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DISPLAY AND DISPENSING PACKAGES FOR ELONGATED ARTICLES

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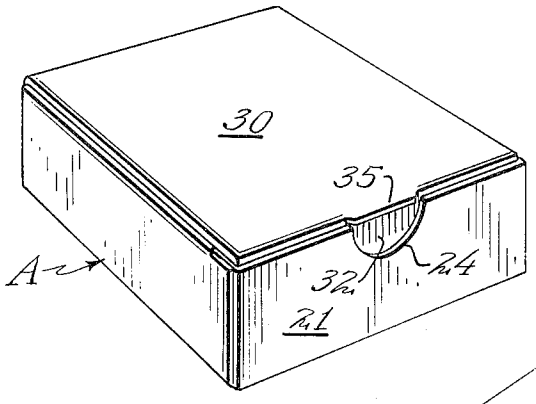


FIG. 1

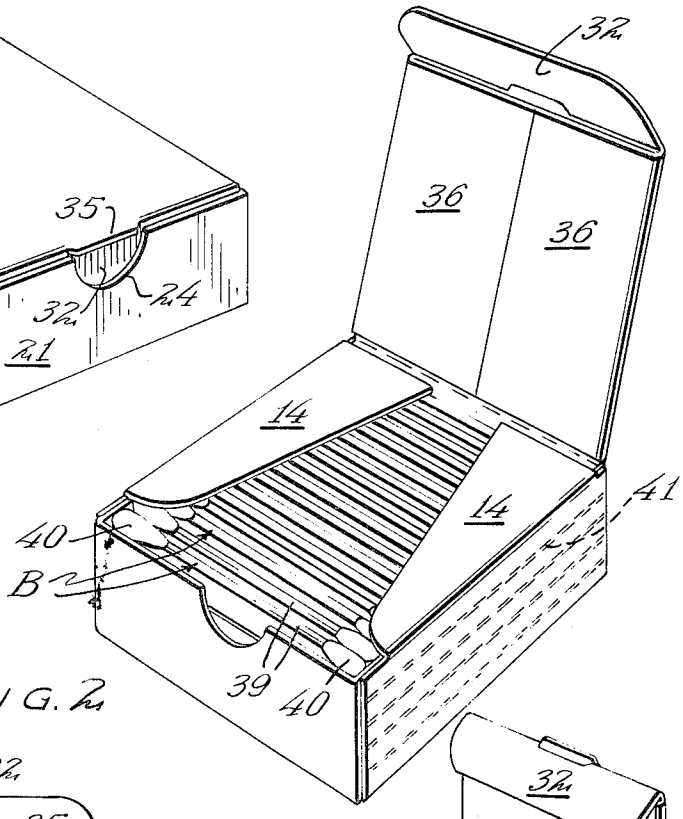


FIG. 2

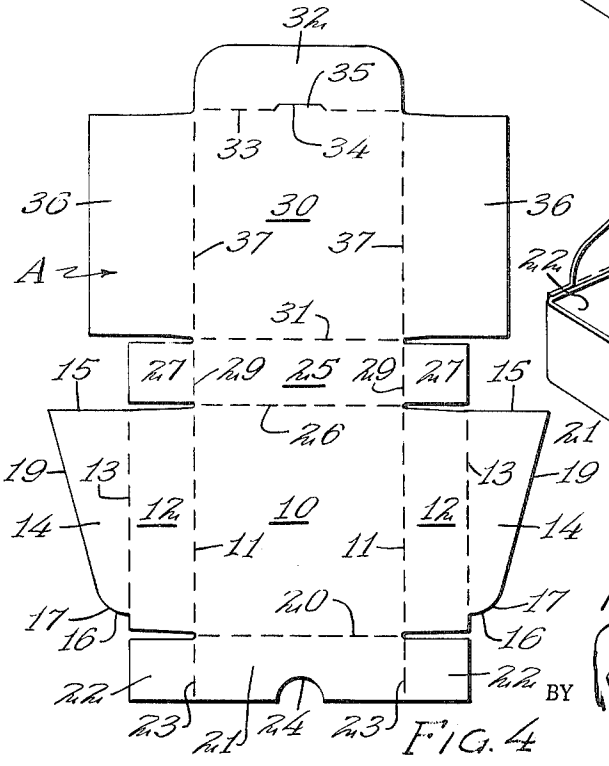


FIG. 4

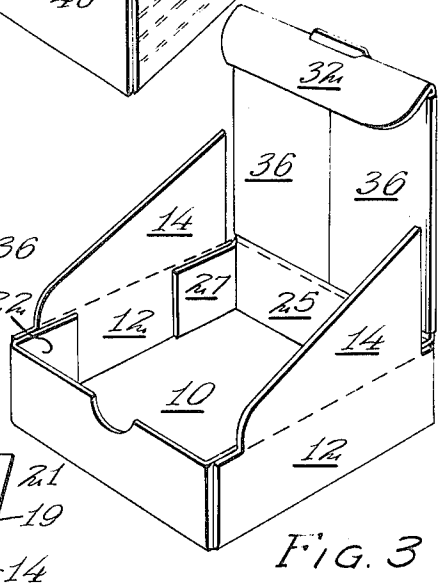


FIG. 3

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DISPLAY AND DISPENSING PACKAGES FOR ELONGATED ARTICLES

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This invention relates to an improvement in display and dispensing packages for elongated articles and deals particularly with a package from which double-ended swabs may be removed one at a time.

Small swabs are produced in great volume for use in cleaning out sores, removing the wax from ears, and for similar purposes. These swabs usually comprise a small-diameter cylindrical shaft of wood, wound paper, and the like having cotton attached to and enclosing both ends. Considerable difficulty has been experienced in packaging these swabs so that they may be easily removed from a package. After the dispensing package has been partially emptied, the swabs usually become twisted together like jack straws, and are difficult to remove without further entangling the remainder of the swabs. It is an object of the present invention to provide a carton useful in the dispensing of objects of this type to permit their removal, one at a time, without disturbing the remainder of the swabs.

An object of the present invention resides in the provision of the carton comprising a rectangular open-top tray having a top closure hingedly connected to one of the end walls. The carton closure is provided with a tuck flap which tucks inwardly of the opposite wall to hold the carton closed.

A feature of the present invention lies in the fact that flanges are hingedly connected to the two walls adjoining the wall supporting the cover panel, and which are folded down beneath the cover panel. These flanges terminate short of the front wall, or the wall against which the tuck flap engages. As a result, these flanges define an open area adjoining the front wall through which the swabs may be removed. The swabs themselves are arranged in vertically-spaced layers to extend parallel to the front and rear walls. With this arrangement, each swab of each layer may be moved forwardly into registry with the open area forwardly of the flanges and may be lifted through this area.

A feature of the present invention resides in the fact that the side walls of the carton, against which the ends of the swabs engage, may fit snugly against the swabs, tending to hold the swabs in position until removed. The flanges terminate in spaced relation, exposing the center portions of all of the swabs, so that each swab may be engaged between the fingers, moved forwardly to the front of the carton, and lifted from the carton.

A further feature of the preferred form of construction of the carton lies in the fact that the flanges are of generally trapezoidal shape, being narrower in width at the forward ends than at their rear ends. As a result, the open area between the opposed flanges gradually decreases in width toward the rear wall of the carton, providing better control of the swabs and their movement.

An added feature of the present invention resides in the fact that the cover panel is preferably reinforced by panels which are hingedly connected to the side edges of the cover panel and are folded into edge-abutting relation to the undersurface of the cover panel and adhered thereto. This arrangement serves two distinct purposes. In the first place, the cover panel is rendered stiff and rigid, and may be much more readily handled than if the cover were of a single thickness. This is particularly true in

cases where the cover is left in an open position, as may be the case in a doctor's office or similar location where the swabs are being frequently used. Furthermore, this arrangement may be used to provide a display which is visible when the cover is opened without the necessity of printing both sides of the sheet. Normally, the outer surface only of the carton is printed, and in order to provide a display on the inside cover it would be necessary to print both sides of the sheet. By folding the panels into edge-abutting relation in the manner described, the outside of the sheet overlies the inner surface of the top panel and may be printed to provide advertising, directions for use, or the like.

A further feature of the present invention lies in the fact that through the use of the present carton, the swabs are maintained in a sanitary condition until used. As previously stated, with the usual construction, after a portion of the swabs have been removed, the remaining swabs are tangled together so that difficulty is experienced in removing a swab without touching the ends thereof. With the present construction, the flanges overlie the sanitary ends of the swabs and act to protect them from becoming contaminated.

Still another feature of the present invention resides in the trapezoidal shape of the flanges. When only three or four swabs have been removed, there is little chance for the swabs to twist out of parallel relation in each layer. However, when only a few swabs remain in a layer, there is more chance for them to twist out of position. By narrowing the slot through which the swabs must be grasped near the rear of the package, a smaller portion of the length of each swab is visible through the slot, insuring the grasping of the swab by the center portion thereof to prevent contamination of the ends.

These and other objects and novel features of the present invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of the specification:

FIGURE 1 is a perspective view of the carton in closed position.

FIGURE 2 is a perspective view of the carton in open position.

FIGURE 3 is a perspective view of the empty carton showing the construction thereof.

FIGURE 4 is a diagrammatic view of the blank from which the carton is formed.

The carton A includes a bottom panel **10** which is hingedly connected along parallel fold lines **11** to opposite side walls **12**. The side walls **12** are hingedly connected along parallel fold lines **13**, which form the upper edges of the side walls **12** when the carton is formed, to generally trapezoidal flanges **14**. The flanges **14** are provided with relatively wide rear edges **15**, and relatively short forward edges **16** which terminate in spaced relation to the forward end of the side walls **12**. The flanges **14** are rounded as indicated at **17** at the juncture between the angled edges **19** of the flanges and the forward edges **16** thereof to eliminate corners past which the swabs must pass.

The bottom panel **10** is connected along a fold line **20** which intersects the fold lines **12** at right angles, to a front wall **21**. Corner flaps **22** are connected to the side edges of the front panel **21** along fold lines **23** which are substantially aligned with the fold lines **11**. A notch **24** is preferably formed in the center of the front wall **21** to simplify the removal of the swabs from the carton.

A rear wall panel **25** is connected to the rear edge of the bottom panel **10** along a fold line **26**. Corner flaps **27** are hingedly connected to the side edges of the rear wall panel **25** along lines of fold **29** which are substan-

tially aligned with the fold lines **11**. A cover panel **30** is hingedly connected to the upper edge of the rear wall **25** along the fold line **31**. A tuck flap **32** is hingedly connected to the forward edge of the cover panel **30** along a fold line **33**. The fold line **33** is interrupted by a centrally-positioned, generally U-shaped, cut line **34** which defines a short tab **35** which remains in the plane of the cover panel **30** when the tuck flap **32** is folded down into carton-closing position as indicated in FIGURE 1.

Cover liner panels **36** foldably connected to the side edges of the cover panel **30** along fold lines **37** which are aligned with the fold lines **11**. These liner panels **36** serve a dual purpose. In the first place, when folded against the undersurface of the top panel **30** and adhered thereto, they reinforce the top panel, and make it relatively stiff and strong. Furthermore, when folded into edge-abutting relation as indicated in FIGURES 2 and 3 of the drawings, the outer surface of the sheet is exposed on the inner surface of the cover. As a result, printed material may be formed on the inside surface of the cover panel without requiring the printing of both sides of the sheet.

In the formation of the carton, the corner flaps **22** and **27** are folded into right angular relation to the front and rear wall panels **21** and **25**, respectively. The front and rear wall panels are erected and the corner flaps **22** and **27** adhered to the inner surface of the side walls **12**. The cover liner panels **36** are also adhered to the inner surface of the top wall panel **30**, forming a substantially continuous inner surface.

The swabs B comprise elongated shafts of wood, rolled paper, or other suitable material, the shafts being indicated at **39**, and the ends of these shafts are covered with wads of cotton **40** or other suitable absorbent material. These swabs are arranged in layers within the carton, the lowermost layer resting upon the bottom panel **10** and layer sheets **41** separating the various layers of swabs. Each layer comprises a single row of swabs arranged in side-by-side relation.

After the carton has been filled, the flaps **14** are folded to overlie the ends **40** of all the swabs except one or two of the first or front swabs of the top layer. The cover panel **30** is folded to overlie the flaps **14**, and the tuck flap **32** is inserted in face contact with the front wall **21**.

When the carton is opened, and the cover swung up into the position indicated in FIGURE 2 of the drawings, the swabs B may be withdrawn one at a time. The front swab of each layer is withdrawn by grasping it between thumb and finger and moving it upwardly through the space provided forwardly of the forward ends of the flaps **14**. Each successive swab is slid forwardly and raised through this dispensing opening.

As the swabs are approximately the same width as the carton, the end edges of the corner flaps **22** tend to form abutments which tend to straighten the swabs as they are withdrawn. In other words, if one end of a swab is forwardly of the other, the forward end tends to engage the abutment to straighten out the swab. Furthermore, it should be noted that the ends of the swabs are protected by the flaps **14**, making it natural to pick up each swab by grasping the shank intermediate the ends **40**. As a result, the swabs are maintained in a sanitary condition and there is no tendency to grasp them by the end.

It should be further noted that the trapezoidal shape of the flanges **14** decreases the width of the space between the edges of these flanges toward the back of the carton. When only a few swabs have been removed, there is little chance for the swabs to move far out of parallel relation. However, as more and more of the swabs of each layer are removed, the tendency for the swabs to get out of position increases. By narrowing the space between the opposed flanges near the back, there is much more assurance that the center portion of the swab will be grasped in removing the last of the swabs from each layer.

In accordance with the patent statutes, I have described the principles of construction and operation of my display and dispensing packages for elongated articles; while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that obvious changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A swab package in combination with a series of swabs comprising elongated shafts having wads of absorbent material enclosing opposite ends thereof, the package including:

a carton including a bottom panel,

front, rear, and side wall panels secured to said bottom panel and extending upwardly therefrom,

a cover panel hinged to the upper edge of said rear panel,

substantially trapezoidal side wall flaps hinged to the upper edges of said side walls and terminating short of said front wall panel a distance slightly greater than the diameter of the ends of said swabs,

said side wall flaps being relatively wide at their rear edge and narrow at their forward edges, and the ends of the side wall flaps terminating in spaced relation to provide access to the interior of the carton between the ends of said flaps when said flaps are in a common plane,

corner flaps hinged to the front and rear wall panels and secured in face contact with the inner surfaces of said side walls, the ends of the corner flaps secured to the front wall panel being spaced from the ends of the corner flaps secured to the rear wall panel, the ends of the corner flaps forming abutments against which the ends of the swabs may engage,

a series of superposed layers of swabs resting on said bottom panel with their shafts parallel to the front and rear wall panels,

each layer being separated from the rest by a layer sheet which is substantially the size of the bottom panel, and

each layer containing a row of parallel swabs supported by their opposed ends and extending from one side wall to the other, whereby the swabs may be removed one at a time by sliding successive swabs forwardly on their layer sheet or bottom panel and lifting the swab by the center portion of its shaft through the space provided forwardly of said side wall flanges,

the engagement of the ends of the swabs engaging the abutments against which the ends of the successive swabs may engage as the swabs are moved forwardly creating a tendency to hold the swabs in parallel relation to the front and rear wall panels as they are moved forwardly.

2. A swab package in combination with a series of swabs comprising elongated shafts having wads of absorbent material enclosing opposite ends thereof, the package including:

a carton including a bottom panel,

front, rear, and side wall panels secured to said bottom panel and extending upwardly therefrom,

a cover panel hinged to the upper edge of said rear panel,

substantially trapezoidal side wall flaps hinged to the upper edges of said side walls and terminating short of said front wall panel a distance slightly greater than the diameter of the ends of said swabs,

a series of superposed layers of swabs resting on said bottom panel with their shafts parallel to said front and rear wall panels,

each layer being separated from the rest by a layer sheet which is substantially the size of said bottom panel,

each layer containing a row of parallel swabs supported by their opposed ends and extending from one side wall to the other,

whereby the swabs may be removed one at a time by sliding successive swabs forwardly on its layer sheet or bottom panel and lifting the swab by the center portion of its shaft through the space provided forwardly of said side wall flanges, and

cover liner flaps connected to opposite side edges of said cover panel and adhered in edge abutting relation to the undersurface of said cover panel.

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