

Nov. 10, 1964

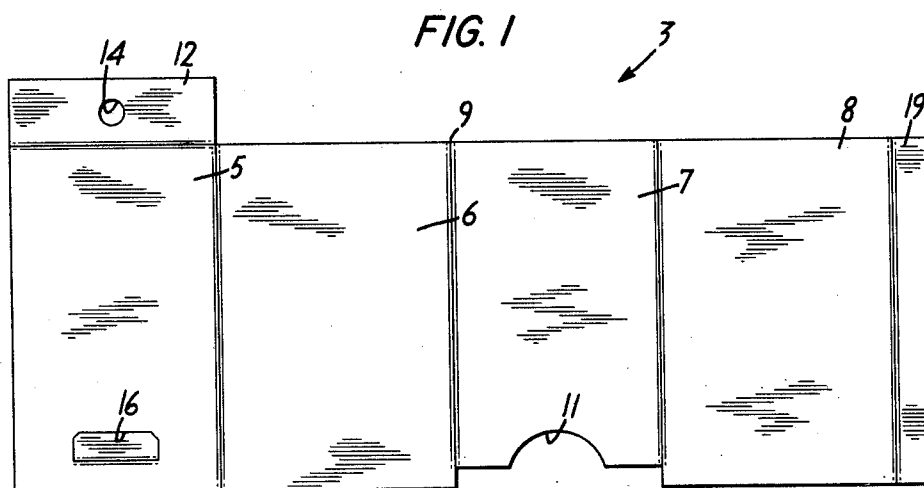
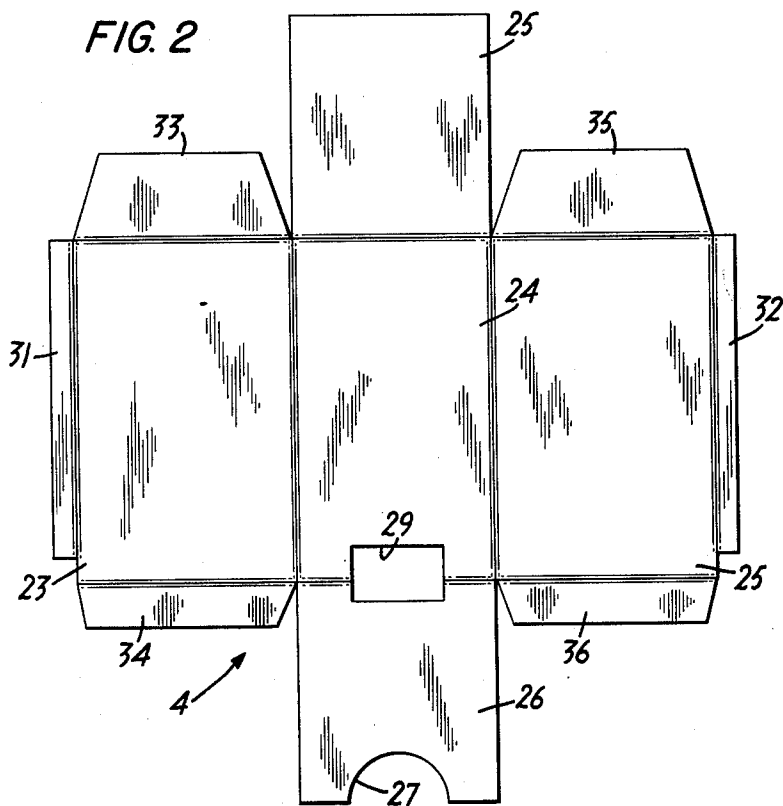
W. J. BUA

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ARTICLE DISPENSER HAVING A REMOVABLE SUPPLY CARTRIDGE

Filed Aug. 20, 1962

5 Sheets-Sheet 1



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FIG. 3

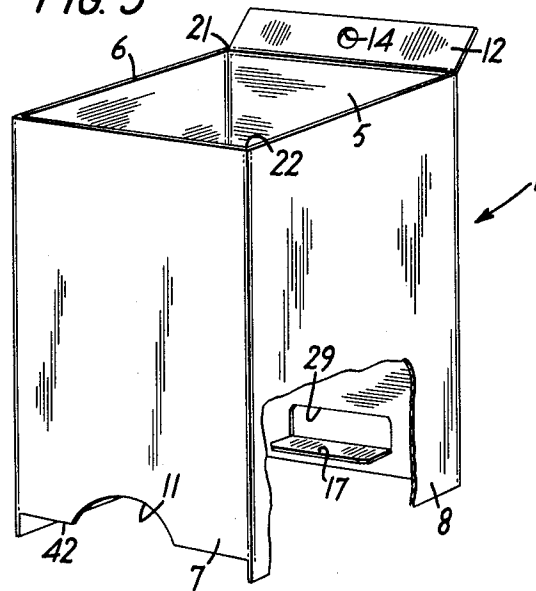
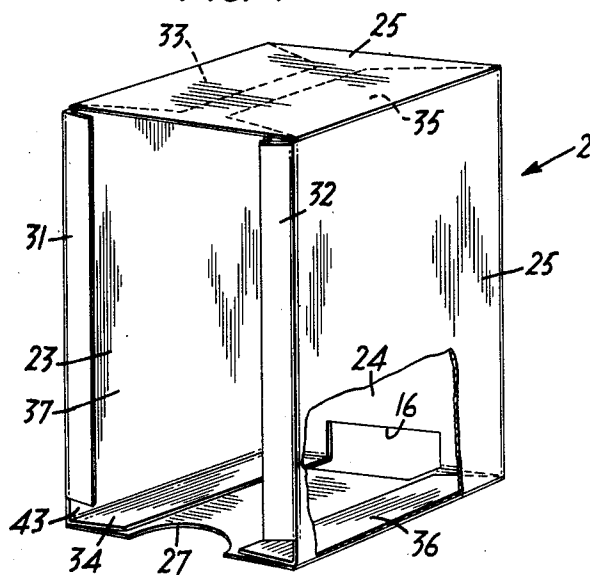


FIG. 4



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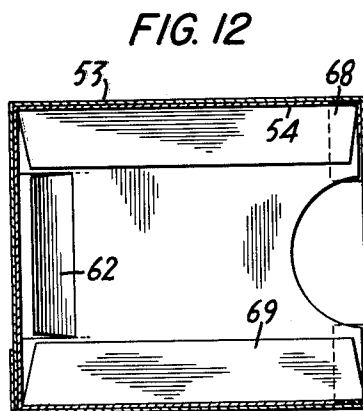
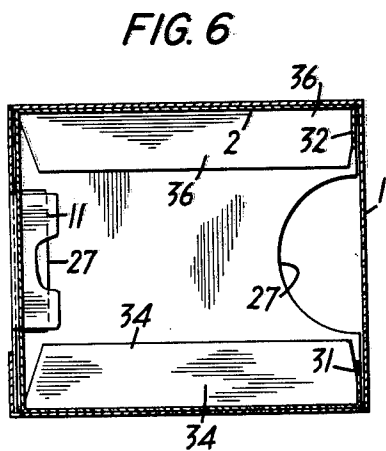
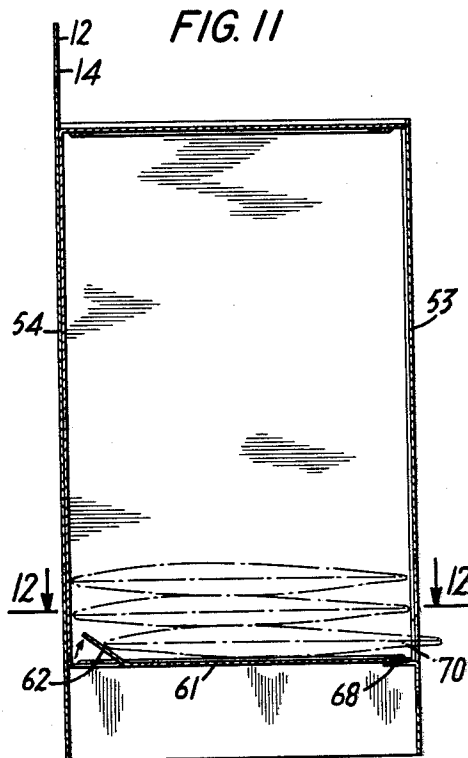
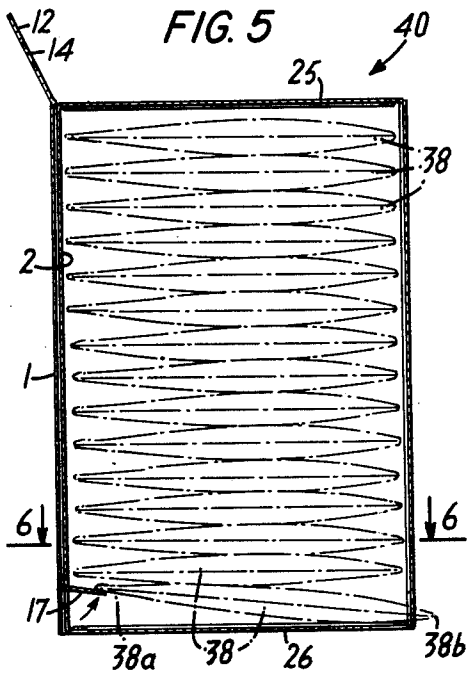
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FIG. 7

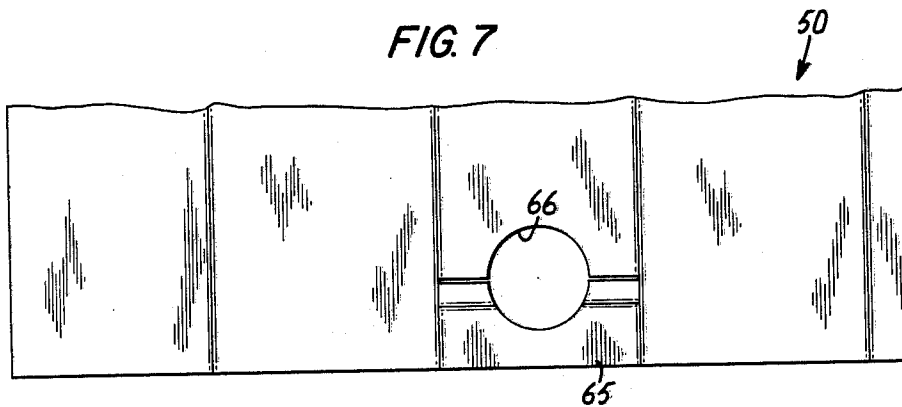


FIG. 8

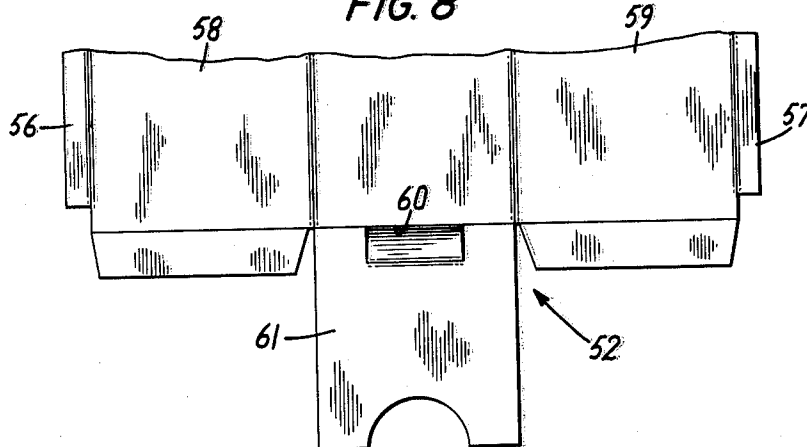


FIG. 9

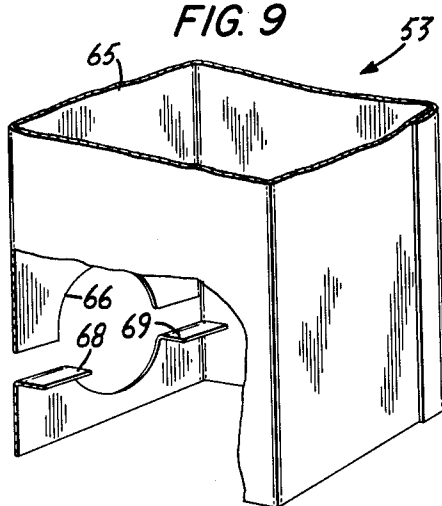
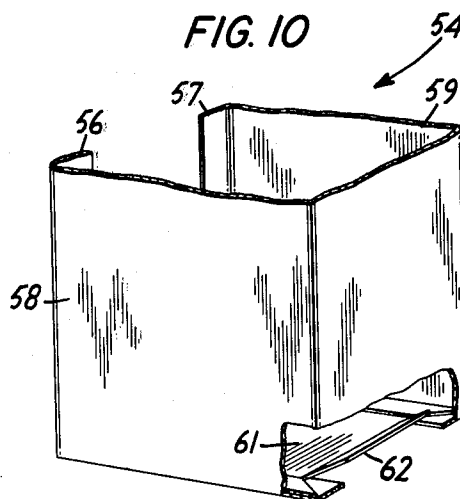


FIG. 10



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FIG. 13

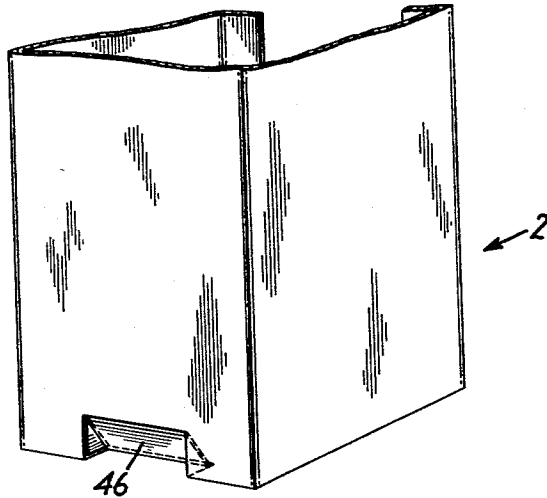


FIG. 14

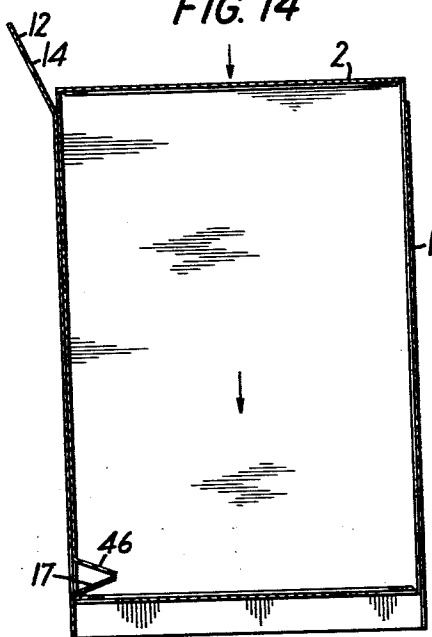
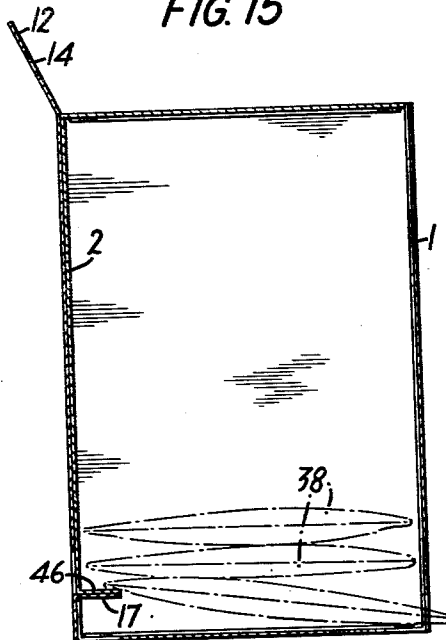


FIG. 15



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ARTICLE DISPENSER HAVING A REMOVABLE SUPPLY CARTRIDGE

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5 Claims. (Cl. 221-197)

This invention relates generally to packaging and more particularly to a new and novel package.

In today's highly competitive and busy age packaging has become very important and has assumed a major importance in promotion of sales of articles and convenience to the user.

A principal object of the invention is the provision of a new and novel package in which component parts thereof are combinable into a dispenser for dispensing individually alike articles packaged in the package.

Another object of the invention is to provide a package in which the component parts of the dispenser thereof are one-piece parts each made automatically and inexpensively of a one-piece blank of paperboard.

Still another object of the present invention is to provide a dispensing device component part in the nature of a tray which is adapted to receive and retain alike articles in the package and then is assembled with a casing and forms the magazine of a dispenser for dispensing the articles individually.

A feature of the package of the invention is the provision of trays in the package which act as magazines in a dispenser when assembled with an outer casing and in which the casing is provided with a deflectable tab capable of acting as an ejector for partially ejecting the individual articles successively, which are stacked within the tray or magazine, through discharge openings registering in the outer casing and tray or magazine.

Other features and advantages and objects of the package and dispenser device in accordance with the present invention will be better understood as described in the following specification and appended claims, in conjunction with the following drawing, in which:

FIG. 1 is a plan view of a paperboard blank for forming a component part of a package according to the invention;

FIG. 2 is a plan view of another paperboard blank for forming another component part of the package according to the invention;

FIG. 3 is a perspective view partly cut-away illustrating an open-end casing formed from the blank illustrated in FIG. 1;

FIG. 4 is a perspective view partly cut-away illustrating a tray formed from the blank illustrated in FIG. 2;

FIG. 5 is an elevation section view of the components illustrated in FIGS. 3 and 4, in unassembled condition illustrating the assembly of a dispenser device when the components are assembled according to the invention and illustrates the operation of the dispenser with alike articles stored therein;

FIG. 6 is a section view taken along line 6-6 of FIG. 5;

FIG. 7 is a fragmentary plan view of another paperboard blank for forming another embodiment of the casing according to the invention;

FIG. 8 is a fragmentary plan view of another paperboard blank for forming another embodiment of a package tray usable as a dispenser magazine according to the invention;

FIG. 9 is a fragmentary perspective view partly cut-away illustrating another casing formed from the blank in FIG. 7;

FIG. 10 is a fragmentary perspective view partly cut-away illustrating a tray formed from the blank illustrated in FIG. 8;

FIG. 11 is a sectional view illustrating another embodi-

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ment of a dispenser device formed by the assembling of the component parts illustrated in FIGS. 9 and 10;

FIG. 12 is a view taken along section line 12-12 of FIG. 11;

FIG. 13 is a fragmentary view illustrating a paperboard tray forming a third embodiment of a magazine usable with the casing illustrated in FIG. 3 in forming a dispenser;

FIG. 14 is an elevation sectional view illustrating assembly of a dispenser formed by a magazine of the type illustrated in FIG. 13 and a casing of the type illustrated in FIG. 4; and

FIG. 15 is an elevation sectional view illustrating the operation of the dispenser in FIG. 14.

While the present invention will be illustrated and described as applied to the packaging and dispensing of teabags which are packaged in an individual packet or envelope, it will be understood that the invention is equally applicable to the packaging and dispensing of other items such as other food products which are packaged in envelopes or packets usually of a rectangular type and which may or may not be sealed, for example, in packaging and dispensing soups, cocoa, sugar and the like. The invention is also applicable to a package for alike articles which are not individually packaged in small packages, for example, for packaging match books and dispensing thereof.

The invention comprises two component parts of a package, namely a collapsible paperboard outer casing 1 and a paperboard tray or magazine 2 insertable axially into the outer casing 1 to form a dispenser as hereinafter described.

The casing 1 is formed from a paperboard blank 3 which comprises four panels 5, 6, 7, 8 integral with each other formed by scoring the blank 3 between the panels, for example, along a line 9 intermediate panels 6 and 7. The panel 7 is blanked out shorter than the adjacent panels 6 and 8 and is provided with an arcuate recess 11. The panel 5 is provided with an integral tab 12 having an opening 14 and has an opening 16 in which a tab 17 is formed and extends inwardly of the casing as hereinafter explained. The blank 3 is scoremarked along the full length of the tab 17 on the panel 5 on the side thereof which forms the outside surface of the casing 1 in order to strengthen the operation of the tab 17 which operates as an ejector as hereinafter explained.

The blank 3 is also provided with a substantially narrow elongated panel or tab 19 extending along the full length of the contiguous panel. The entire blank can be assembled and formed into a substantially rectangular casing 1 as illustrated in FIG. 3 in which the side walls 5-8 of the casing correspond to the individual panels as numbered in FIG. 1. The panel 19 is then bonded, for example by an adhesive, to an adjacent panel 5 and the entire assembled portions form an open end casing which, however, can be collapsed, for example by pressing on the diagonally disposed corners, for example corners 21 and 22, toward each other for collapsing the casing packaging the casing in a box or carton, not shown, as hereinafter explained.

The tray or magazine 2 is also a one-piece construction made of paperboard from a paperboard blank 4 which comprises three contiguous panels 23, 24, 25 with score marks between the contiguous panels to permit folding of the blank into the tray configuration. The central panel 24 has secured to it and integral therewith a short rectangular panel 25 and a substantially similarly sized panel 26 opposite to panel 25 and formed with an arcuate recess 27 as illustrated. An opening 29 is formed between the panels 24 and 26. Each of the outermost panels 23 and 24 has a respective elongated short panel 31, 32 on the long side edge thereof and on its opposite

two ends trapezoidal-shaped tabs, for example the panel 23 has tabs 33, 34 formed thereon and the panel 25 has tabs 35, 36 on opposite ends thereof.

The blank 4 is assembled into a tray 2 forming a magazine which is insertable axially into an open end of the casing 1 as hereafter explained. The tray is formed as illustrated in FIG. 4 in which the reference numerals of the sidewalls 23-25 correspond to the panels of the blank in FIG. 7. The tabs 31, 33, 35 are folded inwardly and the panel 25 is bonded thereto closing one end of the tray. The opposite tabs 34, 36 are bent inwardly and the panel 26 is then bonded over them as illustrated in FIG. 4. The longitudinal tabs 31, 32 form stops or flaps which are positioned facing each other and parallel with the back side wall 24 partially closing a side opening 37 opening along a side of the case of the magazine 2 for insertion or loading, therein in a stacked condition, a plurality of alike articles. In the example illustrated the tabs 31, 32 are positionable parallel to the respective side walls 23, 25 to which they are attached and a plurality of alike articles, for example tea bags 38, are stacked in the tray through the side opening 37. The tabs 31, 32 return to the position illustrated in FIG. 4 and act as retaining elements to hold the teabag envelopes 38 from falling out of the tray when loaded. The articles stacked in the tray correspond or conform substantially to the cross section of the tray 2.

The tray or magazine 2 is constructed so that once loaded with the teabags 38 a plurality of these trays can be inserted into a common box or container, not shown, and then the casing 1 in a collapsed condition can be placed, for example, over the trays and the box or carton sealed. Moreover, a plurality of trays 2 can be individually assembled with a respective casing 1 as hereafter explained and then packaged or boxed in this condition.

The magazines are inserted axially into the open end casing 1. In an assembled condition the casing 1 and magazine 2 form a dispenser 40 as illustrated in FIG. 5. When the tray 2 is inserted into the casing 1 it corresponds in axial length therewith and the opposite ends 25 and 26 thereof close the open ends of the casing. The front panel or wall 7 of the casing is shorter than the others so that front opening 42 is formed thereon completely across the width of the casing 1. The narrow flaps 31, 32 of the tray 2 are of the same length as the casing front wall 7 so that an opening 43 is formed on the tray or magazine 2 extending completely across the tray. These two front openings register when the magazine is inserted axially into the outer casing 1 and jointly form a discharge opening for the lowermost of the articles stacked in the dispenser magazine.

During the insertion of the tray axially into the casing, as illustrated in FIG. 14, the tab 17 is an ejector tab and projects inwardly into the casing 1 and is dimensioned to extend inwardly through the opening 16 into the magazine. The lowermost article or teabag 38 engages the flap or ejector tab 17 and its rearward end 38a is held in a raised condition while a forward end 38b is projected or ejected partially outwardly through the registering front openings 42, 43 of the magazine and outer casing forming the dispenser 40. The lowermost teabags can then be readily withdrawn individually from the leading edge marginal portion. As the lowermost package or article 38 is withdrawn the stack moves downwardly and the tab 17 is deflected or depressed slightly downwardly and then deflects upwardly to act as an ejector biasing or partially ejecting the individual packages outwardly as illustrated in FIG. 5.

Since the outer casing and magazine are of equal axial length the dispenser 40 can be used by setting it on a flat surface and the lowermost of the articles in the dispenser still readily withdrawn. The recess 27 allows the leading edge portion of the articles to be grasped between the fingers without impedance by the bottom 26 of the

magazine. Moreover, the ejector tab 17 holds the magazine axially disposed in the outer casing if it is desired to suspend the dispenser 40 from the hole 14 on the tab 12.

A second embodiment of the type of package and dispenser construction illustrated in FIGS. 1-6 is illustrated in FIGS. 13-15 in which in order to simplify the drawings the reference numerals employed in FIGS. 1-6 are employed on parts similar to the first embodiment. In this embodiment the opening 29 is formed without completely removing the blank portion therefrom and it remains as a tab 46 extending inwardly into the casing 2 so that when the magazine is inserted in the casing 1 the tab 46 engages the tab 17 and they jointly form an ejector which is quite strong and operates in the manner heretofore described with respect to the ejector formed by the single tab 17.

A third embodiment of the invention is illustrated in FIGS. 7-12. In this embodiment paperboard blanks 50 and 52 are employed for forming respectively a magazine 53 and an outer casing 54 which are assembled into a dispenser comparable to the ones heretofore described and that is operative somewhat differently. The blanks are one-piece paperboard blanks and are provided with panels and tabs as illustrated for assembly into the dispenser elements by bonding as heretofore described. The magazine 50 is provided with longitudinally extending flaps 56, 57 which are shorter than their contiguous panels 58, 59 for holding similar articles such as teabags internally of the magazine similarly to the flaps 31 and 32. An opening 60 somewhat comparable to the opening 29 is formed solely on a tab or panel 61 which forms the bottom of the magazine. The portion of the blank forming the opening 60 forms a deflectable tab 62 as seen through the cutaway in FIG. 10. A center panel 65 of the blank 50 has a circular finger-opening 66 from which extends a radial slot formed by forming two tabs 63, 69 on the front panel or wall 65 of the casing as illustrated through the cutaway portion in FIG. 9. These two tabs extend inwardly into the casing 53 and form rests or stops for the bottom 61 of the magazine 54 as illustrated in FIG. 11. In this construction the magazine is shorter axially than the casing and is held spaced from a surface the casing rests on. The tab 62 is an assembled condition of the magazine and outer casing extends upwardly and forms a deflectable ejector of the type described so that a lowermost teabag 70 is partially ejected by it outwardly through a slot or opening formed radially of the finger-hole 66 and can be readily grasped through the finger-hole 66. An advantage of this construction is that the articles are raised from the surfaces on which the dispenser rests.

The invention provides a very simple and inexpensive dispensing device whose component parts or at least one can be used as a package component. In one embodiment the dispensing device can be suspended or used on a flat surface and in the other one the dispenser sets off the surface on which it rests. The articles to be dispensed may be readily withdrawn from the dispenser. The dispenser parts are formed from paperboard blanks automatically die cut and can be automatically scored, folded and bonded into finished configurations for making the dispensers according to the invention.

Those skilled in the art will understand that the envelopes or packets containing the material to be dispensed may be made of decorative materials such as colored foils and that the dispenser parts can be decorated in any desired manner and have printing thereon, not shown. The dispenser parts can be made to handle any size or configuration of alike articles to be dispensed therefrom and the outside box or carton containing the individual trays can be of any desired size and contain one or a plurality of trays forming magazines for a casing or casings packaged together therewith. Score marks may be used on the components of the dispenser as desired, for example,

for facilitating and strengthening the action of the ejectors.

The dispenser according to the invention is formed from the parts of a package and is made of an expensive material. Generally known dispensers are made of rigid materials, for example metals which are not easily formed and ejectors therein are formed by deformation of a back-side wall tending to move the lowermost article toward an ejector opening as the articles move downwardly. These known dispensers do not lend themselves to use as part of a package.

While preferred embodiments of the invention have been shown and described it will be understood that many modifications and changes can be made within the true spirit and scope of the invention.

What I claim and desire to secure by Letters Patent is:

1. A dispenser comprising two component parts comprising a tubular casing and having open ends and a magazine in operation axially into said casing having a space for stacking substantially alike articles therein substantially conforming to a cross section of said magazine, said magazine having a partial closure at the lower end thereof for holding said articles therein and having an opening through which said articles are loaded into said magazine in stacked relationship and having another opening from which a lowermost of said articles may be withdrawn from said stack, said casing having an opening registering with a part of said another opening of said magazine when said magazine is inserted in said casing axially to permit withdrawal of the lowermost articles, a deflectable, ejector tab on one of said parts disposed extending inwardly into said casing and said magazine in position for engaging the lowermost of the stacked articles successively to partially eject them through said registering openings of the magazine and casing for easy withdrawal of the lowermost of said articles from said dispenser.

2. A dispenser according to claim 1, having means for suspending said casing and magazine and in which said ejector tab extends into said casing sufficiently for holding said magazine axially disposed in said casing when in a suspended condition.

3. A dispenser according to claim 1, in which said magazine comprises a side opening for loading said articles therein and includes a pair of oppositely disposed deflectable tabs on opposite sides of said opening deflectable to a position to permit loading of said articles and deflectable to a second position partially closing said opening in readiness for insertion of said magazine into said casing.

4. A dispenser according to claim 1, in which said

casing comprises four sides, said sides comprising a deflectable material joining said sides to allow said magazine sides to be positionable when not in use in an overlying relationship in which said casing is in a collapsed condition.

5. A dispenser comprising, a paperboard tubular casing having open ends, a paperboard magazine substantially conforming in cross section to the cross section of the interior of said casing in operation axially into said casing and having a space for stacking substantially alike articles therein substantially conforming to a cross section of said magazine, said magazine having a partial closure at the lower end thereof for holding said articles therein and having on one side thereof an opening from which a lowermost of said articles may be withdrawn from said stack, said casing having an opening registering with the opening of said magazine when said magazine is inserted in said casing axially, both of said openings being sufficiently large to permit withdrawal of the lowermost of said stacked articles from said dispenser thereby jointly forming a discharge opening, said magazine having a deflectable, ejector tab disposed extending inwardly into said magazine for engaging the lowermost of the stacked articles successively, said tab being disposed upon assembly of said casing and magazine in position to partially eject each of the lowermost of said stacked articles through the registering first openings of the magazine and casing upon withdrawal of the lowermost of said stacked articles successively thereby to provide for easy withdrawal of the lowermost of said articles from said dispenser, said casing having a pair of tabs extending inwardly to support said magazine axially spaced from the bottom of said outer casing, and said pair of tabs being disposed in position to support said magazine in said casing with said openings of the magazine and casing registering jointly forming said discharge opening through which the lowermost articles of said stacked articles are dispensed.

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