

Improvements in or relating to apparatus for cooking, serving and/or storing food and the like.

THIS INVENTION relates to apparatus for cooking, serving and/or storing food and the like, and particularly to dish arrangements suitable therefore.

5 Dishes for use in baking and other cooking applications are typically equipped with a cover so that foodstuffs within the dish can be covered during cooking. Covered cooking helps to retain heat and moisture within the dish and may otherwise aid the cooking process. Even if covered cooking is not desired the cover can be used to help keep the contents of the dish warm prior to serving. When used herein, the term "dish" is intended to
10 include ovenware, such as a casserole dish suitable for use in a microwave oven or a conventional oven, and cooking utensils intended for use on a range-top cooking element.

15 For some cooking applications, it would be advantageous to provide an opening in an otherwise covered dish to allow carefully controlled amounts of steam or other vapors to escape. Further, while it may be desirable to keep a dish covered during cooking, it is nevertheless frequently desirable to gain access to the interior of the dish during cooking, for example, to insert a cooking thermometer into the dish, preferably without
20 completely removing the cover. While serving it may be convenient to leave a serving spoon in the dish and yet keep the dish covered.

25 With some cooking dishes of the prior art, one must substantially remove the entire cover or lid in order to gain access to the interior of the dish. This is at best awkward, because the cook must either hold the removed lid in one hand or else must find a clean and heat-safe location on which the hot lid can be temporarily rested. Moreover, removing the lid from a hot container carries the risk that the cook may be burned by a sudden and uncontrolled escape of steam from the container.

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5 The need to provide an opening for venting steam from the dish or for inserting a cooking thermometer has typically been achieved by setting the lid ajar on the dish. This solution is awkward and usually difficult to regulate, and is undesirable. One known venting expedient, usually limited to metal lids for saucepans or the like, uses a separate butterfly valve element removably attached to the cover. Such valves are not adjustable, easily become clogged, are relatively costly and in any case are not readily adaptable to ceramic or glass cookware. Other prior art dishes have located a venting arrangement in the handle of the dish. However, allowing for the escape of steam in this manner can cause problems for a person handling the container. Locating the vent in such a fashion increases the likelihood that steam will condense on the handle making it hot or slippery or both.

15 The aim of the present invention is at least to mitigate the problems associated with prior art dishes.

20 The invention provides apparatus for cooking, serving and/or storing food, comprising: a cover having an outer rim with an upwardly facing opening therein; a dish having a bottom wall and a peripheral side wall extending upwardly therefrom to form an open mouth defined by an edge of the dish; a dish rim extending outwardly from said edge; said dish rim having an upwardly facing ledge thereon with at least one relatively wide portion and at least one relatively narrow portion; said upwardly facing ledge and said upwardly facing opening cooperating to define an effective unblocked area at various relative positions of said cover on said ledge; said cover being rotatable relative to said upwardly facing ledge between a position over said at least one relatively narrow portion, wherein the effective unblocked area of said upwardly facing opening is maximized, and a position over said at least one relatively wide portion wherein said upwardly facing opening is completely blocked; said effective unblocked area gradually decreasing in size as the upwardly facing opening is rotated from a position over said at least one relatively narrow ledge portion to a position over said at least one relatively wide ledge portion.

35 Preferably, said open mouth has four outwardly generally arcuate sides interconnected by four corners; said upwardly facing ledge having a relatively wide ledge portion adjacent each of said arcuate sides and a relatively narrow portion is adjacent each of said corners.

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Desirably, said dish rim includes an upwardly extending generally circular flange which circumscribes said upwardly facing ledge.

5 The ledge defining said open mouth preferably has a contour such that the effective unblocked area of said opening can be adjusted in size by changing the angular position of the cover relative to said contour.

10 Thus, the cover and dish may cooperate to form at least one adjustably sized opening which allows access to the interior of the covered dish. The opening can function as an adjustable vent to allow controlled amounts of steam or water vapor to escape from the dish. Desirably, the opening is also sufficiently large to admit an implement such as a cooking thermometer or the shank of a spoon.

15 Conveniently, said upwardly facing ledge angles downwardly from said flange towards said edge to direct condensation toward the interior of said dish.

20 The upwardly facing opening is rotatable approximately 45° between an unblocked position over a relatively narrow ledge portion and a blocked position over an adjacent relatively wide ledge portion.

25 Desirably, said cover outer rim has an underside, a lip section extends downwardly from said underside and defines the perimeter of said upwardly facing opening, the lip section being adapted to engage said upwardly facing ledge to completely block access to the interior of said dish when said upwardly facing opening is positioned over a relatively wide ledge portion.

30 In a preferred embodiment the cover includes an outer rim having an opening formed therein. The dish includes a ledge and flange which circumscribe the open mouth of the dish. Portions of the ledge function as handles. When the cover is in place on the dish it can be rotated to at least one relative position wherein the rim of the dish blocks the opening. The cover can be rotated to at least one other position removed from the
35 handles, wherein the opening is unblocked. Thus access to the interior of the dish can be effected without taking the cover off the dish.

Apparatus of the invention provides a covered cooking dish which allows access to the interior of the dish without removing the cover.

5 The dish and cover arrangement provides an adjustably sized opening into the interior of the dish, to allow controlled venting. The opening into the interior of the dish is angularly removed from portions of the dish which function as a handle.

10 In order that the invention may be more readily understood, and so that further features thereof may be appreciated, an embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

FIGURE 1 is a top perspective view of an apparatus of the invention;

FIGURE 2 is an exploded perspective view of the apparatus of Figure 1, illustrating the cover elevated above the dish;

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FIGURE 3 is a top plan view of the apparatus of Figure 1;

FIGURE 4 is a top plan view similar to Figure 3 but with the cover omitted;

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FIGURE 5 is a side elevational view of the apparatus of Figure 1, illustrated with the cover removed and tipped upwardly to show details of the underside thereof;

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FIGURE 6 is an underneath plan view of the cover, taken along line 6-6 of Figure 5;

FIGURE 7 is a fragmentary view taken along line 7-7 of Figure 6;

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FIGURE 8 is a fragmentary top plan view of the apparatus of Figure 1, illustrating an unblocked opening into the dish; and

FIGURE 9 is a cross-sectional view of the apparatus taken along line 9-9 of Figure 3.

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Figures 1 and 2 illustrate a dish 10 having a complementary cover 11. The dish 10 and cover 11 are intended to be used, for example, as a casserole dish or for other cooking purposes. Preferably, the dish 10 and cover 11 are made of any suitable material which can withstand both the high temperatures associated with cooking in an oven or on a range-top and the low temperatures associated with storage in a refrigerator or freezer. For example, the dish and cover may be made from a ceramic glass, metal, plastics or like material.

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As best seen in Figures 2, 4 and 9, the dish 10 has a generally bowl-shaped interior 12 formed by a side wall 13 that is integral with, and extends upwardly from, a bottom wall 14. The bottom wall 14 is slightly convex at

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the center of the dish. The exterior of bottom wall 14 includes a downwardly extending projection 19 which is generally circular in bottom plan view. The projection 19 is preferably formed by a plurality of spaced segments. The projection(s) serve as a base to support the bowl for example on a flat surface. The dish 10 has an open mouth 15 (Figures 2 and 4) having the approximate appearance of a square formed by four outwardly-arcuate side portions 16 interconnected by rounded corners 17. The side portions 16 and corners 17 interconnect to form a continuous smooth edge 18 (Figure 9) defining the open mouth 15 of the dish 10. The continuous smooth edge 18 may be in the form of any other noncircular contour, for example the edge 18 may define an oval mouth 15.

A rim 22 surrounds the open mouth 15 of the dish 10. The upper surface of the rim 22 includes a ledge 24 which extends from the edge 18 of the open mouth 15, and terminates at a generally circular flange 35. As can best be seen in Figure 9, the ledge 24 angles downwardly from the flange 35 towards the open mouth of the dish 10. The flange 35 angles slightly outwardly and is defined at its outer extremity by an outer surface 23. The generally square shape of the open mouth 15 is circumscribed by the flange 35 of the rim 22. As a result the width of the ledge 24 varies between relatively narrow ledge portions 24a, adjacent the corners 17 of the open mouth 15, and relatively wide ledge portions 24b, adjacent the side portions 16 of the open mouth 15. As can best be seen in Figure 4, the relatively wide ledge portions 24b form convenient handles for lifting and carrying the dish 10.

As best shown in Figures 1 and 9, an upper surface of the cover 11 includes a handle 36 centrally located within a surrounding depression 37, so that the handle can be readily grasped, using a "potholder", or any other suitable protective device, when necessary. The perimeter of the depression 37 is defined by an edge 39 which is generally circular in top plan view. A region 38 extends outwardly and downwardly from edge 39 to merge with an outer rim 30, of the cover 11.

The outer rim 30 is defined by a generally circular outer edge 28. As best shown in Figures 3 and 9, the diameter of the outer edge 28 is slightly smaller than the inside diameter of the dish flange 35 so that when the

cover 11 is in place on the dish 10 the flange 35 prevents lateral movement of the cover 11. Outer edge 28 abuts the flange 35 when the cover 11 is tipped to expose the open mouth 15 of the dish 10.

5 A first lip 29 extends downwardly from the underside of the outer rim 30. The first lip 29 is concentric with the outer edge 28 of the cover 11 so that, when the cover 11 is in place on the dish 10 the lip 29 is disposed approximately above the edge 18 of the dish open mouth 15. A second lip 31 extends downwardly at the outer edge 28 of the rim 30. When the cover 11
10 is in place on the dish 10, the second lip 31 contacts the ledge 24 of the rim 22 and supports the cover 11 on the dish. A pair of spaced lugs 32 protrude downwardly from lip 29.

15 A portion of the outer rim 30 of the cover 11 is cut away to form an opening 34 extending inwardly from the outer edge 28 of the cover. The opening 34, as best seen in Figure 6, extends inwardly to a position slightly short of the lip 29. The opening 34 preferably is sufficiently large to accommodate the shank of an implement (not shown) such as a spoon or a cooking thermometer.

20 The second lip 31 includes a section 31a (Figure 6) which defines the perimeter of the opening 34. In combination with the lugs 32 the section 31a forms a base for supporting the rim 30 slightly above any flat surface upon which the cover 11 is placed. As best shown in Figures 3 and 5, the lip
25 section 31a functions to block completely access to the interior of the dish 10 when the opening is positioned over a ledge portion 24b. The portion of lip section 31a extending inwardly from edge 28 angles downwardly at approximately the same angle as the ledge 24.

30 As can be seen from Figure 8, the opening 34 formed on the outer rim 30 of the cover 11 provides access into the interior of the dish 10 whenever the cover 11 is so positioned with respect to the dish 10 that the opening 34 is aligned with one of the corners 17 of the open mouth 15. The opening 34 thus provides access to the interior of the dish for inserting an implement
35 such as a cooking thermometer. The opening also functions as a vent to permit steam to escape from the interior of the dish. The open mouth 15 of the dish 10 must be shaped to provide at least one location at which an

angular placement of the cover 11 on the dish 10 results in opening 34 being unblocked. Since there are four corners 17 in the preferred embodiment, access to the interior of the dish 10 can be accomplished by rotating the cover not more than 45° in any direction.

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By rotating the cover 11 relative to the dish 10, the opening 34 of the cover can be moved from a position over the relatively narrow ledge portion 24a to a position over the relatively wide ledge portion 24b. As best shown in Figure 3, when the opening 34 is positioned over a ledge portion 24b the opening is completely blocked and the interior of the dish becomes inaccessible. Thus the relatively wide ledge portion 24b forms a blocking means which effectively obstructs access to the interior of the dish 10. The dish 10 must include at least one relatively wide ledge portion 24b so that at least one angular placement of the cover 11 on the dish 10 results in the opening being blocked. Since there are four relatively wide ledge portions 24b in the preferred embodiment, the opening 34 can be blocked by rotating the cover not more than 45° in any direction.

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Apparatus of the invention provide various advantages. For example, the effective unblocked area of the opening 34 can be adjusted to any position between maximum unblocked and completely blocked by selecting the appropriate angular position of the cover 11 on the dish 10. It should also be noted that at any angular placement of the cover 11 on the dish 10 the outer rim 30 is positioned over the ledge 24. Condensation on the underside of the rim 30 falls on the ledge 24 and is directed towards the open mouth 15 of dish 10.

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As mentioned previously, the relatively wide ledge portions 24b also facilitates handling of the apparatus, even with the cover in an unblocked position, as in this case the opening 34 is positioned at an angle removed from the relatively wide ledge portions 24b. Thus steam escaping from the interior of the dish will not be directed towards the user's hand when the dish is being grasped. It is also less likely that steam will condense in the area of ledge portion 24b. The slope of the ledge 24 downward towards the open mouth 15 of the dish also directs condensed steam or other liquid towards the interior of the dish.

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CLAIMS

1. Apparatus for cooking, serving and/or storing food, comprising: a cover having an outer rim with an upwardly facing opening therein; a dish having a bottom wall and a peripheral side wall extending upwardly therefrom to form an open mouth defined by an edge of the dish; a dish rim extending outwardly from said edge; said dish rim having an upwardly facing ledge thereon with at least one relatively wide portion and at least one relatively narrow portion; said upwardly facing ledge and said upwardly facing opening cooperating to define an effective unblocked area at various relative positions of said cover on said ledge; said cover being rotatable relative to said upwardly facing ledge between a position over said at least one relatively narrow portion, wherein the effective unblocked area of said upwardly facing opening is maximized, and a position over said at least one relatively wide portion wherein said upwardly facing opening is completely blocked; said effective unblocked area gradually decreasing in size as the upwardly facing opening is rotated from a position over said at least one relatively narrow ledge portion to a position over said at least one relatively wide ledge portion.
2. Apparatus according to claim 1, wherein said open mouth has four outwardly generally arcuate sides interconnected by four corners; said upwardly facing ledge having a relatively wide ledge portion adjacent each of said arcuate sides and a relatively narrow portion is adjacent each of said corners.
3. Apparatus according to claim 1 or claim 2, wherein said dish rim includes an upwardly extending generally circular flange which circumscribes said upwardly facing ledge.
4. Apparatus according to claim 3, wherein said upwardly facing ledge angles downwardly from said flange towards said edge to direct condensation toward the interior of said dish.



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5. Apparatus according to any one of claims 1 to 4, wherein said upwardly facing opening is rotatable approximately 45° between an unblocked position over a relatively narrow ledge portion and a blocked position over an adjacent relatively wide ledge portion.

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6. Apparatus according to any one of claims 1 to 5, wherein said cover outer rim has an underside, a lip section extends downwardly from said underside and defines the perimeter of said upwardly facing opening, the lip section being adapted to engage said upwardly facing ledge to completely block access to the interior of said dish when said upwardly facing opening is positioned over a relatively wide ledge portion.

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7. Apparatus substantially as herein described with reference to and as shown in the accompanying drawings.
