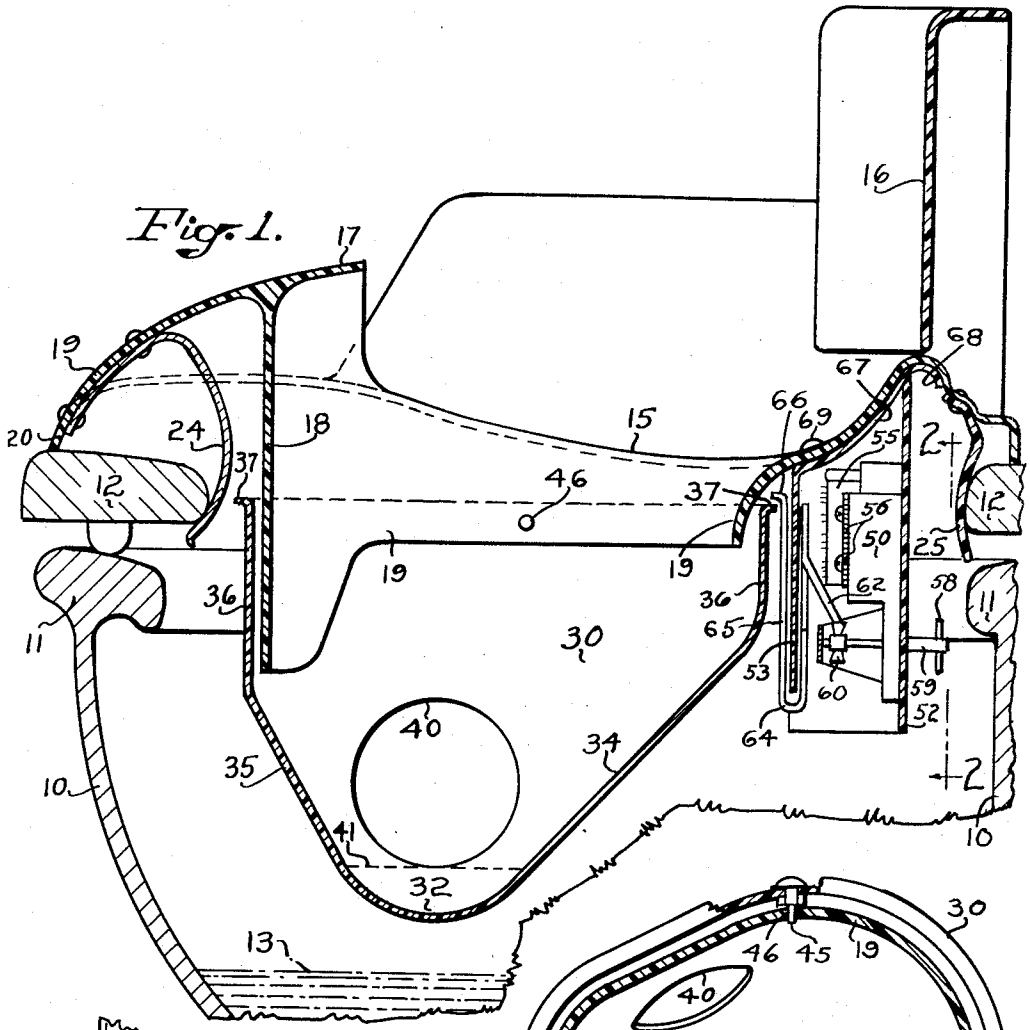
July 28, 1959 A. GILMOUR 2,896,567

CHILD TRAINING NURSERY TOILET DEVICE

Filed Nov. 14, 1957

Fig. 1.



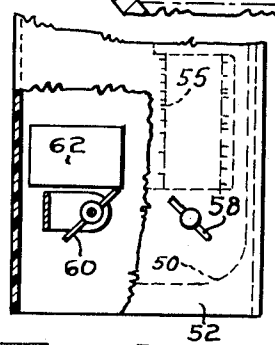


Fig. 2.

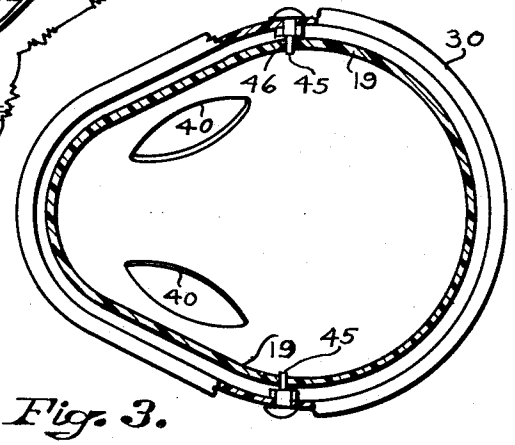


Fig. 3.

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CHILD TRAINING NURSERY TOILET DEVICE

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5 Claims. (Cl. 116—67)

This invention relates to a nursery toilet device, and more particularly to a removable toilet seat for a child's use.

In accordance with the invention set forth in my prior patent #2,802,444 dated August 13, 1957, I have provided a device comprising a nursery toilet chair having a seat and a pivotally mounted, removable receptacle therebeneath which is so arranged relative to a music box attached to the chair that the weight of matter eliminated by the child will cause movement of the receptacle and in turn result in actuation of the music box. That construction required removing and cleaning the receptacle each time after it had been used.

The primary object of my invention is to provide a nursery toilet training device for a child which comprises a small seat shaped to be removably mounted on the top of the seat of a standard flush toilet, and which is associated with a movable receptacle bowl and a musical device, the latter being actuated by an overbalancing movement of the receptacle bowl by the deposition of matter therein, and wherein the receptacle may be cleaned by the ordinary flushing of the toilet in accordance with standard procedure.

A further object is to provide a supplemental small sized toilet seat and associated parts which may be easily mounted on or detached from a standard seat of a flush toilet, and which carries a receptacle bowl so constructed as to minimize adherence of excrement thereto and so mounted that it may be readily removed for cleaning, when needed.

Another object is to so coordinate the control mechanism of a power operated music box with the movable receptacle bowl, so that the music box is normally silent but its control will be released and a musical sound given when only a slight amount of matter is deposited in the bowl, and whereby the operation is positive and normally tamper-proof. Other objects will be readily apparent in the following disclosure.

Referring to the drawings illustrating one embodiment of the invention:

Fig. 1 is a fragmentary view showing in vertical section a part of a standard toilet bowl having a small sized seat removably mounted thereon, which carries a movable receptacle bowl and a music box controlled thereby;

Fig. 2 is a fragmentary vertical section of parts showing the locking control of the music box; and

Fig. 3 is a partly broken away plan view of the receptacle, with its supporting flange on the small seat shown in section.

A standard toilet comprises a porcelain lined bowl **10** having a substantially horizontal rim **11** at its top, on which is customarily mounted an annular seat **12** of wood or plastic suitably hinged at the rear. Water is customarily supplied by a flushing system, and some is retained in the toilet bowl at a level indicated at **13**, but when the bowl is flushed, the water level will rise far enough to insure an adequate cleansing action.

To support a child over the toilet bowl **10**, I employ

a small sized annular seat **15** removably mountable on seat **12**, which is made preferably of plastic and suitably shaped to hold the child. This small seat may carry an upright back portion **16** removably secured in place and arranged to form a support for the child's back. At the front the molded plastic seat **15** is shaped to provide an upstanding rearwardly projecting wall **17** forming a recess arranged to prevent discharge of material onto the top of the seat. A vertical depending flange **18** forming a part of the front wall of the recess is continuous with an annular flange **19** surrounding and defining the seat opening. The seat construction, which may be made as desired and according to standard design, is usually made of a one-piece moulded plastic having an outer depending flange or rim **20** lying substantially in a plane which is sized and shaped to be mounted on the top of the full sized toilet seat **12**. The small seat **15** is held in position by a forwardly curved resilient clip **24** of metal or plastic suitably secured, as by rivets, to the under side of the seat, as shown. The clip projects into the opening of the seat **12** and engages the rear and under side of the front portion thereof. Similarly, a resilient downwardly depending clip **25** suitably secured to the rear part of the seat **15** is adapted to be inserted into the rear of the opening of the large annular seat **12**. These two clips **24** and **25** face away from each other and provide adequate resilient engagement with the seat **12** to hold the small seat removably in place. Various standard constructions may be employed for this small seat.

In accordance with my invention, I pivotally mount a receptacle **30** on and beneath the small seat **15**, and it is somewhat larger than the annular flange **19** and surrounds the same, where it may normally receive any eliminated deposit of liquid or solid. The pivotal mount is such that the receptacle is normally balanced to be located in an inoperative position, but may be moved by a deposit therein to cause actuation of a music box or other suitable sounding device. The musical device is power operated, as by a wind-up spiral spring and it is provided with a member releasably engageable by a movable stop which controls the power operation.

The receptacle is shown as somewhat conical in shape, in that it tapers steeply at the front and rear to a bottom shaped as a concave bowl **32** having a comparatively small area but sufficient to receive and hold enough eliminated matter to cause the required operation. The circumferential wall of the receptacle **30** slopes upwardly at about 45° or steeper at the rear part **34** and more steeply at the front **35**. The concave bottom of the bowl **32** merges with the upright rear and front wall portions **34** and **35**, and it is located forward of the center of gravity of the conical receptacle. These sloping walls **34** and **35** are sufficiently steep at the front and rear to insure that any deposited material will usually fall or slide forward into the concave bowl **32**. The circumferential wall of the receptacle **30** has a vertical cylindrical portion **36**, which is shaped at its top edge **37** as a flange lying in a plane that is nearly horizontal.

For cleansing purposes, the structure has at least one opening **40** located preferably at the side thereof, which terminates well above the bottom of the bowl **32**, so that material may be deposited in that lower bowl up to the horizontal line **41** at the bottom of that opening **40** before it may escape. I preferably provide two of these openings **40** on opposite sides of the conical receptacle and these are large enough, as shown, so that when the toilet is flushed, water may enter freely from the opposite sides and be sure to clean out that bowl portion **32**. The openings are so located as to result in the minimum of splashing or upward surging of the water.

A primary feature of this invention relates to the pivotal mounting of this suspended cone-shaped receptacle whereby a music box may be controlled. As shown in Fig. 3, the depending annular flange 19 of the small seat 15 has inwardly projecting, preferably aligned, pivot pins 45 on opposite sides thereof, and the wall 36 of the open-topped cone 30 has pivot openings 46 therein so arranged that the cone may be pivotally mounted thereon. These pivots are so located relative to the center of gravity that the top flange 37 of the cone is normally tilted towards or into contact with an under part of the seat structure. Or, for that purpose, the receptacle cone may be weighted at the rear as by attaching a weight near the top of the wall 36. The concave bowl portion 32 is forward of a vertical center line passing through the pivot pins 45 and the center of gravity, and the parts are so constructed and arranged that the deposit of a small amount of material, such as two ounces, in the receptacle bowl 32 will over balance the cone and cause the front of the edge 37 to move downwardly. This tilts the upper rear flange portion 37 of the receptacle 30 upwardly within the space provided by the under concaved shape rearwardly of flange 19 of the seat wall. That tilting movement is such as to release the controls of a suitable power actuated musical instrument that is arranged in a concealed position depending from the rear of the small seat 15.

The musical instrument, which may be a music box 50 of standard construction, is mounted in an open topped receptacle having a rear wall 52 and a vertical front wall 53 made of plastic. A bottom may also be provided to prevent access of water to the mechanism, to any material extent. A standard music box comprises a rotatable cylinder 55 having properly positioned metal pegs adapted to operate against resilient metal reeds 56 mounted in alignment on the framework and in such positions that the pegs may strike and vibrate the reeds to provide a desired musical tune. The cylinder 55 is suitably driven by a spring operated gear mechanism, and the spiral spring is wound by means of a key 58 on a shaft 59. That shaft carries a rotatable fan 60 which, according to standard construction, has vanes of such size and shape as to provide a resistance to the forward motion of the gear mechanism and insure that the peg cylinder 55 rotates at the proper speed for providing the music.

When the handle 58 has been turned to wind up the spring of the music box, the mechanism would start playing except for a movable stop which is associated with a power control member on the box 50 to stop or release the rotative cylinder. The releasable member may be the fan which controls the speed. The stop is shown as a slide having a part which normally moves downwardly under the influence of gravity into the rotative path of the vanes of the fan 60 and thus prevents rotation of the fan and operation of the music box. The stop 62 may be mounted on a gravity moved slide controlled by the pivoted receptacle. It is shown as formed of a piece pressed outwardly and rearwardly from a U-shaped plate 64 which slidably straddles the vertical wall 53 from the bottom. The front wall 65 of the U-plate, which is made of plastic or metal, is located in front of the wall 53 of the music box receptacle, and it has a top flange 66 above and normally positioned close to or engaging the top flange 37 at the rear of the pivoted cone 30.

The weight of the U-shaped plate 64 thus holds the projecting stop 62 between two of the fan vanes and normally prevents operation of the music box. If, however, matter is eliminated into the bowl 32 and thus causes an over-balancing of the cone, the upwardly tilting rear wall 50 of the cone strikes against the forwardly projecting flange 66 of the U-shaped stop and lifts the latter away from contact with the fan. Thus, the power operated music mechanism is permitted to rotate the cylinder 55 and cause the reeds of the music box to play the tune which has been predetermined. The walls of the music box as well as those of the receptacle cone and other parts of the small seat 15, may be made of a suitable molded plastic material, such as polyethylene or other synthetic polymerized resin. This material has sufficient strength and resiliency to provide for springing the pivot posts 45 and 46 apart, to permit removal of the cone whenever desired for cleaning purposes. As above stated, the device is supported on and beneath the seat 15. It is shown as having a top wall 67 connected or suitably secured to the walls 52 and 53 and located by an upper curved portion 68 interfitting beneath a similarly shaped rear curved part of the seat. A fastening rivet or screw 69 secures the top plate to the seat 15 and so holds the music box suspended therefrom.

The receptacle may be cleaned, without removal, by pouring water from above, but it is preferably cleaned by the normal action of flushing the toilet bowl 10 in accordance with standard procedure, and the water swirling upwardly through the comparatively large openings 40 in the cone will accomplish the desired cleansing action. However, the receptacle 30 is made of a flexible or resilient material and, when desired, it may be readily removed by springing its sides inwardly to release the pivot openings from the inwardly projecting pivot pegs 54. It will also be observed that the bottom of the cone is well above the normal location of the water 13 in the toilet bowl 10, so as not to interfere with the pivotal operation of the device, but the cone is close enough to the water to insure adequate cleansing when the water rises. Since the bottom is shallow and concave, there are no obstructions to prevent this automatic cleansing operation. The openings 40 may be located as desired for the best operation, and these may include small holes at the bottom through which water will gradually, but slowly, escape so that the musical device will be ultimately stopped.

When the child has eliminated sufficient matter to tilt the receptacle 30 upwardly at the rear and start the music box operation, this gives a pleasing tune for the benefit of the child and at the same time advises the parent of the success of the operation. The music is an incentive or a reward to encourage the child to seek or to express a desire for the toilet seat, and the child looks forward to the pleasing sounds of the music which thus provide a subconscious suggestion as to the desirability of the act of elimination.

I claim:

1. A child training device for positioning on a flush toilet-bowl seat, said bowl having a normal water level, said training device comprising an annular small-sized seat having a rim and a flange depending from said rim into the bowl in the operative position of the device, a receptacle having an open top, a bottom and a flush opening laterally above said bottom, said receptacle being pivotally mounted on said flange and movable about said pivotal mounting when unbalanced by the deposition of matter on said bottom, said lateral flush opening being located above said normal water level for cleaning passage of water therethrough upon flushing of said bowl, a power-operated musical device fixedly mounted on the annular seat adjacent said receptacle, said musical device having a releasable member for holding same inoperative, and actuating means carried by said receptacle for moving said releasable member to operate said musical device upon the aforementioned unbalanced pivotal movement of said receptacle.

2. A device according to claim 1 in which the receptacle is made of a flexible material and has pivot openings, and the pivots are inwardly projecting pins mounted on the seat flange and normally projecting into said openings, said receptacle being readily bendable to release the pins from the pivot openings for removal of the receptacle from the seat.

3. A device according to claim 2 in which the receptacle is a moulded plastic body having steeply sloping front and rear wall portions merging with a concave bottom bowl and wherein two flush openings are located at opposite sides of the receptacle closely above the bottom

of the bowl which are so arranged that flushing the toilet will normally clean the bowl.

4. A device according to claim 1 in which the musical device has a speed governing fan and the stop comprises a member mounted on the rim and moved by gravity into contact with the fan to prevent operation of the device, and the receptacle has a part engageable with the stop to lift it from contact with the fan when deposited matter tilts the receptacle.

5. A device according to claim 4 in which the musical device has a vertical wall and the stop comprises a slide

mounted on the wall which normally projects into the rotative path of the fan, and wherein the stop slide and receptacle have cooperating members engaged by a tilting movement of the receptacle to move the slide and release the fan.

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