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(19) **United States**(12) **Patent Application Publication**  
**Dunn**(10) **Pub. No.: US 2025/0257881 A1**(43) **Pub. Date: Aug. 14, 2025**(54) **ANTI-TIP BRACKET FOR AN OVEN**  
**APPLIANCE**(52) **U.S. Cl.**CPC ..... *F24C 15/083* (2013.01)(71) Applicant: **Haier US Appliance Solutions, Inc.**,  
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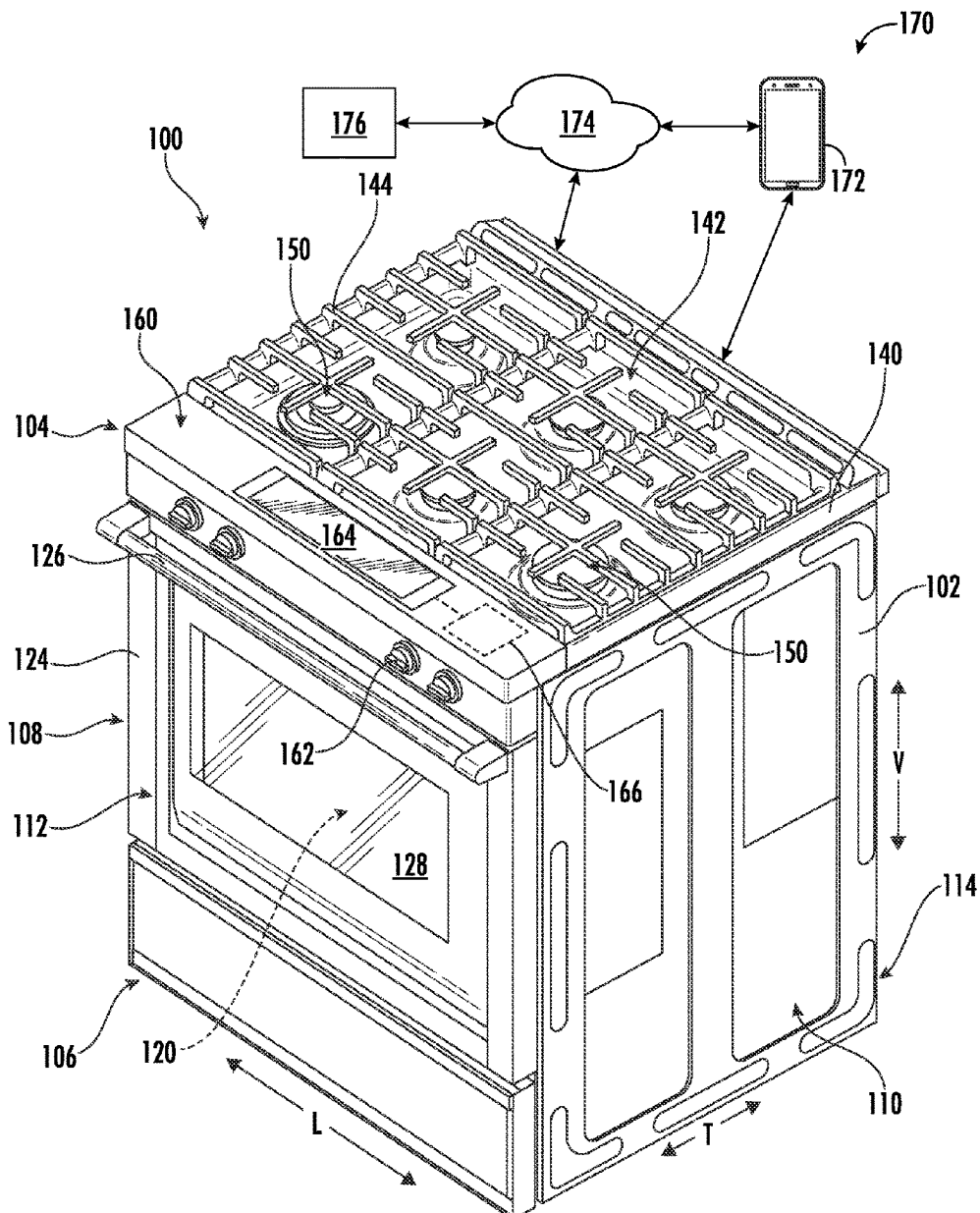
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**ABSTRACT**(72) Inventor: **Wesley Dunn**, Mount Juliet, TN (US)(21) Appl. No.: **18/437,416**(22) Filed: **Feb. 9, 2024**

A method of operating an oven appliance includes determining that an access control mode is enabled, determining that a period of inactivity has occurred while the access control mode is enabled, activating the access control mode, the access control mode comprising providing a limited user interface input selection, detecting a user interaction with the oven appliance, determining that the user interaction is not in compliance with the access control mode, and implementing a responsive action in response to determining that the user interaction is not in compliance with the access control mode.

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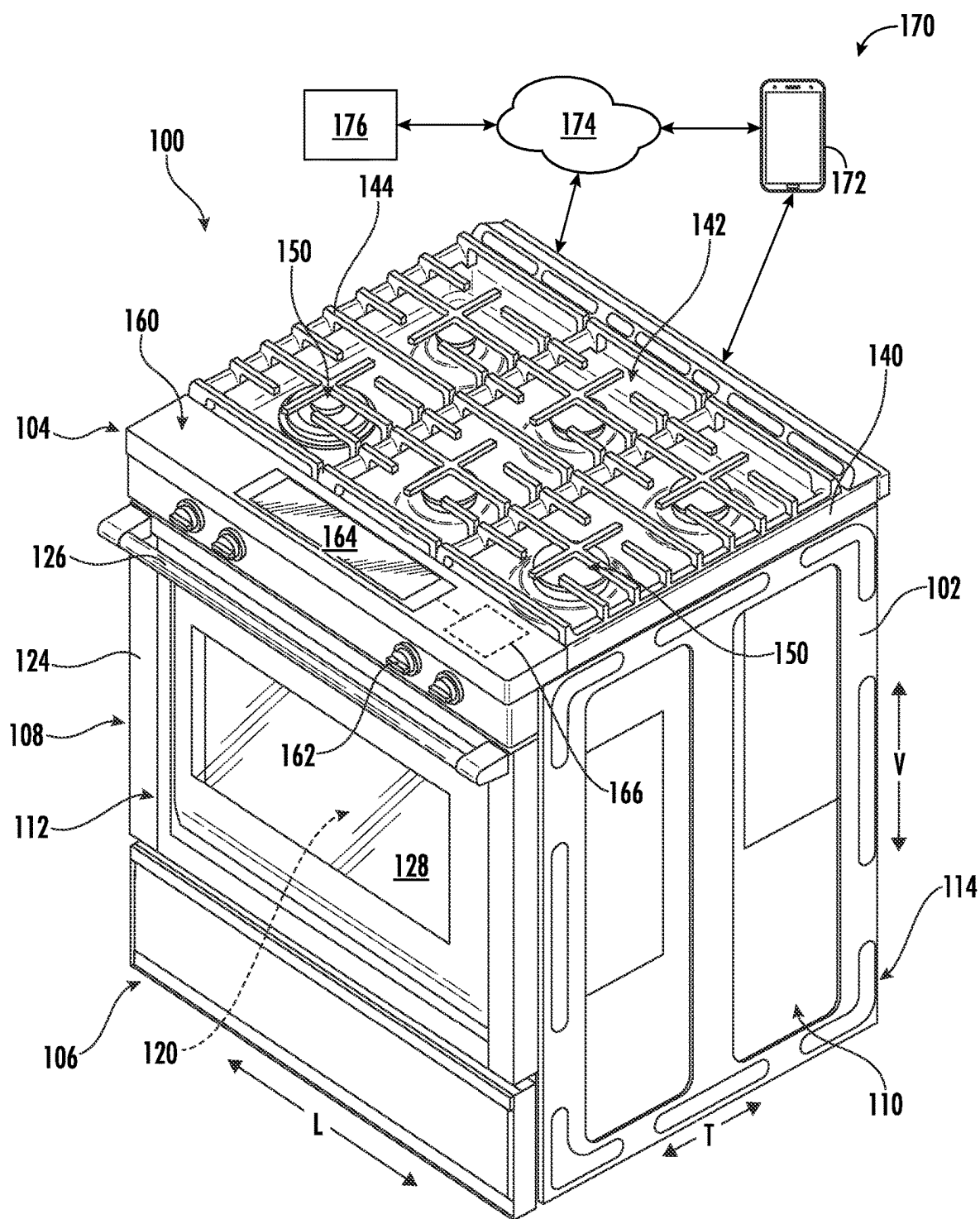
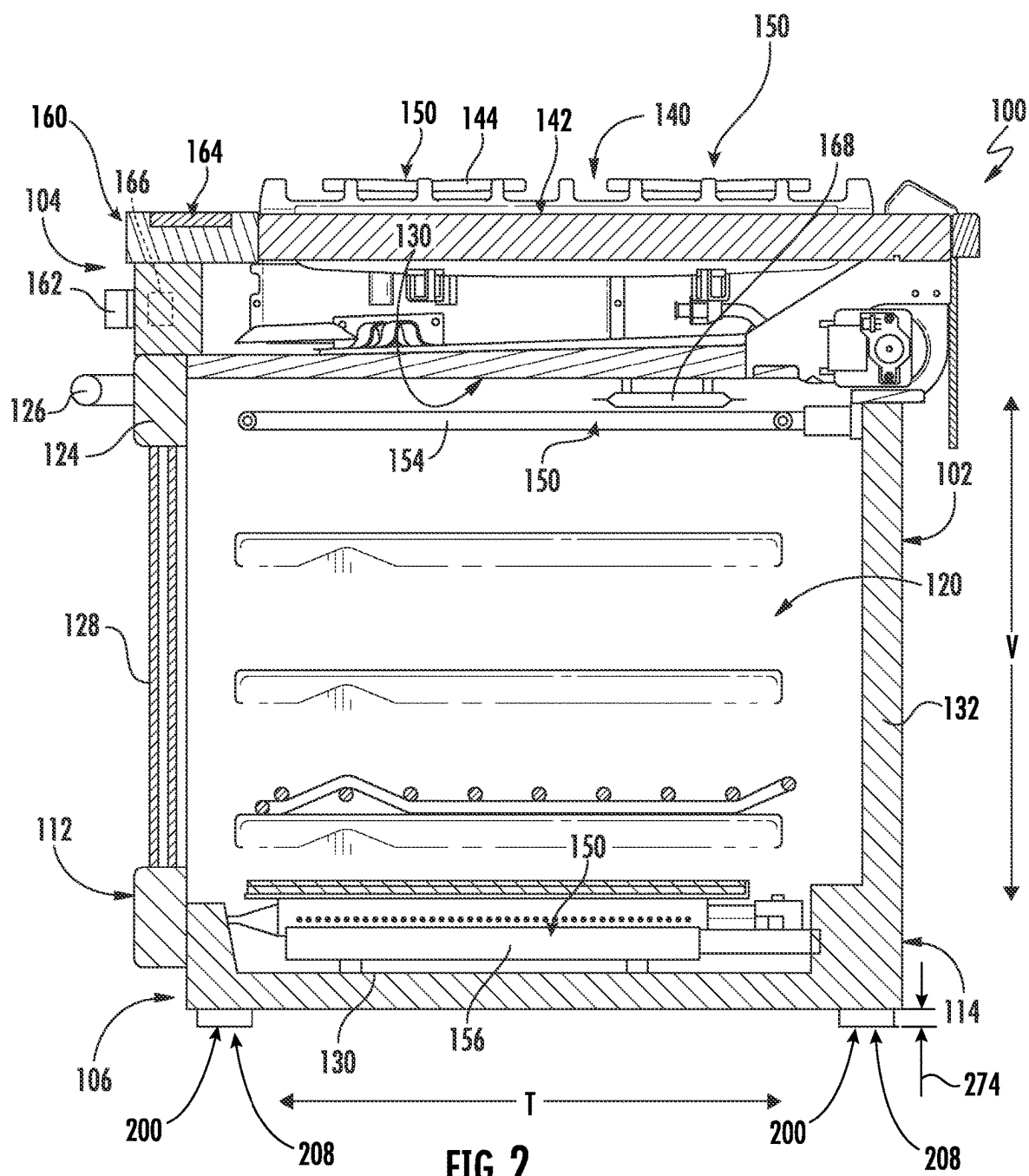


FIG. 1



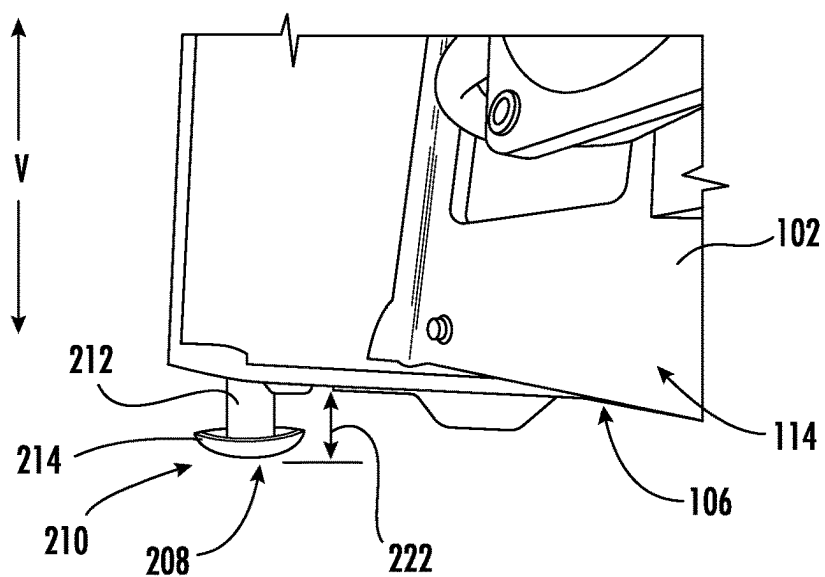


FIG. 3

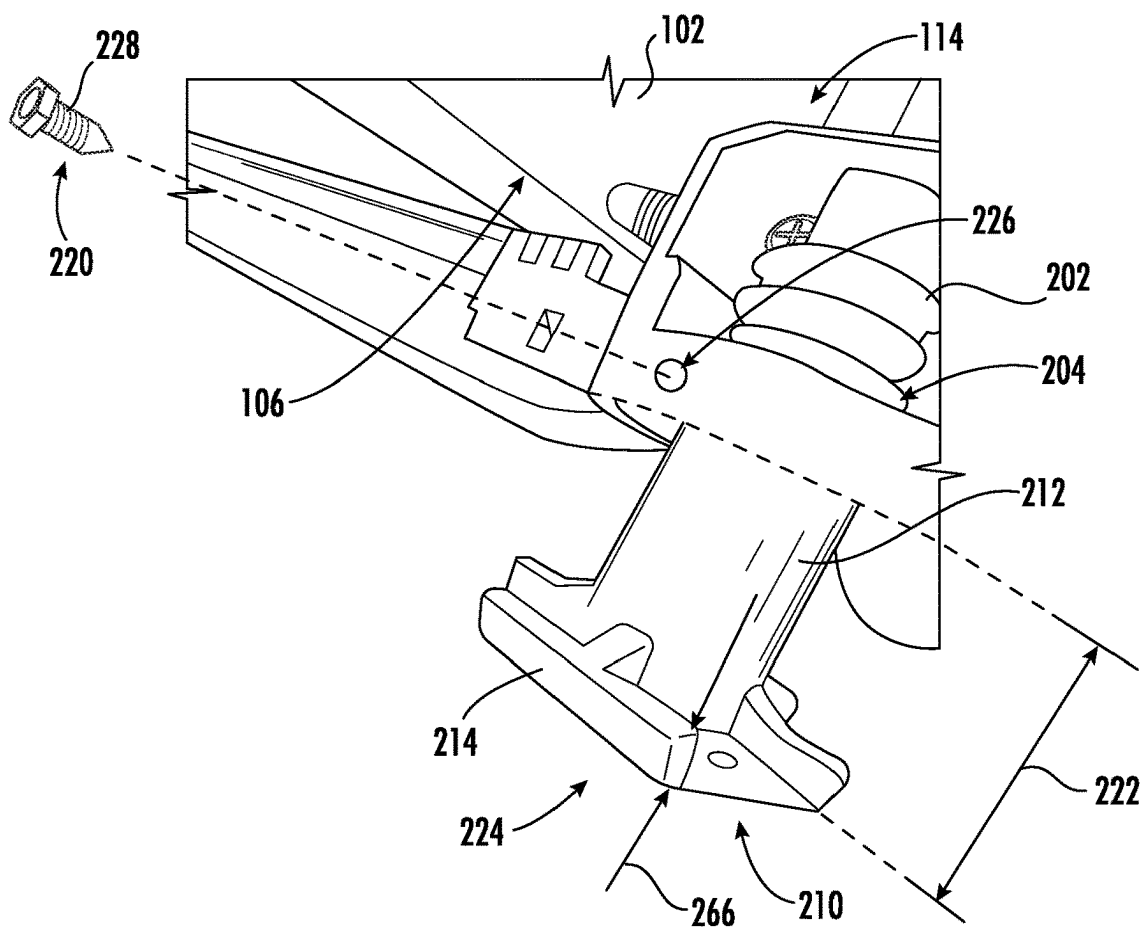


FIG. 4

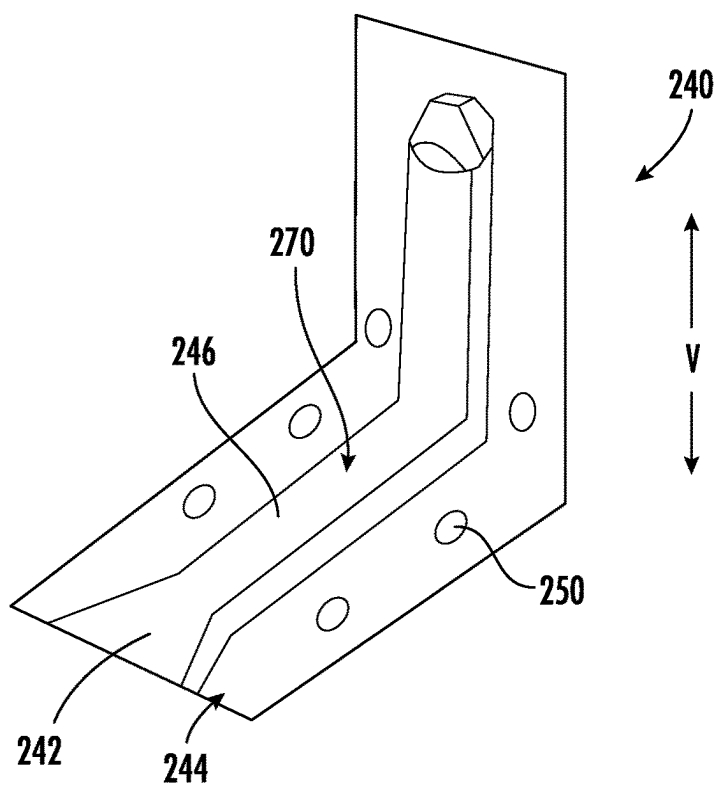


FIG. 5

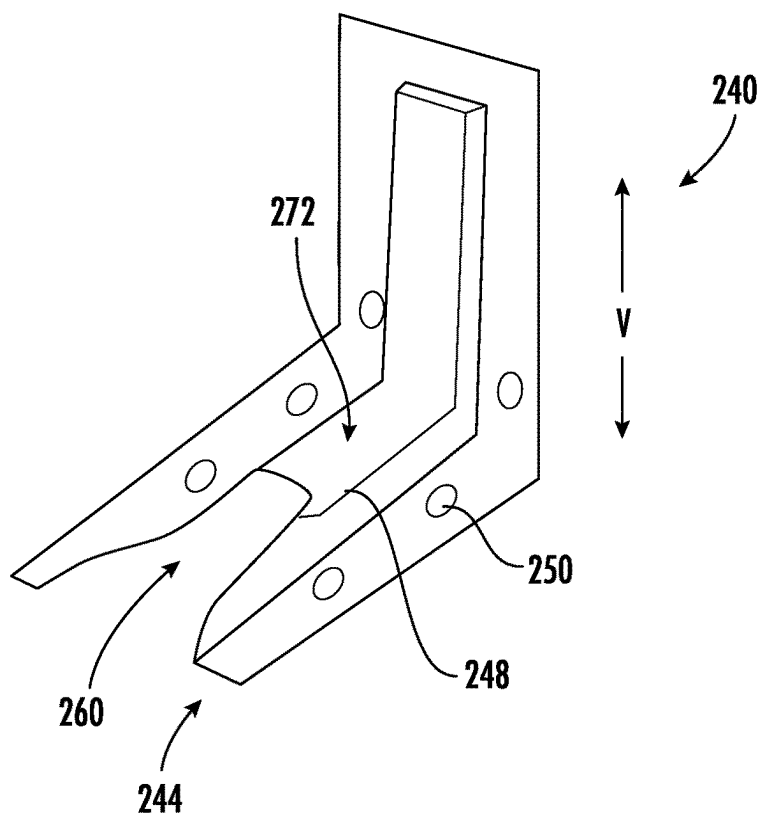


FIG. 6

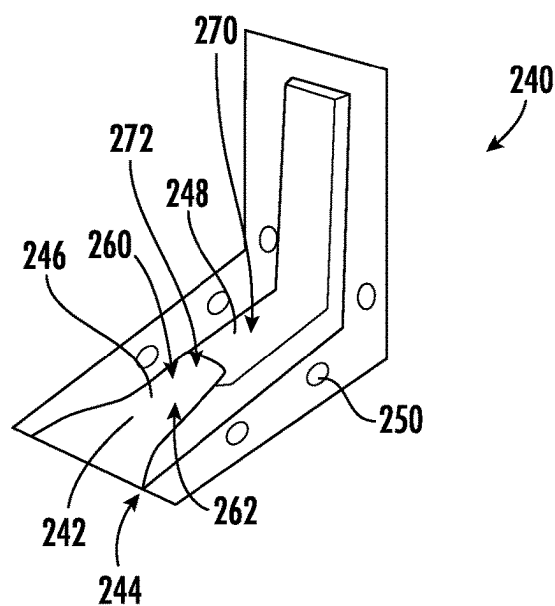


FIG. 7

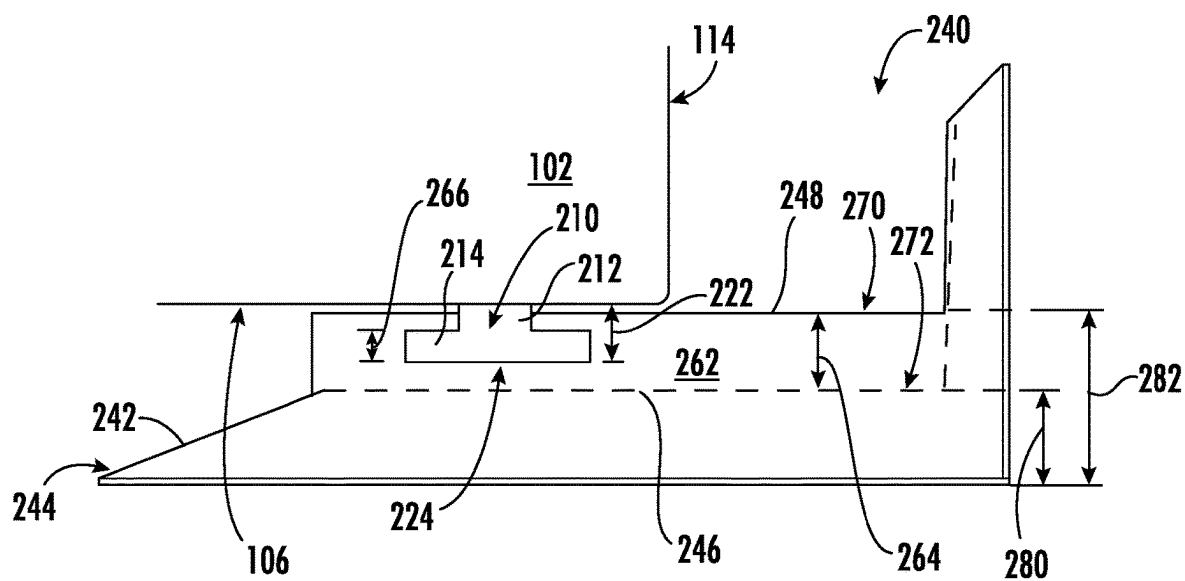


FIG. 8

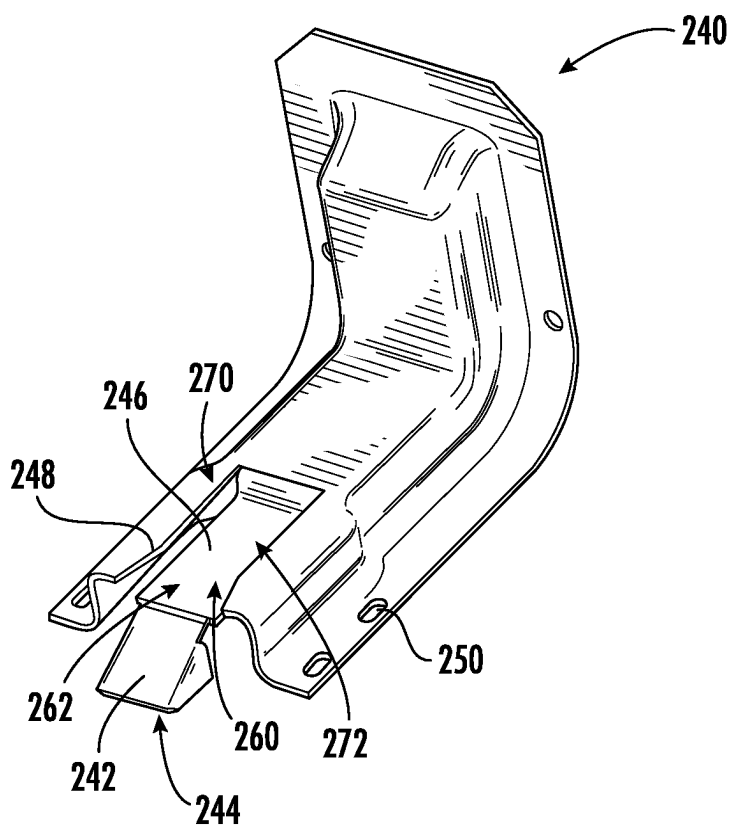


FIG. 9

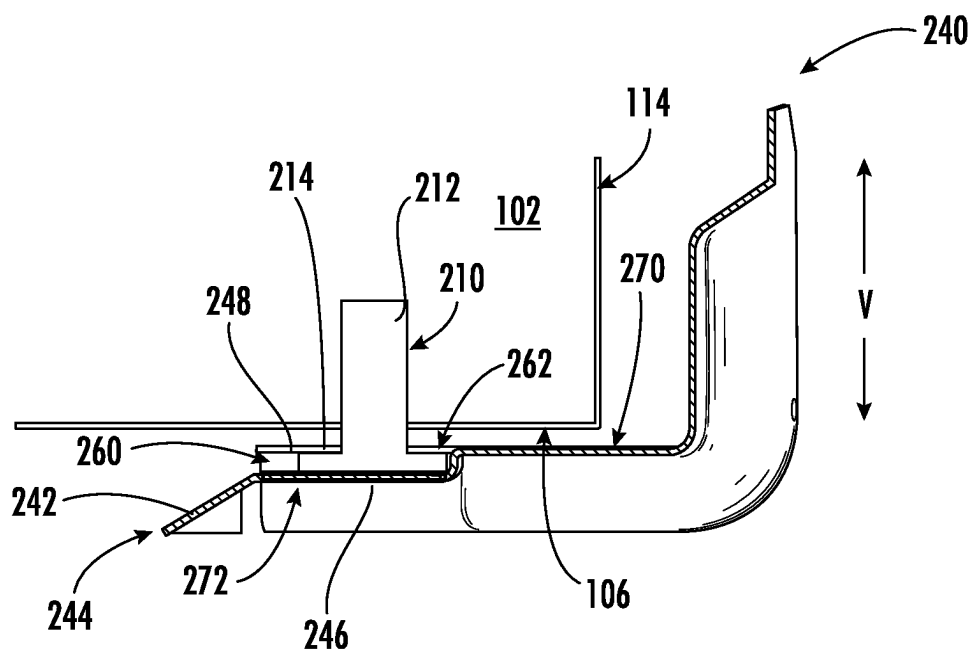


FIG. 10

## ANTI-TIP BRACKET FOR AN OVEN APPLIANCE

### FIELD OF THE INVENTION

[0001] The present subject matter relates generally to oven appliances, and more particularly, to oven appliances including anti-tip features.

### BACKGROUND OF THE INVENTION

[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. 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. Cooking appliances that include both an oven and a cooktop are commonly referred to as “ranges.”

[0003] Particularly in residential settings, freestanding ranges may pose a hazardous situation of not properly installed. For example, adults, children, and other users of a range oven appliance may be injured if the oven appliance tips over or moves in an undesirable manner. Leaning on the unit, opening the door too quickly, or putting too much weight on the door may all lead to tipping situations. Accordingly, certain conventional oven appliances include structures to prevent the tipping of the oven appliance, but such structures are frequently installed incorrectly or not installed at all.

[0004] Accordingly, an oven appliance with improved safeguards for appliance operation and interactions is desirable. More particularly, an oven appliance that includes features to prevent tipping or undesirable movement of the oven appliance would be especially beneficial.

### BRIEF DESCRIPTION OF THE INVENTION

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

[0006] In one exemplary embodiment, an oven appliance defining a vertical direction, a lateral direction, and a transverse direction is provided. The oven appliance includes a cabinet defining a cooking chamber, a cooktop positioned at a top of the cabinet and comprising one or more heating elements, an anti-tip leg extending from a bottom of the cabinet, the anti-tip leg comprising a shaft and a foot, and an anti-tip bracket configured for receipt of the anti-tip leg to secure the anti-tip leg to a floor. The anti-tip bracket includes a ramp defined at a front of the anti-tip bracket, an elevated platform defined at a top of the ramp, and a locking flange spaced apart from the elevated platform along the vertical direction, wherein the locking flange defines a groove for receiving the shaft of the anti-tip leg and a foot slot for receiving the foot of the anti-tip leg.

[0007] In another exemplary embodiment, an anti-tip bracket for securing an oven appliance is provided. The oven appliance defines a vertical direction and includes a cabinet and an anti-tip leg extending from a bottom of the cabinet, the anti-tip leg including a shaft and a foot. The anti-tip bracket includes a ramp defined at a front of the anti-tip bracket, an elevated platform defined at a top of the ramp,

and a locking flange spaced apart from the elevated platform along the vertical direction, wherein the locking flange defines a groove for receiving the shaft of the anti-tip leg and a foot slot for receiving the foot of the anti-tip leg.

[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.

### 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 an oven appliance according to an example embodiment of the present subject matter.

[0011] FIG. 2 provides a side cross-sectional view of the example oven appliance of FIG. 1 according to an example embodiment of the present subject matter.

[0012] FIG. 3 is a perspective view of an anti-tip leg of the example oven appliance of FIG. 1 according to an example embodiment of the present subject matter.

[0013] FIG. 4 is another perspective view of the example anti-tip leg according to an example embodiment of the present subject matter.

[0014] FIG. 5 provides a perspective view of a bottom half of an anti-tip bracket according to an example embodiment of the present subject matter.

[0015] FIG. 6 provides a perspective view of a top half of the example anti-tip bracket of FIG. 5 according to an example embodiment of the present subject matter.

[0016] FIG. 7 provides a perspective view of the example anti-tip bracket of FIG. 5 according to an example embodiment of the present subject matter.

[0017] FIG. 8 provides a side schematic view of the example anti-tip bracket of FIG. 5 according to an example embodiment of the present subject matter.

[0018] FIG. 9 provides a perspective view of an anti-tip bracket according to another example embodiment of the present subject matter.

[0019] FIG. 10 provides a side schematic view of the example anti-tip bracket of FIG. 9 according to an example embodiment of the present subject matter.

[0020] 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 OF THE INVENTION

[0021] 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 or spirit 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.

[0022] As used herein, 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”). Approximating language, as used herein throughout the specification and claims, is 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 “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. For example, the approximating language may refer to being within a 10 percent margin.

[0023] FIG. 1 provides a front, perspective view of an oven appliance 100 as may be employed with the present subject matter. Oven 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, oven appliance 100 includes an insulated cabinet 102. Cabinet 102 of oven 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.

[0024] 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 oven 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 display assemblies for any suitable appliance.

[0025] Oven 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.

[0026] In general, cooking chamber 120 is defined by a plurality of chamber walls 130. Specifically, cooking chamber 120 may be defined by a top wall, a rear wall, a bottom wall, and two sidewalls 130. 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, oven 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.

[0027] Oven 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 are supported on a top surface of top panel 142 for supporting cooking utensils, such as pots or pans, during a cooking process.

[0028] Oven 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 and/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 (i.e., pots, pans, etc.) of various sizes and configurations and to provide different heat inputs for such cooking utensils. According to alternative embodiments, oven appliance 100 may have other cooktop configurations or burner elements.

[0029] 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, e.g., the size of oven appliance 100 or the desired heat output. Oven appliance 100 may include any other suitable number, type, and configuration of heating elements 150 within cabinet 102 and/or on cooktop 140. For example, oven appliance 100 may further include electric heating elements, induction heating elements, or any other suitable heat generating device.

[0030] A control panel assembly 160 is located within convenient reach of a user of the oven 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 oven 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 and/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.

[0031] Generally, oven appliance 100 may include a controller 166 in operative communication with control panel assembly 160. Control panel assembly 160 of oven 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 oven appliance 100 in response to user input via user input devices, e.g., control knobs 162 and/or display assembly 164. Input/Output (“I/O”) signals may be routed between controller 166 and various operational components of oven appliance 100 such that operation of oven 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, 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.

[0032] 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 oven 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 and/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.

[0033] Referring still to FIG. 1, a schematic diagram of an external communication system 170 will be described according to an exemplary embodiment of the present subject matter. In general, external communication system 170 is configured for permitting interaction, data transfer, and other communications between oven appliance 100 and one or more external devices. For example, this communication may be used to provide and receive operating param-

eters, user instructions or notifications, performance characteristics, user preferences, or any other suitable information for improved performance of oven appliance 100. In addition, it should be appreciated that external communication system 170 may be used to transfer data or other information to improve performance of one or more external devices or appliances and/or improve user interaction with such devices.

[0034] For example, external communication system 170 permits controller 166 of oven appliance 100 to communicate with a separate device external to oven appliance 100, referred to generally herein as an external device 172. As described in more detail below, these communications may be facilitated using a wired or wireless connection, such as via a network 174. In general, external device 172 may be any suitable device separate from oven appliance 100 that is configured to provide and/or receive communications, information, data, or commands from a user. In this regard, external device 172 may be, for example, a personal phone, a smartphone, a tablet, a laptop or personal computer, a wearable device, a smart home system, or another mobile or remote device.

[0035] In addition, a remote server 176 may be in communication with oven appliance 100 and/or external device 172 through network 174. In this regard, for example, remote server 176 may be a cloud-based server 176, and is thus located at a distant location, such as in a separate state, country, etc. According to an exemplary embodiment, external device 172 may communicate with a remote server 176 over network 174, such as the Internet, to transmit/receive data or information, provide user inputs, receive user notifications or instructions, interact with or control oven appliance 100, etc. In addition, external device 172 and remote server 176 may communicate with oven appliance 100 to communicate similar information.

[0036] In general, communication between oven appliance 100, external device 172, remote server 176, and/or other user devices or appliances may be carried using any type of wired or wireless connection and using any suitable type of communication network, non-limiting examples of which are provided below. For example, external device 172 may be in direct or indirect communication with oven appliance 100 through any suitable wired or wireless communication connections or interfaces, such as network 174. For example, network 174 may include one or more of a local area network (LAN), a wide area network (WAN), a personal area network (PAN), the Internet, a cellular network, any other suitable short- or long-range wireless networks, etc. In addition, communications may be transmitted using any suitable communications devices or protocols, such as via Wi-Fi®, Bluetooth®, Zigbee®, wireless radio, laser, infrared, Ethernet type devices and interfaces, etc. In addition, such communication may use a variety of communication protocols (e.g., TCP/IP, HTTP, SMTP, FTP), encodings or formats (e.g., HTML, XML), and/or protection schemes (e.g., VPN, secure HTTP, SSL).

[0037] External communication system 170 is described herein according to an exemplary embodiment of the present subject matter. However, it should be appreciated that the exemplary functions and configurations of external communication system 170 provided herein are used only as examples to facilitate description of aspects of the present subject matter. System configurations may vary, other communication devices may be used to communicate directly or

indirectly with one or more associated appliances, other communication protocols and steps may be implemented, etc. These variations and modifications are contemplated as within the scope of the present subject matter.

[0038] Although aspects of the present subject matter are described herein in the context of a single oven appliance, it should be appreciated that oven appliance 100 is provided by way of example only. Other oven or range appliances having different configurations, different appearances, and/or different features may also be utilized with the present subject matter, e.g., double ovens, connected oven/cooktop units, etc. Moreover, aspects of the present subject matter are equally applicable to standalone cooktops (e.g., without cooking chambers) or other cooking appliances.

[0039] Referring now generally to FIGS. 3 through 8, anti-to features of an oven appliance will be described according to example embodiments of the present subject matter. Although the anti-tip features are described with respect to oven appliance 100, it should be appreciated that the features described herein may be used for any other suitable oven appliance. In addition, it should be appreciated that variations and modifications to the anti-tip features may be made while remaining within the scope of the present subject matter.

[0040] As shown in FIGS. 2 and 4, oven appliance 100 may include a plurality of legs (identified herein generally by reference numeral 200). Each of the legs 200 may be mounted to cabinet 102 for supporting oven appliance 100 on a floor (not shown) of a dwelling. In general, each of the legs 200 may be adjustable along the vertical direction V relative to a bottom 106 of cabinet 102. For example, legs 200 may include a threaded portion 202 and may be received within a threaded aperture 204 defined by or on cabinet 102. In this manner, rotating legs 200 in the clockwise or counterclockwise reduces or increases a leg height 206 that is measured between bottom 106 of cabinet 102 and a bottom 208 of legs 200 along the vertical direction V. In this manner, an installer of oven appliance 100 may rotate legs to ensure that cabinet 102 is level and stable on floor of the dwelling.

[0041] Notably, as explained briefly above, oven appliances, whether properly leveled or not, may pose a risk of tipping over when not installed with anti-tip features. However, conventional anti-tip brackets supplied with or purchased for oven appliances are optional features that are burdensome to install and are frequently not installed at all. Accordingly, aspects of the present subject matter are generally directed to anti-tip features that are encouraged to be installed with oven appliance 100, e.g., by requiring additional steps to properly install the oven appliance without the anti-tip features. In other words, attempting to install oven appliance without the anti-tip features may result in a burdensome and time-consuming process, thereby encouraging their installation.

[0042] Specifically, according to the illustrated embodiment, oven appliance may further include one or more anti-tip legs 210 that extend from bottom 106 a cabinet 102. In general, legs 200 are standard, adjustable appliance legs, while anti-tip legs 210 are specifically designed for use with the presently described anti-tip system. Anti-tip leg 210 (similar to legs 200) may generally include a shaft 212 (e.g., a threaded shaft similar to legs 200) and a foot 214 that is positioned at a distal end of shaft 212. The description here refers to the installation and use of a single anti-tip leg 210. However, it should be appreciated that oven appliance 100

may include more than one anti-tip leg 210. For example, both of the rear legs of oven appliance 100 may be anti-tip legs 210.

[0043] Notably, anti-tip legs 210 may generally be fixed or adjustable relative to cabinet 102. For a fixed anti-tip leg 210, the anti-tip leg 210 may be a fixed stub that is not adjustable relative to cabinet 102. In addition, as explained in more detail below, such an anti-tip leg 210 may be shorter than the fully inserted legs 200, thereby preventing proper leveling of oven appliance 100 unless an appropriate anti-tip bracket is installed, as described more below. By contrast, according to an alternative embodiment, oven appliance may include an anti-tip leg 210 that is adjustable along the vertical direction V, but which includes a locking feature 220 for temporarily locking anti-tip leg 210 in the fully inserted position. Whether fixed or adjustable, anti-tip leg 210 defines a minimum leg height 222 measured between bottom 106 of cabinet 102 and a bottom 224 of foot 214. According to the illustrated embodiment, cabinet 102 may define a screw hole 226 and the locking feature 220 may be a set screw 228 that is configured for receipt in screw hole 226 to engage anti-tip leg 210 and secure it in a fully inserted position where it defines minimum leg height 222. Other suitable locking features (e.g., such as latches, pins, or other setting features) are possible and within the scope of the present subject matter.

[0044] Referring now specifically, to FIGS. 5 through 10, oven appliance 100 may further include an anti-tip bracket 240 that is generally configured for receiving anti-tip leg 210 to secure anti-tip leg 210 to a floor of the dwelling where oven appliance 100 is located. According to an example embodiment, anti-tip bracket 240 may be formed from a single piece of rigid and durable material, e.g., such as metal. According to alternative embodiments, anti-tip bracket 240 may be a multi-piece assembly that is joined, e.g., via welding, adhesives, etc. Although an exemplary anti-tip bracket 240 is described herein, it should be appreciated that variations and modifications may be made while remaining within the scope of the present subject matter.

[0045] According to the illustrated embodiment, anti-tip bracket 240 may generally define a ramp 242 at a front 244 of anti-tip bracket 240. In general, ramp 242 is intended to facilitate the lifting of cabinet 102 and/or anti-tip leg 210 along the vertical direction V as oven appliance 100 is pushed back into its mounting position. Anti-bracket 240 may further include an elevated platform 246 that is defined at a top of ramp 242 and which extends substantially along the horizontal direction (e.g., defined by the lateral direction L and the transverse direction T). Anti-tip bracket 240 may further include a locking flange 248 that is spaced apart from elevated platform 246 along the vertical direction V.

[0046] To help visualize the construction of anti-tip bracket 240, FIG. 5 illustrates anti-tip bracket 240 only showing ramp 242 and elevated platform 246, i.e., with locking flange 248 removed for clarity. By contrast, FIG. 6 illustrates anti-tip bracket 240 only showing locking flange 248, i.e., with ramp 242 and elevated platform 246 removed for clarity. FIG. 6 shows the complete anti-tip bracket 240 and FIG. 7 shows a schematic view of anti-tip leg 210 being received within anti-tip bracket 240. As shown, anti-tip bracket 240 may define a plurality of apertures 250 that are configured for receiving mechanical fasteners (not shown) that are intended to secure anti-tip bracket 240 to a floor or wall of the dwelling where oven appliance 100 is located.

[0047] Locking flange 248 may be generally designed to restrict movement of anti-tip leg 210 when oven appliance 100 is in the installed position. In this regard, for example, locking flange 248 may define a groove 260 that is configured for slidably receiving shaft 212 of anti-tip leg 210. In addition, locking flange 248 may be spaced apart from elevated platform 246 to define a foot slot 262 position therebetween along the vertical direction V. Foot slot 262 may be configured for receiving the foot 214 of anti-tip leg 210. More specifically, foot slot 262 may define a slot height 264 that is greater than or equal to a foot height 266 measured along the vertical direction V. In this manner, foot 214 of anti-tip leg 210 may slide freely within foot slot 262. Notably, however, foot 214 of anti-tip leg 210 may not be removed through groove 260, such that locking flange 248 secures anti-tip leg 210 within anti-tip bracket 240.

[0048] Anti-tip bracket 240 may generally support cabinet 102 and/or anti-tip leg 210 while preventing tipping. In this regard, as illustrated for example in FIGS. 5 through 8, an anti-tip leg 210 is illustrated that where a bottom 106 of cabinet 102 may be seated on a top surface 270 of locking flange 248. According to such an embodiment, foot 214 may hang freely within foot slot 262. According to another embodiment, as illustrated for example in FIGS. 9 and 10, another anti-tip bracket 240 is illustrated where a bottom 224 of foot 214 may be seated on a top surface 272 of elevated platform 246, e.g., such that bottom 106 of cabinet 102 is not directly contacting anti-tip bracket 240.

[0049] As explained briefly above, it may be desirable to set minimum leg height 222 of anti-tip leg 210 such that cabinet 102 may only be balanced if installed with anti-tip bracket 240. In this regard, for example, legs 200 of oven appliance (e.g., not anti-tip legs 210) are generally adjustable between a minimum leg height and a maximum leg height (leg height of legs 200 is identified in FIG. 2 generally by reference numeral 206) to facilitate leveling of cabinet 102. According to an example embodiment, minimum leg height 222 of anti-tip leg is shorter than the minimal leg height 206 of the other legs 200. In this manner, additional height must be added to anti-tip leg 210 in order to level oven appliance 100 using the other legs 200.

[0050] Accordingly, according to an example embodiment where the anti-tip leg 210 is supported by elevated platform 246, elevated platform 246 may define a platform height 280 and the sum of platform height 280 and minimum leg height 222 may be greater than the minimal leg height 274 of the other legs 200. By contrast, according to an example embodiment where cabinet 102 is supported by locking flange 248, a flange height 282 of locking flange 248 may be greater than the minimal leg height 274 of the other legs 200.

[0051] As explained herein, aspects of the present subject matter are generally directed to an anti-tip bracket for a cooking appliance (e.g., free-standing range) that includes a bottom plate and a top plate. The cooking appliance may be provided with a short stub (non-adjustable rear leveling leg) that slides into the anti-tip bracket. The bottom plate may include a ramp that provides proper elevation to level (balance) the appliance legs, and the top plate may guide and locks the legs, such that the top and the bottom plates are assembled and anchored to the floor to provide a proper locking mechanism (e.g., to prevent the appliance from tipping or tilting over). Further, this anti-tip bracket may force an installer to use the anti-tip bracket or go through an additional process to balance the appliance unit.

[0052] 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.

What is claimed is:

1. An oven appliance defining a vertical direction, a lateral direction, and a transverse direction, the oven appliance comprising:

- a cabinet defining a cooking chamber;
- a cooktop positioned at a top of the cabinet and comprising one or more heating elements;
- an anti-tip leg extending from a bottom of the cabinet, the anti-tip leg comprising a shaft and a foot; and
- an anti-tip bracket configured for receipt of the anti-tip leg to secure the anti-tip leg to a floor, the anti-tip bracket comprising:
  - a ramp defined at a front of the anti-tip bracket;
  - an elevated platform defined at a top of the ramp; and
  - a locking flange spaced apart from the elevated platform along the vertical direction, wherein the locking flange defines a groove for receiving the shaft of the anti-tip leg and a foot slot for receiving the foot of the anti-tip leg.

2. The oven appliance of claim 1, wherein a bottom of the cabinet is seated on a top surface of the locking flange.

3. The oven appliance of claim 1, wherein a bottom of the foot is seated on a top surface of the elevated platform of the anti-tip bracket.

4. The oven appliance of claim 1, wherein the anti-tip leg is adjustable along the vertical direction, and wherein the oven appliance further comprises:

- a locking feature for temporarily locking the anti-tip leg in a fully inserted position where the anti-tip leg defines a minimum leg height relative to a bottom of the cabinet.

5. The oven appliance of claim 4, wherein the cabinet defines a screw hole and the locking feature is a set screw that is configured for receipt within the screw hole to engage the anti-tip leg and secure the anti-tip leg in a fully inserted position where the anti-tip leg defines a minimum leg height relative to a bottom of the cabinet.

6. The oven appliance of claim 1, wherein the anti-tip leg has a fixed height and is not adjustable along the vertical direction.

7. The oven appliance of claim 1, wherein the anti-tip leg is one of a plurality of legs of the oven appliance, other legs of the plurality of legs are adjustable between a minimal leg height and a maximum leg height, and wherein a height of the anti-tip leg is shorter than the minimal leg height of the other legs.

8. The oven appliance of claim 7, wherein a height of the elevated platform plus a height of the anti-tip leg is greater than the minimal leg height of the other legs.

9. The oven appliance of claim 7, wherein a height of the locking flange is greater than the minimal leg height of the other legs.

**10.** The oven appliance of claim **1**, wherein a slot height of the foot slot is greater than a foot height of the foot.

**11.** The oven appliance of claim **1**, wherein the anti-tip leg is a rear leg of the oven appliance.

**12.** The oven appliance of claim **1**, wherein the anti-tip leg is a first anti-tip leg for installation on a first rear leg of the oven appliance, the oven appliance further comprising a second anti-tip leg for installation on a second rear leg of the oven appliance.

**13.** The oven appliance of claim **1**, wherein a plurality of apertures are defined through the anti-tip bracket for receiving fasteners that secure the anti-tip bracket to a floor or a wall.

**14.** The oven appliance of claim **1**, wherein the anti-tip bracket is formed from a single piece of metal.

**15.** An anti-tip bracket for securing an oven appliance, the oven appliance defining a vertical direction and comprising a cabinet and an anti-tip leg extending from a bottom of the cabinet, the anti-tip leg comprising a shaft and a foot, the anti-tip bracket comprising:

a ramp defined at a front of the anti-tip bracket;

an elevated platform defined at a top of the ramp; and

a locking flange spaced apart from the elevated platform along the vertical direction, wherein the locking flange defines a groove for receiving the shaft of the anti-tip leg and a foot slot for receiving the foot of the anti-tip leg.

**16.** The anti-tip bracket of claim **15**, wherein a bottom of the cabinet is seated on a top surface of the locking flange.

**17.** The anti-tip bracket of claim **15**, wherein a bottom of the foot is seated on a top surface of the elevated platform of the anti-tip bracket.

**18.** The anti-tip bracket of claim **15**, wherein the anti-tip leg is one of a plurality of legs of the oven appliance, other legs of the plurality of legs are adjustable between a minimal leg height and a maximum leg height, and wherein a height of the anti-tip leg is shorter than the minimal leg height of the other legs.

**19.** The anti-tip bracket of claim **18**, wherein a height of the elevated platform plus a height of the anti-tip leg is greater than the minimal leg height of the other legs.

**20.** The anti-tip bracket of claim **18**, wherein a height of the locking flange is greater than the minimal leg height of the other legs.

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