

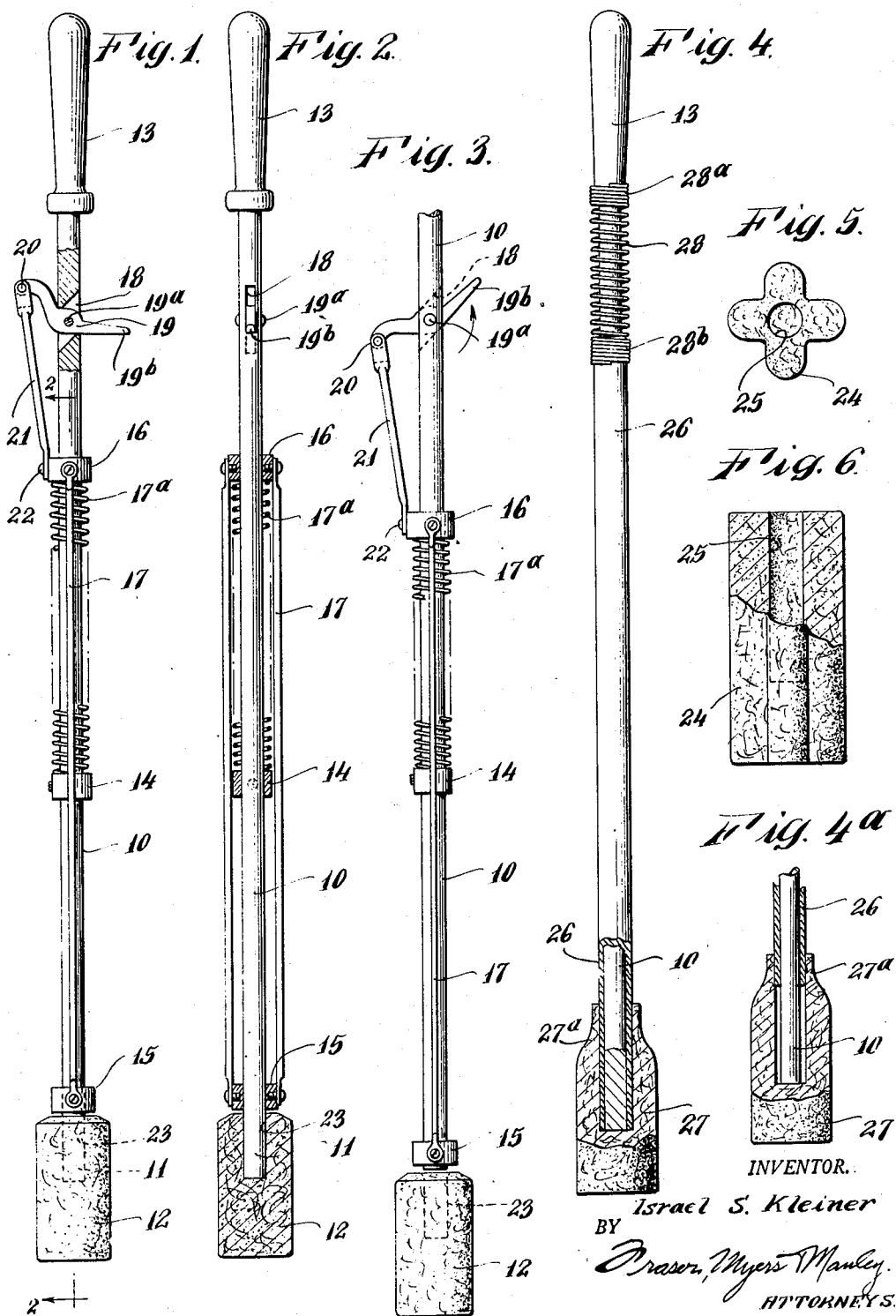
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SWABBING DEVICE WITH DISPOSABLE SWAB

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SWABBING DEVICE WITH DISPOSABLE SWAB

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1 Claim. (Cl. 15—210)

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The present invention relates to cleaning devices for toilet bowls, garbage cans and analogous containers, and aims to provide certain improvements therein.

The cleaning of toilet bowls, garbage cans and the like, especially in the home, has always been an unpleasant task and gave rise to manual contact by the user with the waste products and possible subsequent contamination of products when contacted by the user. Various devices have been proposed to render such task less objectionable and wholly sanitary. Among such devices are numerous types of cleaning brushes, but all of these are objectionable since they are difficult to clean and maintain in a sanitary condition. This is especially so, for even after such brushes are used and washed, it is generally difficult to find a place to store them before they have become dry.

It is accordingly an object of the present invention to provide a cleaning device for toilet bowls which is designed to overcome the objectionable characteristics above set forth and particularly one which will give no basis for any kind of pollution due to the use thereof. A further object is to provide such cleaning device which is simple in construction and has a disposable swab which can be discharged from the device without manual contact with the swab and which eliminates the need for washing the device or finding a suitable a drying place therefor. A further object is to provide such cleaning device which may be impregnated with a detergent for aiding in the cleaning operation and/or with a deodorizing or bactericidal agent.

The foregoing and other objects of my invention not specifically enumerated I accomplish by providing a cleaning device comprising an elongated member adapted to detachably hold at one end thereof a novel removable swab of a size, shape and physical characteristics such that when wetted by the water within a toilet bowl will serve to effectively clean the bowl and be rendered water-disposable, the device having means thereon operable from the end thereof opposite to that which carries the swab adapted to dislodge and discharge the swab into the toilet bowl through which it may be flushed down the drain after the cleaning operation. The invention will be better understood from the detailed description which follows when considered in connection with the accompanying drawings showing certain preferred embodiments, and wherein:

Figure 1 shows an elevation of a cleaning

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device for toilet bowls or the like embodying my invention, parts thereof being broken away to better illustrate constructional details thereof.

Fig. 2 is an elevation of the device shown in Fig. 1 as viewed from the right thereof.

Fig. 3 is an elevation similar to Fig. 1 showing the device in swab-discharging position.

Fig. 4 is an elevation with parts broken away, showing another embodiment of my invention.

Fig. 4a is an elevation of the swab-engaging end of the device shown in Fig. 4, partly broken away and showing the device in swab-discharging position.

Fig. 5 is a top plan view of one form of swab which may be used in the cleaning devices shown in Figs. 1 to 4.

Fig. 6 is an elevation of the swab shown in Fig. 5, partly broken away to better illustrate the form thereof.

Referring first to Figs. 1 to 3 of the drawings, the cleaning device consists of an elongate rod or member 10 preferably of cylindrical form, one end portion 11 thereof being adapted to engage and removably hold a swab 12 thereon and the opposite end portion of the rod being provided with a gripping handle 13. Fixedly mounted on the rod intermediate the ends thereof is a ring or abutment 14, and at spaced distances on opposite sides of the ring 14 the rod has mounted thereon slidable rings or abutments 15 and 16, the ring 15 being normally disposed in proximity to the swab-engaging end portion 11 of the rod. The rings 15 and 16 are connected together by stay rods 17 so that the rings will move in unison. Disposed around the rod and bearing against the rings 14 and 16 is a helical compression spring 17a which normally serves to hold the ring 16 in its uppermost position as seen in Figs. 1 and 2, and in consequence thereof serves to hold the ring 15 at a predetermined distance from the extreme end of the swab-engaging end portion of the rod. The rod, in proximity to the gripping handle 13 is formed with an oblique slot 18 therethrough, and extending through said slot is a lever or trigger member 19 which is pivotally mounted to said rod at 19a. To one end of said trigger is pivotally connected, as at 20, one end of a rod 21, the opposite end of said rod being rigidly secured to the ring 16 by any suitable means such as a screw 22. It will thus be seen that if pressure is applied to the portion 19b of the trigger 19 in the direction of the arrow, as shown in Fig. 3, that the ring 16 will be moved downwardly to compress the spring 17a and simultaneously move the ring 15 by means of the

stay rods 17 toward the extreme end of swab-engaging end portion 11 of the rod. When pressure on the trigger is released, the spring 17a will automatically return the parts to their normal position, as shown in Fig. 1.

The swab 12 is preferably formed of fibrous cellulosic material which has been preformed into desired shape, with an axial socket 23 therein of a diameter and depth to snugly fit over the swab-engaging end portion 11 of the rod to frictionally hold the swab thereon. The swab may be formed from toilet or facial tissue paper, paper toweling, paper pulp stock or cotton, and is of a character such as will be water-disposable, i. e., which may be flushed down a toilet drain or the like. Preferably, the swab may be treated or impregnated with a suitable detergent and, if desirable, it may also be impregnated with a deodorizing agent and/or a bactericidal agent. Also, if it is desirable to impart initial rigidity to the swab, it may be impregnated with a water-soluble hardening agent such as glucose, glue or water-glass. As shown in Figs. 1 to 3, the swab 12 is of substantially cylindrical form but it will be obvious that the external form of the swab may assume any preferred contour, and in Figs. 5 and 6 I have shown a swab 24 of general cruciform shape in transverse cross-section having a cylindrical socket 25 therein of a diameter and depth to frictionally engage and hold onto the swab-engaging end of the device.

In the embodiment of my invention shown in Figs. 4 and 4a there is slidably mounted on the rod 10 a tubular member 26 having an internal diameter to frictionally or slidably engage and hold any position on the rod 10, but preferably it is mounted and held thereon by a coiled compression spring 28, the convolutions 28a at one end of which snugly engage around the upper end of the tubular member 26 and the convolutions 28b at the other end of which snugly engage around the inner end of the handle 13. Normally, the swab-engaging end of the tubular member extends to near the corresponding end of the rod 10 and the swab 27 is formed with a collar 27a and axial socket 27b adapted to engage over and be frictionally held on the end of the tubular member 26.

In the use of the cleaning device of my invention as disclosed in the drawings, the swab such as 12, 24 or 27 is mounted on the swab-engaging end portion of the device, the necessary amount of pressure being applied to force said swab onto said swab-engaging end; it being understood that the diameter of the socket in the swab is made somewhat smaller than the diameter of the rod 10 of Figs. 1 to 3 and of the tubular member 26 of Figs. 4 and 4a. The device is then gripped by the handle 13 and the swab-carrying end is inserted into the toilet bowl, which always contains a quantity of water, and the cleaning of the bowl is carried out by moving the swab around in the usual cleaning or swabbing action. Upon completion of the cleaning operation the swab may be discharged into the toilet bowl. This is accomplished with the device of Figs. 1 to 3 by moving the trigger 19 in the direction of the arrow shown in Fig. 3, by which action the ring 15 will be moved to engage

and discharge the swab from the rod. With the device of Figs. 4 and 4a it is accomplished by gripping the tubular member 26 in one hand and moving the rod 10 downwardly to compress the spring 28, whereby the inner end of the rod 10 will engage the bottom of the socket in the swab 27 to discharge the swab from the tubular member 26. The swab, as hereinbefore stated, is formed of water-disposable cellulosic fibrous material, and after being discharged from the cleaning device into the toilet bowl, may be flushed down the drain.

From the foregoing detailed description it will be appreciated that I have provided a novel, simple and sanitary cleaning device for toilet bowls and the like admirably responding to the various objects of the invention set forth in the opening statement of the specification, and while I have shown and described certain preferred embodiments of my invention it is to be understood that changes may be made therein within the range of mechanical skill without departing from the spirit of my invention as claimed.

What I claim is:

A cleansing device for toilet bowls comprising a tubular member, a rod slidably mounted therein, said rod being of greater length than the tubular member, a handle having a diameter greater than the inside diameter of the tubular member mounted at one end of said rod, said handle being adapted to serve as a stop to limit movement of the rod into said tube, a spring capable of manual manipulation encircling the rod between the handle and tubular member, said spring being adapted to exert pressure against the handle at one end of the rod to hold the handle away from the tube and position the other end of said rod within the tube, said tube having an end portion in which the shell of the tube is continuous and of uniform diameter and said end portion being adapted to fit snugly into and frictionally engage a preformed socket in a fibrous swab without distortion thereof whereby the swab may be frictionally held at the end of the tube for cleaning toilet bowls and manually discharged by moving the handle against the action of the spring to move the rod beyond the end of the tube.

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