

(No Model.)

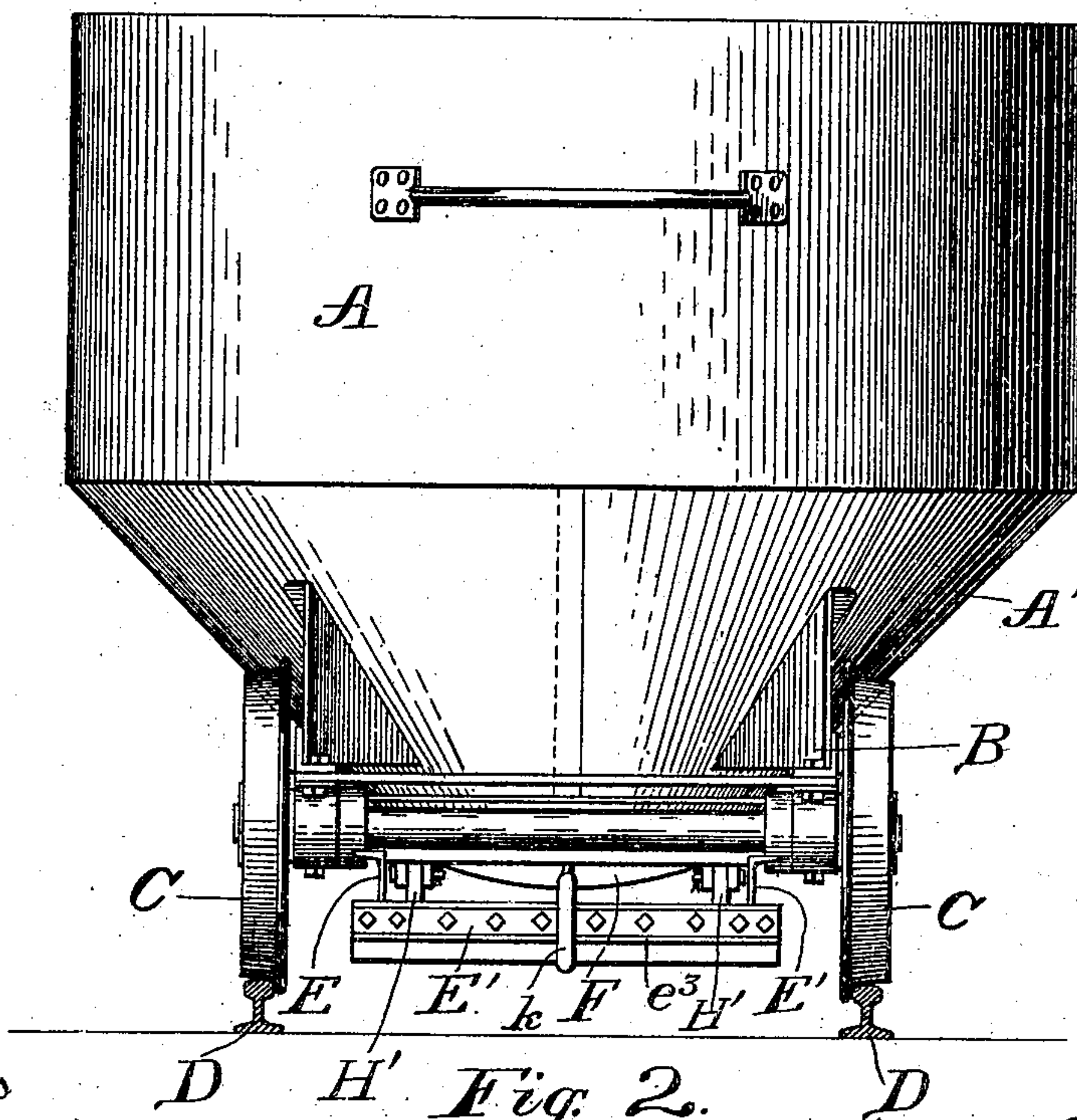
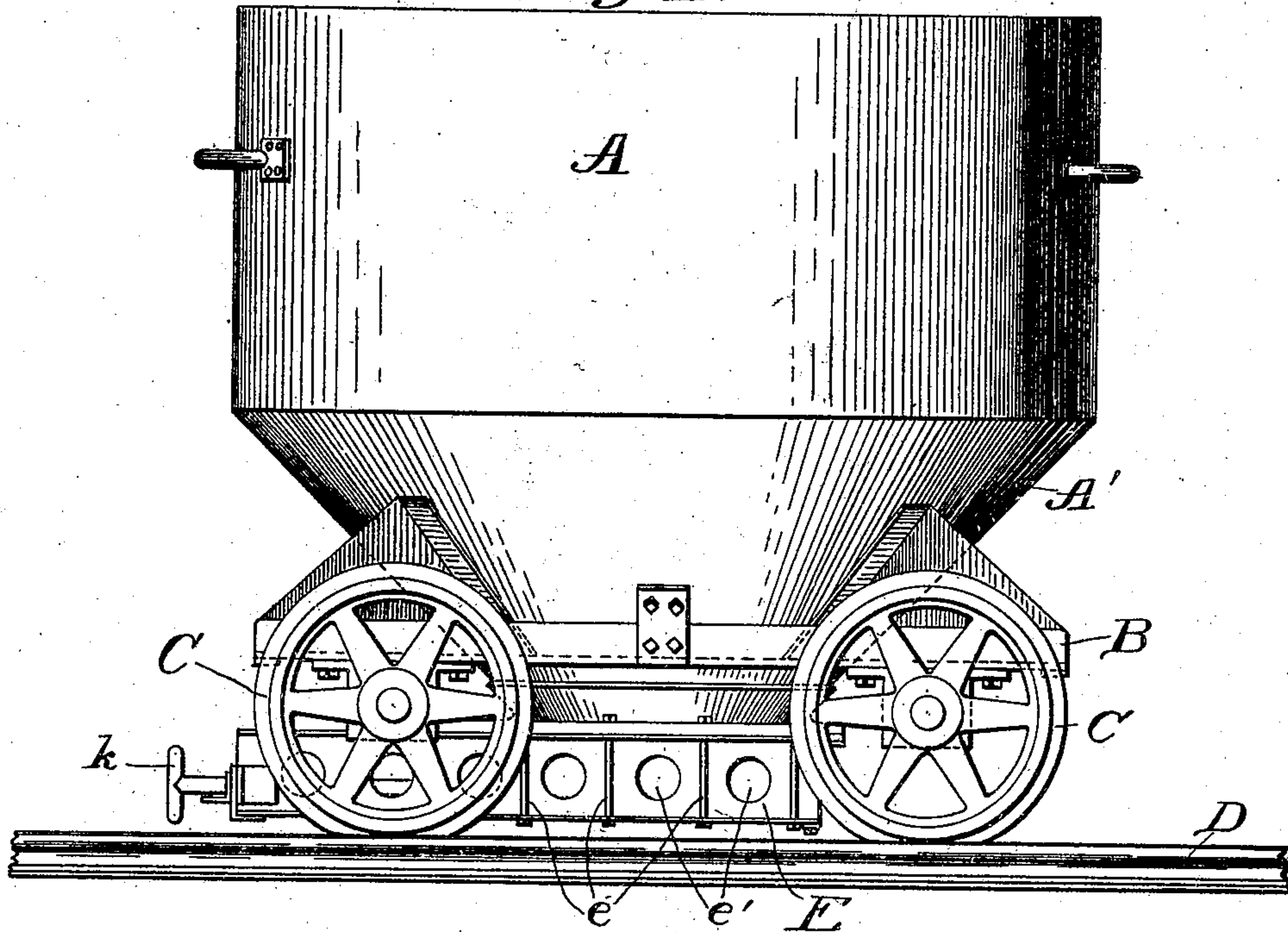
2 Sheets—Sheet 1.

J. E. RETTIG.
OUTLET VALVE FOR GARBAGE CARS.

No. 502,584.

Patented Aug. 1, 1893.

Fig. 1.



Witnesses

Percy C. Bowers
John C. Wilson

Fig. 2.

Inventor

Julius E. Rettig
By *Whitman & Wilkinson*
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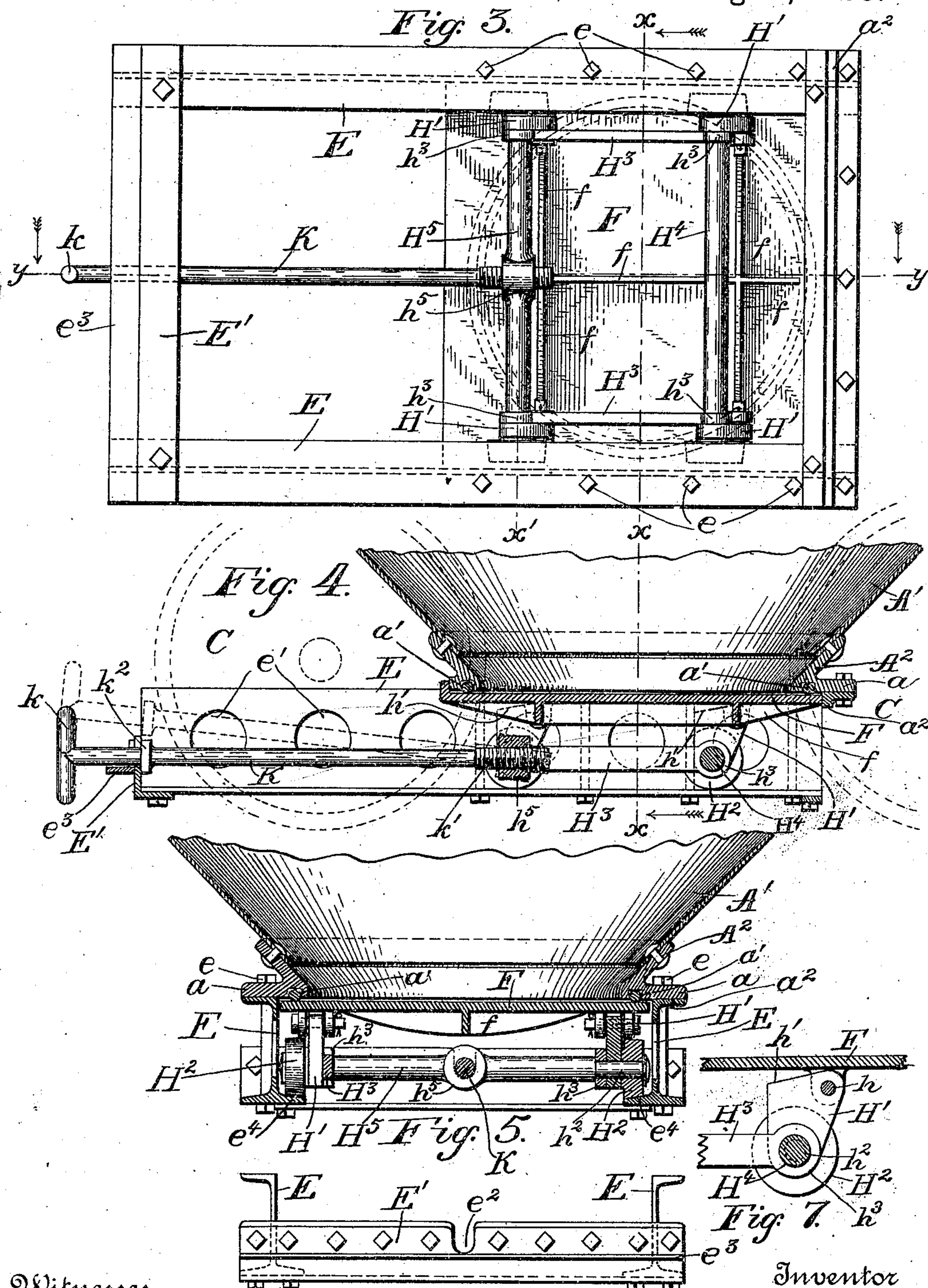
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2 Sheets—Sheet 2.

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OUTLET VALVE FOR GARBAGE CARS.

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Witnesses

Reyn. C. Bowen.
John C. Wilson.

Fig. 6.

Inventor
Julius E. Rettig,
By Whitman & Wilkinson,
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UNITED STATES PATENT OFFICE.

JULIUS E. RETTIG, OF WASHINGTON, DISTRICT OF COLUMBIA.

OUTLET-VALVE FOR GARBAGE-CARS.

SPECIFICATION forming part of Letters Patent No. 502,584, dated August 1, 1893.

Application filed February 2, 1893. Serial No. 460,676. (No model.)

To all whom it may concern:

Be it known that I, JULIUS E. RETTIG, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Outlet-Valves for Garbage-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in outlet valves for dumping cars or wagons, and is especially adapted for use in cars carrying garbage or other material composed partly or wholly of liquids.

Reference is had to the accompanying drawings, wherein the same parts are indicated by the same letters throughout the several views.

Figure 1 represents a side elevation of the garbage car fitted with the hereindescribed outlet valve. Fig. 2 represents an elevation of the device shown in Fig. 1, as seen from the left of the said figure. Fig. 3 represents an inverted plan view of the frame carrying the valve truck and valve. Fig. 4 represents a section of the base of the tank mounted on the car, and of the valve and valve truck along the line $y y$ of Fig. 3. Fig. 5 represents a section along the line $x x$ in Figs. 3 and 4. Fig. 6 represents a view of the frame for the valve truck, as seen from the left in Figs. 1 and 4. Fig. 7 represents the method of mounting the valve on the rollers running in the frame shown in Fig. 6.

A represents the tank or body of the car, which is provided with a tapering bottom A' , and a tapering flanged ring A^2 having a lower flange a , and a packing ring a' let into the said flange, the said flange and packing ring forming the valve seat, against which the valve is firmly pressed upward from below, as will hereinafter be described.

B represents a platform supporting the tank A, and mounted upon the wheels C, which run upon the rails D.

E and E represent two side guides flanged at the bottom as shown at e^4 , and secured at the top to the flanged ring A^2 , and to the platform B by the bolts e . The holes e' are cut in

these guides to lessen the weight. At one end these guides are connected by the beam E' having a notch e^2 cut therein, and stiffened by the rearward-projecting flange e^3 .

F represents a flat rectangular plate which constitutes the valve proper. This plate is stiffened by ribs f , and is supported on four or more metallic plates H' which are pivoted to the bottom of the valve at h , and are journaled on the shafts H^4 and H^5 , which are reduced in diameter at their ends h^2 to receive the wheels H^2 , the said plates H' , and the connecting rods H^3 , having eyes h^3 revolubly mounted on the said shafts. The plate H' constitutes half of a toggle joint, the other half being omitted, or rather compensated for by the roller H^2 . The said plate H' is provided with a shoulder h' adapted to strike beneath the valve F, and support the same, when the said valve is eased down by relaxing the pressure on the said half toggle joint. The rollers H^2 run along the interior flanges e^4 of the guides E, and by means of these rollers the valve may be readily drawn clear of the aperture in the bottom of the tank, or be run back into position again.

The axle H^4 is connected to the axle H^5 by means of the connecting rods H^3 , and the two together form a four-wheeled truck, on which the valve F is mounted. This valve truck is drawn to the rear or pushed back into place by means of the bar K having the handle k , at its rear end, and the screw k' at its forward end, and the collar k^2 adapted to engage the notch of the groove e^2 in the beam E' . The screw k' fits into a tapped boss h^5 of the axle H^5 . The bar K is screwed into the said boss to such a distance that the collar k^2 will bear against the sides of the groove e^2 after the valve has been pushed up firmly in place.

The operation of the device is as follows:—The tank A being empty, the valve truck is run beneath the said tank, and the rollers H^2 are pushed forward with sufficient force to cause the valve F to strike the shoulder a^2 and the lip B of the valve the flange a forcing the valve back, while the onward movement of the rollers H^2 and the moving parts connected thereto, will cause the half toggle levers H' to force the valve up firmly against

the packing ring a' . When the valve is nearly up in place, the collar k^2 is slipped in front of the sides of the groove e^2 , and in turning the handle k the valve is firmly pressed against the packing a' , and the valve is prevented from leaving its seat. The tank A may now be filled with the load to be carried, and the car may be run to the point where it is desired to dump out its contents. When this point is reached, if the bar K be turned until it can be raised out of the groove e^2 , the weight of the material and valve pressing on the seat, will cause the rollers H^2 to slip to the rear, until the valve rests on the shoulders h' of the plates H' , at which time the valve may be readily slipped to the rear, allowing the contents of the tank to fall downward into the receptacle provided for the purpose.

While I have shown a simple hand bar, for withdrawing the valve and for pushing it back into place; where very large tanks are used, or very heavy material, it may be necessary to use other mechanical means for moving the valve truck backward and forward on its rollers.

It will thus be seen that the invention comprises a car mounted upon a suitable truck, and a valve mounted upon a second truck attached to said car.

It will be evident that many modifications would readily suggest themselves to any one skilled in the art, which could be used without departing from the spirit of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a dumping car or wagon, the combination with the car body provided with a valve seat at the bottom thereof, of a frame attached to said car and carrying a track arranged beneath said valve seat, a valve truck adapted to travel on said track, toggle lever arms pivoted to said valve truck and to the valve, and a valve supported by the said toggle lever arms and adapted to be pressed upward on said valve seat as said valve truck advances, substantially as and for the purposes described.

2. In a dumping car, the combination with a tank forming the car body, and provided with a valve seat at the bottom thereof, of a frame attached to the car and carrying a track beneath said valve seat, a valve truck adapted to travel on said track, a flat valve mounted upon said truck, a stop piece and lip to check the forward motion of said valve, toggle lever arms connecting said valve and said truck, and means for holding said truck when said valve is closed, substantially as described.

3. In a dumping car or wagon the combination with a tank forming the car body, and provided with a valve seat at the bottom thereof, of a frame attached to the car and carry-

ing a track beneath said valve seat, a valve truck adapted to travel on said track, a flat valve mounted upon said truck, a stop piece and lip to check the forward motion of said valve, toggle lever arms pivoted to said valve and to said truck and provided with shoulders adapted to engage beneath said valve when the valve is lowered a sufficient distance, and means for holding said truck when said valve is closed, substantially as described.

4. In a dumping car, the combination with a tank forming the car body, and provided with a valve seat A^2 at the bottom thereof, the said valve seat having the flange a and packing ring a' , of a frame attached to the car and carrying a track beneath said valve seat, a valve truck adapted to travel on said track, a flat valve F mounted upon said truck, a stop piece a^2 and lip to check the forward motion of said valve, toggle lever arms H' connecting said valve and said truck, and means for holding said truck when said valve is closed, substantially as described.

5. In a dumping car the combination with a tank forming the car body, and provided with a valve seat A^2 at the bottom thereof, the said valve seat having the flange a and packing ring a' , of a frame attached to the car and carrying a track beneath said valve seat, a valve truck adapted to travel on said track, a flat valve F mounted upon said truck, a stop piece a^2 and lip to check the forward motion of said valve, toggle lever arms H' pivoted to said valve and to said truck and provided with shoulders h' adapted to engage beneath said valve when the valve is lowered a sufficient distance, and means for tightening the valve and holding said truck when said valve is closed, substantially as described.

6. In a dumping car, the combination with a tank forming the car body, and provided with a valve seat A^2 at the bottom thereof, the said valve seat having the flange a and packing ring a' , of a frame attached to the car and carrying a track beneath said valve seat, a valve truck adapted to travel on said track, a flat valve F mounted upon said truck, a stop piece a^2 and lip to check the forward motion of said valve, toggle lever arms H' pivoted to said valve and to said truck and provided with shoulders h' adapted to engage beneath said valve when the valve is lowered a sufficient distance, the bar K adjustably connected to said valve truck and having a collar k^2 , and the plate E' having groove e' with sides adapted to engage said shoulder, substantially as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

JULIUS E. RETTIG.

Witnesses:

H. VON BAYER,
JACOB JOSÉ.