Dec. 23, 1952 V. D. KISSIG 2,622,760

CLOSURE FOR OPENED ENDS OF WRAPPED BREAD LOAVES

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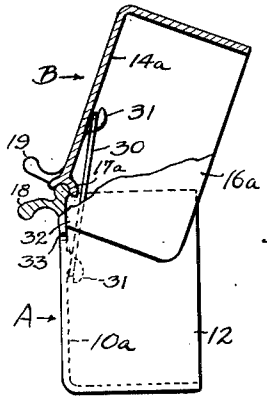


Fig. 7

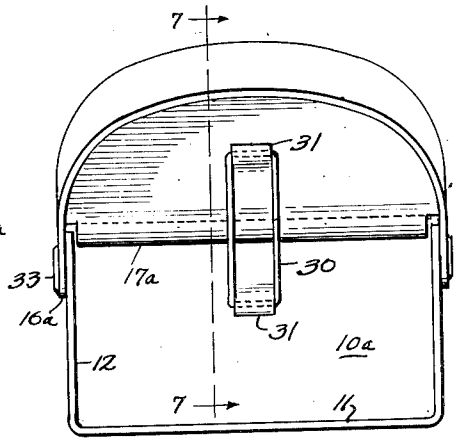


Fig. 6

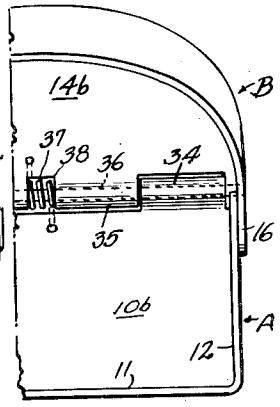


Fig. 8

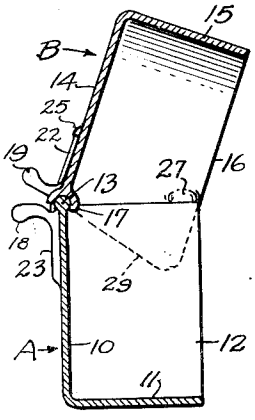


Fig. 3

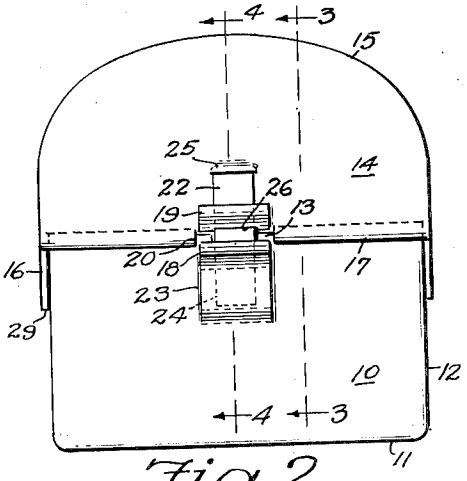


Fig. 2

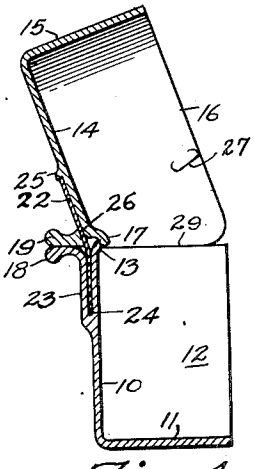


Fig. 4

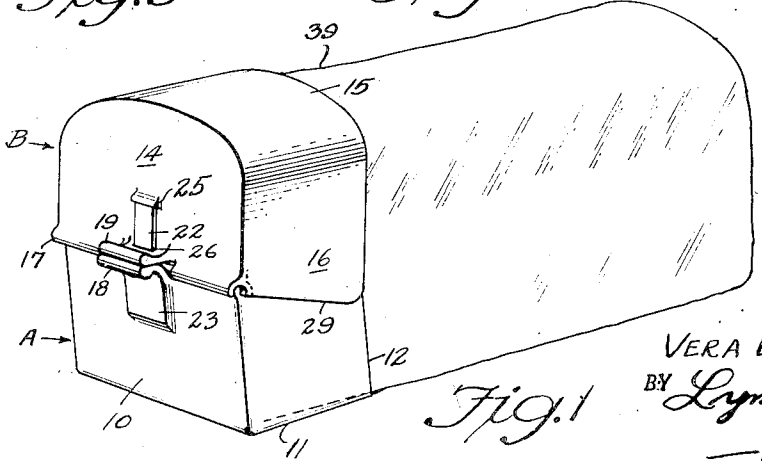


Fig. 1

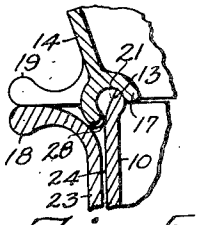


Fig. 5

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CLOSURE FOR OPENED ENDS OF WRAPPED BREAD LOAVES

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7 Claims. (Cl. 220—31)

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This invention relates to closures. Its object is to provide a device for closing the open end of the wrapper of a loaf of bread which has been opened. The invention contemplates a closure device adapted to serve as a closure for the open end of the loaf as the loaf is gradually used up, excluding air and keeping the bread in a fresher and cleaner state than is ordinarily possible.

In general, the invention contemplates a closure comprising a pair of sections hinged together along a central transverse hinge axis, together with means for yieldingly urging the sections in a direction to grip the end of a loaf of bread so that the closure will cling thereto. A particular object is to provide such a closure which is of relatively simple and inexpensive construction so that it may be utilized as a premium item and/or sales item in various retail outlets. Another object is to provide such a closure which adapts itself particularly to be molded from plastic or the equivalent material in order that the device may be produced with an attractive finish in various selected colors and shades.

A further object is to provide such a closure having means whereby it may be manipulated by one hand while a loaf of bread is held in the other hand, thereby facilitating the application of the closure to and the removal of the closure from, the bread loaf. A further object is to provide such a closure embodying a hinge structure having maximum sealing efficiency. Another object is to provide, in such a closure, an arrangement in which the means for yieldingly biasing the closure sections toward each other may serve the added function of an element for securing the sections together in assembly.

Other objects will become apparent in the ensuing specifications and appended drawings in which:

Fig. 1 is a sectional view illustrating one form of my improved closure applied to a loaf of bread;

Fig. 2 is an end view of the closure;

Fig. 3 is a transverse vertical sectional view of the closure; with the sections thereof in positions drawn toward each other, taken on the line 3—3 of Fig. 2;

Fig. 4 is a transverse vertical sectional view of the closure with the sections thereof in extended positions, taken on the line 4—4 of Fig. 2;

Fig. 5 is a detail sectional view through the hinge structure of the closure, showing how the two sections may be assembled;

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Fig. 6 is an inner end view of a modified form of the closure;

Fig. 7 is a side view of the same partially in section as indicated by the line 7—7 of Fig. 6; and

Fig. 8 is a fragmentary inside end view of another modified form of the closure.

As an example of one form in which the invention may be embodied, I have shown in Figs. 1 to 5 inclusive a closure comprising a bottom section A, and a top section B hinged thereto along a hinge axis parallel to the bottom of section A and substantially midway between the top and bottom of the closure.

Bottom section A includes a rear wall 10, a bottom flange 11, and two side flanges 12 of rectangular shape. Bottom section A also includes a hinge trunnion 13 in the form of integral beads on the upper edge of end wall 10.

Top section B includes an end wall 14, an arched top flange 15, and side flanges 16 forming downward continuations of the arched top flange 15. Top section B also includes a downwardly opening substantially semicylindrical channel 17 extending arcuately somewhat more than 180 degrees, sufficiently to embrace trunnion 13 with a grip which prevents radial separation of the respective hinge elements 13 and 17, although permitting free hinging movement. To this end, the inner wall of channel 17 will fit the wall of trunnions 13 with slight clearance to permit hinging movement.

Closure sections A and B are formed with finger grips 18 and 19, projecting rearwardly from the central extremities of end walls 10 and 14 respectively, near the hinge of the closure. Hinge channel 17 has its outer leg cut away at the center of the closure to define a notch 20 in which finger grip 18 may be partially received when sections A and B are spread as in Fig. 4. Trunnion 13 has in its rear side, at the center of the closure, a notch 21 which receives the central portion of a leaf spring 22 by means of which the sections are connected in assembled relationship and urged toward the retracted positions in Fig. 3.

Section A has, on the rear side of end wall 10, centrally disposed, a boss 23 which extends downwardly from the base of finger grip 18. Boss 23 is hollow, defining a shallow flat pocket 24 in which one half of leaf spring 22 is received. The other half of spring 22 bears against the rear face of end wall 14 of the upper section B and may be retained against endwise displacement by a lug 25 on rear wall 14. Leaf spring 22 extends

through a slot 26 in finger grip 19 and, particularly in the relative positions of the sections shown in Fig. 3, is accommodated in notch 21 in hinge trunnion 13. Finger grip 18 is so shaped, at its base, as to provide a recess 28 in which the outer sections of hinge channel 17 may be received when the closure sections are in the relative positions shown in Figs. 4 and 5.

Leaf spring 22, in its unstressed condition, has its upper half bent forwardly relative to the lower half as in Fig. 3, but with a somewhat greater amount of bend. Accordingly, spring 22 constantly biases section B toward the retracted position shown in Fig. 3, in which the two sections A and B are drawn or pressed toward each other to a maximum extent. The limit of such retracting movement is determined by the engagement of lugs 27 on the inner walls of upper section side flanges 16, engaging against the upper edges of side flanges 12 of bottom section A. The spring 22 is capable of being flexed past center to the reversely bent condition shown in Fig. 4, in which there is maximum spread between the sections A and B. This position is determined by the engagement of 18 and 19 against each other as indicated in Fig. 4. In this spread condition of the sections, the closure will readily encompass the end of any ordinary loaf of bread 33 (Fig. 1) and, upon release of the closure, sections A and B will be urged by spring 22 into gripping engagement with the loaf as indicated in Fig. 1, like pressure being exerted against the loaf by bottom and top flanges 11 and 15 respectively. This gripping of the loaf serves to retain the closure in place upon the opened end of the wrapper, thus closing the opened end and largely excluding air as well as dust and bacteria therefrom.

Fig. 5 illustrates how these two sections may be assembled. As indicated in Fig. 1, hinge channel 17 is open at its ends. By disposing the two sections in the relative positions of angularity shown in Figs. 4 and 5, one end of hinge channel 17 may be slipped over the opposite end of hinge trunnion 13 with the lower edges of side flanges 16 disposed above the upper edges of side flanges 12, so that the adjacent flanges may clear each other. Hinge channel 17 may then be slipped onto hinge trunnion 13 by relative axial movement of the two, until side flange 16 meets side flange 12 at the opposite side of bottom section A, when, by again raising top section B until lower edge 29 clears side flange 12, the sections may be shifted into their positions of final assembly shown in Fig. 2. The sections are then hinged toward each other to the positions of Fig. 3, and spring 22 is inserted through slot 26 in finger grip 19 and into pocket 24 of boss 23. By springing it toward the hinge, its upper end may then be engaged beneath lug 25. Lug 25 may be slightly recessed so as to retain the upper end of spring 22 more securely, although it will be understood that the tension in spring 22 will normally retain it against displacement from beneath the lug 25. In the use of the closure, finger grips 18 and 19 are grasped between the thumb and fingertips and pressed into engagement with each other to bring the section to the extended positions of Fig. 4. The closure is then simply slipped over the open end of a loaf of bread and the finger grips 18, 19 released to allow the closure to grip the loaf. To remove it, the handles 18, 19 are again grasped and move toward each other to release the grip of the closure against the loaf and the closure is then simply pulled off the end of the loaf.

The lower edges 29 of side flanges 16 are inclined downwardly at an obtuse angle relative to end wall 14, so that side flanges 16 may overlap side flanges 12 throughout the range of relative movement between the sections, up to the limit positions of expanding movement shown in Fig. 4.

In the form of the invention shown in Fig. 7, the hinge channel 17*a* may be semicylindrical, with its respective lips spaced apart the full diameter of trunnion 17*a* so as to permit assembly of the sections by relative radial movement. The hinge sections are held in assembly by a rubber band 30 which engages a pair of hooks 31 formed on the inner faces of end walls 10, 14 respectively. Side flanges 16*a* of upper section B have heel portions 32 which engage ears 33 extending, in the plane of wall 10*a*, from the respective sides of section A. Rubber band 30 serves the dual function of holding the sections in assembled relation and yieldingly urging them toward their retracted positions shown in Fig. 7.

Fig. 8 illustrates another modification of the invention in which sections A and B are formed with intercepting hinge loops 34 and 35 respectively, a hinge pin 36 being passed through the registering loops. A mouse trap type spring 37 encircles hinge pin 36, in a notch 38 defined between the two hinge loops 35, and has its end portions engaged against the rear walls 14*b* and 10*b* respectively of sections B and A.

The upper extremity of the socket 24 of Figs. 1–5 is flared rearwardly and thereby widened, as indicated in Fig. 5, whereby the central portion of spring 22 is allowed to bend over a sufficiently broad area in being flexed to the position of Fig. 4, to avoid a sharp bend at the center of the spring, beyond its limit of elasticity, and to preserve the full extent of forward bend in the spring, which is utilized in pressing the sections against a bread loaf. If the spring were flexed beyond its elastic limit by the reverse bending of the normally forward bend at the center of the spring, it would obviously reduce this forward bend and thereby weaken the closing bias acting between the sections.

Other types of hinges and springs may, if desired, be employed. The closure sections may be of molded plastic material, the use of such material being particularly appropriate, although it is possible to form the sections from sheet metal.

I claim:

1. In a closure for the opened end of a wrapped bread loaf, a pair of closure sections each including an end wall and a flange extending around three sides thereof, leaving a fourth side open and bordered by a free edge on said end wall, each of said flanges including a pair of spaced, substantially parallel lateral portions and an intermediate bridging portion, one of said sections having a hinge trunnion formed along its free edge and the other having a hinge channel formed along its free edge, said hinge channel receiving said hinge trunnion and embracing the same, the lateral flange portions of one closure section being embraced between those of the other closure section, in overlapping relation, so as to prevent axial movement of the sections relative to each other thereby to retain them in assembly, said bridging flange portions being arranged in opposed relation and functioning as a pair of jaws to grip the end portion of a loaf of bread, and resilient means acting between the sections to urge them toward each other in order that they may cooperatively grip the loaf, said sections being capable of being hinged relative to each other toward spread positions in which the

adjacent edges of said side portions of the flanges will clear each other in order to permit assembly and disassembly of the sections by sliding said hinge channel axially along said hinge trunnion.

2. In a closure for the opened end of a wrapped bread loaf, a pair of closure sections each having an end wall and a flange extending around three sides thereof, each of said flanges including a pair of spaced, substantially parallel lateral portions and an intermediate bridging portion, the lateral flange portions of one closure section being embraced between those of the other closure section, in overlapping relation, said bridging flange portions being arranged in opposed relation and functioning as a pair of jaws to grip the end portion of a loaf of bread, one of said end walls having a hinge trunnion along its free edge, the other having a hinge channel along its free edge, receiving said hinge trunnion and embracing the same so as to prevent separation of the sections radially with reference to the hinge axis, and a leaf spring having respective end portions attached to the respective end walls and resisting axial movement of the hinge elements relative to each other, thereby to hold said sections in assembly, said leaf spring urging said sections toward each other whereby they may yieldingly grasp the loaf.

3. In a closure for the opened end of a wrapped bread loaf, a pair of closure sections each including an end wall and a flange extending around three sides thereof, leaving a fourth side open and bordered by a free edge on said end wall, one of said end walls having along its free edge a hinge trunnion and the other having along its free edge a hinge channel receiving said hinge trunnion and embracing the same so as to prevent separation of the sections radially with reference to the hinge axis, a pair of finger grips integrally formed on the respective end walls adjacent the hinge members and projecting rearwardly for engagement by the fingertips to move said sections toward spread postions for freely receiving the opened end of a bread loaf, one of said sections having a boss extending downwardly from the base of its finger grip and internally recessed to form a pocket, the other section having finger grips provided with an aperture registering with said pocket, and a leaf spring extending through said aperture and having one end received in said boss, the other end of said spring bearing against the rear side of the other section and acting to urge the sections toward each other whereby they may yieldingly grasp a bread loaf between them, said spring by its engagement in its pocket and in said aperture, securing the sections against relative movement axially of the hinge.

4. In an end closure for the opened end of a wrapped bread loaf, a pair of closure sections each having an end wall and a flange extending along three sides thereof, leaving a fourth side open and bordered by a free edge on said end wall, each of said flanges including a pair of spaced, substantially parallel lateral portions and an intermediate bridging portion, one of said end walls having a hinge trunnion along its free edge and the other having a hinge channel along its free edge, said channel loosely receiving said hinge trunnion so as to be separable therefrom by relative movement between the sections radially with reference to the hinge axis, the lateral flange portions of one closure section being embraced between those of the other closure section, in overlapping relation, said bridging flange portions being arranged in opposed relation and functioning as a pair of jaws to grip the end portion of a loaf of bread, said end walls being formed with hooks on their inner sides, in opposed relation in respective sides of the hinge axis, and resilient tension means having its respective ends hooked around said hooks and yieldingly urging said sections toward each other to cause said bridging flange portions to grip the loaf, said tension means further functioning for maintaining said hinge channel in embracing relation to said hinge trunnion.

5. In a closure member for the opened end of a wrapped bread loaf, a pair of closure sections each having an end wall and a flange extending around three sides thereof and leaving a fourth side open and bordered by a free edge on said end wall, each of said flanges including a pair of spaced, substantially parallel lateral portions and an intermediate bridging portion, the lateral flange portions of one closure section being embraced between those of the other closure section, in overlapping relation, said bridging flange portions being arranged in opposed relation, and functioning as a pair of jaws to grip the end portion of a loaf of bread, the free edges of the respective end walls being provided with axially aligned hinge loops, a hinge pin extending through said loops to form a hinge, two of said loops being spaced apart to form a spring receiving notch, and a mouse trap type spring coiled around the hinge pin within said notch and having its respective end portions engaged against the respective end walls to urge said sections toward each other so that they may yieldingly grasp the end of a bread loaf.

6. In a closure for the opened end of a wrapped bread loaf, a pair of closure sections each including an end wall and a flange extending around three sides thereof, leaving an open fourth side bordered by a free edge on said end wall, each of said flanges including a pair of spaced, substantially parallel lateral portions and an intermediate bridging portion, one of said end walls having at its free edge a hinge trunnion, the other end wall having at its free edge a female hinge element receiving said hinge trunnion to provide a hinged connection between the closure sections, the respective closure sections having socket members opening toward said hinged connection and spaced therefrom, the lateral flange portions of one closure section being embraced between those of the other closure section, in overlapping relation, said bridging flange portions being arranged in opposed relation and functioning as a pair of jaws to grip the end portion of a loaf of bread, and a spring having arms engaging the respective end walls and having the end portions of said arms engaged in the respective sockets, said spring yieldingly biasing the sections toward each other for gripping the loaf.

7. In a closure for the opened end of a wrapped bread loaf, a pair of closure sections each having an end wall and a flange extending around three sides thereof, leaving a fourth side open and bordered by a free edge on said end wall, hinge means joining said free edges for hinging movement of the closure sections relative to one another, each of said flanges including a pair of spaced, substantially parallel lateral portions and an intermediate bridging portion, the lateral flange portions of one closure section being embraced between those of the other closure section, in overlapping relation, said bridging flange portions being arranged in opposed relation and functioning as a pair of jaws to grip the end por-

tion of a loaf of bread, and means yieldingly urging said sections toward each other so as to cause said bridging flange portions to grip the loaf between them, said sections cooperatively defining a closure of cap shape having an open side to receive the loaf.

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