

July 2, 1963

A. BABIN

3,095,996

FOLDED SHEET DISPENSER

Filed Nov. 29, 1960

3 Sheets-Sheet 1

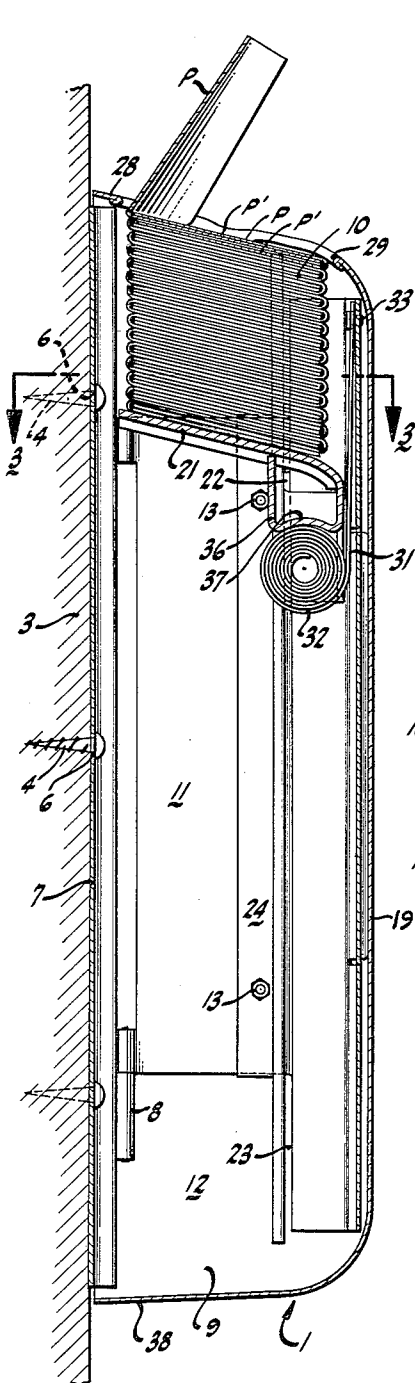


FIG-2

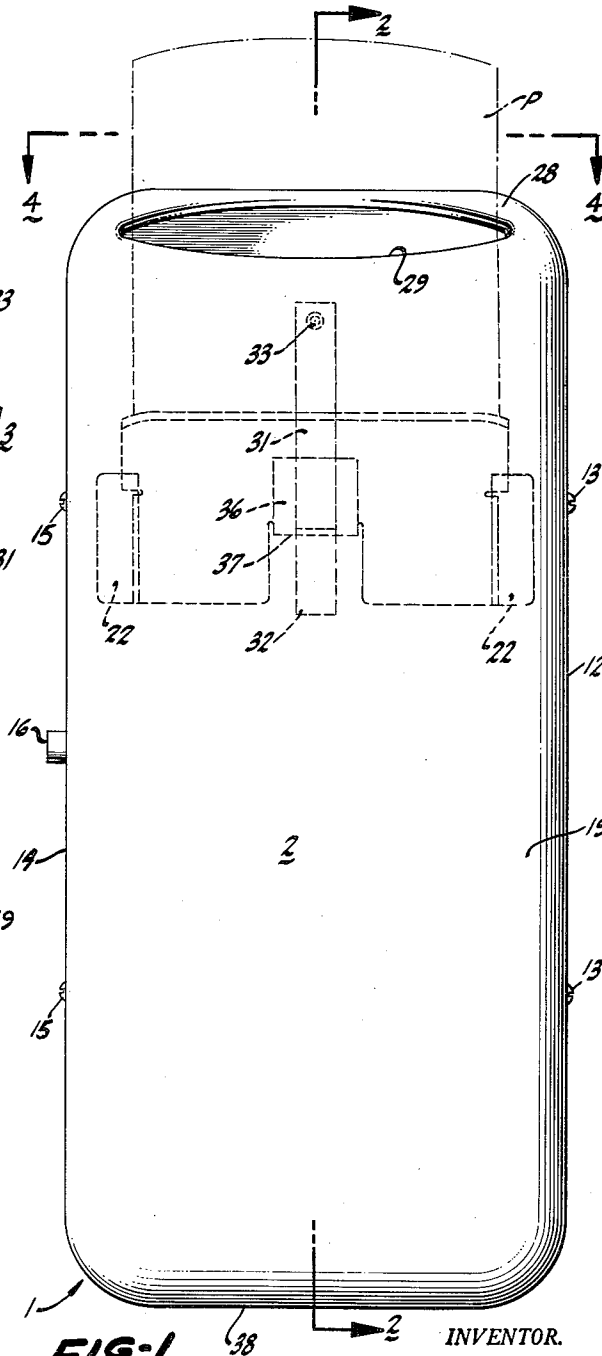


FIG-1

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3 Sheets-Sheet 2

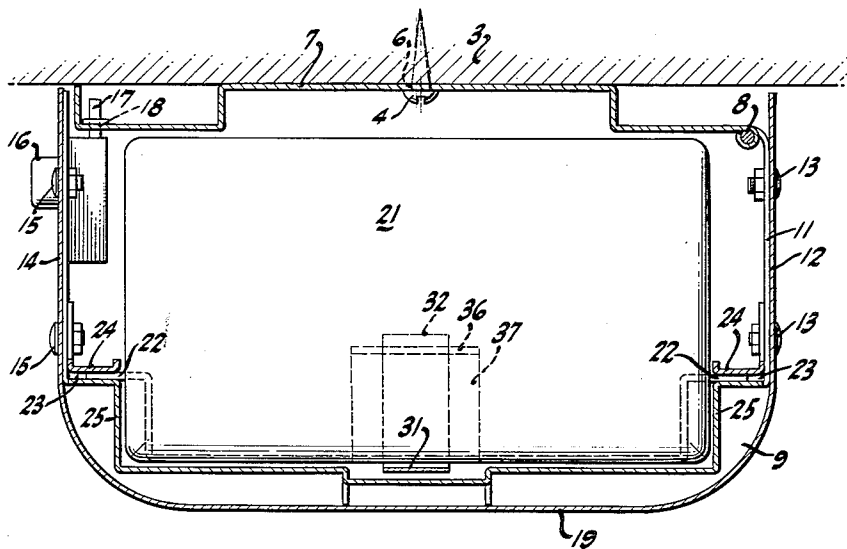


FIG-3

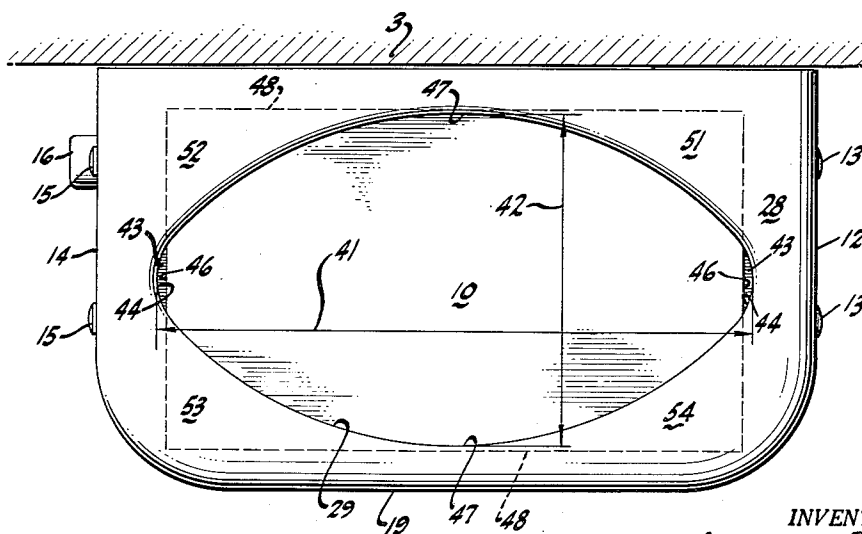


FIG-4

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3 Sheets-Sheet 3

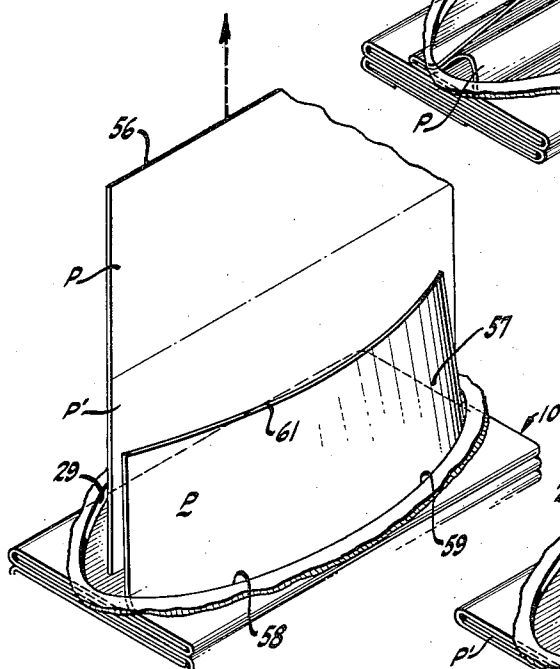
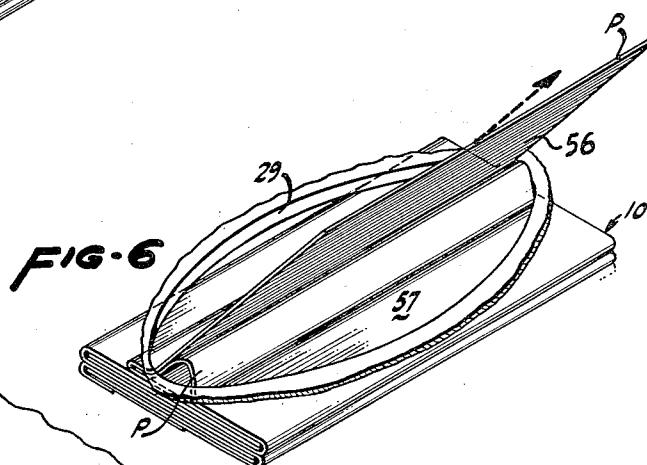
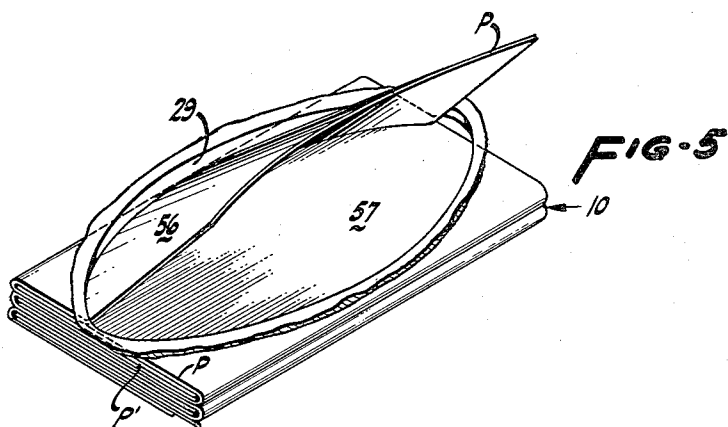
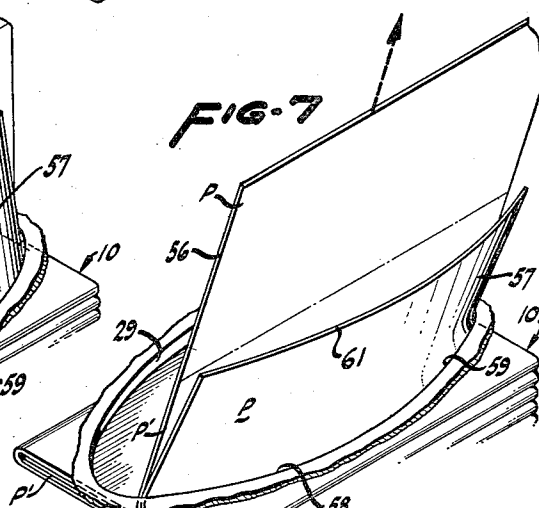


FIG-8



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3,095,996

FOLDED SHEET DISPENSER

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7 Claims. (Cl. 221-52)

This invention relates generally to a dispenser for folded sheets of paper and like flexible material, and more particularly to a dispenser package combination comprising a dispenser container and a plurality of folded sheets stacked therein to be dispensed therefrom individually and in substantially unfolded condition ready for use. This invention primarily relates to a toilet tissue dispenser for dispensing individual sheets through a sheet dispensing opening provided in the dispenser which has a particular configuration adapted to cooperate with the sheets to be dispensed in a novel manner so that a projecting portion of a sheet is positioned for easy grasping for removal from said dispenser.

While various prior art dispensing devices for folded sheets have been known heretofore, no such prior art devices are known to employ the particular and novel cooperation which exists between the dispensing opening of the subject dispenser container and the folded sheets positioned in the container to be dispensed therefrom. The subject dispenser container is provided at an end thereof with a dispensing opening of non-rectangular configuration through which folded sheets of substantially rectangular configuration are withdrawable. Due to the novel cooperation between the folded sheets and the non-conventional dispensing opening, withdrawal of the outermost sheet from the container for use automatically effects at least partial withdrawal of the next underlying folded sheet in pop-up fashion so that at least a portion of such underlying folded sheet is accessible for grasping. During withdrawal of the outermost sheet, the underlying sheet is buckled or bowed transversely thereof so that rigidity is imparted thereto whereby a portion of such sheet is maintained by the bow therein in projecting relationship relative to the dispenser opening.

The subject dispenser container is intended to be mounted vertically with the dispenser opening at the top thereof. Accordingly, the transverse bow imparted to a portion of a sheet on withdrawal of another sheet maintains the first mentioned sheet portion in a substantially upright condition for easy grasping. Preferably, the dispensing opening is of substantially elliptical configuration so that the rectangular folded sheets cooperable therewith are clamped and maintained in the dispenser container as a result of the top of the container contacting substantially only corner portions of the sheets.

Objects of the present invention include the provision of a novel dispenser container and a dispenser package combination comprising such container and a plurality of folded interleaved sheets positioned therein for dispensing therefrom; the provision of such a dispenser container with a non-rectangular and preferably elliptical dispenser opening in an end thereof through which rectangular folded sheets are to be withdrawn; and the provision of such a dispenser container and dispenser package in which the rectangular sheets as withdrawn effect automatic withdrawal of a portion of another sheet in pop-up fashion so that a portion of such other sheet is transversely buckled or bowed to impart rigidity thereto so that the same will project away from the remainder of the sheets in the container for easy grasping. These and other objects of the invention will become apparent from a study of the following specification in which reference is directed to the accompanying drawings.

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FIG. 1 is a front elevational view of the subject dispenser container.

FIG. 2 is a longitudinal sectional view through the subject dispenser container taken in the plane of line 2-2 of FIG. 1.

FIG. 3 is a horizontal sectional view through the subject dispenser container taken in the plane of line 3-3 of FIG. 2.

FIG. 4 is a plan view of the subject dispenser container taken in the plane of line 4-4 of FIG. 1.

FIGS. 5 through 8 are generally schematic isometric views illustrating the cooperation involved between a folded sheet and the dispenser opening of the container as a sheet is withdrawn therefrom to automatically position a portion of an underlying sheet for subsequent grasping.

As will be pointed out hereinafter in detail, an important feature of the subject invention is the novel cooperation which exists between the particularly shaped dispenser opening of the container, which is non-rectangular in configuration, preferably elliptical, and the rectangular folded sheets to be disposed therefrom. Such cooperation results in a portion of an underlying sheet being automatically withdrawn from the dispenser container and being maintained in a projecting position relative thereto for ready grasping as the outer most sheet of the sheet supply is withdrawn from the container.

While the subject invention relates primarily to and is particularly described with respect to interleaved individual folded paper sheets intended for use as toilet tissue, the invention has broader applicability and could be employed for the dispensing of larger flexible folded sheets, such as paper towels, as well.

Because toilet tissue is of a very flexible nature, difficulty has been experienced heretofore with the positioning of a portion of a tissue sheet for grasping to facilitate removal thereof from a dispenser. That is, it is difficult to maintain a portion of a toilet tissue sheet in projecting fashion relative to a dispenser container. Heretofore, reliance primarily has been placed upon the dispensing of such sheets from the bottom of a container so that the force of gravity is effective to maintain a portion of a sheet in a depending position ready for grasping. Frequently, however, bottom dispensing arrangements are unsatisfactory, due to inaccessibility or the like. Accordingly, the subject invention relates to a dispenser and dispensing arrangement in which sheets are dispensed from the top of a container for maximum accessibility and in which a portion of each individual sheet to be dispensed in turn is positioned substantially upright and projects from the dispenser container top so as to be readily graspable.

Referring now to the drawings, the subject dispenser 1 comprises a housing 2, preferably formed of attractive metal, such as stainless steel, aluminum or the like. Housing 2 as seen in FIG. 2 is intended to be secured in a vertical position to a supporting surface 3 by means of a plurality of screws or like fasteners 4. Such fasteners are extended through appropriate holes 6 formed in the rear wall 7 of the housing.

As seen in FIG. 3, rear wall 7 is provided at one vertically extending side edge thereof with a pin and hinge arrangement 8 by means of which the remainder of the housing is pivotally connected to the rear wall 7. In this manner, after the housing is secured to supporting surface 3, it may be swung open to permit access to the interior 9 of the housing in which a plurality of folded sheets 10 to be dispensed therefrom are stacked as seen in FIG. 2.

Preferably rear wall 7 is secured by the hinge arrangement 8 to a preformed elongated, generally U-shaped

housing frame 11. One side wall 12 of the housing is secured to frame 11 by means of a series of nut and bolt fasteners 13 or the like. The opposite side wall 14 of the housing also is secured to frame 11 by another series of nut and bolt fasteners 15. A push button 16 or key lock is provided on side wall 14 which is operative to selectively disengage a latch 17 (FIG. 3) engaged with a notch opening 18 in the housing rear wall 7. Latch 17 is effective to maintain the housing normally closed but may be disengaged from the rear wall to permit access to the interior 9 of the housing upon pivoting of the side walls 13 and 14 and the front wall 19 as a unit about the hinge arrangement 8 so that the supply of folded sheets in the housing may be periodically replenished.

Movably positioned in the housing so as to be vertically slidable therein is a support platform 21 on which the stack of folded sheets 10 is positioned. Means are provided between platform 21 and the housing frame 11 for guiding the platform during vertical movement thereof within the housing. As seen in FIGS. 1 and 3, such guide means preferably includes a pair of laterally extending substantially straight flanges 22 which project from the platform towards the opposite housing side walls 12 and 14. Flanges 22 are slidably received in opposite substantially straight vertical guide ways 23 provided on the frame 11 adjacent the housing side walls near the front wall 19 thereof.

While guide ways 23 may be formed in various manners, in the embodiment illustrated small L-shaped brackets 24 are secured to the opposite side walls of the housing by means of aforementioned bolts and nut fasteners 13 and 15 which secure the frame 11 to the respective housing side walls. Such brackets 24, it should be understood, extend substantially the full vertical length of the housing as seen in FIG. 2 and form one side of each guide way. The other side of each guide way in the embodiment illustrated is defined by a right angle bent section 25 of the frame 11. Brackets 24 and bent sections 25 of the frame are spaced from each other a distance sufficient to slidably yet snugly receive flanges 22 of the platform 21 therebetween.

Means is provided in conjunction with the support platform for normally urging the platform towards the end of the housing defined by the top 28 thereof in which a non-rectangular dispenser opening 29 to be described is provided. Such means desirably is of the spring type and preferably comprises a constant force band type extension spring of the type manufactured by Hunter Spring Company of Lansdale, Pennsylvania, under one or more of the following U.S. patents: 2,609,191; 2,609,192; 2,609,193; and 2,647,743. Such spring comprises an elongated flat band 31 of spring material tightly wound upon itself from one end as seen at 32 in FIG. 2. The upper end of the spring 31 is secured to the aforementioned housing frame 11 adjacent its upper end by means of a rivet or screw fastener 33 as seen in FIGS. 1 and 2.

As noted in FIG. 2, the bottom of support platform 21 is provided with a reversely bent arm 36 which provides at 37 a seat for the wound convolutions 32 of spring 31. It should be understood that the spring 31 is coiled so that it normally tends to completely roll upon itself upwardly towards the upper secured end thereof. In this manner, due to the engagement of the coiled convolutions of the spring with the seat 37 of the platform, the platform at all times is normally urged upwardly towards the dispensing opening 29 in the housing top to present the outermost sheet of the stack to the dispenser opening. To replenish the sheet supply in the housing, it is merely necessary to draw the support platform downwardly toward the bottom 38 of the housing against the urging of the spring to uncoil the same.

As seen in FIG. 2, the upper surface of platform 21 is slightly inclined relative to the horizontal. The platform incline is governed by the downward slope of housing

top 28 so that the sheets in the stack are parallel to the housing top. Preferably housing top 28 is sloped as shown so that cigarettes and other objects cannot be rested thereon. However, top 28 and platform 21 may both be horizontally arranged if found desirable.

While a spring may be employed which will apply any suitable constant predetermined pressure to the support platform to urge the same upwardly, in a dispenser having a metal platform of a size of about 2½ inches by 4½ inches which is adapted to support a stack of standard folded sheets of similar size as hereinafter disclosed, a total spring pressure in the range of from 1 to 5 pounds on the platform preferably is employed, with a 2½ pound spring pressure having been found well suited for this purpose. The constant spring pressure exerted on the platform by spring 31 insures that each sheet of the stack will be urged against the top 28 of the housing with uniform force irrespective of the quantity of sheets in the stack. This insures proper sheet feeding at all times and precludes sheet tearing and removal difficulties when the sheet supply has just been replenished.

Referring now to FIG. 4, an important feature of this invention resides in the particular configuration of the dispenser opening 29 provided in the top 28 of the housing. As seen, the dispenser opening is of non-rectangular shape, and preferably is elliptical in configuration. Opening 29 is provided with a major axis 41 and a minor axis 42 extending normal thereto as seen in FIG. 4. As also seen in FIG. 4, preferably the major and minor axes of the elliptical dispenser opening are substantially equal to the respective major and minor dimensions of the rectangular folded sheets to be dispensed from the housing. Preferably, the length of major axis 41 is slightly greater than the length of the rectangular sheets to be dispensed therefrom so that an open space or gap 43 exists between the arcuate ends 44 of the opening and the lateral edges 46 of the sheets positioned adjacent to such ends.

Preferably, the length of minor axis 42 of the opening is about equal to or slightly less than the width of the folded sheets so that at most only a small gap may exist between the arcuate edges 47 of the opening at opposite ends of minor axis 42 and the longitudinal edges 48 of the sheets located adjacent thereto. Preferably no gaps are provided at the ends of the minor axis, however. The aforementioned gaps 43 at the ends of the major axis provide clearance so that individual sheets may be withdrawn from the dispenser opening without tearing.

With this arrangement, substantially only the corner portions of the uppermost sheets in the stack are clamped beneath and engaged with the undersurface of the housing top 28. As a result of this limited contact of the housing top with the sheets to be withdrawn, easy and uniform removal of individual sheets without tearing is facilitated. That is, each corner portion of the uppermost sheets of the stack 10 is clamped beneath the housing top by top clamping areas 51, 52, 53 and 54 respectively, each of which is substantially triangular in shape as defined by the dotted outline of the sheet corners as seen in FIG. 4.

One specific example of the applicability of this invention as applied to the dispensing of standard individual interleaved toilet tissue sheets will be described. Each such sheet is of rectangular outline having the dimensions of 4½ inches by 5 inches when unfolded. Manufacturing tolerances in this regard may result in those dimensions varying plus or minus ⅛ inch. Each sheet is folded along a median fold line to provide two folded sheet panels P and P' (FIG. 2) of substantially equal size so that the resulting folded sheet is of the size of substantially 4½ inches by 2½ inches. As desired, each sheet panel may be of single ply construction or may include two or more plies. The panels P and P' of adjacent sheets are interleaved or interfolded in a well known manner so that withdrawal of one folded sheet panel automatically results in at least partial withdrawal of the panel of the underlying sheet which is interfolded therewith.

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With folded sheets of the dimension described, it has been found suitable to employ a dispenser housing having an elliptical opening the major axis of which is approximately $4\frac{3}{8}$ inches and the minor axis of which is approximately $2\frac{1}{2}$ inches. In this manner, the open spaces or gaps 43 provided between the opposite ends of the major axis 41 and the lateral edges of the folded sheets 46 positioned adjacent thereto are approximately $\frac{1}{16}$ of an inch, with a clearance of plus or minus $\frac{1}{32}$ of an inch in this regard being acceptable. While in the illustrated embodiment, no gaps are employed at the ends of minor axis 42, small gaps also could be employed there if the size of the stack clamping areas is to be decreased relative to sheets of a given size.

While desirably the small gaps noted between the arcuate edges of the opening and the straight edges of the folded sheets are provided, such gaps under all conditions are not necessary so long as the length of both the major and minor axes of the opening are approximately equal to the major and minor dimensions of the folded rectangular sheets.

The particular configuration of the non-rectangular opening relative to the rectangular sheets is important in that the relationship existing between the opening and the sheets results in a popping-up type withdrawal action which is effective to cause one panel P of a sheet to project substantially upright from the housing end to be readily graspable for subsequent withdrawal. That is, referring to FIGS. 5 through 8, as a panel P of the uppermost sheet 56 of the stack 10 is grasped for removal, and as such panel is pulled generally upward in the direction of the arrow, it pulls therewith an outer panel P of the underlying sheet 57 which is interfolded therewith. However, as seen by comparing FIGS. 7 and 8, when the upper panel P of sheet 56 is being withdrawn, the upper panel P of the next underlying sheet 57 is caused to ride upon spaced portions 58 and 59 of one side the arcuate edge of the opening 29. As a result, panel P of underlying sheet 57 is transversely bowed or buckled as at 61 in FIGS. 7 and 8. Such transverse bowing stabilizes and rigidifies the panel P of the underlying sheet so that the same is made more sturdy and is able to remain in the substantially upright position seen in FIG. 8 when the outermost sheet has been completely withdrawn. This bowing is important due to the flexible nature of the paper from which toilet tissue sheets are made.

Because the support platform 21 is urged upwardly against the stack to force the stack and the uppermost sheet against the housing clamping areas provided, the uppermost bowed projecting panel is maintained in its buckled condition due to the frictional engagement thereof with the undersurface of the housing top. That is, after a sheet panel is bowed transversely as seen in FIG. 8, the spring pressure applied to the stack maintains such panel bowed so that it can stand substantially upright for grasping. As a result, at all times a substantially upright panel projects from the dispenser top so long as a supply of sheets exists in the dispenser container.

While an elliptical opening of the type illustrated in the drawings is preferred for this construction, it should be understood that if desired an opening of other non-rectangular configuration which departs somewhat from the elliptical configuration also could be employed. For example, a substantially diamond shaped opening having relatively straight edges extending between the ends of the major and minor axes thereof also could be employed, but the elliptical opening illustrated is preferred.

Because the subject folded sheets are interleaved in the manner illustrated, alternate sheets to be withdrawn will be alternately engaged with opposite sides of the dispensing opening but the sheet pop-up withdrawal and clamping action will produce the desired results irrespective of which side of the opening is engaged by a given sheet.

A further important feature of this invention resides in

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the fact that several packs of interleaved folded sheets, each of which comprises several hundred sheets and is surrounded by a paper retaining band in a well known manner, may be simultaneously positioned in the dispenser container so that a reserve supply of sheets is available. As the sheets from one pack is exhausted so that the band around the underlying pack is presented to the opening 29, a consumer may reach through the opening to tear and withdraw the band so that the dispensing procedure may be carried out upon a panel of the uppermost sheet of the new pack being grasped and pulled.

While one embodiment of the subject dispenser container package combination has been illustrated herein, it should be understood that modifications thereof which may become apparent to a skilled person in the art after studying this disclosure also are contemplated as being included in the invention and the same should be interpreted in light of the appended claims.

I claim:

1. In combination, a dispenser and a stack of folded sheets positioned in said dispenser to be individually withdrawn therefrom; each of said sheets comprising a pair of rectangular panels hingedly connected with each other along a fold line, the panels of adjacent sheets in said stack being interfolded with each other whereby withdrawal of one sheet from said dispenser automatically withdraws at least partially a panel of another sheet which is interfolded therewith; said dispenser comprising a housing to be vertically mounted on a supporting surface, a sheet dispensing opening in an end of said housing through which individual sheets are withdrawable, a platform movably mounted in said housing on which said stack of sheets is supported, means normally urging said platform toward said housing end whereby the outermost sheet in said stack is engaged with said end; said dispensing opening being non-rectangular in configuration and having major and minor axes, the lengths of the major and minor axes of said dispensing opening being substantially equal to the respective major and minor dimensions of the folded sheets of said stack, said sheets being oriented in said housing with their fold lines and major dimension extending in the same direction as the major axis of said opening, whereby corner portions of the sheets of said stack are engaged with said housing end.

2. In combination, a dispenser and a stack of folded sheets positioned in said dispenser to be individually withdrawn therefrom in unfolded condition; each of said sheets comprising a pair of rectangular panels of substantially equal size hingedly connected with each other along a fold line, the panels of adjacent sheets in said stack being interfolded with each other whereby withdrawal of one sheet from said dispenser automatically withdraws at least partially a panel of another sheet which is interfolded therewith; said dispenser comprising a housing to be vertically mounted on a supporting surface, a sheet dispensing opening in the top of said housing through which individual sheets are withdrawable, a support platform slidably positioned in said housing for supporting said stack of folded sheets thereon, and means in said housing normally urging said platform upwardly toward said housing top whereby the uppermost sheet in said stack is engaged with said top; said dispensing opening being substantially elliptical in configuration and having major and minor axes, the length of the major axis of said opening being slightly greater than the major dimension of each folded rectangular sheet of said stack so that an open space exists between the opposite edge portions of said opening at the ends of said major axis and the edges of the sheets located adjacent thereto, said sheets being oriented in said housing with their fold lines and major dimension extending in the same direction as the major axis of said opening, whereby corner portions of the sheets of said stack are engaged with said housing top,

withdrawal of said uppermost sheet from said dispenser effecting transverse bowing and automatic popping-up of a panel of the next underlying sheet of said stack which is partially withdrawn therewith, whereby such bowed panel projects from said opening and is maintained by the bow therein substantially upright for easy grasping.

3. In combination, a dispenser and a stack of folded sheets positioned in said dispenser to be individually withdrawn therefrom in unfolded condition; each of said sheets comprising a pair of rectangular panels of substantially equal size hingedly connected with each other along a fold line, the panels of adjacent sheets in said stack being interfolded with each other whereby withdrawal of one sheet from said dispenser automatically withdraws at least partially a panel of another sheet which is interfolded therewith; said dispenser comprising a housing to be vertically mounted on a supporting surface, a sheet dispensing opening in the top of said housing through which individual sheets are withdrawable, a support platform slidably positioned in said housing for supporting said stack of folded sheets thereon, and means in said housing normally urging said platform upwardly toward said housing top whereby the uppermost sheet in said stack is engaged with said top; said dispensing opening being non-rectangular in configuration and having major and minor axes, the lengths of the major and minor axes of said dispensing opening being substantially equal to the respective major and minor dimensions of the folded sheets of said stack, said sheets being oriented in said housing with their major and minor dimensions respectively extending in the same directions as the respective major and minor axes of said opening, and with their fold lines extending in the same direction as the major axis of said opening whereby substantially only corner portions of the sheets of said stack are engaged with said housing top so that sheet withdrawal is facilitated, withdrawal of said uppermost sheet from said dispenser effecting transverse bowing and automatic popping-up of a panel of the next underlying sheet of said stack which is partially withdrawn therewith, whereby such bowed panel projects from said opening and is maintained by the bow therein substantially upright for easy grasping.

4. In combination, a dispenser and a stack of folded sheets positioned in said dispenser to be individually withdrawn therefrom in unfolded condition; each of said sheets comprising a pair of rectangular panels of substantially equal size hingedly connected with each other along a fold line, the panels of adjacent sheets in said stack being interfolded with each other whereby withdrawal of one sheet from said dispenser automatically withdraws at least partially a panel of another sheet which is interfolded therewith; said dispenser comprising a housing to be vertically mounted on a supporting surface, a sheet dispensing opening in the top of said housing through which individual sheets are withdrawable, a support platform positioned in said housing for supporting said stack of folded sheets thereon, guide means between said platform and said housing for slidably mounting said platform in said housing, and constant force spring means in said housing normally urging said platform upwardly toward said housing top whereby the uppermost sheet in said stack is engaged with said top; said dispensing opening having an elliptical configuration which has major and minor axes, the lengths of at least the major axis of said elliptical opening being slightly greater than the corresponding major dimension of the folded rectangular sheets of said stack, said sheets being oriented in said housing with their fold lines and major dimension extending in the same direction as the major axis of said opening so that a small open space exists between the opposite edge portions of said opening which lie at opposite ends of such axis and the edges of the sheets of said stack which are located adjacent thereto, whereby substantially only

corner portions of the sheets of said stack are engaged with said housing top and are clamped therebeneath by the upward pressure of said spring means so that sheet withdrawal is facilitated, withdrawal of said uppermost sheet from said dispenser effecting transverse bowing and automatic popping-up of a panel of the next underlying sheet of said stack which is partially withdrawn therewith, whereby such bowed panel projects from said opening and is maintained by the bow therein substantially upright for easy grasping.

5. A toilet tissue dispenser package comprising a vertically positioned dispenser container having a dispensing opening in the top thereof, and a plurality of folded toilet tissue sheets each of which is rectangular when unfolded stacked in said container to be individually withdrawn therefrom; each of said sheets being folded along a central fold line to provide a pair of rectangular panels of substantially equal size, the panels of adjacent sheets of said stack being interleaved with each other whereby withdrawal of one sheet from said container automatically effects at least partial withdrawal of a panel of the next sheet of said stack; said container having means therein for urging said stack of sheets upwardly toward said dispensing opening; said dispensing opening being of substantially elliptical configuration and having major and minor axes the lengths of which are substantially equal to the respective major and minor dimensions of said folded rectangular sheets, said sheets being oriented in said container with their major and minor dimensions respectively extending in the same directions as the respective major and minor axes of said opening, and with their fold lines extending in the same direction as said major axis of said opening so that the sheets of said stack contact said container top only at corner portions of said stack whereby individual sheet withdrawal from said container is facilitated, such individual sheet withdrawal being automatically accompanied by pop-up withdrawal of a panel of the next sheet in said stack and automatic transverse bowing of such panel, such bowing stiffening said panel and maintaining the same substantially upright for easy grasping.

6. In combination, a dispenser and a stack of folded and interleaved sheets in said dispenser; said dispenser comprising an elongated housing having a sheet dispensing opening in an end thereof through which individual sheets of said stack are withdrawable in sequence, said dispensing opening being generally elliptical in configuration and having major and minor axes, a platform slidably mounted in said housing for movement relative to said end, and spring means for normally urging said platform toward said housing end so that the uppermost sheet in said stack of sheets is urged against said housing end; each sheet of said stack being folded into two panels along a fold line so that each sheet has a predetermined maximum dimension extending along its fold line, said stack being positioned in said housing so that the maximum dimension of each sheet is arranged to extend in the same direction as the major axis of said dispensing opening, the length of said major axis of said opening being substantially equal to the maximum dimension of each sheet of said stack.

7. In combination, a dispenser and a stack of folded and interleaved sheets in said dispenser, each of said sheets comprising a pair of panels hingedly interconnected with each other along a fold line, said fold line defining the maximum dimension of each sheet when folded, the panels of adjacent sheets being interleaved with each other whereby withdrawal of one sheet from said dispenser automatically withdraws a panel of another sheet therewith; said dispenser having an opening in an end thereof through which individual sheets are withdrawable in sequence, said dispensing opening being non-rectangular in configuration and being defined by curved edges, said opening having two axes arranged generally at right

angles to each other, one of said axes defining the maximum dimension of said opening, and means for urging said stack of sheets towards said dispenser end, said sheets being arranged in said dispenser with their fold lines which define their maximum dimension when folded extending in the same direction as the axis of said opening which defines the maximum dimension of said opening, said maximum dimension of said sheets being substantially equal to said maximum dimension of said opening.

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