Oct. 28, 1952 A. M. ROTHBARDT 2,615,562

SWAB HOLDER AND DISPENSER

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Fig. 1.

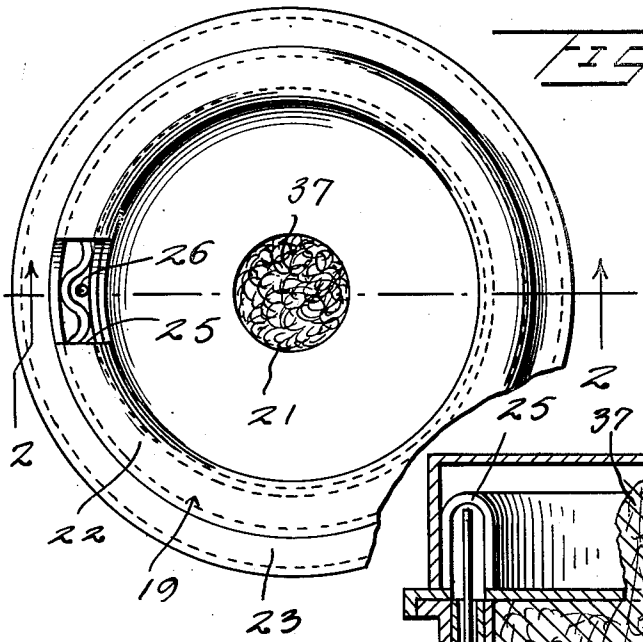


Fig. 2.

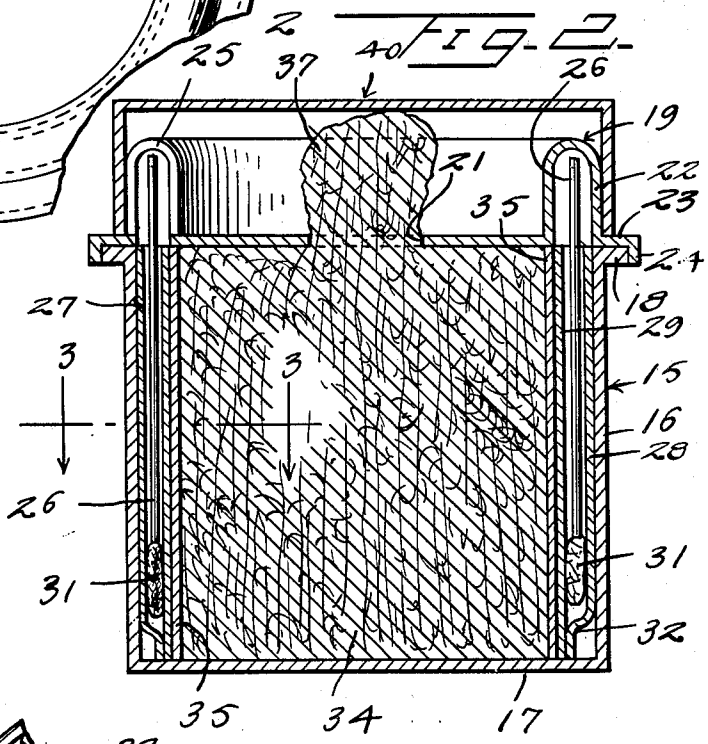
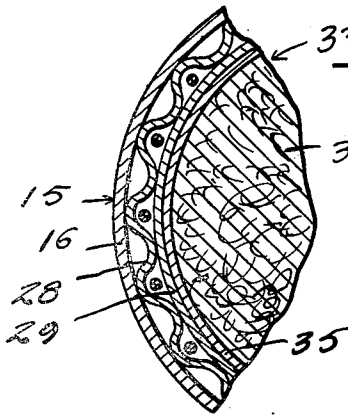


Fig. 3.



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FIG. 4.

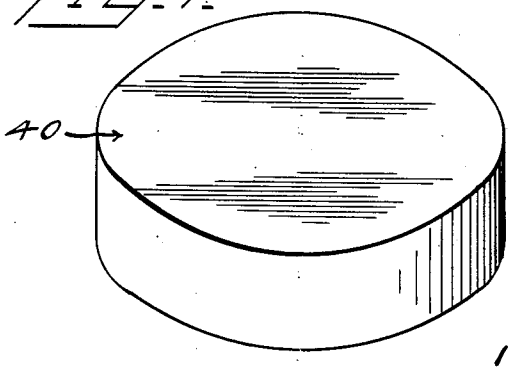


FIG. 5.

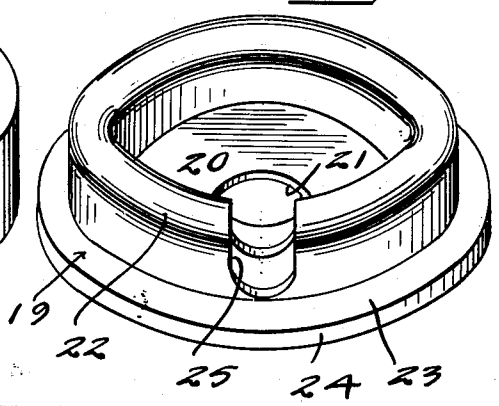


FIG. 6.

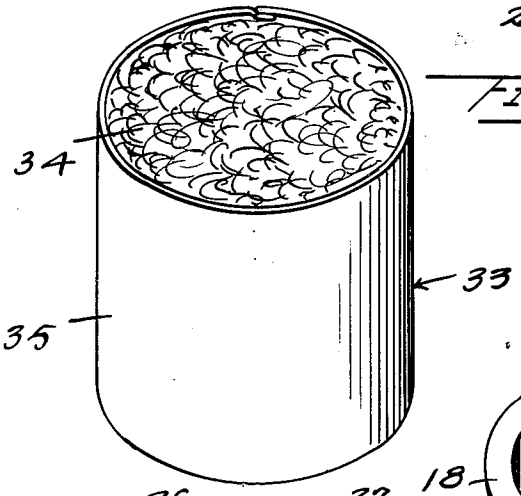
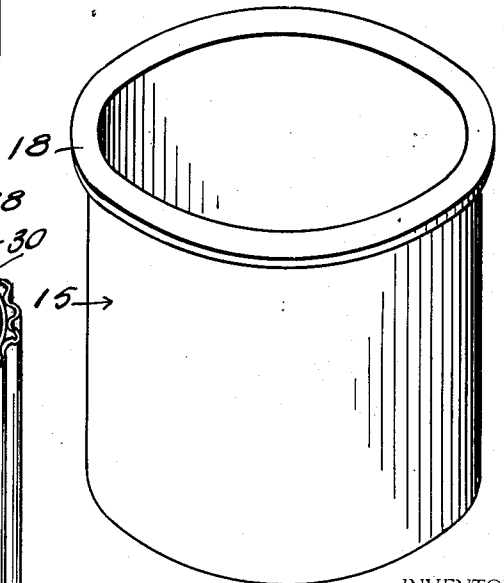


FIG. 8.



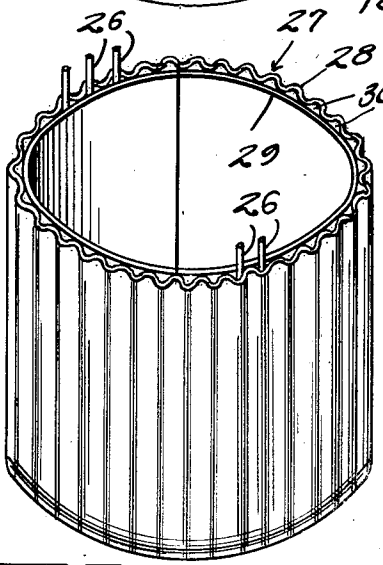


FIG. 7.

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FIG. 9

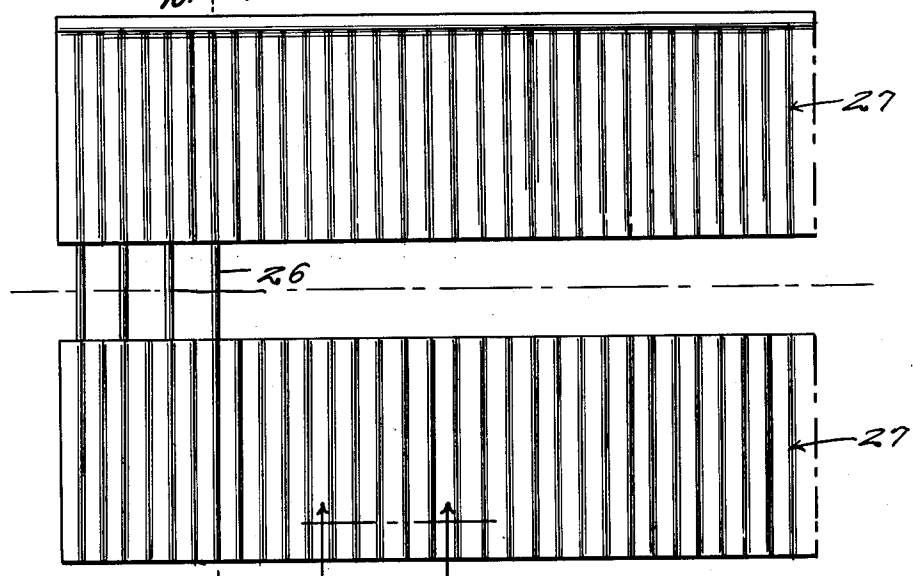


FIG. 10

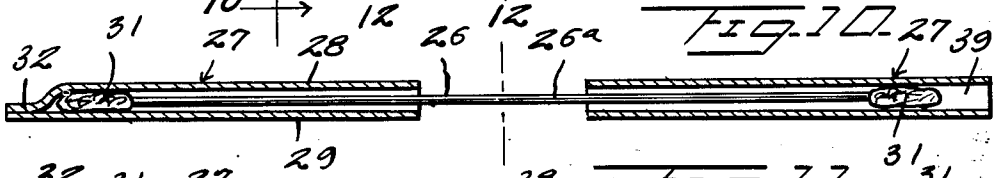


FIG. 11

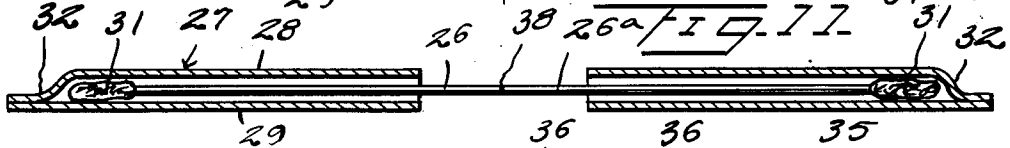
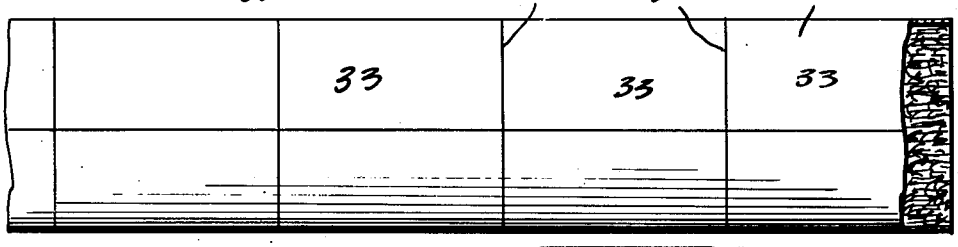


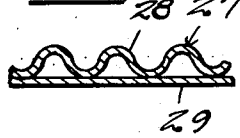
FIG. 13



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FIG. 12



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UNITED STATES PATENT OFFICE

2,615,562

SWAB HOLDER AND DISPENSER

Adolph Martin Rothbardt, Chicago, Ill.

Application August 23, 1950, Serial No. 180,999

3 Claims. (Cl. 206—1)

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This invention relates to swab holders and dispensers and is an improvement over the structure embodied in my co-pending application, Serial No. 145,937, filed February 24, 1950, for Swab Holder, now Patent No. 2,609,089, issued September 2, 1952.

An object of this invention is to provide a holder for sterile swabs and cotton which is so constructed and arranged that the swabs may be removed one at a time without affecting sterility of the remaining swabs.

Another object of this invention is to provide an improved swab refill unit for a holder of this kind together with an improved method of producing the swab units.

A further object of this invention is to provide an improved cotton refill unit for mounting in a holder of this kind.

A further object of this invention is to provide an improved method of making the cotton refill units.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawings and specification, and then more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a plan view partly broken away of a swab holder and dispenser constructed according to an embodiment of this invention with the cover removed.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a fragmentary sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a perspective view of the cover.

Figure 5 is a perspective view of the dispensing cap.

Figure 6 is a perspective view of the cotton magazine.

Figure 7 is a perspective view of the swab magazine.

Figure 8 is a perspective view of the outer receptacle.

Figure 9 is a plan view showing the manner in which the swab magazines are produced.

Figure 10 is a sectional view taken on the line 10—10 of Figure 9.

Figure 11 is a view similar to Figure 10, but showing one end of each swab magazine sealed.

Figure 12 is a fragmentary sectional view taken on the line 12—12 of Figure 9.

Figure 13 is a detail side elevation partly broken away and in section showing the manner of forming the cotton magazine.

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Referring to the drawings, the numeral 15 designates generally a receptacle which is formed with a cylindrical side wall 16, a bottom wall 17, and an annular flange or rim 18 at the upper end of side wall 16. A cap generally designated as 19 is rotatably mounted on the upper end of the receptacle 15 and comprises a disc-shaped plate 20 formed with a central cotton dispensing opening 21 and formed at its outer edge with a circular and inverted U-shaped channel member 22. The outer leg of the channel member 22 has projecting therefrom an annular flange 23, and a depending cylindrical flange 24 extends from the flange 23 and encompasses the rim or annular flange 18 of receptacle 15. The channel member 22 is formed with a cutout 25 providing a dispensing opening through the channel member whereby the upper projecting end of a swab stick 26 may be grasped between a pair of fingers and pulled upwardly and out of a swab magazine generally designated as 27.

The swab magazine 27 is formed of an outer corrugated flexible sheet 28 and an inner smooth surface sheet 29 which is secured in any suitable manner to the peaks or ridges of the corrugated outer sheet 28. The two sheets, 28 and 29 form pockets 30 therebetween within which the swab sticks 26 having a wad of cotton 31 on the lower ends thereof are adapted to removably engage. Preferably the lower end of the magazine 27 is sealed as indicated at 32. The swab magazine is initially constructed in flat form and is then bent in the form of a cylinder and inserted within the receptacle 15.

A cotton magazine generally designated as 33 is adapted to removably engage within the interior of the swab magazine 27 and comprises a body of cotton 34 which is encased in a cylindrical wrapper 35. The wrapper 35 may be formed of any suitable flexible material such as paper, plastic, or the like. In the forming of the cotton magazine 33 the body of cotton 34 is initially combed in a manner such that the cotton fibers are in parallel relation and lengthwise of the wad of cotton.

The cotton is then formed into a strip of suitable size which is compressed and is then encased in a tubular casing or wrapper 35. The tubular wrapper 35 is of any suitable length, and the magazines 33 are then cut as indicated at 36 from the long stick or magazine which is formed by wrapping the long wad of cotton. The cotton is pulled upwardly through the dispenser opening 21 and by having the fibers of the cotton

extending lengthwise of the magazine when a ball 37 of cotton is initially pulled upwardly through the dispenser opening 21 there will continue to be enmeshed cotton fibers which will be pulled upwardly through the dispenser opening 21 until substantially all of the cotton 34 has been withdrawn from the jacket 35.

Referring now to Figures 9 and 10, there is disclosed one method of producing the swab magazines. The two flexible sheets 28 and 29 are fed toward each other by any suitable feeding means, and the ridges of the corrugated sheet 28 are heat secured to the sheet 29.

Double ended swab sticks 26 and 26a are also fed between the sheets 28 and 29 for engagement in the flutings of corrugated sheet 28 and as the inner edges of the sheets 28 and 29 of one swab holder are spaced from the inner edges of the other swab holder there will be a substantial projection of each swab stick which is subsequently cut off as indicated at 38, thereby separating the two connected together swab magazines.

In Figure 10 one magazine 27 is shown with the lower edge thereof open as indicated at 39; whereas, in Figure 11 the outer edges or ends of the holders are sealed together. By sealing the outer edges, which when the magazines are bent into cylindrical form produce the lower edges of the magazine, the cotton wadding or ball 34 will be maintained in its original sterile condition.

After the two magazines 27 and 33 are inserted into the receptacle 15 and the cap 19 engaged over the upper end of the receptacle 15 and encompassing the projecting ends of the swab sticks 26, a cover 40 is adapted to be placed over the channel 22 of cap 19 as shown in Figure 2.

In the dispensing of the swab sticks or cotton from the dispenser hereinbefore described, the cover 40 is removed from the cap 19, and the cap 19 is turned on the upper end of the receptacle 15 so as to expose one projecting end of the swab stick through the delivery opening 25.

The swab stick may then be pulled upwardly out of a pocket 30 in magazine 27. The desired amount of cotton may be pulled upwardly by grasping the projecting ball 37 of cotton and due to the intertwining or meshing of the parallel fibers of the cotton 34, there will always remain a projecting ball portion 37 after a quantity of cotton has been separated from ball 37.

The holder hereinbefore described may be formed out of any suitable material such as plastic or the like and will provide an antiseptic or sanitary means for holding swab sticks and sterile cotton. The magazines 27 are constructed in a manner whereby when one magazine has been exhausted as to the swab sticks 26, a refill magazine may be readily inserted into the receptacle 15. In the same manner when the cotton magazine 33 has been exhausted, a refill cotton magazine may be inserted interiorly of the swab magazine.

I claim:

1. In a device of the character described, a cylindrical container including spaced inner and outer walls and a bottom wall, the interior of said inner wall defining a cotton-containing receptacle and the space between said walls defining a swab holder containing receptacle, a unitary swab holder in said last-mentioned receptacle comprised of a corrugated sheet and a flat sheet fixed to one side of said corrugated sheet to form swab stick holding pockets, closure means comprised of an upwardly turned portion of said corrugated sheet for one end of each pocket, a swab stick of a length in excess of the depth of said pockets removably positioned in at least one of said pockets, a cover rotatably mounted on said container, said cover including a central plate having an aperture therein for permitting access to said first-mentioned receptacle, a hollow bead of inverted U-shaped cross-section of a depth sufficient to accommodate the projecting portion of said swab stick surrounding said plate, and a coinciding cross-sectional cutout portion extending transversely of said bead and radially of said plate rotatable to selectively expose one of said pockets for withdrawal of a swab stick therefrom.

2. In a device of the character described, a cylindrical container including spaced inner and outer walls and a bottom wall, the interior of said inner wall defining a cotton-containing receptacle and the space between said walls defining a swab holder containing receptacle, a unitary swab holder in said last-mentioned receptacle comprised of a corrugated sheet and a flat sheet fixed to one side of said corrugated sheet to form swab stick holding pockets, closure means comprised of an upwardly turned portion of said corrugated sheet for one end of each pocket, a swab stick of a length in excess of the depth of said pockets removably positioned in at least one of said pockets, a cover rotatably mounted on said container, said cover including a central plate having an aperture therein for permitting access to said first-mentioned receptacle, a hollow bead of inverted U-shaped cross-section of a depth sufficient to accommodate the projecting portion of said swab stick surrounding said plate, a coinciding cross-sectional cutout portion extending transversely of said bead and radially of said plate rotatable to selectively expose one of said pockets for withdrawal of a swab stick therefrom, said container having an annular flange about the top thereof and a corresponding flange carried by said cover seating on said first-mentioned flange, a depending guide ring about the periphery of said corresponding flange, and a closure member including an annular top and a depending rim, said rim seating on the top of said corresponding flange and closely engaging the outer periphery of said bead.

3. In a device of the character described, a cylindrical container including spaced inner and outer walls and a bottom wall, the interior of said inner wall defining a cotton-containing receptacle and the space between said walls defining a swab holder containing receptacle, a unitary swab holder in said last-mentioned receptacle comprised of a corrugated sheet and a flat sheet fixed to one side of said corrugated sheet to form swab stick holding pockets, closure means comprised of an upwardly turned portion of said corrugated sheet for one end of each pocket, a swab stick of a length in excess of the depth of said pockets removably positioned in at least one of said pockets, a cover rotatably mounted on said container, said cover including a central plate having an aperture therein for permitting access to said first-mentioned receptacle, a hollow bead of inverted U-shaped cross-section of a depth sufficient to accommodate the projecting portion of said swab stick surrounding said plate, and a coinciding cross-sectional cutout portion extending transversely of said bead and radially of said plate rotatable to selectively expose one of said pockets for withdrawal of a swab stick therefrom,

said container having an annular flange about the top thereof and a corresponding flange carried by said cover seating on said first-mentioned flange, said cutout portion extending through both the side walls of said bead to the level of said plate and being so dimensioned as to permit the insertion of the fingers to grasp a swab stick.

ADOLPH MARTIN ROTHBARDT.

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