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2,366,770

COLLAPSIBLE CONTAINER

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FIG. 1.

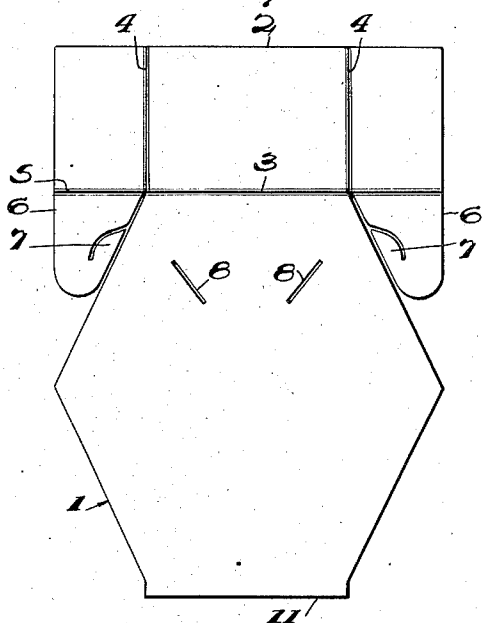


FIG. 2.

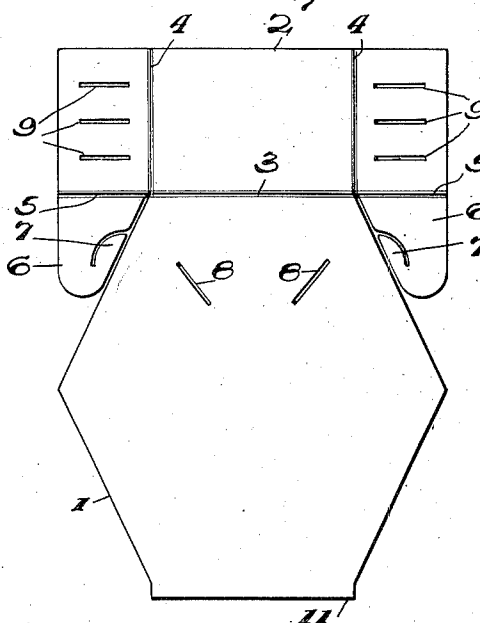


FIG. 3.

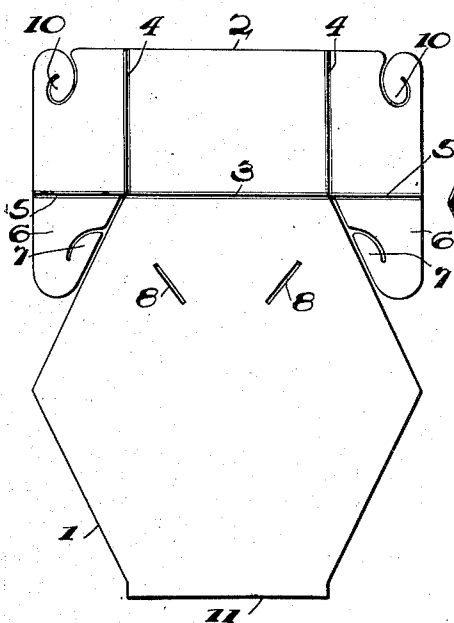
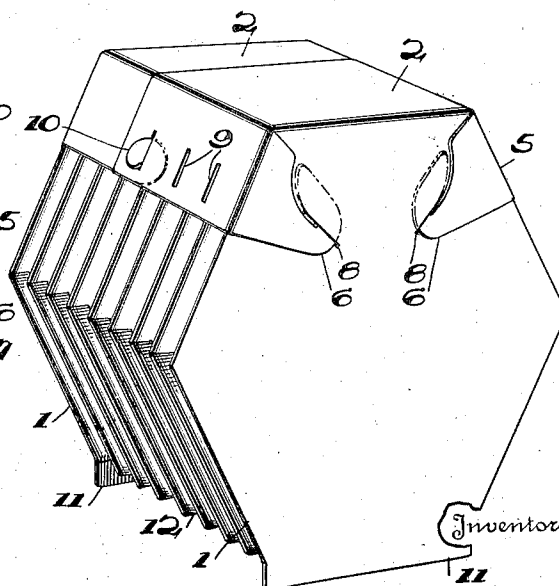


FIG. 4.



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COLLAPSIBLE CONTAINER

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2 Claims. (Cl. 229—41)

This invention relates to a collapsible container and more particularly to a bellows type container with an improved closure as a part thereof.

Various types of receptacles generally available are manufactured in many sizes but when not in use occupy considerable storage space which, therefore, limits their utility. This is particularly true of cheap disposable receptacles fabricated from paper, cardboard and the like, which are sometimes used for household purposes. Also, in such containers, simple and positive acting closure means have been lacking.

This invention has as an object the provision of a collapsible bellows-like container or receptacle which requires a minimum of storage space when not in use but which may be readily extended to receive a variety of materials. Another object is the provision of a collapsible receptacle which is easily disposable together with the contents. Another object is the provision of a collapsible receptacle which may be employed to advantage as a kitchen sink pan. Another object is the provision of a collapsible receptacle for garbage which permits drainage of liquids from such refuse. Another object is the provision of a bellows-like container which is compact in form and which may be constructed from cheap materials such as paper, cardboard, reinforced or stiffened fabric and the like. Another object is the provision of a collapsible receptacle which is strong, neat-looking and which improves sanitation particularly in the disposal of kitchen garbage. A further object is the provision of a collapsible bellows-like container which may be tightly closed to prevent loss or spillage of the contents. A still further and particular object of the invention is the provision of a collapsible bellows-like container which has as a part thereof a unique and improved closure means, simple in construction but positive in its action. Other objects will appear as the description of the invention proceeds.

These objects are accomplished in accordance with the present invention by means of an improved container consisting of a front and rear wall connected by a bellows or pleated element constructed so as to be closed on all sides except the top, said walls bearing notches or slits positioned in the face thereof so as to receive cooperating retaining or locking hooks cut into tabs which together with flaps of sufficient length to meet or preferably overlap at the greatest extension of the container form a part of the front and rear walls. In the preferred embodiment of the invention in order to strengthen the closure

particularly when the bellows element is well extended a similar locking arrangement is provided in that part of the flaps which are constructed so as to fit over part of the side walls of the bellows element and in this instance provision is made for various extensions by a plurality of notches or slits in the face of the flaps.

Referring now to the accompanying drawing, Figure 1 represents a plan view of identical front and rear walls with the closing flaps and locking means shown in the tabs in the simplest form. Figures 2 and 3 are plan views of the front and rear walls for a modified embodiment with the closing flaps illustrating closure means for both wall surfaces and for reinforcing locking means on the side flaps which extend down over the upper portion of the bellows element. Figure 4 is a perspective view of the improved container with the flaps closing the top of the container and held in place in the front and rear walls and on the side flaps over the bellows element by the locking means more fully described hereinafter.

In the drawing, 1 illustrates identical front and rear walls of the container shown to be hexagonal in shape which is the preferred form. The flap 2 of sufficient length to meet or overlap when the container is at its greatest extension is secured by creasing at the lines 3, 4 and 5 which when folded in the closed position covers and closes the top of the container and extends down partly over the side of the bellows element. Tabs 6 forming a part of the flap 2 are adapted to extend a short distance over and across the front and rear walls 1 and are constructed with locking or retaining hooks 7 provided by merely cutting a hook into the paper, cardboard or other material from which the container is constructed to permit the engaging of the hooked portion of the tab in and with the slits 8 which preferably are constructed to slightly protrude at the top of the slit to facilitate engagement of the retaining hook 7. A plurality of slits in those portions of the flap on one wall of the preferred construction which extends down partly over the hexagonal side of the container is illustrated by 9. These slits 9 may vary considerably in number and may be positioned at intervals over the entire length of the flap in order to provide locking closure means at any extended position of the receptacle. Those portions of the flap on the opposite wall of the preferred embodiment of the container which likewise is constructed to extend down over part of the bellows element and which are designed to meet or preferably overlap the flaps from the opposite wall carrying the slits are provided with

locking or retaining hooks 10 cut into the flaps approximately similar to those shown in tabs 6 and serve to engage the slits 9 so as to afford a more secure closure for the receptacle.

The supporting base 11 may be constructed at the bottom of only the front and rear walls or all or part of the pleats forming the bellows element may likewise have this supporting base, a modification which may be desirable if the contents are heavy. The use of any supporting base, however, is optional but it is of advantage when the container is used for garbage where some drainage is needed as provided by suitable perforations. The numeral 12 represents a plurality of joined pleats which forms the bellows element shown in Figure 4. In Figure 4, the side flaps containing the slits 9 are shown as overlapping the side flaps containing the retaining hooks 10, but if desired, for greater ease in closing the container, the position of the side flaps may be reversed and the side flaps constructed with the retaining hooks 10 made to overlap the side flaps containing the slits 9 and in this position, the engagement of the retaining hooks 10 with the slits 9 is somewhat facilitated.

The improved container may be constructed of any suitable material having proper strength and stiffness depending upon the specific utility for which it is constructed. For example, it may be fabricated from heavy paper stock, cardboard, heavy gauge regenerated cellulose sheeting, cellulose acetate sheeting or laminations of such materials to afford better stiffness and overall strength or sized and reinforced fabric materials. For many utilities it is also preferred that such materials be waterproofed and/or greaseproofed, properties which may be readily obtained by coating or impregnating base materials such as suggested above with waxes and conventional greaseproofing lacquers. For economic reasons, particularly when the improved receptacle is designed for receiving garbage and other refuse and consequently early disposal, a heavy paper or cardboard stock preferably greaseproofed and waterproofed suffices.

The bellows element may also be perforated with any desired number of holes at or near the bottom of the element to permit ready drainage of liquids where desired, for example, if the receptacle is to be employed for holding garbage.

In using and closing the container, it is pulled open from a flat, compact closed position to the desired extent through the action of the bellows element, the contents placed in the interior and the container then closed by folding the flaps 2 which form extensions of the front and rear walls down over the top and side of the container and then folding the tabs 6 across the face of the walls and engaging the retaining hooks 7 in the cooperating slits 8. In the more secure closure which is desirable for some purposes, the retaining hooks 10 are inserted into the proper slits 9 after the side portions of the flaps are folded as indicated above.

The improved container has many diversified utilities such as storage of foods, clothing and other materials, since the adjustable features of the container combined with the improved closure means permits space economizing packing. When made of heavy flexible materials and fitted with suitable handles, it may be employed as a collapsible travelling bag, laundry holder or hat

box. A specific and important utility is that of a container for the disposal of waste materials or kitchen garbage. If used for waste paper the receptacle may be burned together with the paper and as a substitute for the conventional unsightly sink pan, it offers numerous advantages as a more sanitary means of garbage disposal. When used for this purpose, no dumping and wrapping of the garbage in paper is required. Instead, the cheap, sanitary, neat-looking container is simply closed securely by the means described and container and contents placed in the outdoor garbage can, leaving no filthy sink pan to clean or scour and discolor the sink enamel.

The improved container is characterized by several important advantages. When collapsed and not in use it is quite compact requiring only a minimum of storage space. It is readily adjustable to greater volume for receiving materials but again economizes space since it need only to be extended to the volume actually required for the added materials. It is cheap, strong and adapted for a wide variety of purposes. When used for garbage disposal, general sanitation is improved. A particular advantage resides in the unique closure means which provides positive and tight-fitting closing, thus avoiding loss or spillage of the contents. The container may be fabricated from cheap materials such as paper, cardboard, sized fabrics and the like, so that it may be discarded along with refuse and waste materials at very low cost.

It is apparent that many widely different embodiments of the invention may be made without departing from the spirit and scope thereof; and, therefore, it is not intended to be limited except as indicated in the appended claims.

I claim:

1. A collapsible container comprising front and rear walls connected by a pleated bellows element closed on all sides except the top, said walls carrying as an extension at the top and side thereof, foldable flaps forming part of said walls and of sufficient length to close the top of the bellows element when at its greatest extension and extending partly down over the side of said element when folded, and foldable tabs forming a part of said flaps adapted to fold across the front and rear walls and carrying hook retainers. said walls carrying slits for engaging hook retainers whereby to provide a locking closure.

2. A collapsible container comprising front and rear walls connected by a pleated bellows element closed on all sides except the top, said walls carrying as an extension at the top and side thereof, foldable flaps forming a part of said walls and of sufficient length to close the top of the bellows element when at its greatest extension and extending partly down over the side of said element when folded, the flap on one wall carrying a plurality of slits on the portion of the flap adapted to fit over part of the side walls of the bellows element and the flap on the other wall carrying hook retainers adapted to engage the slits on the flaps on the opposite wall and foldable tabs forming a part of said flaps adapted to fold across the front and rear walls and carrying hook retainers, said walls carrying slits for engaging the hook retainers in the tabs, whereby to provide a securely locking closure.

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