Dec. 24, 1957 O. W. HAHN 2,817,092

COMMODE

Filed Feb. 9, 1953 4 Sheets-Sheet 1

Fig. 1

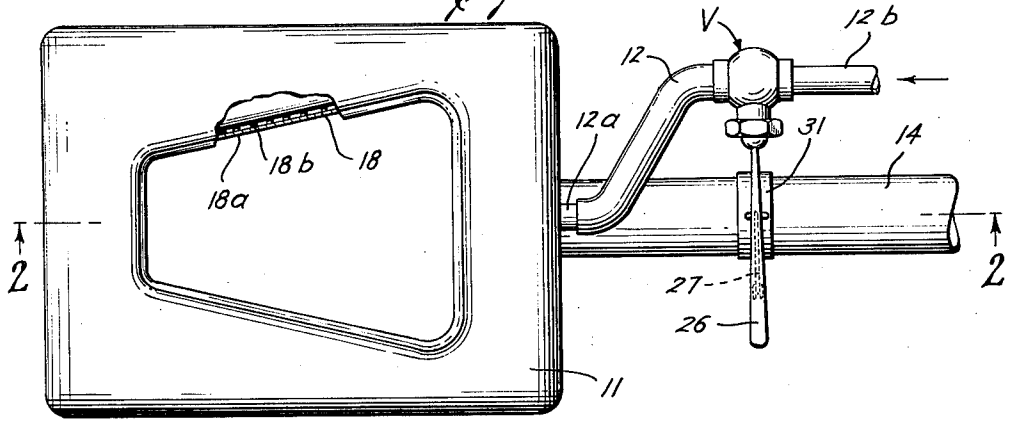


Fig. 2

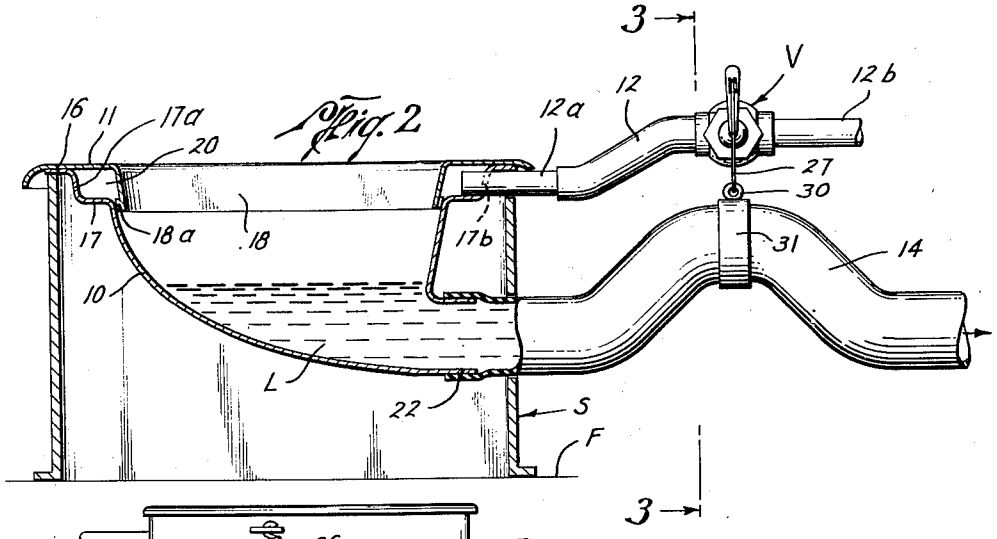
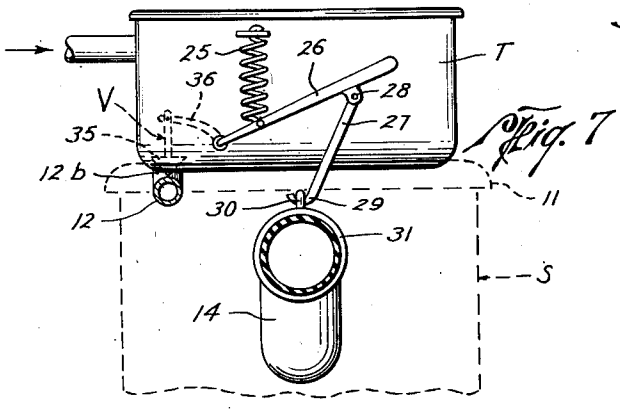


Fig. 7



Oscar W. Hahn
INVENTOR.
BY J. Vincent Martin
Joe E. Edwards
B. R. Pravel
ATTORNEYS

Dec. 24, 1957 O. W. HAHN 2,817,092

COMMODE

Filed Feb. 9, 1953 4 Sheets-Sheet 2

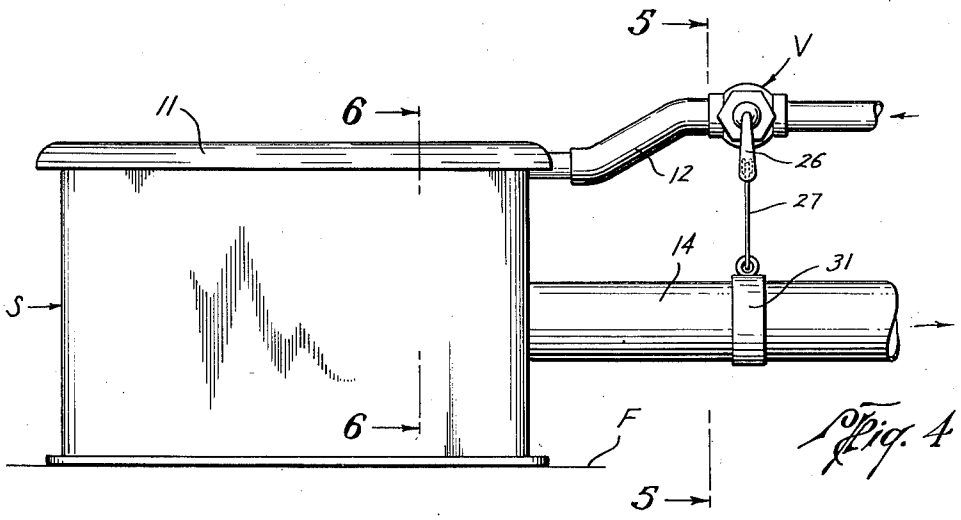


Fig. 4

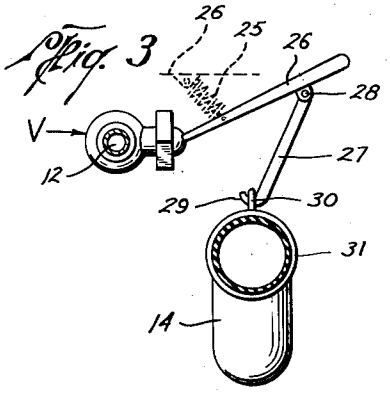


Fig. 3

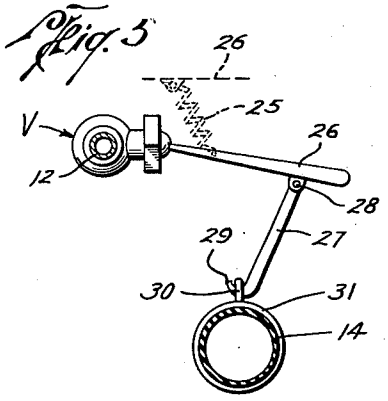


Fig. 5

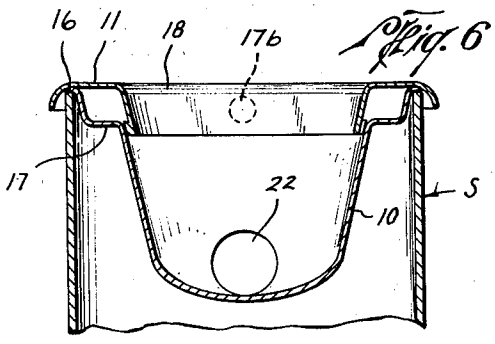


Fig. 6

Oscar W. Hahn
INVENTOR.

BY J. Vincent Martin
Joe E. Edwards
B. R. Pravel
ATTORNEYS

Dec. 24, 1957 O. W. HAHN 2,817,092

COMMODE

Filed Feb. 9, 1953 4 Sheets-Sheet 3

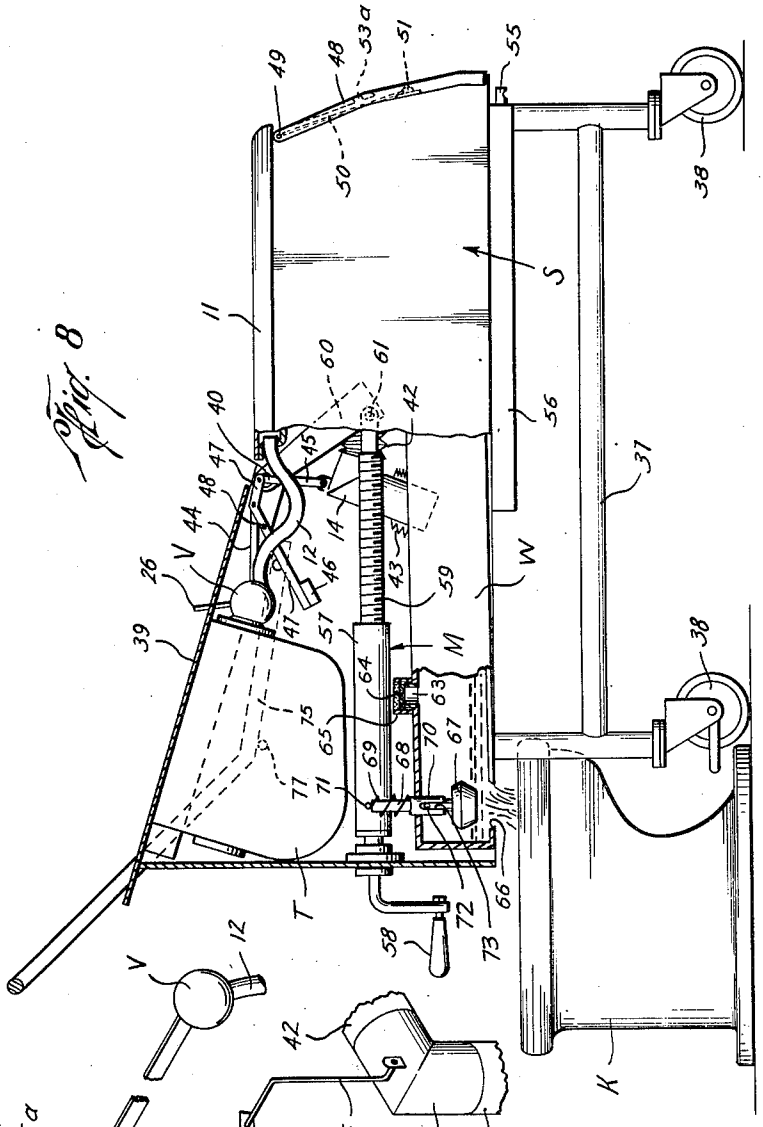


Fig. 8

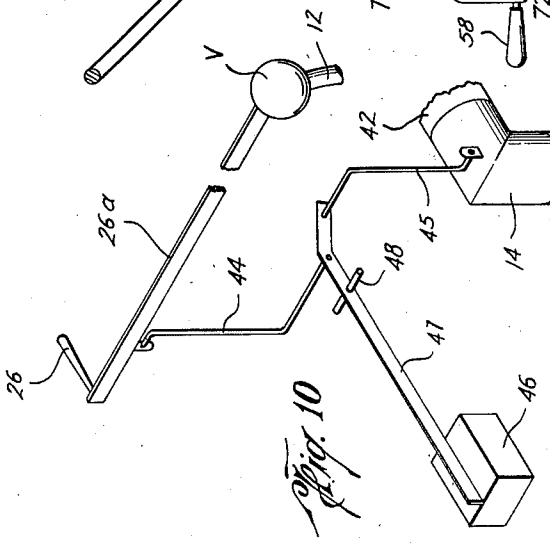


Fig. 10

Oscar W. Hahn
INVENTOR.
BY J. Vincent Martin
Joe E. Edwards
B. R. Travel
ATTORNEYS

Dec. 24, 1957 O. W. HAHN 2,817,092

COMMODE

Filed Feb. 9, 1953 4 Sheets-Sheet 4

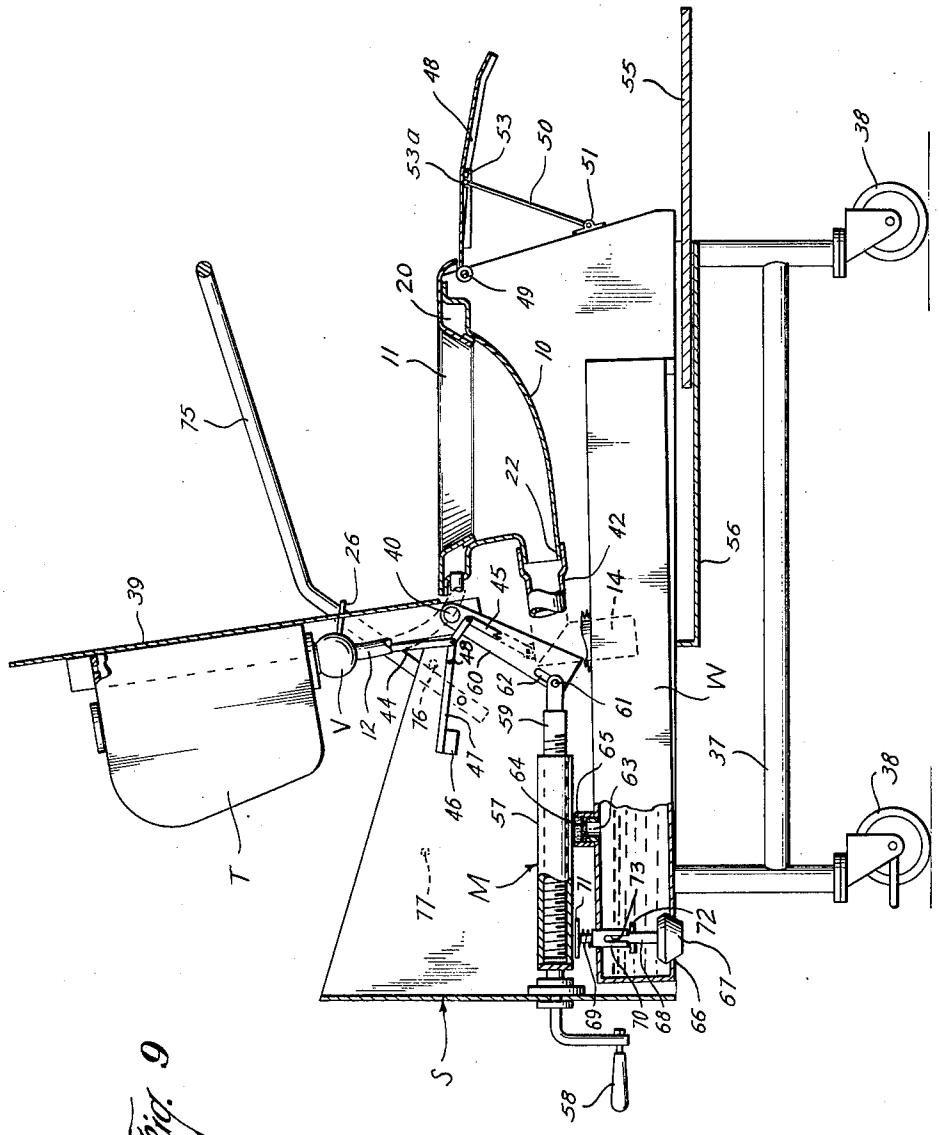


Fig. 9

Oscar W. Hahn
INVENTOR.
BY J. Vincent Martin
Joe E. Edwards
B. R. Pravel
ATTORNEYS

United States Patent Office

2,817,092

Patented Dec. 24, 1957

2,817,092

COMMODE

Oscar W. Hahn, Houston, Tex.

Application February 9, 1953, Serial No. 335,721

11 Claims. (Cl. 4—10)

This invention relates to new and useful improvements in commodes.

This invention is an improvement over my prior copending U. S. patent application, Serial No. 228,279, filed May 25, 1951, and since matured into U. S. Patent No. 2,696,012, dated December 7, 1954.

An object of this invention is to provide an improved commode wherein the flushing of the bowl thereof is coordinated with the lowering of the odor trap in the discharge line from said bowl, whereby flushing can be effected with a low flushing liquid pressure and with a minimum amount of flushing liquid for each flushing of the bowl.

An important object of this invention is to provide an improved commode which is of substantially bed-height so that the commode can be positioned alongside a bed to receive a bedridden patient without substantially changing the reclined position of the patient during the transfer to and from the commode, said commode having a toilet bowl with a discharge line therefrom extending into a waste tank, the discharge line being adapted to be lowered below the bottom of the bowl during flushing whereby the flushing liquid does not have to rise in the bowl to initiate siphoning action for discharge from the bowl as is necessary in the conventional odor-trap toilet bowls, thereby enabling the use of a much shallower bowl and a great saving in space which permits the bed-height commode to be adequately flushed and at the same time to be spaced sufficiently high above the conventional stationary commodes in homes or hospitals so that the waste tank can collect the waste from a number of flushings of said bowl and thereafter be positioned over such a stationary commode for draining thereinto.

Another object of this invention is to provide an improved commode which is adapted to receive a patient or user thereof in a reclined position and which has a back rest with a flushing liquid supply tank connected thereto, whereby the patient may be raised to a sitting position while simultaneously elevating said tank so as to provide an increased flushing liquid pressure for the commode.

Another object of this invention is to provide an improved commode adapted to be disposed alongside a bed, such as a hospital bed, and constructed so that a patient or user can be transferred thereto and supported thereby with his legs substantially horizontal and his head and back reclined and so that thereafter the patient or user can be placed in a sitting position thereon with his legs, back and head supported.

Still another object of this invention is to provide a portable commode having a flushing liquid tank pivoted thereto for raising to an elevated position to increase the gravity flow therefrom to the commode bowl for flushing same.

The construction designed to carry out the invention will be hereinafter described together with other features thereof.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawings forming a part thereof, wherein an example of the invention is shown, and wherein:

Figure 1 is a plan view of the commode of this invention, illustrating particularly the valve and odor trap construction;

Figure 2 is a side view, partly in section and partly in elevation, taken on line 2—2 of Figure 1, and illustrates the discharge line from the commode in the raised position to form an odor trap;

Figure 3 is a view taken on line 3—3 of Figure 2;

Figure 4 is an elevational view illustrating the valve and odor trap construction wherein the odor trap has been lowered to form a straight discharge from the commode;

Figure 5 is a view taken on line 5—5 of Figure 4;

Figure 6 is a view taken on line 6—6 of Figure 4 and illustrates the details of the bowl construction;

Figure 7 is a view, partly in elevation and partly in section, illustrating a modification of the valve for controlling the flow of fluid from a flushing water tank;

Figure 8 is a side view, partly in section and partly in elevation, of a portable commode of substantially bed-height wherein the valve and odor trap combination of Figures 1–7 has been particularly included, and illustrates the commode with the back rest and flushing tank in a reclined position and the discharge tank in draining position over a conventional stationary commode;

Figure 9 is a view similar to Figure 8, but illustrating the raised position of the back rest and tank during flushing of the bowl of the commode; and

Figure 10 is an isometric view of the form of the flushing valve and odor trap construction utilized in the portable commode of Figures 8 and 9.

In the drawings, the letter "S" designates the support or housing of the commode of this invention. The support S has a toilet bowl **10** and a toilet seat **11** mounted at its upper end, with the toilet seat **11** being disposed over the bowl **10**. Flushing liquid, such as water, is supplied under pressure from some source, such as an elevated tank, through an inlet line **12** to the upper end of the toilet bowl **10** and below the seat **11**. The admission of the flushing liquid to the bowl **10** is controlled by a valve V which is constructed so as to normally be urged to a closed position. The lower end of the toilet bowl **10** has a discharge line **14** connected thereto which is constructed so as to serve as an odor trap when in a raised position and to permit the discharge of liquid from the bowl **10** when in a lowered or straight position. As will be explained, the valve V and the discharge line **14** are constructed so that the discharge line **14** is raised as an odor trap when the valve V is closed, but upon opening the valve V, the discharge line **14** is lowered to provide for the discharge of the liquid from the bowl **10** without requiring the liquid to overcome the back pressure of the odor trap.

Referring now to Figures 1 and 6 in particular, therein it can be seen that the support or housing S is tubular and is disposed on the floor F or any suitable base. The upper end of the support S has mounted thereon the radial flange **16** of the bowl **10**, which flange **16** may merely rest upon the support S or may be affixed thereto by a suitable securing means such as an adhesive or bolts (not shown). Below the radial flange **16**, an annular shoulder **17** is formed on the bowl **10**, with an opening **17***b* being formed in the wall **17***a* of the bowl **10** above the annular shoulder or ledge **17**, for the reception of a rigid connector tube **12***a* of the inlet line **12**. The toilet seat **11** is mounted on the bowl **10** in contact with the radial flange **16**, with the seat **11** being secured to the bowl **10** by an ad-

hesive if the bowl **10** and seat **11** are of plastic or similar material, or by solder or other securing means if the seat **11** and bowl **10** are of metal or an equivalent material. It is preferable to form the seat and bowl of plastic materials with a bond at the flange **16** so that the seat **11** and bowl **10** form a unitary structure.

The seat **11** has an inner downwardly extending rim **18** which extends below the annular shoulder or ledge **17** of the bowl **10**. The rim **18** has an enlargement **18***a* which contacts the wall of the bowl **10** below the shoulder **17** to form a closed annular pocket **20** at the upper end of the bowl **10**. The enlargement **18***a* has openings **18***b* spaced uniformly around the periphery of the enlargement **18***a* so that the flushing liquid which is admitted through the opening **17***b* into the annular pocket **20** is uniformly distributed along the inner surfaces of the bowl **10** to wash and thereby flush the bowl upon the admission of the flushing liquid.

The bowl **10**, below the flange **17** is generally cup-shaped with an outlet tube **22** connected at its lower end and extending in a substantially horizontal direction, which provides for the connection of the flexible discharge line **14** thereto. The discharge line **14** is made of rubber or a rubber-like material which is secured to the outlet **22** by its own elasticity or resilience, or by adhesive or any equivalent securing means.

Liquid, such as water, under pressure is supplied to the end **12***b* of the liquid inlet **12** which is on the side of the valve V remote from the inlet **12***a*. This end **12***b* may be connected to a tank having the flushing liquid therein with the pressure for the liquid being supplied by gravity or the connection may be to an ordinary water tap or faucet so that the usual pressure in a building is utilized. The valve V which controls the admission of the liquid into the bowl **10** through the line **12** is of a conventional construction and may be of the spring loaded type which is adapted to stay in a closed position by the spring action therein. The details of the valve V are not illustrated since such details are well known and any conventional type of spring loaded or weight actuated valve may be utilized. However, in Figures 3 and 5, a spring **25** is shown as having a connection to a fixed base **26** in order to illustrate the action of the spring, which is normally within the valve V. This spring **25** urges the handle **26** of the valve V upwardly to a closed position, although it will be appreciated that in some instances the spring loaded valves have the handle **26** extending substantially horizontal when the valve is closed. To open the valve V, for the admission of the flushing liquid from the flushing liquid source, it is only necessary to force downwardly on the handle **26** whereupon a flushing liquid is admitted into the annular pocket **20** of the bowl **10** to wash the inner surfaces of the bowl and flush same.

The handle **26** has a link or lever **27** connected thereto at a pivot **28** for engagement of a hooked end **29** in a loop **30** on a rigid ring or tube **31** encircling the discharge line **14** at a point a sufficient distance from the outlet **22** to provide an arch in the discharge line when it is in a raised position (Figure 2).

By reason of the linkage **27** connecting the handle **26** and the discharge line **14**, the discharge line **14** is held in its raised position to form an odor trap by the same spring which maintains the valve V closed (spring **25** in Figure 3). When the handle **26** is lowered as shown in Figure 5 to open the valve V, the discharge line is simultaneously lowered to form a straight substantially horizontal outlet line (Figure 4) so that the flushing force does not have to overcome any back pressure or elevation which would be required if the discharge line were in position as shown in Figure 2 to serve as an odor trap. The outlet line **14** may, of course, be lowered below a straight horizontal position to assure flow of liquid and waste from the bottom of the bowl **10**.

In the operation or use of the commode illustrated in Figures 1–6, the flushing liquid such as water is supplied

under pressure from some source (not shown) to the inlet line **12** and the admission of such flushing liquid is controlled by the valve V. Considering that a person has just used the commode of this invention, the valve V is opened by forcing downwardly on the handle **26** against the action of the spring **25**, or its equivalent, to simultaneously lower the discharge line **14** from its position shown in Figure 2 wherein it serves as an odor trap to its position shown in Figure 4. Thus, while the flushing liquid is being admitted to the bowl **10** for flushing same, the discharge line **14** is substantially straight, that is, it is on substantially the same horizontal level as the outlet **22** at the lower end of the bowl **10**, or below such horizontal level if desired, so that the discharge of waste and liquid from the bowl **10** is not impeded by the arched position of the discharge line **14** when it is used as an odor trap. It will therefore be evident that the maximum flushing can be obtained by reason of this construction. After the flushing has continued sufficiently long in order to wash all waste material from the bowl **10**, the valve V is closed and the discharge line **14** is simultaneously raised to its arched position shown in Figure 2 whereby a portion of the flushing liquid L is trapped in the bottom of the bowl **10** so that any odors from the tank (not shown) to which the discharge line is connected will not escape through the discharge line and out through the bowl into the room wherein the commode is used.

In the form of the invention shown in Figure 7, a flushing liquid tank T is shown disposed behind the toilet seat **11** and the support S. In this construction, the handle **26** on the valve V is disposed outside of the tank T and has a spring **25** connected thereto with the other end of the spring being fixed to the tank. The handle **26** extends into the interior of the tank T where it is connected to a conical valve member **35** by a suitable pivoted linkage **36**. The valve member **35** fits into a discharge opening connected to the end **12***b* of the discharge line **12**, whereby the flow of the flushing liquid from the tank T can be controlled. Except for the modified form of the valve V shown in Figure 7, the construction and operation is identical with that shown in Figures 1–6.

In Figures 8–10, the valve and odor trap construction illustrated in Figures 1–6 is shown as used in a portable commode, with the valve and odor trap construction being modified as will appear hereinafter. In this use, the support S is a housing of substantially rectangular construction which is mounted on a frame **37** with wheels **38** for enabling the movement of the commode to a position alongside a bed, such as a hospital bed. The toilet bowl **10** and the toilet seat **11** are constructed in substantially the same manner as that illustrated in Figures 1–6, with the bowl and seat being mounted at the forward end of the support S of the commode (Figure 9). In this form of the invention, the commode has a back-rest **39** to which is connected the flushing liquid supply tank T. The back-rest **39** and the tank T are pivoted at the pivot rod **40** on the forward end of the back-rest **39** adjacent the seat **11**, with the pivot rod **40** extending through the support S or brackets mounted therein in any suitable manner.

In this form of the invention, the inlet line **12** is substantially the same as that shown in Figures 1–6, although in this form the line **12** must be elastic or flexible so as to prevent damage thereto when the tank T is raised and lowered. The inlet line **12** is connected with the valve V and extends into the annular pocket **20** in the same manner as previously described with the valve V being mounted on the bowl **10**. Thus the flushing liquid which is supplied to the bowl **10** is fed from the tank T through the inlet line **12** to the annular pocket **20**. The valve V in the form of the invention shown in the Figures 8–10 is identical with that shown in Figures 1–6, except that it is weight loaded for maintaining the same closed normally and is adapted to be opened by a down-

ward movement of the handle **26**, as will be explained. The discharge line **14** may be flexible as in Figures 1–6, but preferably is a rigid elbow or return bend which has a flexible or elastic end **42** connected to the outlet **22** of the bowl **10**. This flexible end connection **42** is preferably a rubber sleeve which is joined to the rigid elbow **14** and to the outlet **22** and becomes corrugated when in the raised position (Figure 8). The open end of the elbow **14** extends into a waste tank W and a flexible seal **43** is provided around the elbow **14** to prevent leakage of the liquid and vapors which pass into the waste tank from the elbow **14**. As shown in the drawings, the handle **26** is connected to a rod or bar **26***a* which extends to the valve V. The elbow **14** is connected to the bar **26***a* and thus to the handle **26** by a linkage which includes an upper link **44** and a lower link **45**, which are pivotally connected to a weight arm **47**. The arm **47** is pivoted on a rod **48** to the support S and a weight **46** is mounted on the arm **47** on the side of the pivot **48** opposite from the side at which the links **44** and **45** are connected. The weight **46** is just sufficient to normally urge the elbow **14** to a raised position (Figure 8) and to hold the bar **26***a* and handle **26** in a raised position to maintain the valve V closed. As will be appreciated, upon moving handle **26** downwardly, the rod **26***a* is also moved downwardly to open the valve V. The lowering of rod **26***a* also lowers links **44** and **45** and the tube **14** to its discharge position (Figure 9).

As pointed out above, the back-rest **39** and the tank T are adapted to be raised together, with the back-rest **39** serving as a support for the back of the person using the commode when such person is in a sitting position. When the user or patient is to be transferred to the commode, the back-rest **39** is in a reclined position as seen in Figure 8, which is at an angle slightly above the horizontal position of the seat **11**. This angle is used because the commode is particularly adapted to be used alongside a hospital bed wherein the head end of such bed can be inclined at substantially the same angle as the back-rest **39** (Figure 8). It is therefore possible to move a patient from the hospital bed to the commode without changing his reclined position. Additionally, a leg rest **48** is provided on the forward end of the support S and is pivoted at **49** so that it can extend in substantially the same horizontal plane as the seat **11** (Figure 9). The leg-rest **48** is maintained in such horizontal position by a rod **50** pivoted at its lower end to the support S at **51**; the upper end of the rod **50** has a lateral projection slidable in a wire bracket **53** on the lower surface of the leg-rest **48**. When the rod **50** is supporting the leg-rest **48**, the upper end fits within a notch **53***a* as shown in full lines in Figure 9, and upon lowering the leg rest **48**, the rod **50** pivots rearwardly to the dotted line position shown in Figure 8. Of course, any suitable or equivalent means for maintaining the leg rest in its horizontal position could be used.

When it is desired to place the patient or user on the commode, therefore, the patient can be transferred to the commode surface which is substantially in the same reclined position as that presented by the top surface of the hospital bed. After the patient or user has been placed on the commode, then a foot rest **55** below the support or housing S can be moved from its retracted position within the shelf **56** as shown in Figure 8 to its extended position shown in Figure 9 wherein it is horizontally disposed for receiving the feet of the user when in a sitting position. The leg rest **48** of course will be lowered by pivoting the rod **50** rearwardly and permitting the rest **48** to pivot downwardly on its pivot **49** to the position shown in Figure 8. The back rest is also pivoted upwardly to the position shown in Figure 9 to provide support for the back of the user when in such sitting position.

The mechanism for raising the back rest **39** and attached tank T is preferably a crank mechanism M which includes a threaded sleeve **57** connected to a crank handle **58** which is mounted in the support S for rotating the sleeve **57** upon cranking the handle **58**. Within the sleeve **57** is a threaded shaft **59** which is movable inwardly and outwardly of the threaded sleeve **57** upon rotation thereof. The outer end of the shaft **59** is connected to a connector plate **60** by a pin **61** in a slot **62** of the plate **60**. The upper end of the plate **60** is welded, keyed or otherwise affixed to the pivot rod **40** so that upon rotation of the sleeve **57** and forward movement of the shaft **59** by turning the crank **58**, the plate **60** moves forwardly to pivot the rod **40** which carries the back rest **39** and tank T downwardly until the back rest **39** contacts the upper edge of the support S (Figure 8). Upon a reverse turning of the crank **58**, the shaft **59** and the plate **60** are moved rearwardly to pivot the rod **40** so as to raise the back rest **39** and tank T (Figure 9).

A particular advantage to having a tank T which is raised is due to the fact that the pressure or head of liquid in the tank is thereby increased when the device is used, and it is necessary to flush the bowl **10**. On the other hand, the tank T is lowered out of the way of the person being positioned on the commode and also is out of the way when the commode is not being used. It will be appreciated, of course, that the back rest **39** could pivot downwardly to a substantially horizontal position if the support S were so constructed, since the support S is the limit which determines how far back the back rest **39** can move. In some cases, therefore, it may be desirable to have a back rest **39** at substantially the same elevation as the toilet seat **11**.

For supporting the arms of a patient while on the commode, the arm rest **75** which is pivoted to the housing or support S is provided; stops **76** and **77** are on the housing S to limit forward and rearward movement, respectively.

A waste tank W is mounted in the support S at an angle so that a discharge opening **66** in the bottom thereof is at substantially the lowest point of the tank W. A discharge valve **67** having an elongate rod **68** extending upwardly therefrom is adapted to seat in said opening **66** to close same. A spring **69** acts to urge said valve **67** upwardly to hold the valve **67** above the opening **66** whereby liquid and waste will readily drain from the tank W. The rod **68** extends through a sleeve **70** secured to the top of the waste tank and the lower end of the spring **69** rests on the top of said sleeve **70** with the upper end of the spring being confined by a handle **71**. The valve **67** is maintained seated in opening **66** by transverse pins **72** on the rod **68** which are locked below the lower edge of the sleeve **70**. Upon a rotation of the handle **71** and rod **8**, the pins **72** are aligned with longitudinal slots **73** in the sleeve **70** so that the spring **69** lifts the valve **67** upwardly until the pins **72** hit the top of the slots **73**, thus opening the valve to discharge waste from the tank W. The contents of the waste tank W will be discharged through the opening **66** preferably into a fixed or stationary commode K of the usual construction in a home or hospital.

In some cases it may be desirable to provide a vapor vent in the top of the waste tank W with an inner tube **63** affixed to the tank and a detachable sleeve **65** slidably disposed therearound (Figure 9). The sleeve **65** preferably has a screen **64** therein which rests on the upper edge of the inner tube **63** whereby a chemically treated filter may be supported to mask or remove odors from the outgoing vapors. The sleeve **65** and attached screen **64** may be removed for insertion of a spray hose into the opening **63** to wash down the tank W.

In the operation or use of the device shown in Figures 8–10, as has been explained, the patient or user is placed on the commode with the back rest in the reclined position shown in Figure 8 and the leg rest **48** extended substantially horizontally (Figure 9). Thereafter the leg

rest 48 is dropped to its lowered position (Figure 8) and the foot rest 55 is pulled from its shelf 56 below the body or housing S to provide the foot rest. Substantially simultaneously with the positioning of the patient's feet on the foot rest 55, the arm rest or handle 57 and the back rest can be pivoted forward to the position shown in Figure 9, so that the patient will be fully supported in a sitting position. After the patient has used the commode, he can actuate the valve V by moving the handle 26 downwardly to open the valve V and allow the flushing liquid to discharge into the bowl 10 and also to lower the trap or line 14. When the handle 26 is released, the weight 46 will return the valve V to a closed position and will simultaneously raise the elbow or discharge line 14 so as to form an odor trap with a portion of the flushing liquid trapped in the bowl 10. Then the arm rest 75 and the back rest 39 may each be moved to their original lowered positions shown in Figure 8, and the patient can be placed back on the bed. When the commode has been used a sufficient number of times to substantially fill the waste tank W, the valve 67 can be opened with the commode placed over a fixed receptacle such as the usual hospital or home commode K so as to empty same.

From the foregoing it can be seen that a portable commode of bed-height has been provided which has a waste tank sufficiently high from the floor to permit discharge of the waste from the waste tank into a conventional stationary commode. This is accomplished primarily because of the coordinated lowering of the odor trap and the opening of the flushing valve, because this permits proper flushing without requiring the excess of water necessary in the usual stationary commode to begin the siphoning action from the bowl. As is well known, the usual stationary commode requires the flushing water to rise considerably in the bowl before the siphoning action of the water occurs. Such an excess of water would not be practical in a portable commode since the size of the flushing water and waste tanks would have to be too large or the waste tank would have to be emptied too frequently. In addition, the commode of this invention does not sacrifice the odor trap. Other advantages have been set forth above.

The foregoing disclosure and description of the invention is illustrative and explanatory thereof and various changes in the size, shape and materials, as well as in the details of the illustrated construction may be made, within the scope of the appended claims, without departing from the spirit of the invention.

What is claimed is:

1. In a commode, a toilet bowl having a discharge outlet at the lower end thereof and a flushing liquid inlet at the upper end thereof, a source of liquid connected to said inlet, a valve to control the admission of the liquid from said source to said bowl, a discharge line having a flexible connection with said outlet, and connection means operatively connecting said valve and said line for raising and lowering said line relative to said outlet when said valve is manipulated to form an odor trap with said line when said line is in a raised position above said outlet and to relieve the back pressure of the odor trap when said line is in a lowered position so that a more effective flushing of the bowl is effected with a reduced flushing liquid pressure and a minimum amount of flushing liquid discharged from said valve.

2. The structure set forth in claim 1, including means operatively connecting said discharge line and said valve simultaneously opens said valve and lowers said line and also simultaneously closes said valve and raises said line.

3. The structure set forth in claim 1, including resilient means associated with the valve for urging said valve to a closed position and for also maintaining said discharge line in a raised position.

4. The structure set forth in claim 1, wherein said discharge line is flexible so that it is substantially straight when in said lower position for discharging and is arched upwardly when in said raised position for serving as an odor trap.

5. The structure as set forth in claim 1, wherein said discharge line is a rigid elbow having a flexible connection to said outlet with the branch of said elbow which is adjacent said flexible connection being inclined upwardly when the discharge line is raised to form an odor trap and being substantially horizontal when lowered for discharging.

6. The structure set forth in claim 1, wherein said discharge line is flexible so that it is substantially straight when in said lower position for discharging and is arched upwardly when in said raised position for serving as an odor trap, and wherein said connection means includes a handle on said valve and a linkage connecting said handle to said discharge line.

7. A commode adapted to be disposed alongside a bed, comprising a support, a toilet bowl mounted on said support, a flushing liquid tank having connection with said bowl for supplying flushing water thereto, and means pivotally connecting said tank to said support for pivoting said tank from a lower position on said support to a raised substantially vertical position, whereby said tank may be disposed in said lower position to facilitate positioning a user on said commode from the bed but may be pivoted to the raised position after the user is positioned on the seat to increase the flushing force of the liquid supplied from said tank to said bowl.

8. The structure set forth in claim 7, including a hose providing the connection from said tank to said bowl, said hose having a flexible portion so as to permit bending of the hose when said tank is raised and lowered, and means associated with said hose for controlling the flow of flushing liquid therethrough from said tank to said bowl.

9. The structure set forth in claim 7 including a discharge line having a flexible connection to the lower end of said bowl, and means to raise and lower said line whereby said line when raised above the lower end of said bowl forms an odor trap and when lowered to at least the same level as said lower end permits discharge of liquid from said bowl without acting against a back pressure.

10. The structure set forth in claim 7, including a discharge line having a flexible connection to the lower end of said bowl whereby said line may be raised and lowered relative to said lower end to form an odor trap in the raised position and to relieve the back pressure of the odor trap in the lowered position, valve means to control the flow of liquid to said bowl from said tank, and means to simultaneously open said valve means and lower said discharge line from said raised position to said lowered position.

11. A commode positionable alongside a bed, comprising a support, a toilet seat mounted on the upper end of said support at the forward end thereof and at substantially the height of the bed, a back rest mounted on the upper end of said support adjacent and behind said seat, a pivotal connection joining said back rest to said support for pivoting said back rest from a lowered reclined position on said support at substantially the elevation of the bed to a raised substantially vertical position behind said seat, a toilet bowl on said support below said seat, a flushing liquid tank mounted on said back rest for raising and lowering same as said back rest is raised and lowered, and means connecting said tank to said bowl, whereby when said back rest is pivoted to its raised position to provide a back support of the user in a sitting position on the commode said tank is elevated to increase the flushing force of the liquid supplied to said bowl from said tank.

(References on following page)

References Cited in the file of this patent

UNITED STATES PATENTS

571,244	Reed	Nov. 10, 1896
706,990	McGuire	Aug. 12, 1902
732,955	O'Hara	July 7, 1903
741,203	Williams	Oct. 13, 1903
1,001,973	Miller	Aug. 29, 1911
1,210,419	Cerney	Jan. 2, 1917
1,353,749	Hegarty	Sept. 21, 1920
1,738,017	Phillips	Dec. 3, 1929
2,483,612	Beem	Oct. 4, 1949
2,527,270	Levin	Oct. 24, 1950
2,585,698	Spring	Feb. 12, 1952
2,696,012	Hahn	Dec. 7, 1954