Oct. 25, 1955 N. P. FINDLEY, JR 2,721,531

TOILET SIGNALLING DEVICES

Filed April 28, 1953 2 Sheets-Sheet 1

Fig. 1

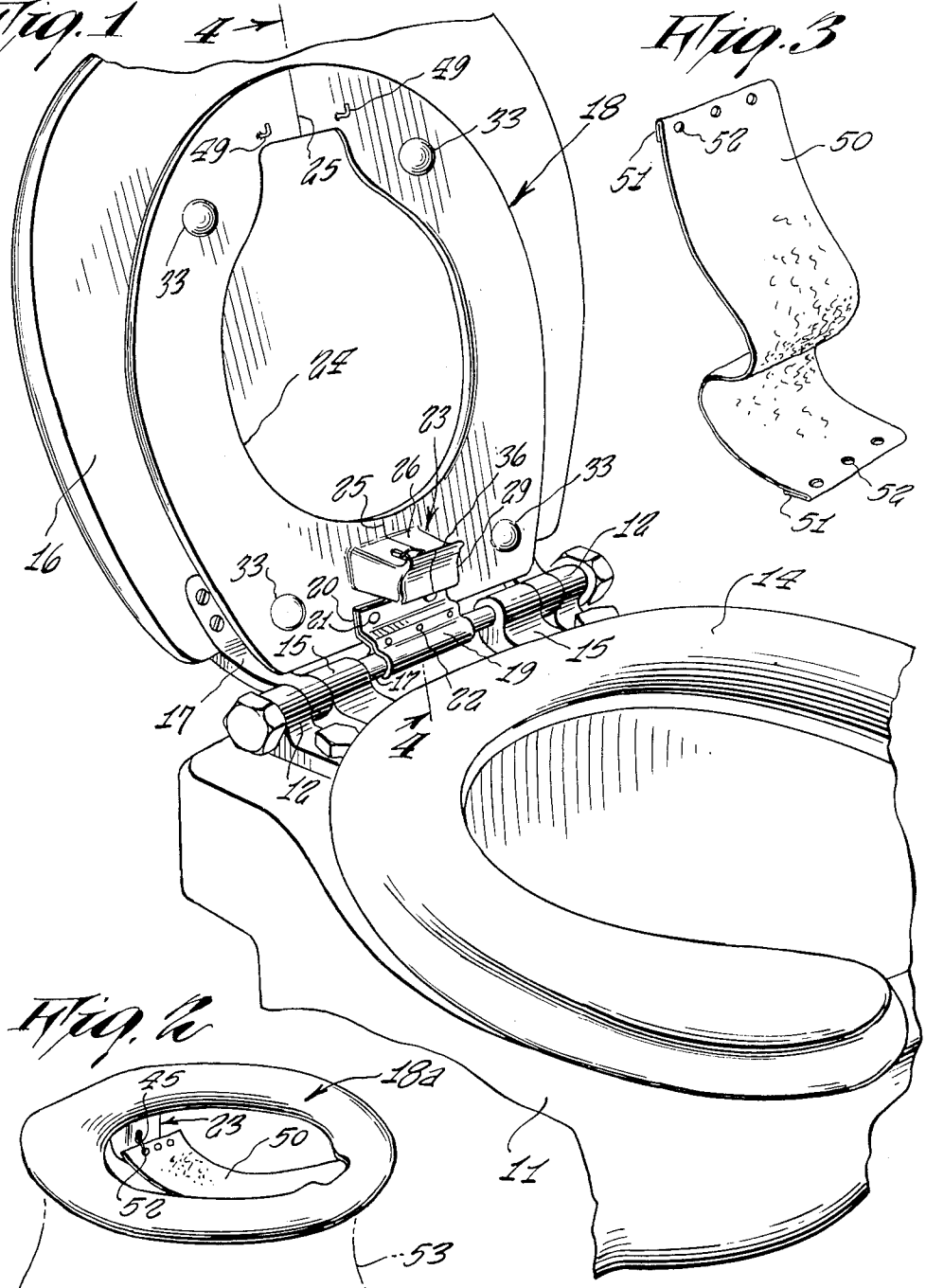


Fig. 3

Fig. 2

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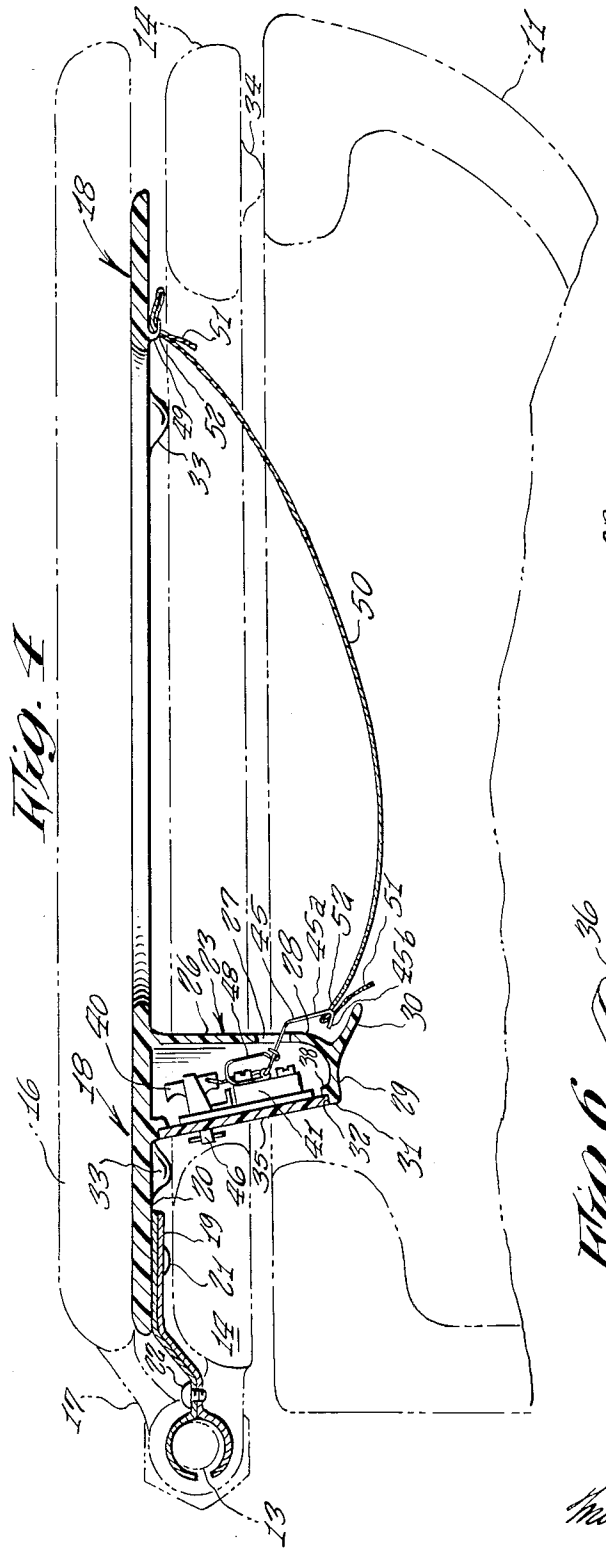


Fig. 4

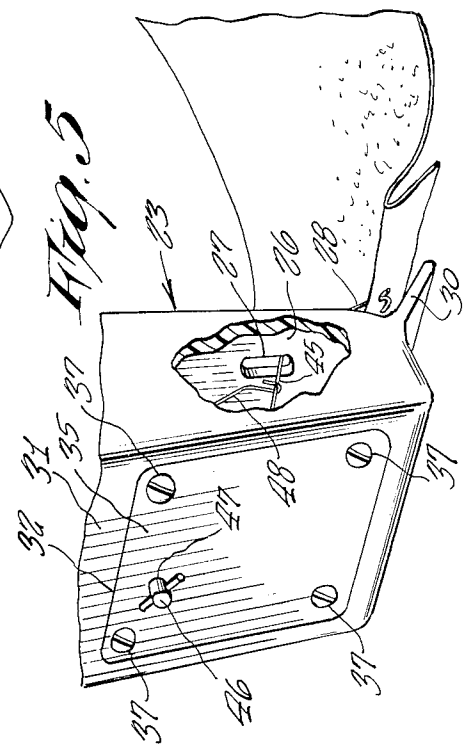


Fig. 5

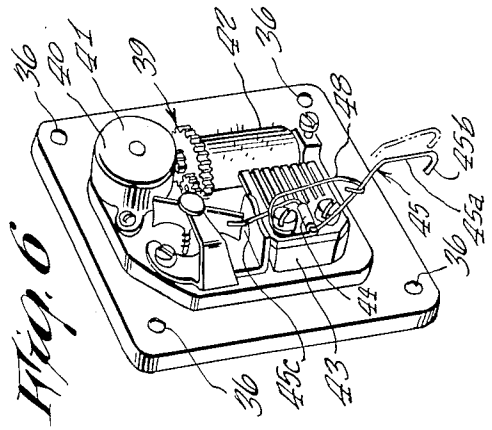


Fig. 6

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TOILET SIGNALLING DEVICES

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6 Claims. (Cl. 116—67)

This invention relates to toilet signalling devices for training infants.

Heretofore, various toilet signalling devices have been proposed characterized by trip levers disposed in the path of the excrement and which, when tripped, serve to actuate the signalling device. However, such devices have been objectionable because the tripping lever is a permanent part of the signalling device and must, therefore, be cleaned after each operation. This is a serious objection and aside from the inconvenience, is also unsanitary.

It is accordingly a principal object of the present invention to provide a toilet signal device for training infants wherein the trip is disposable after each use, in the same manner as conventional toilet paper.

It is another object of the present invention to provide a disposable trip adapted to be used in connection with the present apparatus, this trip may be marketed separately, apart from the device itself, in the manner of conventional toilet paper.

It is still another object of the present invention to provide a toilet signal device of the above type comprising a small toilet seat adapted to be readily connected above the usual sized toilet seat, a music box being carried on the undersurface of the small toilet seat and having a trip in operative engagement therewith and forming a rear support for the disposable trip, the latter being supported at its forward edge by depending hooks carried by the small toilet seat.

Other objects of the present invention are to provide a toilet signal device for training infants bearing the above objects in mind which is of simple construction, inexpensive to manufacture, has a minimum number of parts, is easy to use and efficient in operation.

For other objects and a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which:

Figure 1 is a perspective view of a toilet signal device embodying the features of the present invention, with the toilet seat in a raised position;

Figure 2 is a perspective view of a modified form of the invention adapted to be used with pottys;

Figure 3 is a perspective view of the disposable trip forming a part of the present invention, shown alone;

Figure 4 is a longitudinal sectional view taken along the line 4—4 of Figure 1 and showing the toilet seat in a lowered, operative position;

Figure 5 is an enlarged fragmentary perspective view of a portion of the present invention; and

Figure 6 is a perspective view of the rear, removable wall carrying the signalling mechanism.

Referring now more in detail to the drawing, in which similar reference numerals identify corresponding parts throughout the several views, there is shown a toilet bowl **11** of conventional design and provided with the usual bearings **12** in which are rotatably mounted the lateral shaft **13**, substantially as illustrated.

The usual toilet seat **14** is rotatably mounted on top of bowl **11** by means of fixedly carried bearing members **15** which rotate on shaft **13**.

The usual cover **16** is likewise rotatably mounted on shaft **13** by means of fixedly carried bearing members **17**.

In the practice of my invention, a small toilet seat **18** is rotatably mounted on shaft **13** intermediate seat **14** and cover **16** by means of cooperating clamp elements **19** and **20**, substantially as illustrated. The clamp elements **19** and **20** are secured to the undersurface of small toilet seat **18** by means of screws or rivets **21**, while the opposite ends of clamping elements **19** and **20** are secured about shaft **13** by means of screws **22** (see Fig. 4).

A hollow housing **23** is integrally formed on the undersurface of seat **18** at the rear of opening **24** provided in the latter.

The housing **23** and seat **18** are preferably formed of plastic although they may be constructed from many other materials such as metal or wood. As shown in Figure 1, the seat **18** and housing **23** may be stamped in one operation from complementary halves heat sealed or otherwise sealed along the line **25**, as will be apparent to those skilled in the art, and effecting thereby an economy of cost and labor.

The front wall **26** of housing **23** extends downwardly from the undersurface of seat **18** at substantially right angles thereto and is provided at one side with an elongated opening **27**.

The bottom of front wall **26** is curved rearwardly as at **28**, joining bottom wall **29**. A downwardly and forwardly extending guide **30** is integrally formed along the bottom of housing **23** intermediate portion **28** and bottom wall **29**, for a purpose which will hereinafter become clear.

The rear wall **31** of housing **23** extends downwardly from the undersurface of seat **18** and is inclined forwardly from the vertical, so as to clear the rear portion of seat **14** (see Fig. 4), and is provided with an opening **32**.

The undersurface of seat **18** is provided with the usual bumpers **33** of rubber or other suitable material, while the seat **14** is provided with the usual bumpers **34**.

A rear wall **35** fits snugly into the opening **32** and is releasably secured therewithin by means of corner openings **36**, screws **37** and internally threaded openings provided in a flange **38** integrally formed around the inside of opening **32**, as will be obvious.

As shown in Figure 4, a signal mechanism, referred to collectively as **39**, of conventional design is mounted on the inner face of removable wall **35**. The mechanism **39** includes a rotary member **40** constituting a part of a spring motor **41**, the motor **41** operating a signal **42** to actuate a music producing element **43**, constituting an audible indicator. This will be readily apparent to those skilled in the art that other indicators than mechanism **39** may be employed without departing from the spirit and scope of the invention.

A bearing **44** is provided and serves to provide a horizontal pivot for the lever **45**, as shown in Figure 6.

The lever **45** has a downwardly offset arm **45***a* which terminates in a hook **45***b*. It will be noted that a lever **45** has an upwardly extending portion **45***c* disposed in the path of rotary member **40**. The lever **45** extends forwardly through the opening **27** provided in front wall **26**, with the hook **45***b* thereof terminating above the guard **30**.

In order to render the motor **41** operable, a spring winding knob **46** extends exterially of the housing **23** for operative connection to the spring of the motor **41**, the knob **46** passing through an opening **47** provided in removable wall **35**.

A spring **48** engages the lever **45** and serves to retain

the portion 45c thereof normally in operative engagement with the rotary member 40, as shown in Figures 4 and 6.

It will be apparent that the disposition of the portion 45c in the path of rotary member 40 prevents operation of spring motor 41. It will also be apparent that any downward force on the hook 45b will rotate lever 45 in a counterclockwise direction and rotate portion 45c thereof from the path of rotating member, permitting thereby the operation of spring motor 41 and the associated parts.

A pair of laterally spaced hooks 49 are secured to the undersurface of seat 18 at the forward portion thereof for a purpose hereinafter described.

A disposable trip is provided and may consist of elongated strips of toilet-type paper 50 having doubled up lateral ends 51, as shown in Figure 3, the strip 50 and reinforcing border 51 being provided with aligned openings 52.

By means of openings 52, which are laterally spaced at each end, the strip 50 may be disposed in the manner shown in Figure 4, i. e. directly under the central opening 24 of the seat 18, the openings 52 serving to receive the hook 45b at one end and the hooks 49 at the other. It will be noted that the laterally spaced hooks 49 provide a three point support, imparting a lateral stability.

In operation, with the discharge of excrement or urine onto the strip 50, the lever 45 will be moved in a counterclockwise direction to move the portion 45c thereof from the path of the rotating member 40, thereby releasing the spring motor 41 to operate the musical element 43. Thus, the spring motor 41 is released and the musical signal is emitted to inform that the toilet has been completed. The strip may then be severed from the hook 45b and hooks 49 and dropped into the bowl 11 in an obviously sanitary manner, the strip 50 thus expended being replaced by a clean, new strip when the mechanism is again used. Thus, the necessity of cleaning a permanently connected trip lever is eliminated, and a more sanitary device is provided.

Referring now particularly to Figure 2, there is shown a modified form of the present invention, wherein a small toilet seat 18a is suitably secured to the open top of potty 53.

In other respects the form of the invention shown in Figure 2 is the same as that shown in Figures 1 and 3 through 6, and like reference numerals identify like parts throughout the several views.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

What is claimed is:

1. A toilet signal device for training infants comprising a toilet seat, a signal device, an actuator for said signal device terminating in a substantially hooked portion, hooked means extending from the other end of said toilet seat and carried by the latter, and a disposable trip supported at each end by said hooked portion of said actuator and said hook means.

2. A toilet signal device for training infants comprising a toilet seat, a signal device carried by said seat, an actuator for the said signal device, a disposable trip supported at one end by said actuator, and means carried by said seat for supporting the other end of said disposable trip.

3. Apparatus according to claim 1, said disposable trip consisting of tissue paper pierced at one end by the hooked portion of said actuator and pierced at the other end by said hook means.

4. An infant's toilet signal device comprising a toilet seat, a hollow housing secured to the undersurface of said seat, a signal device within said housing, an actuator for said signal device passing through said housing and extending into the toilet zone, a guard for said actuator formed along the bottom of said housing and underlying the bottom of said actuator, a disposable trip supported at one end by the bottom of said actuator and hook means carried by the other end of said seat adapted to support the other end of said disposable trip.

5. A toilet signal device for training infants comprising a toilet seat, a hollow housing carried on the bottom of said seat at the rear thereof, said housing having a removable rear wall, a music box mechanism mounted on said removable rear wall and including winding means extending therethrough, an actuator for said music box mechanism extending into the toilet zone through the front wall of said housing, spring means for normally retaining said actuator in an operative position to prevent operation of said music box, the lower end of said actuator external of said housing terminating in a substantially hook shaped portion, a guard underlying said hook shaped portion and connected to the bottom of said housing, a pair of laterally spaced hooks secured to the undersurface of said seat at the front portion thereof and a disposable trip supported at its forward end by said hooks and at its rear end by the said hooked portion of said actuator.

6. A toilet signal device comprising a toilet seat, a signal device secured thereon, actuating means for said signal device, disposable trip means extending across the toilet zone and secured at one end to said actuating means and at the other end to said toilet seat.

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