Sept. 12, 1939. A. PAPINI 2,172,517

TOILET CREAM DISPENSER

Filed April 6, 1938

Fig. 4.

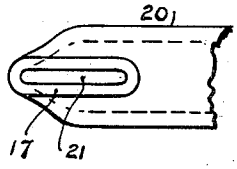
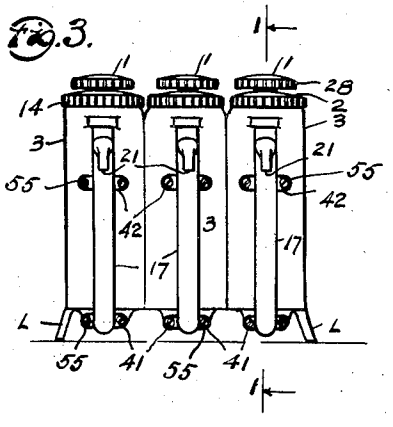


Fig. 1.

Fig. 2.

Fig. 3.



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TOILET CREAM DISPENSER

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13 Claims. (Cl. 221—78)

The present invention relates to an improvement in emollient dispensing devices, and has for its principal object the provision of means for sanitarily storing and dispensing toilet creams, salves and the like, for use in the home, in beauty parlors and barber shops, where many people would have access to, and use such a device, with a consequent possibility of contaminating the creams, if otherwise stored and dispensed.

One of the outstanding features is in the provision of means, whereby the material to be dispensed is initially packaged in containers, which are so constructed as to, later, cooperate with the dispenser, to carry out the feature of sanitary control of the materials until the instant of dispensing the material for use.

While one dispensing container, alone, is found useful, it is amongst the further features of advantage that two or more such dispensing devices may be utilized as a set, thereby to provide, in a single set or group, a plurality of dispensing, storage vehicles for rouge, skin cream, astringents and the like, all available for skin treatments, as desired.

A further feature of advantage is in the construction of the dispensing nozzle wherein its discharge orifice is turned downward thus to suspend the discharged cream in a position for easy wiping removal by the finger of the user from the suspended position. This form of discharge nozzle has a further feature of advantage, in that the discharge column, from the main source of storage to the orifice, acts as a blocking means for any loss of the more volatile constituents of the cream and the horizontal portion of the nozzle, adjacent the discharge orifice acts as a trap to further retard volatile losses at the orifice.

As the replaceable, main supply container is entirely enclosed during operative use thereof, the volatile essences are thus prevented from evaporating and the container is sealed against dust and contamination, and is kept sterile.

The foregoing, and other features of advantage will be apprehended as the herein description proceeds, and it will be obvious that modifications may be made in the herein disclosed structure, without departing from the spirit hereof or the scope of the appended claims.

In the drawing:

Fig. 1 is a vertical section enlarged, taken on line 1—1, Fig. 3, looking in the direction of the arrows;

Fig. 2 is a side view of the storage jar or container, partially sectioned;

Fig. 3 is a reduced view of a set of dispensing devices, made in one integral set; and

Fig. 4 is a fragmented, bottom view of the mouth of the terminal of the dispensing nozzle, taken on line 4—4, Fig. 1, looking in the direction of the arrows.

As shown in Fig. 1, the dispenser comprises a main container 3, made of any suitable material, has a rounding bottom 54 terminating in an internally threaded aperture 47, which aperture merges into a curved, bored portion 48, the bore P of which extends from the aperture 47 into a horizontal plane, and terminates at 49, Fig. 1, slightly extended from the surface 43 of the container 3. The front portion of the bore P, is provided with a recess 50 in which is seated an apertured gasket 44.

A bored, separable, vertical dispensing spout 17 has its lower end provided with a right angled, curved extension 53, the end of which is seated in said recess 49, and bears against the gasket, to effectively seal the jointure in said recess 50.

The spout 17 has its bore or conduit 19 merging from the curved lower portion at the gasket 44 into a vertical position in alignment with the wall 43 of dispenser 3, and at the top portion of said spout, the spout and its appurtenant bore is curved into a right angled direction, as at 20, and the spout and bore portion is again turned at a right angle in an easy curve, thus to have the discharge terminus of said spout downwardly directed, substantially parallel with the bore 19, as shown at 21, Fig. 1. The terminal of the spout is preferably contracted into an elongate discharge port 21, Fig. 4, to better facilitate the wiping removal of the suspended extrusion F, shown dotted in Fig. 1.

The spout portion 17, as seen dotted in Fig. 1 and shown in full lines in Fig. 3, is provided with offset fastening lugs or ears 41, 42, at the bottom, and near the top of said spout, and headed screws 55 are used to fasten the spout against gasket 50 and the seat 43 of the container, to hold the spout 17 in firm operative position. As thus described, a cream conductive duct is formed leading from the interior of the container 3, and when the device is used, the cream flows in the direction of the arrows 18, 22, shown in Fig. 1, therein.

The lower portion of the container, either in single structure, as in Fig. 1, or in a set as shown in Fig. 3 may be provided with legs L to operatively support the container.

The upper portion of the container 3 may be provided with threaded portions 29, Fig. 1, which

are engageable with a threaded removable cap 2, said cap being provided with a depending, bored bushing 13, into which is rotatably suspended the cylindrical end of a stem 5, the upper end 23 of which is stepped down in diameter and is fitted into and firmly held in a depending bushing 15 of a knurled cap 1, by a set screw.

The flange 28 of the cap 1 is knurled, as shown at 27, as is also the flange of cap 2, as shown at 14, Fig. 1.

Below the end of the bushing 13, and in operative engagement therewith is located a collar 11, which may be affixed to stem 5, by a key pin 12. This collar rotatably maintains the stem 5 in the bushing 13.

The lower end of stem 5, as seen in Fig. 1, is threaded from below collar 12, as at 6.

A plunger piston 8, Fig. 1, is provided with a hollow, cylindrical extension 7, the upper interior end of which is provided with a thread 27, which engages with threaded end 6 of stem 5, and which, when cap 1 is rotated causes the plunger assembly to ride downwardly, or upwardly according to the direction in which the cap 1 is rotated.

The plunger head 24 has mounted thereon a leather cap piston 9, the outer perimeter of which is flanged downwardly as at 25, Fig. 1. This cup is held in pressure operating position on the plunger head 24, by means of a central cup holding screw 46, which is threadedly engaged with said headed screw. The head 45 of the screw 46 is purposely enlarged for purposes hereinafter to be described.

As disclosed in Fig. 1, the plunger head 24 is shown with a downwardly crowned contour, to which the cup leather 9 conforms, for a purpose later to be described.

In Fig. 1, is shown a vitreous storage jar, generally denoted by 10, which has a lower threaded discharge opening, which is threadedly engaged by its thread 10'' to the threaded opening 47 of the container 3, thus to removably support the storage jar 10 in operative position.

When the storage jar is mounted as shown in Fig. 1, it fits tightly against a compressible gasket W, to guard against leakage between the gasket seats 56.

As shown in Figs. 1 and 2, the storage jar 10 is provided with a large open end, which is provided with external cover engaging threads 10', these being, preferably, of the bayonet locking type. The large open end of the jar 10, as will be noted in Fig. 1, operably receives therein the cupped plunger head 24 in a close fit, the jar 10 thus acting as a cylinder for the cupped plunger, so that as the plunger assembly is screwed down, it will force the plastic contents of the jaw 10 downwardly, and cause some of said contents to be extruded as at F, Fig. 1, there to be removed, by the user, as previously described.

As the material in jar 10 becomes gradually exhausted, and as the cupped plunger finally reaches the bottom of the jar 10, the contour of the face of the cupped plunger, which is virtually the same contour of the inside of the rounded shoulder 38, of the jar 10, will practically extrude the last remaining portions of the contents of container 10, the flexible flange 25 of the cup packing 9, being then contracted as it reaches the shoulder 38. The enlarged head 45 of the screw 46 also enters the discharge aperture of jar 10, when the plunger is at the lower end of its stroke and this action tends, also to leave little, if any residue of the contents in the jar.

After the jar 10 of Fig. 1 is emptied, the cap 2 is unscrewed, and the plunger assembly is then removed, the jar 10 is unscrewed and removed, and a freshly opened jar 10 and contents is screwed into operative position, the plunger assembly is then adjusted, and again placed in the operative position, as shown in Fig. 1.

From the foregoing description it will be noted that the creams are protected completely from the initial filling of the jar, to the final dispensing of the product contained therein.

The jar 10 herein disclosed, and as seen in Fig. 1, is open at both ends and provided with two removable closure caps 31 and 32, Fig. 2. Both ends of the jar are provided with cap engaging means in the form of molded on, interrupted threads 10' and 10'', upon which are threadedly engaged the covers or caps 31 and 32. Each of these caps are provided with a suitable gasket, such as 49, for the small closure cap, and 49' for the larger closure cap. The cap 31 may first be positioned tightly as a closure, and the cream may then be introduced into the jar, preferably by a machine filler, and then after filling, the cap 32 may then be firmly screwed on, and the jar is then ready for shipment and storage until required for use. Under the foregoing proceedings, it will be obvious that the cream is fully protected from contamination until the instant of use.

It is understood that the degree of viscosity of the materials dispensed from the device herein disclosed is such that the extruded portion F at the nozzle 22, will remain indefinitely suspended, until removed as described.

Having thus described the invention what is claimed is:

1. A toilet article for dispensing toilet creams, said article comprising a cylindrical vessel having a lower end wall having a neck; an inverted-mushroom-shaped plunger disposed in said vessel in slightly spaced relation with the walls thereof; means for raising and lowering the plunger; a leather piston conformably fitting on the intra-marginal portion of the lower face of the plunger and provided with a downwardly flanged peripheral portion engaged with the wall of the vessel; a screw passing through the center of the piston and provided with a cylindrical head adapted to fill said neck at the lower limit of movement; the contour of the inner face of the lower wall of the vessel conforming to the contour of said lower face at said lower limit.

2. A toilet article for dispensing toilet creams, said article comprising a main container having at the lower end a small threaded central opening; a spout connected to said opening; a jar having a threaded neck engaged in said central opening; a cap on the container and provided with an axial bore; a stem in said bore; an inverted-mushroom-shaped plunger disposed in said jar in slightly spaced relation with the walls thereof and connected to said stem; a leather piston conformably fitting on the intra-marginal portion of the lower face of the plunger and provided with a downwardly flanged peripheral portion engaged with the wall of the jar; a screw passing through the center of the piston and provided with a cylindrical head adapted to fill said neck at the lower limit of movement; the contour of the inner face of the lower wall of the jar conforming to and fitting the lower face of the piston at said lower limit, the flanged periphery of the piston disposing itself in the space between the plunger and the side walls of the jar,

whereby the piston and said screw head cooperate to express all of the cream from the jar and neck at said lower limit.

3. A toilet article for dispensing toilet creams, said article comprising a main container having at the lower end a small threaded central opening; a radially disposed duct connecting with said opening and having a gasket around its outer end; a spout secured against the outer face of the container and secured against said gasket and communicating with the duct; a jar having a threaded neck engaged in said central opening; and a piston in the jar.

4. A toilet article for dispensing toilet creams, said article comprising a substantially cylindrical main container, having at the lower end a small threaded central opening, a radially disposed duct extending from said opening under the container to the periphery thereof provided with an annular shoulder in its outer end; supporting means for the container extending below said duct; a gasket on said shoulder; a spout disposed flat against the outer face of the container and having a lower extension disposed against said gasket, the upper end of the spout being outwardly and downwardly turned; off-set fastening lugs on opposite sides of upper and lower parts of the spout engaged against the container; screws passing through the lugs into the structure of the container; a substantially cylindrical jar having a threaded neck engaged in said central opening; and a piston in the jar.

5. A toilet article for dispensing toilet creams, said article comprising a substantially cylindrical main container, having at the lower end a small threaded central opening, a radially disposed duct extending from said opening under the container to the periphery thereof provided with an annular shoulder in its outer end; legs on the container projecting below said duct; a gasket on said shoulder; a spout disposed flat against the outer face of the container and having a lower extension disposed against said gasket, the upper end of the spout being outwardly and downwardly turned and provided with a lower narrow elongated discharge port disposed radially to the container; off-set fastening lugs on opposite sides of upper and lower parts of the spout engaged against the container; screws passing through the lugs into the structure of the container; legs formed on the lower part of the spout and container and projecting below said duct; a gasket around said central opening; a substantially cylindrical jar having an annular shoulder on its end wall resting on said gasket, said jar having a threaded neck engaged in said central opening; a cap on the container having an axial bore; a stem in said bore and a plunger piston in said jar connected to said stem.

6. A toilet article for dispensing toilet creams, said article comprising a main container having at the lower end a small threaded central opening; a spout against the outer face of the container and having a part extending under the container and connected to said opening; supporting means for the container extending below said part; a jar having a threaded neck engaged in said central opening; a piston in the jar engaged with the side walls of the jar; and means for operating the piston.

7. A toilet article for dispensing toilet creams, said article comprising a main container having at the lower end a small threaded central opening; a spout against the outer face of the container and connected to said opening; a gasket around said opening; a jar having a threaded neck engaged in said central opening and having an annular shoulder around the neck engaged with said gasket; and a piston in the jar.

8. A toilet article for dispensing toilet creams, said article comprising a main container having an exteriorly threaded open upper end and at the lower end a small threaded central opening; a spout against the outer face of the container and connected to said opening; a jar having a threaded neck engaged in said central opening, and an open upper end; a cap on the container and provided with an inner axial bored bushing; a cap engaged on the upper threaded portion of the container and provided with an inner axial bored bushing; a cylindrical stem rotatable in said bushing and provided with a threaded lower end, a collar engaged against the bushing and a knurled head at the upper end; stem rotatable in said bushing and provided with a thread below the bushing and a knurled head at the upper end; a plunger in said jar and provided with an upper hollow stem-like extension having the upper part of its interior reduced in diameter and having threads engaged with the threads of said stem; and a piston on the lower face of the plunger and engaged with the wall of the jar.

9. A toilet article for dispensing toilet creams, said article comprising an integral body comprising a plurality of main containers each having at the lower end a small threaded central opening; said containers being integrally secured in standing position side by side; a spout against the outer face of each container and connected to said opening and having a downturned discharge end near the upper part of the container; a jar having a threaded neck engaged in each central opening; a cap on each container and provided with an axial bore; stem rotatable in said bore and provided with a knurled head at the upper end and a threaded part below the bore; a plunger in each jar connected to said stem; and a piston on the lower face of the plunger and engaged with the side walls of the jar.

10. A toilet article for dispensing toilet creams, said article comprising a cylindrical receptacle having at the lower part an opening; a spout disposed upwardly along the outer part of the receptacle and communicating with said opening; and a piston in the receptacle engaged with the side walls of the receptacle; the upper end of the spout being outwardly and downwardly turned and provided with a lower narrow elongated discharge port disposed radially to the receptacle.

11. In a toilet article for dispensing toilet creams, the combination of a cream jar having a substantially cylindrical side wall and a lower wall having a neck and a substantially concaved inner face; a plunger piston in said jar spaced from said side wall and having its lower face conforming in contour to said lower face and the interior of the neck and provided with a downwardly flanged periphery engaged with the wall of the jar, said plunger piston being in part sufficiently yieldable to adapt the plunger piston to engage upon and conform to substantially all parts of said inner face.

12. In a toilet article for dispensing toilet creams, the combination of a cream jar having a substantially cylindrical side wall and a lower wall having a neck and a substantially concaved inner face; a plunger piston in said jar and having its lower face conforming in contour to

said lower face and the interior of the neck and provided with a downwardly flanged periphery engaged with the wall of the jar, said plunger piston being adapted to move into subtsantial engagement with and to conform to substantially all parts of said inner face.

13. In a toilet article for dispensing toilet creams, the combination of a cream jar having a substantially cylindrical side wall and a lower wall having therein a neck; a plunger in said jar spaced from said side wall and having its lower face conforming in contour to the inner face of the lower wall and the interior of the neck; and a flexible sheet fitting on said lower face and provided with a downwardly flanged periphery engaged with the wall of the jar and adapted to move into the space around the plunger to allow the piston to engage upon and conform to said inner face.

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