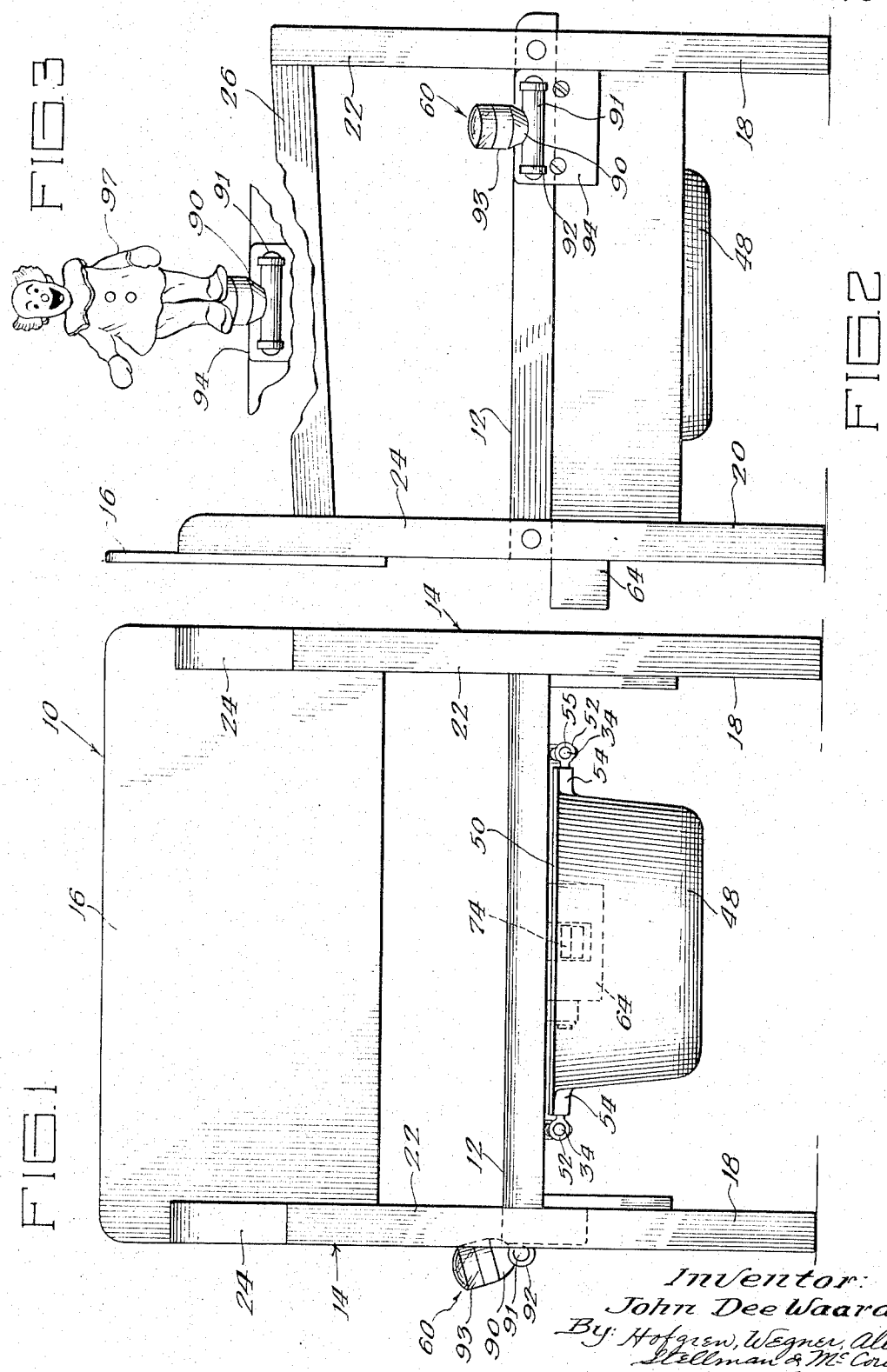
Jan. 16, 1968 J. DEE WAARD 3,364,478

INFANT TRAINING CHAIR

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Attorneys

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INFANT TRAINING CHAIR

Filed Feb. 2, 1965 3 Sheets-Sheet 2

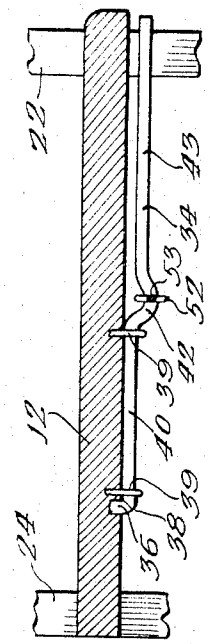


FIG. 6

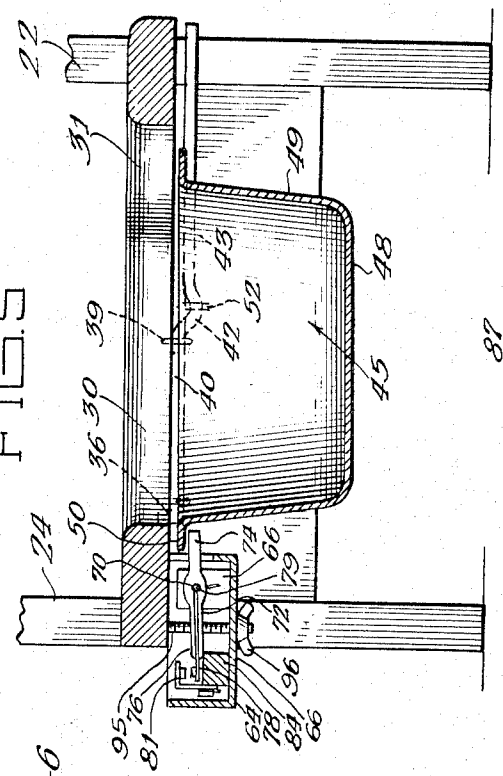


FIG. 5

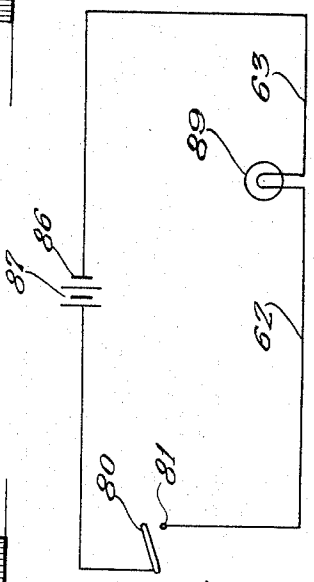


FIG. 7

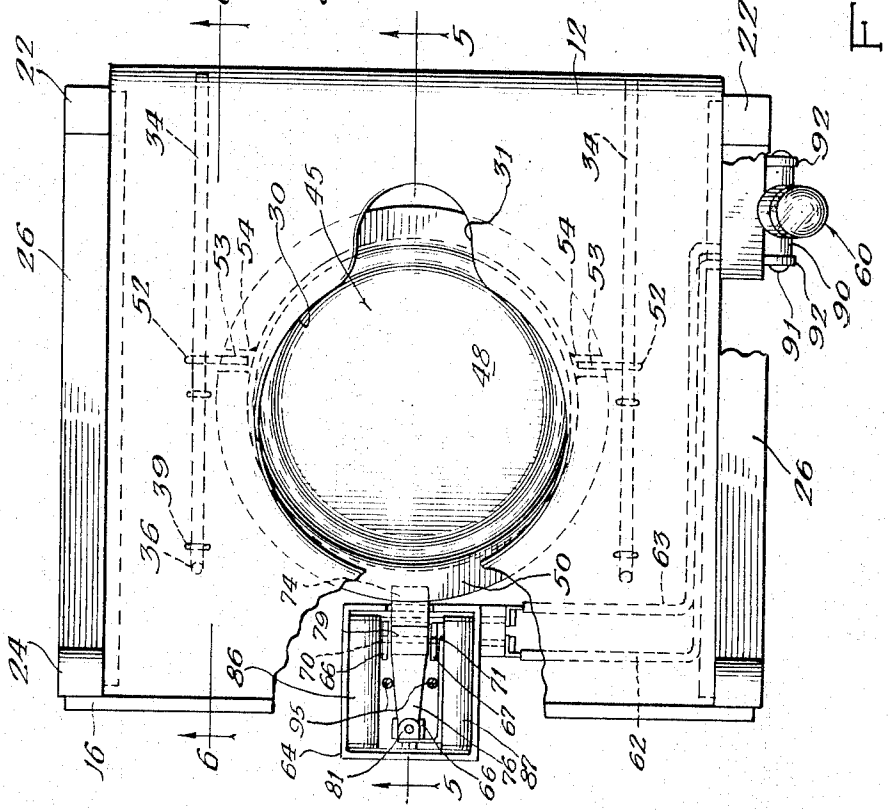


FIG. 4

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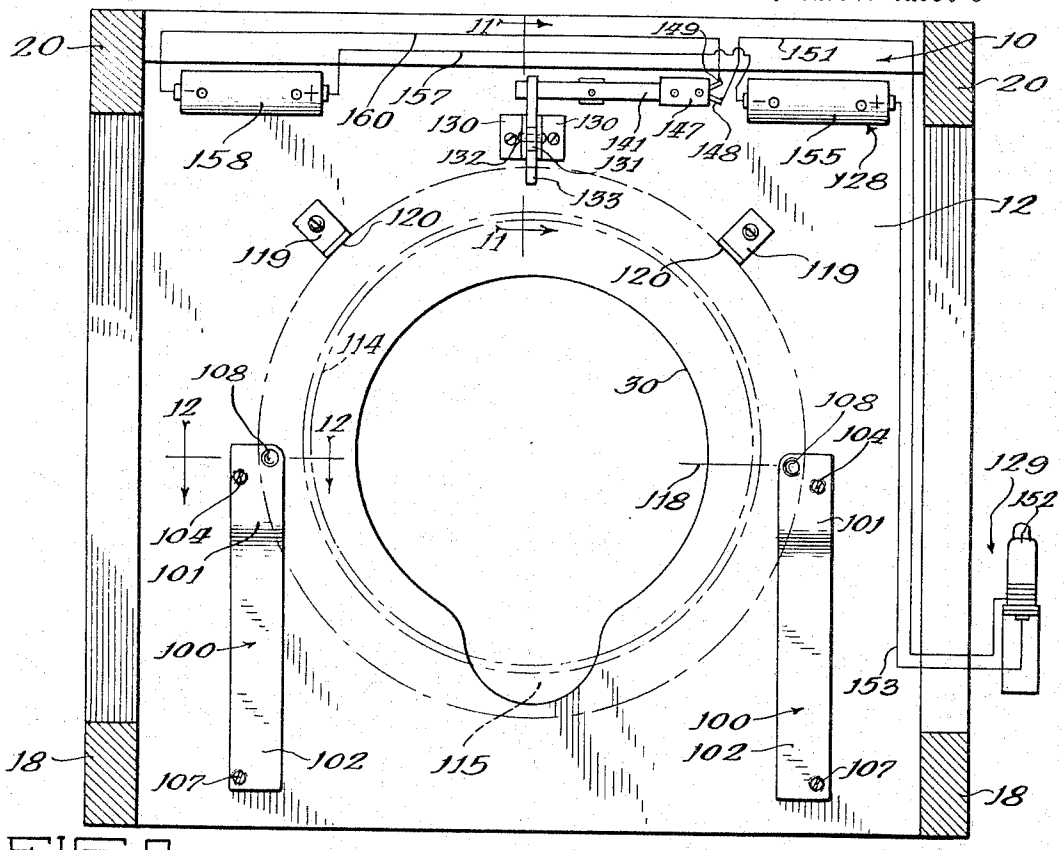


FIG. 8

FIG. 9

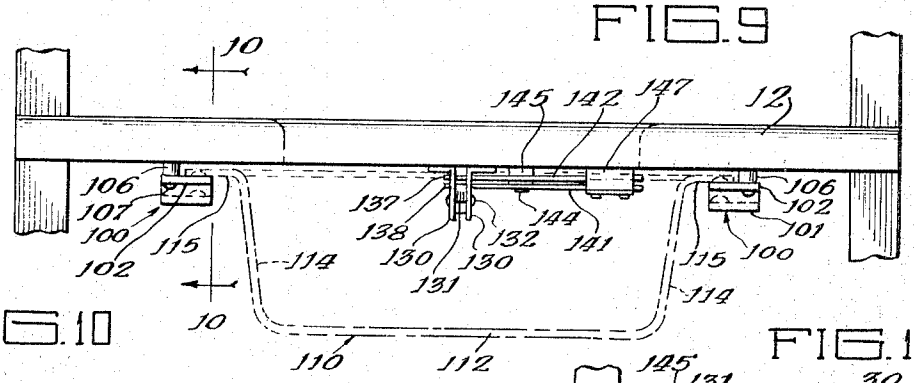


FIG. 10

FIG. 11

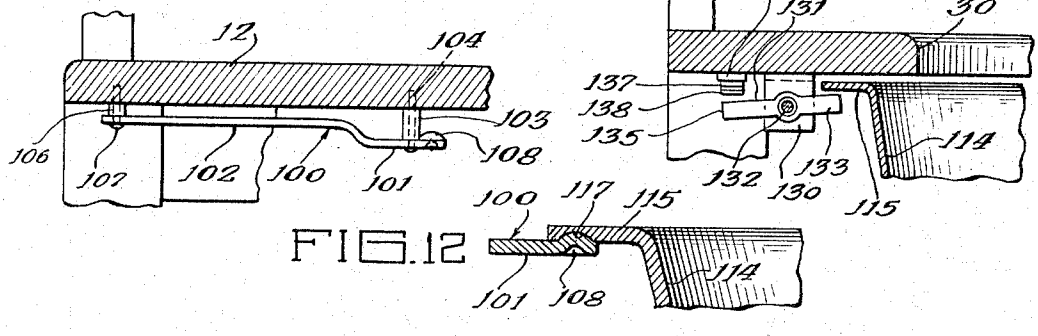


FIG. 12

United States Patent Office 3,364,478 Patented Jan. 16, 1968

3,364,478

INFANT TRAINING CHAIR

John Dee Waard, Chesterton, Ind., assignor to Creative Monitor, Inc., Grand Forks, N. Dak., a corporation of North Dakota

Filed Feb. 2, 1965, Ser. No. 429,787
2 Claims. (Cl. 340—272)

This invention relates to training devices and more particularly to devices for training children to the use of a toilet by signalling the accomplishment of the desired result.

Heretofore, in the process of teaching a child to use a toilet, it has been the accepted procedure to place the child on a toilet and wait until the desired result has been accomplished. In order to be sure that the result has been thus accomplished, the child must be picked up periodically and checked so that when the result was actually accomplished, no one really knows, so that the praise or reward to the child is often associated by the child with being picked up from the seat and not necessarily with having performed the desired result. Using the above described method sometimes takes weeks and even months to train a child properly.

Using my improved device, a child is placed on the toilet seat with a balanced toilet member operatively connected to a signal device whereupon successful accomplishment of the desired result will set off the signal which will please the child by its being able to see or hear the signal and will please the parent by making it possible to immediately praise and reward the child at the instant of success such that the desire act is associated with the praise and reward, thereby making it possible to more quickly train the child.

There are other devices available for accomplishing this result, but they are complicated and expensive. Some of said devices require the use of special electrical devices in the bottom of the toilet member which will complete an electrical circuit when acid fluid flows into the toilet member. These are complicated to clean and are useful only for fluid training.

Other devices use special pivoted frames and counterweights which when unbalanced by additional weight, will signal the result. These devices are difficult to use because of the requirement of adjusting the counterbalances and the like.

It is, therefore, a principal object of this invention to provide an improved toilet training device capable of signalling the accomplishment of the desired result almost instantaneously.

It is another object of this invention to provide an improved toilet training device that has a carefully balanced system which will tilt the desired amount with the addition of even the slightest amount of weight.

It is still another object of this invention to provide an improved training device that has all of the regularly accepted components of a child's training device without modification, thereby requiring no special instructions to reeducate purchasers of the device.

Still another object of this invention is to provide an improved training device that provides either a visual or an audible signal that can be placed in a position to attract the attention of the child when the signal is actuated.

Another object of this invention is to provide an improved training device that provides a signal readily viewable or audible by the attending adult.

A further object of this invention is to provide an improved child's training device which has a portion easily removable for cleaning and for return to the device.

And still another object of this invention is to provide an improved child's training device which is simple in

construction, is inexpensive to build and maintain and is highly efficient in use.

Other and further objects and advantages of the invention will become apparent from a reading of the following specification taken in conjunction with the drawings, in which:

FIGURE 1 is a front view in elevation showing my improved toilet training receptacle in position on a training seat;

FIGURE 2 is a side elevation showing one type of signal device of my invention in position on a training seat;

FIGURE 3 is a modified form of a signal device of my invention;

FIGURE 4 is a top view of my invention with parts broken away to better illustrate the operative parts of a switch device of my invention;

FIGURE 5 is a cross-sectional view of my invention taken along the line 5—5 of FIGURE 4;

FIGURE 6 is a cross-sectional view taken along the line 6—6 of FIGURE 4 with parts broken away;

FIGURE 7 is a wiring diagram showing one form of circuit usable in my training device;

FIGURE 8 is a bottom view of a modified form of my invention with certain parts in section and other parts in phantom;

FIGURE 9 is a front view of the modified form shown in FIGURE 8 with parts broken away and parts in phantom;

FIGURE 10 is a cross-sectional view taken on the line 10—10 of FIGURE 9;

FIGURE 11 is a cross-sectional view taken on the line 11—11 of FIGURE 8; and

FIGURE 12 is a cross-sectional view taken on the line 12—12 of FIGURE 8.

Referring to the drawings in which numerals of the like character designate similar parts throughout the several views and wherein a toilet training chair 10 consists of a base or seat portion 12 having a pair of side portions 14 attached on one end thereof with a back portion 16 fastened between said sides. Each side 14 has a pair of legs 18, 20 extending below the seat 12 with a pair of uprights 22, 24 extending above the seat and having an arm 26 fastened between the upper ends of said uprights upon which users of the chair may rest their arms. Said back portion 16 has its ends fastened to the uprights 24 of the sides so as to be positioned relative to the seat and arms in such a way as to support the back of the user of the chair.

The seat portion 12 has an enlarged aperture 30 extending substantially through the center portion thereof with a slight additional portion 31 cut away at the center front portion of the seat in conjunction with the aperture 30 such that the aperture 30 is in fact shaped somewhat like a figure 8 with the top loop of the 8 being relatively small, as is clearly shown in FIGURE 4.

On the underside of the seat portion 12 and lying substantially parallel to each other and disposed on each side of said aperture 30 is a pair of rod shaped support members 34. Each rod member 34 has one end portion 36 bent upward at a right angle to the main body of the rod 34, which portion 36 is seated in an opening 38 in said seat portion 12. A pair of fasteners 39 engage around one part 40 of the rod and are embedded into the seat, which together with the upturned end portion 36, positions the rod in a fixed non-turning relationship with respect to the seat. Integrally formed with the part 40 of the rod 34 is a downwardly shaped offset portion 42 which is then curved upwardly a slight amount before joining with the portion 43 thereof. The portion 43 is spaced a slight distance from the under part of the seat

12 and has its outer end substantially positioned in close relation to the front edge of the seat.

A toilet bowl or member 45 is formed of any well known material that can be readily cleaned and disinfected and for the present purposes is formed of one of the well-known plastics. The bowl 45 has a container or catch portion with a substantially flat base or bottom 48 and continuously formed side walls 49. A ledge or lip portion 50 is integrally formed around the upper edge of said side walls 49. A pair of hooks or rings 52 have base portions 53 seated in thickened portions 54 on opposite sides of said ledge portion 50 of the bowl. The hooks 52 have eyes 55 adapted to be threaded by the rods 34 so that the hooks will come to rest in the offset portions 42 of said rods 34.

In FIGURE 4 it will be noted that the thickened portions or ridges 54 and hooks 52 lie on an axis slightly forward of the axis through the center of the bowl 45. The location of the axis is dependent upon the balance in the bowl 45, the axis being located along the line of balance of the bowl such that when the bowl is empty and hangs from the hooks 54, it will be substantially balanced on a level front and rear. There is however a need to have the axis slightly forward of center such that the bottom 48 of the bowl will have a very modest tilt to the rear. In this way whenever any substance is placed in the bowl, it will roll to the rear and upset the balance of the bowl rearward.

A signal device 60 which in this case is a visual signal, is located on the side edge of the seat 12. The signal 60 is connected by means of wires 62, 63 to a switch housing 64 positioned centrally and underneath the rear portion of the seat. Within the housing 64 is a pair of lugs 66, 67 upstanding from a bottom wall 68 thereof and between which lugs is extending a conducting pivot pin 70 passing through an opening 71 in an actuating lever 72. One end portion 74 of said lever extends outwardly beyond said housing and into overlapping relationship with the under portion of said ledge 50 of said bowl 45. The other end portion 76 of the lever 72 has a conducting metal insert 78 embedded therein which insert extends from beyond the end of said portion 76 of the lever to a connection with a copper or conducting metal sleeve 79 in said opening 71 in said lever. The portion of said insert 78 extending beyond said lever has an electrical contact point 80 which is aligned with a mating contact point 81 on an electrical connector 82 fixedly carried by a block 84 mounted in the housing 62. A pair of batteries 86, 87 are positioned in said housing 62 in a conventional fashion such that one wire 62 will be electrically connected to the positive end of one battery while the negative end of said battery will be connected to the positive end of the other battery with its negative end electrically connected through one of the lugs 66 to the pin 70. The pin 70 being of a conducting material and being in contact with the conducting metal sleeve 79 in the lever 72 in effect connects said batteries through said pin 70, sleeve 79 and metal insert 78 in the lever 72 to the one contact point 80. The other contact point 81 is connected through the connector 82 to the other wire 63 connected to the signal device 60.

The wires 62, 63 connect with the signal device 60 by one wire (62) connecting with one portion of the light 89 with the other wire (63) connecting to the other portion of said light such as is conventional for wiring a light. When the portion 74 of the lever 72 is depressed, the portion 76 will move upward and contact the points 80, 81 completing an electric circuit with the light through the batteries, thereby energizing the light 89. The signal device 60 has a base 90 pivoted by means of a pin 91 to the lugs 92 on the bracket 94 on the seat 12 with the globe 93 of the signal device being removably carried by the base 90. The light 89 is wired in the base and is disposed within the confines of the globe 93. The bulb can be removed in the usual fashion after the globe 93 is removed from the base either by snapping out or in some other way releasing it from the base.

It will be noted that the switch and battery housing 64 is removably attached to the seat 12 by means of a threaded lug 95 carried by the seat extending downwardly and through an opening in the housing with a wing nut 96 threaded thereon for holding the housing on the seat. The housing can readily be removed to replace the batteries 86, 87 in the housing.

In use, my improved training device is placed upon a reasonably level surface with the bowl 45 in place under the seat. The child is placed on the seat. Immediately upon the child passing any substance into the bowl, the balance of the bowl will be upset and the ledge 50 will move downward into contact with the lever 72. The lever will pivot, completing the circuit from the batteries through the pin 70, sleeve 79, insert 78, contacts 80, 81 and wires 62, 63 to the light 89, whereupon the light will glow. Both the child and the attendant will recognize that the desired result has been accomplished. The child will soon realize that the light signals that he has done what he was expected to do. The attendant, by praise and rewards, will further seat the impression in the child's subconscious that this is what is desired, thereby speeding the training process immeasurably.

As a modification of my invention, I have shown in FIGURES 8–12 another way that my invention can be implemented. The chair construction described above is not repeated here, but contains the same general construction of legs 18, 20, arms 24, apertured seat 12 and back 16. A pair of flat metal supports or plastic strips 100 having offset end portions 101 are supported in parallel relationship underneath the seat on either side of the aperture 30 and extend from the front of the seat rearwardly. The offset 101 is spaced farther from the seat than the main portion 102 by means of a spacer 103 positioned around the fastening member 104. The front of the main portion 102 of the strips 100 are spaced from the seat by spacers 106 positioned around fastening members 107, which fastening members 107 pass through the outboard corners of the strips 100. A pair of curved bearing surfaces 108 are formed opposite each other on the inboard corners of the offset portions 101 of the supports 100. The bearing surfaces 108 can be struck into said support by a forming process or can be the result of the rounded head of a rivet.

A bowl or receptacle 110 having a catch portion consisting of a bottom 112 and side walls 114 has an outwardly flared ledge or lip 115 extending around the upper peripheral edge thereof.

Formed in the undersurface of the lip 115 on opposite sides of the bowl 110 is a pair of dimples or recesses 117. The recesses lie on a line or axis 118 parallel to a diameter through the center of the bowl 110 but spaced forward of said diameter an amount sufficient to balance the bowl 110 on a level but slightly unstable to the rear. That is, with the bottom surfaces of the recesses 117 of the bowl resting on the bearing surfaces 108 of the supports 100, the bowl will be substantially level, but leaning if at all to the rear such that any material in the bowl will immediately roll to the rear and pivot the bowl about the axis 118 toward the rear of the chair 10.

A pair of stops 119 are fastened to the undersurface of the seat 12 with downwardly depending portions 120 which are in line with and overhang downwardly beyond the edge 115 of the bowl 110 so as to engage with the edge of the bowl to align the bowl relative to the aperture 30 in the seat 12. The fastening members 107 are positioned outward of the center line of the supports 100 so that the edge 115 of the bowl can pass between the support 100 and the seat 12 with sufficient overhang to guide and support the bowl thereon. Various tracking arrangements can be used to guide the bowl into position on the bearing surfaces 108, the one illustrated being one preferred form.

A signal device 129 is mounted on the chair 10 for actuation by the tilt of the bowl 110 and comprises a trigger device, a source of power 128 and a signal member 129. The trigger device has a pair of flanges 130 fastened to the underside of the seat 12 in a position just to the rear of the properly aligned bowl 110 so that a lever 131 pivoted at 132 between said flanges 130 will have one end portion 133 positioned underneath the lip or edge 115 of the bowl. The other end portion 135 of the lever 131 overhangs a spaced apart pair of contacts 137, 138 on the outer end portions of a pair of flexible reeds 141, 142 of a switch 143. The reeds 141, 142 are fastened in spaced apart and insulated relationship midway down the length thereof by means of a rivet 144 connected to an insulator 145 and to the underside of the seat. The ends of the reeds 141, 142 are mounted in the insulated box 147 with a lead 148 connected to reed 141 and contact 138 and a lead 149 connected to reed 142 and contact 137.

The lead 148 is connected through the wire 151 to the one side of the signal device 129 which in the instant case is a lamp 152 with a lead 153 leading from said lamp 152 to the battery 155 which in turn is connected through lead 157 to battery 158. The other end of battery 158 is connected through lead 160 with the lead 149 on the reed 142. The contacts 137, 138 are normally separated so that the circuit is open and the signal device 129 is inactive. When the lever 131 pivots, the end portion 135 contacts reed 141 and moves the contact 138 into engagement with contact 137 completing the circuit through the batteries to the light 152.

The training device of FIGURES 8–12 operates substantially the same as the form shown in FIGURES 1–7, that is, with the bowl 110 mounted with the surfaces of the recesses 117 engaging the surface of the bearings 108, the chair is ready for use. A child on the seat will receive not only the pleasant sensation of seeing the light 152 flash on, but also the praise and rewards from the attendant when it has commenced one of the activities for which it was placed on the seat. That is, any matter, liquid or solid, deposited in the bowl 110 will tilt the bowl rearwardly about the axis 118 so as to pivot the lever 131 and close the switch device, whereupon the light 152, or other signal device, will be energized. The flashing light will please the child and the attendant. The child will immediately associate the pleasant sight of the light and the praise of the attendant with doing what was intended. Training the child to the toilet in this manner is fast, pleasant and efficient.

As a modification, it is contemplated to mount, for instance, a globe 97 shaped like a clown (see FIGURE 3) in place of the globe 93 such that when lighted, the clown will glow, attracting the child's attention in a pleasing manner. The light could be mounted on a spring rod extending up from the arm or seat such that the child can amuse itself therewith and especially when the light glows from a successful training session. It is also believed to be obvious that instead of a visual signal, a bell or audible signal could be wired in place of the light such that energization of the signal device will play a tune or ring a bell or the like.

It is therefore believed that I have provided an improved training device which has a balanced bowl member carried directly by the training chair which member when unbalanced by the addition of any weight will trip a circuit to energize a signal device advising that the desired result has been accomplished.

From the above it is obvious that various changes may be made in the detail construction herein set out, however, such changes shall be within the spirit and scope of the present invention as defined in the appended claims.

I claim:

1. A toilet training chair having legs, arms, a back and a seat with an enlarged aperture therethrough comprising a pair of elongated parallel supports fixed on and spaced from the underside of said seat, a bowl having at least two outwardly extending flange portions on opposite sides thereof, pivot means on said flange portions along a common axis, said pivot means engaging with portions of said supports such that the bowl is substantially balanced along said common axis, a light carried by said chair, a battery operated circuit for said light, an actuator member in said circuit whereby in one position said light is inoperative and in another position said light is operative, and said actuator member extending in operative relation to said bowl whereby said actuator member is in the inoperative position when said bowl is empty and said actuator member is in the operative position when weight is added to said bowl to pivot said bowl into said operative position of said actuator member by a portion of said bowl engaging with and moving said portion of said actuator member to light said light.

2. A training chair as claimed in claim 1 wherein said supports are rod members with one end portion attached to said underside of said seat and the other end portion is spaced from said underside and projects in a direction toward the front of said chair, and each said pivot means is a ring member fastened to the flange portion of said bowl and is adapted to engage around said rod members for balancing said bowl in alignment with said aperture in said seat.

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