Dec. 3, 1968 T. E. WRIGHT 3,414,157

COMBINED LITTER CONTAINER AND TISSUE DISPENSER

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Fig. 1

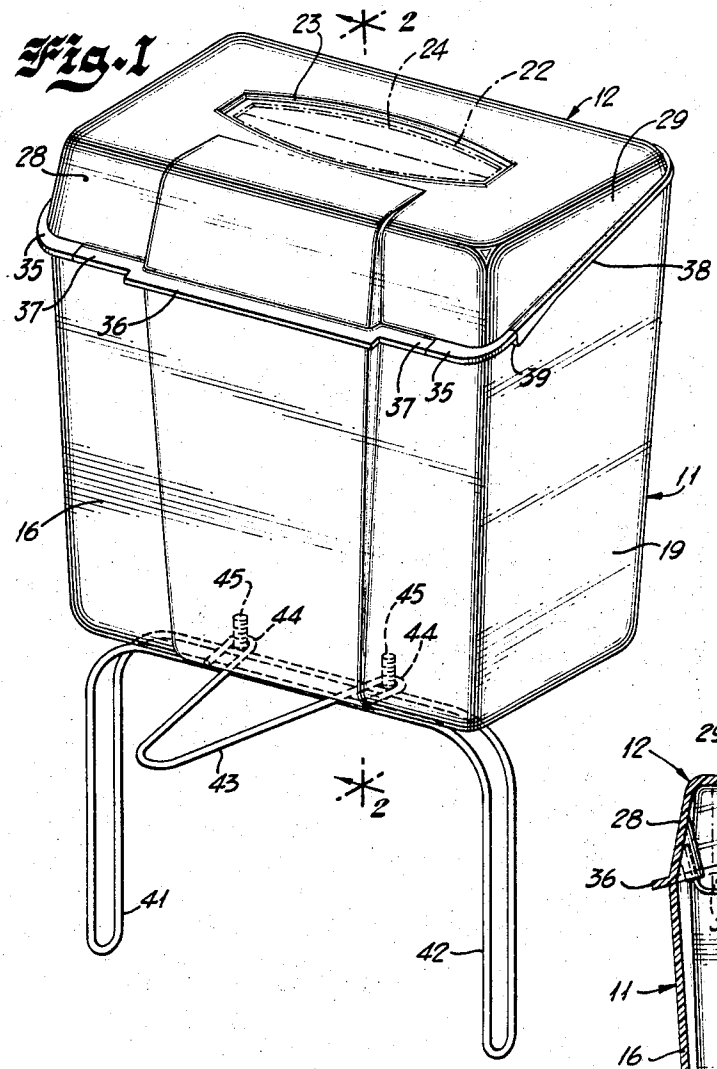
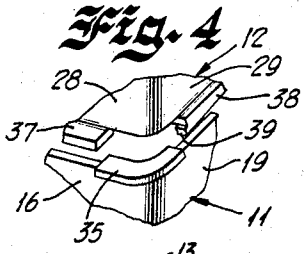


Fig. 4



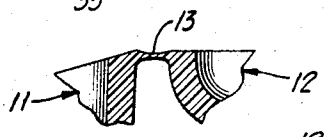


Fig. 5

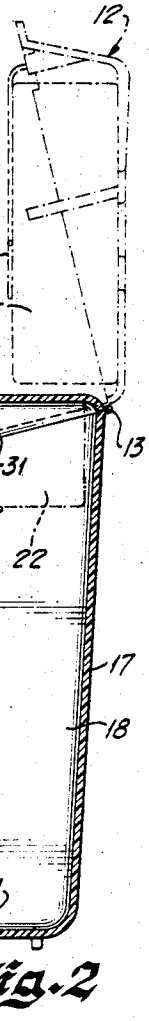


Fig. 2

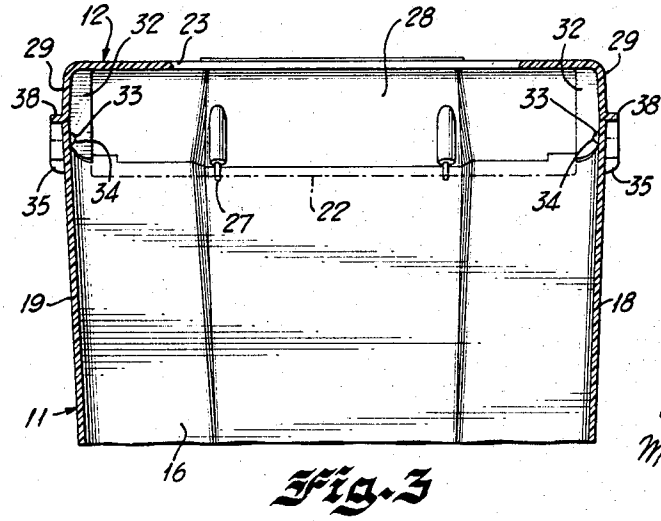


Fig. 3

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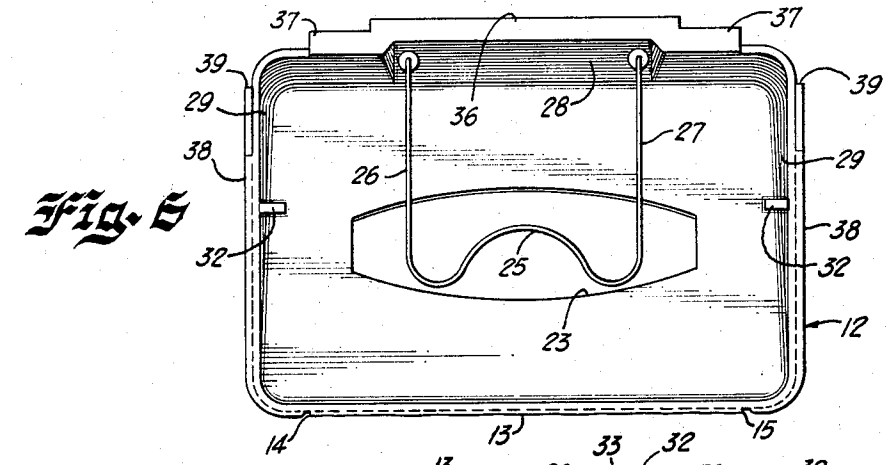
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Fig. 6



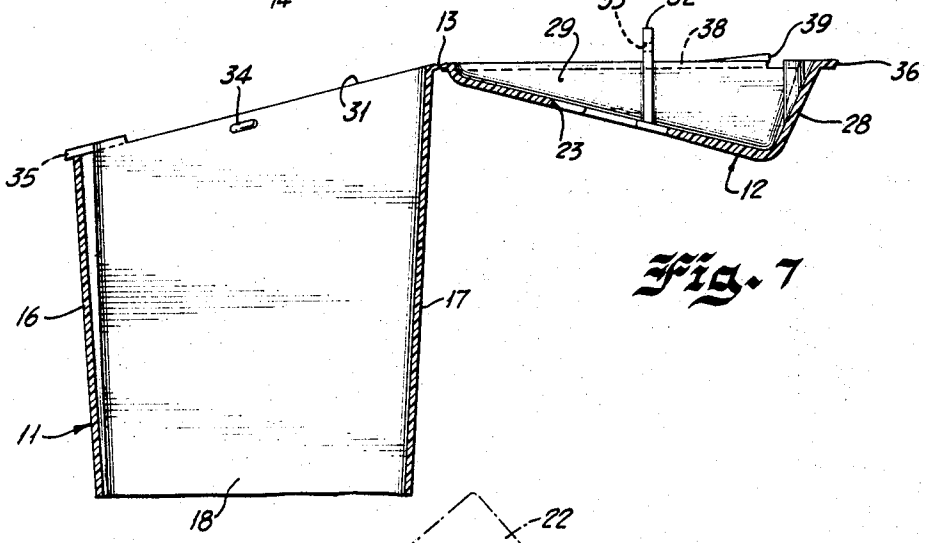


Fig. 7

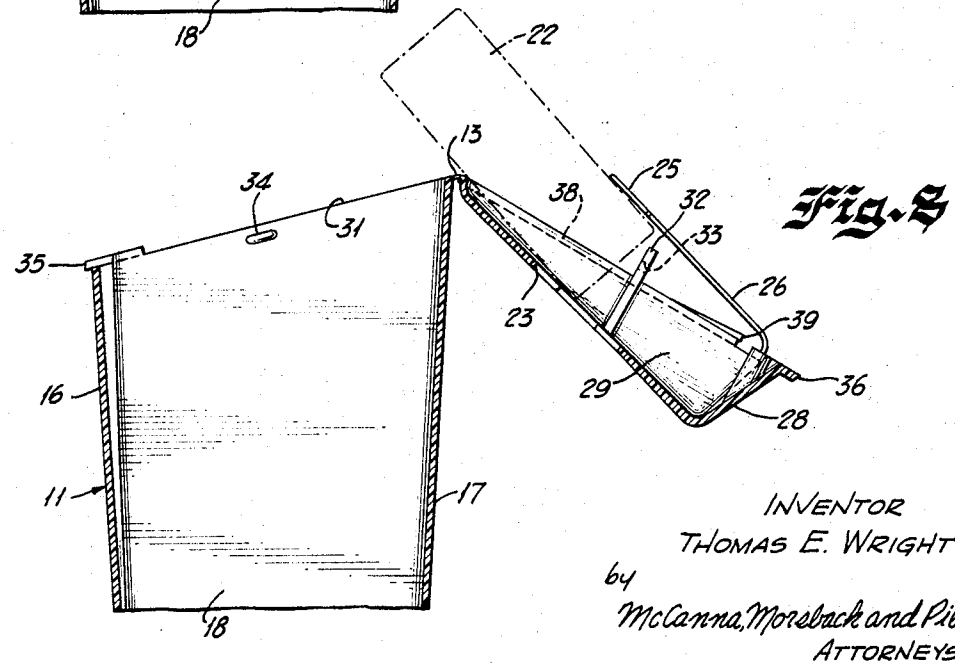


Fig. 8

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COMBINED LITTER CONTAINER AND TISSUE DISPENSER

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5 Claims. (Cl. 220—23)

ABSTRACT OF THE DISCLOSURE

An open top container having a lid hinged thereto and a tissue dispensing opening in its top wall, a tissue package having a tissue dispensing opening in its top wall, and means releasably holding the tissue package in an operative position at the inner side of the lid with the tissue dispensing openings in registration and permitting removal of a used tissue package from said operative position and mounting a refill tissue package in such position when the lid is swung on its hinge to an open position.

This invention is an improvement on the invention disclosed in my application for patent Ser. No. 378,914, filed June 29, 1964, now abandoned, having the same title as the instant application.

The primary object of this invention is to provide an improved article of manufacture of the character described in my earlier application.

One of the features of improvement is in the lid construction and the manner in which the tissue package is mounted, particularly with relation to the container, whereby to facilitate insertion of the tissue package into its operative position and also removal of the package as when replacing it with a refill package.

Another feature is in accurately and positively retaining the tissue package in its operative position.

Another feature is the provision of improved means for releaseably locking the lid in its closed position and permitting quick and easy opening of the lid from such position.

I have also aimed to provide a novel container and lid construction characterized by a one-piece molded unit, that is, by molding both the container and the lid in one operation with the lid joined to the container by a hinge structure capable of permitting movement of the lid back and forth between the several positions contemplated by this invention. In one such position the lid closes the open top of the container and the tissue package is supported within the lid in the operative position in which individual tissues are removable. In a second position the lid while holding the tissue package is swung up on its hinge mounting to open the container for deposit of used tissue or other litter therein. Continued opening movement of the lid brings it to a position in which the tissue package may be more easily removed from the lid and a refill package or the like may be inserted in the lid.

Another object is to provide an improved container and lid having coacting structural features, characterized by one-piece molding of the container and lid and by forming in such molding operation a hinge structure by which the lid is joined to the container and on which the lid is moved back and forth between different operative positions.

Another object is to provide a combined litter container and tissue dispenser of the character described constructed in such manner as to enable manufacture of the article at a comparatively low cost.

Other objects and attendant advantages will be appreciated as the invention becomes better understood by reference to the following description considered in connection with the accompanying drawings in which:

FIGURE 1 is a perspective view of a combined litter container and tissue dispenser embodying my invention;

FIG. 2 is a vertical section through said container and dispenser taken substantially on the mid-section lines 2—2 of FIG. 1, showing the lid in dotted lines in an open position as when open for depositing used tissue or other litter into the container;

FIG. 3 is a sectional view taken on the section line 3—3 of FIG. 2;

FIG. 4 is a detail perspective view of a front corner, showing the lid open;

FIG. 5 is a detail section through the hinge juncture between the container and the lid;

FIG. 6 is a fragmentary view looking at the under side of the lid at the outer end thereof, showing the tissue package retaining spring;

FIG. 7 is a section similar to FIG. 2 but showing the container and the lid in the relation one with respect to the other in which they are molded, showing only the upper portion of the container; and

FIG. 8 is a section similar to FIG. 6 but with the lid swung down and showing a tissue package in an intermediate position as when inserting the package to its operative position in the lid or removing it therefrom.

The present invention is an improvement on the embodiment disclosed in my earlier application above identified. The improvements make for greater practicability and utility. The features concerned with mounting and supporting the unit are claimed in a separate application. Such subject matter deals with quickly adapting the unit for mounting in any of a plurality of different applications such as in an automobile and in hospitals, offices and other places where sanitation and litter problems are involved.

In the present embodiment the litter container designated generally by reference numeral **11** and the lid by **12** are molded in one operation so that they constitute a one-piece unit. The form and relative relation of the container and lid with respect to each other in this molding operation is shown in FIG. 6. I prefer to use a thermoplastic material known as polypropylene. This provides the desired characteristics and permanent shape. The molded product has high tensile strength, hardness, temperature resistance, stiffness, and water resistance. My invention contemplates joining the container and the lid in this molding operation so that they are integrally united without the use of extraneous hinge parts. A section through the juncture of the container and lid at the time of molding is shown in FIG. 5. The joining portion **13** which is the hinge per se extends along the adjoining edges of the lid and container preferably a substantial length thereof as indicated between the ends of the hinge at **14** and **15** in FIG. 6. This provides a substantial hinge attachment for the lid. Flexibility of the hinge section is provided by movement of the lid back and forth a number of times immediately upon removal of the molded unit from the mold. This flexing of the section prevents setting of the material in rigid form and serves to establish a molecular structure which is flexible for the desired movements of the lid. The cross-section of the hinge structure **13** shown in FIG. 5 is uniform from end to end of the hinge, that is, it is the same between the points **14** and **15** which designate the length of the hinge. The narrowing of the cross-section at the center of the hinge structure is a factor in providing the described permanent flexibility.

The container is preferably rectangular in cross-section, having front and rear walls **16** and **17**, respectively, joined by side walls **18** and **19**, a bottom wall **21**, and an open top. The lid may be swung upwardly to an open position shown in dotted lines in FIG. 2 or back farther such as to the positions shown in FIGS. 7 and 8 to permit the deposit of litter into the container through its open top.

The lid serves to hold a replaceable tissue package designated generally by **22** or a supply of tissues. The lid has an outlet opening **23** in its top wall in registration with an opening **24** in the package through which the tissues are removed. The package is held in this operative position by a retainer **25** formed of stiff but resilient wire such as 16 gage. This is best shown in FIGS. 2 and 6. Each end of the wire is inserted in a press fit into a boss molded with the lid, as shown in FIG. 2. The wire is shaped to provide a wide retainer arm having spaced arm portions **26–27**. The retainer arm is under tension yieldingly pressing upwardly to hold the tissue package in the operative position against the lid.

It will be observed that the front wall **28** of the lid is of a depth approximating the depth of the tissue package and that the side walls **29** of the lid have a varying depth diminishing from the front wall **28** to the hinged edge of the lid. The top end of the container is shaped to conform with the inclined or diagonal line **31** which defines the juncture between the lid and the top of the container. The purpose of the construction is to provide an ample housing and protection for the tissue package and also to facilitate insertion of the package to and removal thereof from its described operative position. It will be evident that when the lid is swung open to the position shown in FIG. 7 or beyond that to FIG. 8, the vertically narrow hinged end of the lid together with the downwardly inclined top end of the container provide a wide open mouth or entrance area for inserting the parkage into the lid compartment and beneath the retainer arm **25–27**. This is particularly desirable under varying conditions of usage because it makes for quick and easy removal of a used tissue package and mounting a refill package. To further insure proper positioning of the package the lid is provided with side guides **32** (FIGS. 2 and 3) each molded integral with its adjacent side wall. These guides **32** center the tissue package with respect to the lid opening **23** and prevent endwise displacement of the package. Also, each guide **32** has a notch **33** in its outer edge which when the lid is moved to closed position snaps into engagement with a projection **34** on the adjacent inner wall of the container.

Further provision is made for snap closing the lid and quick release for opening the lid. One such means is applied to each front corner coacting between the container and the lid, best shown in FIGS. 1 and 4. At each top corner of the container there is molded a flat corner member **35** in a plane parallel with the plane **31** but above and contiguous to such plane **31**. The front wall of the lid has molded therewith a forwardly projecting flange or rib member **36**, the end portions **37** of which are coplanar and contiguous with the members **35**, as shown in FIG. 1. Each side wall of the lid has molded therewith an outwardly extending flange **38** which has a forward projection **39** adapted to snap-engage beneath the adjacent under side of the member **35** when the lid is moved to its closed position. The members **35** are thumb and finger rests for use in releasing the lid from its snap-closed position. To release the lid the user places a thumb or finger on top of the member **35**, presses down, and with another finger applies pressure upwardly on the adjoining rib member **37**. By this opposing pressure application the lid will be released from the engagements at **32–33** and the corners **35–39**. This finger operation simulates a slight twisting movement and enables quick and easy release of the lid.

The container unit may be mounted and supported in any manner suitable for its use. It is exceptionally well suited for use in automobiles where it provides not only a most convenient supply of tissues but it also takes care of the disposed tissues and other litter which some motorists so negligently and carelessly throw out into streets and highways. In this application I have shown a wire bracket attached to the underside of the container and shaped to fit over the floor hump customary in most cars. As shown in FIG. 1 the wire is bent to provide spaced resilient arms **41** and **42** which straddle and fit over the hump, a central stabilizing arm **43** which seats on the crest of the hump, and loops **44** for the reception of screws **45** which are threaded into suitable pads in the bottom of container. This attachment and supporting means is, as abovementioned, the subject matter of a separate application for patent. Such separate application for patent also provides for mounting and supporting the unit for numerous other needs.

It is believed that the foregoing conveys a clear understanding of the objects prefaced above and it will be further understood that in the practice of my invention changes may be made in the construction, proportions, and material, without departing from the spirit and scope of the invention expressed in the appended claims.

I claim:

1. A combined litter container and tissue dispenser comprising, in combination, an open top container, a lid hinged at its rear end to the container and movable back and forth on its hinge between a position closing the open top of the container and an open position, the lid having a top wall provided with a tissue dispensing opening, a tissue package having a top wall provided with a tissue dispensing opening, and means releasably holding the tissue package in an operative position at the inner side of the lid with said tissue dispensing openings in registration for dispensing tissue therethrough, whereby the tissue package may be mounted in said operative position and withdrawn from said operative position in a movement through the under open side of the lid when the lid has been moved in an opening movement at least to a horizontal position.

2. A combined litter container and tissue dispenser as set forth in claim **1**, in which the holding means comprises a retainer wire of general U-shape having the ends of its spaced arm portions fixed to the lid adjacent to the front end thereof and with the arm portions spaced beneath the top wall of the lid and having releasable engagement with the under side of the tissue package when the package is in the operative position.

3. A combined litter container and tissue dispenser as set forth in claim **1**, in which the holding means releasably engages the under side of the tissue package when it is in the operative position and the holding means being shaped to permit sliding movement of the tissue package relative to the lid when the lid has been moved in the described opening movement, said sliding movement carrying the tissue package inwardly through the hinged open end of the lid for removal of a used tissue package and mounting a refill tissue package.

4. A combined litter container and tissue dispenser comprising, in combination, an open top container, a lid hinged at its rear edge to the container, a flat tissue package of a depth to hold a substantial supply of tissue for individual use, the package having a top wall provided with a tissue dispensing opening, the lid having a top wall, opposed side walls, and a front wall joining the side walls, the top wall of the lid having a tissue dispening opening, the front wall of the lid being of a depth approximately that of the tissue package so as to form an enclosure for such package at the front of the lid, means releasably holding the tissue package in an operative position with its top wall flat against the inner side of the top wall of the lid, said tissue dispensing openings being in registration when the tissue package is in said operative position, the side walls of the lid being of diminishing depth from the front wall to the hinged end of the lid so that when the lid is swung open to and beyond a horizontal position the inner end of the package will be exposed to facilitate removal of the package through the open under side of the lid.

5. A combined litter container and tissue dispenser comprising, in combination, an open top container, a tissue package having a top opening through which tissues may be individually removed, a lid hinged at one edge to

the container for movement back and forth on its hinge from a position in which it closes the open top of the container to a position in which the container top is open for the reception of litter, the lid having a top wall provided with a tissue discharge opening, means mounting the tissue package to the lid at the inner side thereof in an operative position with the package tissue opening in registration with the tissue discharge opening in the lid, the container and the lid each having complementary side walls and a front wall located opposite from the hinged edge of the lid, each complementary set of side walls being shaped to provide a diagonal separation extending from a minimum depth adjacent to the hinge mounting to a maximum depth adjacent to the front walls whereby the front wall of lid has substantial depth providing with the side walls of the lid a housing for the tissue package and whereby when the lid is moved on its hinge mounting to the open position

the minimum depth side walls provide an unobstructed opening through which to insert the tissue package into and remove it from its operative position in coaction with the lid.

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