June 24, 1930. T. STRUMPF 1,765,463

SANITARY TOILET SEAT COVER

Filed Oct. 2, 1929 2 Sheets-Sheet 1

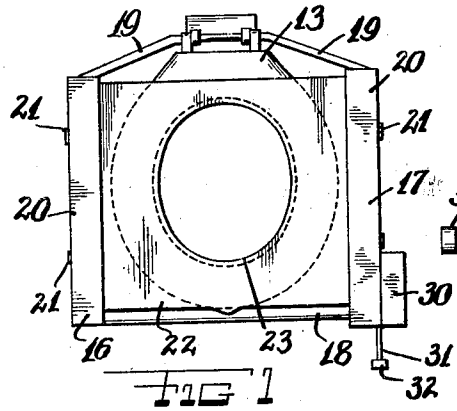


FIG 1

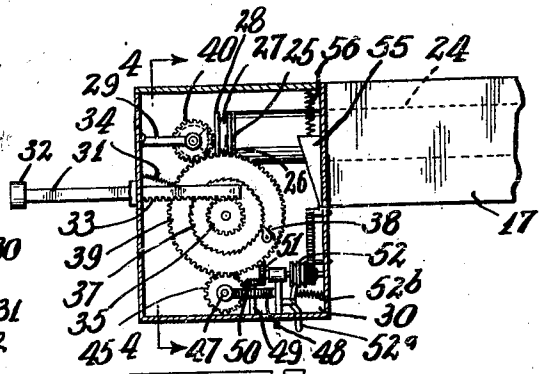


FIG 3

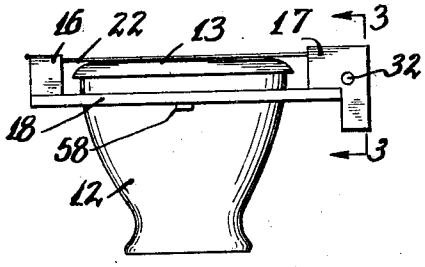


FIG 2

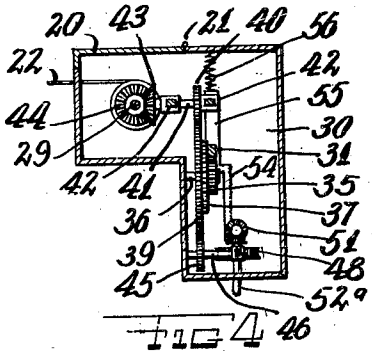


FIG 4

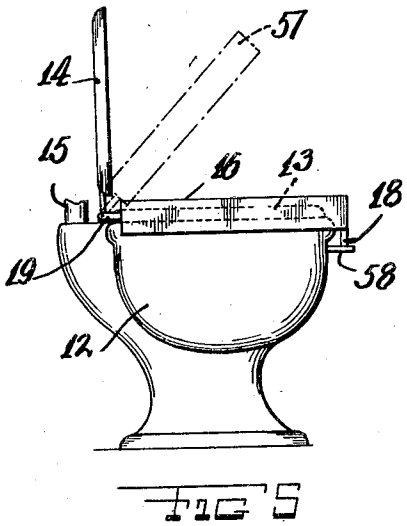


FIG 5

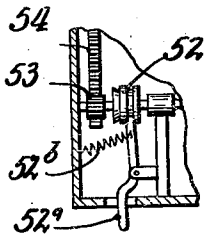


FIG 6

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SANITARY TOILET SEAT COVER

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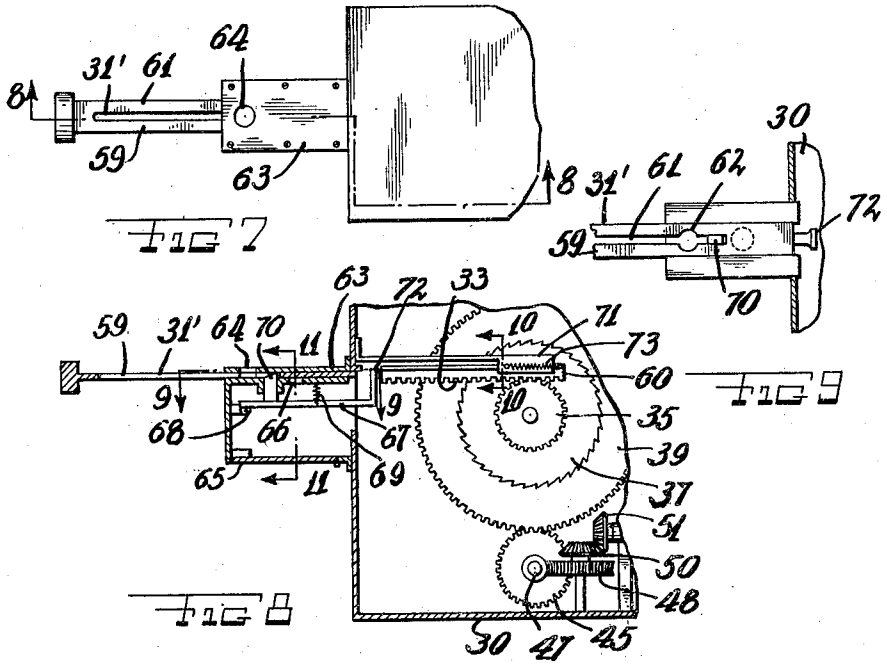


FIG 7

FIG 9

FIG 8

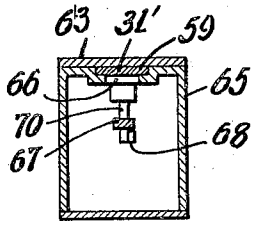


FIG 11



FIG 10

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UNITED STATES PATENT OFFICE

THEODORE STRUMPF, OF NEW YORK, N. Y.

SANITARY TOILET-SEAT COVER

Application filed October 2, 1929. Serial No. 396,602.

This invention relates to new and useful improvements in sanitary toilet seats.

The invention has for an object the provision of a device of the class mentioned which is of simple durable construction, dependable in use and efficient in action, and which can be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:—

Fig. 1 is a plan view of the device applied.

Fig. 2 is a front elevational view of Fig. 1.

Fig. 3 is an enlarged fragmentary sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3.

Fig. 5 is a side elevational view of the device applied to a modified form of bowl.

Fig. 6 is an enlarged detail view of a portion of Fig. 3.

Fig. 7 is an enlarged fragmentary plan view similar to a portion of Fig. 3 but illustrating a modification.

Fig. 8 is a sectional view taken on the line 8—8 of Fig. 7.

Fig. 9 is a horizontal sectional view taken on the line 9—9 of Fig. 8.

Fig. 10 is an enlarged sectional view taken on the line 10—10 of Fig. 8.

Fig. 11 is a sectional view taken on the line 11—11 of Fig. 8.

In the drawings, the reference numeral 12 indicates a conventional toilet bowl provided with a seat 13 pivotally mounted thereon. In Fig. 5 a modified form has been shown in which a seat cover 14 is also pivotally mounted upon the bowl and a flushing pipe 15 is shown connected with the latter element. Extended across each of the seats of the embodiments and mounted upon the bowls is a sanitary covering device constructed according to this invention.

The said covering device consists of a frame for engaging over the toilet seat and bowl, a sanitary web on rolls mounted on the frames and extending across the seat, and means for manually advancing the web for positioning new portions over the seat. The said frame consists of side-forming casings 16 and 17, a front transverse brace 18 connected between the casings, and rear arms 19 pivotally supporting the frame upon the bowl. Each of the casings is formed with a top cover 20 hinged at 21.

The said sanitary web is indicated by reference numeral 22 and is shown extended across the top of the seat 13. This web may be drawn from a supply roll within the casing 16. It is formed with a plurality of openings 23 equally spaced from each other. The cover 20 of the casing 16 may be open for placing a new web supply roll therein. This roll is rotatively mounted within the casing in a manner known to people skilled in the art and for this reason not shown on the drawing. The web extends onto a receiving roll 24 within the casing 17. This receiving roll is provided with end trunnions 25 square in transverse cross section and engaging in square apertures in discs 26 resiliently connected by springs 27 to support discs 28 fixed upon stud shafts 29 rotatively supported in the casing. The discs 26 may be manually moved against the action of springs 27 so that the receiving roll may be removed after the web has been completely wound thereon and a new one replaced instead.

The said means for manually advancing the web consists of a casing extension 30 arranged on the front end of the casing 17 and slidably supporting a plunger 31. This plunger is provided with a head 32 on its outer end and with rack teeth 33 on its inner end. A spring 34 acts between the plunger and the casing for normally urging it into extended position.

The rack teeth of the plunger mesh with a gear 35 fixed upon a stud shaft 36. A ratchet wheel 37 is also fixed upon the shaft 36 and is engaged by a spring pressed pawl 38 mounted upon a gear 39 rotatively

mounted on the shaft 36. The gear 39 meshes with a gear 40 on a shaft 41 supported by standards 42 attached upon the casing. A bevel gear 43 is fixed upon the shaft 41 and meshes with another bevel gear 44 fixed upon the said stud shaft 29.

The means for manually advancing the web also consists of a gear 45 meshing with the said gear 39 and fixed upon a shaft 46 carrying a worm pinion 47 meshing with a worm wheel 48 on a shaft 49 provided with a bevel gear 50. Another bevel gear 51 meshes with the gear 50 and is fixed upon a shaft provided with a clutch 52 operable by a lever 52^a extended thru the casing 30, and maintained in engagement by spring 52^b. A pinion 53 is fixed upon the shaft having the clutch but on opposite sides of the bevel gear 51. This pinion meshes with a rack 54 slidably mounted on the casing extension 30. A plunger-limiting member 55 is attached upon the rack and is disposed in the path of motion of the plunger 31. A spring 56 normally tends to urge the plunger-limiting member upwards. The plunger-limiting member has an inclined side against which the plunger 31 contacts when completely depressed and limits the amount to which the plunger may move determined according to the position of the limiting member.

The sanitary device may be raised to a vertical position similar to the position of the seat cover 14 shown in Fig. 5. Dot and dash lines 57 illustrate the sanitary device in a partially raised position. A projection 58 from the bowl serves to limit the downward position of the sanitary device by reason of the transverse bar 18 engaging thereagainst. Fig. 2 illustrates this condition of the device.

In the modified form of the invention illustrated in Figs. 7 to 11 inclusive, the said means for manually advancing the web has been modified to include a coin control. As shown, it is provided with a plunger 31′ formed of separate sections 59 and 60, respectively. The outer section 59 is formed with a longitudinal slot 61 communicating with a coin recess 62. A guard plate 63 is attached upon the casing extension and is located adjacently above the plunger section 59. The guard plate is formed with a coin opening 64 aligned with the opening 62 when the plunger section 59 is in its full extended position. A coin box 65 is attached upon the casing extension 30 and has its top face adjacent the bottom face of the plunger section 59. The coin box has a coin opening 66 arranged for alignment with the coin recess 62 when the plunger section 59 is substantially fully depressed.

A plunger control lever 67 is pivotally mounted at one end 68 upon the coin box 65 and is normally urged upwards by a spring 69. A peg 70 projects from the plunger controlling lever and extends from the coin box 65 and engages into the slot 61 of the plunger section 59. This peg has an inclined top end arranged for allowing a coin to ride over it and depress the lever 67.

The inner section 60 of the plunger 31′ is slidably mounted in a bracket 71 supported within the casing extension 30. The said plunger controlling lever 67 is formed with an upturned inner end 72 normally interposed between the sections of the plunger. The inner section 60 is formed with rack teeth 33 engaging gear 35. The remaining portion of the means for advancing the web is similar to that of the preferred form and may be recognized by numerals corresponding therewith. A spring 73 acts between the bracket 71 and the plunger section 60 for normally urging the section outwards.

In operation of the device illustrated in Figs. 1 to 6 inclusive, the plunger 31 may be manually depressed for causing the web 22 to advance so that a new portion is disposed over the seat. As the web winds upon the receiving roll 24, this roll increases in size and necessarily a smaller number of rotations is necessary for advancing the web the same amount.

Depression of the plunger 31 is communicated to the gear 35, then to the gear 39 by the interaction of the pawl 38. From gear 39 the motion continues to gears 40, 43, 44 and shaft 29. Rotation of the shaft 29 is directly communicated for rotating the roll 24. Rotation from gear 39 also is communicated to gear 45, pinion 47, worm wheel 48, gears 50, 51, pinion 53, rack 54 and the plunger-limiting member 55. Each depression of the plunger causes the roll 24 to draw on more of the web and also causes the plunger-limiting member 55 to slightly descend and thus reduce the amount of inward travel of the plunger. Reduction of the travel of the plunger reduces the number of rotations of the receiving roll 24 and compensates for the increase of this roll.

After the web has been completely wound upon the roll 24, the cover 20 of the casing is opened and the roll removed. A new supply roll is next engaged in the casing 16 and the free end connected with an empty receiving roll 24. The clutch 32 is momentarily disengaged for allowing the spring 56 to draw the plunger-limiting member to its top position and now the plunger may again be depressed to its maximum amount. This is necessary since the new roll 24 is of small diameter and requires a large number of rotations to accomplish a complete advance.

In the modified form illustrated in Figs. 7 to 11 inclusive, a coin must be deposited in the coin opening 64 before the plunger section 59 can be depressed. Upon depositing of the coin and a slight forward motion

of the front plunger section, the coin depresses the peg 70 for lowering the hook portion 72 of the plunger-limiting lever. Then the front plunger section may pass over this hook portion and force the rear plunger section 60 inwards. Upon the freeing of the plunger section 59, the spring 73 snaps both sections of the plunger outwards, and the plunger-limiting controlling lever 67 assumes its raised position for locking the front section of the plunger against depression. Another coin must be inserted before it may again be depressed.

While I have shown and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:—

1. In combination with a toilet bowl having a seat, a frame for engaging over the bowl and having side-forming members on opposite sides of the seat, a sanitary web on rolls mounted on the frame and extending across the seat, and means for manually advancing the web for positioning new portions over the seat, said frame also includes a transverse brace between the side-forming members, and rear arms pivotally connecting with the bowl.

2. In combination with a toilet bowl having a seat, a frame for engaging over the bowl and having side-forming members on opposite sides of the seat, a santiary web on rolls mounted on the frame and extending across the seat, and means for manually advancing the web for positioning new portions over the seat, said frame also includes a tranverse brace between the side-forming members, and coacting means on the bowl for pivotally supporting the frame.

In testimony whereof I have affixed my signature.

THEODORE STRUMPF.