

July 29, 1952

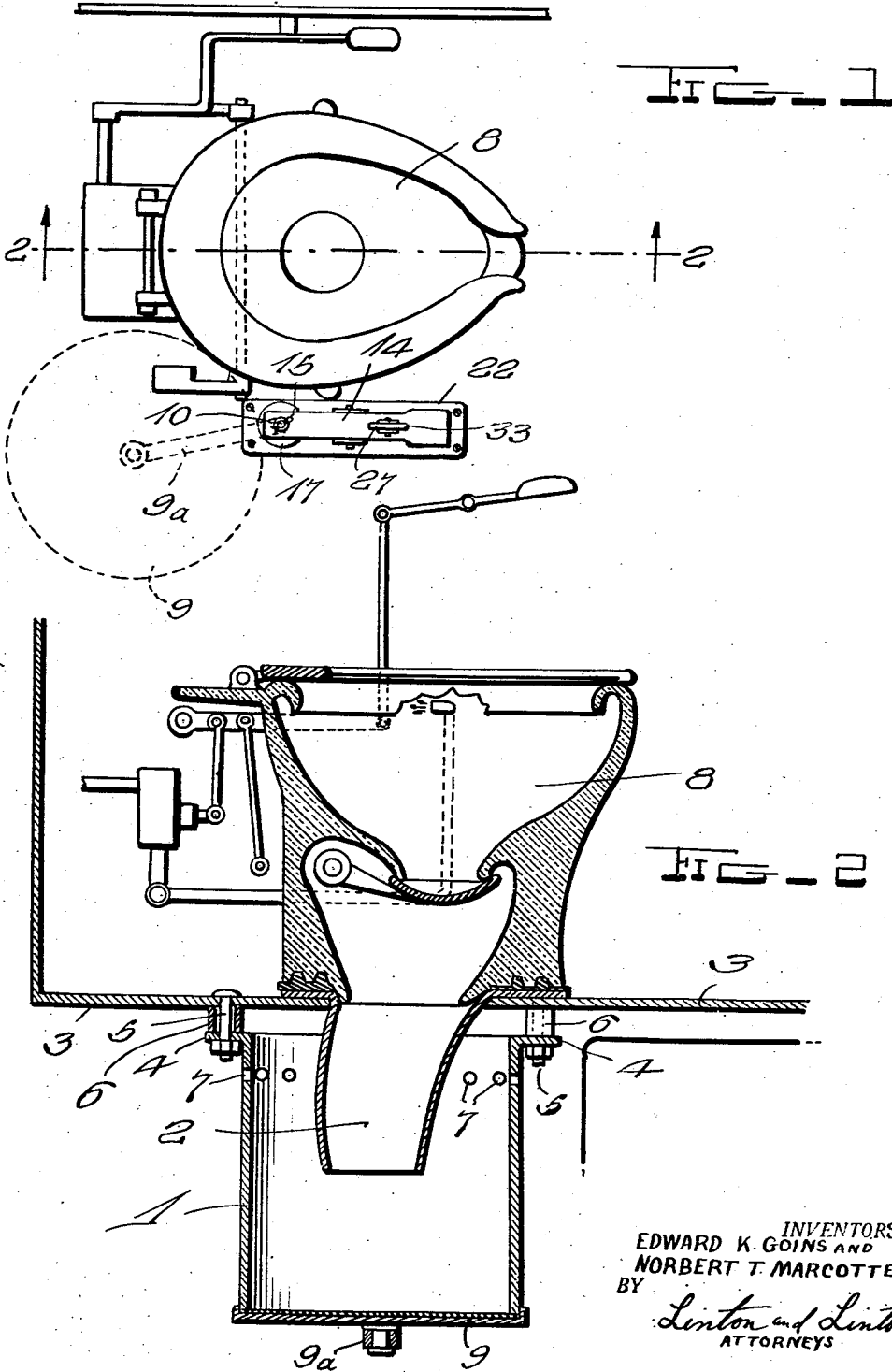
E. K. GOINS ET AL

2,604,635

CESS TANK FOR VEHICLE TOILETS

Filed Sept. 13, 1950

2 SHEETS—SHEET 1



INVENTORS
EDWARD K. GOINS AND
NORBERT T. MARCOTTE
BY
Linton and Linton
ATTORNEYS

July 29, 1952

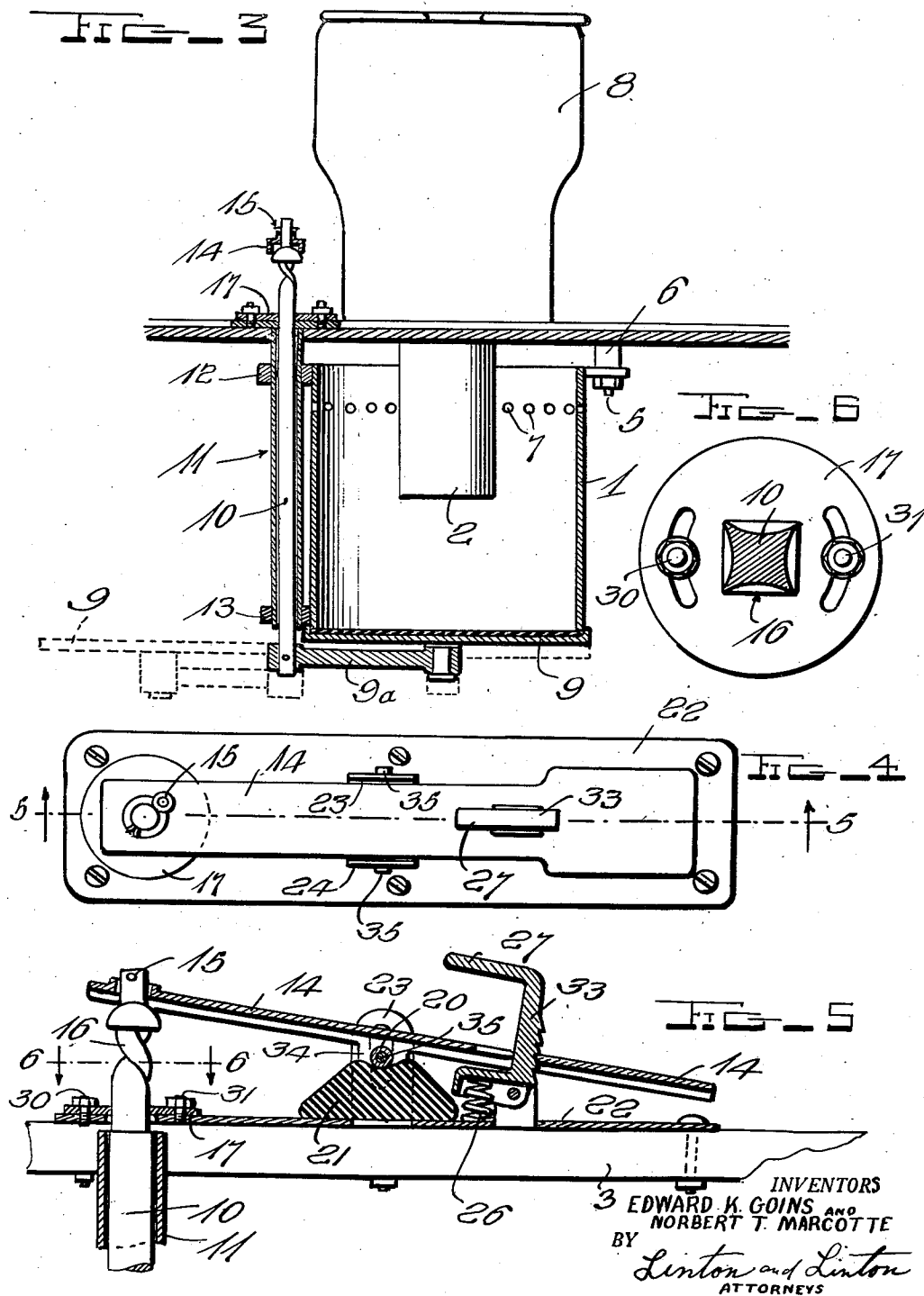
E. K. GOINS ET AL

2,604,635

CESS TANK FOR VEHICLE TOILETS

Filed Sept. 13, 1950

2 SHEETS—SHEET 2



UNITED STATES PATENT OFFICE

2,604,635

CESS TANK FOR VEHICLE TOILETS

Edward K. Goins and Norbert T. Marcotte,
Pocatello, Idaho

Application September 13, 1950, Serial No. 184,668

3 Claims. (Cl. 4—128)

1

This invention relates to portable toilet rooms and more particularly to an auxiliary cess tank adapted to collect and temporarily retain the more solid parts of the refuse commonly deposited within the toilet hopper.

A general object of this invention is to provide improved means in the form of an auxiliary cess tank secured below but inclosing the drain spout of a portable toilet in a manner that adapts said cess tank to collect and temporarily retain the more solid parts of the refuse commonly deposited within the hopper of said portable toilet.

A specific object of this invention is to provide improved means for conveniently controlling the removable bottom of an auxiliary cess tank whereby said tank may be used to collect and retain the more solid parts of refuse commonly deposited within the hopper of a portable toilet with which said tank is associated, and, vice versa, said controlling means providing for conveniently opening said bottom of said cess tank whereby said cess tank offers no obstruction to the flow of refuse commonly flushed through said portable toilet.

Another specific object of this invention is to provide improved means for controlling an auxiliary cess tank, designed to be associated with a portable toilet, of such form that the operating handle of said controlling means may be located convenient to the hand of the care-taker and out-of-the-way of the user of said portable toilet, whereby said handle may not be disturbed by said user but may be quickly and conveniently operated by said care-taker to close or open said cess tank.

Another specific object of this invention is to provide improved means in an auxiliary cess tank and controls of forms suitable to be associated with standard forms of portable toilets, such as used in Pullman cars, other standard passenger cars, and house trailers, whereby the porter in charge of the particular vehicle may conveniently and quickly close said auxiliary cess tank when said car stops at a station and/or open said auxiliary cess tank when said car has moved away from said station.

Another object of this invention is to provide improved means in an auxiliary cess tank and controls in forms adapted to be installed on standard vehicles without interference with structural parts of said vehicle.

Various other objects and advantages will be apparent as the nature of the invention is more fully disclosed.

In the accompanying drawings are shown the

2

novel features and construction of one embodiment of the device according to the present invention:

Fig. 1 is a plan view of a portable toilet of common form showing the bottom of the accompanying auxiliary cess tank rotated into an off-position as indicated by dotted lines;

Fig. 2 is a longitudinal vertical section approximately along the line 2—2 of Fig. 1, and showing the auxiliary cess tank in relation to the drain spout of a portable toilet;

Fig. 3 is a front view of the hopper of a portable toilet and showing the auxiliary cess tank in a transverse vertical section;

Fig. 4 is a plan view of the operating control lever and conjunctive parts;

Fig. 5 is a longitudinal vertical sectional view approximately along the line 5—5 of Fig. 4; and

Fig. 6 is an enlarged fragmentary view of an adjustment member, taken above and approximately along the line 6—6 of Fig. 5.

In the following description certain specific terms are used for convenience in referring to various details of the invention. These terms, however, are to be given as broad an interpretation as the state of the art will permit.

Referring now more particularly to the accompanying drawings, the following is a description thereof wherein like and corresponding parts are designated by similar reference characters.

In the embodiment of the invention disclosed numeral 1 represents the walls of a tubular auxiliary cess tank which incloses the drain spout 2 of a portable toilet. Said cess tank is secured to the floor 3 of a portable toilet room, on a standard vehicle, by means of projections 4 and bolts 5, and said cess tank is spaced below said floor 3 by means of spacers 6. Near the top of said cess tank 1 screen openings 7 permit excess water to drain out, the more solid parts of the refuse commonly deposited within the hopper 8 of a conventional toilet for vehicles being retained within said tank 1 when the bottom 9 is closed. Said bottom 9 is secured to a shaft 10 by an arm 9a which pivots in a tube 11 that is secured to projections 12 and 13 of said tank 1. Said tube 11 and shaft 10 extend approximately vertically but may be inclined away from said hopper 8 when necessary to avoid interference with existing structures.

Shaft 10 and bottom 9 are operated by means of a lever 14 which is adapted to be operated by the foot of the porter in charge of said portable toilet room. Said lever 14 is connected to the upper end of shaft 10 in a common manner; the

3

upper end of said shaft 10 turns freely in a hole near one end of said lever 14, and is retained by means of a pin 15. The screw-shaped portion 16 of said shaft 10 is equivalent to a spiral spline produced by twisting a solid square bar, and when made slidable through a square hole as shown in the nut 17, Fig. 6, this provides a rotating action of said shaft 10 that closes and opens said bottom 9 with the upward and downward movement, respectively, of said shaft 10. A roller 20 rests within the saddle of a rubber cushion 21 in a manner adapted to support the weight of said bottom 9 and conjunctive parts, and hold, by its resiliency, said bottom 9 against the lower end of said tank 1. Said rubber cushion 21 is supported by the base plate 22, and retained between extensions 23, 24 of said base plate 22. Near the central part of said lever 14, downward extensions 34 retain a pin 35, and said roller 20 concentric with said pin 35 between said extensions 34. Said extensions 23, 24 also retain the ends of said pin 35, which slide freely within vertical slots cut within said extensions 23, 24. Said lever 14 is held in closed position, as shown in Fig. 5, by means of a toothed pawl 33. Said pawl 33 is held in active position, as shown in Fig. 5, by means of a compression spring 26, which rests upon said base plate 22. To open said bottom 9, said pawl 33 is released by the foot of said porter in charge, upon the extension 27 of said pawl 33 as the weight of said bottom 9 depresses the end of said lever 14 that retains the upper end of said shaft 10. The weight of said porter's foot may be added when necessary. Said shaft 10 and thereby said bottom 9 are positioned exactly by the adjustment plate 17 in the following manner: The screws or bolts 30, 31 are loosened and said plate 17 turned until said bottom 9 is in the correct closed position and then said fastenings 30, 31 are secured. Said base plate 22 is secured to the floor 3 of said portable toilet room in a common manner by bolts and screws.

To provide for the need for emergency use of a portable toilet while the vehicle bearing the same is stopped at a station requires structural means that do not interfere with standard structures of the vehicle to which said means may be applied and also requires means of control adapted to be quickly and conveniently operated by the caretaker. The structural means to meet these requirements constitute the present invention. Therefore, structural factors that constitute the present invention have been selected capable of considerable modification, and such changes thereto as come within the scope of the appended claims are deemed to be a part of the present invention.

We claim:

1. A cess tank for toilets having depending

4

drain spouts and supported upon a vehicle comprising a tubular tank positioned vertically beneath the toilet drain spout and attached to the underside of the vehicle supporting means for the toilet with which said tank is associated, a bottom for closing the lower end of said tank, a tube mounted on the side of said tank and extending longitudinally thereof, a shaft rotatably and slidably positioned through said tube, an arm extending from the lower end of said shaft to beneath said tank and supporting said bottom, said shaft being formed with a screw portion, a base plate fixedly mounted on the top of said vehicle supporting means and having an opening formed therethrough, a nut adjustably mounted on said base plate with the bore of said nut being in line with said base plate opening and the bore of said tube and having said shaft slidably mounted through said plate opening and said nut bore, the screw part of said shaft being arranged for threaded engagement with said nut during part of the movement of said shaft for rotating the same, a lever pivotally mounted on said base plate and pivotally connected at one end to the top of said shaft for raising and lowering said shaft, and locking means for retaining said lever in various positions as desired.

2. A cess tank as claimed in claim 1 wherein the pivotal connection of said lever to said base plate consists of a pair of uprights extending from said base plate and each having a longitudinal slot formed therein, an axle connected to the medial portion of said lever and having each end slidably and rotatably positioned in one of said longitudinal slots and a resilient cushion mounted on said base plate and supporting said axle.

3. A cess tank as claimed in claim 1 wherein said locking means consists of a bar having a notched edge pivotally connected to said base plate, said lever having an opening formed therein through which extends said bar, resilient means tending to pivot said bar with the notches thereof engaging an edge of said lever opening, and a foot plate extending from said bar for manually pivoting said bar against said resilient means.

EDWARD K. GOINS.

NORBERT T. MARCOTTE.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
337,546	Angell	Mar. 9, 1886
652,252	Dodge	June 26, 1900
1,683,754	Bell	Sept. 11, 1928
2,506,382	Pazandak	May 2, 1950