Sept. 26, 1950 W. J. RIGBY ET AL 2,524,021

NURSING CONTAINER

Filed April 13, 1948

Fig. 1.

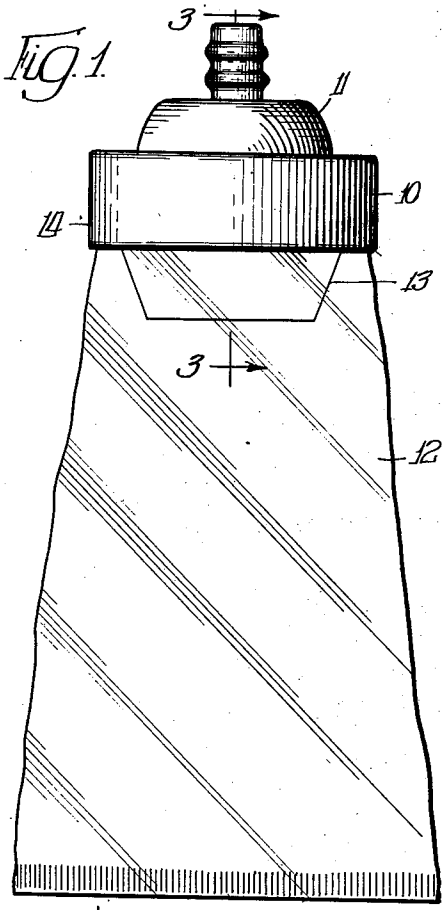


Fig. 2.

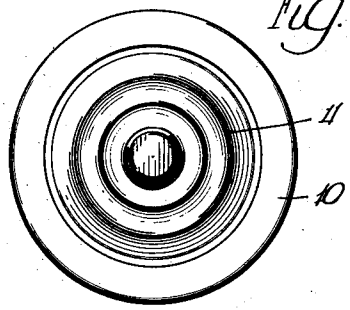


Fig. 4.

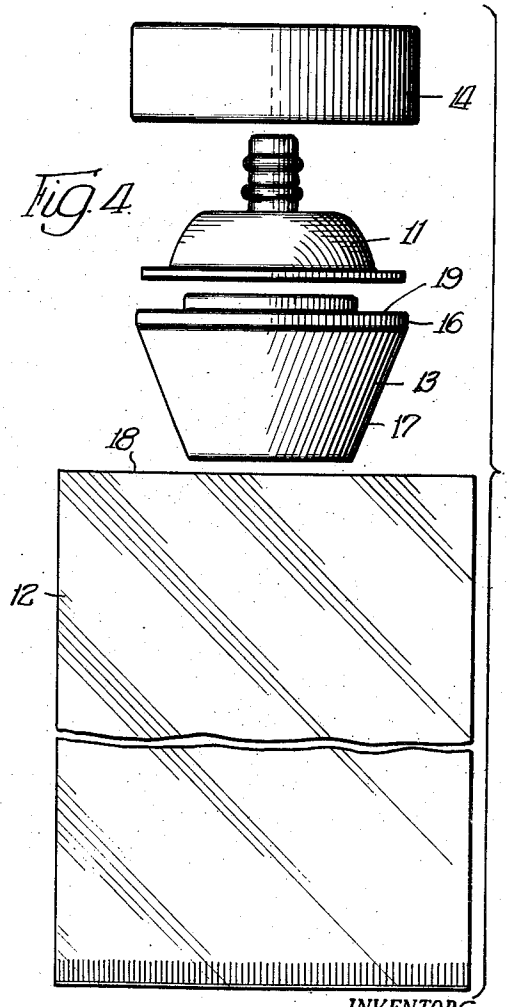
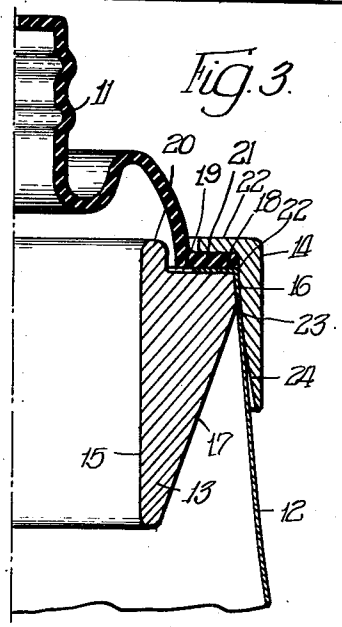


Fig. 3.



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NURSING CONTAINER

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2 Claims. (Cl. 215—11)

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This invention is concerned with improvements in containers. More particularly, it has to do with an improved holder or top construction for use with a container body of flexible material.

It is a general object of the invention to provide a bottle top or holder fixture which is adapted to be secured in clamping relation to the open top of a bottle body of flexible disposable material.

It is a more specific object of the invention to provide a nursing bottle unit which comprises an internal clamping member having a peripheral skirt portion for insertion within the mouth of a flexible bottle body member, a nipple having a flanged base, and an external clamping ring member having an inwardly directed flange for securing the flexible body member and the flanged nipple to the internal clamping member.

A further object of the invention is to provide a nursing unit of the type described wherein the top margins of the flexible body member are secured between the internal clamping member and the external clamping member by a close frictional engagement between the clamping members and wherein the flange on the nipple is at the same time secured in engagement with the internal clamping member by the flange on the external clamping member.

These and other objects of the invention will be apparent to those skilled in this art from a consideration of the preferred form of the device which is shown by way of example in the accompanying drawings, wherein:

Fig. 1 is an elevation of a nursing bottle unit incorporating therein the principles of the invention;

Fig. 2 is a plan view of the unit;

Fig. 3 is an enlarged vertical section taken on the line 3—3 of Fig. 1; and

Fig. 4 is an exploded view of the unit in elevation.

Referring to the drawings, there is shown a particular form of nursing bottle unit which incorporates therein a two-piece holder or top construction 10 in combination with a nipple 11 and a flexible disposable container body 12 of the general type required for use with the holder 10.

The holder 10 comprises an internal clamping member 13 and an external clamping member or ring 14 for cooperation therewith. The internal clamping member 13, which is relatively deep, is provided with a central bore 15 and an external cylindrical surface comprising a relatively narrow peripheral clamping portion 16 and a wider depending skirt portion 17, the latter being provided with a downward and inward taper. The external diameter of the portion 16 of the clamping member 13 is substantially the same as the internal diameter of the marginal portion 18 of the top of the container member 12. The tapered portion 17 of the member 13 is adapted to be inserted into the open top of the container 12 a sufficient distance to bring the marginal portion 18 thereof over the top rim portion 19 of the member 13. The member 13 is provided with a central upwardly projecting shoulder forming portion 20 which acts as a guide for seating the nipple 11 thereon.

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The nipple 11 is provided with a relatively wide base and includes a peripheral flange 21 which is adapted to seat on the top rim portion 19 of the clamping member 13, being located in proper position thereon by the projecting shoulder portion 20 and overlapping at its outer margin the folded-in marginal top portion 18 of the container member 12.

The external clamping member 14 is a relatively thin ring-like member which comprises an inwardly directed top flange 22. The flange 22 is adapted to engage over the nipple flange 21 and clamp the same against the top rim portion 19 of the member 13. The smallest internal diameter of the upper portion 22 of the ring member 14 is only slightly greater than the external diameter of the portion 16 of the clamping member 13. The inner surface of the portion 22 tapers outwardly and downwardly only slightly, for example, approximately 2°. The surface 23 is provided with a slightly greater taper, for example 7° and the surface 24 is provided with a still greater taper, for example 15°. When the external ring member 14 is in clamping position relative to the internal clamping member 13 the container top is clamped adjacent the margin 18 between the exterior surface of portion 16 of the internal clamping member 13 and the interior surface of portion 22 of the external clamping ring 14. The clamping members 13 and 14 are sufficiently close fitting to provide a wedging action which insures a tight seal between the container top and the clamping members.

The container body 12 which is used with the nursing unit is made of material, such as "Pliofilm," polyethylene, etc. The marginal or mouth portion 18 should be approximately the same diameter as the external diameter of portion 16 of the clamping member 13 so that the tapered portion 17 of the inner clamping member 13 may be inserted in the mouth portion 18 and the latter drawn up over the surface 16 to provide a

snug fit. When the container is clamped between members 13 and 14 an effective seal is obtained.

The clamping members 13 and 14 are preferably formed of a plastic material such as nylon, or the like, which will provide sufficient resiliency to permit the locking or wedging action between the members and which will withstand heat and deformation when subjected to a sterilizing process.

While specific materials and details of construction have been referred to in describing the preferred form of the invention it will be understood that other materials and other details of construction may be resorted to within the spirit of the invention.

We claim:

1. A nursing unit comprising a flexible disposable container body, a flanged nipple and cooperating clamping members for securing the top portion of the container body in sealed relation with the nipple flange, said clamping members comprising an inner clamping member having a top shoulder portion for seating thereagainst the flange of the nipple and having a smooth peripheral clamping surface adjacent said shoulder portion for insertion in the open top of the container and an outer clamping member having an inwardly directed flange for engaging in clamping relation over the margin of the flange on the nipple, said outer clamping member having a smooth inner clamping surface for cooperation with the peripheral clamping surface of the inner clamping member whereby said clamping members may be engaged with said top portion of said body by non-rotatable axial movement to frictionally secure between said clamping members the top of the receptacle in sealing relation thereto.

2. In a nursing unit comprising a flanged nipple, a flexible disposable container and cooperating internal and external ring members for securing the nipple and the container in communicating relation, said internal ring member having a top portion for seating the flange of the nipple and a smooth slightly tapered peripheral surface for insertion in close fitting relation within the top of the container and said external ring member having an inwardly directed top flange portion for clamping engagement with the flange of the nipple and a smooth slightly tapered depending skirt portion for cooperation with the tapered peripheral surface of the internal ring member, said ring members being adapted to be moved into clamping relation by non-rotatable axial movement to hold between said ring members the top of the container.

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THOMAS R. BAXTER.

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