MULTIFUNCTIONAL PAN LID

FIELD OF INVENTION

[0001] The present invention relates to a pan lid structure, and more particularly to a multifunctional pan lid with an opening formed on a lid body, and a top cover detachably installed to the top of the opening, such that when the top cover covers the opening, the pan lid can simmer food and prevent hot oil from splashing, or when the top cover is open, moisture or oil fume can be released from the opening of the pan lid.

BACKGROUND OF INVENTION

Description of the Related Art

[0002] When food is put into a pot or pan for frying, hot oil often splashes when it encounters the moisture of the food. The splashing of the hot oil not only easily burns the user's face or hands, but also causes the surrounding area of the stove to become dirty. Obviously, it is a heavy burden to clean up the oil stain and grease in the kitchen. Although a pan lid can be used to cover the pan during the cooking process to prevent the oil from bursting out, the pan lid will cause the excess moisture produced from the food during frying to stay inside the pan, thereby making the food not crispy enough and affecting the taste of the deep fried food.

[0003] In order to overcome the aforementioned problems, R.O.C. Pat. Nos. M286644 and 456229 have improved the conventional frying pan, R.O.C. Pat. No. M414183 has improved the way of discharging air from a pan, and R.O.C. Pat. No. M4235272 has improved a conventional spatula, and the foregoing patented technologies are intended for making the food frying process safer and maintaining a more crispy taste of the food.

[0004] The pan lid disclosed in R.O.C. Pat. No. M414183 includes a pivot member for pivotally connecting a first lid body to a side of a second lid body. When the first and second lid bodies are unfolded relative to each other, the top of the pan

can be covered. When the first lid body is pushed by a user to pivot relative to the second lid body, a sector-shaped opening is formed between the first and second lid bodies, such that the moisture produced by the deep dried food can be released to the outside from the sector-shaped opening. However, this structure may easily produce dead corners in cleaning. For example, it is easy for the overlapping parts of the first and second lid bodies to adhere to oil stains which are uneasy to clean.

[0005] The spatula disclosed in R.O.C. Pat. No. M423527 includes a transparent protective plate installed to the spatula and provided for preventing hot oil from splashing on the user's body when operating the cooking utensils to fry food. However, in actual operation, the transparent protective plate is relatively large in size, it is easy to collide with other equipment in the kitchen and lose the flexibility of the spatula. Obviously such spatula cannot solve the problem of the dirty and greasy situation around the stove caused by the splashing of the hot oil.

[0006] In view of the aforementioned drawbacks, the inventor of the present invention based on years of experience in the related industry to conduct extensive research and experiment, and finally develop a multifunctional pan lid to overcome the drawbacks of the prior art.

SUMMARY OF THE INVENTION

[0007] Therefore, it is a primary object of the present invention to provide a multifunctional pan lid which can stop hot oil from splashing around, avoid people from being burned by oil explosion or cause the kitchen to be greasy and dirty, and allow moisture and oil fume to be released from the opening, and when the opening is covered, the pan lid can be used in a general way to simmer food, so as to provide a multifunctional use.

[0008] To achieve the aforementioned and other objectives, the present invention discloses a multifunctional pan lid comprising a lid body with an opening formed at the center of the top of the lid body, and a top cover combined with the top of the opening and having a grip disposed on a top surface of the top cover, wherein

the opening has a positioning edge disposed around the inner periphery thereof, and at least one set of vertically aligned snap portion and snap member disposed between the periphery of (the bottom surface of) the top cover and (the top surface of) the positioning edge; the top cover can deflect relative to the lid body to snap the snap portion with the snap member for positioning, such that the top cover is combined with the lid body; the top cover can deflect in an opposite direction relative to the lid body to release the snapped status of the snap portion and the snap member, such that the top cover can be removed from the lid body.

[0009] With the aforementioned structure, the top cover can be detachably combined with the lid body by the snap portion and the snap member, thereby allowing users to choose the way of use according to their needs. When the pan contains hot oil for frying food, the top cover can be removed, and the lid body can stop hot oil from splashing around, avoid people from being burned by oil explosion or cause the kitchen to be greasy and dirty, while allowing moisture and oil fume to be released from the opening. When the top cover is combined with the lid body to cover the opening, the pan lid can be used in a general way to simmer food or facilitate user to access the pan lid, so as to provide a multifunctional use.

[0010] The embodiments of each components are further described below:

[0011] In an embodiment, the snap portion is disposed around the top cover and the snap member is disposed on the top surface of the positioning edge of the lid body.

[0012] In an embodiment, the snap member is substantially in a columnar shape or a convex granular shape and has a neck, and a protrusion disposed at the top of the neck, and the protrusion has an external diameter greater than the external diameter of neck; the snap portion is an elongated through slot penetrating through the thickness of the top cover, and one of the ends of the through slot is defined as a first end having an internal diameter greater than the external diameter of the protrusion, and the other end is defined as a second end having an internal diameter greater than the external diameter of the neck and smaller than the external diameter of the protrusion; and after the snap member is passed through

the corresponding first end, the top cover is deflected relative to the lid body, such that the second end of the through slot is shifted to the outer periphery of the corresponding snap member to snap and fix the protrusion of the snap member with the second end.

[0013] In an embodiment, the snap portion is disposed on the positioning edge of the lid body, and the snap member is disposed around the bottom surface of the top cover.

[0014] In an embodiment, the snap member is substantially in a columnar shape or a convex granular shape and has a neck, and a protrusion disposed at the bottom of the neck, and the protrusion has an external diameter greater than the external diameter of neck; the snap portion is an elongated through slot penetrating through the thickness of the positioning edge, and one of the ends of the through slot is defined as a first end having an internal diameter greater than the external diameter of the protrusion, and the other end is defined as a second end having an internal diameter greater than the external diameter of the neck and smaller than the external diameter of the protrusion; and after the snap member is passed into the corresponding first end, the top cover is deflected relative to the lid body, such that the neck of the snap member is shifted to the inner periphery of the second end of the corresponding through slot to snap and fix the protrusion of the snap member with the second end.

[0015] In an embodiment, the pan lid further comprises a handle installed to an edge of the lid body.

[0016] Compared with the prior art, the present invention provides a detachable top cover on the lid body, so that users can choose the usage method according to their needs. When the pan is filled with hot oil for frying food, the top cover can be removed and then the lid body can block the hot oil from splashing around, avoid dirt and greasy from splashing around the furnace, and also avoid people from being burned by oil explosions, while allowing the moisture and oil fume produced during frying to be released through the opening. When the top cover is combined with the lid body to cover the opening, the pan lid can be used in a general way to

simmer food. When it is not necessary to simmer food, the whole pan lid can be lifted up by the grip of grip of the top cover or the handle at the edge of the lid body, so as to provide a multifunctional use.

[0017] It is noteworthy that the air outlet of a hood is aligned precisely with the stove, so that when the pan is placed on the stove, the opening of the lid body is just below the air outlet, and when the top cover is removed, the opening of the lid body allows the moisture and oil fume in the pan to be released upwardly and quickly, so as to prevent the oil fume from dispersing in the kitchen..

[0018] The technical characteristics of the present invention will become clearer in light of the following detailed description of illustrative embodiments of this invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] FIG. 1 is a perspective exploded view of a first embodiment of the present invention;

[0020] FIG. 2 is a schematic view of a top cover that covers a lid body of the present invention;

[0021] FIG. 3 is a schematic view of a top cover combined with a lid body of the present invention;

[0022] FIG. 4 is a first schematic view showing the use of the present invention;

[0023] FIG. 5 is a second schematic view showing the use of the present invention;

[0024] FIG. 6 is a perspective exploded view of a second embodiment of the present invention; and

[0025] FIG. 7 is a perspective exploded view of a third embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0026] With reference to FIG. 1 for a multifunctional pan lid of the present invention, the pan lid can be covered onto a pan (not shown in the figure), and the pan lid includes a lid body 10 that can be placed on the top of the pan, and a top

cover 20, and the lid body 10 is formed by surrounding an upwardly tapered ring wall 11, and an opening 12 is formed at the center of the top of the lid body 10, and a positioning edge 13 is disposed around the inner periphery of the opening 12 and provided for combining with the top cover 20.

[0027] The top cover 20 has a grip 21 at the top surface of the top cover 20 and provided for a user to apply forces, and at least one set of a snap portion 31 and a snap member 32 disposed between the periphery of the top cover 20 and the positioning edge 13 and vertically aligned with each other. The top cover 20 can be detachably combined with the positioning edge 13 of the lid body 10 by the snap portion 31 and the snap member 32.

[0028] During use, a user can hold the grip 21 of the top cover 20 and applies a force to deflect the top cover 20 relative to the lid body 10 in order to snap and fix the snap portion 31 with the snap member 32, such that the top cover 20 is combined with the lid body 10; or the user can apply a force to deflect the top cover 20 in an opposite direction relative to the lid body 10 in order to release the snap portion 31 from the snap member 32, such that the top cover 20 can be removed from the lid body 10.

[0029] The installation positions of the snap portion 31 and the snap member 32 are shown in FIG. 1, wherein the snap portion 31 is disposed around the top cover 20, and the snap member 32 is disposed on the top surface of the positioning edge 13 of the lid body 10. In another feasible way as shown in FIG. 7, the snap portion 31 is disposed on the positioning edge 13 of the lid body 10, and the snap member 32 is disposed on the bottom surface of the top cover 20.

[0030] An example of having a plurality of snap portions 31 disposed on the top cover 20 and a plurality of snap members 32 disposed on the lid body 10 is described as follows. In FIG. 1, each snap member 32 is substantially in a columnar shape or in a convex granular shape (as shown in the figure) and each snap member 32 has a neck 321, and a protrusion 322 disposed at the top of the neck 321, wherein the protrusion 322 has an external diameter greater than the external diameter of the neck 321.

[0031] Each snap portion 31 is an elongated through slot penetrating through the thickness of the top cover 20, and one of the ends of the through slot is defined as a first end 311 having an internal diameter greater than the external diameter of the protrusion 322, and the other end is defined as a second end 312 having an internal diameter greater than the external diameter of the neck 321 and smaller than the external diameter of the protrusion 322.

[0032] In FIGS. 1 to 3, When the pan is filled with hot oil for frying, the top cover 20 can be removed and the lid body 10 can prevent the hot oil from splashing around, prevent people from being burned by the oil explosion, whole allowing the moisture and oil fume produced during the frying process to be released from the opening 12.

[0033] When the user wants to combine the top cover 20 with the opening 12 of the lid body 10, the user presses the bottom periphery of the top cover 20 against the positioning edge 13 of the opening 12 to align the first end 311 of each through slot with each respective snap member 32, such that the protrusion 322 of each snap member 32 can be passed into the inner periphery of the first end 311 of the corresponding through slot.

[0034] After the protrusion 322 of each snap member 32 is passed into the inner periphery of the first end 311 of the corresponding through slot, the user can apply a force to the grip 21 to turn the top cover 20, such that the second end 312 of each through slot can be shifted to a position corresponding to the outer periphery of the neck 321 of the snap member 32, so as to snap and fix the protrusion 322 of the snap member 32 with the second end 312, and secure the top cover 20 onto the lid body 10. Therefore, the user can use the pan lid in an ordinary way for simmering food, or the user can move the top cover 20 and the lid body 10 by the grip 21. When the user wants to remove the top cover 20, the user just need to turn the top cover 20 in an opposite direction to release the snapped status of the top cover 20 in order to remove the top cover 20.

[0035] In FIG. 4, when the top cover 20 covers the opening 12, the moisture is circulated between the pan and the pan lid to simmer the food. In FIG. 5, after the

top cover 20 is removed, the tapered top of the lid body 10 can effectively block the hot oil from splashing around, avoid dirt and grease at the stove, and allow moisture and oil fume inside the pan to be released in a direction towards the opening 12 to provide the effect of controlling the moisture and oil fume, and the opening 12 is substantially disposed at the center of the lid body 10 and configured to be corresponsive to the air outlet of the hood, such that after the moisture and oil fume are released from the opening 12, they can be drawn to the outside quickly through the hood to prevent the oil fume from dispersing indoors.

[0036] In FIG. 6, the pan lid further includes a handle 14 disposed at an edge of the lid body 10. After the top cover 20 is removed from the lid body 10, the user can move the lid body 10 by the handle 14, and such arrangement provides a more convenient use.

[0037] Compared with the prior art, the present invention is provided with a removable top cover 20 on the lid body 10, so that the user can choose the usage method according to their needs. When the pan is filled with hot oil for frying and after the top cover 20 is removed, the lid body 10 can be used to prevent the hot oil from splashing around, so as to avoid dirt and greasy around the stove, and also prevent people from being burned by the oil explosion. When the top cover 20 is combined with the lid body 10 to cover the opening 12, the pan lid can be used to simmer the food in an ordinary way, and the grip 21 on the top cover 20 or the handle 14 at the edge of the lid body 10 can be used to lift the entire pan lid when simmering is not required, so as to provide a multifunctional use.

[0038] While the invention has been described by means of specific embodiments, numerous modifications and variations could be made thereto by those skilled in the art without departing from the scope and spirit of the invention set forth in the claims.

10	Lid body
11	Ring wall
12	Opening
13	Positioning edge
14	Handle
20	Top cover
21	Grip
31	Snap portion
311	First end
312	Second end
32	Snap member
321	Neck
322	Protrusion

What is claimed is:

1. A multifunctional pan lid, comprising a lid body with an opening formed at the center of the top of the lid body, and a top cover combined with the top of the opening and having a grip disposed on a top surface of the top cover, wherein the opening has a positioning edge disposed around the inner periphery thereof, and at least one set of vertically aligned snap portion and snap member disposed between the periphery of the top cover and the positioning edge; the top cover can deflect relative to the lid body to snap the snap portion with the snap member for positioning, such that the top cover is combined with the lid body; the top cover can deflect in an opposite direction relative to the lid body to release the snapped status of the snap portion and the snap member, such that the top cover can be removed from the lid body.

2. The multifunctional pan lid according to claim 1, wherein the snap portion is disposed around the top cover and the snap member is disposed on the top surface of the positioning edge of the lid body.

3. The multifunctional pan lid according to claim 2, wherein the snap member is substantially in a columnar shape or a convex granular shape and has a neck, and a protrusion disposed at the top of the neck, and the protrusion has an external diameter greater than the external diameter of neck;

   the snap portion is a thick elongated through slot penetrating through the top cover, and one of the ends of the through slot is defined as a first end having an internal diameter greater than the external diameter of the protrusion, and the other end is defined as a second end having an internal diameter greater than the external diameter of the neck and smaller than the external diameter of the protrusion;

and after the snap member is passed through the corresponding first end, the top cover is deflected relative to the lid body, such that the second end of the through slot is shifted to the outer periphery of the corresponding snap member to snap and fix the protrusion of the snap member with the second end.

4. The multifunctional pan lid according to claim 1, wherein the snap portion is disposed on the positioning edge of the lid body, and the snap member is disposed around the bottom surface of the top cover.

5. The multifunctional pan lid according to claim 4, wherein the snap member is substantially in a columnar shape or a convex granular shape and has a neck, and a protrusion disposed at the bottom of the neck, and the protrusion has an external diameter greater than the external diameter of neck;
the snap portion is a thick elongated through slot penetrating through the positioning edge, and one of the ends of the through slot is defined as a first end having an internal diameter greater than the external diameter of the protrusion, and the other end is defined as a second end having an internal diameter greater than the external diameter of the neck and smaller than the external diameter of the protrusion; and
after the snap member is passed into the corresponding first end, the top cover is deflected relative to the lid body, such that the neck of the snap member is shifted to the inner periphery of the second end of the corresponding through slot to snap and fix the protrusion of the snap member with the second end.

6. The multifunctional pan lid according to any one of claims 1 to 5, further comprising a handle installed to an edge of the lid body.