Oct. 16, 1956 W. J. MACKEY 2,766,716

TOILET TRAINING DEVICE FOR INFANTS

Filed July 29, 1955 2 Sheets-Sheet 1

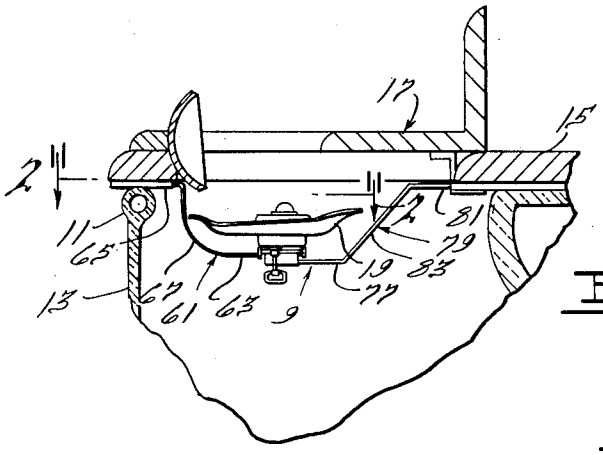
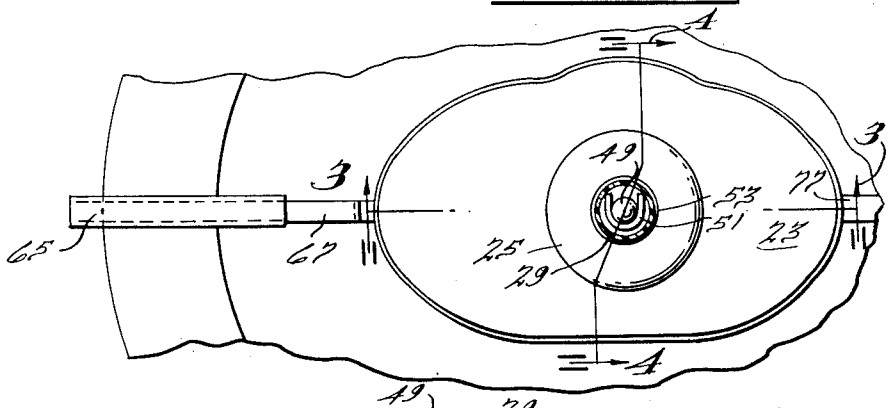


FIG. 1.

FIG. 2.



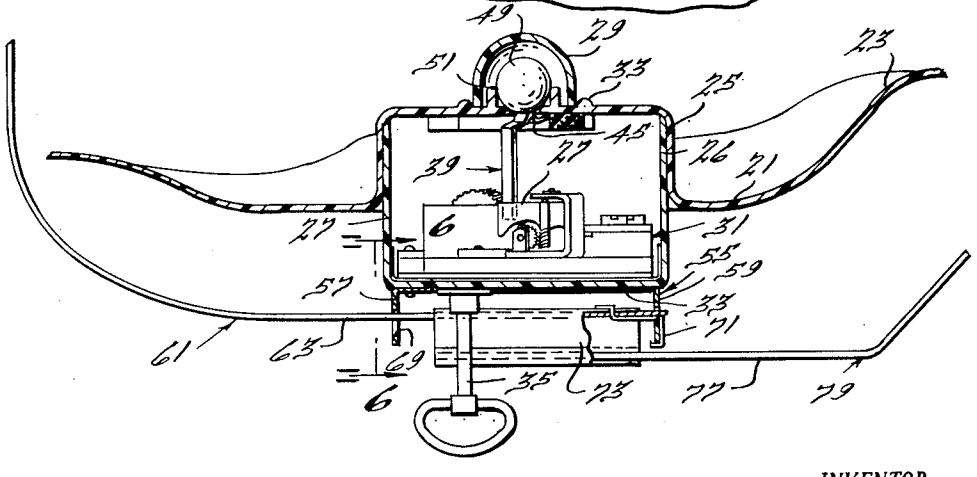


FIG. 3.

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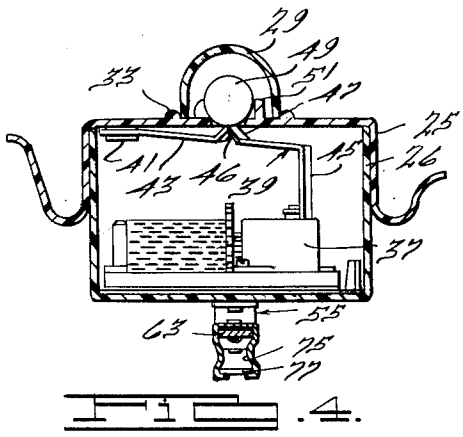


Fig. 4.

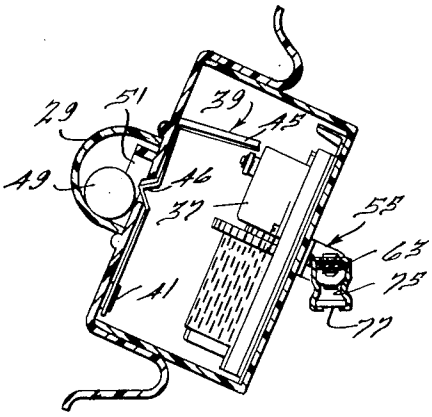


Fig. 5.

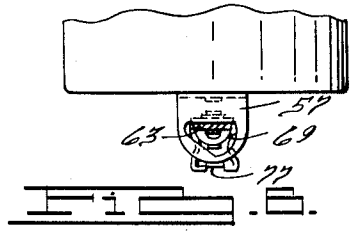


Fig. 6.

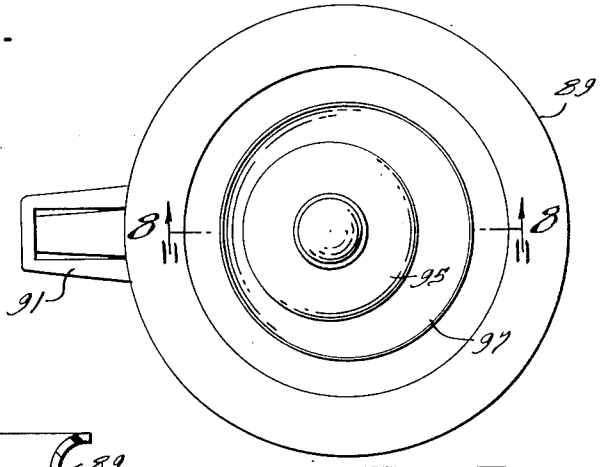


Fig. 7.

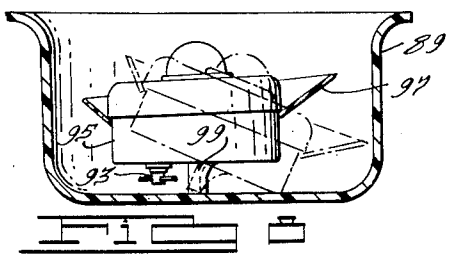


Fig. 8.

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TOILET TRAINING DEVICE FOR INFANTS

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Application July 29, 1955, Serial No. 525,221

5 Claims. (Cl. 116—67)

This invention relates to an infant's toilet training device and constitutes an improvement over the device shown in applicant's prior Patent No. 2,699,139 issued January 11, 1955 and entitled, "Musical Toilet Trainer for Infants."

It is an object of this invention to provide an infant's toilet training device adapted to be disposed in a toilet bowl of either the conventional household type or of the portable type so that when the child's excrement engages the training device, a musical song or tune will be played, thereby causing the infant to associate its toilet duties with the pleasant musical sounds.

It is a still further object of this invention to provide a device of the aforementioned type which includes a music box type mechanism which will automatically play upon tilting movement of the device caused by an infant's excrement.

It is a still further object of this invention to provide a device of the aforementioned type in which the music box type mechanism is sealingly enclosed within housing means so that the device may be washed and cleaned without injuring such mechanism.

It is a still further object of this invention to provide novel means for controlling the actuation of the music box type mechanism.

It is a still further object of this invention to provide a toilet training device of the aforementioned type which is attractive in appearance, durable in construction, relatively inexpensive to manufacture, and which may be easily supported on toilet bowls or toilet chambers.

These and other objects of this invention will become apparent from the following detailed description, taken in conjunction with the accompanying drawings, in which:

Figure 1 is a sectional view of a conventional household toilet bowl illustrating a device of this invention mounted thereon;

Fig. 2 is an enlarged view of the structure illustrated in Figure 1, taken along the line 2—2 thereof;

Fig. 3 is an enlarged sectional view of the structure illustrated in Fig. 2, taken along the line 3—3 thereof;

Fig. 4 is a sectional view of the structure illustrated in Fig. 2, taken along the line 4—4 thereof;

Fig. 5 is a view similar to Fig. 4 illustrating the device in its tilted position;

Fig. 6 is a sectional view of the structure illustrated in Fig. 3, taken along the line 6—6 thereof;

Fig. 7 is a top plan view of a portable chamber type toilet bowl with a further embodiment of the device of this invention positioned therein; and

Fig. 8 is a sectional view of the structure illustrated in Fig. 7, taken along the line 8—8 thereof.

Referring now to the drawings and more particularly to Figs. 1 to 6, it will be seen that the training device, which is generally indicated at 9, is mounted on the rim 11 of a conventional household type toilet bowl 13 which has a toilet seat 15 hinged thereto and on which is placed an infant's toilet seat 17. The device 9 is disposed within the toilet bowl in position to receive an infant's excrement.

The device includes an elongated receptacle 19, the bottom 21 of which slopes upwardly adjacent the periphery thereof to provide a wall-like portion 23 surrounding the receptacle bottom. The receptacle bottom 21 slopes downwardly toward one side and one end thereof for reasons which will hereinafter appear. The housing bottom includes a raised or upwardly projecting portion 25 disposed substantially centrally thereof which defines a downwardly opening cavity 26. The underside of the cavity 26 is closed by means of a housing member 27 which is sealingly connected with the receptacle to define a chamber. A dome-like cover member 29 is sealingly connected with the top of the raised portion 25 for reason which will hereinafter appear. The raised portion 25 of the receptacle, the housing member 27 and the cover member 29 define what will hereinafter be referred to as housing means for the device.

A music box type mechanism 31 is disposed within the housing means and supported on the bottom wall 33 of the housing member 27. The music box type mechanism is of the conventional type which plays a musical tune or the like and is spring-driven when a stem 35, which projects through the bottom wall 33 of the housing, is wound. The music or noise-making mechanism 31 includes a rotatably driven member 37 which, if released for rotation, will permit the music mechanism to play a tune. In order to control the actuation of the music mechanism, a stop member 39 is provided which may be made of a yieldable metal material and which is of an elongated finger type having one end thereof connected at 41 to the underside of the raised portion 25. The stop member 39 includes a generally horizontally extending leg 43 and a vertically extending leg 45 which is adapted to engage the rotatable member 37 to prevent the music mechanism from operating. The horizontal leg 43 of the stop member 39 has a projecting portion 45 intermediate the ends thereof which is adapted to project upwardly through an opening 47 in the underside of the top wall of the receptacle raised portion 25. A weight member in the form of a steel ball or the like 49 is movably supported on the top of the receptacle raised portion 25 and is sealingly enclosed in the housing means by the cover member 29.

The receptacle and housing means are preferably made of plastic and a molded track 51 is provided on the top wall of the receptacle raised portion 25 for controlling the direction of movement of the ball or weight member 49. When the receptacle is in a generally horizontal untilted position, the ball 49 engages the projecting portion 45 of the stop member to press the stop member downwardly into engagement with the rotatable music mechanism member 37. When the receptacle is tilted sidewise, as will be hereinafter described, the ball 49 rolls away from the stop member 39, as can be clearly seen in Fig. 5, and the stop member moves to its uppermost position out of engagement with the rotatable member 37, thereby permitting the music mechanism to make its musical sounds. In order to prevent undesirable vibrations or noise, strips of sponge rubber or the like 53 are connected with the underside of the receptacle raised portion 25 adjacent the stop member 39. These strips of material materially enhance the sound coming from the device.

In order to support the device on a toilet bowl in the manner illustrated, a bracket member 55 is connected to the underside of the housing member 27 and has longitudinally spaced depending flanges 57 and 59 adjacent the opposite ends thereof. An elongated arm 61 includes a generally lower horizontal portion 63, an upper horizontal portion 65 and an intermediate arc por-

tion 67. The lower horizontal portion 63 has its innermost end pivotally supported in the flange 59 and extends through an opening 69 in the flange 57 which is shaped so that the receptacle can tilt approximately 60-degrees relative to the arm 61. The arm 61 is locked against axial movement relative to the bracket flange 59 by means of a suitable locking strip 71. The lower horizontal portion 63 of the arm 61 carries, between the flanges 57 and 59, a fitting member 73 which defines a channel 75 into which an inner horizontal portion 77 of an arm 79 may be inserted. The arm 79 extends in an opposed or opposite direction from the arm 61 and has an upper horizontal portion 81 connected with the lower horizontal portion 77 through an inclined arm portion 83, so that the upper horizontal portions 81 and 65 are disposed in a parallel opposed relationship so as to engage the opposite portions of the rim 11 of a toilet bowl 13. The arm 79 is detachably connected with the arm 61 so that the device may be more easily packaged and stored without extremely long arms projecting therefrom.

When the device is mounted on the toilet bowl, the upper horizontal portions 65 and 81 of the arms 61 and 79 engage the toilet bowl and retain the receptacle in a generally horizontal untilted position. When an infant's excrement is received in the receptacle, due to the sloping of the receptacle bottom the excrement will move in a direction to cause more weight to be applied to one side of the receptacle than to the opposite side thereof, thus causing the receptacle to tilt to the position illustrated in Fig. 5, whereupon the stop member 39 will move out of engagement with the rotatably driven music mechanism member 37 and the music mechanism will be actuated automatically to play the desired song or tune. As soon as the device is returned to its untilted position, the ball 49 will press the stop member 39 downwardly into engagement with the rotatably driven element 37 to stop the mechanism from operating. It will thus be appreciated that the device will encourage better toilet habits for an infant, and the device is attractive in appearance, relatively inexpensive to manufacture, and can be easily washed and cleaned because all of the moving mechanism is enclosed within the housing means.

In the embodiment illustrated in Figs. 7 and 8, the toilet training device is shown used in conjunction with a toilet bowl of the portable chamber type, and it will thus be seen that the chamber 89 is illustrated having a handle 91 thereon. This chamber may be of any conventional, well-known type. The toilet training device used with this arrangement includes the music box type mechanism 93 mounted in housing means 95 and actuated and operated in substantially identical manner as previously described, except that the weight member or ball can roll in any direction so that no matter in what direction the device tilts, the ball can move away from the stop member. In this device, the receptacle is formed by means of a generally annular collar-like member 97 which is secured to the housing means 95 in a sloped arrangement, such as to cause the excrement to move to one side thereof. Instead of the supporting bracket and arm arrangement previously described, a foot 99 is provided on the bottom of the housing means 95 which is positioned so as to support the device in an untilted position in the chamber 89 when the receptacle 97 is empty. However, as soon as the receptacle is engaged by weight, such as excrement, it will tilt on the foot 99 to the position illustrated in dot and dash lines in Fig. 8, whereupon the music mechanism will be released in the same manner as previously described so as to play a musical tune.

Two forms of the invention are thus illustrated, one adapted for use with a conventional household toilet bowl, and one for use with a toilet bowl of the portable chamber type. In either event, the toilet training habits of an infant will be enhanced by the device of this invention.

What is claimed is:

1. An infant's toilet training device adapted to be disposed in a toilet bowl, said device including a receptacle adapted to receive excrement, said receptacle bottom being sloped downwardly toward one side thereof, housing means sealingly connected with said receptacle, a noise-making mechanism within said housing means and including a rotatably driven element, a stop member supported in said housing means and movable between a first position wherein said member engages said mechanism and prevents rotation of said element and a second position wherein said member moves out of engagement with said mechanism and permits rotation of said element, a weighted ball member movably supported in said housing means for movement between a first position in which said weighted ball engages said stop member to retain the same in its first position when said receptacle is in a generally horizontal untilted position and a second position wherein said weighted ball member moves out of engagement with said stop member so that said stop member moves to its second position when said receptacle is tilted, and means connected with said receptacle and engageable with a bowl to normally retain said receptacle in a generally horizontal untilted position but permitting said receptacle to tilt when excrement engages the downwardly sloped bottom portion of said receptacle.

2. An infants' toilet training device adapted to be disposed in a toilet bowl, said device including a receptacle adapted to receive excrement, said receptacle bottom having a raised central portion defining a downwardly opening cavity in the underside thereof, a housing member sealingly connected with the underside of said receptacle and closing said cavity so as to provide a chamber, a noise-making mechanism disposed within said chamber and including a rotatably driven element, a stop member supported on the underside of said receptacle bottom within said chamber and movable between a first position wherein it engages said mechanism and prevents rotation of said element and a second position wherein it moves out of engagement with said mechanism and permits rotation of said element, a weight member supported for rolling movement on said receptacle raised portion for movement between a first position in which said weight member actuates said stop member to move the same to its first position when said receptacle is in a generally horizontal untilted position and a second position wherein said weight member releases said stop member for movement to its second position when said receptacle is tilted, cover means encompassing said weight member and sealingly connected with said raised portion, and means connected with said receptacle and engageable with a bowl to normally retain said receptacle in a generally horizontal untilted position but permitting said receptacle to tilt upon the application of a weight in a portion of said receptacle.

3. An infant's toilet training device adapted to be disposed in a toilet bowl, said device including a receptacle adapted to receive excrement, the bottom of said receptacle being sloped downwardly toward one side thereof, said receptacle bottom having an upstanding housing portion providing a downwardly opening cavity, a housing member sealingly connected with the underside of said receptacle and cooperating with said receptacle housing portion to provide an enclosed chamber, a noise-making mechanism supported on said housing member within said chamber and including a rotatably driven element, a flexible finger supported on the underside of the top wall of said receptacle housing portion which will move out of engagement with said mechanism so as to permit rotation of said noise-making element unless biased into engagement with said mechanism, an aperture in the top wall of said housing portion, a portion of said flexible finger projecting through said aperture above the top surface of said housing portion top wall, a weighted ball movably supported on the top surface of said housing

portion top wall and engaging the projecting portion of said flexible finger when said receptacle is in a generally horizontal untilted positioned so as to move said finger into engagement with said mechanism, means sealingly enclosing said ball but permitting said ball to move out of engagement with said flexible finger when said receptable is tilted so that said finger moves out of engagement with said mechanism, and means connected with said receptacle and engageable with a bowl to normally retain said receptacle in a generally horizontal untilted position but permitting said receptacle to tilt when weight is disposed in the downwardly sloped bottom of said receptacle so as to cause said noise-making mechanism to make a noise.

4. An infant's toilet training device adapted to be disposed in a toilet bowl, said device including a receptacle adapted to receive excrement, the bottom of said receptacle being sloped downwardly toward one side thereof, housing means sealingly connected with said receptacle, a noise-making mechanism disposed within said housing means and including a rotatably driven element, a stop member connected with said receptacle and movable between a position to permit rotation of said driven element and a position to prevent rotation of said driven element, said stop member normally preventing rotation of said driven element when said receptacle is in a generally horizontal untilted position and being movable upon tilting of said receptacle to permit rotation of said driven element, means for supporting said housing means and receptacle on the peripheral wall portion of a toilet bowl, said means including a bracket member pivotally connected to the underside of said housing means, an arm connected with said bracket means and extending away therefrom, the outer end of said arm being disposed in a generally horizontal plane above the top of said receptacle, and a second arm connected with said bracket

means and extending in an opposite direction to said first arm, the outer end of said second arm being disposed in in a generally horizontal plane above the top of said receptacle means, said first arm being adapted to rest upon the front portion of a toilet bowl wall and said arm being adapted to rest upon the back portion of a toilet bowl wall so as to support the receptacle in said toilet bowl below the top thereof and so as to permit said receptacle to tilt relative to said arms upon the application of weight to the downwardly sloped bottom portion thereof.

5. An infant's toilet training device adapted to be positioned within a child's toilet chamber, said device including a receptacle adapted to receive excrement, said receptacle being sloped downwardly toward one side thereof, housing means sealingly connected with said receptacle, a noise-making mechanism within said housing means including a rotatably driven element, means supported on said receptacle normally engaging said mechanism to prevent rotation of said rotatably driven element when said receptacle is in a generally horizontal untilted position, said means being automatically movable out of engagement with said mechanism to permit said rotatably driven element to move when said receptacle is tilted, and a foot member connected with the underside of said receptacle, said foot member being positioned relative to said receptacle so as to support the same in a generally horizontal untilted position until the receptacle receives excrement, whereupon said receptacle will tip on said foot member in the chamber to a tilted positioned to cause said mechanism to make a noise.

References Cited in the file of this patent

UNITED STATES PATENTS

2,699,139 Mackey ---------- Jan. 11, 1955