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APPLIANCE FOR RAILWAY CARS AND OTHER CONVEYANCES.

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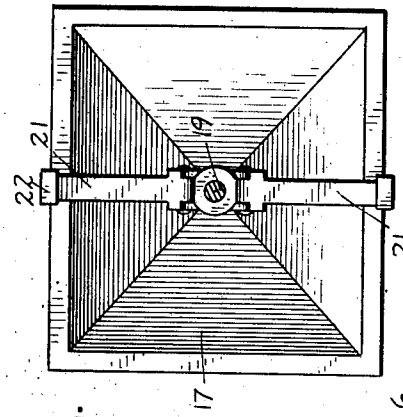

Fig. 2.

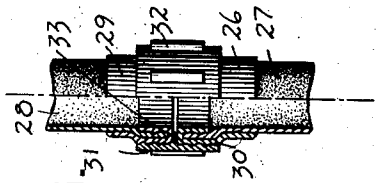

Fig. 3.

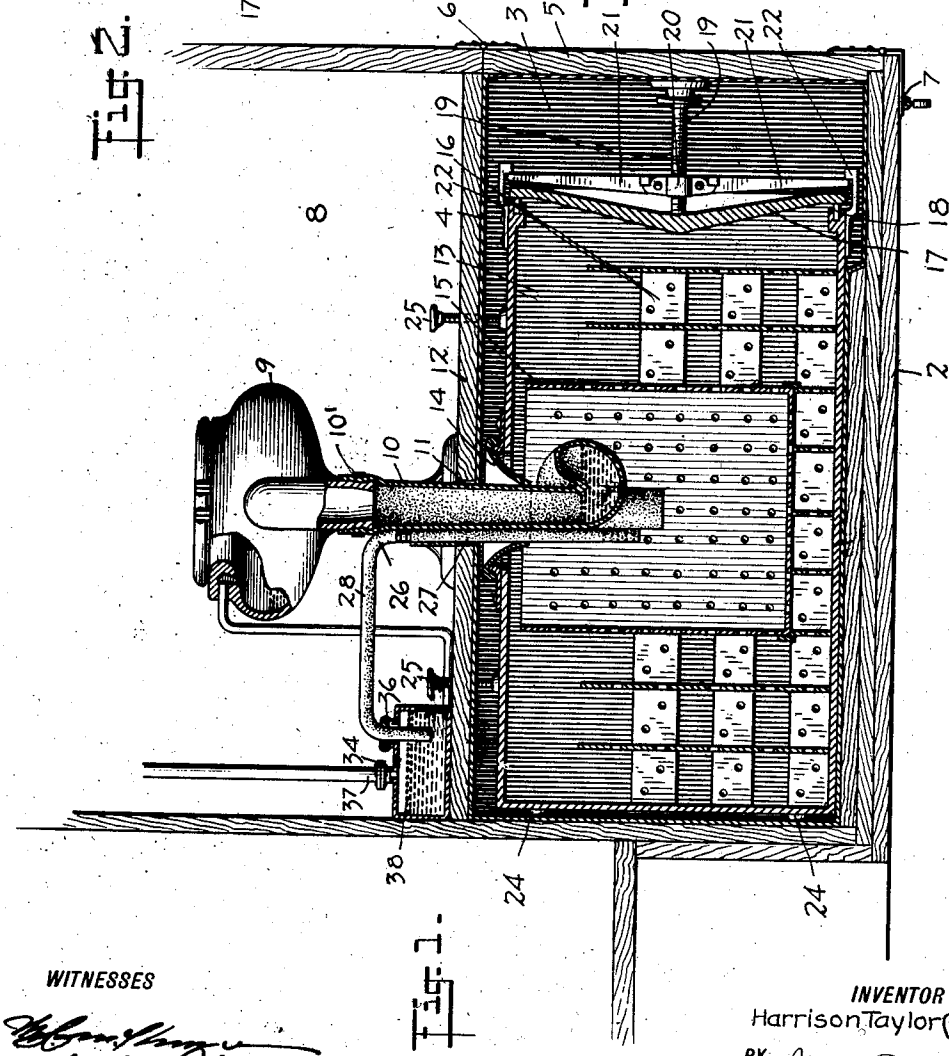

Fig. 1.

WITNESSES

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# UNITED STATES PATENT OFFICE.

HARRISON TAYLOR CRONK, OF NEW YORK, N. Y.

## APPLIANCE FOR RAILWAY-CARS AND OTHER CONVEYANCES.

1,021,663. Specification of Letters Patent. Patented Mar. 26, 1912.

Application filed December 3, 1910. Serial No. 595,371.

*To all whom it may concern:*

Be it known that I, HARRISON TAYLOR CRONK, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Appliance for Railway-Cars and other Conveyances, of which the following is a full, clear, and exact description.

This invention relates to a new and improved appliance to be used in connection with railway cars or other moving conveyances, and is for the purpose of collecting refuse which is ordinarily scattered along the right of way.

An object of this invention is to provide a receptacle for the collection of refuse, which will be located within the car, and thereby avoid the use of unsightly tanks projecting below the car, and also prevent freezing.

Another object of this invention is to provide means for forming an outlet for the gases displaced by the accumulating material in the receptacle, with means for disinfecting these gases.

A further object of this invention is to provide a lined receptacle located above the floor of the body of the car, with a tank in said receptacle, and a door in the side of the car for permitting access to said tank, for the purpose of removal.

A still further object of this invention is to provide a receiving hopper having a collapsible connection with a refuse tank, and an outlet pipe for the displaced gases, which may be either collapsible, flexible or rigid, and extends from said tank to a suitable disinfector.

These and further objects, together with the construction and combination of parts, will be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a fragmentary transverse section through the lower corner of a car, adjacent one end thereof; Fig. 2 is an end view of the tank; and Fig. 3 is a fragmentary portion partly in section, showing the means coupling the two portions of the collapsible or flexible ventilating conduit or pipe.

Referring more particularly to the separate parts of the device, 1 indicates the body of any suitable conveyance, such as a railway car, the bottom floor of which is indicated at 2. Above the bottom floor of the body of the car, there is provided a compartment 3 of any suitable size and dimensions, which is preferably lined with a suitable material, such as any durable metal, as indicated at 4. Access may be had to the interior of this compartment through an opening in the side of the car, which is normally closed by a door 5, hinged in any suitable manner to the body of the car, as at 6, and adapted to be locked in its closed position by any suitable locking mechanism, such as that indicated at 7.

The compartment 3 is preferably disposed directly below a compartment 8 in the car, which may be of any suitable character, such as a closet. Within the compartment 8, there is provided a suitable receiving hopper 9, which has secured to the outlet thereof a collapsible pipe 10 of any suitable material, such as papier-mâché, which passes through an opening 11 in a partition 12 located between the compartments 8 and 3. This pipe 10 is detachably connected to the hopper 9 in any suitable manner, as by means of a lock band 10′, and extends at its lower end into a tank 13 located in the compartment 3. The opening through which the pipe 10 passes into the tank 13 is provided with a fluid-tight gasket 14, of any suitable character, which surrounds the pipe 10 and prevents the exit of liquid or gases from the interior of the tank 13. The tank 13 may be of any suitable structure, but preferably provided with a receiving receptacle 15, which is located within the tank and of somewhat smaller dimensions, and is perforated so as to catch the solid matter and permit the fluid matter to drain into the rest of the tank. This tank may also be

provided with a plurality of plates 16, extending both longitudinally and transversely of the tank, and which are adapted to break up the motion of the contents of the tank, so as to prevent any excessive splashing, and also to prevent any damage to the tank.

In order that when the tank is removed through the opening in the side of the car, the contents of the tank may be disposed of, there is provided a cover 17 for one end of the tank, which engages flexible packing 18, thereby preventing any leakage. This cover 17 is held in intimate contact with the packing 18 by means of an adjustable member 19, which may be of any suitable character, such as the screw shown, and engages a nut 20 pivotally connected so as to have a limited motion relative to arms 21, which are adapted to abut at their opposite ends against inwardly-turned flanges on brackets 22 located on the top and bottom of the tank. The outer end of the screw 19 is provided with a head 23, of any suitable material, such as flexible rubber, which is adapted to abut against the door 5, so as to hold the tank securely in the compartment 3 when the door is closed, and thus prevent the tank from shifting. The opposite end of the tank may also be provided with flexible knobs or projections 24 of any suitable material, such as rubber, which will also tend to prevent the movement of the tank when the door is closed.

The up-and-down movement of the tank may be prevented in any suitable manner, as by means of a plurality of adjustable screws 25 passing through openings in the partition 12 and engaging the top of the tank.

An important feature of this invention lies in the means for permitting the exit of the gases from the tank 13, which are displaced by the incoming material. For this purpose, I have shown an outlet pipe or conduit 26, which may be termed a ventilating pipe, and is provided with a plurality of perforations adjacent its lower end so as to permit the passage of gases from the tank 13 into the interior of the pipe. This pipe may be of any suitable material, such as papier-mâché, and may be either flexible or collapsible, or both, and is preferably formed in two sections 27 and 28. The former section 27 preferably extends up in close alinement with the pipe 10 and passes through the openings in the gasket 14 and the tank 13, so that there will be no leakage of fluid or liquid around the same.

The sections of the pipe 26 may be connected in any suitable manner. One form of connection, however, is shown in Fig. 3, which is found to be quite feasible. This consists in providing the juxtaposed ends of each section with metallic reinforcements 29 and 30, which are shown in the form of tubular members folded so as to engage the ends of the section on both sides, and screw-threaded, so as to engage in corresponding screw-threads in an overlapping joint collar 31. The collar 31 may be provided with projections 32, so that it can be more readily manipulated. There also may be provided a gasket or packing ring 33, of any suitable material, such as rubber, located between the juxtaposed ends of the reinforcements, so as to provide a fluid-tight fit.

The opposite end of the pipe 26 extends into a disinfector 34, which may be of any suitable character, and in this case is shown in the form of a wash bottle having an inlet 36 and an outlet 37, and being provided with a suitable disinfecting fluid 38. The outlet 37 may be of any suitable form, such as the pipe illustrated, and may extend to any suitable point, such as the top of the car, for the purpose of letting out the gases from the tank 13, after they have been thoroughly deodorized, disinfected, and the germs made innocuous or destroyed.

The utility of the device will be readily understood when taken in connection with the above description. The refuse entering the receiving hopper 9 may be flushed out in any suitable manner, so that it will enter into the outlet pipe 10, and thus into the tank 13 through any suitable form of trap, such as that shown. The solid material will accumulate in the internal receptacle 15, and the liquid material will pass out into the body of the tank, where it will be prevented from excessive splashing by means of the baffle plates 16. The gases displaced by the incoming material will pass into the pipe 26 through the openings in the lower end thereof, and will be thoroughly disinfected by being washed in the disinfecting solution 38 in the disinfector 34. From the disinfector, these gases will pass out into the air thoroughly sterilized and harmless.

While the conveyance is in movement, the tank is prevented from movement by the various members which abut against it, and the interior of the compartment 3. When the conveyance has reached the end of its trip, the tank may be removed by opening the door 5 in the side of the car and taking it out bodily, and emptying its contents by removing its cover 17. In order to remove the tank, it is first necessary to detach the pipes 10 and 26. These pipes, by being of collapsible material, can be forced down into the openings into the tank 13, so that they can be removed with the tank, and fresh ones put in place when the tank is replaced in the compartment 3, ready for a new trip.

It will thus be seen that there is provided a simple and efficient device, which will store the objectionable refuse, during a trip of

the conveyance, in such a manner that there will be no objectionable splashing, nor will there be any objectionable odors coming from the tank, inasmuch as the gases are thoroughly disinfected before being permitted to pass out into the air.

The fact that the tank is located within the body of the car does away with the use of unsightly tanks suspended below the car, and permits it to be just as readily, if not more readily removed if it is desired to remove it, or adjust it for any purpose whatsoever.

While I have shown one embodiment of my invention, I do not wish to be limited to the specific details thereof, but desire to be protected in various changes, alterations and modifications which may come within the scope of the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a car body having a compartment therein located above the bottom thereof, means for permitting access to the interior of said compartment through the side of said car body, a tank removably mounted in said compartment, said car body having a second compartment disposed in juxtaposed relation with respect to said first compartment, a receiving hopper in said second-mentioned compartment, and connections between said receiving hopper and said tank.

2. The combination with a car body having a compartment therein located above the bottom thereof, means for permitting access to the interior of said compartment from the side of said car body, a tank removably mounted in said compartment, said car body having a second compartment disposed in juxtaposed relation with respect to said first-compartment, a receiving hopper in said second-mentioned compartment, connections between said receiving hopper and said tank, a ventilating outlet for said tank, whereby the gases displaced by the incoming material may pass out of said tank, and a disinfector for disinfecting said gases.

3. The combination with a car body, said car body having a compartment therein, of a door located in the side of said car body permitting access to said compartment, a tank located in said compartment, a receiving hopper connected to said tank, said tank having a detachable cover, means for securing said cover in position, and a buffer on said means, adapted to be engaged by said door so as to hold said tank against movement when said door is closed.

4. The combination with a conveyance, of a tank connected to said conveyance, a receiving hopper in said conveyance, a connection between said receiving hopper and said tank, whereby the material in said receiving hopper may flow into said tank, a collapsible ventilating pipe leading from said tank, whereby the gases in said tank may pass out of said tank, and a disinfector connected to said ventilating pipe and adapted to disinfect said gases coming from said tank.

5. The combination with a conveyance, of a tank connected to said conveyance, a receiving hopper in said conveyance, a connection between said receiving hopper and said tank, whereby the material in said receiving hopper may flow into said tank, and a ventilating pipe extending from said tank, adapted to carry off the gases from said tank, said ventilating pipe comprising a plurality of sections, with means for detachably connecting said sections together.

6. The combination with a conveyance, of a tank connected to said conveyance, a receiving hopper in said conveyance, a connection between said receiving hopper and said tank, whereby the material in said receiving hopper may flow into said tank, and a ventilating pipe extending from said tank, adapted to carry off the gases from said tank, said ventilating pipe comprising a plurality of readily destructible sections, and means for connecting said sections together.

7. The combination with a conveyance, of a tank connected to said conveyance, a receiving hopper in said conveyance, a connection between said receiving hopper and said tank, whereby the material in said receiving hopper may flow into said tank, a collapsible ventilating pipe leading from said tank, whereby the gases in said tank may pass out of said tank, a wash bottle containing a disinfecting solution, said ventilating pipe projecting into said wash bottle, and an outlet for said wash bottle.

8. The combination with a conveyance having a plurality of compartments, of a tank located in one of said compartments, a receiving hopper located in another of said compartments, and a readily destructible pipe extending between said compartments, said pipe comprising a plurality of sections composed of readily destructible material, reinforcing members on the ends of said sections, and a joint engaging said reinforcing members so as to make an air-tight connection between said sections.

9. The combination with a conveyance, of a receptacle connected to said conveyance, a receiving hopper in said conveyance, a pipe connecting said receiving hopper with said receptacle, whereby the material in said receiving hopper may flow into said receptacle, a ventilating pipe extending from said receptacle, for permitting the gases in said receptacle to escape therefrom, said

ventilating pipe extending out of said conveyance, and a wash bottle connected to said ventilating pipe and adapted to contain a disinfecting solution through which said gases will pass before leaving said conveyance.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRISON TAYLOR CRONK.

Witnesses:
HORATIO WHITING,
PHILIP D. ROLLHAUS.