

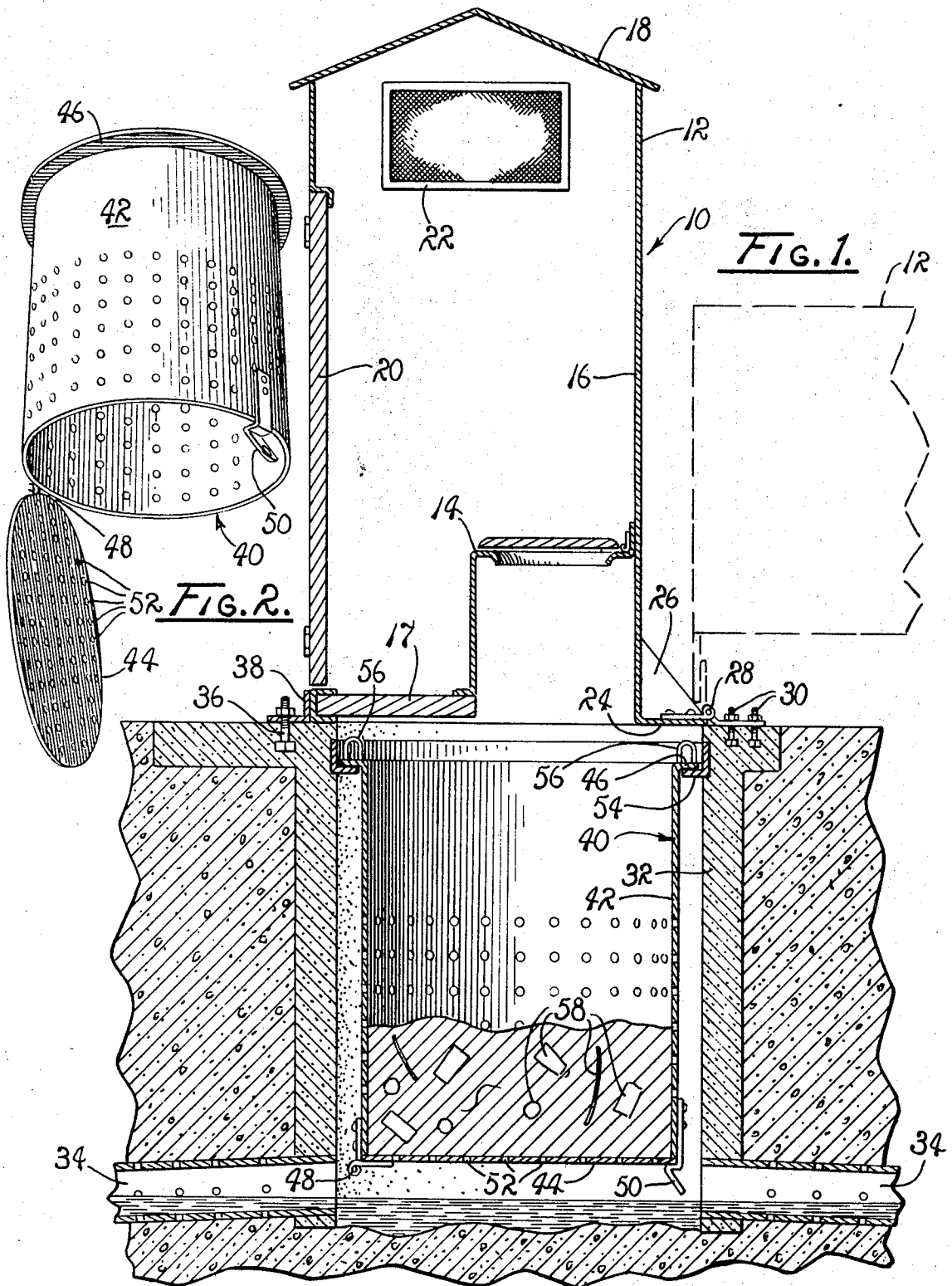
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TOILET

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3,546,718
TOILET

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3 Claims

ABSTRACT OF THE DISCLOSURE

A structural apparatus for use by the public in answering calls of nature in outdoor areas, the apparatus including a superstructure or housing providing privacy for the user and having an apertured seat, the housing being pivoted to a foundational tubular substructure and swingable to a position providing access to a removable container supported within the substructure below the seat, the container being foraminous for catching and retaining foreign objects and debris but permitting human body waste matter to pass therethrough, the container having a pivotally connected bottom normally latched in closed position but releasable for gravitationally discharging the retained contents, after which the container with the bottom thereof closed is returned for support within the substructure.

BACKGROUND OF INVENTION

The present invention relates to sanitary facilities such as toilets and the like adapted to receive and dispose of bodily waste from humans and more particularly to an improved toilet for use by the public in outdoor areas which includes a movably mounted housing and a container for catching foreign objects and debris which clog and impair effective use of the toilet and cleansing thereof, the container and retained contents thereof being removable for disposition of the contents.

In the interest of health and sanitation there are provided in our national parks and other outdoor areas sanitation facilities or units for use by the public, each unit consisting essentially of a small building or housing affording privacy for the user and a substructure disposed in a suitable excavation or hole in the ground for receiving the bodily waste. It is frequently necessary to provide such units at points where there is no sewage system or readily available source of water for washing down the waste materials. In such instances, treatment of the waste materials is usually by periodic application of a suitable chemical and disinfectant for reducing odors and denying use of the waste material as a breeding place for insects such as flies and the like. At seasons end, the sanitary units are cleansed by washing down and pumping out the waste materials, as by a flexible pipe inserted through the seat opening. The hole is then suitably treated with disinfectant or the like in preparation for the next season.

However, experience has shown that the aforementioned hole in the ground becomes a receptacle for matter other than waste materials from the human body, including such foreign objects as tin cans, toys, articles of apparel, sticks, rocks and other debris, intentionally or inadvertently deposited therein, such foreign objects seriously interfering with effective use of the sanitary unit and at times rendering impossible the pumping out of the toilet or other cleansing operation.

SUMMARY OF INVENTION

It is therefore an object of the present invention to provide an outdoor toilet of improved type which is capable of catching and retaining foreign objects in a

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manner which does not impair its effectiveness in performing its primary functions.

Another object is to provide an improved toilet in accordance with the present invention having a capability of catching and retaining foreign objects while permitting the passage of human body waste materials.

Still another object is to provide an improved toilet mounted for easy displacement for providing ready access to a removable container adapted to catch and retain foreign objects.

A further object is to provide an improved toilet of outdoor type for catching and retaining foreign objects in a manner providing for ready removal therefrom and disposition thereof in a facile and sanitary way.

These and other objects and advantages are achieved by an improved toilet embodying the principles of the present invention which includes a superstructure receiving and affording a user a considerable degree of privacy, the superstructure being pivoted to a foundational substructure in the form of a tubular member adapted to be inserted in a hole in the ground and serving as a liner therefor and preventing cavein of the walls thereof, the substructure having associated therewith drain pipe or the like, the tubular member having an inwardly directed lip or flange upon which a foraminous container is supported by means of an annular flange the annular flange having fixed thereto U-shaped brackets for engagement by lifting hooks for removal of the container, the bottom of the container being pivoted and normally held in contents retaining position by means of a releasable catch or latch, the bottom being adapted to be released for gravitationally discharging or dumping of the retained contents after removal of the container and disposition thereof over a suitable receptacle.

BRIEF DESCRIPTION OF DRAWING

FIG. 1 is a vertical section of an improved outdoor type of toilet embodying the principles of the present invention.

FIG. 2 is a perspective view at a reduced scale of the removable container which constitutes a feature of the present invention.

DESCRIPTION OF EMBODIMENT

Referring to the drawing, there is shown in FIG. 1 a sanitation facility or unit 10 in the form of an improved toilet of the outdoor type which embodies the principles of the present invention and includes a suitable building structure or housing 12 supporting an apertured seat 14 therewithin and having the usual walls 16, floor 17, roof 18 and a door 20. Walls 16 are pierced as desired or necessary for the reception of screened windows 22 for ventilation of the housing and the exclusion of flies and other insects therefrom. Door 20 is provided with a suitable latch, not shown, for providing privacy for the user of the sanitary facility.

It will be noted that the wall 16 opposite the door 20 is provided with a rearwardly directed lip or flange 24 braced by a plate or gusset 26. Secured to the flange 24 is one strap of a hinge mechanism 28 the other strap of which is secured by bolts 30 fixed in the top of a substructure 32 of concrete or other suitable material. Substructure 32 is a bottomless tubular member adapted to be inserted in an opening or hole excavated in the ground and communicates with the subsoil by means of drain pipes 34. Member 32 serves as a liner for the hole and to prevent cavein of the walls thereof, as well as a foundation for the housing 12. Also fixed in the top of the tubular member 32 is a suitable fastening means 36, such as a bolt or bolts, for holding down an angle iron 38 fixed to the threshold of the housing 12. Thus, with the fastening means 36 unbolted, the housing 12 may be swung about

the pivotal axis of the hinge mechanism 28 for disposing the housing in the position fragmentarily shown in phantom lines in FIG. 1, for the purpose of providing easy access to the interior of the tubular member 32.

The reason for providing easy access to the tubular member 32 is for the purpose of readily removing a container 40 and cleaning out the waste materials which have accumulated therein over a period of time, usually a season's use. Such cleansing is ordinarily performed by washing down with a suitable fluid and then pumping out of the contents, usually by means of a pipe passed through the seat opening. Cleansing by pumping, however, is frequently hampered or rendered well nigh impossible because of the presence of foreign objects among the waste materials such as tin cans, toys, articles of apparel, sticks, rocks and other debris, and the like. Moreover, such foreign objects clog the openings to the drain pipe, impairing effective use of the toilet.

A solution to the problem of foreign objects is presented by the present invention which provides the removable container 40 to be supported within the tubular member 32 for catching and retaining the foreign objects while permitting the flow of waste body fluids therethrough for conveyance to the subsoil via drain pipes or conduits 38. Inviting attention also to FIG. 2, container 40, which constitutes a feature of the present invention, is formed with a cylindrical wall 42 and a bottom plate or closure 44, both perforated or foraminous, wall 42 having an annular flange 46 at the top edge thereof. Bottom plate 44 is pivotally connected to the cylindrical wall 42 by means of a suitable hinge mechanism 48 and is adapted to be held in engagement therewith by means of a suitable latch or catch 50. Latch 50 may be of the type which is made of spring metal and has a perforation 52 whereby the latch may be hooked from a distance for release of the bottom plate 44.

Container 40 is adapted to be supported within the tubular member 32 with the bottom thereof above the subsoil so that the effectiveness of the toilet is not impaired. Such support is accomplished by means of an inwardly directed lip or flange 54 set into the tubular member adjacent the top thereof, flange 46 being received by and adapted to rest on the lip or flange 54. Flange 46 has affixed thereto U-shaped brackets or staples 56 in which lifting hooks, not shown, are adapted to be received for removal of the container 40 from within the member 32. With the parts disposed as shown in FIG. 1, the container 40 acts as a receptacle for receipt of materials falling through the seat opening and serves to catch and retain foreign objects 58, while permitting fluid materials to pass through the foraminous walls and bottom thereof.

OPERATION

The operation of the device of the present invention is believed to be clearly apparent and is briefly summarized at this point. When it is desired to cleanse the toilet after a period of use, the fastening means 36 is unbolted and the housing 12 is swung about the pivot axis of hinge 28 to the position fragmentarily shown in phantom lines in FIG. 1. The apparatus, not shown, for performing the cleansing operation includes lifting equipment having a pair of lifting hooks which are hooked into the brackets or staples 56 for removal of the container 40. After disposition of the container over a disposal point, such as a receptacle or compartment in a dump truck, catch 50 is moved out of engagement with the bottom plate 44 for permitting the same to pivot about the axis of hinge 48 for dumping the contents of the container. In the meantime, the residue of materials may be pumped out and

other cleansing operations performed, such as the washing down of the walls of the tubular member and the spraying of disinfectant, etc. The container 40 may also be washed and sprayed, after which it is reinserted in the tubular member with the bottom thereof in closed position ready for the capture and retention of any foreign objects.

There has thus been provided an outdoor toilet of improved design and construction which provides for the catching and detention of foreign objects or debris and for removal thereof in a rapid and facile manner for facilitating the cleansing of such type sanitary units.

Although the invention has been herein shown and described in what is conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the scope of the invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices and apparatus.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A sanitary facility comprising a superstructure providing a degree of privacy for the user; a substructure on which said superstructure is mounted; and a foraminous container within said substructure for catching and retaining foreign objects introduced thereto while permitting descent therethrough of human excrement and the like, said superstructure being pivotally mounted on said substructure for movement to a position providing access to said container, said container including a perforated cylindrical wall, a perforated bottom plate pivotally connected to said wall, and a catch on said wall for holding said bottom in engagement with said wall for retaining objects therein and movable for pivoting of said bottom plate and gravitational discharge of said objects.

2. The facility of claim 1 wherein said cylindrical wall has an annular flange, and lift-hook receiving means secured to said flange.

3. An improved outdoor type toilet comprising a substructure including a tubular member functioning as a receptacle and as a subterranean foundation; a removable container disposed within said tubular member; and a superstructure including a housing pivotally mounted on said tubular member for movement relative thereto to provide ready access to said container for removal thereof, said tubular member having an inwardly directed supporting flange, and said container including an outwardly directed flange adapted to be supported on said first-named flange for support of the container, lift-hook receiving means, a pivotally connected bottom plate, and latch means normally holding said bottom plate in closed position for retaining the contents of the container therein and adapted to be moved for releasing said bottom plate for pivoting to open position and gravitationally discharging said contents.

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