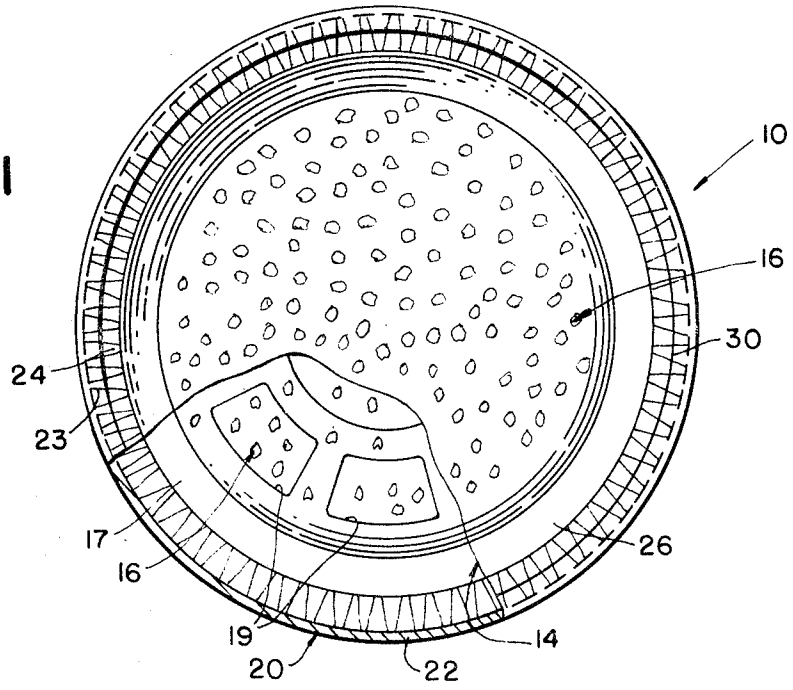
July 7, 1970 R. P. DUNN 3,519,439

POPCORN PACKAGE

Filed Oct. 5, 1966

FIG. 1



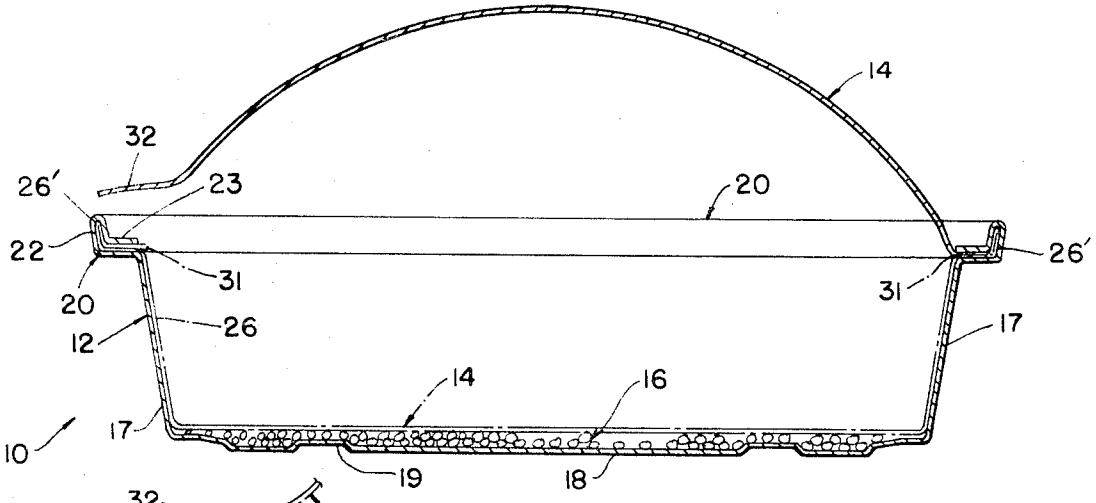


FIG. 2

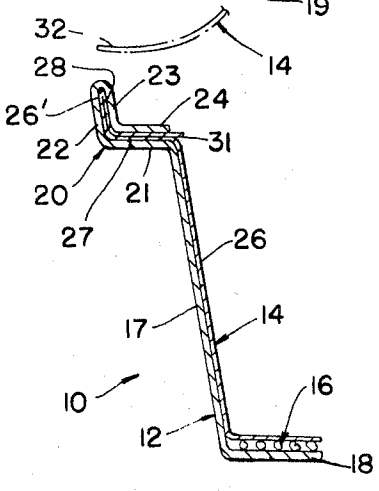


FIG. 3

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POPCORN PACKAGE

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U.S. Cl. 99—171 1 Claim

ABSTRACT OF THE DISCLOSURE

A plurality of nestable popcorn kernel packages having an open topped relatively shallow pan provided with an annular flange, a flexible cover extending across and downwardly into the pan and having substantially the same relatively shallow outline as the pan, and a charge of popcorn kernels confined between the pan and cover. The cover is upwardly flexible upon the cooking and expansion of the kernals. The cover is doubled over itself in the area of the flange with an outer edge extending beyond the flange to serve as a pull rim.

The present invention relates to an improved popcorn package of a general type which has recently come into considerable vogue. More particularly, the package comprises a relatively shallow, pan-like vessel of an aluminum foil or like heat-resistant material which is semi-rigid in nature and is stably self-sustaining in the manner of a conventional frying pan or like cooking utensil. This vessel has an upright annular, inverted frusto-conical side wall i.e., trapezoidal in cross section in a vertical plane through the center of the vessel or pan. In accordance with the improvement of the invention the pan wall has a special flange formation around its upper edge which serves effectively in releasably anchoring to the pan the usual flexible cover of the package; and this cover, as nestingly mated downwardly within the pan in the normal position of the cover, confines in the usual manner a charge of unpopped popcorn kernels, along with frying or popping oil, salt, butter, coloring and/or other ingredients.

The improved package is well adapted to be cooked in a machine such as the subject matter of my co-pending application, Ser. No. 503,380, filed Oct. 23, 1965 and entitled "Popcorn Popper," now abandoned. A continuation of that application, Ser. No. 637,847, filed May 11, 1967, matured in Letters Patent No. 3,359,886. However, the package is equally well adapted for home cooking on a kitchen range, as will appear.

In accordance with the invention the cover, which is preferably of cellophane or like transparent, readily flexible material, is anchored firmly about its upper periphery by means of the pan's flange formation referred to above. The machine of the identified application includes a piercing element which automatically penetrates the cover of the package as it balloons upwardly under internal gas pressure, thus venting the pressure; and it may be found desirably to preliminarily vent the cover of the improved package manually in home cooking, for a like reason. However, the cover is not so strongly anchored by the flange formation as to prevent at least a portion of the cover from either being manually pulled free when home popping is completed, or from itself pulling free from the anchor under gas pressure generated beneath the cover, as the latter balloons upwardly until popping comes to completion.

Thus, the flange formation of the pan includes a generally horizontal, radially outwardly extending rim or ledge portion, an upright, intermediate flange portion of substantial height, and a reversely bent inner portion.

One part of inner portion parallels the intermediate flange portion, and another, terminal part is in a radially inwardly disposed position, paralleling the first named horizontal rim portion.

As assembled in the manufacture of the package, the upper annular margin of the cover is releasably gripped horizontally and vertically between said rim and intermediate flange portions, on the one hand, and said inner portion, on the other, of the flange formation. The grip or anchor is sufficiently strong to resist accidental displacement of the cover in the normal handling of the package prior to use, for example, in the nesting and unnesting of a number of the packages as stacked for compact storage, shipment or display. However, venting or release of the cover in either of the ways mentioned in a preceding paragraph is readily accomplished.

Further in accordance with the invention, it is desirable that the upper annular margin of the cover also be folded upon itself, so as to afford a two-ply upper rim, which is gripped firmly between portions of the top flange formation of the pan, in the manner described above. As initially forced at least in part from its anchor, the cover may be manually gripped to complete the separation of the remainder thereof from the pan, leaving the popped content of the latter exposed for eating.

The foregoing, as well as other objects, will become more apparent as this description proceeds, especially when considered in connection with the accompanying drawings illustrating the invention, wherein:

FIG. 1 is a top plan view of the improved popcorn package of the invention, the transparent cover of which is partially broken away;

FIG. 2 is a somewhat enlarged view in diametral section through the center of the pan of the package along a vertical plane; the cover of the package being shown in a dot-dash line in its normal nested position within the pan, and being shown in solid line as ballooned upwardly under internal pressure, and with an outer part thereof worked free from the pan's gripping flange formation; and

FIG. 3 is a fragmentary and still further enlarged scale view in section similar to FIG. 2, more clearly illustrating the releasable anchoring of the cover's reversely folded margin by the several portions of the flange formation of the pan.

The improved popcorn package of the invention, generally designated by the reference numeral **10**, essentially comprises a shallow frying vessel, receptacle or pan **12** which is of circular outline in plan and frusto-conical in elevation, i.e., generally trapezoidal in the diametral plane of FIG. 2; a flexible cover **14**, preferably of cellophane or other suitably transparent material, although a suitable gauge of metal foil or non-transparent material may be employed; and a charge **16** of corn to be popped, which may include along with the unpopped kernels, a suitable frying agent (such as a hydrogenated vegetable oil) and the usual other agents, flavoring or otherwise, such as salt, butter, artificial color, etc.

In the usual fashion, the cover **14** is normally nested matingly downwardly within the pan **12**, in direct side contact with the upright wall **17** of the latter about its periphery, and with the bottom area of the cover **14** somewhat above the bottom **18** of pan **12**, so as to snugly confine the popcorn charge **16**, as appears in FIGS. 2 and 3. If desired, pan **12** may have its bottom **18** suitably embossed at **19** for additional rigidity. However, as indicated above, the material of pan **12**, for example aluminum foil, is of sufficient thickness that it is semi-rigid and self-sustaining as to shape when handled prior to and during intended use.

The reference numeral **20** generally designates an integral flange formation at the top of the pan wall **17**, by

which the desired anchoring of cover **14** in its normal nested position, for shipment, storage, display and sale, is effected. Thus, the formation **20** includes a generally horizontal rim or ledge portion **21** of substantial radially outward extent about the entire top periphery of pan wall **17**; an upright intermediate portion **22**, which is dished a trifle radially outwardly from the portion **21**; and an inner, downwardly extending portion **23**, which is in part bent to parallel the intermediate portion **22** and is also bent radially inwardly in part at **24** to parallel the horizontal rim or ledge portion **21**.

Further in accordance with the invention, the upright, frusto-conical wall **26** of cover **14** (FIG. 3), as nested within pan **12**, is provided at its top and about its periphery with a reversely bent fold **26'**, comprising an outer ply **27** and an inner ply **28**; and this inner ply extends, when the two-ply fold **26'** is gripped and anchored by flange formation **20**, somewhat inwardly beyond the inner periphery of the terminal part **24** of that flange formation.

As shown in FIG. 1, flange formation **20** is tightly crimped into its generally L-shaped cross section in completing the package **10**, with characteristic pleating at **30** (FIG. 1) about its entire peripheral and internal and external surfaces.

With package **10** thus completed, an inner margin **31** of the two-ply cover top extends a trifle inwardly beyond the inner portion **23** of the pan's flange formation **20**. It is thus available for gripping between the fingernails of a user to fully expose the popped content of the package; on the other hand, the upward ballooning of the cover **14** (solid line in FIG. 2 and dot-dash line in FIG. 3), under gas pressure and upward swell of the content, will usually result in at least a portion **32** of the fold **26'** of the cover being pulled free from its previously clamped and anchored condition. With this start, the cover may be readily gripped by the fingers and drawn completely off the pan for the enjoyment of the cooked commodity.

The improved package is extremely simple and compact, and very inexpensively produced and sold. It is ideally adapted for the stable, distortion-resisting nesting of a number of packages one within the other for compact shipment, storage or display; and is, in effect, self-opening as an incident to the completion of the popping of the kernel charge **16**. As shown in FIGS. 2 and 3, the side-by-side engaging and mating relationship between frusto-conical cover wall **26** and pan wall **17** enables a very compact and stable stacking of a large number of the packages one within the next, and without undesired displacement of the cover **14** in normal handling, as previously pointed out.

What is claimed is:

1. A plurality of cookable popcorn kernel packages, each comprising an open topped relatively shallow pan of self-sustaining semi-rigid material having an upright wall provided with an annular flange structure about the top of the wall, said structure including a radially outwardly extending and relatively horizontal ledge portion, an intermediate flange portion upturned from the outer part of said ledge portion, and an inner portion bent downwardly from the upper part of and along said intermediate portion and then inwardly along said ledge portion, a cover of readily flexible material normally disposed downwardly in parallel, side-by-side engaging and fully mated relation within said pan wall throughout substantially the entire height of the latter, and a charge of popcorn kernals to be cooked confined in said pan by said normally disposed cover, said cover having its radially outer edge portion doubled over upon itself, said doubled-over outer edge portion being radially outwardly overlapped on said ledge portion of said flange structure and being secured downwardly on the ledge portion, within said intermediate upturned flange portion, by said inner portion of said flange structure, a substantially flat bottom portion of said normally disposed cover paralleling the bottom of the pan slightly above said bottom, thereby enabling a compact substantially fully nested stacking of multiple packages at the mated pan wall and a wall portion of the cover, the free radially inner margin of said double-over outer edge portion of said cover extending radially inwardly beyond said inner portion of said flange structure to provide an annular pull rim for manually releasing said cover from said flange structure, said packages being nested together one within the other, said nested packages being separable from one another and as to each package when separated the portion of said cover radially inwardly of said flange structure being adapted to flex upwardly through said flange structure upon the cooking and expansion of the popcorn kernals.

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