

- [54] MATERIAL DISPENSING CONTAINER
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- [58] Field of Search 222/142.1, 142.4, 222/498, 545, 556, 482, 484, 485, 486; 206/42; 229/15, 7, 44

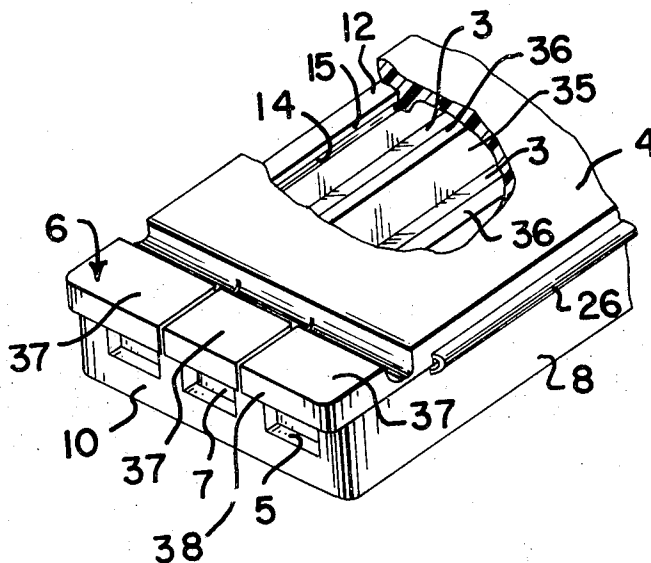
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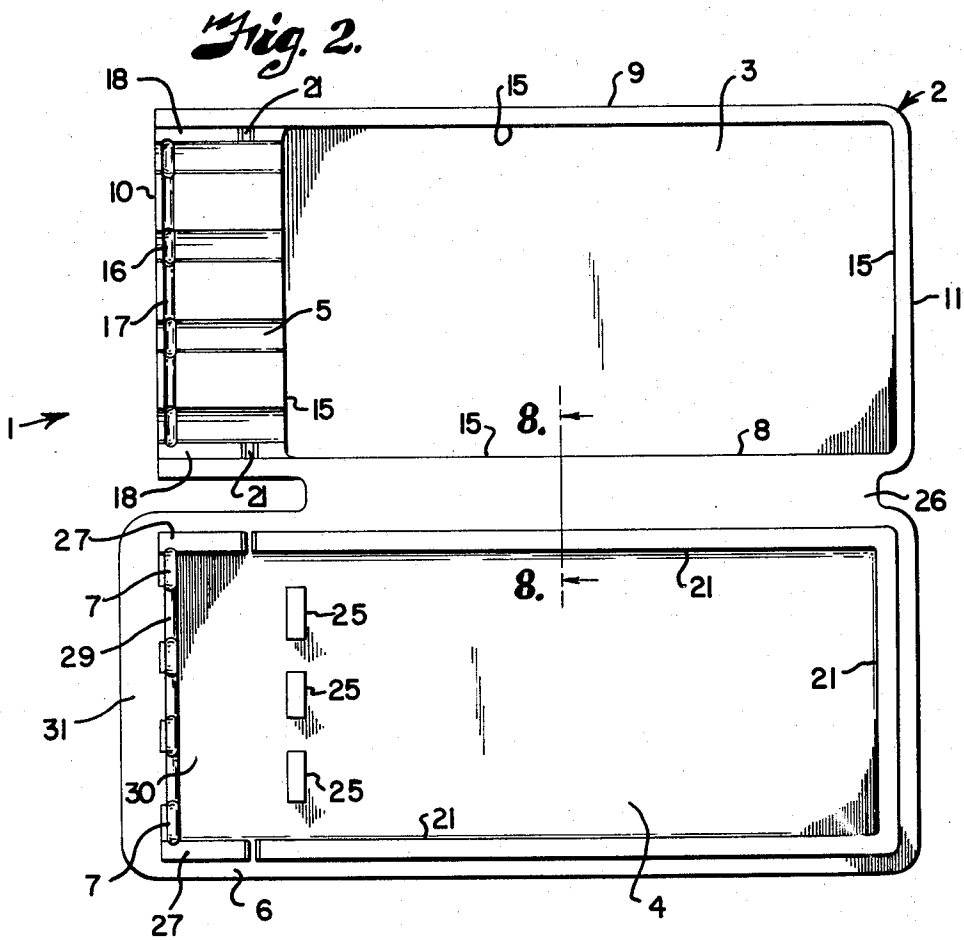
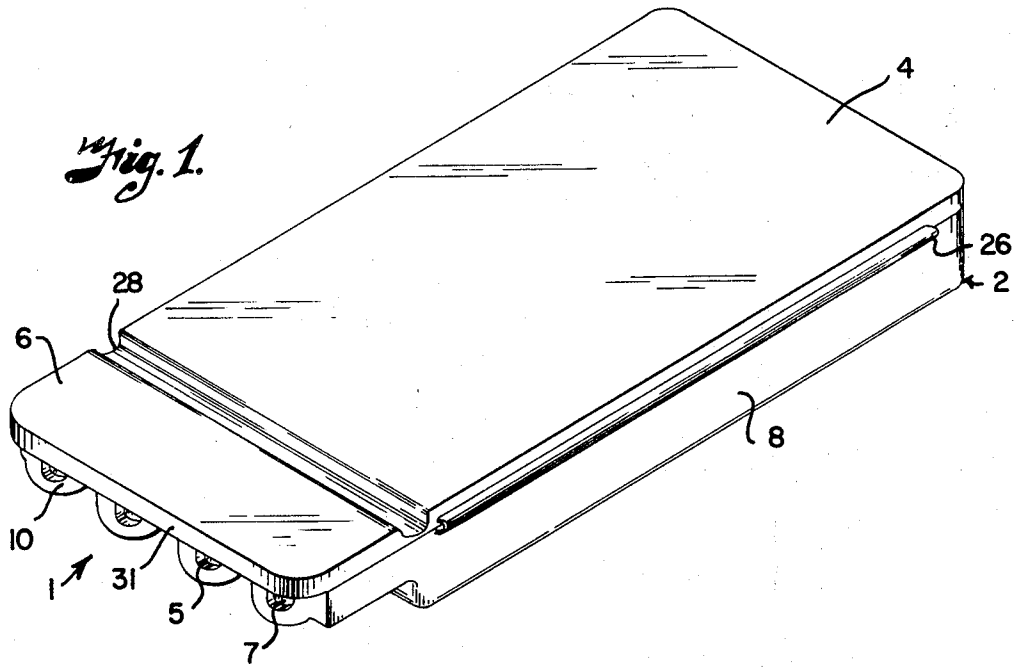
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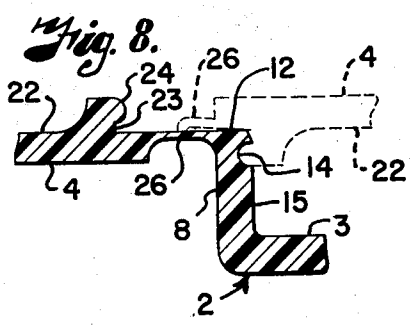
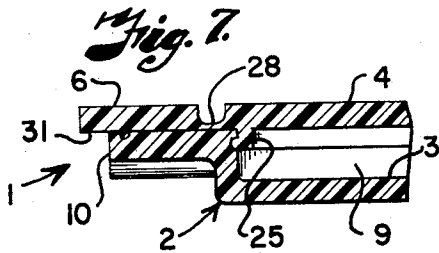
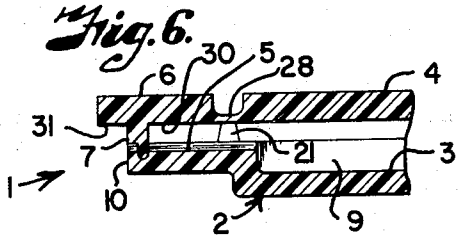
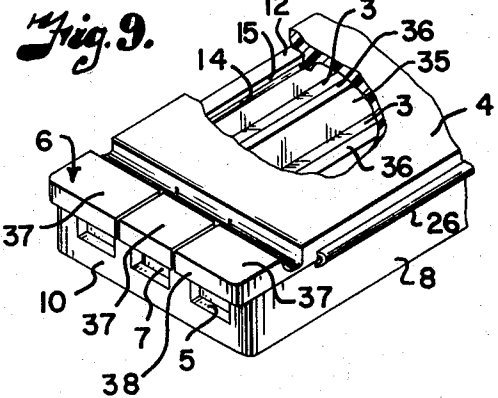
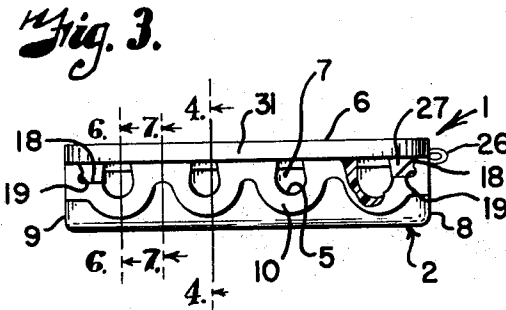
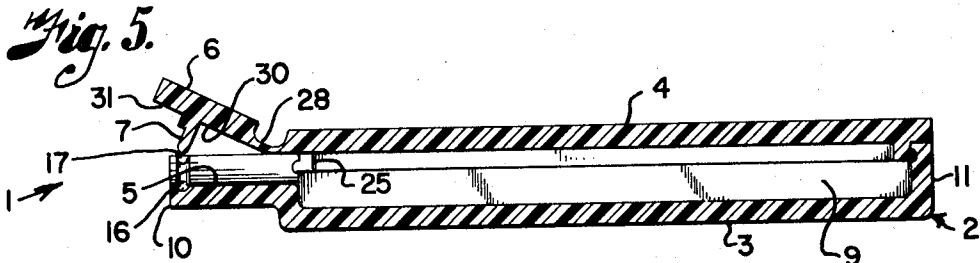
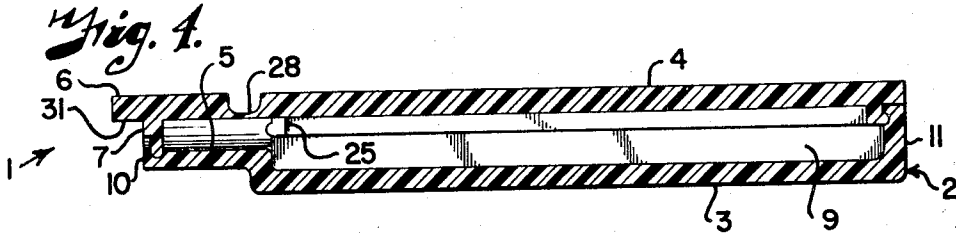
[57] **ABSTRACT**
 A material dispensing container adapted to be molded

in one piece with component parts thereof movable into cooperating and interfitting engagement one with the other to form a closed and sealed container for particulate material such as, for example, salt, pepper, sugar, spice, and the like. The container includes a body portion having a side wall and peripheral side and end walls extending therefrom and a cover member overlying the side wall of the body portion cooperating interfitting portions on the cover member and on the peripheral side and end walls of the body portion effect sealing of the cover member in position. One of the peripheral walls of the body portion has surfaces defining a plurality of material dispensing passages therethrough and portion of the cover member forms a closure member which is integrally and hingedly connected to the cover member and has tongue portions extending therefrom to close and seal a respective one of the dispensing passages when in closed position.

12 Claims, 9 Drawing Figures







MATERIAL DISPENSING CONTAINER

The present invention relates to material dispensing containers and more particularly to particulate material dispensing containers having a plurality of integrally connected and interfitting parts and having a plurality of dispensing passages selectively opened for dispensing particulate material such as condiments, and the like.

Disposable paper packets having salt, pepper, non-dairy creamer, sugar, or other condiments or food substances therein are served with carry-out food at drive-in restaurants, room service at hotels and motels, with food delivered to residences, and the like. However, once opened there is no structure for reclosing the paper packets. Therefore, the paper packets are not adapted for re-use and a portion of the contents which is not consumed is wasted. Also, paper packets are particularly susceptible to absorption of moisture thereby damaging the contents therein especially caking of salt and sugar. Paper packets also are easily torn or otherwise damaged prior to use. It is possible to reduce caking by adding anti-caking agents and by lining the paper packets with a suitable plastic or metal foil. However, this substantially increases the unit cost.

Condiment and spice containers are usually made of rigid materials and are expensive to manufacture and often inconvenient to open and use. Metal containers having a metal slide for covering or uncovering a dispensing aperture or apertures are inconvenient to operate, expensive to manufacture, require assembly of separate parts in the making of the complete container and do not closely or tightly cover the dispensing aperture thereby allowing entry of moisture and escape of spice fragrance during periods of storage or use of the respective container. Dispensing closures for containers have been provided, however, such containers and dispensing closures therefor are expensive to manufacture and require several operations to assemble.

The principal objects of the present invention are: to provide a material dispensing container substantially eliminating the aforesaid disadvantages of paper packets, metal spice and condiment containers, and dispensing closures for containers; to provide such a material dispensing container particularly adapted for controlled dispensing of particulate materials such as salt, pepper, sugar, spice, and other condiments; to provide such a material dispensing container adapted for containing and individually dispensing a plurality of different particulate materials, such as different condiments including salt, pepper, sugar and the like; to provide such dispensing container particularly adapted to be molded of a clear or translucent plastic, such as polyethylene, polypropylene, or like material approved for use in containers for food ingredients and which has tough foldable, tear resistant properties, and which is substantially moisture proof; to provide such a dispensing container particularly adapted for use with meals or food served on airlines, and like carriers, food served by carry service in hospitals, institutions, hotels, motels, and the like; to provide such a dispensing container which is re-useable and refillable and which is adapted for dispensing by shaking of condiments, such as salt, sugar, pepper, spices, and the like; to provide such a dispensing container using an economical material in making a lightweight dispensing container that seals and protects packaged particulate materials, con-

diments, and the like and that has a dispensing closure structure that is rugged, convenient, functional, attractive, economical and effective in closing each of a plurality of dispensing passages; to provide such a material dispensing container adapted to be formed as a one piece molded assembly with component parts movable into cooperating and interfitting sealing engagement to form the container; and to provide such a material dispensing container that is economical to manufacture, positive in operation, convenient in use, effective in sealing in and preserving of fragrances of packaged spices and other condiments and preventing caking of moisture susceptible condiments, and particularly well adapted for the proposed use.

Other objects and advantages of this invention will become apparent from the following description taken in connection with the accompanying drawings wherein are set forth by way of illustration and example certain embodiments of this invention.

The drawings constitute a part of this specification and include an exemplary embodiment of the present invention and illustrate various objects and features of the material dispensing container.

FIG. 1 is a perspective view of a material dispensing container embodying features of the present invention.

FIG. 2 is a plan view of a molded assembly shown after removal from a mold and prior to positioning of components in a closed position forming the dispensing container.

FIG. 3 is an elevational view of one end of the material dispensing container showing an exterior end of a plurality of dispensing passages.

FIG. 4 is a longitudinal sectional view through an intermediate dispensing passage and taken on line 4-4, FIG. 3 and showing means for closing and sealing the dispensing passages.

FIG. 5 is a longitudinal sectional view similar to FIG. 4 except showing a closure member in an open position to permit dispensing of contents of the container.

FIG. 6 is a fragmentary longitudinal sectional view through one side dispensing passage and taken on line 6-6, FIG. 3 and showing the respective side dispensing passage closed.

FIG. 7 is a fragmentary longitudinal sectional view taken on line 7-7, FIG. 3 and showing means for sealing the one end of the material dispensing container.

FIG. 8 is an enlarged fragmentary transverse sectional view taken on line 8-8, FIG. 2 and showing a closed position in broken lines.

FIG. 9 is a fragmentary perspective view of an other form of the material dispensing container.

Referring more in detail to the drawings:

As required, detailed embodiments of the present invention are disclosed herein. However, it is to be understood that the disclosed embodiments are merely exemplary of the invention which may be embodied in various forms. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the present invention in virtually any appropriate detailed structure.

In the disclosed embodiment of the present invention, the reference numeral 1 generally designates a material dispensing container adapted to be molded in one piece with component parts thereof movable into cooperating and interfitting engagement one with the

other to form a closed and sealed container particularly adapted for containing and dispensing particulate materials, such as, for example, salt, pepper, sugar, spice, and the like. The dispensing container 1 includes a body portion 2 having a side wall 3 and peripheral side and end walls extending therefrom and a cover member 4 overlying the side wall 3 of the body portion 2 cooperating interfitting portions on the cover member 4 and on the peripheral side and end walls of the body portion 2 effect sealing the cover member 4 in position. One of the peripheral end walls of the body portion 2 has surfaces defining a plurality of spaced dispensing passages 5 therethrough and a closure member 6 is integrally connected to the cover member 4 and has a plurality of tongue portions extending therefrom and each adapted to close and seal a respective one of the dispensing passages 5.

The body member 2 may be any desired shape adapted to retain a desired material therein. In the illustrated embodiment, the body portion 2 is an elongated generally planar member having peripheral side walls 8 and 9 extending from respective peripheral side edges of the side wall 3 and peripheral end walls 10 and 11 extending from respective peripheral end edges of the side wall 3. The peripheral side walls 8 and 9 and the peripheral end walls 10 and 11 each have an outer edge 12 adapted to be engaged by the cover member 4.

The peripheral side walls 8 and 9 and the peripheral end walls 10 and 11 each have a groove 14 in an interior surface 15 thereof and the groove 14 extends along the respective interior surface 15 and is substantially parallel with the side wall 3 of the body portion 2. The grooves 14 are each spaced from the respective outer edge 12 of the peripheral side walls 8 and 9 and the peripheral end walls 10 and 11.

As best seen in FIGS. 2 and 3, the dispensing passages 5 are formed in one of the peripheral end walls, for example end wall 10, which is illustrated as having a substantially greater thickness than the peripheral side walls 8 and 9 and the other peripheral end wall 11 whereby the dispensing passages 5 are elongated. In the illustrated embodiment, the surfaces defining each of the dispensing passages 5 include facing surfaces depending from the outer edge 12 of the one peripheral end wall 10 with a generally rounded bottom surface joining the facing surfaces depending from the outer edge 12 of the one peripheral end wall 10. The dispensing passages 5 are illustrated as being narrower at the top than at the rounded bottom, for a purpose later described.

Each of the surfaces defining the dispensing passage 5 have a groove 16 therein which extends generally transversely of the respective dispensing passages 5 with each of the grooves 16 being adapted to receive a respective one of the tongue portions 7 therein. The outer edge 12 of the one peripheral end wall 10 has a plurality of transversely extending grooves 17 therein which are aligned with the grooves 16 in the surfaces defining the dispensing passages 5.

The illustrated dispensing container 1 has at least one intermediate dispensing passage and a pair of side dispensing passages positioned adjacent the respective peripheral side walls 8 and 9. The passage defining surfaces adjacent the peripheral side walls 8 and 9 each have a longitudinally extending shoulder 18 and a longitudinally extending groove 19 in that portion of the surface between the shoulder 18 and the outer edge 12.

A projection 20 extends from each of the shoulders 18 adjacent the peripheral side walls 8 and 9, for a purpose later described.

The cover member 4 engages the outer edge 12 of the peripheral side walls 8 and 9 and the peripheral end walls 10 and 11 and has portions thereon to cooperate with the body portion 2 thereby closing and sealing same. The cover member 4 is illustrated as a generally planar elongated member having respective surface portions engageable with the outer edge 12 of the peripheral side walls 8 and 9 and the peripheral end walls 10 and 11. It is desirable that the engagement between the cover member 4 and the outer edge 12 be sealed, therefore, the cover member 4 has a plurality of beads 21 extending from an interior surface 22 of the cover member 4 and the beads are positioned adjacent respective side and end edges of the cover member 4. The beads 21 are each adapted to be received in a respective groove 14 in the interior surface 15 of the respective peripheral side walls 8 and 9 and peripheral end walls 10 and 11.

Each of the illustrated beads 21 on the cover member 4 has a stem portion 23 adapted to engage a portion of the interior surface 15 of the respective peripheral side walls 8 and 9 and peripheral end walls 10 and 11 between the respective outer edge 12 and the groove 14 therein. Each of the beads 21 has a bead portion 24 adapted to be received in the groove 14 in the respective peripheral side and end walls. The bead 21 on the cover member 4 which is to be received in the groove 14 in the one peripheral end wall 10 of the body portion 2 is illustrated as a plurality of spaced bead portions 25 with the dispensing passages 5 therebetween.

The cover member 4 and the closure member 6 are integrally connected to the body portion 2 and adapted to be moved to a position sealing the peripheral side walls 8 and 9 and peripheral end walls 10 and 11. In the illustrated embodiment, a connecting member 26 extends from one of the peripheral side walls, for example side wall 8. The connecting member 26 is positioned adjacent the outer edge 12 of the side wall 8 and preferably has a thickness substantially less than the thickness of the peripheral side wall 8 and the thickness of the cover member 4 thereby functioning as a hinge for moving member 4 to a position overlying the side wall 3 of the body portion 2 and sealingly engaging respective surfaces of the body portion 2 to form a closed container.

The closure member 6 is integrally connected to and extends from the cover member 4 and is movable between an open position, as best seen in FIG. 5, and a position closing the dispensing passages 5, as best seen in FIGS. 4 and 6.

The tongue portions 7 on the closure member 6 are illustrated as extending from the closure member 6 and each are adapted to be received in the transversely extending groove 16 in a respective one of the dispensing passages 5 through the one peripheral end wall 10 thereby closing the dispensing passages 5. The tongue portions 7 are preferably formed to have an interference in the respective transversely extending grooves 16 thereby providing an effective seal for the dispensing passages 5. The closure member 6 has a plurality of bead portions 27 each extending between adjacent tongue portions 7 and each adapted to be received in a respective one of the transversely extending grooves

17 in the outer surface 12 of the one peripheral end wall 10.

The closure member 6 is integrally connected to the cover member 4 by a connecting member 28 preferably having a thickness less than the thickness of the closure member 6 and the thickness of the cover member 4. The closure member 6 has a plurality of beads 29 extending from an interior surface 30 thereof with the beads 29 being adapted to be received within respective grooves 19 in that portion of the surface defining the dispensing passages 5 between the shoulder 18 and the outer edge 12 of the peripheral end wall 10. The beads 29 each are substantially similar in transverse cross section to the beads 21 and have one end thereof spaced from a respective bead 21 on the cover member 4 and the beads 29 are each longitudinally aligned with a respective one of the beads 21 on the cover member 4. The space between adjacent beads 29 and 21 is adapted to be filled by the projections 20 which are shaped to engage facing ends of the beads 29 on the closure member 6 and the beads 21 on the cover member 4.

It is desirable that the closure member 6 be readily movable to a position opening the dispensing passages 5, therefore, the closure member 6 has a projecting portion 31 extending beyond the peripheral end wall 10 and adapted to be grasped by the hand of an individual desiring to open the dispensing container 1.

In using a dispensing container as illustrated and described, the molded assembly, as best illustrated in FIG. 2, is removed from a suitable mold (not shown) and the desired material is placed within the body portion 2 and the cover member 4 and closure member 6 integrally connected thereto are moved to a position overlying the side wall 3 of the body portion 2 and the respective beads and tongue portions 7 are forced into the respective grooves with the projections 20 closing and sealing the space between facing ends of the beads 29 on the closure member 6 and the beads 21 on the cover member 4 thereby sealing the contents of the material dispensing container 1 therein. When it is desired to dispense a portion of the contents within the material dispensing container 1, the projecting portion 31 is moved away from the outer edge 12 of the one peripheral end wall 10 thereby opening the dispensing passages 5. The contents of the dispensing container 1 are then suitably discharged, as by shaking, to effect flow of the material through the dispensing passages 5. In the event that all of the contents of the dispensing container 1 are not used, the closure member 6 is moved to a position in engagement with the outer edge 12 of the one peripheral end wall 10 with the tongue portions 7 and bead portions 27 closing the material dispensing container 1.

FIG. 9 illustrates another form of the material dispensing container which is adapted for containing and individually dispensing a plurality of different particulate materials, such as different condiments including salt, pepper, sugar, and the like.

The illustrated other form of the material dispensing container includes a plurality of laterally spaced intermediate walls 35 each extending from the side wall 3 of the body portion 2 and the intermediate walls 35 each extend between the peripheral end walls 10 and 11 and have an outer edge 36 coplanar with the outer edge 12 of the peripheral side walls 8 and 9 and the peripheral end walls 10 and 11. The intermediate walls 35 define a plurality of material retaining compartments

therebetween each adapted to contain a respective one of a plurality of condiments.

It is desirable that each of the material retaining compartments be aligned with a respective one of the dispensing passages 5 through the one end wall 10 for easy flow of material from the compartments.

The closure member 6 has a plurality of closing sections 37 each adapted to close a respective one of the dispensing passages 5. The sections 37 of the closure member 6 are each individually movable between an open position permitting dispensing material from the respective passage and compartment and a closed position for sealing the respective dispensing passage 5. Each of the closing sections 37 has a projecting portion 38 extending beyond the one end wall 10.

When it is desired to dispense a portion or all of the contents of one of the material retaining compartments, the respective closing section 37 is moved to an open position by moving the projecting portion 38 thereof away from the outer edge 12 of the one peripheral end wall 10. The contents of the respective material retaining compartment are suitably discharged, as by shaking, to effect flow of the material through the respective dispensing passage 5. In the event that all of the contents of the respective material retaining compartment are not used, the closing section 37 is moved to a position in engagement with the outer edge 12 of the one peripheral end wall 10 thereby closing the respective dispensing passage 5.

It is to be understood that while I have illustrated and described one form of my invention, it is not to be limited to the specific form or arrangement of parts herein described and shown.

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

1. A dispensing container comprising:
 - a. a body portion having a side wall and edge walls extending from respective peripheral edges of said side wall;
 - b. a cover member integral with and hingedly connected to said body portion and having surface portions sealingly engageable with said edge walls of said body portion;
 - c. surfaces on one of said edge walls of said body portion defining a plurality of dispensing passages through the one of said edge walls of said body portion;
 - d. a closure member integrally and hingedly connected to said cover member for movement between an open position and a position closing said dispensing passages; and
 - e. cooperating means on said closure member and said one edge wall for closing said dispensing passages.
2. A dispensing container as set forth in claim 1 wherein:
 - a. said edge walls of said body portion each have a groove therein and extending along a respective inwardly facing surface thereof; and
 - b. said cover member has a bead extending from one surface thereof and adapted to be received in the groove in a respective one of said edge walls of said body portion.
3. A dispensing container as set forth in claim 1 wherein:
 - a. said surfaces on the one of said edge walls of said body portion defining said dispensing passages

each have a groove therein and extending generally transversely of said respective passages; and

- b. said closure member has a plurality of tongue portions each adapted to be received in the groove in a respective one of said plurality of surfaces defining said dispensing passages for closing said respective passages.

4. A dispensing container as set forth in claim 3 wherein:

- a. said edge walls of said body portion each have a groove therein and extending along a respective inwardly facing surface thereof;
- b. said cover member has a bead extending from one surface thereof and adapted to be received in the groove in a respective one of said edge walls of said body portion;
- c. said closure member integral and hinged connection to said cover member is a connecting member having a thin portion less than the thickness of said closure member and said cover member forming an integral hinge;
- d. said closure member has a plurality of beads extending from one surface thereof and each aligned with and spaced from said bead on said cover member;
- e. certain of said surfaces defining said dispensing passages each have a groove therein adapted to receive therein a respective one of said beads on said closure member; and
- f. the bead on said cover member to be received in the groove in said one of said edge walls having said dispensing passages extending therethrough comprises a plurality of spaced bead portions with said dispensing passages therebetween.

5. A dispensing container as set forth in claim 4 wherein:

- a. said closure member has a plurality of bead portions each extending between adjacent tongue portions; and
- b. said one of said edge walls having said dispensing passages extending therethrough has a plurality of grooves in the surface to be engaged by said closure member and each adapted to receive therein a respective one of said bead portions extending between said adjacent tongue portions.

6. A dispensing container as set forth in claim 4 wherein said one of said edge walls having said dispensing passages extending therethrough has a plurality of projections each adapted to extend between and engage a respective one of said beads extending from said closure member and said respective one of said beads on said cover member aligned therewith to close the space therebetween.

7. A dispensing container as set forth in claim 1 wherein:

- a. said body portion has a plurality of intermediate walls extending from said side wall to define a plurality of material retaining compartments;
- b. said material retaining compartments are each aligned with a respective one of said dispensing passages; and
- c. said closure member has a plurality of sections each adapted to close a respective one of said dispensing passages.

8. A dispensing container comprising:

- a. an elongated body portion having a side wall and peripheral side and end walls extending from re-

spective peripheral side and end edges of said side wall;

- b. surfaces on one of said peripheral end walls of said body portion defining a plurality of spaced dispensing passages through the one of said peripheral end walls of said body portion;
- c. a cover member having respective surface portions engageable with an outer edge of said peripheral side and end walls of said body portion;
- d. a closure member integrally connected to and extending from said cover member for movement between an open position and a position closing said dispensing passages;
- e. a connection member integrally joining said body portion and said cover member and said closure member integrally connected thereto;
- f. cooperating means on said cover member and said peripheral side and end walls of said body portion for sealing respective engaging surfaces of said cover member and said peripheral side and end walls of said body portion; and
- g. cooperating means on said closure member and said one of said peripheral end walls of said body portion for sealing said dispensing passages.

9. A dispensing container as set forth in claim 8 wherein:

- a. said peripheral side and end walls of said body portion each have a groove in an interior surface thereof and extending along said respective interior surface and substantially parallel with said side wall of said body portion;
- b. said grooves are each spaced from the outer edge of said respective peripheral side and end walls;
- c. said cover member has a plurality of beads extending from one surface thereof and each adapted to be received in said groove in a respective one of said peripheral side and end walls of said body portion; and
- d. each of said plurality of beads has a stem portion adapted to engage a portion of said respective peripheral side and end walls between the outer edge thereof and said groove therein and a bead portion adapted to be received in said respective groove.

10. A dispensing container as set forth in claim 9 wherein:

- a. said surfaces on one of said peripheral end walls of said body portion defining said dispensing passages each have a groove therein and extending generally transversely of said respective passages;
- b. said one of said peripheral end walls having said dispensing passages extending therethrough has a plurality of transversely extending grooves in the outer edge thereof and aligned with said grooves in said surfaces on said one of said peripheral end walls defining said dispensing passages;
- c. said closure member has a plurality of spaced tongue portions extending therefrom and each adapted to be received in the transversely extending groove in a respective one of said dispensing passages through said one of said peripheral end walls of said body portion for closing said dispensing passages; and
- d. said closure member has a plurality of bead portions each extending between adjacent tongue portions and each adapted to be received in a respective one of the transversely extending grooves in the outer edge of said one of said peripheral end

walls having said dispensing passages extending therethrough.

11. A dispensing container as set forth in claim 10 wherein:

- a. said closure member is integrally connected to said cover member by a connecting member having a thickness less than the thickness of said closure member and said cover member;
- b. said closure member has a plurality of beads extending from one surface thereof and each aligned with and spaced from a respective one of said beads on said cover member;
- c. certain of said surfaces defining said dispensing passages each have a longitudinally extending groove therein adapted and positioned to receive therein a respective one of said beads on said closure member;
- d. the bead on said cover member to be received in the groove in said one of said peripheral end walls of said body portion having said dispensing passages extending therethrough comprises a plurality of spaced bead portions with said dispensing pas-

sages therebetween; and

- e. said one of said peripheral end walls having said dispensing passages therethrough has a plurality of projections each adapted to extend between and engage a respective one of said beads extending from said closure member and a respective one of said beads on said cover member aligned therewith to close the space therebetween.

12. A dispensing container as set forth in claim 8 wherein:

- a. said body portion has a plurality of intermediate walls extending from said side wall and extending between said peripheral end walls to define a plurality of material retaining compartments;
- b. said material retaining compartments are each aligned with a respective one of said dispensing passages; and
- c. said closure member has a plurality of sections each adapted to close a respective one of said dispensing passages.

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