

[54] **DISPENSER FOR A MOIST FLEXIBLE SHEET MATERIAL**

[76] Inventor: **Kurt Walker**, Marienstrasse 1,
Stuttgart, Germany

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[51] **Int. Cl.**..... **A47k 10/36**

[58] **Field of Search**..... 15/104.93, 210;
206/57 R, 58, 56 AB, 56 AA; 221/30, 64, 69,
154; 128/268, 269, 270; 118/37-43; 4/1

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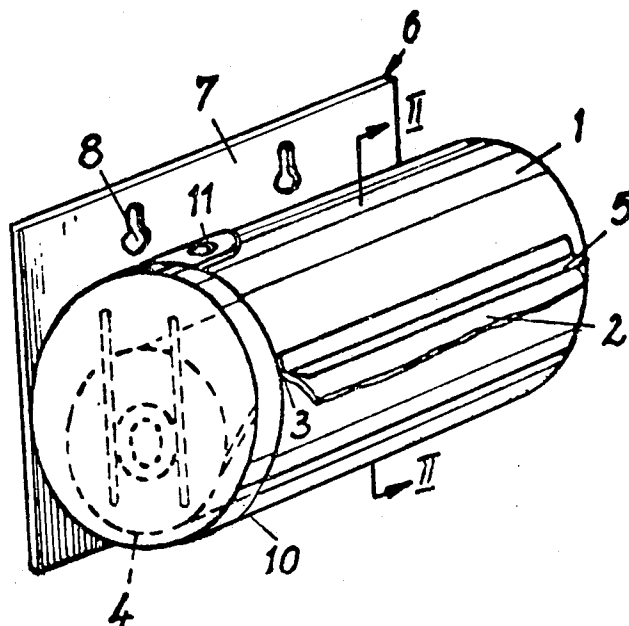
Primary Examiner—Leon G. Machlin

Attorney—Craig, Antonelli & Hill

[57] **ABSTRACT**

A dispenser for a moist flexible sheet material for medical and similar purposes comprising a normally closed container into which the material is either inserted in a moist condition, preferably in the form of a roll, or into which a treating liquid is poured so as to moisten the sheet material while bring unwound from a dry roll when it is withdrawn through a narrow slot in the container wall and a sheet of the desired length is then torn or cut off by a cutting edge or a cutting blade.

2 Claims, 10 Drawing Figures



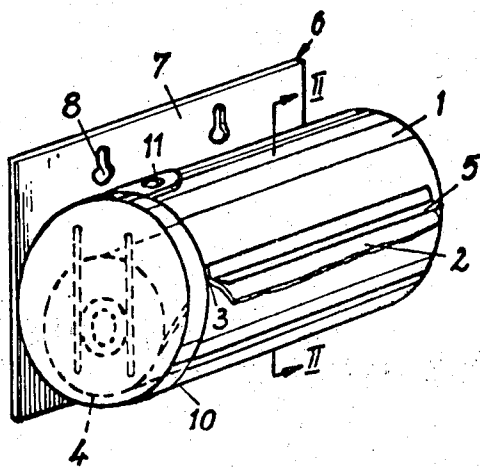


Fig. 1

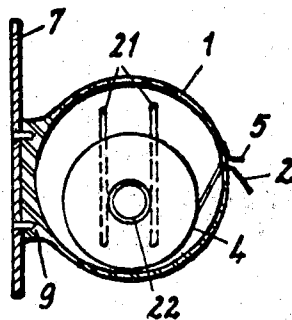


Fig. 2

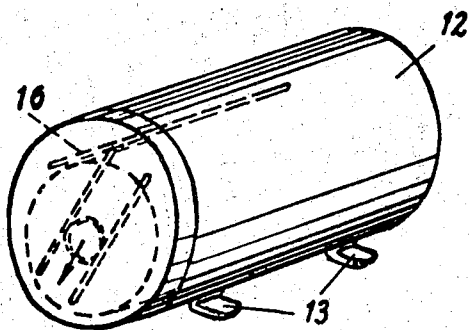


Fig. 3

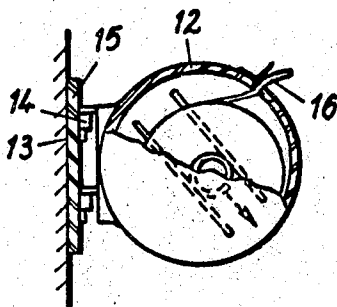


Fig. 4

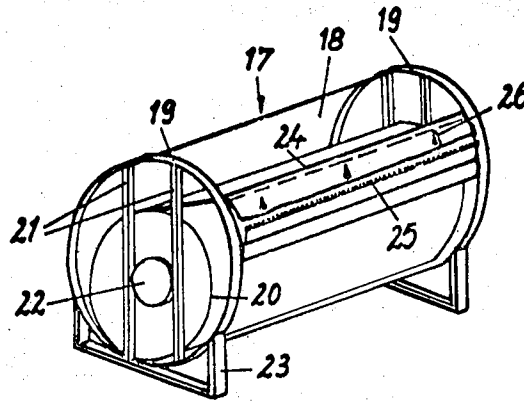


Fig. 5

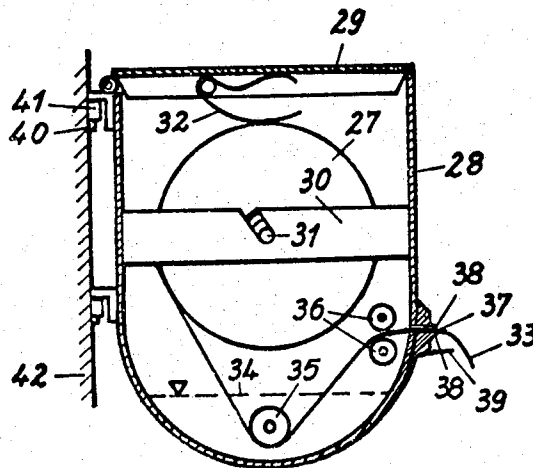
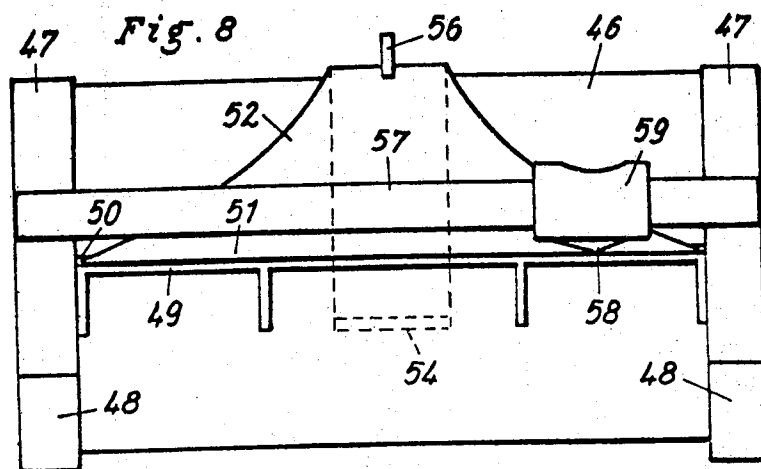
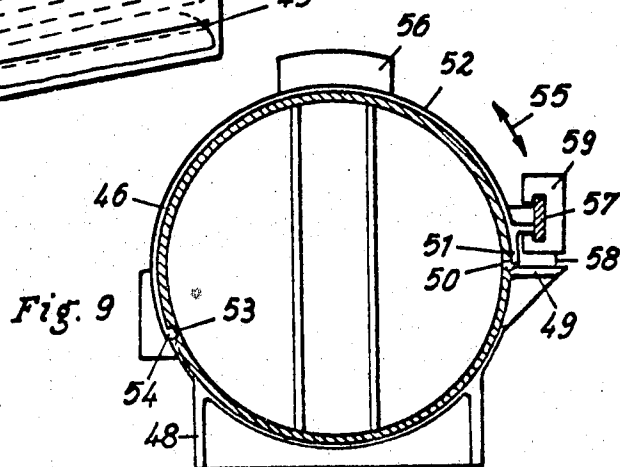
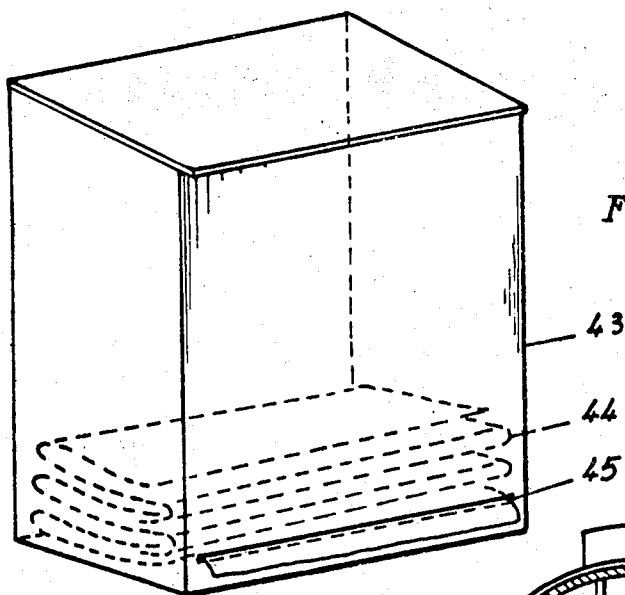


Fig. 6



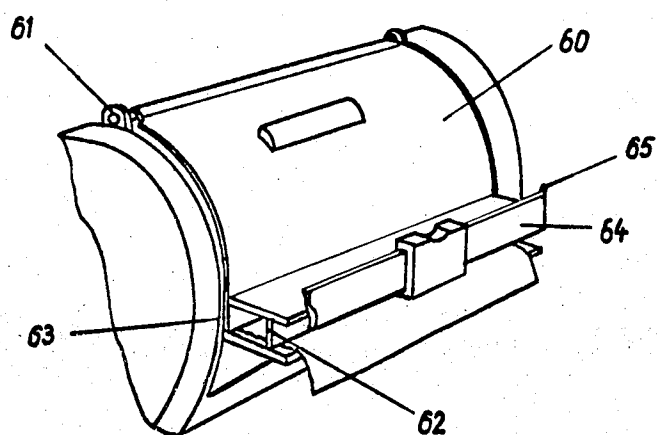


Fig. 10

DISPENSER FOR A MOIST FLEXIBLE SHEET MATERIAL

The present invention relates to a device for dispensing a moist flexible fibrous sheet material which has been treated with a suitable liquid for medical, sanitary or similar purposes. More particularly, the device according to the invention is intended for anal-hygienic purposes, for example, for use in toilets.

There are various kinds of dispensers already known which are intended, for example, for use in kitchens, toilets, or hospitals and comprise containers for receiving wrapping paper, toilet or toweling paper or even surgical bandages or dressings. None of these containers is, however, suitable for receiving a liquid or a moist roll which is already saturated with a liquid, since it is not closed airtight toward the outside and the liquid would either evaporate from the container itself or from the moist roll within the container. Furthermore, these containers are usually also not provided with supporting means which insure that the respective container will be held in such a position that, if a moist roll is inserted therein, the liquid with which this roll is saturated will not drain out of it so that the roll will eventually dry out.

It is an object of the present invention to provide a dispenser which eliminates the above-mentioned disadvantages and comprises a container which is especially suitable for receiving a moist roll or long folded strip of any desired fibrous sheet material and is designed so as to prevent as much as possible the evaporation of the liquid with which the roll or folded strip is saturated or which might be held in the container for moistening the sheet material before it is withdrawn from the container.

For attaining this object, the present invention provides that the container is adapted to receive a roll or a long folded strip of a suitable sheet material which is moistened or saturated with a chemical, pharmaceutical, or medical liquid substance or that the container is adapted to hold a certain quantity of such a liquid substance and the sheet material passes from a dry roll or folded strip within the container through this substance before it is withdrawn from the container, and that the container which is otherwise tightly closed is provided with a continuous longitudinal slot through which the desired length of the moist sheet material may be withdrawn from the container and which is closed toward the outside as air-tight and liquid-tight as possible either by the sheet material itself or by additional sealing means.

In order to render the container according to the invention as inexpensive and economical as possible, it is advisable to make it of a single piece of material, for example, of plastic, which encloses the roll or folded strip of sheet material and may be thrown away when empty. Such containers may be made of a very simple shape and be mass-produced at a very low cost. They may be useful especially if, when made, they already contain the roll or folded strip of sheet material in the moistened or saturated condition. The container may, however, also consist of several parts so as to permit it to be refilled whenever necessary and also to permit different sheet materials and/or different liquids to be inserted therein.

Another feature of the invention consists in providing a supporting device for the container which permits

this container to be secured in the proper operative position. This supporting device may consist, for example, of a pair of feet which are secured to the opposite ends of the container and extend transverse to the axis of the latter and have a length substantially equal to the width of the container. These feet permit the container to be rested or mounted in a fixed position in which any excess of the liquid with which the roll or folded strip of sheet material is saturated will always accumulate in a predetermined part of the container or in which the liquid which is filled into the container for saturating the sheet material before it is withdrawn through the dispensing slot will always be located in the proper part of the container for such a saturation.

For producing the container at a low cost, it is advisable to make it in the form of a cylindrical casing and to provide its opposite ends either with a fixed cover and a removable cover or with removable covers on both ends. These removable covers are preferably secured to the casing in a predetermined position by bayonet or snap locks or the like and they are further provided with guide bars projecting for a short distance toward the inside of the casing for guiding the ends of a core on which the roll of sheet material is wound. These guide bars on the two covers may extend either vertically or diagonally depending upon the particular operating position in which the container is to be mounted. If the guide bars extend diagonally to the container and at an angle to its supporting device, the container may be mounted in either of two operative positions extending at an angle of 90° to each other. The container may thus be mounted either on a horizontal surface, for example, on a table, or on a vertical surface, for example, on a wall. Since the guide bars extend diagonally in either of these positions, the core of the roll the projecting ends of which are slidable between these guide bars will always tend to slide downwardly within the container so that at least the outer layers of the material on the roll which are next to be withdrawn from the container will always be immersed in the liquid which is kept in the lowest part of the container. In any operative position of the container, its dispensing slot should extend substantially parallel to the axis of the container and thus in a horizontal direction and be preferably located within the upper part of the container, and the length of this slot should substantially correspond to the width of the sheet material. The width of the slot should be so narrow that it will be closed substantially air-tight and liquid-tight by the sheet material passing therethrough so that the liquid which is held in the container will not evaporate to the outside.

Another feature of the invention consists in providing the container on its outer side with a cutting device which extends along the dispensing slot at one side thereof and may consist of a straight or serrated blade. This cutting device may, however, also be similar to the blade of scissors and be pivotable relative to the slot about an axis near one end thereof. Intermediate the dispensing slot and the cutting device, the outside of the container should further be provided with a row of gripping pins for holding the end of the sheet in a fixed position which is to be torn or cut off. These gripping pins further prevent the short end of the sheet material which projects to the outside of the slot after each cutting operation from slipping back through the slot toward the inside of the container. It is, however, also

possible to provide the container with a straight or serrated cutting edge along the dispensing slot and with a holding plate which may, for example, be pivotable about the container and extend parallel to the slot and the cutting edge. This holding plate may be pressed downwardly, for example, with the thumb of one hand, so as to press the end of the sheet material projecting through the slot against the cylindrical surface of the container adjacent to the slot so that a moist sheet or strip of any desired length may then be easily cut off.

According to another feature of the invention it is advisable to provide the container directly adjacent to the dispensing slot with additional sealing lips, preferably of an elastic plastic, which engage upon the opposite sides of the sheet material and thus seal the container tightly toward the outside. When employing such elastic sealing lips on a container which is adapted to be refilled, it is also possible to make the dispensing slot of a greater width so as to permit sheet materials of different thicknesses to be employed. These materials may be of any suitable type and consist, for example, of paper, gauze or fibrous fleece materials of a very inexpensive kind which, even when wet, have a good tensile strength.

The liquid with which the roll or folded strip of sheet material is saturated or into which the dry sheet material is immersed in the container may contain medicinal substances, for example, monovalent or polyvalent alcohols such as, for example, ethanol, glycerin, or sorbite, or antibacterial substances, for example, hexachlorophene, tensides or tweenes. The liquid may in addition contain substances with a cooling effect, for example, menthol or a hamamelis solution, or odorous substances, for example, perfume oils, or curing substances, for example, parabenes. Although the moist sheet material may be employed for any other desired purpose, it is primarily intended for anal-hygienic purposes.

The features and advantages of the present invention will become more clearly apparent from the following detailed description thereof which is to be read with reference to the accompanying drawings, in which

FIG. 1 shows a perspective view of a dispenser according to the invention together with a device for mounting this dispenser in its operative position;

FIG. 2 shows a cross section which is taken along the line II — II of FIG. 1;

FIG. 3 shows a perspective view of a modification of the dispenser in a first of two operative positions in which it may be employed;

FIG. 4 shows an end view, partly broken away and in section, of the dispenser according to FIG. 3 in its second operative position;

FIG. 5 shows a perspective view of a transparent dispenser with a pair of feet and gripping pins;

FIG. 6 shows a cross section of a modification of the dispenser according to the invention in the form of a refillable container with a dry roll of sheet material in its upper part and a treating liquid in its lower part;

FIG. 7 shows a perspective view of a box-shaped dispenser with a folded sheet material therein;

FIG. 8 shows a front view of a dispenser with a cutting device;

FIG. 9 shows a vertical cross section of the dispenser according to FIG. 8, while

FIG. 10 shows a perspective view of a part of a dispenser similar to that as shown in FIGS. 8 and 9, but with a different support of its cutting device.

FIGS. 1 and 2, illustrate a dispenser according to the invention which comprises a tubular container 1 which is closed at one end and adapted to receive a roll 4 of a fibrous sheet material which is saturated with a liquid containing chemical and/or pharmaceutical, medical or other ingredients. A sheet 2 of this material is to be unwound from the roll 4 and withdrawn to the outside through a narrow longitudinal slot 3 in the container wall. This slot 3 is designed so as to be closed sufficiently airtight by the sheet 2 so that the liquid with which the roll 4 is saturated or which is filled into the container 1 will be prevented from evaporating. The container 1 may either consist of a single piece of an inexpensive material, for example, plastic, which may be thrown away after the roll 4 of saturated sheet material has been consumed or it may be designed for being refilled. For cutting off a sheet 2 of the desired length, the container is provided above the slot 3 with a cutting edge 5. This cutting edge 5 may, however, also be provided underneath the slot 3 which may in some cases facilitate the cutting operation. FIGS. 1 and 2 also illustrate the supporting device 6 for the container 1 which consists of a flat board or plate 7 which is secured to the container 1, for example, by screws, and is provided with a pair of holes 8 in its upper part for suspending the dispenser on hooks on a wall. As shown in FIG. 2, the container is further provided on its side opposite to that containing the slot 3 with a flangelike projection 9 into which the screws for securing the plate 7 to the container may be screwed. This projection 9 holds the container 1 at a certain distance from the plate 7 so that the cover 10 of the container may be easily fitted over or into the open end of the latter and will then close the container airtight and liquid-tight. In this particular embodiment of the invention, the cover 10 is additionally locked to the container 1 by means of a snap lock 11 which may be easily released. FIGS. 1 and 2 also indicate parallel guide bars 21 which project from the inner sides of the cover and bottom of the container 1 and are adapted to guide the opposite ends of the core 22 on which the roll of sheet material is wound.

FIGS. 3 and 4 illustrate a dispenser of a slightly different construction. The container 12 of this dispenser is provided with four feet 13 which are secured to the container near the opposite ends thereof and permit the container either to be used while mounted on a table or other horizontal surface in a position as shown in FIG. 3, or while being hooked into eyes 14 on a board or plate 15 which is secured to a wall, as shown in FIG. 4. The longitudinal slot 16 in the container 12 through which a sheet may be withdrawn is located in either of these operating positions of the container 12 at an upper side of the latter.

FIG. 5 illustrates a dispenser according to another modification of the invention. It comprises a container 17 which may be very easily produced and consists of a cylindrical casing 18 the opposite ends of which are closed by covers 19. This casing 18 may be made, for example, of a transparent plastic so that the proper unwinding of the sheet material from the roll 20 and the amount thereof remaining on the roll at the inside of the container 17 may be observed from the outside. The covers 19 may be secured to the casing 18, for example, by means of bayonet locks, not shown, and each

of them is provided on its inner side with a pair of parallel guide bars 21 for guiding the projecting ends of the core 22 on which the roll 20 of sheet material is wound. The feet 23 by means of which the container may be supported on a table or the like may be cast either integral with the casing 18 or with the covers 19. The upper side of casing 18 is provided with a dispensing slot 24 which extends parallel to the axis of the casing and has a length equal to the width of the sheet material on the roll 20. For tearing off a piece of the sheet material which has been withdrawn through the dispensing slot 24, a serrated cutting edge 25 is provided along this slot while for gripping the end of the sheet material which projects from the slot 24 so as to prevent it from slipping back into the container 17 a row of gripping pins are provided on and project from the outer surface of the casing 18 between the slot 24 and the cutting edge 25.

In place of these gripping pins 26, it is, however, also possible to provide a pivotable bar or strip along the dispensing slot 24 which by suitable spring means may clamp the end of the sheet material while being torn off against the surface of casing 18.

A further modification of the dispenser according to the invention is illustrated in FIG. 6. It comprises a container 28 for a roll 27 of a sheet material 33. This container 28 is adapted to be refilled with a liquid and with a dry roll of a sheet material and is therefore provided with a pivotable cover 29. On or adjacent to its opposite end walls the container 28 is provided with slotted transverse bars 30 into which the opposite ends of the core or pin 31 carrying the dry roll 27 may be inserted. This roll 27 is pressed downwardly by a spring 32 which also exerts such a friction upon the roll that it will not continue to rotate and will therefore not be excessively unwound when the desired length of the sheet material 33 is being withdrawn from the dispensing slot 37. From the roll 27 the sheet material passes downwardly over a roller 35 and through a quantity of treating liquid 34 in the bottom of the container 28 and then upwardly toward two wiping rollers 36 and between the latter to and through the dispensing slot 37 which is sealed toward the outside by two elastic sealing lips 38 which engage upon the upper and lower sides of the sheet 33. When the desired length of this sheet is withdrawn from the dispensing slot 37, it may be torn off on the cutting edge 39. The container 28 may be secured in a simple manner by means of hooks 40 and eyes 41 on a wall 42. This embodiment of the invention has the advantage that the roll 27 of sheet material may be inserted in a dry condition into the slots in the supporting bars 30 of the container and that any desirable liquid 34 may be poured into the container 28 to saturate the sheet material freshly before it is dispensed from the container by being pulled through the slot 37. Due to the provision of the sealing lips 38, the dispensing slot 37 may also be made of a greater width so as to permit sheet materials of different thicknesses to be employed.

The liquid for saturating the sheet material preferably contains medically effective substances, for example, monovalent or polyvalent alcohols such as, for example, ethanol, glycerine, sorbite, antibacterial substances such as hexachlorophene and tensides such as tweens or the like. The liquid may additionally contain substances with a cooling effect, odorous substances such as perfume oils, antiseptics or the like. All of these substances may be employed in an aqueous solution or

emulsion or be applied in the saturating liquid in any other form.

In place of any of the containers as illustrated in FIGS. 1 to 6, it is also possible to employ a box-shaped container 43 as shown in FIG. 7, into which long folded webs, sheets or strips of tissue or folded individual pieces of tissue 44 may be inserted which are saturated with any of the liquids as previously mentioned. In order to prevent any liquid which might drain from the tissue 44 into the container 43 from running out of the latter through the dispensing slot 45, this slot is provided at a certain distance above the bottom wall of the container.

If long continuous sheets, webs or strips of tissue are employed, the container 43 may also be provided with a cutting device to permit pieces of any desired length to be cut off. The provision of such a cutting device is especially advisable if the tissue consists of a fibrous fleece material or any other sheet material with a relatively high tensile strength.

FIGS. 8 and 9 illustrate how such a cutting device may be designed and mounted on a cylindrical container similar to one of those as previously described. On the outer side of this cylindrical container 46, the covers 47 of which are provided with feet 48 a cutting bar 49 is secured which has a horizontal surface and is disposed underneath and parallel to the dispensing slot 50. The section of the material to be cut off is pressed upon the cutting bar 49 by a hold-down bar 51 which is secured to a substantially semicircular plate 52 which is curved around and engages with the outer surface of the container 46 and is slidably peripherally to a limited extent back and forth around the container in the direction of the double arrow 55 between a retracted position, in which a projection 54 on one end of this member 52 engages into a substantially semicircular groove 53 in the outer wall of the container 46, and a hold-down position in which the hold-down bar 51 presses the sheet which has been withdrawn through the dispensing slot 50 upon the cutting bar 48. For manipulating the curved plate 52 and the hold-down bar 51 thereon, plate 52 is provided with a handle 56. Adjacent to the hold-down bar 51, the container 46 is further provided with a guide bar 57 which extends along the entire length of the container and carries a blade holder 59 from which a cutting blade 58 with a convex or conical cutting edge projects which terminates into a sharp point. This blade holder 59 is slidable along the guide bar 57 and the cutting edge of blade 58 is capable of cutting in both directions.

FIG. 10 shows a perspective view of a part of a container similar to that as shown in FIGS. 8 and 9 but provided with a different support for the cutting device. The curved supporting plate 60 which is pivotably mounted at 61 on the upper part of the cylindrical container is provided on its free end with a rail 62 which together with the end 63 of the supporting plate 60 presses the sheet of tissue of the like tightly upon the cutting bar. In order to prevent the blade holder from sliding off the ends of the guide bar 64 when the blade holder is moved along the latter in one or the other direction, these ends of guide bar 64 may be provided with stop projections 65.

For cutting off individual sections of tissue or the like it is also possible to employ cutting devices different from those as previously described. Thus, for example, a cutting blade may be used which is pivotably

mounted at one end and, when pivoted downwardly, cuts off the saturated material along the cutting edge of a supporting surface in a manner similar to that of scissors.

Although my invention has been illustrated and described with reference to the preferred embodiments thereof, I wish to have it understood that it is in no way limited to the details of such embodiments but is capable of numerous modifications within the scope of the appended claims.

Having thus fully disclosed my invention, what I claim is:

1. A dispenser for dispensing a moist flexible sheet material containing a liquid for medical, cleansing or similar purposes comprising a container for holding a supply of said sheet material and fully enclosing said supply, said container consists of at least two parts adapted to be secured to each other and to be at least partially separated from each other to permit said supply of sheet material to be renewed when required, said parts comprising a cylindrical casing having covers on its opposite ends, at least one of said covers being removably connected to said casing, means for locking said removable cover in a predetermined position to

said casing, and a pair of parallel raillike projections secured to the inner side of each of said covers and extending in the same direction on both covers, said supply consisting of a roll of said material, and a core upon which said roll is wound, said core having ends projecting from said roll and inserted between and slidable along the associated pairs of projections, said casing having a longitudinal wall and a dispensing passage in said wall through which said material may be withdrawn from said supply in a moist condition to the outside, means for restricting said passage to a width substantially equal to the thickness of said material so that the liquid will be substantially prevented from evaporating from said container, and cutting means on the outer side of said container for cutting off a moist section of said material.

2. A dispenser as defined in claim 1, in which said dispensing passage comprises a longitudinal slot in the wall of said casing and extending parallel to the axis of said casing, said slot being located in an upper part of said casing when said dispenser is mounted in an operative position and having a length equal to the width of said material.

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