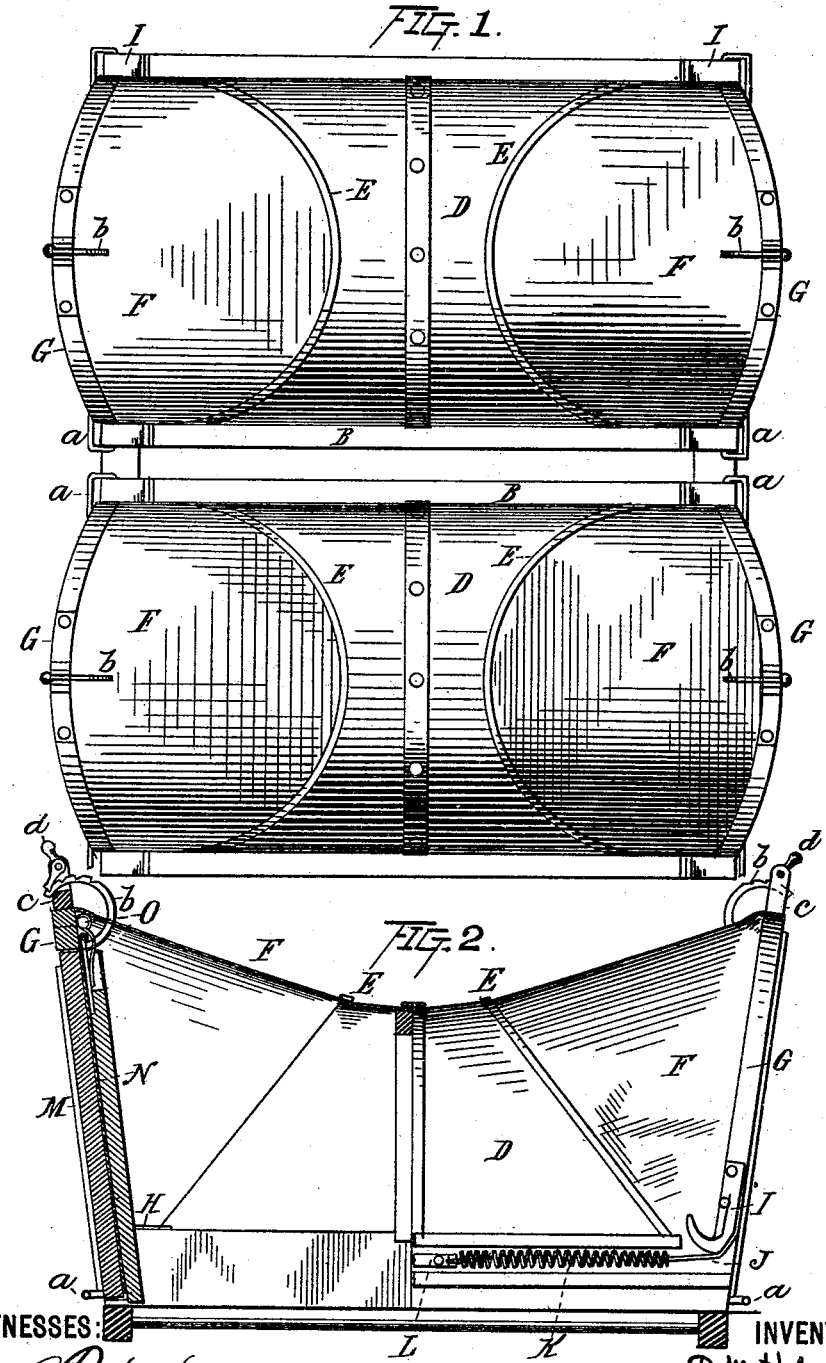
(No Model.) 2 Sheets—Sheet 1.

D. M. HOLMES.

ASH CART.

No. 457,320. Patented Aug. 4, 1891.

FIG. 1.



WITNESSES:
Edward C. Rowland.
Francis C. Bowen

INVENTOR
D. M. Holmes.
BY A. M. Pierce.
ATTORNEY

(No Model.) 2 Sheets—Sheet 2.

D. M. HOLMES.

ASH CART.

No. 457,320. Patented Aug. 4, 1891.

FIG. 3.

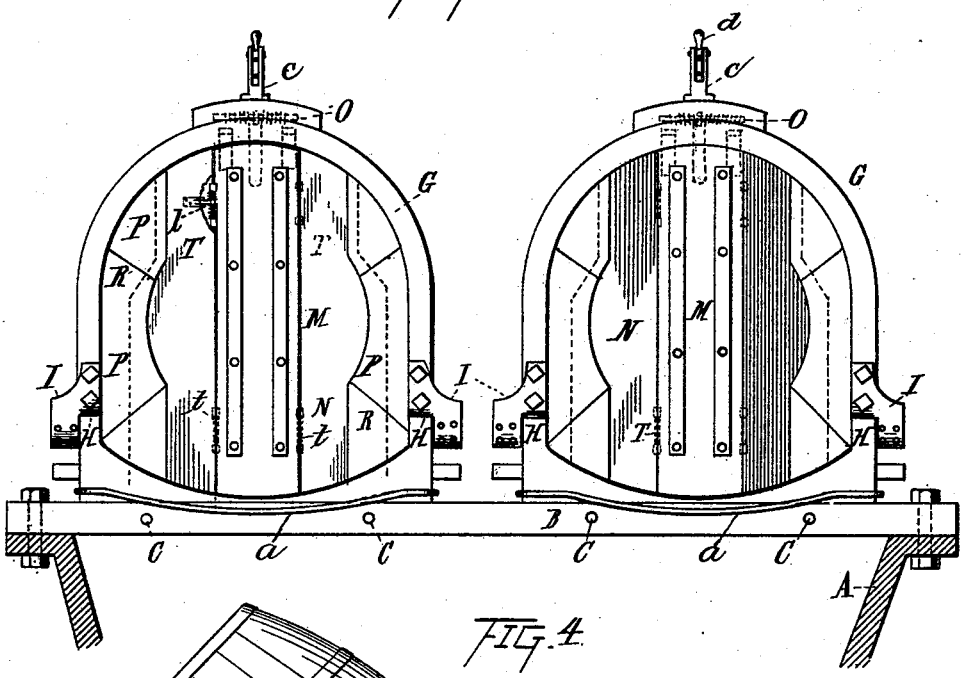
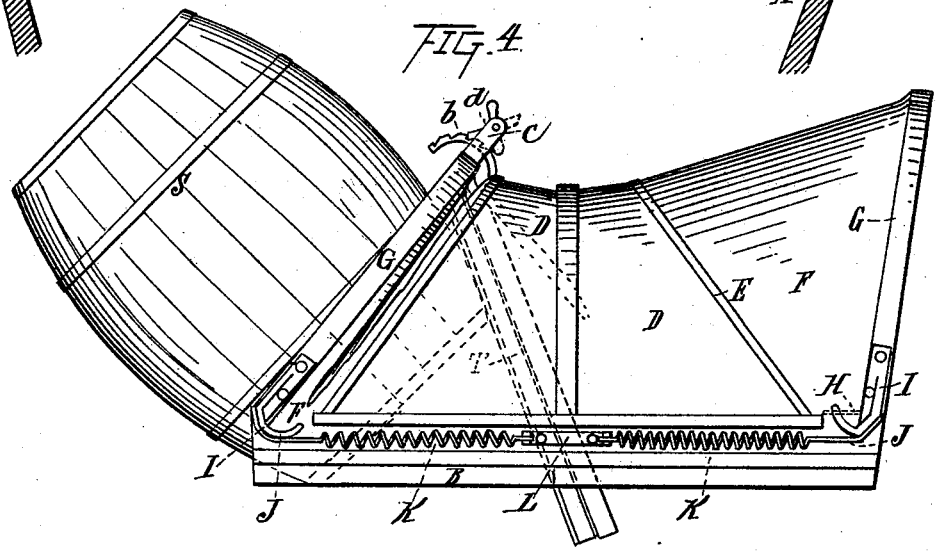


FIG. 4.



WITNESSES:
Edward C. Rowland.
Francis C. Bowen

INVENTOR
D. M. Holmes
BY A. M. Pierce.
ATTORNEY

UNITED STATES PATENT OFFICE.

DANIEL M. HOLMES, OF ARLINGTON, NEW JERSEY, ASSIGNOR TO JOHN R. VAN DEWERE, OF NEW YORK, N. Y.

ASH-CART.

SPECIFICATION forming part of Letters Patent No. 457,320, dated August 4, 1891.

Application filed February 18, 1891. Serial No. 381,897. (No model.)

To all whom it may concern:

Be it known that I, DANIEL M. HOLMES, a citizen of the United States, residing at Arlington, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Ash Carts or Wagons, of which the following is a specification.

My invention relates especially to the construction and arrangement of the bodies of carts or wagons employed for receiving and conveying ashes and equivalent material, and has for its object the provision of means and mechanism of simple and cheap construction, whereby the contents of receptacles such as barrels, cans, &c., may be easily and quickly transferred to the body of the cart or wagon and all spilling of the contents and flying of dust are absolutely prevented while the receptacle is being emptied, when it is removed, and while the vehicle is moving.

To attain the desired end my invention consists, essentially, in a closed body having an opening or openings in its top, wherewith flexible walls are connected, said walls forming a passage for the ashes, &c., and engaging at the outer edge with a spring-actuated frame having an inwardly-projecting lining or flange. Within this frame is a door or cover hinged at the top and arranged to swing inward, being normally held closed by gravity or spring mechanism, this arrangement constituting what may be termed a "valve;" and my invention also involves certain other novel and useful combinations or arrangements of parts and peculiarities of construction and operation, all of which will be hereinafter first fully described, and then pointed out in the claims.

In the drawings, Figure 1 is a plan view of a cart or wagon body wherewith my invention is employed. Fig. 2 is an end elevation thereof. Fig. 3 is a side elevation. Fig. 4 is an end elevation illustrating the operation of the device.

Like letters of reference, wherever they occur, indicate corresponding parts in all the figures.

A is the body of a cart or wagon, of which only the upper edge is shown. This body may be of any desired shape and size and mounted upon two or four wheels.

B is a main frame fixed to the top of the body A and having rods C passing across from side to side, serving as binding-rods, and also as a rest for the edge of the ash-receptacle while being emptied. Surrounding an opening in the frame at the center is a rigid wall made of wood or metal D, of a square or semicircular shape, as preferred.

E is a strip of metal, to which is secured a flexible wall F, of stout canvas or equivalent material.

G is a frame hinged at bottom upon the inside to the frame B at H H and bearing above each hinge a casting I, the shape whereof is particularly illustrated in Figs. 2 and 3. To each casting I is firmly secured a flexible piece J, of material such as leather, which engages with a spring K, the farther end whereof is secured at L to the main frame B. This arrangement is particularly shown in Fig. 2, the springs being covered in the completed device to provide protection from injury.

M is a door or cover hinged to the top of the frame G upon the inside and above the edge and bearing a slightly-flexible lining N, made of stiff rubber or equivalent material.

O is a spring which normally holds the door or cover outward, although gravity alone would have a tendency to keep the same closed.

P is an inwardly-projecting flange or lip secured to the frame G and against which the lining N of the door M strikes. This lip is divided at R, and the arrangement of the adjacent parts forms a species of valve.

In order to give additional stability to the door, the center portion M bears wings T at each side, which are connected thereto by spring-actuated hinges *t*. By this means when the door is pushed back, as in Fig. 4, the side pieces bend downward at a slight angle, forming a secure backing for the flexible lining N, preventing the breaking of the same.

In order to provide additional means for insuring an easy manipulation of the ash barrel or other receptacle while being emptied, a rod *a*, having bent ends pivoted at each side of the frame G, is provided, and when the barrel is lifted up it strikes against

the rod, which turns upward and inward with it, protecting the frame G and greatly facilitating the turning of the barrel while the contents are being discharged.

It may be desirable at some time to have an opening into which ashes or other material may be shoveled, and to provide for this emergency a notched segment *b* is secured to the back of the cover M, said segment passing through a perforated plate *c*, attached to the top of the frame G. A pawl *d* is pivoted in the top of plate *c*. By pushing the cover inward the segment will be turned through the plate *c*, and the pawl will hold it so that the door will be maintained in an open position. If the pawl be thrown back, the door will move freely and this mechanism will be inoperative.

When constructed and arranged in accordance with the foregoing description, the operation of my device is as follows: Only one of the valve-doors and the parts connected therewith may be used with a cart or wagon body, if desired; but it will be found convenient to have two or four, as illustrated in the drawings. When a barrel S, can, or other receptacle is to be emptied, it is raised up, resting upon the lower edge of the frame G, and the bottom tipped upward. The upper edge of the receptacle will strike against the door M, swinging it inward, and the flexible wall F will give, folding together, permitting the receptacle to turn at such an angle as to insure the discharge of its contents into the cart-body. At the time the receptacle is pushed into the frame G the flexible lining P will close around it, and thus any spilling of the contents or flying of dust is effectually prevented while the emptying is taking place, and as soon as the receptacle is removed the door, cover, or valve M will be instantly forced home against the lining P, which resumes its normal position, and the frame G will be forced outward, returning the flexible wall F to an extended position. This operation performs a very important function, for while the escape of any of the contents of the receptacle is effectually prevented by the arrangement of the receiving-mouth, the instantaneous closing of the door and extension of the flexible wall create a partial vacuum within the body of the cart or wagon, laying the dust arising therein after the receptacle is removed and causing an inward draft, instead of forcing the dust-ladened air outward, as is ordinarily the case where dusty material is emptied from one receptacle into another.

If it is desired to provide means for leveling the contents of the cart or wagon body, a rake-head or similar device may be placed within the body, having a handle projecting through a hole in the side or end of the body, and by moving the same backward and forward over the contents of the body it will be given a level and uniform surface. The body may be provided with a swinging end-gate for discharging the contents.

Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In an ash cart or wagon, a closed body having openings in its top provided with doors or covers adapted and arranged to automatically open when a receptacle is brought in contact therewith and automatically close when the receptacle is removed, substantially as shown and described.

2. The combination, with a closed cart or wagon body, of an automatically-operating cover mounted in a movable frame wherewith compressible top and side walls are connected, substantially as shown and described.

3. In a device of the character herein specified, a compressible wall forming the top and sides of a passage, one extremity whereof communicates with a closed cart or wagon body, the other extremity being provided with an automatically-operated valve or cover, whereby a partial vacuum may be produced within the cart or wagon body when ashes or equivalent material is introduced, substantially as shown and described.

4. In a device of the character herein specified, the combination, with the compressible top and side walls forming a passage-way to the interior of a closed cart or wagon body, of a hinged door or cover mounted at the outer end of said passage, and a flexible lining against which said door impinges, substantially as shown and described.

5. In a device of the character herein specified, a compressible wall forming the top and sides of a passage, said wall engaging at its outer edge with a tiltable frame provided with a self-closing cover or door hinged to the top of the frame and with an inwardly-extending flexible flange or lip, substantially as shown and described.

6. In a device of the character herein specified, the combination, with a flexible wall forming the top and sides of a passage, as set forth, of a frame at the outer end of said passage hinged to a main supporting-frame and provided with springs adapted and arranged to force the hinged frame outward, substantially as shown and described.

7. In a device of the character herein specified, a closed cart or wagon body having openings in its top whereover are mounted flexible walls, a movable hinged frame secured to the outer extremity of the flexible walls normally held outward by springs, and a door or cover hinged to the top of the frame and normally held closed by spring mechanism, and a flexible lining projecting inwardly around the frame against which the closed door rests, the whole combined and arranged to operate substantially as shown and described.

8. In a device of the character herein specified, the combination, with the door in the

frame at the outer extremity of the flexible walls, of the notched segment secured to the back of the door, and the guide-plate and pawl upon the frame to which the said door is hinged, substantially as shown and described.

9. In a device of the character herein specified, the combination, with the central portion of the swinging door hinged to the surrounding frame and provided with a flexible lining, of wings upon each side of said central portion attached thereto by spring-hinges, substantially as shown and described.

DANIEL M. HOLMES.

Witnesses:
A. M. PIERCE,
EDWARD C. ROWLAND.

Correction in Letters Patent No. 457,320.

It is hereby certified that the name of the assignee in Letters Patent No. 457,320, granted August 4, 1891, upon the application of Daniel M. Holmes, of Arlington, New York, for an improvement in "Ash-Carts," was erroneously written and printed "John R. Van Dewere," whereas said name should have been written and printed *John R. Van Dervere;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 11th day of August, A. D. 1891.

[SEAL.]

CYRUS BUSSEY
Assistant Secretary of the Interior.

Countersigned:
W. E. SIMONDS,
Commissioner of Patents.