A device comprising a container and dispensing element for a flowable substance such as a liquid in combination with a mounting bracket therefor and a sheet-material supply means, e.g., a cleansing- or toilet-tissue supply unit. The device is adapted to provide given areas of the sheet material treated with the substance which are interspersed with untreated areas at the option of the user, the sheet material being suitable for use as an improved cleansing or other medium.

4 Claims, 10 Drawing Figures
DEVICE FOR CLEANSING AND SANITATION PURPOSES

This application is a continuation-in-part of application Ser. No. 48,916 filed June 18, 1970, now U.S. Pat. No. 3,707,945 which in turn is a continuation of application Ser. No. 678,600, filed Oct. 27, 1967, now abandoned. This application is also a continuation-in-part of application Ser. No. 715,768, filed Mar. 25, 1968, now U.S. Pat. No. 3,652,174.

BRIEF SUMMARY OF THE INVENTION

The subject invention is concerned, basically, with the combination of a cleansing- or toilet-tissue supply means, a hermetically-sealed container-dispenser for providing a controlled stream or spray of a substance under compression, e.g., a liquid, and mounting means for positioning the container-dispenser functionally with respect to given surface areas of the tissue whereby a ready and correct release of the substance to these areas is achieved. A reasonable attractiveness and simplicity of the device are important objectives.

In production, the device may be considered in one example as embodying an integral relationship of the aforesaid sheet-material supply means and the mounting means, e.g., in the form of a cast or molded ceramic or plastic unit, the container-dispenser being carried by the mounting means and correctly aligned in cooperation therewith. In a second example the container-dispenser mounting means is permanently attached to or unitary with a common supporting medium to which the sheet-material supply means is also fastened. Aligning of the dispenser-container (which will hereinafter be termed the container for brevity of language) relative to the sheet material is provided by cooperating elements of the container and mounting means. In a third instance the mounting means is in the form of a simple relatively inexpensive attachment or accessory which can be releasably fastened to a conventional toilet-tissue supply means, without modification thereof or the necessity of tools for the purpose. All of the above structures appear to have commercial significance, the last-named perhaps being of more immediate concern because of its possible combination with existing already installed sheet material supply means. It is contemplated that the sheet-material supply means, mounting means and charged container as a unit, or the mounting means and charged container as an alternate unit might constitute the initial installation and that, thereafter, new charged containers to replace those exhausted would constitute a commercial item of large volume.

While the content of the container may be in the form of a dischargeable powder for certain uses, it is generally to be assumed that it is in the form of a liquid and, particularly, a liquid under compression. A basic liquid for purposes of the subject invention may, for example, be, largely, distilled sterile water. Again, the liquid may include water and alcohol, or water, alcohol and an emollient such as lanolin. Where serving as a refreshant, a so-called “fragrance” may be included. Other possible ingredients include a humectant, e.g., glycerine or propylene glycol; an appropriate antiseptic or germicidal substance or a bacteriostat such as hexachlorophene; a mineral oil and emulsifying agent, and a stabilizing agent.

With reference to devices for a related purpose which may be noted in the art, a wetting agent has been shown as supplied in a substantially open container and thus subject to contamination, evaporation and general deterioration. Again, the art has disclosed large and unwieldy apparatus unsuitable for a bathroom installation from either an appearance or installation viewpoint. Little or no regard appears to have been given to the possibility of utilizing standard fixtures as components of the device in combination with auxiliary or accessory means as comprehended herein.

The functional significance of the subject invention relative to personal hygiene may be considered in the light of the following considerations. Conventional use of toilet or cleansing tissue alone cannot completely remove body secretions and waste substances, for example after evacuation. A residue of these substances remains. Complete cleanliness, therefore, is not normally possible using tissue only. The present invention makes it possible to remove such residues, undesirable from a health and good-grooming viewpoint, by applying a light touch of cleansing liquid to one or more of the last-used sheets of the tissue.

In accordance with the foregoing considerations, objects of the invention are to provide a device for supplying a sheet material and selectively treating the material by applying predetermined amounts of a flowable substance to given surface areas thereof; to provide a device as described wherein the substance is a liquid and wherein application of the liquid is intermittent with respect to succeeding areas of the material to provide treated and untreated portions thereof; to provide a device of the type stated wherein the sheet material is a cleansing- or toilet-tissue and the substance is released thereon under compression from a hermetically-sealed container; to provide a device of the character described wherein is incorporated a sheet-material supply means, a hermetically-sealed container of a cleansing substance and means for mounting the container so that a dispensing orifice thereof is predeterminedly directed toward a given surface area of the sheet material, improved means for actuating a release valve being included; to provide a device as set forth wherein the sheet-material supply means and container mounting means form an integral or one-piece unit; to provide a device of the foregoing category wherein the container mounting means is separate from the sheet-material supply means as, for example, in the form of an attachment releasably fastened to the latter; to provide a device as characterized wherein the liquid is carried in a pressurized container and released as a spray of a given conical configuration; to provide a device of the type stated wherein the spacing between the orifice and the sheet-material surface and the spreading characteristics of the orifice are such as to cover a given area and to provide a device of the character described wherein the container and mounting means therefor include complementary keying means for determining the rotational position of the container to control the direction of its orifice.

Other objects of the present invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the device possessing the features, properties, constructions and relations of components which are exemplified in the following detailed disclosure and the scope of the application of which will be indicated in the claims.
BRIEF DESCRIPTION OF THE DRAWING

For a fuller understanding of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawing wherein like numbers refer to like parts throughout the several views and wherein:

FIG. 1 is a diagrammatic front-elevation view of one arrangement of components forming the device of the invention;

FIG. 1a is a fragmentary side view of the component 36 of FIG. 1;

FIG. 2 is a diagrammatic front-elevation view of a second arrangement of components forming the device of the invention;

FIG. 2a is a fragmentary front view of a modification of means for attaching the yoke members of FIG. 1;

FIG. 3 is a diagrammatic perspective view of a modification of the arrangement of components of FIGS. 1 and 2;

FIG. 4 is a diagrammatic perspective view of the device illustrating an integral construction of the container-mounting and paper-supply means;

FIG. 5 is a diagrammatic perspective view of a means for spacing a leading portion of a continuous roll of sheet material from following portions of the roll;

FIG. 6 is a diagrammatic front-elevation view of a modification of the device wherein are shown a plurality of interleaved sheets and a supply means therefor;

FIG. 6a is a fragmentary side view of the element 6a of FIG. 6; and

FIG. 7 is a diagrammatic fragmentary front view of a modification of the container mounting means.

DETAILED DESCRIPTION

In FIG. 1 there is shown one form of the device 10 of the invention comprising the cleansing- or toilet-tissue mounting means or supply unit 12, the pressurized container component 14, and the intermediate mounting means or bracket 16 for predeterminingly positioning the container 14. As previously intimated, the container 14 preferably carries a liquid having at least a cleansing property although a powder under compression may be employed where of advantage. While the liquid could be initially uncompressed and released by a generally conventional plunger-type pump positioned at and operated somewhat similarly to the release means 52 shown herein, the pressurized container is a preferred embodiment because of its superior operation, cleanliness of parts and protection of the liquid against contamination.

The paper-supply unit 12 may be of generally conventional construction and include a principal body or housing 18 having a recessed chamber 20, a pair of forwardly-extending posts or arms 22, each of which has a recess 24 formed therein, and a spindle 26 of the usual telescopic spring-biased type. A roll of paper 30, having a leading edge at 30a is mounted for rotation on the spindle, the latter including a pair of stub shafts 28 inserted in the recesses 24 of the posts 22. The housing 18 may be composed of a suitable ceramic material and mounted on and partially within an aperture of the wall 31.

The mounting bracket 16, composed, for example, of a metal such as aluminum or of a suitable plastic, for instance a polycarbonate, comprises a depending yoke member 32 including the arms 34 and 36, the generally-laterally-disposed sections 38 which conform somewhat angularly to the contour of the container 14, and the curved engaging portions 40. Each of the yoke arms 34 and 36 includes a slot 42 adjacent to its extremity which engages the stub shafts 28, as shown more clearly in FIG. 1a. The laterally offset mounting of stub shafts 28 in the slots 42 tends to bias the entire mounting bracket 16 and container 14, mounted thereon, toward the paper-supply unit 12 and wall 31 to enhance its firm positioning. It will be noted that the slots 42 are large enough to accept stub shafts of various diameter but they may, alternatively, be dimensioned to provide a close fit.

The configuration of portions of the bracket 10 which are in direct contact with the container 14 is obviously subject to considerable variation as indicated, for example, in other figures of the drawing and may be additionally curved to substantially surround the container. As shown in FIG. 1, it will be understood that the container 14, having the rotational-positioning and limit-stop pin 44, is inserted to the extent permitted by the complementary positioning and limit-stop slot 48 and, when completely inserted, is held at this position by the upturned end-piece 50.

A movable release means or nozzle 52 of the container including an internal valve is adapted to be pushed inwardly or depressed to release the contained liquid under compression in the form of a conically dispersed spray 54 of given diameter to the paper 30. Contributing to the area covered and the quantity of the liquid dispensed, in addition to the characteristics of the nozzle aperture or orifice 56, are the spacing of the latter, e.g., approximately 2½ inches, from the paper surface as provided by the bracket 16 and the direction of the orifice 56 as determined by the keying means 44 and 48. The acute angle at which the container is positioned contributes to an efficient operation thereof.

Inasmuch as the release means 52 is depressed against bias provided by an internal compression spring, not shown, damping means may be combined therewith to provide a given slightly delayed return of the release means valve to closed position. Depression and immediate release of the release means may thereby provide, automatically, discharge of a measured quantity of the liquid. The lever 58 mounted on bracket 10 bears lightly against the release means 52 as biased by the spring component 60. This spring may also serve the aforesaid damping function. The lever 58 facilitates depression and release of the release means 52 which is usually rather difficult to operate smoothly of itself.

Means for locking the device against pilferage in a commercial installation is indicated by the locking plate 62 having a slot 64 through which the staple 66 attached to the band 40 passes. An eye 68 fastened to the wall 31 is aligned with the padlock 66. The staple and eye are fastened together by the padlock 70. As will apparent, the locking means shown is merely indicative of such a means being employable, a more compact lock being that which would be utilized.

The embodiment 10a of FIG. 2 is similar to that of FIG. 1 except that the yoke member 32a and the modified bracket 16a are positioned upwardly relative to the paper supply-unit 12, the orifice 56 of the container 14 thus being positioned so as to overlie the paper 30. To facilitate a firm mounting of the bracket 16a, a supplemental holding means 72, such as a suction cup or a
magnet may be mounted on the yoke 32a. If a magnet, a complementary metallic piece would be cemented to the wall 31.

In FIG. 2a there is shown an alternate means for attaching the yoke 32 to the sheet material supply-unit 12. An angled clamping member 76 is attached to the yoke arm 34, a similar member, not shown, being attached to the other yoke arm. With the paper roll 30 removed, the clamp, formed by member 76 and upper portions of yoke arm 34, is slipped over the post 22. When paper roll 30 is installed, the yoke arm 34 is positioned behind the stub shaft 28, the latter serving to hold the yoke and entire bracket assembly 16 inwardly against the unit 12. The thumb-screw 78 serves to provide a firm engagement of the clamp with post 22.

The device 10b of FIG. 3 merely illustrates a modified mounting-bracket 16b for positioning the container 14 vertically. An angled retaining clip 80 inserted in a slot formed behind the housing 18 engages the front edge of the yoke to hold the bracket firmly in place. The yoke arms are mounted on the stub shafts 28 as described relative to FIG. 1.

In FIG. 4, the device 10c comprises a mounting bracket 16c which is integral with the paper supply-unit 12. In this example it may be assumed that components 12 and 16c are cast or molded as a single entity as, for example, from a ceramic or plastic material. It will be noted that the lever 58 is mounted on the unit 12.

FIG. 5 illustrates the device 10d in which a pair of appendages 82 and 84 extend from the yoke arms, the latter being generally similar to those shown in FIGS. 2 and 3. A rod or roller 86 extends horizontally between elements 82 and 84. Lead-in portions 34b of the paper pass over the member 86. This structure permits spacing or separation of paper portions 30b from following rolled portions of the paper. Accordingly, an area of portion 30b may have liquid from container 14 applied thereto without possibility of its penetration through the paper to underlying portions of roll 30.

The embodiment 10e of FIG. 6 represents a modification of the device of the invention wherein a supply-unit 88 carries a plurality of interleaved sheets 90. The leading sheet portion 90a passes through an aperture 92. The mounting bracket 16d is releasable attached to the unit 88 by a pair of slots or apertures 94 of the bracket, shown more clearly in FIG. 6a, which fit over the studs 98, the latter being fixed to and projecting outwardly from the unit 88. The container 14 is inserted in the ring-like portion 100 of the mounting bracket 16d. Keying means is illustrated by the pin 102 of the ring portion 100 which engages the slot 104 formed in the bevel of the container 14 to provide a correct rotational position of the release means aperture 56. A lever 58d enhances depression of the release means 52.

FIG. 7 illustrates the device 10f embodying a mounting bracket 16e for the container 14 which is completely separate from the sheet material supply-unit 12. However, it is predeterminedly spaced therefrom and angled with respect thereto which, when taken with keying means 44 and 48 of the container and bracket, respectively, enables dispensal of the liquid to a given area of sheet material 30. The mounting bracket 16e is attached directly to the wall 31 by the studs 106. A modification of FIG. 7 would permit the container to be mounted in a recess of wall 31 extending, for example, inwardly at 90° to the front surface thereof. This construction would permit the container to be positioned directly above or directly below the supply-unit 12, it being understood that limit stop means of the recess would position the container movable release means 52 forwardly of the recess and that keying means of the type hereinbefore described would preferably be included. In the showing of FIG. 7, it is to be understood that supplemental means for actuating the movable release means 52, e.g., of the type of lever 58, may be mounted on means attached to either the supply-unit 12 or the bracket 16e.

The brackets 16, 16a, 16b and 16d, with containers 14 mounted therein, may be considered, primarily, as attachments for combination with the supply unit 12 to provide the device of the invention. Bracket 16c is an integral part of the supply unit, as described above. Bracket 16e or its recessed modification is a separate element but is related to the supply unit in terms of its spacing, relative angular position and mounting upon or within a common supporting means. With reference to merchandising considerations relating to constructions of the invention, it is contemplated that the paper supply-unit, the mounting bracket and the container would together be included in an initial installation, either in the integral form of FIG. 4 or in another of the forms shown herein. Where the paper supply-unit is already installed, the container mounting bracket and the container would together be supplied as an entity. Assuming the paper supply-unit and bracket to have been installed the container would be supplied. In each instance it will be understood that the container is filled with the liquid.

While the constructions shown herein have generally illustrated the container positioned above or below the roll of paper, it would, of course, be possible to modify these positions where the spindle for mounting the paper is mounted vertically. To represent such a possibility, FIGS. 1-4 and 7 could be rotated 90° and would provide workable examples.

It will be understood that the subject invention may be practiced or embodied in other ways without departing from the spirit or character thereof. The preferred embodiment described herein is to be regarded, therefore, as illustrative and not restrictive, the scope of which is indicated by the appended claims and all variations which come within the meaning of the claims are intended to be embraced therein.

What is claimed is:

1. A device for providing the selective wetting of given leading areas of a roll of toilet-tissue prior to separation of said areas from the roll, said roll being carried on the spindle of a substantially conventional toilet-tissue dispenser which includes a principal body having a pair of projecting posts between which the spindle is mounted, said device being in the form of an attachment for supplementing the provision of dry sheets by said dispenser and comprising:

a container for supplying a liquid through an orifice thereof;

movable release means mounted on said container for dispensing said liquid in spray form through said orifice;

enclosing means within which said container is positioned; and

a yoke-like element interconnecting said toilet-tissue dispenser and said container enclosing means, said yoke-like element being adapted to position said
container orifice at a given distance and angle with respect to said given areas of toilet-tissue, whereby said spray is directed so said areas, and including a horizontal member, a pair of vertical members extending at approximately 90° to said horizontal member, and means at an extremity of each said vertical member which is so shaped as to releasably engage portions of said spindle adjacent to its extremities, at least one of said horizontal and vertical members being connected integrally with said container enclosing means.

2. A device as defined in claim 1 wherein is included means in the form of a pair of arms extending outwardly from said vertical yoke members and a horizontal rod-like element is mounted between said arms, leading areas of said toilet-tissue, uncoiled from said roll but still connected therewith, being adapted to pass over said rod-like element and be spaced from following coiled portions during dispensal of said liquid thereto.

3. An angular mounting bracket for use in a device for providing the selective wetting of given areas of toilet tissue carried on support means of a dispenser therefor by release to said areas of a liquid under compression in a container, the container being of a type having an orifice and a movable release means associated therewith, said bracket comprising:

5 a generally horizontal arm-like member;

8 at least one vertical arm-like member integral with and extending at approximately 90° with respect to said horizontal member;

10 means located at an extremity of said vertical members for releasably engaging said support means of the dispenser; and

15 means integral with and extending outwardly from at least one of said horizontal and vertical arm-like members which is predeterminedly formed for partially enclosing and releasably mounting said container.

4. A mounting bracket as defined in claim 3 wherein is included manually operable lever means mounted on one of said horizontal and vertical arm-like members which is adapted to bear against and actuate said movable liquid release means to facilitate operation of the latter.

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