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United States Patent Application Publication

20250257880

Kind Code

A1

Publication Date

August 14, 2025

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VENT TRIM ASSEMBLY FOR A COOKING APPLIANCE

Abstract

A cooking appliance may define a vertical direction, a lateral direction, and a transverse direction. The cooking appliance may include a cabinet. The cooking appliance may further include a cooktop provided above the cabinet. The cooking appliance may also include a cooktop extending between a front edge and a rear edge along the transverse direction. The rear edge may include a rear lip. The cooking appliance may also include a vent trim assembly in fluid communication with the cabinet. The vent trim assembly may include a lower vent trim positioned at the rear edge of the cooktop. The lower vent trim may include a support ledge positioned below the rear edge. The rear lip may be interfaced with the support ledge.

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Family ID: **1000007708985**

Appl. No.: **18/436787**

Filed: **February 08, 2024**

Publication Classification

Int. Cl.: **F24C15/08 (20060101)**

U.S. Cl.:

CPC **F24C15/08 (20130101);**

Background/Summary

FIELD OF THE DISCLOSURE

[0001] The present subject matter relates generally to a cooking appliance, and more particularly to support features for a cooking appliance.

BACKGROUND OF THE DISCLOSURE

[0002] Conventional residential and commercial oven appliances generally include a cabinet that includes a cooking chamber for receipt of food items for cooking. Multiple heating elements are positioned within the cooking chamber to provide heat to food items located therein. The heating elements can include, for example, radiant heating elements, such as a bake heating assembly positioned at a bottom of the cooking chamber, or a separate broiler heating assembly positioned at a top of the cooking chamber. In addition, conventional oven appliances include a cooktop positioned on a top of the appliance that includes one or more heating elements, such as electric heaters, gas burners, or induction heating elements.

[0003] Often, during production of the oven appliance, the cooktops undergo an enameling process to strengthen and protect the cooktop. However, the enameling process applied to the cooktop may result in one or more drawbacks for the oven appliance. For example, due to the thermal load that the cooktop experiences during the enameling process, surfaces of the cooktop can experience a level of deformation. For instance, the cooktop can be “bowed” across one or more edges due the enameling process. The bowing of one or more edges of the cooktop may result in undesirable gaps or voids between the cooktop and one or more adjacent components of the oven appliance.

[0004] Accordingly, an oven appliance that obviates one or more of the above-mentioned drawbacks would be useful.

BRIEF DESCRIPTION OF THE DISCLOSURE

[0005] Aspects and advantages of the invention will be set forth in part in the following description, or may be obvious from the description, or may be learned through practice of the invention.

[0006] In one exemplary aspect of the present disclosure, a cooking appliance is provided. The cooking appliance may define a vertical direction, a lateral direction, and a transverse direction. The cooking appliance may include a cabinet. The cooking appliance may further include a cooktop provided above the cabinet. The cooking appliance may also include a cooktop extending between a front edge and a rear edge along the transverse direction. The rear edge may include a rear lip. The cooking appliance may also include a vent trim assembly in fluid communication with the cabinet. The vent trim assembly may include a lower vent trim positioned at the rear edge of the cooktop. The lower vent trim may include a support ledge positioned below the rear edge. The rear lip may be interfaced with the support ledge.

[0007] In another exemplary aspect of the present disclosure, a vent trim assembly for a cooking appliance is provided. The vent trim assembly may define a vertical direction, a lateral direction, and a transverse direction. The vent trim assembly may include a lower vent trim. The lower vent trim may further define a first side, a second side, a front side, and a rear side. The first side and the second side are spaced apart along the lateral direction. The front side and the rear side are spaced apart along the transverse direction. The lower vent trim may include a front face positioned at the front side and a support ledge extending outward from the front face.

[0008] These and other features, aspects and advantages of the present invention will become better understood with reference to the following description and appended claims. The accompanying drawings, which are incorporated in and constitute a part of this specification, illustrate embodiments of the invention and, together with the description, serve to explain the principles of the invention.

Description

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] A full and enabling disclosure of the present invention, including the best mode thereof, directed to one of ordinary skill in the art, is set forth in the specification, which makes reference to the appended figures.

[0010] FIG. 1 provides a front perspective view of a cooking appliance according to one or more exemplary embodiments of the present subject matter.

[0011] FIG. 2 provides a side cross-sectional view of the exemplary cooking appliance of FIG. 1 according to one or more exemplary embodiments of the present subject matter.

[0012] FIG. 3 provides a back perspective view of a portion of the exemplary cooking appliance of FIG. 1 according to one or more exemplary embodiments of the present subject matter.

[0013] FIG. 4 provides a side cross-sectional view of a portion of the exemplary cooking appliance of FIG. 1 according to one or more exemplary embodiments of the present subject matter.

[0014] FIG. 5 provides a perspective view of a lower vent trim according to one or more exemplary embodiments of the present subject matter.

[0015] FIG. 6 provides a close-up perspective view of a portion of the lower vent trim of FIG. 4 according to one or more exemplary embodiments of the present subject matter.

[0016] Repeat use of reference characters in the present specification and drawings is intended to represent the same or analogous features or elements of the present invention.

DETAILED DESCRIPTION

[0017] Reference now will be made in detail to embodiments of the invention, one or more examples of which are illustrated in the drawings. Each example is provided by way of explanation of the invention, not limitation of the invention. In fact, it will be apparent to those skilled in the art that various modifications and variations can be made in the present invention without departing from the scope of the invention. For instance, features illustrated or described as part of one embodiment can be used with another embodiment to yield a still further embodiment. Thus, it is intended that the present invention covers such modifications and variations as come within the scope of the appended claims and their equivalents.

[0018] As used herein, the terms “first,” “second,” and “third” may be used interchangeably to distinguish one component from another and are not intended to signify location or importance of the individual components. The terms “includes” and “including” are intended to be inclusive in a manner similar to the term “comprising.” Similarly, the term “or” is generally intended to be inclusive (i.e., “A or B” is intended to mean “A or B or both”). In addition, here and throughout the specification and claims, range limitations may be combined or interchanged. Such ranges are identified and include all the sub-ranges contained therein unless context or language indicates otherwise. For example, all ranges disclosed herein are inclusive of the endpoints, and the endpoints are independently combinable with each other. The singular forms “a,” “an,” and “the” include plural references unless the context clearly dictates otherwise.

[0019] Approximating language, as used herein throughout the specification and claims, may be applied to modify any quantitative representation that could permissibly vary without resulting in a change in the basic function to which it is related. Accordingly, a value modified by a term or terms, such as “generally,” “about,” “approximately,” and “substantially,” are not to be limited to the precise value specified. In at least some instances, the approximating language may correspond to the precision of an instrument for measuring the value, or the precision of the methods or machines for constructing or manufacturing the components or systems. For example, the approximating language may refer to being within a ten percent margin, e.g., including values within ten percent greater or less than the stated value. In this regard, for example, when used in the context of an angle or direction, such terms include within ten degrees greater or less than the stated angle or direction, e.g., “generally vertical” includes forming an angle of up to ten degrees in any direction, e.g., clockwise or counterclockwise, with the vertical direction V.

[0020] The word “exemplary” is used herein to mean “serving as an example, instance, or illustration.” In addition, references to “an embodiment” or “one embodiment” does not necessarily refer to the same embodiment, although it may. Any implementation described herein as “exemplary” or “an embodiment” is not necessarily to be construed as preferred or advantageous over other implementations.

[0021] Exemplary aspects of the present subject matter advantageously provide a vent trim assembly for a cooking appliance that includes a support ledge. The exemplary support ledge advantageously locates (e.g., during assembly) and supports (e.g., once assembled) a rear edge of a cooktop of the cooking appliance. For instance, the support ledge may advantageously include a ramp portion and a support portion. The ramp portion may locate the rear edge of the cooktop to the support portion. For instance, the ramp portion may guide or direct a rear edge of the cooktop to the support portion. The support portion may be a portion of the support ledge that may support, for instance, the weight of, the rear edge of the cooktop. Thus, the exemplary support ledge advantageously prevent or mitigate sagging of the cooktop along the rear edge of the cooktop. Furthermore, by preventing or mitigating sagging of the cooktop along the rear edge, undesirable gaps or voids between the cooktop and adjacent vent trim pieces may be reduced or mitigated.

[0022] FIG. 1 provides a front, perspective view of a cooking appliance **100** as may be employed with the present subject matter. Cooking appliance **100** generally defines a vertical direction V, a lateral direction L, and a transverse direction T, each of which is mutually perpendicular, such that an orthogonal coordinate system is generally defined. As illustrated, cooking appliance **100** includes an insulated cabinet **102**. Cabinet **102** of cooking appliance **100** extends between a top **104** and a bottom **106** along the vertical direction V, between a first side **108** (left side when viewed from front) and a second side **110** (right side when viewed from front) along the lateral direction L, and between a front **112** and a rear **114** along the transverse direction T.

[0023] Within cabinet **102** is a single cooking chamber **120** which is configured for the receipt of one or more food items to be cooked. However, it should be appreciated that cooking appliance **100** is provided by way of example only, and aspects of the present subject matter may be used in any suitable cooking appliance, such as a double oven range appliance. Thus, the example embodiment shown in FIG. 1 is not intended to limit the present subject matter to any particular cooking chamber configuration or arrangement. Indeed, aspects of the present subject matter may be applied to cooktops for any suitable appliance.

[0024] Cooking appliance **100** includes a door **124** rotatably attached to cabinet **102** in order to permit selective access to cooking chamber **120**. Handle **126** is mounted to door **124** to assist a user with opening and closing door **124** in order to access cooking chamber **120**. As an example, a user can pull on handle **126** mounted to door **124** to open or close door **124** and access cooking chamber **120**. One or more transparent viewing windows **128** (FIG. 1) may be defined within door **124** to provide for viewing the contents of cooking chamber **120** when door **124** is closed and also assist with insulating cooking chamber **120**.

[0025] In general, cooking chamber **120** is defined by a plurality of chamber walls **130** (FIG. 2). Specifically, cooking chamber **120** may be defined by a top wall, a rear wall, a bottom wall, and two sidewalls. These chamber walls **130** may be joined together to define an opening through which a user may selectively access cooking chamber **120** by opening door **124**. In order to insulate cooking chamber **120**, cooking appliance **100** includes an insulating gap defined between the chamber walls **130** and cabinet **102**. According to an exemplary embodiment, the insulation gap is filled with an insulating material **132**, such as insulating foam or fiberglass, for insulating cooking chamber **120**.

[0026] Cooking appliance **100** also includes a cooktop **140**. Cooktop **140** is positioned at or adjacent top **104** of cabinet **102** such that it is positioned above cooking chamber **120**. Specifically, cooktop **140** includes a top panel **142** positioned proximate top **104** of cabinet **102**. By way of example, top panel **142** may be constructed of glass, ceramics, enameled steel, and combinations

thereof. One or more grates **144** may be supported on a top surface of top panel **142** for supporting cooking utensils, such as pots or pans, during a cooking process.

[0027] Cooking appliance **100** may further include one or more heating elements (identified generally by reference numeral **150**) for selectively heating cooking utensils positioned on grates **144** or food items positioned within cooking chamber **120**. For example, referring to FIG. **1**, heating elements **150** may be gas burners **150**. Specifically, a plurality of gas burners **150** are mounted within or on top of top panel **142** underneath grates **144** that supports cooking utensils over the gas burners **150** while gas burners **150** provide thermal energy to cooking utensils positioned thereon, e.g., to heat food or cooking liquids (e.g., oil, water, etc.). Gas burners **150** can be configured in various sizes so as to provide e.g., for the receipt of cooking utensils (e.g., pots, pans, etc.) of various sizes and configurations and to provide different heat inputs for such cooking utensils. According to alternative embodiments, cooking appliance **100** may have other cooktop configurations or burner elements.

[0028] In addition, heating elements **150** may be positioned within or may otherwise be in thermal communication with cooking chamber **120** for regulating the temperature within cooking chamber **120**. Specifically, an upper gas heating element **154** (also referred to as a broil heating element or gas burner) may be positioned in cabinet **102**, e.g., at a top portion of cooking chamber **120**, and a lower gas heating element **156** (also referred to as a bake heating element or gas burner) may be positioned at a bottom portion of cooking chamber **120**. Upper gas heating element **154** and lower gas heating element **156** may be used independently or simultaneously to heat cooking chamber **120**, perform a baking or broil operation, perform a cleaning cycle, etc. The size and heat output of gas heating elements **154**, **156** can be selected based on the, for example, the size of cooking appliance **100** or the desired heat output. Cooking appliance **100** may include any other suitable number, type, and configuration of heating elements **150** within cabinet **102** or on cooktop **140**. For example, cooking appliance **100** may further include electric heating elements, induction heating elements, or any other suitable heat generating device.

[0029] A control panel assembly **160** is located within convenient reach of a user of the cooking appliance **100**. For this example embodiment, control panel assembly **160** is positioned at a top **104** and front **112** of cabinet **102**, e.g., above door **124** along the vertical direction V and forward of cooktop **140** along the transverse direction T. Control panel assembly **160** includes knobs **162** that are each associated with one of heating elements **150**. In this manner, knobs **162** allow the user to activate each heating element **150** and determine the amount of heat input provided by each heating element **150** for cooking food items within cooking chamber **120** or on cooktop **140**. Although shown with knobs **162**, it should be understood that knobs **162** and the configuration of cooking appliance **100** shown in FIG. **1** is provided by way of example only. More specifically, control panel assembly **160** may include various input components, such as one or more of a variety of touch-type controls, electrical, mechanical or electro-mechanical input devices including rotary dials, push buttons, and touch pads. Control panel assembly **160** may also be provided with one or more graphical display devices or display components, such as a digital or analog display device designed to provide operational feedback or other information to the user such as e.g., whether a particular heating element **150** is activated or the rate at which the heating element **150** is set. Indeed, according to the illustrated embodiment, control panel assembly **160** includes a display assembly **164**, such as a liquid crystal display with an interactive display and interface.

[0030] Generally, cooking appliance **100** may include a controller **166** in operative communication with control panel assembly **160**. Control panel assembly **160** of cooking appliance **100** may be in communication with controller **166** via, for example, one or more signal lines or shared communication busses, and signals generated in controller **166** operate cooking appliance **100** in response to user input via user input devices, e.g., control knobs **162** or display assembly **164**. Input/Output (“I/O”) signals may be routed between controller **166** and various operational components of cooking appliance **100** such that operation of cooking appliance **100** can be

regulated by controller **166**. In addition, controller **166** may also be in communication with one or more sensors, such as temperature sensor **168** (FIG. 2), which may be used to measure temperature inside cooking chamber **120** and provide such measurements to the controller **166**. Although temperature sensor **168** is illustrated at a top and rear of cooking chamber **120**, it should be appreciated that other sensor types, positions, and configurations may be used according to alternative embodiments.

[0031] Controller **166** is a “processing device” or “controller” and may be embodied as described herein. Controller **166** may include a memory and one or more microprocessors, microcontrollers, application-specific integrated circuits (ASICs), CPUs or the like, such as general or special purpose microprocessors operable to execute programming instructions or micro-control code associated with operation of cooking appliance **100**, and controller **166** is not restricted necessarily to a single element. The memory may represent random access memory such as DRAM, or read only memory such as ROM, electrically erasable, programmable read only memory (EEPROM), or FLASH. In one embodiment, the processor executes programming instructions stored in memory. The memory may be a separate component from the processor or may be included onboard within the processor. Alternatively, controller **166** may be constructed without using a microprocessor, e.g., using a combination of discrete analog or digital logic circuitry (such as switches, amplifiers, integrators, comparators, flip-flops, AND gates, and the like) to perform control functionality instead of relying upon software.

[0032] Although aspects of the present subject matter are described herein in the context of a single oven appliance, it should be appreciated that cooking appliance **100** is provided by way of example only. Other oven or range appliances having different configurations, different appearances, or different features may also be utilized with the present subject matter, e.g., double ovens, standalone cooktops, etc.

[0033] Referring now to FIGS. 3 through 6, a vent trim assembly **200**, and more particularly, components thereof, of the cooking appliance **100** are provided. Generally, the vent trim assembly **200** is in fluid communication with the cooking chamber **120**. The vent trim assembly **200** may be utilized as an exhaust vent, for instance, for a cooling system **202** of the cooking appliance. Cooling system **202** may include an inlet duct **204**. Inlet duct **204** may be provided within cabinet **102**. For instance, inlet duct **204** may be located between cooking chamber **120** and cooktop **140** (e.g., above cooking chamber **120** and beneath cooktop **140**). Inlet duct **204** may thus extend from front **112** (e.g., adjacent control panel assembly **160**) approximately along or parallel to the transverse direction T to rear **114** of cabinet **102**. Inlet duct **204** may form an air passage therein, through which air is selectively motivated to provide a cooling effect to one or more components of cooking appliance **100**. According to at least some embodiments, inlet duct **204** includes an air inlet provided at a front thereof and an air outlet provided at a rear thereof.

[0034] Cooling system **202** may include a cooling fan **206**. For example, cooling fan **206** may urge a flow of air through inlet duct **204** and out of exhaust duct (described below) to the vent trim assembly **200** and then to an ambient environment. In some embodiments, the cooling fan **206** includes or is provided as a tangential fan positioned within inlet duct **204**. Additionally or alternatively, one or more cooling fan may be positioned at any other suitable location and may include or be provided as any other suitable fan type, such as a centrifugal fan, etc. In some other additional or alternative embodiments, the cooling fan **206** is a variable speed fan such that it may rotate at different rotational speeds, thereby generating different air flow rates (e.g., as directed by controller **166**). In this manner, the amount of air drawn over control panel assembly **160** may be continuously and precisely regulated. Moreover, by pulsing the operation of cooling fan **206** or throttling cooling fan **206** between different rotational speeds, the flow of air drawn into inlet duct **204** may have a different flow velocity or may generate a different flow pattern within inlet duct **204**. Thus, by pulsating the variable speed fan or otherwise varying its speed, the flow of air may be randomized, thereby eliminating stagnant regions within inlet duct **204** and better circulating the

flow of air to provide a more even cooling effect.

[0035] Furthermore, cooling system **202** may include an exhaust duct **208**. The exhaust duct **208** may be provided above cooling fan **206** along the vertical direction V. Exhaust duct **208** may be selectively coupled to inlet duct **204**. Exhaust duct **208** may include an inlet (not depicted) and an outlet **210** (e.g., FIG. 4). In at least some instances, air is urged through inlet duct **204** by cooling fan **206** and exhausted upward through exhaust duct **208**. For instance, the inlet of the exhaust duct **208** may be located at a bottom of exhaust duct **208** and in fluid communication with cooling fan **206** and inlet duct **204**. The outlet **210** of the exhaust duct **208** may be provided at a top of exhaust duct **208** and exposed to the ambient atmosphere, for instance, via the vent trim assembly **200**.

[0036] In some embodiments, the cooling system **202** includes a catch basket **212**. Catch basket **212** may be selectively received within exhaust duct **208**. For instance, catch basket **212** may be received within the outlet **210** of exhaust duct **208**. Catch basket **212** may include a wire form, for instance, including a plurality of tines provided in a grid pattern. In some embodiments, the catch basket **212** extends along the lateral direction across a lateral width of the exhaust duct **208**.

Additionally or alternatively, catch basket **212** may define a plurality of through holes (e.g., as formed by the plurality of tines) through which air, liquid, and small debris may pass.

[0037] In some embodiments, the vent trim assembly **200** includes a lower vent trim **214** and an upper vent trim **216**. The lower vent trim **214** may be attached to the exhaust duct **208** of the cooling system **202**. For instance, the lower vent trim **214** may include a lower exhaust vent **215** that defines a lower exhaust outlet **217**. The outlet **210** of the exhaust duct **208** may be attached or coupled to the lower exhaust vent **215** such that the outlet **210** of the exhaust duct **208** is in direct fluid communication with the lower exhaust outlet **217** of the lower exhaust vent **215**. Additionally, in some embodiments, the lower vent trim **214** is selectively attached to the rear edge **262** of the cooktop **140**. As will be appreciated in light of the below details, the lower vent trim **214** may be utilized to locate and support the cooktop **140** of the cooking appliance **100** to the vent trim assembly **200**.

[0038] The lower vent trim **214** may define a front side **218** and a rear side **220** spaced apart along the transverse direction T. In addition, the lower vent trim **214** may define a first side **222** (e.g., a left side of the cooking appliance **100** when viewed from the front of the cooking appliance **100**) and a second side **224** (e.g., a right side of the cooking appliance **100** when viewed from the front of the cooking appliance **100**) spaced apart along the lateral direction L. A front face **226** (e.g., a forward-facing and, optionally, flat or planar face) may be positioned at the front side **218** of the lower vent trim **214**. The front face **226** may include a top edge **228** and a bottom edge **230** that are spaced apart along the vertical direction V. The front face **226** may also include one or more clips **232** that are each extended from the top edge **228**. The one or more clips **232** may be spaced apart along the lateral direction L along the top edge **228** of the front face **226**. As will be appreciated, the one or more clips **232** may each be engaged with the upper vent trim **216** to attach the upper vent trim **216** to the cooktop **140**. For instance, a bottom surface of each of the one or more clips **232** may be interfaced with a return flange **254** of the upper vent trim **216**. Furthermore, a support ledge **234** may be extended outward from the bottom edge **230** of the front face **226** (e.g., along the transverse direction T). As will be appreciated in light of the below details, the support ledge **234** may advantageously locate the cooktop **140** (e.g., during an assembly process) to an installed position and support the cooktop **140** in the installed position.

[0039] The support ledge **234** of the lower vent trim **214** may be positioned approximately equidistance between the first side **222** and the second side **224** of the lower vent trim **214** (e.g., relative to the lateral direction L). That is, the support ledge **234** may be extended from the front face **226** at an approximate lateral center of the lower vent trim **214**, and more particularly, of the front face **226**. In some embodiments, the support ledge **234** includes a first portion **236** and a second portion **238**. The first portion **236** may be attached directly to the bottom edge **230** of the front face **226**. The first portion **236** may be extended from the bottom edge **230** approximately

along or parallel to the transverse direction T. Further, the first portion **236** may include a first edge **240** and a second edge **242** that are spaced apart along the transverse direction T. The first edge **240** may be attached directly to the bottom edge **230** of the front face **226**.

[0040] The second portion **238** may be attached to the second edge **242** of the first portion **236**. In some embodiments, the second portion **238** may be extended outward from the second edge **242** of the second portion **238** at a predetermined angle **244** relative to the second portion **238**. For example, the predetermined angle **244** may be measured upwardly from an upward facing surface of the second portion **238** to a plane running along an upward facing surface of the first portion **236**. For instance, second portion **238** may extend outward (e.g., toward the front of the cooking appliance **100**) and downward (e.g., toward the bottom of the cooking appliance **100**) such that the predetermined angle **244** may be an acute angle (e.g., an angle less than ninety degrees).

[0041] Generally, the upper vent trim **216** may be positioned atop the lower vent trim **214**. In some embodiments, the upper vent trim **216** includes a vent body **246** attached to the cooktop **140** and the lower vent trim **214**. The vent body **246** may include a front face **248**, a rear face **250**, a top face **252**, and a return flange **254** (e.g., FIG. 4). The return flange **254** may be attached to a bottom edge **256** of the front face **248** of the vent body **246**. Further, the return flange **254** may be extended along the transverse direction T toward the rear face **250** of the vent body **246**. The return flange **254** may include a top surface **258** and a bottom surface **260** spaced apart along the vertical direction V. The bottom surface **260** of the return flange **254** may be interfaced with the cooktop **140** and the top surface **258** of the return flange **254** may be interfaced with the one or more clips **232**, for instance, to couple the upper vent trim **216** to the cooktop **140**.

[0042] In some embodiments, the exemplary support ledge **234** of the lower vent trim **214** may advantageously prevent or mitigate gaps or voids between the upper vent trim **216** and the cooktop **140**. For instance, during assembly of the cooking appliance **100**, the second portion **238** of the support ledge **234** may be utilized to locate the cooktop **140** to the vent trim assembly **200**. In particular, as the cooktop **140** is positioned on top of the cabinet **102**, an operator may slide the cooktop **140** from the front **112** of the cabinet **102** toward the rear **114** of the cabinet **102**. Once at the rear **114** of the cabinet **102**, a rear edge **262** of the cooktop **140**, and more particularly, a rear lip **264** of the rear edge **262** may come into contact with the second portion **238** of the support ledge **234**. Due to the angle of the second portion **238** of the support ledge **234**, the second portion **238** may direct the rear edge **262** of the cooktop **140** to the first portion **236** of the support ledge **234**. The rear edge **262** may then be supported on the first portion **236** of the support ledge **234**, for instance, in an “installed position.” Moreover, as the second portion **238** may direct or guide the rear edge **262** to or toward the first portion **236**, the second portion **238** may be referred to as a “ramp portion” of the support ledge **234**.

[0043] In the installed position, the rear lip **264** of the rear edge **262** may be interfaced with the first portion **236** of the support ledge **234** and therefore supported by the first portion **236**. In this regard, the first portion **236** may be referred to as a “support portion” of the support ledge **234**. For instance, the support ledge **234**, and more particularly, the first portion **236** of the support ledge **234**, may be formed from a resilient material (e.g., a metallic material, such as galvanized steel) that is capable of supporting the weight of the rear edge **262** of the cooktop **140**. Particularly, the support ledge **234** may support the weight of the cooktop **140** such that a top surface **266** of the rear edge **262** of the cooktop **140** is approximately parallel to the return flange **254**. In this regard, when the return flange **254** of the upper vent trim **216** is interfaced with the top surface **266** of the rear edge **262**, any undesirable gaps or voids between the upper vent trim **216** and the cooktop **140**, for example, due to sagging or deformation of the rear edge **262** of the cooktop **140**, may be mitigated or prevented. In some exemplary embodiments, sagging or deformation of the rear edge **262** of the cooktop **140** may be greatest toward the lateral center of the rear edge **262**. Thus, positioning of the support ledge **234** (e.g., at the lateral center of the lower vent trim **214**) may further mitigate or prevent any undesirable gaps or voids between the upper vent trim **216** and the cooktop **140** in this

area.

[0044] This written description uses examples to disclose the invention, including the best mode, and also to enable any person skilled in the art to practice the invention, including making and using any devices or systems and performing any incorporated methods. The patentable scope of the invention is defined by the claims, and may include other examples that occur to those skilled in the art. Such other examples are intended to be within the scope of the claims if they include structural elements that do not differ from the literal language of the claims, or if they include equivalent structural elements with insubstantial differences from the literal languages of the claims.

Claims

1. A cooking appliance defining a vertical direction, a lateral direction, and a transverse direction, the cooking appliance comprising: a cabinet; a cooktop provided above the cabinet, the cooktop extending between a front edge and a rear edge along the transverse direction, the rear edge comprising a rear lip; and a vent trim assembly in fluid communication with the cooking chamber, the vent trim assembly comprising: a lower vent trim positioned at the rear edge of the cooktop, the lower vent trim comprising a support ledge positioned below the rear edge, the rear lip being interfaced with the support ledge.
2. The cooking appliance of claim 1, wherein the lower vent trim defines a front side and a rear side spaced apart along the transverse direction, wherein the lower vent trim comprises a front face positioned at the front side, wherein the front face comprises a top edge and a bottom edge spaced apart along the vertical direction, and wherein the support ledge is extended outward from the bottom edge of the front face.
3. The cooking appliance of claim 2, wherein the support ledge comprises a first portion attached directly to the bottom edge of the front face, and wherein the rear lip is interfaced with the first portion.
4. The cooking appliance of claim 3, wherein the first portion comprises a first edge and a second edge, wherein the first edge and the second edge are spaced apart along the transverse direction, and wherein the first edge is disposed at the bottom edge of the front face.
5. The cooking appliance of claim 4, wherein the support ledge further comprises a second portion attached to the second edge of the first portion, and wherein second portion defines a predetermined angle relative to the first portion.
6. The cooking appliance of claim 5, wherein the predetermined angle is an acute angle.
7. The cooking appliance of claim 1, wherein the lower vent trim defines a first side and a second side spaced apart along the lateral direction, and wherein the support ledge is positioned approximately equidistance between the first side and the second side.
8. The cooking appliance of claim 1, wherein the vent trim assembly further comprises an upper vent trim, and wherein the upper vent trim is positioned atop of the lower vent trim.
9. The cooking appliance of claim 8, wherein the upper vent trim comprises a return flange, wherein the return flange comprises a bottom surface and a top surface, wherein the lower vent trim comprises a one or more clips, wherein the bottom surface of the return flange is interfaced with the cooktop, and wherein the top surface of the return flange is interfaced with the one or more clips.
10. A vent trim assembly for a cooking appliance, the vent trim assembly defining a vertical direction, a lateral direction, and a transverse direction, the vent trim assembly comprising: a lower vent trim further defining a first side, a second side, a front side, and a rear side, the first side and the second side spaced apart along the lateral direction, the front side and the rear side spaced apart along the transverse direction, the lower vent trim comprising a front face positioned at the front side and a support ledge extending outward from the front face.

- 11.** The vent trim assembly of claim 10, wherein the front face comprises a top edge and a bottom edge spaced apart along the vertical direction, and wherein the support ledge is extended outward from the bottom edge of the front face.
- 12.** The vent trim assembly of claim 11, wherein the support ledge comprises a first portion attached directly to the bottom edge of the front face, and wherein the rear lip is interfaced with the first portion.
- 13.** The vent trim assembly of claim 12, wherein the first portion comprises a first edge and a second edge, wherein the first edge and the second edge are spaced apart along the transverse direction, and wherein the first edge is disposed at the bottom edge of the front face.
- 14.** The vent trim assembly of claim 13, wherein the support ledge further comprises a second portion attached to the second edge of the first portion, and wherein second portion defines a predetermined angle relative to the first portion.
- 15.** The vent trim assembly of claim 14, wherein the predetermined angle is an acute angle.
- 16.** The vent trim assembly of claim 10, wherein the lower vent trim defines a first side and a second side spaced apart along the lateral direction, and wherein the support ledge is positioned approximately equidistance between the first side and the second side.
- 17.** The vent trim assembly of claim 10, wherein the vent trim assembly further comprises an upper vent trim, and wherein the upper vent trim is positioned atop of the lower vent trim.
- 18.** The vent trim assembly of claim 17, wherein the upper vent trim comprises a return flange, wherein the return flange comprises a bottom surface and a top surface, wherein the lower vent trim comprises a one or more clips, wherein the bottom surface of the return flange is interfaced with a cooktop of the cooking appliance, and wherein the top surface of the return flange is interfaced with the one or more clips.
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