

Aug. 26, 1958

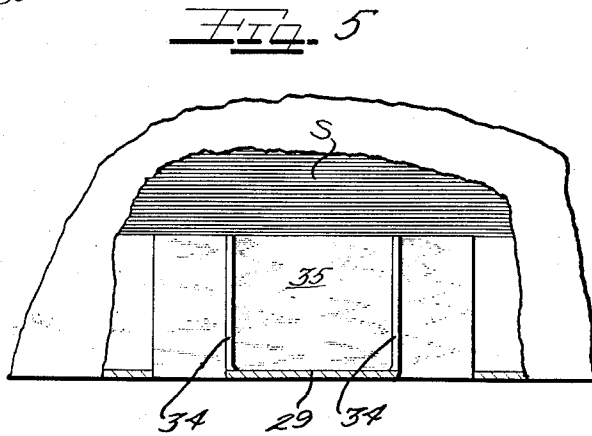
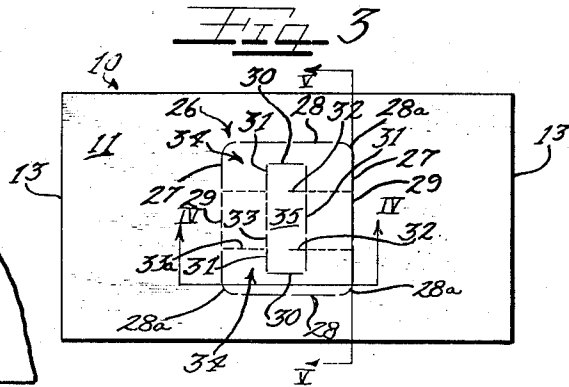
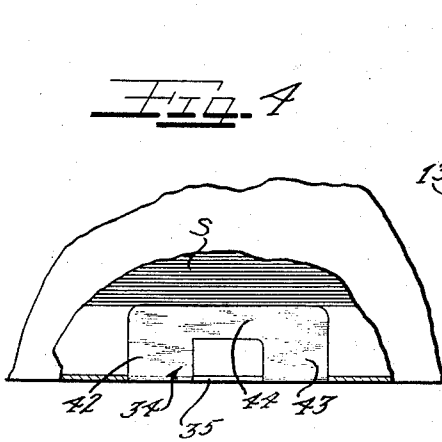
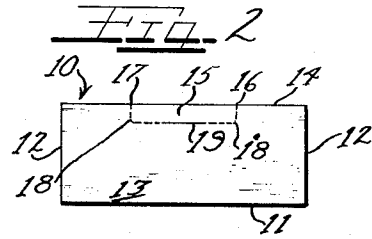
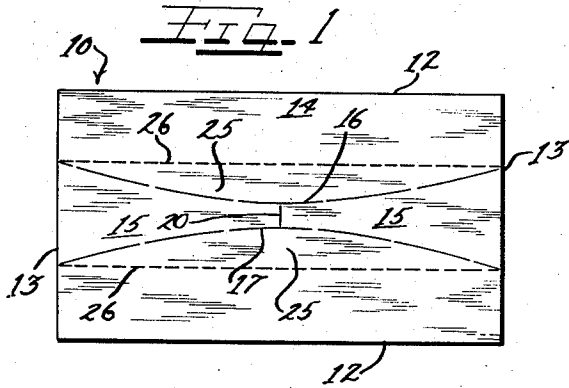
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2,849,152

DISPENSER CARTON

Filed Nov. 15, 1954

3 Sheets-Sheet 1



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FIG.

FIG.

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DISPENSER CARTON

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3 Sheets-Sheet 2

FIG. 6

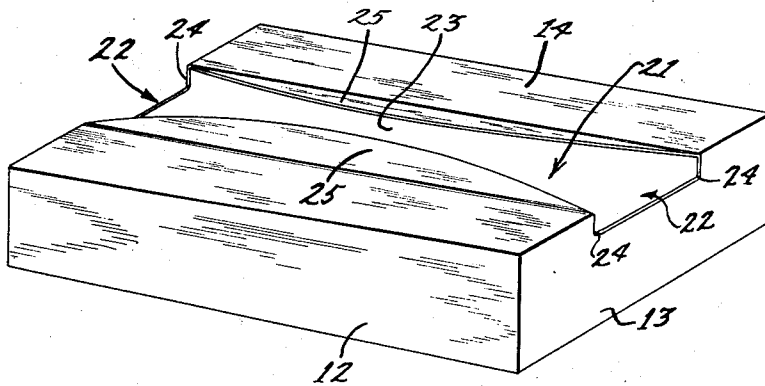
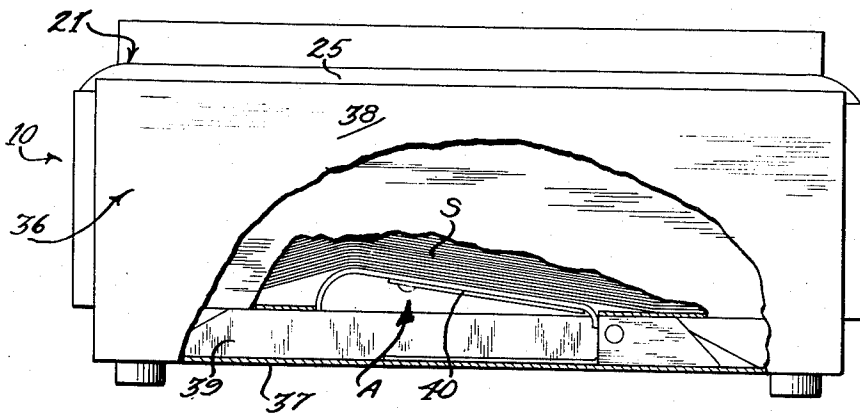


FIG. 7



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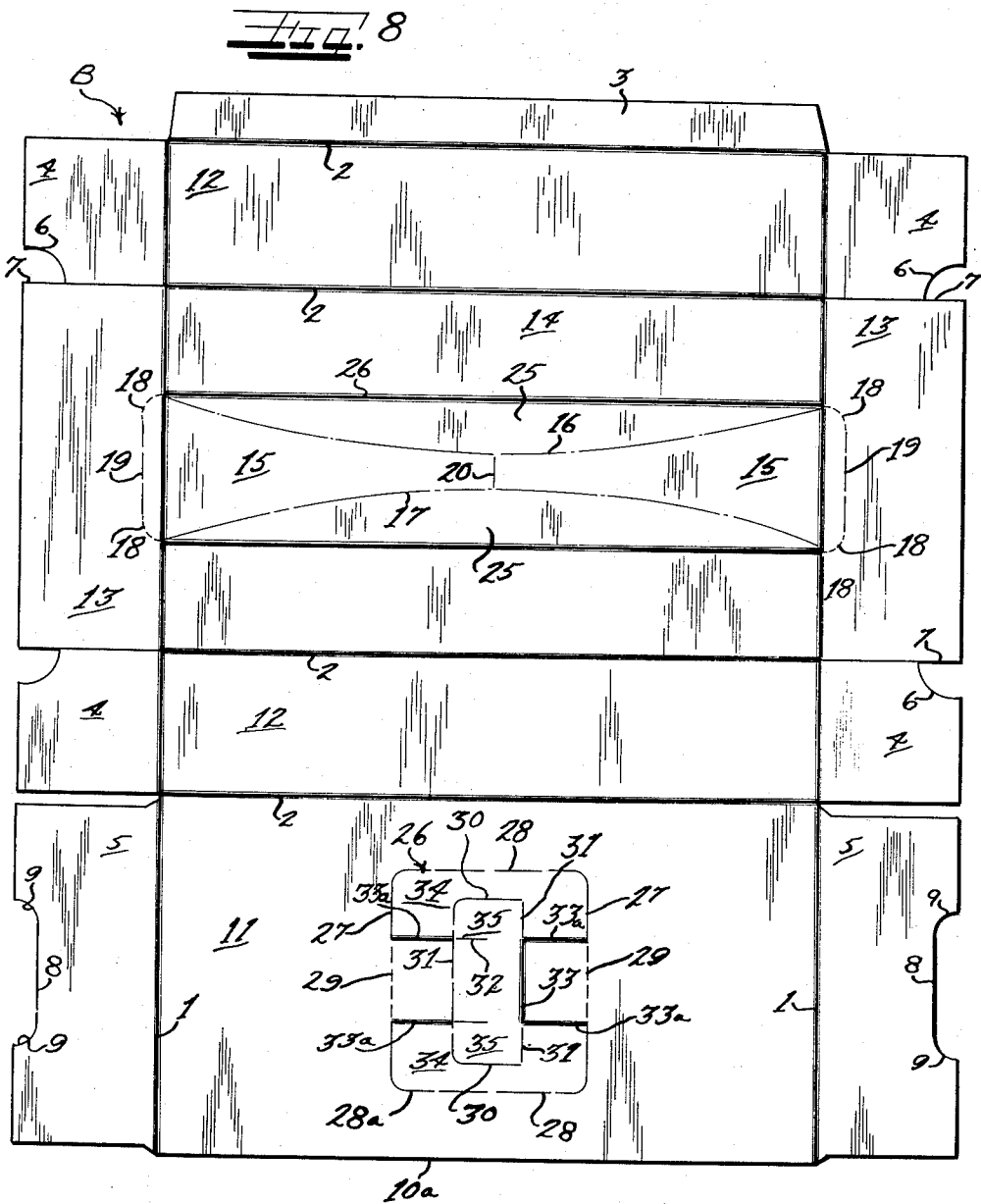
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DISPENSER CARTON

2,849,152

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3 Sheets-Sheet 3



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2,849,152

## DISPENSER CARTON

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Application November 15, 1954, Serial No. 468,749

6 Claims. (Cl. 221—48)

The present invention relates to a new and improved dispensing carton construction in which a stack of paper sheets contained in the carton may be dispensed automatically therefrom, a sheet at a time, down to and including the last sheet in the stack by employing suitable external dispensing apparatus or by utilizing novel means provided integrally in the carton construction.

In handling individual articles of food, especially on the retail level, it is customary to employ a sheet of paper to prevent the bare hand from coming in contact with the food article. This is especially true in handling fresh foods, such as fruits, pastries, and meats. The type of paper sheets most often employed for this purpose is glassine, parchment or other grease-proof papers. These papers are supplied to retailers in several forms, such as in rolls, plain packs or interfolded packs.

The last mentioned form, that is interfolded paper sheets, are customarily packed in cartons having a slit-like aperture or dispensing opening in the top for removing the paper sheet from the carton. The packs of paper sheets are interfolded or leafed in such a manner that the removal of the top sheet of the pack causes an edge of the next sheet to be introduced into the dispensing slot or opening. In this manner, a single sheet at a time can be removed from the carton while the carton is substantially full. However, as the contents of the carton diminish, the removal of the top sheet does not always result in the introduction of the next sheet into the dispensing opening. This is especially true of slippery, highly finished grease-proof papers, such as the glassine papers used by butchers. Accordingly, as the carton becomes empty, it is often necessary for the operator to dig or "grope" into the dispensing opening in order to remove a sheet of paper from the carton.

By the present invention, however, this problem of dispensing sheets from partially full cartons of interfolded papers has been eliminated. According to the general features of the present invention there is provided a new and improved carton for dispensing a sheet at a time from a stack of sheets contained in the carton down to and including the last sheet.

One of the primary objects of this invention is the provision of a carton for dispensing individual sheets from a stack of sheets contained therein in which the stack of sheets is automatically advanced toward a dispensing slot in the top of the carton as the stack is depleted by suitable external dispenser apparatus or, in the absence of such external dispensing apparatus, the stack may be supported in the carton and biased toward the dispensing slot by novel supporting means constructed integrally with the bottom of the carton.

Another object is to provide a new and improved dispenser carton construction for dispensing a sheet at a time from a stack of interfolded paper sheets contained therein in which dispensing of the individual sheets is materially aided either by suitable external dispenser apparatus or by means of a novel stack supporting and

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biasing construction provided integrally in the carton, and in which the carton is also provided with a new and improved form of dispensing slot which allows withdrawal of individual sheets from the carton from either end of the slot or the middle thereof and in which the possibility of accidentally tearing the sheets as they are removed from the carton is effectively reduced to a negligible minimum.

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Other objects, features and advantages of the present invention will be readily apparent from the following detailed description of a preferred embodiment thereof taken in conjunction with the accompanying sheets of drawings, in which:

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Figure 1 is a top plan view of the carton of the instant invention;

Figure 2 is an end elevational view of the carton;

Figure 3 is a bottom plan view of the instant dispensing carton;

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Figure 4 is an enlarged fragmentary view with parts broken away and parts in section view taken along line IV—IV of Figure 3;

Figure 5 is an enlarged fragmentary view with parts broken away and parts in section view taken along line V—V of Figure 3;

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Figure 6 is a perspective view of the instant dispensing carton illustrating the improved dispensing slot construction employed therein;

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Figure 7 is a side elevational view with parts broken away and parts in section illustrating the manner in which individual sheets are dispensed from the instant carton utilizing suitable external dispenser apparatus; and

Figure 8 is a plan view of a blank from which the instant dispenser may be formed.

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In the embodiment shown in the drawings a dispensing carton, shown generally at 10, is formed from a blank B (Figure 8) which is preferably produced from cardboard, fiberboard or a similar pasteboard type of material.

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The carton 10 includes, as its principal components, a generally rectangular bottom 11, parallel opposed side walls 12 and end walls 13, and a top 14, defined generally by parallel score lines 1 extending longitudinally on the blank B and parallel transverse score lines 2.

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A securing tab 3 is provided along the terminal margin of that side wall 12 opposite the bottom 11 on the blank. Securing tabs 4 are provided on both ends of each of the side walls 12 contiguous therewith on the score lines 1. The bottom 11 is provided with a pair of generally rectangular securing and reinforcing tabs 50  
5  
5 contiguous therewith on the score lines 1.

Each of the securing tabs 4 is provided with an arcuately cut out portion 6 on a corner thereof adjacent an end edge of the end walls 13, as at 7, and the side edge of the tab 4. The securing and reinforcing tabs 5 are each provided with an elongated cut out portion 8 having rounded end portions, as at 9, on the side edge thereof intermediate the end edge portions of the tabs 5.

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The blank B is brought into carton defining shape by folding the blank along the transverse score lines 2 so that the top 14 is in parallel superposed relation to the bottom 11. This shape is secured by affixing the tab 3 to the marginal free edge of the bottom 11, as at 10a, by means of staples, adhesive or the like. Thereafter the tabs 4 are folded inwardly on the score lines 1 and the tabs 5 are folded inwardly to overlie the tabs 4. In this position the cut out portions 6 on the tabs 4 coincide with the rounded ends 9 of the cut out portions 8 on the tabs 5 for a reason that will be more fully explained hereinafter. To complete the formation of the carton 10, the end walls 13 are folded inwardly on the score lines

1 to overlie the tabs 5 and are affixed thereto by suitable means such as staples, adhesive or the like.

The carton 10 is provided with means on the bottom 11 to accommodate the supporting of a stack of interfolded paper sheets S (Figures 4, 5 and 7) in spaced relation above the bottom 11 to effect a biasing of the stack S toward the top 14 of the carton 10, as will be explained more fully hereinafter. The carton 10 is also provided with a dispensing slot knock-out portion 15 defined by lines of weakness on the top 14 and the end walls 13. By "lines of weakness" is meant interrupted slits or perforations, or similar non-continuous linear slits, cuts, or perforations commonly employed to define a removable self-sustaining area or configuration in a fiber board article, or the like, which allows the defined area or configuration to be easily disengaged from the article by the application of manual pressure thereto.

As seen best in Figure 1, the dispensing slot knock-out portion 15 is defined on the top 14 of the carton 10 by oppositely bowed lines of weakness 16 and 17 curved toward each other from the ends of line of fold 26, 26 that are spaced equidistantly from the longitudinal mid-line of the top 14. The lines of weakness 16 and 17 extend between and terminate in the end walls 13. As seen best in Figure 8 the lines of weakness 16 and 17, respectively extend downwardly and inwardly in an arcuate manner in each of the end walls 13, as at 18, and communicate or merge into a common straight line 19, below the top edge of the end walls 13 substantially parallel to the top edge of the end walls.

In order to facilitate easy removal of the dispensing slot knock-out portion 15 from the carton 10, a line of weakness or interrupted slit 20 is provided between the arcuate lines of weakness 16 and 17 on the transverse mid-line of the top 14. This allows the dispenser slot knock-out portion 15 to be removed in two separate right and left hand pieces and minimizes the possibility of tearing the top 14 during removal of the knock-out portion 15.

When the dispenser slot knock-out portion 15 is removed or disengaged from the top 14 by applying suitable manual pressure thereto, a dispensing slot shown generally at 21 (Figure 6) is formed thereby. The dispensing slot 21 is of a generally double-concave shape and extends across the top 14 and terminates in the end walls 13. Because of its double-concave configuration, the dispenser slot 21 has end portions 22 in each of the end walls 13 which are wider than the middle of the slot, at 23.

These enlarged end portions 22 in the end walls 13 allow sheets of paper to be withdrawn from the carton 10 from either end of the slot as well as through the middle 23. Heretofore dispensing slots employed in most containers did not extend to and include wider end portions in the end walls of the container. Accordingly, paper sheets could be removed via such slots only through the middle thereof, for, sheets which were pulled out through or toward the end of the slot would tend to engage the restricted terminal portions of the slot or the end walls of the container, which not uncommonly resulted in tearing of such sheets.

The rounded corners of the end portion 22 of the dispenser slot 21, as at 24, which are formed by the downwardly and inwardly extending arcuate portions 18 of the lines of weakness 16 and 17 are adapted to coincide with the arcuate cut-out corner portions 6 on the tabs 4 and the rounded ends 9 on the tabs 5. The cut-out portions 8 on the tabs 5 are of the same general size and shape as the end portions 22 of the dispenser slot. Forming the dispensing slot 21 in the described manner yields a significant improvement over dispensing slots employed heretofore. As may be seen best in Figures 6 and 8 the rounded corners 24 in the end walls 13 help to form a dispensing slot which has no sharp, inwardly projecting corners or edges. That is, all of the edges of the dispenser slot 21 which come into contact with a sheet

as it is withdrawn from the carton 10 are smoothly curved and present no sharp inwardly projecting edges or corners upon which the sheet could be torn. This assures the removal of each and every sheet from the stack S in an intact condition.

In addition, the round corners 24 allow the dispenser slot knock-out portion 15 to be disengaged easily from the carton 10 without tearing the end walls 13. If the corners 24 were square, however, tearing of the end walls 13 could easily occur during removal of the dispenser slot knock-out portion 15, for sharp corners would concentrate the force applied in an extremely small area.

This concentration of force in a small area could easily result in a tearing of the end walls 13.

The curved edge portions of the top 14 defining the double-concave dispensing slot 21 provide curved tabs 25. In operation the curved tabs 25 on the top 14 are bent upwardly and outwardly away from the carton 10 (Figure 6) about the score lines 26 (Figure 1) provided on the top 14. When bent upwardly to the angled position shown in Figure 7 the curved tabs 25 provide means for guiding the sheets being withdrawn from the stack S via the dispensing slot 21. The curved tabs 25 also provide means for maintaining the outwardly projecting free edges of the uppermost or top sheet of the stack S in a generally upright manually accessible position which materially aids in removal of the top sheet from the carton.

As referred to previously, means are provided on the bottom 11 of the carton 10 to accommodate the supporting of the stack S in spaced relation above the bottom 11 in order to effect the biasing of the stack toward the dispensing slot 21 in the top 14. In the embodiment shown in the drawings (Figure 3) such means comprise a generally rectangular knock-out portion shown generally at 26, defined by transverse parallel lines of weakness 27 and longitudinal parallel lines of weakness 28 arcuately merging with lines 27 to form rounded corners 28a. The center portions of the lines 27, as at 29, are not cut through the bottom 11 but are merely scored, for a reason that will be explained more fully hereinafter.

Additional lines of weakness are provided within the confines of the knock-out portion 26 on the bottom 11. These additional lines of weakness include lines 30 which extend parallel to the outer lines of weakness 28, and lines of weakness 31 which are parallel to the outer lines of weakness 27 and intersect the lines 30.

Spaced parallel slits 32 extend inwardly from the right hand line of weakness 31 to approximately the center of the knock-out portion 26 or the transverse mid-line of the bottom 11. The central portion of the left hand line of weakness 31, as at 33, is merely scored and does not extend through the bottom 11. Parallel spaced score lines 33a are provided in aligned relationship with the slits 32 and extend between the outer lines 27 and the inner lines 31. The function of the slits 32 and the scored portions 33 and 33a will be explained more fully hereinafter in describing the operation of the dispensing carton 10.

The outer transverse lines of weakness 27 extending from the central, uncut portion 29 thereof into communication with the longitudinal outer lines of weakness 28 in cooperation with the inner lines of weakness 30 and 31 and the score lines 33a define a pair of generally U-shaped diametrically opposed supporting tabs, shown generally at 34. The inner longitudinal and transverse lines of weakness 30 and 31 define a locking tab 35 within their confines.

The stack of sheets S contained within the carton 10 may be supported in spaced relation above the bottom 11 and biased toward the dispensing slot 21 in the top 14 in one of two ways. These are: (1) by utilizing an external means in the form of a dispensing apparatus; or (2) by means of the U-shaped supporting tabs 34 coacting with the locking tab 35 as provided integrally with the knock-out portion 26.

When external means are employed in biasing stack S toward the dispenser slot 21, the centrally disposed, generally rectangular knock-out portion 26 on the bottom 11 is removed or disengaged therefrom by suitable manual pressure. Disengagement or removal of the knock-out portion 26 produces a generally rectangular aperture in the bottom 11 corresponding in size and shape to the knock-out portion 26. The aperture thus formed accommodates introduction of external means into the carton 10 for biasing the stack S toward the top 14.

Such external biasing means may, of course, assume a variety of forms. A preferred form comprises the dispenser apparatus described in my co-pending application U. S. Serial No. 382,168, filed September 24, 1953, now Patent No. 2,795,353, issued June 11, 1957, an illustration of which is shown in Figure 7. As shown therein, the carton 10 is removably carried by a dispensing mechanism shown generally at 36. The dispenser 36 includes a generally C-shaped bracket having a base portion 37, parallel side walls 38 and inwardly extending box retaining flanges (not shown). The free end edges of the box retaining flanges are in parallel opposed relationship to form a gap adapted to coincide with the dispensing slot 21. A pair of generally upright, parallel box supporting flanges 39 are provided on the base portion 37. A centrally disposed spring-loaded pressure foot 40 is carried by the base 37 between the parallel box supporting flanges 39.

In employing the instant carton 10 in the dispenser 36, one first disengages or removes the knock-out portion 26 from the bottom 11 to provide an aperture, A therein. The carton 10 having the knock-out portion 26 thus removed from the bottom thereof, and preferably also having the dispensing slot knock-out portion 15 removed from the top and the end walls thereof, is inserted into the C-shaped bracket 36 from the right hand side of the bracket as shown in Figure 7. As the carton 10 is advanced into the bracket 36 it rides upon and is supported by the parallel box supporting flanges 39. The carton 10 is advanced into the dispenser 36 until the aperture A coincides with and is located directly over the pressure foot 40. The pressure foot 40, which is initially depressed by the introduction of the carton 10 into the dispenser, then snaps up into the carton 10, contacts the bottom of the stack S, and exerts a resilient, continuous biasing pressure on the stack upwardly toward the dispensing slot 21. This permits each and every sheet in the stack S to be removed a sheet at a time down to and including the last sheet in the carton 10.

In the absence of external biasing means, the supporting of the stack S in spaced relation above the bottom 11 and the biasing of the stack S toward the dispensing slot 21 may be effectively accommodated by means of the U-shaped supporting tabs 34 coacting with the locking tab 35 on the knockout portion 26.

When external biasing means are not employed, the knock-out portion 26, naturally, is not disengaged from the bottom 11, but rather is allowed to remain intact. The manner in which the U-shaped supporting tabs 34 coacting with the locking tab 35 support the stack S, and the procedure followed in effecting such support are shown in Figures 4 and 5. As seen therein one first applies inwardly directed manual pressure on the U-shaped supporting tabs 34 in the area between the outer lines of weakness 28 and the inner lines 30. This causes the diametrically opposed U-shaped supporting tabs 34 to be disengaged from the knock-out portion 26 and bent upwardly into the carton 10 along the score lines 33a. As seen best in Figure 4, the supporting tabs 34 when bent upwardly into the carton 10 have a generally inverted U-shape and include upwardly extending side legs 42 and 43 and a top or end leg 44.

The U-shaped supporting tabs 34 are preferably bent upwardly into the carton 10 to a position at which they are substantially parallel to one another and substan-

tially parallel to the side walls 12 of the carton 10. In this position, the supporting tabs 34 hold the stack S in spaced relation above the bottom of the carton; the stack S resting upon the end legs 44.

The tabs 34 are maintained in this generally upright stack-supporting position by means of the locking tabs 35. As seen best in Figure 5, the locking tabs 35 are bent upwardly into the carton 10, the bending being effected at the uncut portions 33 of the inner transverse lines of weakness 31. As the locking tabs 35 are bent upwardly into the carton 10 the side legs 42 and 43 and the end legs 44 of the supporting tabs 34 are introduced into the slits 32 on the locking tabs 35. Thus, when the locking tabs are raised to a generally upright position substantially parallel to the end walls 13, the inner marginal extremities of the slits 32 grippingly engage the sides of the supporting tabs 34 and lock them against transverse movement.

It will of course be appreciated that the supporting tabs 34 and the locking tabs 35 function most effectively when the stack S is partially depleted. Most of the difficulty encountered in removing interfolded paper sheets from a carton of the instant type arises primarily when the stack is nearing depletion, usually after about two-thirds of the stack has been used. Therefore, the supporting tabs 34 and the locking tabs 35 are usually brought into operation, in the absence of external biasing means, when the stack S is partially depleted, preferably when there is sufficient room to allow the tabs 34 to be bent upwardly into the carton 10 without bending or damaging the supporting tabs.

It will be apparent to those skilled in the art that I have now provided a new and improved form of dispenser carton construction in which sheets in a stack of sheets contained in the carton may be efficiently dispensed automatically therefrom, a sheet at a time, down to and including the last sheet in the stack by employing either a suitable external dispensing apparatus, or by utilizing the novel supporting and locking tabs provided integrally with the bottom of the carton.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

I claim as my invention:

1. A carton for dispensing a sheet at a time from a stack of interfolded paper sheets contained therein which comprises, a bottom, parallel opposed end and side walls and a top parallel to said bottom, lines of weakness on said bottom defining a knock-out portion adapted to be disengaged from said bottom to provide an aperture to accommodate the introduction of external means into said carton for biasing said stack toward the top of said carton, lines of weakness defining a pair of generally U-shaped diametrically opposed supporting tabs on said knock-out portion, said supporting tabs being adapted to be bent upwardly into said carton to a position substantially parallel to one another and parallel to said side walls to support said stack of sheets in spaced relation above said bottom and bias said stack toward said top in the absence of said external biasing means, lines of weakness defining locking tab means on said bottom adapted to be bent upwardly into said carton to grippingly engage said supporting tabs and lock the same in a generally upright stack supporting position, and lines of weakness defining a removable dispensing slot knock-out portion on said top and end walls, said dispensing slot knock-out portion being adapted to be disengaged from said carton to provide a double-concave dispensing slot in said top extending to and terminating in said end walls, the termination of said dispensing slot being defined in each of said end walls by downwardly and inwardly extending arcuate corners merging into a common straight edge below the top edge of each of said end walls substantially parallel to said top edge so that said dispensing slot is free of sharp inwardly projecting corners thereby assuring

the dispensing of each sheet in an intact condition, the top of said carton including tab-forming lines of fold spaced equidistantly from the longitudinal mid-line of said top and the resulting tabs being adapted to be bent angularly outwardly to provide means for guiding sheets being withdrawn from said carton and means for maintaining the outwardly projecting free edge of the top sheet of the stack in said carton in a generally upright manually accessible position.

2. A carton for dispensing a sheet at a time from a stack of sheets contained therein including a bottom, parallel opposed side and end walls and a top, lines of weakness on said bottom defining a knock-out portion adapted to be disengaged from said bottom to provide an aperture to accommodate the introduction of external means into said carton for biasing said stack toward the top of said carton, lines of weakness on said knock-out portion defining supporting tabs for supporting said stack of sheets in spaced relation above said bottom in the absence of said external biasing means, means for locking said supporting tabs in stack supporting disposition, and lines of weakness defining a dispensing slot knock-out portion on said top and end walls adapted to be disengaged from said carton to provide a double-concave dispensing slot having the ends thereof terminating in said end walls, said slot being free of inwardly projecting corners to assure the dispensing of each sheet from said carton in an intact condition and allowing the withdrawal of sheets from said carton through either end of said slot and through the middle thereof.

3. A carton for dispensing a sheet at a time from a stack of sheets contained therein including a bottom, parallel opposed side and end walls and a top, lines of weakness on said bottom defining a knock-out portion adapted to be disengaged from said bottom to provide an aperture to accommodate the introduction of external means into said carton for biasing said stack toward the top of said carton, lines of weakness on said knock-out portion defining supporting tabs adapted to be bent upwardly into said carton to a position substantially parallel to said side walls for supporting said stack of sheets in spaced relation above said bottom in the absence of said external biasing means, lines of weakness on said knock-out portion defining locking tab means adapted to be bent upwardly into said carton to grippingly engage said supporting tabs and lock the same in a generally upright paper supporting position, and lines of weakness defining a dispensing slot knock-out portion on said top and end walls adapted to be disengaged from said carton to provide a double-concave dispensing slot having the ends thereof terminating in said end walls, said slot being free of inwardly projecting corners to assure the dispensing of each sheet from said carton in an intact condition and allowing the withdrawal of sheets from said carton through either end of said slot and through the middle thereof.

4. A carton for dispensing a sheet at a time from a stack of sheets contained therein including a bottom, parallel opposed side and end walls, a top and means on said top and end walls adapted to provide a dispensing slot therein for the removal of said sheets from said carton, the improvement which comprises providing lines of weakness defining a knock-out portion on said bottom

adapted to be disengaged therefrom to provide an aperture to accommodate the introduction of external means into said carton for biasing said stack toward the top of said carton, lines of weakness on said knock-out portion defining supporting tabs for supporting said stack of sheets in spaced relation above said bottom in the absence of said external biasing means and means for locking said supporting tabs in stack supporting disposition.

5. A carton for dispensing a sheet at a time from a stack of sheets contained therein including a bottom, parallel opposed side and end walls, a top and means on said top and end walls adapted to provide a dispensing slot therein for the removal of said sheets from said carton, the improvement which comprises providing lines of weakness defining a knock-out portion on said bottom adapted to be disengaged therefrom to provide an aperture to accommodate the introduction of external means into said carton for biasing said stack toward the top of said carton, lines of weakness on said knock-out portion defining supporting tabs adapted to be bent upwardly into said carton to a position substantially parallel to said side walls for supporting said stack of sheets in spaced relation above said bottom in the absence of said external biasing means and lines of weakness on said knock-out portion defining locking tab means adapted to be bent upwardly into said carton to grippingly engage said supporting tabs and lock the same in a generally upright paper supporting position.

6. In a device for dispensing a sheet at a time from a stack of sheets contained therein, an enclosure having spaced end walls, a panel extending between said end walls and having an elongated sheet-dispensing opening defined by opposed longitudinally extending edges smoothly and continuously curved toward each other from said end walls toward the intermediate portion of said opening to provide an opening that is relatively narrow at its intermediate portion and that gradually flares from said intermediate portion toward and into said end walls, said end walls having recesses in their upper edges forming full width extensions of said sheet-dispensing opening into said end walls, the longitudinal edges of said opening being upstanding from the general plane of said panel to support at their intermediate portion an exposed portion of the sheet to be dispensed in a position removed from the plane of the panel to facilitate grasping of said sheet by the user.

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