May 21, 1968 A. R. COX ETAL 3,384,231

FOLDING SYRINGE CASE AND CONTAINER

Filed Sept. 13, 1966 2 Sheets-Sheet 1

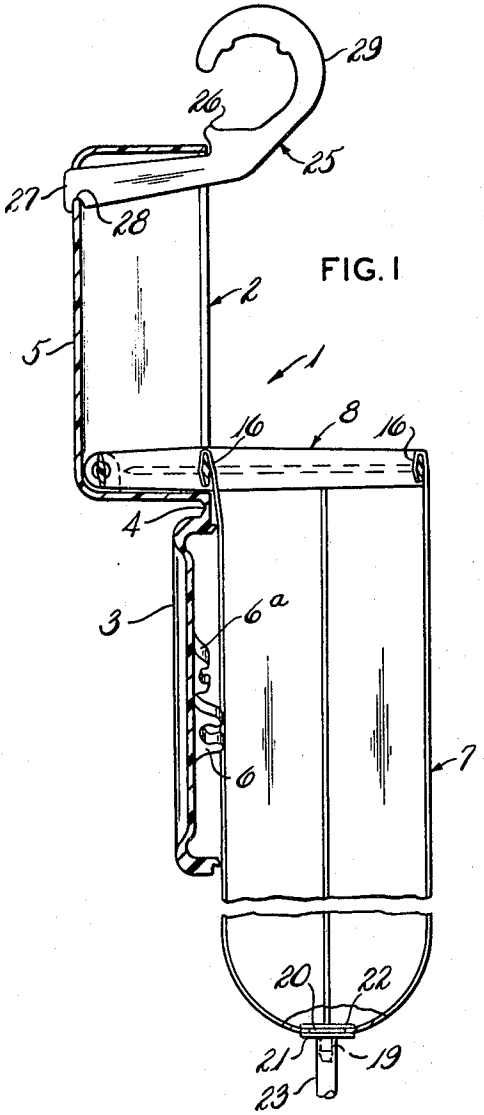
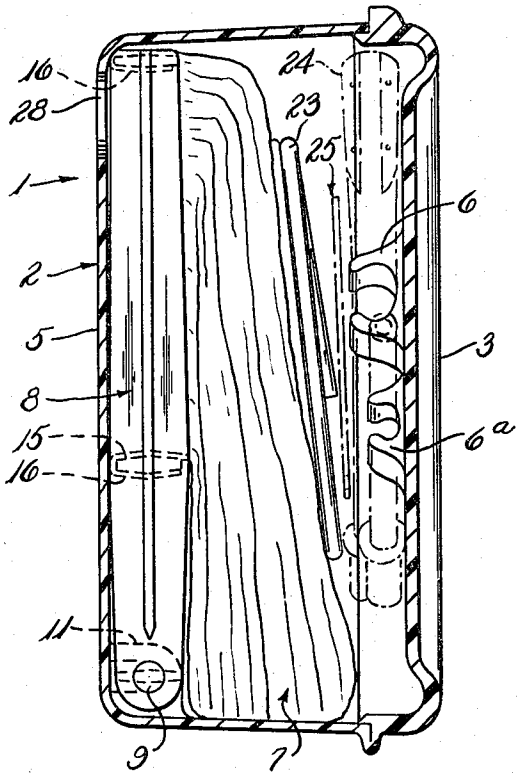


FIG. 1

FIG. 2



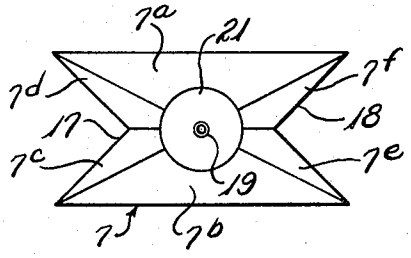


FIG. 5

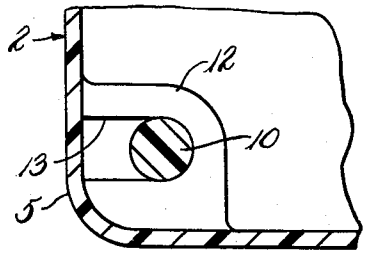


FIG. 4

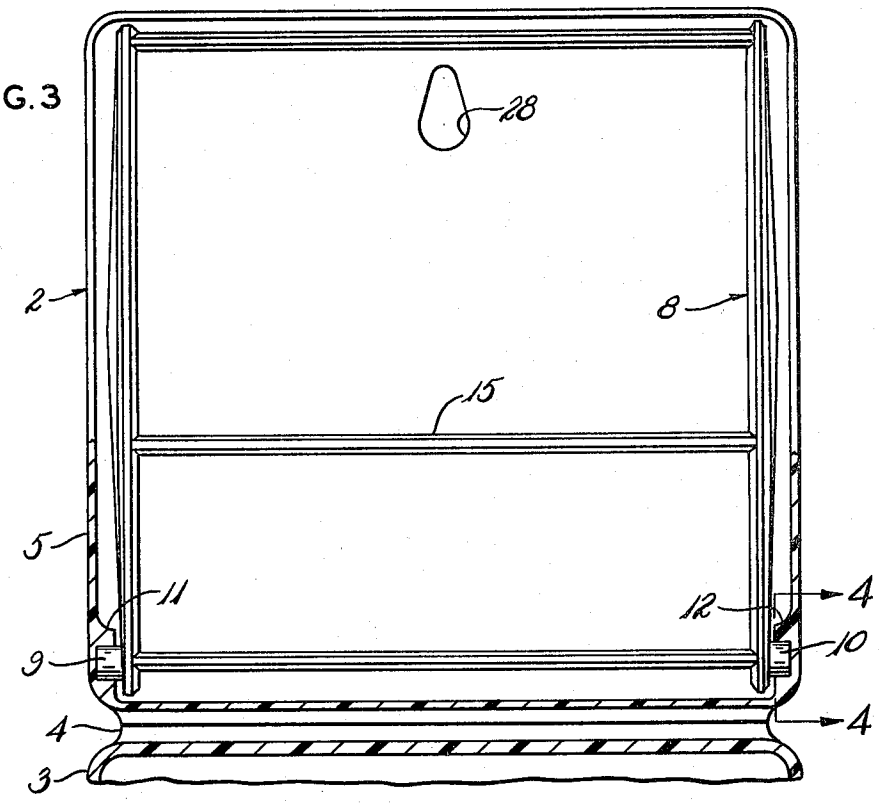
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FIG. 3



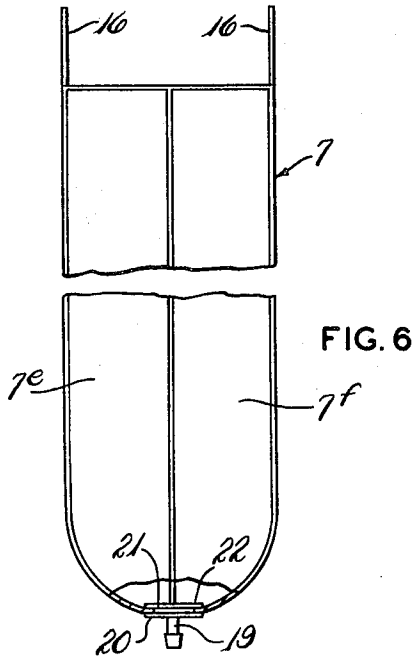


FIG. 6

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FOLDING SYRINGE CASE AND CONTAINER

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7 Claims. (Cl. 206—69)

ABSTRACT OF THE DISCLOSURE

A folding syringe case and container assembly including a cover hingedly secured to the case and which case is substantially vertically positioned when operative. An open center frame is pivotally positioned in a portion of the case and adapted to extend therefrom horizontally when the case is opened and frame and case are operative. A flexible container is secured to the frame and is suspended therefrom when the case and frame are operatively positioned. The frame and container are adapted to be swung into the case and the container to be collapsed therein for storage.

This invention relates to syringe cases and containers or bags provided therefore, and particularly to a compact, improved syringe case and container assembly of a portable nature.

Heretofore there have been various types of syringe cases, containers, supports or other equivalent apparatus provided primarily for use for feminine hygiene purposes, but none of such prior constructions have been completely satisfactory. In use, normally these syringe cases and/or containers must be adapted to be secured to wall fixture or other unit and receive fluid in a container portion thereof for discharge through associated tubing, nozzles, syringe pipes, or the like. One early type of such a device is shown in Patent 2,213,929. More recent patents showing similar constructions to that of the present invention include U.S. Patents Nos. 2,612,161 and 2,672,869.

The general object of the present invention is to provide a novel and improved folding syringe case and container assembly characterized by the sturdy construction thereof and by the ease of use of the syringe case and container assembly and by the convenient storage characteristics of the novel and improved unit of the invention.

Another object of the invention is to provide a syringe case and container or bag assembly wherein all of the components of the assembly can easily and conveniently be stored within the case portion of the assembly but with the case being adapted to be opened and be positioned vertically and to have other portions of the assembly operatively support a container or bag in the apparatus for receipt of fluids therein for controlled discharge purpose.

A further object of the invention is to provided improved means for supporting a container or bag in a syringe case assembly and with the container or bag being readily collapsible or foldable for storage inside the carrier or receptacle case provided.

Other objects of the invention are to provide a novel and improved hanger member for use within an assembly of the invention for operatively supporting the same; to provide a novel and improved flexible bag for receipt of controlled amounts of fluid for convenient controlled discharge thereof; to provide a novel, unitary case member having a flexible hinge formed as a portion thereof; to use a novel and improved plastic support frame in association with the syringe case for operatively engaging the syringe case and to have the container or bag means

permanently secured to such frame for storage and/or operatively positioning the container or bag as desired; to provide a novel unitary socket means in the case for receiving syringe pipes or the like therein for storage purposes; and to provide a novel and improved hanger member adapted to engage with a portion of the case when opened and to be in substantially fixed or rigid engagement therewith for operatively positioning the case and associated means.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

Attention now is particularly directed to the accompanying drawings, wherein:

FIG. 1 is a side elevation the operative position of a syringe case and container assembly embodying the principles of the invention with portions of the case and associated means being shown in vertical section;

FIG. 2 is a vertical section through the assembly of FIG. 1 with the components thereof stored in inoperative positions;

FIG. 3 is a plan view of the plastic frame and case provided in the assembly shown in FIG. 1 with parts of the case broken away and shown in section;

FIG. 4 is a fragmentary enlarged section of a portion of the hinge means provided in the case taken on line 4—4 of FIG. 3;

FIG. 5 is a bottom plan of the container provided in the assembly of FIGS. 1 and 2; and

FIG. 6 is a side elevation of the container of FIG. 3.

When referring to corresponding members shown in the drawings and referred to in the specification, corresponding numerals are used to facilitate comparison therebetween.

Generally speaking, the present invention, as to one embodiment thereof can be considered to relate to a folding syringe case and container assembly that comprises a case including a cover connected to a relatively deep case based by a hinge means, which case is adapted to be supported in an operative position with the case base being substantially vertical at such time, and open center frame of generally rectangular shape pivotally positioned in a lower corner of the case base and adapted to be supported on a wall of such case base and protrude therefrom when the case is opened and the frame is operatively positioned, which frame has a cross bar therein positioned substantially at an edge of the case when it is opened and the plastic frame has swung out to operative position, a flexible top end open container secured to the plastic frame in the portion thereof and protrudes from the case base and adapted to be operatively suspended from the plastic frame when the case and frame are operatively positioned, and discharge means carried by the operative bottom portion of the container, which container is adapted to be collapsed up against the frame, and the frame and container being adapted to be moved into the case base for storage.

Reference now is particularly directed to the details of the structure shown in the drawings, and a folding syringe case and container assembly is indicated as a whole by the numeral 1. Such assembly 1 particularly includes a case 2 that has, in this instance, relatively thin cover or top section 3 provided thereon that may be connected, as by an integral, or unitary hinge section 4 to a case base 5 which in this instance is a relatively deep construction for receipt of other components of the assembly 1 therein when the assembly is in its stored or inoperative condition. This case 2 preferably is made from any suitable flexible material, such as polypropylene, and it can be molded as one unit.

The case 2 includes, as one novel portion of the present

invention one or more unitary clips or socket members 6, and 6a in this instance which are shown in FIG. 1 of the drawings in which clips 6 and 6a are adapted to receive or engage suitable nozzles or discharge pipes therein for storage action in the assembly 1 when it is inoperative. By the resilient nature of the material forming the case 2, the socket means or clips 6 and 6a can readily be sprung apart for receipt of and temporarily engaging members, such as the pipes or nozzles as shown.

As a pair of the operative assembly one of the invention, a flexible top end open container 7 is provided in the assembly 1 and such container 7 is engaged with and supported by a frame indicated as a whole by the numeral 8. As one feature of the present invention, this frame 8 can be made from a suitable slightly flexible or resilient plastic material, such as polypropylene, and such plastic frame may be considered to be of generally open centered rectangular shape. The frame 8 has a pair of hinge means, or bosses 9 and 10 formed as a unit therewith and extending laterally from what is the inner most end of the frame 8 when operatively engaged with the case 2. The case 2 particularly is provided with a pair of reenforced bosses or bracket means 11 and 12, as shown in FIG. 6, which bosses or brackets 11 and 12 are normally provided with open end slots 13 extending thereinto from the base portion of the case base 5 whereby suitable means such as bushings or bearings (not shown) can be positioned in the slots 13 if desired for receipt of the bosses 9 and 10 to pivotally support the frame 8. It will be noted that the brackets 11 and 12 are in a lower portion of the case and specifically in the lower corner of this case base 5 when operatively positioned vertically, as shown in FIG. 1. The free end of the frame 8 can be swung out of the case base and will normally be supported in operative position by engaging some part of the case wall forming the case base 5 for some length of this frame to provide a reenforced support or positioning action for the frame 8 when it protrudes from the case base 5. It will be seen that the frame 8 also is formed with some member, such as a cross bar 15 that normally is formed as a unit therewith and which cross bar 15 is positioned to be adjacent or immediately overlie the edge of the case base when the plastic frame 8 is swung out to its operative position. Thus approximately one-third of the length of the frame 8 would be received in and supported by the case base 5 and with two-thirds of the frame extending therefrom. Usually the container or bag 7 has upper end flaps 16 suitably secured thereto or formed therewith and such flaps 16 are wrapped around suitable portions of the frame 8 and usually are heat sealed or bonded back to each other or to main portions of the container whereby the flexible container 7 will be suitably but tightly carried by at least opposed portions of the frame 8 for operatively positioning the container by being suspended from the frame. One of such end flaps may engage the cross bar 15. Any suitable amounts of water or other desired material then can be introduced into the container 7 and the apparatus will be ready for operation.

Preferably the container or bag 7 is made from a plurality of strips or pieces of suitable material, such as vinyl plastic, or the like wherein the edge portions of the strips can be suitably bonded to each other by heat seal action, or other suitable means as desired. Usually the strips are so formed and assembled that the container has recessed or indented sides as indicated at 17 and 18 which sides then aid in the collapsing of the container 7 whereby it can be rolled or folded up on itself to make a compact inoperative position for the container when it is positioned immediately adjacent the frame 8. The container 7 hence is shown made from a pair of opposed face sections 7a and 7b, and the sides are each made from a pair of sections 7c and 7d, and 7e and 7f.

Preferably the operative lower end of the container 7 has any suitable fitting means, such as a member 19, operatively secured thereto. Such fitting may be secured in place, for example, by means of an enlarged base flange 20 formed thereon which is secured thereto the lower portion of the container 7 as by means of washers or sealing means 21 and 22 that can be made from any suitable material and can be heat sealed or bonded to adjacent portions of the container, as desired for retaining the fitting in operative position at the lower end of the container. Any suitable means, such as a flexible tube 23 can be provided for removable engagement with the fitting 19 whereby the hose may have a nozzle or discharge pipe removably secured thereto in a conventional manner whereby the entire unit can be operatively assembled for use at any desired time. However, when it is desired to store the assembly of the invention, the hose 23 can readily be pulled from the fitting 19 and the pipe 24 can be removed whereby the unit can be collapsed and the frame 8 can be swung into the case base 5 and the components of the assembly be stored within the case 2, as indicated in FIG. 2 of the drawings.

Usually the bosses 9 and 10 on the frame 8 can be readily sprung into engagement with the bosses 11 and 12 or bushings therein on the case base 5.

As another feature of the present invention, an improved hanger indicated as a whole by the number 25 is provided for use with the assembly 1. This hanger 25 has a finger portion 26 that is adapted to seat against an edge of the case base 5 when the case 2 is opened and operatively positioned. The hanger 25 likewise has a foot section 27 that is adapted to extend through an aperture 28 of any suitable size provided in a base wall of the case base 5. Thus the hanger 25 will be substantially rigidly engaged with the case base 5 and will extend outwardly and upwardly therefrom in the hook portion 29 thereof whereby the entire assembly can be supported on this hanger 25 for operative use of the assembly, when desired. If one does not desire to use the hanger 25, the aperture 28 provided in the case base is such that the case base and the remainder of the assembly 1 can be supported by any suitable hook or other member that can be engaged with the aperture 28 for support purposes. It should be noted that the hanger 25 is of such as size and it can be received within the case base 5 when the case is closed and the apparatus is to be inoperatively positioned for storage or the like.

From the foregoing, it will be seen that the novel and improved syringe case and container assembly has been provided by the invention. Any desired type of container means can be used in this assembly but preferably such container is an open ended upper end flexible bag which is adapted to be collapsed and folded into a compact unit when desired for storage purposes. At the same time, relatively sturdy support means are provided for the container 7 and such support means comprises a frame which will swing operatively into the case base 5 for storage purposes. Thus it is thought that the object of the invention has been achieved.

While one embodiment of the invention has been disclosed herein, it will be appreciated that modification of this particular embodiment of the invention may be resorted to without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. A folding syringe case and container assembly comprising

a one-piece flexible plastic case including a cover connecting to a relatively deep case base by a unitary hinge section,

an open center plastic frame of generally rectangular shape pivotally positioned in a lower corner of said case base and adapted to be supported on a wall of such case base and protrude therefrom when said case is opened and operatively positioned vertically, said frame having a cross bar therein positioned substantially at an edge of said case when it is

opened and said plastic frame is operatively positioned,

a flexible top end open container secured to said plastic frame at a portion thereof that protrudes from said case base and at said cross bar and adapted to be operatively suspended therefrom when said case and frame are operatively positioned, and

a fitting secured to the operative bottom portion of said container, said container being adapted to be folded up against said frame, and said frame and container being adapted to be swung into said case base for storage.

2. An assembly as in claim 1 where said case base has hinge sockets formed therein, and said plastic frame has laterally outwardly extending hinge bosses thereon that are sprung into engagement with such hinge sockets.

3. A folding syring case and container assembly comprising

a case including a cover connected to a relatively deep case base by a hinge means, said case being adapted to be supported in an operative position with said case base being substantially vertically positioned,

an open center frame pivotally positioned in a lower corner of said case base and adapted to be supported by horizontally spaced sections of such case base and protrude therefrom horizontally when said case is opened and operatively positioned vertically,

a flexible top end open container secured to said frame in the portion thereof that protrudes from said case base and adapted to be operatively suspended therefrom when said case and frame are operatively positioned, and

discharge means carried by the operative bottom portion of said container, said frame and container being adapted to be swung into said case base and said container to be collapsed therein for storage.

4. An assembly as in claim 3 wherein said frame is journalled in said case base by complementary means formed on adjacent portions of said frame and said case base.

5. An assembly as in claim 3 where said container has a pair of opposed indented sides to facilitate folding the container for storage.

6. An assembly as in claim 3 where said case base has a bottom with an aperture therein remote from said plastic frame and adjacent a side wall of said case base, and

a hanger is provided for said case base, said hanger having means thereon for removably engaging an edge of the wall of said case base and engaging said aperture to provide two spaced support areas for the case base, said hanger having a hook section extending upwardly of said case base to suspend it operatively in substantially a vertical position.

7. A folding syringe case and container assembly comprising

a flexible plastic case including a cover connecting to a relatively deep case base by single means,

an open center plastic frame of generally rectangular shape pivotally positioned in a lower corner of said base and adapted to be supported on a wall of such case base and protrude therefrom when said case is opened and operatively positioned vertically, said frame having a cross bar therein positioned substantially at an edge of said case when it is opened and said plastic frame is operatively positioned,

a flexible top end open container secured to said plastic frame at a portion thereof that protrudes from said case base and at said cross bar and adapted to be operatively suspended therefrom when said case and frame are operatively positioned,

a fitting secured to the operative bottom portion of said container, said container being adapted to be folded up against said frame, and said frame and container being adapted to be swung into said case base for storage,

said case having a bottom with an aperture therein remote from said plastic frame and adjacent a side wall of said case base, and

a hanger is provided for said case base, said hanger having a finger thereon for engaging an edge of the wall of said case base and a foot section to engage said aperture, said hanger having a hook section extending upwardly of said case base to suspend it operatively in substantially a vertical position, said hanger removably engaging said case base and being positionable therein for storage.

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BOBBY R. GAY, *Examiner.*

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,384,231

May 21, 1968

Alvon R. Cox et al.

It is certified that error appears in the above identified patent and that said Letters Patent are hereby corrected as shown below:

Column 6, line 9, "single" should read -- hinge --.

Signed and sealed this 16th day of December 1969.

(SEAL)
Attest:

Edward M. Fletcher, Jr.
Attesting Officer

WILLIAM E. SCHUYLER, JR.
Commissioner of Patents