardly above the upper edge of said end board, the slots —15— are continued upwardly in the ends of the top section —40— and —41— as best seen in Fig. 2 to receive the lugs —14— when the locking members —13— are elevated.

What I claim is:

1. In a push cart, a box having a bottom, side and end pieces, a vertically swinging leg journaled on one of the end pieces and movable axially, locking members on said end in proximity to the swinging axis of the leg, said locking members being disposed in different radial planes at an angle corresponding to the arc of movement of the leg from one extreme to the other, locking shoulders on the hinged end of the leg movable alternately into and out of interlocking engagement with said locking members as the leg is moved axially in opposite directions.

2. In a push cart, a box having a bottom, side and end pieces, a vertically swinging leg journaled on one of the end pieces and movable axially, locking members on said end in proximity to the swinging axis of the leg, said locking members being disposed in different radial planes at an angle corresponding to the arc of movement of the leg from one extreme to the other, locking shoulders on the hinged end of the leg movable alternately into and out of interlocking

engagement with said locking members as the leg is moved axially in opposite directions, the axial distance between the shoulders on the hinged end of the leg being greater than the distance from outside to outside of the locking members which they are adapted to engage to allow the leg to be swung vertically without engaging the shoulders with the locking members.

3. In a push cart, a box composed of bottom, opposite side pieces and opposite end pieces, a pair of bearings on one of the end pieces each bearing having recesses in its opposite ends, a V-shaped swinging leg having the ends of its opposite arms deflected laterally and journaled in said bearings, said leg being provided with locking members adapted to be brought into interlocking engagement with said recesses as the leg is moved axially in either direction.

4. In a push cart, a box composed of a bottom, opposite sides and end pieces, bearings on one of the end pieces, each bearing having a pair of shoulders at opposite ends thereof, a vertically swinging leg having oppositely projecting spindles journaled in said bearings, said leg being movable axially, each spindle having a pair of locking shoulders at opposite ends of the corresponding bearing, one shoulder of each spindle being adapted to interlock with the shoulders on one end of the bearings when the leg is rocked to one position while the shoulders at the opposite side of the bearing are adapted to lock with the adjacent shoulders of said bearings when the leg is rocked to the opposite position, said shoulders being brought into locking engagement by the axial movement of the leg.

5. In a push cart a box comprising a bottom, opposite side and end pieces, one of the end pieces being hinged along its lower edge to the box and provided with slots extending downwardly from its upper edge, crank arms journaled on the sides of the box and provided with locking members movable into and out of said slots as the crank arms are rocked vertically in opposite directions whereby the hinged end of the box is locked and unlocked.

6. In a push cart, a box composed of a bottom, opposite side and end pieces, one of the end pieces being movable and provided with pivotal pins extending along the adjacent end of the bottom, bearings for said pivotal pins, said movable end having slots extending downwardly from its upper edge, rock arms journaled on the sides of the box and provided with lugs movable into and out of said slots for locking and unlocking the movable end piece in and from its operative position.

7. In a push cart, a box having one end of its bottom provided with an underturned



bearing, U-shaped bars, each having one of  
its arms journaled in one end of said bear-  
ing, a swinging end piece for the box se-  
cured to the opposite ends of said bars and  
5 having its lower edge terminating a slight  
distance above the bottom to permit drain-  
age of water therefrom, said movable end  
piece being provided with slots extending  
downwardly from its upper edge, and swing-

ing locking members hinged to the side of 10  
the box and movable into and out of said  
slots.

In witness whereof I have hereunto set  
my hand this 2 day of March 1908.

HENRY A. VELING.

Witnesses:

M. S. MARKHAM,  
H. L. BALDWIN.