D. J. MATTHEWS.

LAVATORY DEVICE.

APPLICATION FILED FEB. 5, 1913.

**1,083,887.** Patented Jan. 6, 1914.

Fig. 1

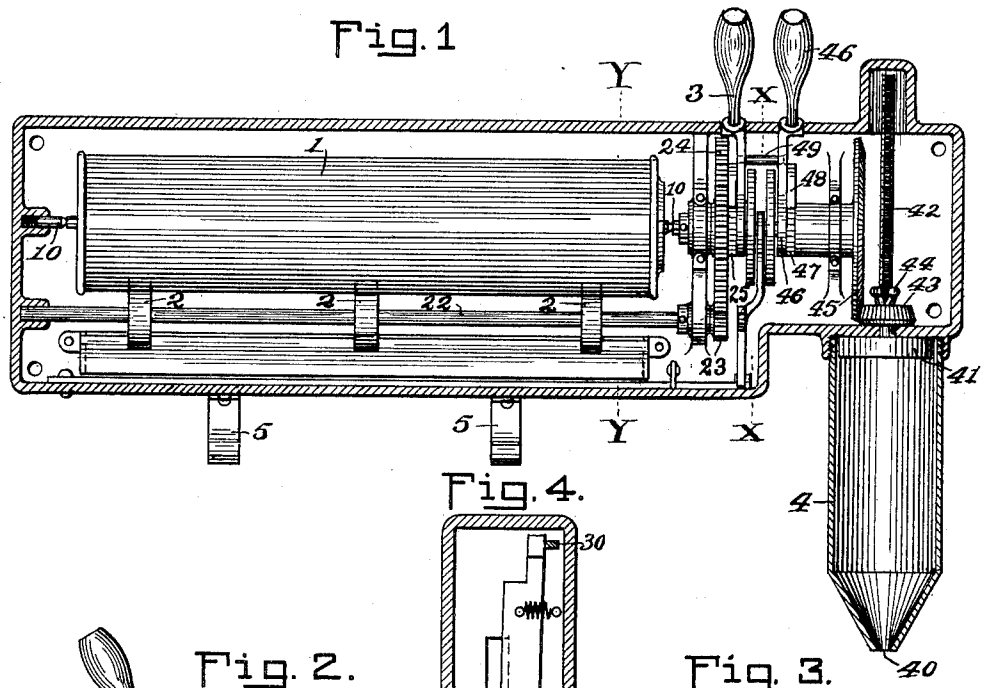



Fig. 4.

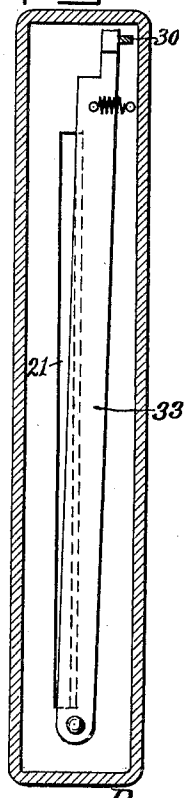



Fig. 2.

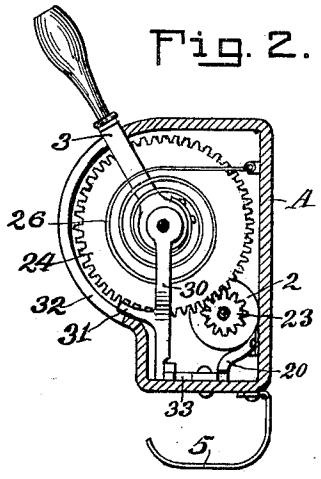
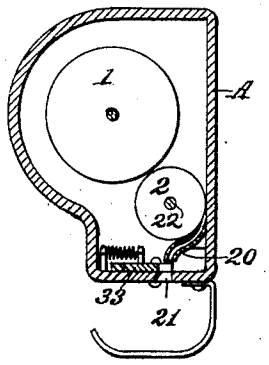



Fig. 3.




Witnesses

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# UNITED STATES PATENT OFFICE.

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## LAVATORY DEVICE.

1,083,887. Specification of Letters Patent. Patented Jan. 6, 1914.

Application filed February 5, 1913. Serial No. 746,416.

*To all whom it may concern:*

Be it known that I, DAVID J. MATTHEWS, a citizen of the United States, and resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Lavatory Devices, of which the following is a specification.

My invention relates to a towel and soap delivering mechanism, and comprises the parts and combination of parts hereinafter described and particularly pointed out in the claims.

The object of my invention is to provide a device which will hold a supply of paper towels; these to be in the form of a roll and from which a section of the roll may be obtained when desired; and to combine with this a soap container, or for a washing compound, which is an equivalent of soap, and mechanism whereby a sufficient supply of this soap or washing compound may be obtained when desired.

In the accompanying drawings I have shown my invention embodied in the form which is now preferred by me.

Figure 1 is a sectional elevation of my device. Fig. 2 is a front sectional elevation of my device, taken upon the line X X of Fig. 1. Fig. 3 is a sectional elevation of my device taken upon the line Y Y of Fig. 1, except that the paper feed rolls are not shown in the section. Fig. 4 is a section taken upon a horizontal plane, just above the cutting-off knife.

In carrying out my invention I employ paper towels in the form of a roll; said roll being shown in Figs. 1 and 3 at 1. This roll is, preferably, of a character such that the roll as a whole may be inserted, and, when the paper thereon has been used up, the central core may be removed and a new and full roll substituted therefor. To this end, I provide bearings, 10, at each end; one of these bearings preferably being spring held as is shown at the left in Fig. 1.

The paper composing the towels is led from this roll over a set of feed wheels or a roller 2, and thence through a suitable guide as 20, and an exit slot 21; the latter being herein shown as located in the under side of the casing A; although it is evident that the exit slot may be placed in another position should this be, for any reason, desirable.

The shaft 22, upon which the feeding pulleys, or roller is mounted, has thereon a pinion 23 which meshes with a gear 24, which gear is herein shown as mounted to turn upon the same axis as the axis of the towel roll 1, although this feature is immaterial.

I provide a lever 3, pivoted upon the same axis as the wheel 24, by which this wheel may be turned in order to actuate the towel-feeding mechanism, which the lever 3 should have an alternating back-and-forth movement, while the gear 24 should have a movement in one direction only. To secure this result, I provide some form of ratchet or clutch mechanism for connecting the lever with the wheel. This may be provided by securing to the side of the wheel 24, a ratchet wheel 25, and mounting a pawl upon the lever in position to engage this ratchet wheel. The same result may be secured by a pulley mounted upon a lever and adapted to engage the exterior teeth of the wheel. To return the lever 3 into its normal position, or that occupied when the device is not in use, I provide a spring; the same being herein shown as a spiral spring 26, resembling in its type that of a clock spring.

When the lever 3 is thrown downward, the large gear wheel 24 is turned through a considerable segment, and, being much larger than the pinion 23, this, and the feed rollers attached thereto are turned a sufficient amount to feed out a sufficient section of the toweling to answer for a single use. This is projected through the slot 21 in the casing.

When the lever 3 reaches the lowermost part of its movement, it strikes a lever 30, or, as I have herein shown, a finger 31, which is integrally secured to this lever, and which extends across the lowermost end of the slot 32 in the casing within which the lever swings.

The lever 30 is pivoted concentric with the lever 3 and its lower end engages with a knife 33, which is pivoted at one end and is adapted to swing across the slot 21.

The edge of the slot 21 and the edge of the lever or bar 33 are adapted to co-act and form shears, thus severing the section of paper which has been protruded through the slot 21. This movement may be limited in such a manner as to not entirely sever the protruded section of the toweling and leaving it hanging by a small, unsevered por-

tion at one edge. This will prevent the possibility of the towel dropping. The same result may be secured by shaping the cutting surface by which the towel is severed so as to leave one or more small unsevered sections by which the towel is held in place. These sections should be sufficiently small that they will readily tear away when the end of the towel is pulled away.

In connection with the towel-delivering mechanism above described, I provide a soap container, and means by which a small portion of the contents thereof may be protruded. By the term "soap", as herein used, I mean to include any type of material which is to be used for cleansing purposes, such as powders, pastes, etc.

The soap container, as I have herein shown it, consists of a cylinder 4, which depends from the main casing and terminates in a conical lower end having a small opening therein. The material which is supplied to this container should be of a somewhat pasty character, such that pressure applied thereto will cause it to flow through the opening 40, at its lower end, yet of sufficient stiffness that it will not flow through this opening by its own weight. Within this container is a piston 41 carried upon the rod 42, which is screw-threaded and of sufficient length that it may have a movement equal to the full length of the container.

In supplying the soap material to the container, I prefer to have same put up in small and cheap containers, of such size as will snugly fit the container 4; and so constructed that both ends may be removed. I would then place such a cartridge within the container 4, the ends of the cartridge having been removed, and apply the piston 41 to the upper ends thereof. In case this method of supplying the soap material is employed, the piston 41 should be made sufficiently smaller than the container 4 to accommodate the thickness of the shell of the cartridge, so that the piston may be reciprocated within said cartridge.

The piston 41 and its screw-threaded rod 42 are held from turning in any convenient way, as by means of a spline or key-way and key. Upon the stem 42 is mounted a bevel pinion 43, which is provided with a releasable nut member 44, adapted to engage the threads upon the stem 42 and thus to force the piston downward as the pinion 43 turns.

The pinion 43 meshes with a bevel gear 45 which is operated by a lever 46 which is preferably located close alongside the lever 3, by which the paper feeding roll is operated. This lever is adapted to be engaged with and turn the wheel 45 by a pawl and ratchet arrangement similar to that described in connection with the gear-wheel 24. As herein shown, this consists of a ratchet wheel 47 mounted upon the shaft of the wheel 45 to a pawl 48 carried by a lever 46.

I prefer to have the towel-delivering and soap-feeding mechanisms so that the towel-delivering mechanism, at least, may be operated independently of the soap-feeding mechanism, as many persons may wish to use the towel without using soap. At the same time, it will always be desirable to use the towel whenever soap is required; therefore I have made the two operating levers as separate, but have provided a lever 46 by which the soap-feeding mechanism is actuated, with a pin 49, which projects so as to engage the lever 3; this pin being back of the lever 3. In consequence, the operation of the lever 3 will not operate the lever 46 to feed the soap, while the operation of the soap-feeding device means the simultaneous operation of the towel-delivering mechanism.

In many cases it may be desirable that the towel, when projected from the casing should not be permitted to hang down its full length as it might drop over or into the wash basin, or for other reasons be in the way. I therefore mount upon the casing retaining fingers 5 which curve below the slot 21 and are adapted to engage and hold the towel against dropping down where it will be in the way. These retain the towel in a folded mass or roll, just below the casing where it may be easily gotten at and removed when desired.

What I claim as my invention is;

1. In a towel dispensing mechanism, in combination, an inclosing casing, a pair of journal bearings adapted to receive between them the axis of a roll of towel webbing, a gear wheel journaled co-axially with but independent of the bearings for said roll, an operating lever independently pivoted about the same axis, a ratchet or one-way-operating connection between said lever and gear wheel, a web feeding roller, a pinion secured to turn with the web feeding roller and meshing with the said gear wheel, a web cutting mechanism and an operating lever therefor pivoted concentric with the main operating lever and engaged thereby during the latter part of its stroke to sever the web.

2. In a towel dispensing mechanism, in combination, a pair of alined but separated journal bearings adapted to receive between them the axis of a roll of towel webbing, a gear wheel pivoted to turn about a common axis with said journal bearings, an operating lever pivoted alongside of said wheel to turn upon the same axis therewith, a ratchet or one-way operating mechanism connecting said lever with said wheel, a spring acting to return said lever, a web feeding roll, a pinion connected to turn said web feeding roll and meshing with said gear

wheel, a web shearing mechanism engaging the web after passing the feeding roll, a lever pivoted concentric with the main operating lever and connected with the web shearing mechanism, and provided with a finger extending into the path of travel of the main operating lever at the latter end of said path, and a spring acting to open the web shearing mechanism.

3. In a towel dispensing mechanism, in combination, an inclosing casing, two separated and alined pivot bearings adapted to receive the axis of a roll of towel webbing between them, a towel feeding roller about which the towel webbing passes after leaving its roll, the casing having a slit for the discharge of the webbing after passing the feeding roller, one side of said slit being adapted to act as one half of a shearing mechanism, a shearing bar or knife extending alongside said slit and pivoted near one end thereof, a main operating lever pivoted within the casing and having an end projecting therefrom, a ratchet mechanism connecting said lever with the feeding roller, a knife actuating lever pivoted concentric the main operating lever and having a part thereof extending across the latter part of the path of the main operating lever, and spring returning mechanisms for both levers.

4. The combination with a towel supplying mechanism having a manually actuated operating member, a soap supplying mechanism having a manually actuated operating member, said operating members being located adjacent and having like movements, and means carried by one of said operating members and extending into the path of movement of the other operating member, whereby the two will be operated together when one member is actuated and only one will be operated when the other is actuated.

In testimony whereof I have hereunto affixed my signature at Seattle, Washington, this 29th day of January, 1913.

D. J. MATTHEWS.

Witnesses:
H. E. BROWN,
H. L. REYNOLDS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."