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(54) **A recloseable sealed lid**

(57) A reclosable sealed lid for an open-topped container comprising a first side, a second side, an opening (104) through the first and second sides, a tongue (103), a pair of guides (107a, 107b) for guiding the sliding tongue and a tamper proof system visible to the consumer when in use, the first side opposing the container when the lid is in use, the second side facing away from the container when the lid is in use, the tongue slidable when in use

between a first closed position when the opening is covered and a second position when the opening is uncovered, the tongue and pair of guides being in the same plane at least when in use, the tongue not including an opening, and wherein the lid is manufactured from a unitary template.

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Description

[0001] This invention relates to a reclosable sealed lid for an open-topped container such as a tray, a can, a jar or a tub, in particular for an open-topped container containing a free-flowing solid product such as chopped frozen herbs.

[0002] Products such as frozen chopped herbs are generally sold in 30g non-recloseable cardboard packets. One problem with such packaging is that, once opened, the contents can easily inadvertently escape the packaging. Another problem is the need to ensure that any reclosable packaging has a tamper proof system so that the consumer can tell if the packaging has been previously opened before purchase.

[0003] In this specification, reference to a "tamper proof system" means a system which indicates to a user that the reclosable lid has been opened at least once.

Summary of the Invention

[0004] The aforementioned problems are solved, in a first aspect of the invention, by providing a reclosable sealed lid for an open-topped container comprising a first side, a second side, an opening through the first and second sides, a tongue, a pair of guides for guiding the sliding tongue and a tamper proof system visible to the consumer when in use, the first side opposing the container when the lid is in use, the second side facing away from the container when the lid is in use, the tongue slidable when in use between a first closed position when the opening is covered and a second position when the opening is uncovered, the tongue and pair of guides being in the same plane at least when in use, the tongue not including an opening, and wherein the lid is manufactured from a unitary template..

[0005] It has been observed that by ensuring that the sliding tongue and pair of guides are in the same plane at least when in use, the tongue cannot lift with the consequent risk of any free-flowing solid product finding its way under the tongue and becoming frozen and jammed with the guides. With the present arrangement of tongue and guides, the tongue may slide more freely.

[0006] The unitary template may be coated on one side only with a water-impermeable coating thereby to ensure that the first side of the lid is entirely coated with the water-impermeable coating. This reduces the risk of the lid losing any mechanical strength through absorption of moisture from the contents of the open-topped container whilst ensuring that the costs of manufacture are minimised through only needing to coat one side of the template and not both. Alternatively the unitary template may be laminated on one side only with a water-impermeable laminate. In a further embodiment, both sides of the unitary template may be thus coated or laminated or one side coated and the other laminated.

[0007] In one embodiment, the tamper proof system may comprise a plurality of perforations which must be

broken in order to operate the tongue for the first time. In another embodiment either separately or in combination with the first embodiment, the tamper proof system comprises an adhesive seal between the tongue and, when in use, an open-topped container. With either embodiment, it is clearly visible to the consumer whether the lid has been opened for the first time or not.

[0008] The tongue may comprise a leading edge which slides across the opening, the leading edge having a concave shape. It has been observed that the concave shape of the leading edge facilitates closure of the lid.

[0009] The reclosable sealed lid may further comprise at least one stop thereby to ensure that the tongue only slides between the first position and the second position. Preferably the reclosable sealed lid comprises two stops. The at least one stop may comprise a pair of abutting shoulders, one shoulder located on the sliding tongue and the other on a part of the reclosable sealed lid other than the sliding tongue.

[0010] In another aspect of the invention, a recloseable sealed container is provided comprising an open-topped container and a recloseable sealed lid according to the invention.

Summary of the Drawings

[0011] The invention will now be exemplified with reference to the drawings which show in:

- Figure 1: a first embodiment of the invention; and in
Figure 2: a second embodiment of the invention.

Detailed Description

[0012] Figure 1 shows a template comprising an approximately rectangular central flap (101) in hinged connection along one side to a bottom flap (102) and in hinged connection along an opposing side to a tongue flap (103). The central flap (101) includes a central flap opening (104) proximal the bottom flap (102) and a tongue opening (105) proximal the tongue flap (103). The bottom flap (102) includes a bottom flap opening (106) proximal the central flap (101). The central flap opening (104) and the bottom flap opening (106) are identical in size and shape and are arranged such that if the central flap (101) and the bottom flap (102) are folded together, then the central flap opening (104) and the bottom flap opening (106) are superimposed. The central flap opening (104) may comprise a plurality of perforations thereby providing a means to control dispensing of goods through the bottom flap opening (106).

[0013] The bottom flap (102) is hingedly connected to an opposing pair of guide flaps (107a and 107b) located either side of the bottom flap opening (106). Each guide flap end distal to the central flap (101) terminates in a guide flap shoulder (108a and 108b).

[0014] The tongue flap (103) comprises a head part (111), which is shaped to overlap the central flap opening

(104) and the bottom flap opening (106), connected to a neck part (112), which can pass, in operation, through the pair of guide flap shoulder (108a and 108b) and a pair of tongue flap shoulders (109a and 109b) at the base of the head part where it connects with the neck part (112) which are in opposition to the guide flap shoulders (108a and 108b) and which, when in operation, abut the guide flap shoulders (108a and 108b). Furthermore the head part edge (110) distal from the neck part (112) adopts a concave form.

[0015] Two perforated lines (114a and 114b) connect the tongue opening (105) to the tongue flap (103) which when broken allows separation of the tongue flap (103) from the central flap (101).

[0016] In this embodiment, only one side of the template is coated or laminated with a water impermeable coating or laminate. However this does not preclude both sides of the template being coated or laminated or one side being coated and the other laminated.

[0017] The lid is assembled by folding the coated side of the tongue flap (103) onto the coated side of the central flap (101). Then the coated sides of the guide flaps (107a and 107b) are folded forwards each other onto the coated side of the bottom flap (102). The guide flaps (107a and 107b) may optionally be glued or otherwise secured to the bottom flap (102). Then the coated side of the central flap (101) is folded onto the coated side of the bottom flap (102). In order to secure the central flap (101) to the bottom flap (102), glue or some other suitable means may be used.

[0018] Figure 1 also shows an open-topped container provided with a rim (not shown) to which the assembled lid is attached by adhesive or some other means. For this purpose, the perimeter of the central flap (101) and the bottom flap (102) will generally adopt that of the rim of the open-topped container.

[0019] In use, the perforated lines (114a and 114b) are broken thereby to form an independent section consisting of the tongue flap (103) and part of the central flap attached thereto, the independent section being, in effect, a tongue. The part of the central flap still attached to the tongue flap (103) is then unfolded and pulled away from the lid together with the tongue flap (103) thereby uncovering the central flap opening (104) and the bottom flap opening (106) providing access to the interior of the open-topped container. As the tongue flap (103) is pulled further away from the lid, the pair of tongue flap shoulders (109a and 109b) meet the pair of guide flap shoulders (108a and 108b) thus confining the tongue flap to sliding between the first and second positions. The lid is closed by simply pushing the tongue flap (103) back towards the lid.

[0020] Figure 2 shows another embodiment of the invention. The template comprises an approximately rectangular central flap (201) in hinged connection along one side to a bottom flap (202), in hinged connection along an opposing side to a tongue flap (203) and in hinged connection along an adjacent side to a top flap

(204). The bottom flap (202) includes a bottom flap opening (205) and the top flap (204) includes a top flap opening (206). The bottom flap opening (205) and the top flap opening (206) are identical in size and shape and are arranged such that when the lid is assembled, the bottom flap opening (205) and the top flap opening (206) are superimposed.

[0021] The tongue flap (203) comprises a head part (207), which is shaped to overlap the bottom flap opening (205) and the top flap opening (206), connected to a neck part (208). The tongue flap (203) is connected to the central flap (201) only by two neck part shoulders (209a and 209b), which form part of the tongue flap (203), located on either side of the neck part distal from the head part (207). The tongue flap (203) also includes a pair of tongue flap shoulders (214a and 214b) at the base of the head part where it connects with the neck part (208). The neck part (208) is connected at the end distal to the head part (207) to a handle (210) which projects into the central flap (201). Furthermore the head part edge (211) distal from the neck part (208) adopts a concave form.

[0022] The central part (201) includes a tongue flap opening (212) suitable for guiding the head part when in use sliding from the first position to the second position.

The central part (201) also includes a pair of guide shoulders (213a and 213b) placed on either side of the handle (210) which are in opposition to the pair of tongue flap shoulders (214a and 214b) and which, when in operation, abut the pair of tongue flap shoulders (214a and 214b).

[0023] Two perforated lines (215a and 215b) separate the neck part (208) from the two neck part shoulders (209a and 209b) which when broken allows separation of the neck part (208), head part (207) and handle (210), in effect the tongue, from the rest of the lid.

[0024] In this embodiment, only one side of the template is coated or laminated with a water impermeable coating or laminate. However this does not preclude both sides of the template being coated or laminated or one side being coated and the other laminated.

[0025] The lid is assembled by folding the coated side of the tongue flap (203) on to the coated side of the central flap (201). Then the uncoated side of the central flap (201) is folded on to the uncoated side of the bottom flap (202). Then the coated side of the top flap (204) is folded onto the coated side of the central flap (201). In order to secure the top flap (204) and bottom flap (202) to the central flap (201), glue or some other suitable means may be used.

[0026] Figure 2 also shows an open-topped container provided with a rim to which the assembled lid is attached by adhesive or some other means. For this purpose, the perimeter of the central flap (201) and the bottom flap (202) will generally adopt that of the rim of the open-topped container. The handle (210) is then folded down and secured, preferably by adhesive) to the side of the open-topped container.

[0027] In use, the handle (210) is first lifted away from the side of the open-topped container and the perforated lines (215a and 215b) broken thereby to form an inde-

pendent section consisting of the neck part (208), head part (207) and handle (210), the independent section being, in effect, a tongue. The lid is then opened by pulling on the handle (210) thereby to slide the tongue to the second position providing access to the interior of the open-topped container. Further sliding of the tongue beyond the second position is prevented by abutment of the pair of tongue flap shoulders (109a and 109b) meet the pair of tongue flap shoulders (214a and 214b) against the pair of guide shoulders (213a and 213b). The lid is closed by simply pushing the tongue back towards the lid.

[0028] The templates may be constructed from any type of foldable board such as recycled, mechanical or chemical wood pulp with a density of 250-500 gm² or a suitable plastics material such as polypropylene, polyethylene, polystyrene, poly(lactic acid) and mixtures thereof. The coating may be based on polyethylene, polypropylene, poly(lactic acid), poly(hydroxyalkanoates) and mixtures thereof. The laminate may be based on polyethylene, polypropylene, polylactic acid, polystyrene, polyethylene terephthalate, poly(hydroxyalkanoates) and mixtures thereof and have a laminate thickness of 300-500 microns. The process of coating or laminating the foldable board is accomplished using techniques known to the person skilled in the art.

Claims

1. A reclosable sealed lid for an open-topped container comprising a first side, a second side, an opening through the first and second sides, a tongue, a pair of guides for guiding the sliding tongue and a tamper proof system visible to the consumer when in use, the first side opposing the container when the lid is in use, the second side facing away from the container when the lid is in use, the tongue slidable when in use between a first closed position when the opening is covered and a second position when the opening is uncovered, the tongue and pair of guides being in the same plane at least when in use, the tongue not including an opening, and wherein the lid is manufactured from a unitary template. 30
2. A reclosable sealed lid according to claim 1 wherein the unitary template is coated on one side only with a water-impermeable coating thereby to ensure that the first side of the lid is entirely coated with the water-impermeable coating. 35
3. A reclosable sealed lid according to claim 1 wherein the unitary template is laminated on one side only with a water-impermeable laminate thereby to ensure that the first side of the lid is entirely laminated with the water-impermeable coating. 40
4. A reclosable sealed lid according to any one of the preceding claims wherein the tamper proof system 45
5. A reclosable sealed lid according to any one of the preceding claims wherein the tamper proof system comprises an adhesive seal between the tongue and, when in use, an open-topped container. 50
6. A reclosable sealed lid according to any one of the preceding claims wherein the tongue comprises a leading edge which slides across the opening, the leading edge having a concave shape. 55
7. A reclosable sealed lid according to any one of the preceding claims further comprising at least one stop thereby to ensure that the tongue only slides between the first position and the second position.
8. A reclosable sealed lid according to claim 7 wherein the at least one stop comprises a pair of abutting shoulders, one shoulder located on the tongue and the other on a part of the reclosable sealed lid other than the tongue.
9. A recloseable sealed container comprising an open-topped container and a recloseable sealed lid according to any one of the preceding claims.

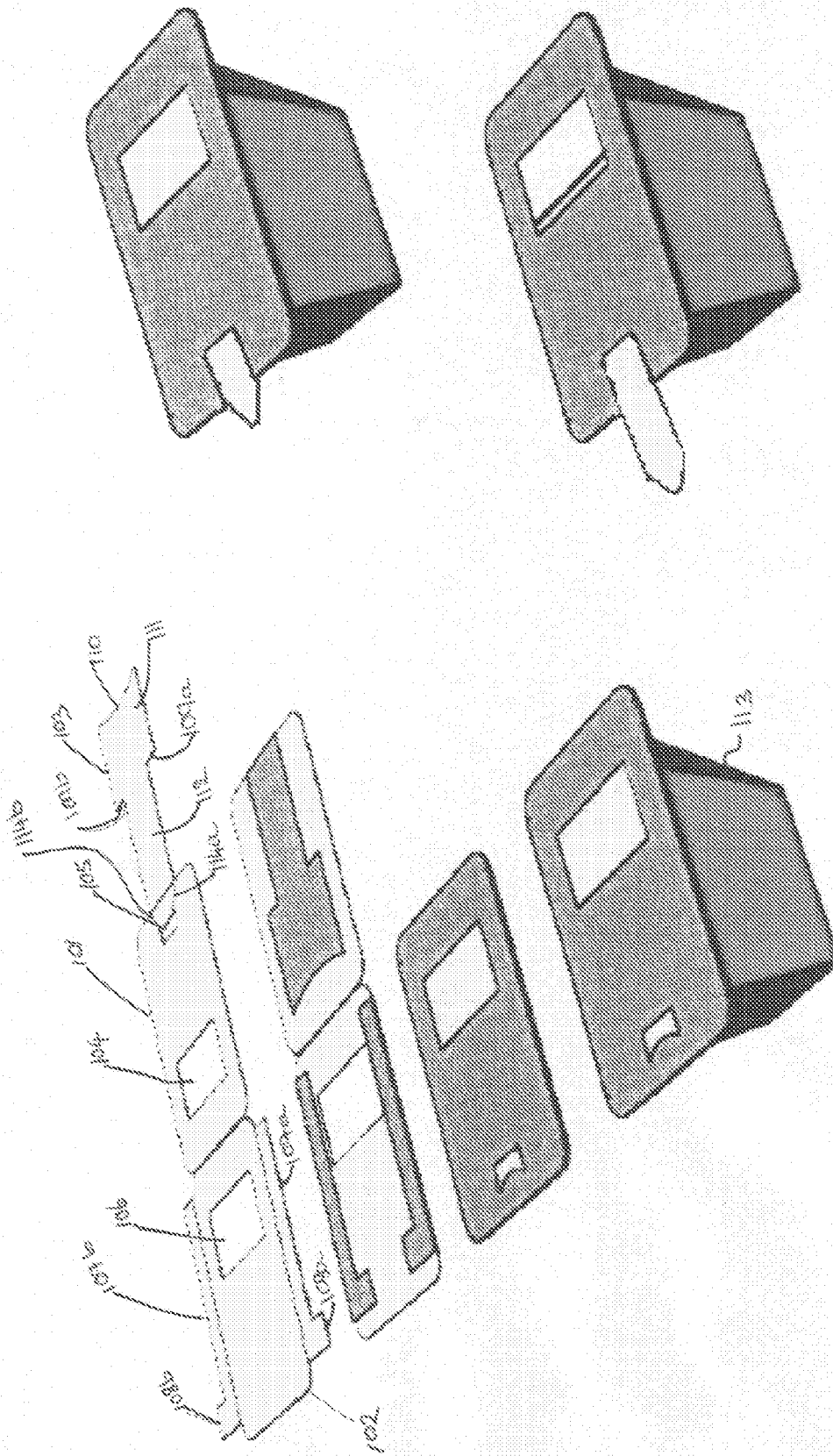


FIGURE 2.

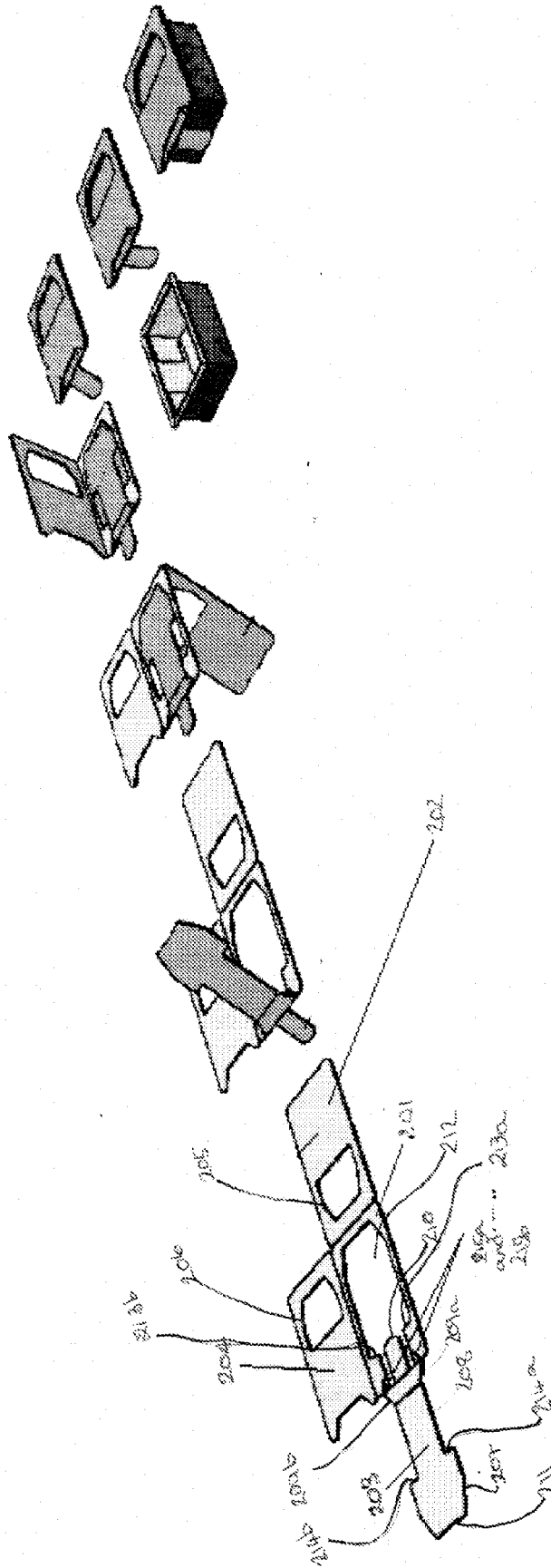


FIGURE 2



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			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		13 March 2007	Leijten, René
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X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82