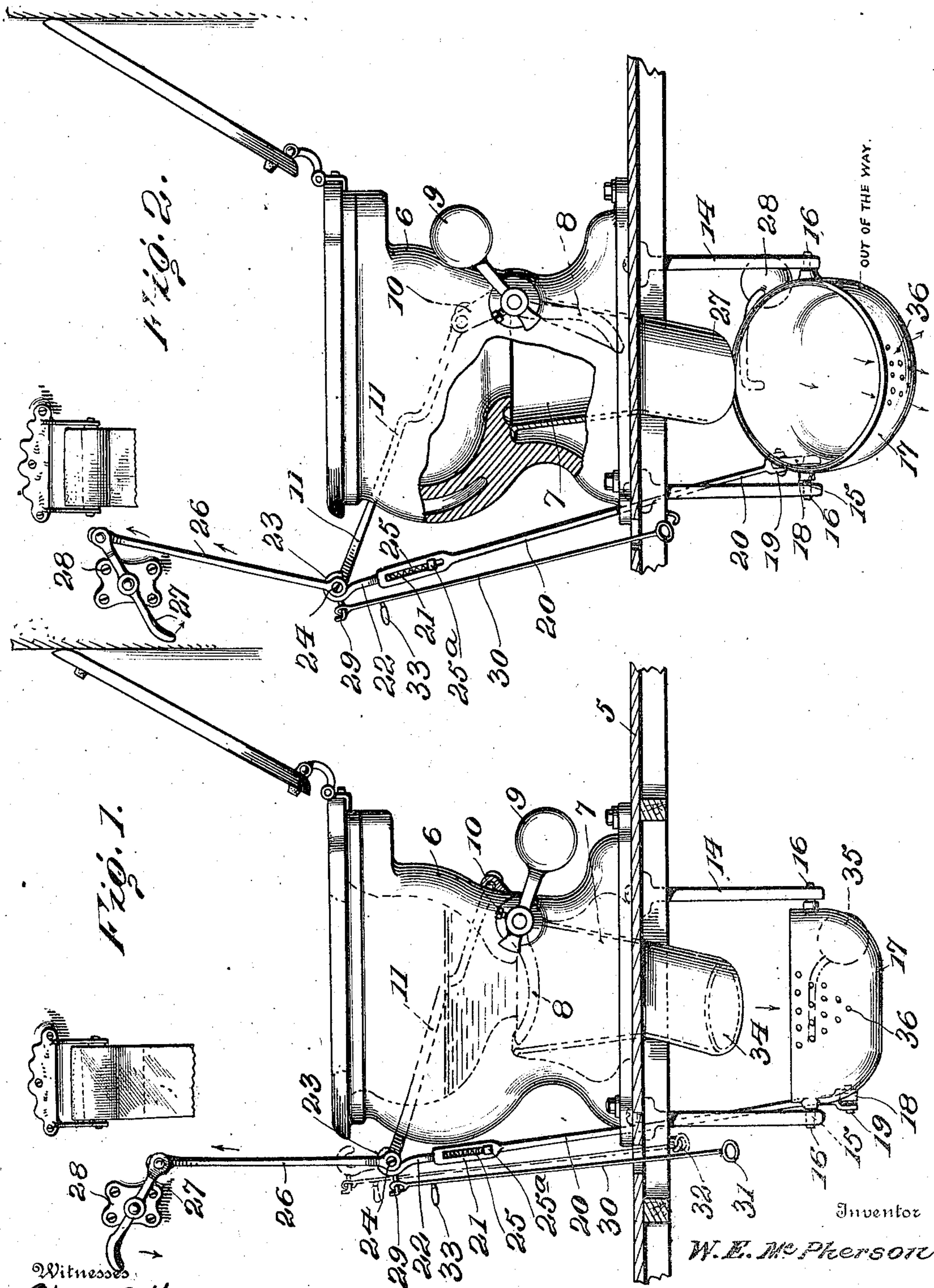


APPLICATION FILED MAY 9, 1910.

965,400.

Patented July 26, 1910.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM E. McPHERSON, OF RENSSELAER, NEW YORK, ASSIGNOR OF SEVENTY ONE-HUNDREDTHS TO HIMSELF, FIFTEEN ONE-HUNDREDTHS TO J. M. RODGERS, AND FIFTEEN ONE-HUNDREDTHS TO J. FLETCHER, OF PITTSBURG, PENNSYLVANIA.

## DUPLEX RAILWAY-HOPPER.

965,400.

Specification of Letters Patent. Patented July 26, 1910.

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### *To all whom it may concern:*

Be it known that I, WILLIAM E. McPHERSON, citizen of the United States, residing at Rensselaer, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Duplex Railway-Hoppers, of which the following is a specification.

This invention relates to water closets and more particularly to that class of closets especially designed for use on passenger cars and other railway rolling stock.

It is a well known fact that the railway regulations, and municipal ordinances of most sections of the country, require the porter or other attendant on a train to lock the toilet compartments when the train is traveling within city limits or standing at a station, which lack of toilet facilities is a great inconvenience to the passengers desirous of responding to a call of nature.

The object of the present invention is to avoid this disadvantage of railway traveling and to provide a sanitary closet that may be left open for use by passengers at all times, without danger of excretions and other effete matter in the hopper being deposited on the track contrary to the railway regulations.

A further object is to provide a closet having main and auxiliary hoppers, one of which is adapted to receive refuse from the other while the train is standing at a station, means being provided for connecting said hoppers, thereby to effect the simultaneous dumping of both hoppers when necessary.

Another object is generally to improve this class of devices so as to increase their utility, durability, and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of a railway water closet constructed in accordance with my invention, the connecting rod being shown in full lines in operative position and in dotted lines in operative position to per-

mit independent dumping of the upper pan or hopper. Fig. 2 is a side elevation, partly in section, showing both hoppers dumped.

Corresponding and like parts are referred to in the following description and indicated in both views of the accompanying drawings by the same reference characters.

The improved closet forming the subject matter of the present invention is principally designed for use on passenger cars and other railway rolling stock and by way of illustration is shown in connection with a passenger car of the ordinary construction in which 5 designates the platform and 6 the closet bowl secured in any suitable manner to the floor 5 and provided with the usual outlet 7 and dumping pan or hopper 8.

The upper dumping pan or hopper 8 is provided with the usual counterbalance or weight 9 and spaced ears or lugs 10, to which is connected a relatively short lever 11, there being an offset formed in the lever 11 to permit free pivotal movement of the pan 8 in dumping the latter.

Depending from the floor 5 and secured thereto by screws or similar fastening devices 13, are spaced hangers 14 having transversely alined openings 15 formed in the lower ends thereof for the reception of correspondingly shaped pins or trunnions 16, carried by an auxiliary dumping pan or hopper indicated at 17.

The auxiliary pan or hopper 17 is adapted to receive the refuse from the upper pan or hopper 8 when the train is traveling within city limits or when standing at a station for any predetermined length of time, thereby to allow the passengers to respond to a call of nature at such times without liability of the refuse from the upper hopper being deposited on the tracks. Extending laterally from one side of the auxiliary pan or hopper 17 is an arm 18 to which is pivotally connected at 19 the adjacent end of a relatively long rod section 20, the upper end of said rod section being extended through a slot formed in the floor 5 and provided with a terminal socket 21, for the reception of the lower end of a relatively short rod section 22.

The upper end of the rod section 22 is provided with a hooked terminal 23 which is normally and yieldably held in engagement with a pivot pin or lug 24 on the offset lever 11, by a coil spring 25. The coil spring



is seated in the socket 21 with one end thereof bearing against a nut 25<sup>a</sup> on the lower end of the rod section 22 and with its other end engaging the adjacent end wall of said socket as shown, thus to form a yieldable connection between said rod sections.

One end of a connecting rod or link 26 is pivotally mounted on the lug or pin 24 of the offset lever 11, while the other end thereof is pivotally connected with an operating lever 27, mounted on a plate or bracket 28 secured in any suitable manner to the adjacent side wall of the car.

Extending laterally from the hooked end of the rod section 22 is an arm 29 to which is pivotally connected the adjacent end of an actuating rod 30, the lower end of said rod being extended through a slot or opening in the floor 5 and provided with a terminal loop or eye 31 adapted to engage a hook 32 secured to the bottom of the car as shown. The actuating rod 30 is provided with a finger piece 33, by lifting which the hooked terminal 23 may be disengaged from the pin or lug 24 when it is desired to operate the upper pan or hopper 8 independently of the auxiliary hopper 17.

A chute 34 is secured to the bottom of the car beneath the outlet 7 for the purpose of directing the refuse from the upper hopper into the lower hopper when the latter is in normal or operative position.

Attention is here called to the fact that the auxiliary pan or hopper 17 is provided with a counterbalance or weight 35, which latter serves to normally retain the upper portion or mouth of the hopper in a horizontal plane and in proper position to receive the contents of the upper pan or hopper when the latter is tilted. It will also be noted that the vertical wall of the lower or auxiliary hopper is perforated at 36 so as to permit the escape of liquid while retaining the solid matter therein.

When a train approaches a city or enters a station the porter or other attendant on the train exerts an upward pull on the finger piece 33 which disengages the hook 23 from the pivot pin 24 so that a person after using the closet may discharge the contents of the pan or hopper 8 into the lower hopper 17 by merely depressing the actuating end of the lever 27, the lower hopper being normally retained in position to receive the refuse by means of the weight 35 as before stated. When the actuating rod 30 is moved upwardly the eye or loop 31 will engage the hook 32 and thus lock said rod in elevated position. As the train leaves a station the attendant partially rotates the finger piece 33 which disengages the loop or eye 31 from the hook 32, thereby causing the spring 25 to move the hook 23 into engagement with the pin 24 so that by depressing the free end of the operating lever 27 a simultaneous

dumping of both the upper and lower hoppers may be effected. The release of the loop or eye 31 may also be effected by a person standing on the outside of the car by merely reaching beneath the platform on one side of the car and rotating the loop or eye 30. Thus it will be seen that means are provided for simultaneously or independently operating both dumping pans or hoppers so that the closet compartments on a train may be kept open at all times without liability of the refuse being dumped upon the track.

Having thus described the invention, what is claimed as new is:

1. A water closet including a main hopper, an auxiliary hopper disposed beneath the same, and means for simultaneously or independently dumping said hoppers.
2. A water closet including a main hopper, an auxiliary hopper, and a rod forming a detachable connection between said hoppers thereby to admit independent or simultaneous dumping thereof.
3. A water closet including a main hopper, an auxiliary hopper, a sectional rod forming a detachable connection between said hoppers thereby to permit independent or simultaneous dumping thereof, and means for normally and yieldably holding the sections of said rod in engagement with each other.
4. A water closet including a main hopper, an auxiliary hopper pivotally mounted for tilting movement below the main hopper, a rod forming a detachable connection between the main and auxiliary hoppers, a counterbalance carried by the auxiliary hopper for normally retaining the latter in operative position beneath the main hopper, and means operatively connected with both hoppers for simultaneously dumping the same.
5. A water closet including an upper hopper, spaced hangers disposed beneath the main hopper, an auxiliary hopper mounted for tilting movement between said hangers, a lever connected with the main hopper, an operating handle, a link having one end thereof secured to the operating handle and its other end pivotally connected with the lever of the main hopper, and a connecting rod pivotally mounted on the auxiliary hopper and provided with a hooked terminal for detachable connection with the lever of the main hopper.
6. A water closet including an upper hopper, a lever operatively connected therewith and provided with a lug, an auxiliary hopper pivotally mounted for tilting movement beneath the main hopper, a sectional rod one section of which is pivotally connected with the auxiliary hopper and the other section thereof provided with a hooked terminal adapted to engage the lug on said lever,



an operating lever for simultaneously effecting the dumping of both hoppers, and an actuating rod connected with the hooked end of the rod section for disengaging the latter from the lug thereby to permit dumping of the upper hopper independently of the auxiliary hopper.

7. A water closet including an upper hopper, a lever operatively connected therewith and provided with a laterally extending lug, an auxiliary hopper pivotally mounted for tilting movement beneath the main hopper, a sectional rod one section of which is pivotally connected with the auxiliary hopper and provided with a socket, the other section being slidably mounted in said socket and having a hooked terminal engaging the lug, a spring seated in said socket for normally and yieldably holding the hooked terminal of the rod section in engagement with the lug, an operating lever connected with said lug for simultaneously effecting the dumping of the hoppers, and an actuating rod connected with the hooked rod section for disengaging the latter from the lug thereby to permit dumping of the upper hopper independently of the lower hopper.

8. A water closet including an upper hopper, a lever operatively connected therewith and provided with a lug, spaced hangers disposed beneath the main hopper, a counter-balanced auxiliary hopper mounted for tilting movement between said hangers, a sectional rod one section of which is pivotally connected with the auxiliary hopper and provided with a socket, the other section of said rod being slidably mounted in the socket and provided with a terminal hook engaging

the lug, a spring seated in the socket and forming a yieldable connection between said rod sections, an arm extending laterally from the hooked rod section, an operating lever pivotally connected with the lug for effecting the simultaneous dumping of both hoppers, an actuating rod engaging the arm, a finger piece carried by the actuating rod for elevating said rod to disengage the hooked rod section from the lug, and means for locking the actuating rod in elevated position.

9. A water closet including an upper hopper, a lever operatively connected therewith and provided with a laterally extending lug, an auxiliary hopper pivotally mounted for swinging movement beneath the main hopper, a sectional rod connecting the lug and auxiliary hopper, one of said rod sections being movable to extended position and provided with a hooked terminal adapted to engage the lug, an operating lever pivotally connected with the lug for simultaneously operating both hoppers, an arm extending laterally from the hooked rod section, an actuating lever having one end thereof engaging the arm and its other end formed with an eye, a finger piece carried by the rod for elevating the latter to disengage the hooked rod section from the lug, and a hook adapted to engage the eye of the actuating lever for locking the latter in elevated position.

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

WILLIAM E. MCPHERSON. [L. s.]

Witnesses:

W. D. WALKER,  
J. F. FELTON.