

A PAN-TYPE COOKING UTENSIL

This invention relates to a pan-type cooking utensil for cooking meat, fish, vegetables and the like.

In the past, frying pans have been exclusively employed for frying foods such as meat, fish and vegetables, in an edible oil bath, or by toasting such foods on an edible oil layer on the bottom of the pan. Saucepans have been exclusively employed for boiling such foods.

The object of the present invention is to provide a versatile pan-type cooking utensil which can be variously employed for broiling, toasting, smoking and steaming the above-mentioned foods.

According to the present invention there is provided a pan-type cooking utensil comprising a pan-shaped main body having hot air inlets, a dome-shaped cover detachably fitted on said main body and having an exhaust member extending upwardly from the centre region of the cover, said exhaust member being open at its upper and lower ends, a lid pivotably connected to said exhaust member for opening and closing the upper end of the exhaust member and having an elongated opening, and a tie extending through said opening with the lower end of the tie secured to said exhaust member and the upper end of the tie connected to a lift mechanism for lowering and raising said cover onto and from said main body.

The above and other objects and attendant advantages of the present invention will be more readily apparent to those skilled in the art from the following detailed description in conjunction with the accompanying drawings which show preferred embodiments of the invention, by way of example. In the drawings:-

Fig. 1 is a partly sectional elevation showing a first form of pan-type cooking utensil in accordance with the

present invention, with a portion broken away to show the interior of the utensil;

Fig. 2 is a vertical section showing a second form of pan-type cooking utensil in accordance with the present invention, with some components removed; and,

Fig. 3 is a vertical section showing third form of pan-type cooking utensil in accordance with the present invention, with some components removed.

Referring to Fig. 1 of the accompanying drawings, the cooking utensil generally comprises a pan-shaped main body 1 of substantially U-shaped cross-section and including a flat bottom wall 2 and an integral side wall 3 extending upwardly and radially outwardly from the periphery of the bottom wall 2, at an angle with respect to the plane of the bottom wall 2. A dome-shaped cover 4, open at the top and bottom, is detachably fitted on the main body 1 to seal the interior of the main body from the atmosphere.

The side wall 3 includes a flange 3a extending around the upper edge of the side wall 3 and is provided with a plurality of circumferentially spaced hot air inlets 3b (only one hot air intake 3b is shown in Fig. 1). The flange 3a first extends horizontally, then outwardly downwardly at an angle to the horizontal portion and finally upwardly outwardly at an angle to the downwardly extending portion.

A hollow cylindrical exhaust member 5 is integral with and extends vertically upwardly from the top of the dome-shaped cover 4 in the centre region of the cover. The exhaust member is open at the top and bottom. The open top of the exhaust member 5 is normally closed by a circular lid 6 having an elongated opening 6a which extends from the periphery and through the centre of the lid to terminate short of the diametrically opposite part of the lid periphery. The lid 6 is suitably connected to the side wall

of the exhaust member by means of a hinge or the like 7, for pivotal movement relative to the exhaust member between the open and closed positions. A rope or like tie extends through the opening 6a in the lid 6 in the centre of the latter. The lower end of the rope is suitably secured to the inner surface of the exhaust member 5, and the upper end of the rope is connected to a suitable conventional lift mechanism (not shown).

The inner construction of the main body 1 will now be described in detail, for illustration purposes. A plurality of inwardly extending projections 9 (only one projection 9 is shown in Fig. 1) are provided on the inner surface of the side wall 3 in a circumferentially spaced relationship, and a screen 10 extends across the interior of the side wall 3 and is secured at the periphery to the projection 9, under tension. Alternatively, although not shown, such projections 9 may be provided on the upper or inner surface of the bottom wall 2 and the screen 10 may extend across the interior of the side wall 3 and be secured at the periphery to the projections, this being within the scope of the present invention.

Referring now to Fig. 2, the second form of the pan-type cooking utensil of the invention is substantially similar to the first embodiment as described hereinabove, except for the construction of the side wall 3 and the disposition of the hot air inlets 3b. In this second embodiment, the peripheral flange 3a at the upper edge of the side wall 3 extends downwardly at an angle to the plane of the upper edge of the side wall, and a plurality of hot air inlets 3b are provided in the side wall in different intermediate positions between the upper and lower edges of the side wall 3 in a circumferentially spaced relationship.

Fig. 3 shows the third form of the pan-type cooking utensil of the present invention, which is substantially

(18)

5 similar to the foregoing embodiments except for the construction of the side wall 3 and the disposition of the hot air inlets 3b. In this third embodiment, the side wall 3 does not have a flange (3a) as provided in the preceding  
10 embodiments, and the hot air inlets 3b are formed by notches at the upper edge of the side wall 3 in a suitable circumferentially spaced relationship. In Figs. 2 and 3, the rope (8), the projections (9) and the screen (10) as shown in Fig. 1 are omitted to simplify the drawing.

15 In the second and third embodiments of the cooking utensil of the present invention, when the cover 4 is applied, it is \_\_\_\_\_ placed on the main body 1 to the extent that the lower edge of the cover extends to an intermediate position along the height of the side wall 3. In this position, the cover shields the hot air inlets 3b from the atmosphere to resist hot air escaping through the inlets into the atmosphere.

20 With the above-mentioned construction and arrangement of the components of the cooking utensil according to the present invention, when the cooking utensil is used for cooking food, the main body 1 of the utensil is placed on a gas kitchen range 20, food F such as meat is placed on  
25 the screen 10, the cover 4 is lowered onto the main body 1, and the gas is ignited.

30 The air heated by the flames generated in the kitchen range strikes against the annular upwardly inwardly extending recess in the undersurface of the horizontal and downwardly extending portions of the peripheral flange 3a on the side wall 3, and then flows through the hot air inlets 3b in the flange into the cavity defined by the main body 1 and the cover 4 (Fig. 1). In the second and third  
35 embodiments, as shown in Figures 2 and 3, the heated air flows through the hot air inlets 3b in the body of the side wall 3, or through the hot air inlets 3b at the upper

edge of the side wall 3, into the cavity. In this way, the meat is roasted from above by the heated air. When the meat is heated in the manner described above, fat oozes out of the meat and drips down through the screen 10 and onto the heated bottom wall 2 of the main body 1. The fat is burnt on the bottom wall to generate vapour and smoke which contact the meat from below.

The air heated by the flames generated in the gas cooking range flows through the hot air inlets 3b into the cooking utensil cavity as described above, and then along the inner surface of the dome-shaped cover by convection, as shown by the arrows in Fig. 1, to heat the meat F from above.

Thus, the meat F on the screen 10 is acted upon by the heated air, vapour and smoke from both above and below to be roasted, broiled, steamed and smoked until it is sufficiently cooked.

Furthermore, according to the present invention, if the degree of cooking the meat is desired to be controlled, the lid 6 can be partially opened by an amount depending upon the desired cooking degree to allow a portion of the vapour, smoke and heated air to escape from the cavity defined by the main body and cover, through the exhaust member 5 into the atmosphere.

As mentioned hereinabove, although the rope 8 extends through the centre of the exhaust member 5 and is suitably secured at its lower end to the inner surface of the exhaust member 5, with the upper end connected to the conventional lifting mechanism (not shown), since the lid 6 on the exhaust member 5 is provided with the opening 6a therein, the lid 6 can be opened and closed without interference from the rope 8.

When a cooking operation on the meat F in the cooking

utensil has been completed, the lifting mechanism is operated to haul the rope 8 up to raise the cover 4 from the main body 1, so that the cooked meat can be removed from the utensil.

5           When the next cooking operation is to be conducted in the cooking utensil, the uncooked food is placed on the screen, after the cover has been raised from the main body, and the lifting mechanism is operated to lower the rope until  
10           the cover is properly replaced on the main body. Thereafter, the gas range is ignited again to cook the food in the manner mentioned hereinabove.

          The above-mentioned lifting mechanism may be manual or automatic lifting mechanism and, since the cover can be replaced onto and raised from the main body by lowering the rope  
15           and hauling the rope up, convenient handling of the cover is possible even if the cooking utensil is of a large type. In addition, since the cover can be lowered onto and raised from the main body by the rope in the cooking operation, without the cover having to be put aside to a storage position  
20           adjacent to the gas range, the cover does not occupy any extra space.

          While the present invention has been described in conjunction with the embodiments described herein, it will be evident that many alternatives, modifications and variations  
25           will be apparent to those skilled in the art. Accordingly, the present invention is intended to embrace all such alternatives, modifications and variations within the \_\_\_\_\_  
\_\_\_\_\_ scope of the appended claims.



CLAIMS

1. A pan-type cooking utensil comprising a pan-shaped main body having hot air inlets, a dome-shaped cover detachably fitted on said main body and having an exhaust member extending upwardly from the centre region of the cover, said exhaust member being open at its upper and lower ends, a lid pivotably connected to said exhaust member opening and closing the upper end of the exhaust member and having an elongated opening, and a tie extending through said opening with the lower end of the tie secured to said exhaust member and the upper end of the tie connected to a lift mechanism for lowering and raising said cover onto and from said main body.
2. A pan-type cooking utensil as claimed in Claim 1, in which said main body includes a bottom wall and a side wall integrally extending radially outwardly from the periphery of said bottom wall at an angle with respect to the plane of the bottom wall.
3. A pan-type cooking utensil as claimed in Claim 2, in which said side wall has a flange extending along the upper peripheral edge of the side wall and said hot air inlets are provided in said flange in a circumferentially spaced relationship.
4. A pan-type cooking utensil as claimed in Claim 2 or Claim 3, in which said hot air inlets are provided in said side wall in different intermediate positions between the upper and lower edges of the side wall along a circumferentially spaced relationship.
5. A pan-type cooking utensil as claimed in any of Claims 2 to 4, and further comprising projections integrally extending radially inwardly from the inner surface of said side wall, and a screen extending across



22

the area defined by the side wall and engaging at its periphery with said projections.

6. A pan-type cooking utensil as claimed in Claim 2, in which said hot air inlets are provided at the upper edge of said side wall in a circumferentially spaced relationship.

7. A pan-type cooking utensil as claimed in Claim 6, in which each of said hot air inlets is in the form of a notch.

8. A pan-type cooking utensil, substantially as hereinbefore described with reference to Fig. 1, Fig. 2 or Fig. 3 of the accompanying drawings.

---