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- (71) Applicant: **SHARKNINJA OPERATING LLC**
[US/US]; 89 A Street #100, Needham, Massachusetts 02494 (US).
- (72) Inventors: **SWANSON, Matilda**; 47B Adys Road, Peckham, London SE15 4DX (GB). **IISAKA, Mai**; 37 Wheat-sheaf Close, Woking GU21 4BL (GB). **BROWN, Edward**; 3 Ennerdale Terrace, Stalybridge SK151EH (GB). **JACKSON, Roger Neil**; The Lodge, Hillside, Treburley, Launceston, Cornwall PL159PU (GB). **MARSDEN, Jennifer Kathryn**; 15B Montpelier Road, London SE15 2HB (GB).

(74) Agent: **EADIE, Nicholas M.**; Mintz Levin Cohn Ferris Glovsky and Popeo, P.C., One Financial Center, Boston, Massachusetts 02111 (US).

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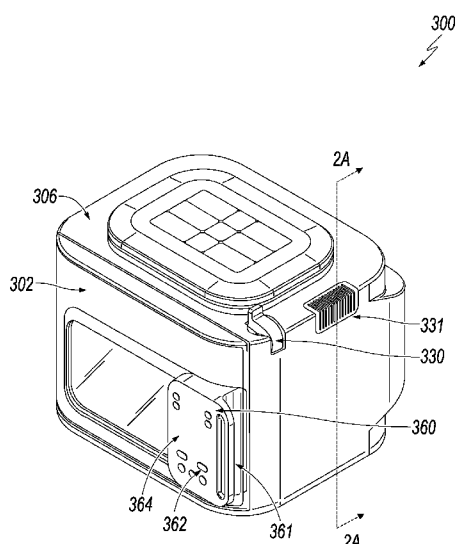


FIG. 1

(57) Abstract: A cooking device drainage system is provided. In one embodiment, a cooking device drainage system includes a seal (310) positioned between a door (302) and a housing of an appliance. The seal (310) is configured to be attached to the door (302) and at least partially define a seal channel (508) configured to receive condensation from an interior surface of the door. The seal (310) includes an elongate body (318) and a protrusion (320). The elongate body (318) and the protrusion (320) extend horizontally along a bottom region of the interior surface of the door. The elongate body (318) comprises a top surface and at least one side arm. The protrusion (320) extends outward from the top surface in a direction perpendicular to the top surface. The seal (310) is further configured to rotate between an uncompressed orientation when the door (302) is in an open position and a compressed orientation when the door (302) is in a closed position.

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COOKING DEVICE DRAINAGE SYSTEMS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present application claims priority under 35 U.S.C. § 119(e) to U.S. Provisional Patent Application Number 63/514,593 titled “COOKING DEVICE DRAINAGE SYSTEMS”, filed on July 20, 2023, the entire contents of which is hereby expressly incorporated by reference herein.

FIELD

[0002] The present application generally relates to drainage systems for cooking devices.

BACKGROUND

[0003] Conventional cooking devices, such as pressure cookers and air fryers, each perform a single cooking operation, and as such, these devices employ different components and methods for cooking food items. As such, multiple devices are required to perform various cooking operations. For consumers that wish to enjoy food cooked in different ways via different operations, an accumulation of these devices can occur. For example, a consumer may have a steam cooker for cooking food while keeping it moist, and a separate air fryer to cook the food in order to achieve a desired level of crisp on the outer surface of the food. Such an accumulation of cooking devices is often prohibitive from a standpoint of cost and/or storage space.

[0004] Combination cookers, such as those that can perform both steaming and air frying operations, have been developed, however these devices generate condensation when performing a steaming cooking procedure. As such, condensation can collect on internal surfaces of the **device, including an internal surface of the device’s door. In order to ensure that condensation collected on the door does not escape form the device and spill on a support surface, a condensation collection system may be installed in the device to collect the condensation that forms on the door and to direct the condensation to a collection area outside of the device’s cooking chamber.**

[0005] For at least these reasons, improved cooking devices are needed.

SUMMARY

[0006] Wire supporting clamp for cables are provided.

[0007] In some aspects, the techniques described herein relate to a cooking device drainage system including: a seal positioned between a door and a housing, the housing including a cooking chamber, the seal configured to be attached to the door and at least partially define a seal channel configured to receive condensation from an interior surface of the door, the seal including: an elongate body and a protrusion, wherein the elongate body and the protrusion extend horizontally along a bottom region of the interior surface of the door, the elongate body including a top surface and at least one side arm, and the protrusion extending outward from the top surface in a direction perpendicular to the top surface; and wherein the seal is further configured to rotate between an uncompressed orientation when the door is in an open position and a compressed orientation when the door is in a closed position.

[0008] In some aspects, the techniques described herein relate to a cooking device drainage system, wherein the protrusion maintains contact with the top surface along length of the seal.

[0009] In some aspects, the techniques described herein relate to a cooking device drainage system, wherein the protrusion is configured to angle away from the interior surface of the door in the open position.

[0010] In some aspects, the techniques described herein relate to a cooking device drainage system, wherein the protrusion includes a first side and a second side, and wherein the second side of the protrusion is configured to rest flush with a floor of the cooking chamber in the closed position .

[0011] In some aspects, the techniques described herein relate to a cooking device drainage system, wherein the protrusion is configured to retain liquid on the first side of the protrusion.

[0012] In some aspects, the techniques described herein relate to a cooking device drainage system, wherein the system is configured to enable liquid flow from the first side of the protrusion to a collection area.

[0013] In some aspects, the techniques described herein relate to a cooking device drainage system, wherein the liquid gathered in the collection area is configured to be recycled into a cooking process.

[0014] In some aspects, the techniques described herein relate to a cooking device drainage system, wherein the at least one side arm curves outwardly from the top surface.

[0015] In some aspects, the techniques described herein relate to a cooking device drainage system, wherein the protrusion includes a base that contacts the top surface at a middle portion of the top surface.

[0016] In some aspects, the techniques described herein relate to a cooking device drainage system, wherein the seal is configured to rotate toward the cooking chamber between the open position and the closed position.

[0017] In some aspects, the techniques described herein relate to a cooking device drainage system, wherein the protrusion is configured to prevent liquid from spilling out of the door in the open position.

[0018] In some aspects, the techniques described herein relate to a cooking device including: a housing having an opening and having a cooking chamber therein; a door movably attached to the housing, the door including an interior surface configured to cover the opening when the door is in a closed position; and a seal positioned between the housing and the door, the seal extending horizontally along a bottom region of the interior surface of the door, the seal including a top surface, at least one side arm, and a protrusion, wherein the seal is configured to receive condensation from the interior surface of the door, wherein the seal is further configured to alternate between an uncompressed position when the door is in the open position and a compressed position when the door is in the closed position.

[0019] In some aspects, the techniques described herein relate to a cooking device, wherein the seal is configured to attach to the interior surface of the door.

[0020] In some aspects, the techniques described herein relate to a cooking device, wherein the seal at least partially defines a seal channel, the seal channel being arranged within the interior surface of the door.

[0021] In some aspects, the techniques described herein relate to a cooking device, wherein the protrusion is configured to angle away from the interior surface of the door in the open position.

[0022] In some aspects, the techniques described herein relate to a cooking device, wherein the protrusion includes a first side and a second side, and wherein the second side of the protrusion is configured to rest flush with a floor of the cooking chamber in the closed position.

[0023] In some aspects, the techniques described herein relate to a cooking device, wherein the protrusion is configured to retain liquid on the first side of the protrusion in the open position.

[0024] In some aspects, the techniques described herein relate to a cooking device, wherein the at least one side arm curves outwardly from the top surface.

[0025] In some aspects, the techniques described herein relate to a cooking device, wherein the seal is configured to rotate toward the cooking chamber between the open position and the closed position.

[0026] In some aspects, the techniques described herein relate to a cooking device, wherein the protrusion is configured to prevent liquid from spilling out of the door in the open position.

BRIEF DESCRIPTION OF THE DRAWINGS

[0027] These and other features will be more readily understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

[0028] FIG. 1 is a perspective view of an embodiment of a cooking device;

[0029] FIG. 2A is a cross-sectional view of the cooking device taken along line 2A-2A in FIG. 1;

[0030] FIG. 2B is a schematic view of an example control system of the cooking device of FIG. 1;

[0031] FIG. 3 is a perspective view of the example cooking device of FIG. 1 with a door open;

[0032] FIG. 4 is a perspective view of the example cooking device of FIG. 1 with the door open and partially bisected;

[0033] FIG. 5 is an isolated perspective view of the door of FIG. 3;

[0034] FIG. 6 is an isolated perspective view of the door of FIG. 4;

[0035] FIG. 7A is an isolated perspective view of a seal of the door of FIG. 3;

[0036] FIG. 7B is a detailed perspective view of the seal of FIG. 7A;

[0037] FIG. 8 is a side cross-sectional view of the seal of FIG. 7B when the door of the cooking system of FIG. 3 is open; and

[0038] FIG. 9 is a side cross-sectional view of the seal of FIG. 7B when the door of the cooking system of FIG. 3 is closed.

[0039] It is noted that the drawings are not necessarily to scale. The drawings are intended to depict only typical aspects of the subject matter disclosed herein, and therefore should not be considered as limiting the scope of the disclosure.

DETAILED DESCRIPTION

[0040] Certain exemplary embodiments will now be described to provide an overall understanding of the principles of the structure, function, manufacture, and use of the devices and methods disclosed herein. One or more examples of these embodiments are illustrated in the accompanying drawings. Those skilled in the art will understand that the devices and methods specifically described herein and illustrated in the accompanying drawings are non-limiting exemplary embodiments and that the scope of the present invention is defined solely by the claims. The features illustrated or described in connection with one exemplary embodiment may be combined with the features of other embodiments. Such modifications and variations are intended to be included within the scope of the present invention.

[0041] A cooking device is provided having multiple cooking modes, a vent, an outwardly swinging door, and a condensation collection system. In an exemplary embodiment, the cooking device includes multiple cooking modes including a steam cooking mode and an air fry cooking mode, and the device can be configured to transition from the steam cooking mode to the air fry cooking mode during a single cooking operation. In the steam cooking mode, a moisture level **within the device's cooking compartment increases, and thus condensation collects on internal walls of the device, including the device's outwardly swinging door. It is important when a user opens the door that the collected condensation does not drip form the door, collecting on the support surface which the device is resting on, such as a countertop. Accordingly, a condensation collection system is provided that is configured to allow for the collection of fluid, such as water, into an internal volume of the housing, and for dispensing of the collected fluid from within an internal volume of the housing to a collection area positioned outside of the cooking chamber.**

[0042] FIGS. 1-9 illustrate an exemplary embodiment of a cooking device 300 configured to perform multiple cooking operations. The cooking device 300 is substantially similar to the cooking device disclosed in U.S. Patent No. 11,490,761, entitled **"Single Opening Vent For Steam Air Fryer"** issued on Nov. 8, 2022, which is hereby incorporated by reference in its entirety. As such, like components and operations between the two cooking devices are not described in detail.

[0043] As shown in FIG. 1, the cooking device 300 generally includes a door 302 and a housing 306, with the door 302 attached to the housing 306.

[0044] As depicted in FIG. 3, arranged inside of the housing 306 is a cooking compartment (also referred to herein as a “cooking chamber”) 303, which is accessible via an opening 305 arranged in the housing 306. A consumable container 307 is receivable inside the cooking compartment 303. The container 307 has an interior designed to receive and retain one or more consumable products, such as food products. Examples of food products suitable for use with the cooking device 300, include but are not limited to meats, fish, poultry, bread, rice, grains, pasta, vegetables, fruits, and dairy products, among others.

[0045] As depicted in FIG. 2A, the cooking device 300 includes one or more heating elements 352, 353 for heating the cooking compartment 303. A first heating element 352 is positioned generally at or above an upper extent of the cooking compartment 303 and therefore may be completely outside of the area which the container 307 is inserted into the cooking compartment 303. A second heating element 353 is located generally adjacent a bottom of the cooking compartment 303 and can be completely outside of the area which the container 307 is inserted into the cooking compartment 303.

[0046] As illustrated in FIG. 2A, an air movement device 356 is selectively operable to circulate a flow of fluid, for example air, through the cooking chamber 303. The air movement device 356 includes a motor 358 having a fan 359 coupled thereto. The air movement device 356 is operable to circulate air within the cooking chamber 303 through the at least one heating element 352, 353. As the air passes over the at least one heating element 352, 353, the air is heated for cooking the consumable within the cooking chamber 303. In an exemplary embodiment, the air movement device 356 can be mounted within the upper portion of the cooking compartment 303 at a position vertically offset from the first heating element 352. However, other configurations of the air movement device 356 relative to the first heating element 352, for example a concentric arrangement of the air movement device 356 and the first heating element 352, are also contemplated herein.

[0047] As shown in FIG. 1, a control panel or user interface 360 of the cooking device 300 is positioned on a handle 361 of the door 302, although the control panel 360 can be located elsewhere on the cooking device 300. The control panel 360 includes one or more inputs 362 associated with energizing the at least one heating element 352, 353 of the cooking device 300 and for selecting various modes of operation of the cooking device 300. One or more of the

inputs 362 can include a light or other indicator to show that the respective input has been selected. The control panel 360 can additionally include a display 364 separate from and associated with the at least one input 362. However, embodiments where the display 364 is integrated into the at least one input 362 are also contemplated herein. Additionally, portions of the control panel 360 can be activated via the position of a switching mechanism 330.

[0048] The switching mechanism 330 is connected to a vent assembly 331, which is configured to control a flow of humid air from the housing 306. The switching mechanism 330 is configured to move the vent assembly 331 from an open position (for air-frying) to a closed position (for steaming). In order to achieve both a steam cooking operation and an air frying operation within the same unit, the high humidity air must be removed from the system and replaced with less humid air. By using a single vent assembly 331, the **single vent assembly's inlet and outlet must** be spaced apart to prevent the inlet taking in high humidity air from the outlet. The single vent assembly 331 is substantially similar to the single vent design disclosed in previously mentioned U.S. Patent No. 11,490,761, which is hereby incorporated by reference.

[0049] When the vent assembly 331 is in a closed position, the display 364 is configured to be illuminated to inform a user that the cooking device 330 can be operated in a first cooking mode. A first portion of the display 364 is related to the first cooking mode, and can include options related to the first cooking mode, such as steaming, proofing, and steam and crisp processes. In some embodiments, this information is displayed in any of a variety of ways, with the illustrated display 364 having a first portion configured to show information related to the first cooking mode and a second, different portion of the display 364 configured to show information related to the second cooking mode, which may help a user easily discern that information is being shown in relation to a particular cooking mode based on where the information is shown on the display 364. When the vent assembly 331 is in an open position, the display 364 is configured to be illuminated to inform a user that the cooking device 330 can be operated in a second cooking mode. A second portion of the display 364 is related to the second cooking mode, and can include options related to the second cooking mode, such as air frying, baking, roasting, searing, and slow cooking processes. In an exemplary embodiment, the inputs 362 only function with the one of the first and second portions of the display 364 that is active due to the position of the switching mechanism 330.

[0050] Illustrated in FIG. 2B, a control system 370 of the cooking device 300 includes a controller or processor 372 configured to control operation of the one or more heating elements 352, 353 and operation of the air movement device 356 (including the motor 358 and fan 359

associated therewith). In some embodiments, the control system 370 is additionally configured to execute stored sequences of heating operation. The processor 372 is configured to be operably coupled to the control panel 360, the one or more heating elements 352, 353, and the air movement device 356.

[0051] In addition, in some embodiments, one or more sensors S each configured to monitor one or more parameters (such as temperature, pressure, door open/closed configuration, etc.) associated with operation of the one or more heating elements 352, 353 can be arranged in communication with the processor 372. In one embodiment, a sensor S can be configured to monitor whether the door 302 is in a closed configuration. Alternatively, or in addition, a sensor S can be configured to monitor a temperature within the cooking compartment 303.

[0052] Accordingly, during a steam cooking operation, the processor 372 is configured to initiate operation of the one or more heating elements 352, 353, causing the temperature within the cooking compartment 303 to increase. This temperature increase would cause any fluid or moisture within the cooking chamber 303, either fluid directly arranged in the cooking chamber 303 or naturally embedded within the consumable located within the chamber 303, to vaporize. With the air movement device 356 active, the fluid may become entrained within the air circulating through the cooking compartment 303. As a result, when the air and fluid is heated as it passes over the at least one heating element 352, 353, causing the fluid to become a gas, such as water vapor or steam. This transformation of a liquid to a vapor performed within the cooking compartment 303 in response to the heat generated by the at least one heating element 352, 353 causes not only the pressure, but also the humidity, within the cooking compartment 303 to increase. This steam can then form condensation on the interior surface of the cooking compartment 303, including an interior surface 304 of the door 302.

[0053] As shown in FIG. 3, the door 302 is configured to open along a vertical axis 308 to control access to the cooking chamber 303 through an opening 305 on a front side of the housing 306. The door 302 is arranged such that the interior surface 304 of the door 302 abuts the housing 306 when the door 302 is in the closed position.

[0054] Still referring to FIG. 3, it should be noted that the door 302 is connectable to a front surface of the housing 306 to close off entry to the interior of the cooking compartment 303. Accordingly, when the door 302 is closed, the cooking compartment 303 can be defined by interior surfaces of the housing 306 and the interior surface 304 of the door 302. An area of the door 302 can be complementary to an area of the housing 306 such that the door 302 covers the

opening 305 of the housing 306. The door 302 can be made of any suitable material, such as glass, aluminum, plastic, or stainless steel. Further, the door 302 can, but need not, include one or more handles 361 for removably coupling the door 302 to the remainder of the cooking device 300.

[0055] As previously discussed, the cooking appliance 300 is configured to heat food in a variety of cooking modes. One or more of these modes, for example, steaming, can produce condensation along an interior surface of the cooking chamber 303, including the interior surface 304 of the door 302. The embodiments described throughout this disclosure may prevent, reduce, or mitigate liquid build-up on the interior surface 304 of the door 302. As illustrated in FIGS. 3-7B, a seal 310 including a protrusion 320 is located between the door 302 and the housing 306. In some embodiments, the seal 310 is attached or otherwise fixed to the door. For example as shown in FIGS. 5-6, the seal 310 can include tabs 504 extending from a rear portion 509 of the seal 310. In order to fasten the seal 310 to the door 302, the tabs 509 are arranged within holes on the door 302, and then a fastening plate 600 can be arranged over the rear portion 509 and connected to the door 302 to tension the seal between the fastening plate 600 and the inner surface of the door 302. Other ways of fastening the seal 310 to the door 302 can be used without departing from this disclosure, for example, adhesives, interference fits, or fasteners can be used. The seal 310 can be formed from silicon, rubber, or any suitable heat restraint sealing material.

[0056] As illustrated in FIG. 8, the seal 310 comprises an elongate body 318 and a protrusion 320. The elongate body 318 and the protrusion 320 each extend horizontally along a bottom region of the interior surface 304 of the door 302. The elongate body 318 is formed from a flexible material and includes a top surface 322 and first and second side arms 324, 326, described below in more detail. The protrusion 320 includes a base 328, a first side 332, a second side 334, and an outer edge 336. The base 328 contacts the top surface 322 of elongate body 318 at a middle portion 338 of the top surface 322 and maintains contact thereat along the entire length of the seal 310. The first side 332 and the second side 334 each extend outward from the base 328 in a direction perpendicular to the top surface 322. The first side 332 and the second side 334 join together at the outer edge 336. Returning to the elongate body, the first side arm 324 is adjacent to the first side 332 of protrusion 320 and the second side arm 326 is adjacent to the second side 334 of protrusion 320. The first side arm 324 is defined by a first curve 340 of elongate body 318. The first curve 340 curls outwardly from base 328 and away from the top surface 322 and toward the interior surface 304 of the door 302. The second side arm 326 is

defined by a second curve 342 of elongate body 318. The second curve 342 curls outwardly from base 328 and away from the top surface 322 and toward the cooking chamber 303.

[0057] As shown in FIG. 8, the seal 310 at least partially defines a seal channel 508 along a lower portion of the door 302. The seal channel 508 is arranged and configured to receive condensation from the interior, vertical surface 304 of the door 302. In some embodiments, the seal channel 508 is partially defined by the door 302 itself. Regardless of the seal channel components, the seal channel 508 extends across a lower portion of the door 302. In some embodiments, the seal channel 508 can extend further around the perimeter of the door, for example to reduce risk of installation failures due to improper orientation. As illustrated in FIG. 6, the seal 310 can include an opening 510 arranged at one end of the seal channel 508 in order to allow water to drain from the seal channel 508. A tapered section 507 can be positioned on the protrusion 320 in order to aid in water drainage. Additionally, as illustrated in FIG. 7A, a rounded corner 506 of the protrusion 320 can be positioned opposite the tapered section 507 to aid in the collection of water.

[0058] To maintain the seal channel 508, the seal 310 is configured to rotate between a first orientation when the door 302 is open and a second orientation when the door 302 is closed. As illustrated in FIG. 8, when the door 302 is open, the protrusion 320 is angled away from the interior surface 304 of the door 302. In this first orientation, seal 310 is uncompressed and liquid that has formed on the interior surface 304 of the door 302 can flow from the inner surface 304 to the first side 332 of the protrusion 320, as illustrated by the arrows in FIG. 8. The protrusion 320 thus acts as a gutter to retain liquid in the door 302 to avoid spillage outside of the cooking device 300. When the door 302 moves from the open position to the closed position, the seal 310 rotates toward the cooking chamber 303 and compresses. The result of this rotation is that once the door 302 is closed, as illustrated in FIG. 9, the second side 334 of the protrusion 320 can rest flush against a floor 344 of the cooking chamber 303. In this state, as illustrated by the arrows in FIG. 9, the liquid that has been retained on the first side 332 of the protrusion 320 can flow from the protrusion 320 and across the floor 344 before ultimately pooling in a collection area 311. As illustrated in FIGS. 3-4, the collection area 311 is formed between the door 302 and the floor 344 of the cooking compartment 303 by the housing 306 abutting against the door 302. The collection area 311 can extend along the width of the cooking compartment 303 and parallel to the seal 310 when the door 302 is closed. The liquid in collection area 311 can ultimately be recycled into the cooking process.

[0059] Certain exemplary implementations have been described to provide an overall understanding of the principles of the structure, function, manufacture, and use of the systems, devices, and methods disclosed herein. One or more examples of these implementations have been illustrated in the accompanying drawings. Those skilled in the art will understand that the systems, devices, and methods specifically described herein and illustrated in the accompanying drawings are non-limiting exemplary implementations and that the scope of the present invention is defined solely by the claims. The features illustrated or described in connection with one exemplary implementation may be combined with the features of other implementations. Such modifications and variations are intended to be included within the scope of the present invention. Further, in the present disclosure, like-named components of the implementations generally have similar features, and thus within a particular implementation each feature of each like-named component is not necessarily fully elaborated upon.

[0060] 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 “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. Here and throughout the specification and claims, range limitations may be combined and/or interchanged, such ranges are identified and include all the sub-ranges contained therein unless context or language indicates otherwise.

[0061] One skilled in the art will appreciate further features and advantages of the invention based on the above-described implementations. Accordingly, the present application is not to be limited by what has been particularly shown and described, except as indicated by the appended claims. All publications and references cited herein are expressly incorporated by reference in their entirety for all purposes.

[0062] What is claimed is:

CLAIMS

1. A cooking device drainage system comprising:
a seal positioned between a door and a housing, the housing including a cooking chamber, the seal configured to be attached to the door and at least partially define a seal channel configured to receive condensation from an interior surface of the door, the seal including:
an elongate body and a protrusion, wherein the elongate body and the protrusion extend horizontally along a bottom region of the interior surface of the door, the elongate body comprising a top surface and at least one side arm, and the protrusion extending outward from the top surface in a direction perpendicular to the top surface; and
wherein the seal is further configured to rotate between an uncompressed orientation when the door is in an open position and a compressed orientation when the door is in a closed position.
2. The cooking device drainage system of claim 1, wherein the protrusion maintains contact with the top surface along length of the seal.
3. The cooking device drainage system of claim 1, wherein the protrusion is configured to angle away from the interior surface of the door in the open position.
4. The cooking device drainage system of claim 1, wherein the protrusion includes a first side and a second side, and wherein the second side of the protrusion is configured to rest flush with a floor of the cooking chamber in the closed position .
5. The cooking device drainage system of claim 4, wherein the protrusion is configured to retain liquid on the first side of the protrusion.
6. The cooking device drainage system of claim 4, wherein the system is configured to enable liquid flow from the first side of the protrusion to a collection area.
7. The cooking device drainage system of claim 6, wherein the liquid gathered in the collection area is configured to be recycled into a cooking process.
8. The cooking device drainage system of claim 1, wherein the at least one side arm curves outwardly from the top surface.
9. The cooking device drainage system of claim 1, wherein the protrusion includes a base that contacts the top surface at a middle portion of the top surface.

10. The cooking device drainage system of claim 1, wherein the seal is configured to rotate toward the cooking chamber between the open position and the closed position.
11. The cooking device drainage system of claim 1, wherein the protrusion is configured to prevent liquid from spilling out of the door in the open position.
12. A cooking device comprising:
 - a housing having an opening and having a cooking chamber therein;
 - a door movably attached to the housing, the door including an interior surface configured to cover the opening when the door is in a closed position; and
 - a seal positioned between the housing and the door, the seal extending horizontally along a bottom region of the interior surface of the door, the seal including a top surface, at least one side arm, and a protrusion, wherein the seal is configured to receive condensation from the interior surface of the door,wherein the seal is further configured to alternate between an uncompressed position when the door is in the open position and a compressed position when the door is in the closed position.
13. The cooking device of claim 12, wherein the seal is configured to attach to the interior surface of the door.
14. The cooking device of claim 12, wherein the seal at least partially defines a seal channel, the seal channel being arranged within the interior surface of the door.
15. The cooking device of claim 12, wherein the protrusion is configured to angle away from the interior surface of the door in the open position.
16. The cooking device of claim 12, wherein the protrusion includes a first side and a second side, and wherein the second side of the protrusion is configured to rest flush with a floor of the cooking chamber in the closed position.
17. The cooking device of claim 16, wherein the protrusion is configured to retain liquid on the first side of the protrusion in the open position.
18. The cooking device of claim 12, wherein the at least one side arm curves outwardly from the top surface.
19. The cooking device of claim 12, wherein the seal is configured to rotate toward the

cooking chamber between the open position and the closed position.

20. The cooking device of claim 12, wherein the protrusion is configured to prevent liquid from spilling out of the door in the open position.

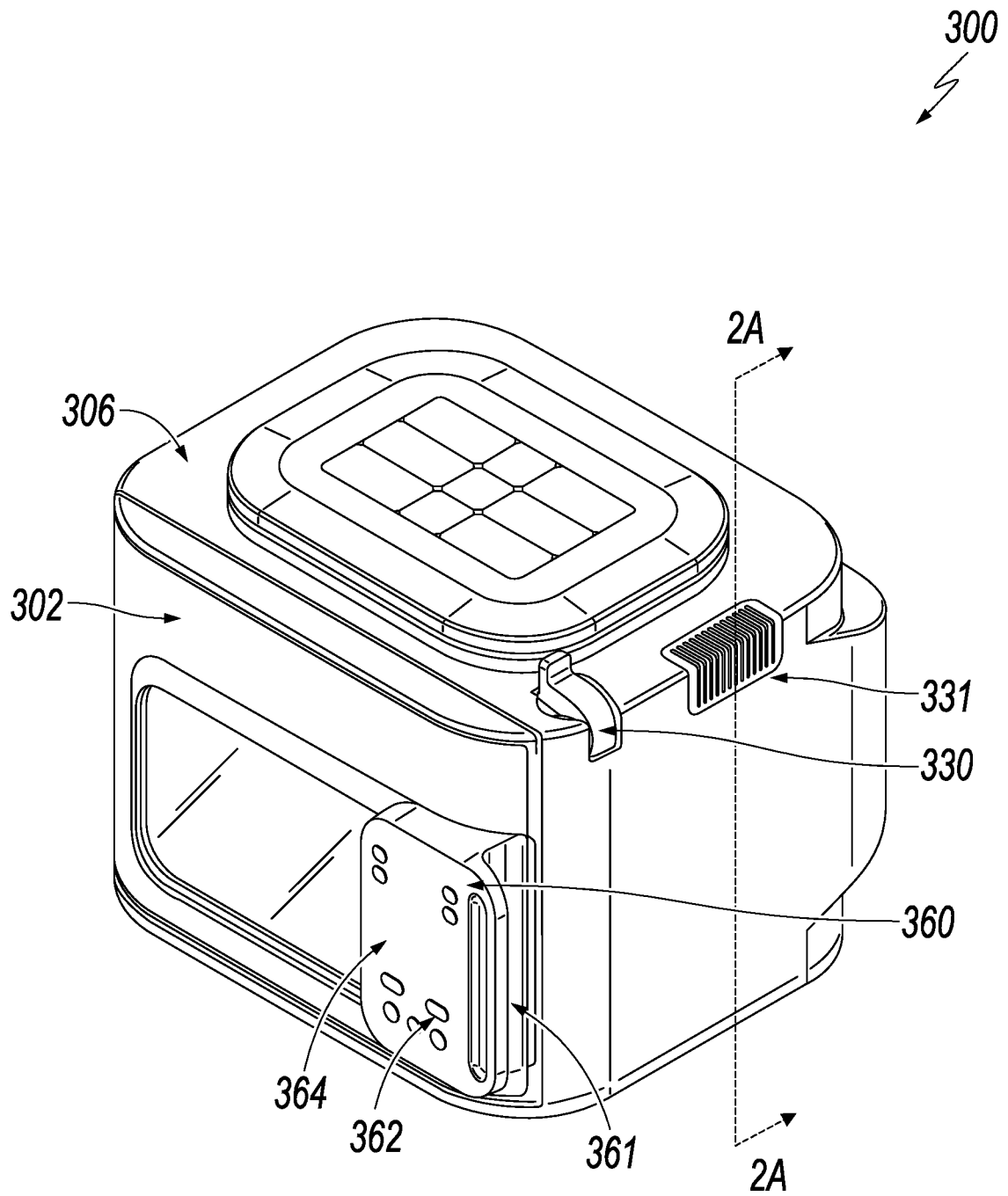


FIG. 1

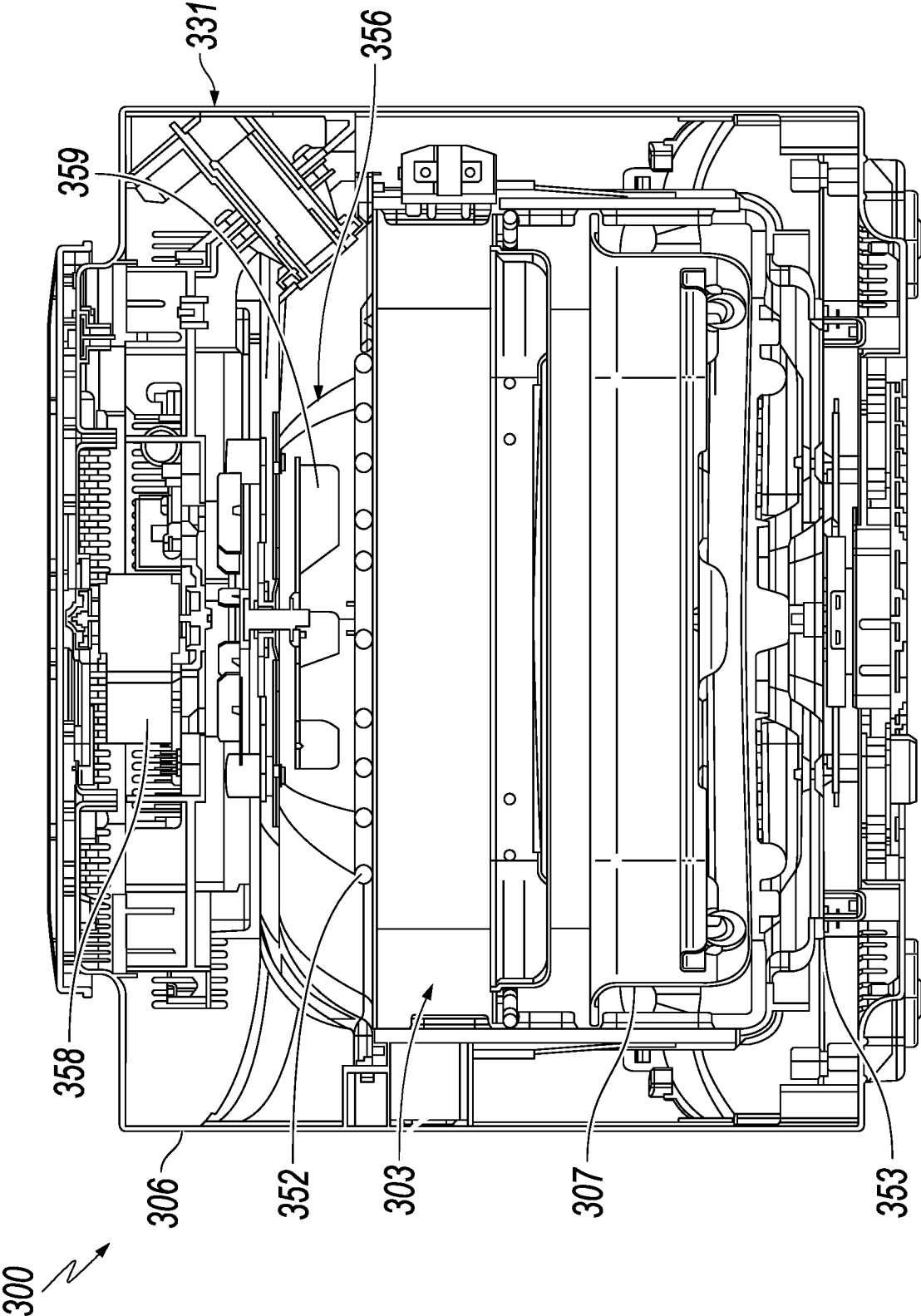


FIG. 2A

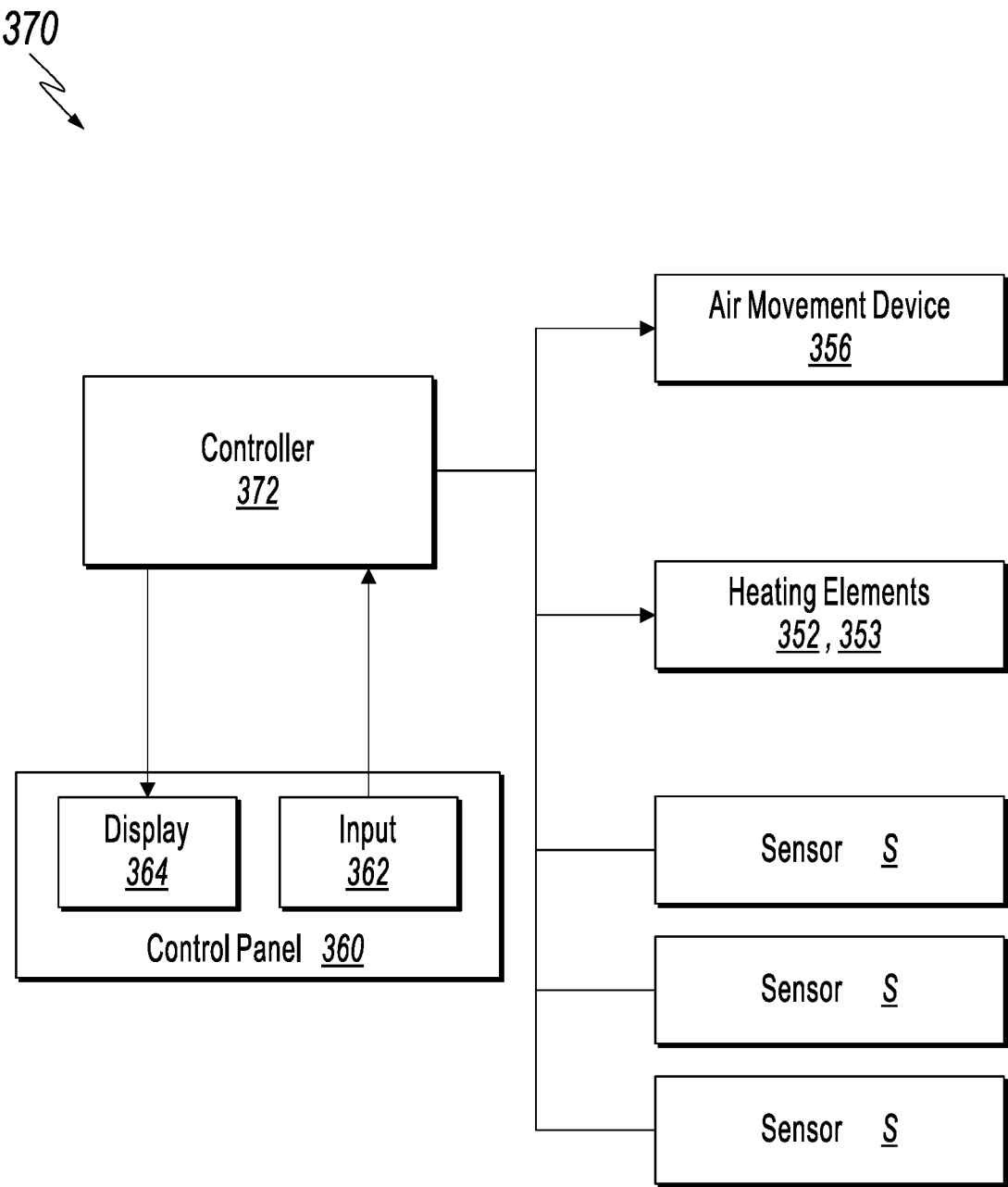


FIG. 2B

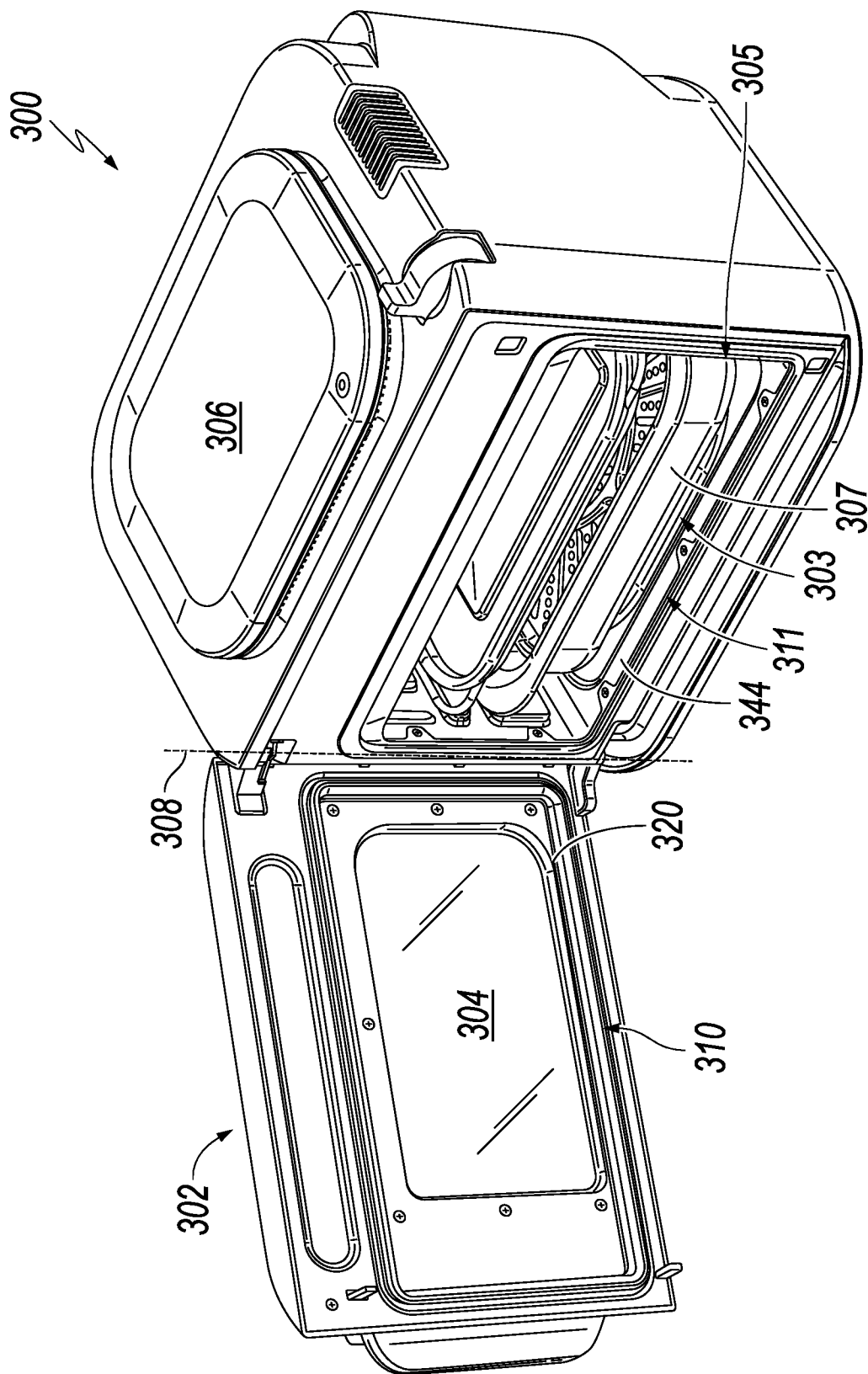


FIG. 3

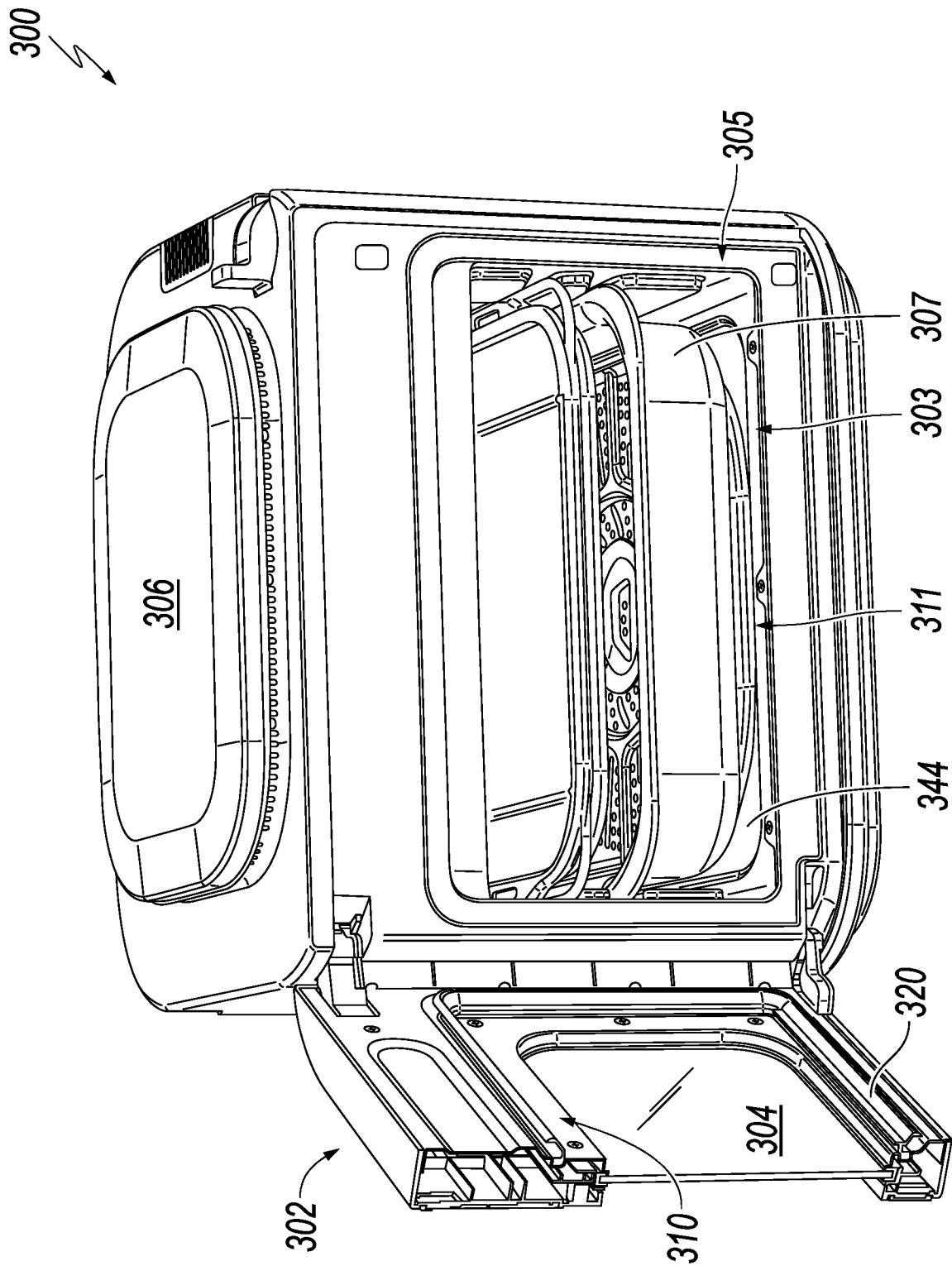


FIG. 4

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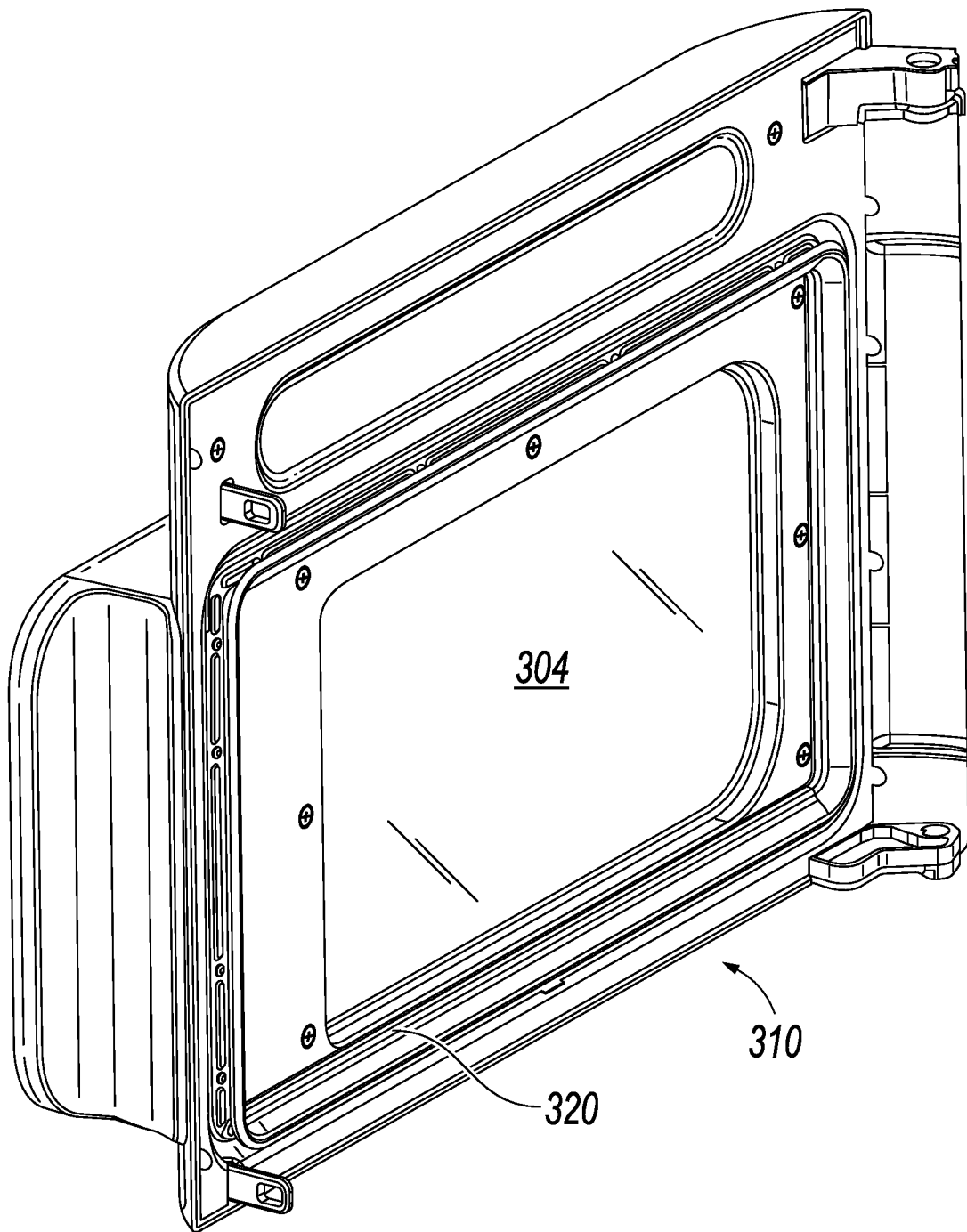


FIG. 5

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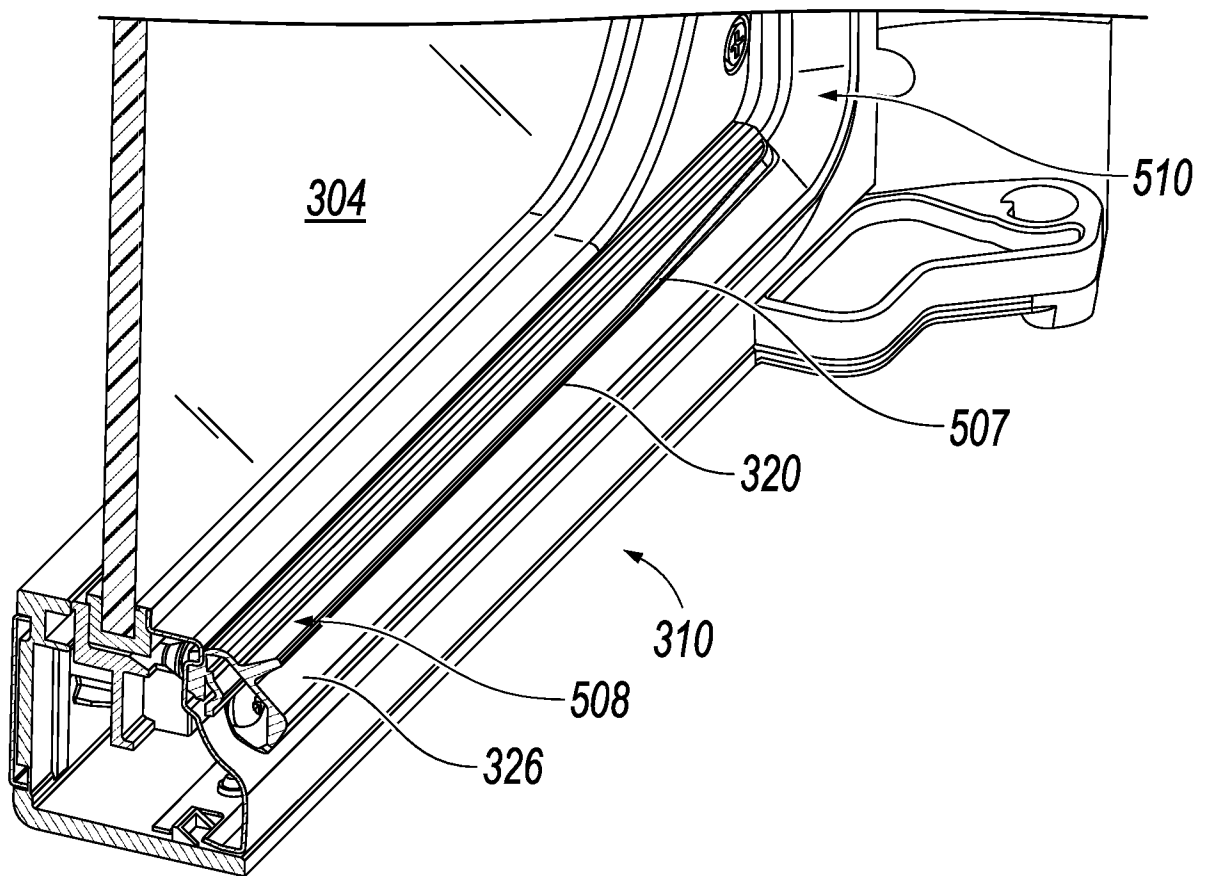


FIG. 6

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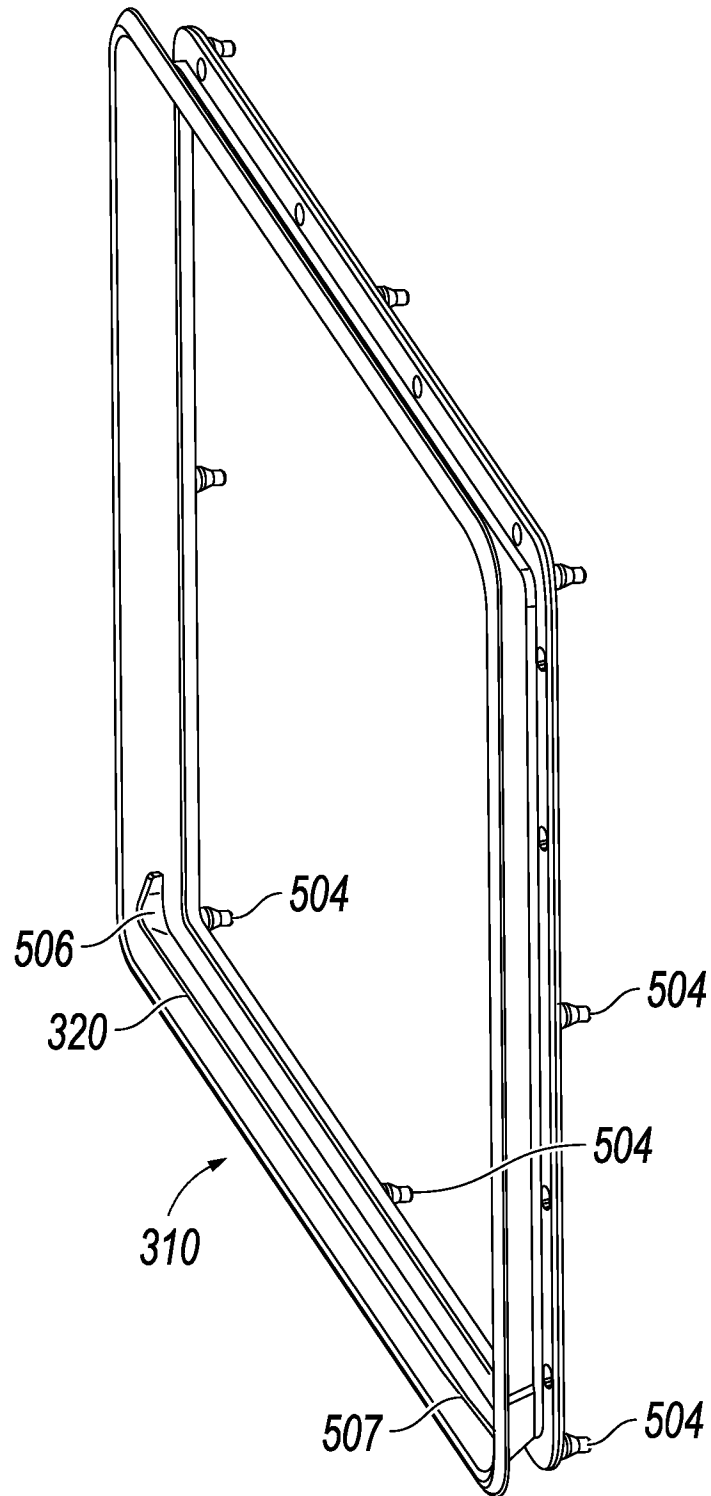


FIG. 7A

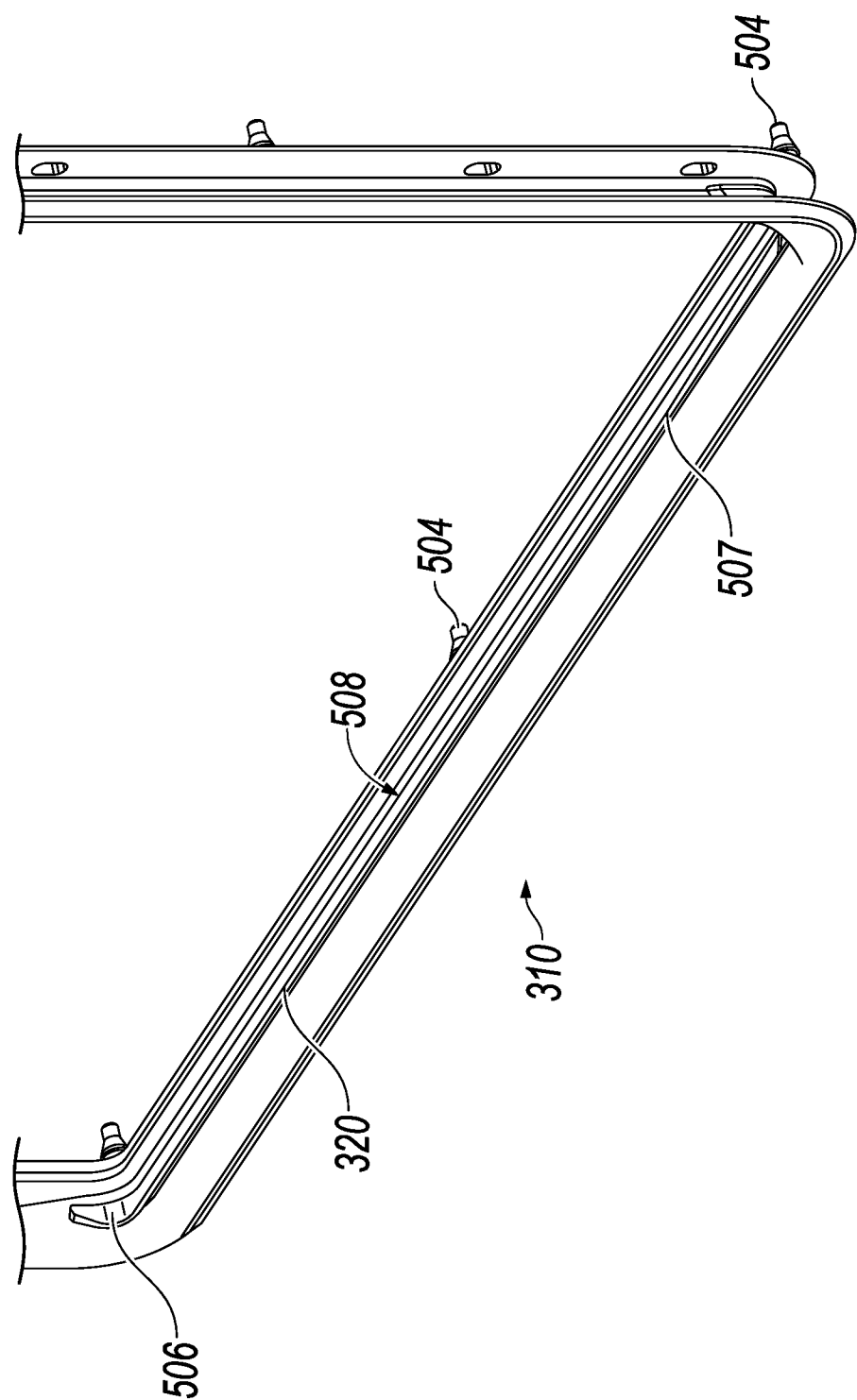


FIG. 7B

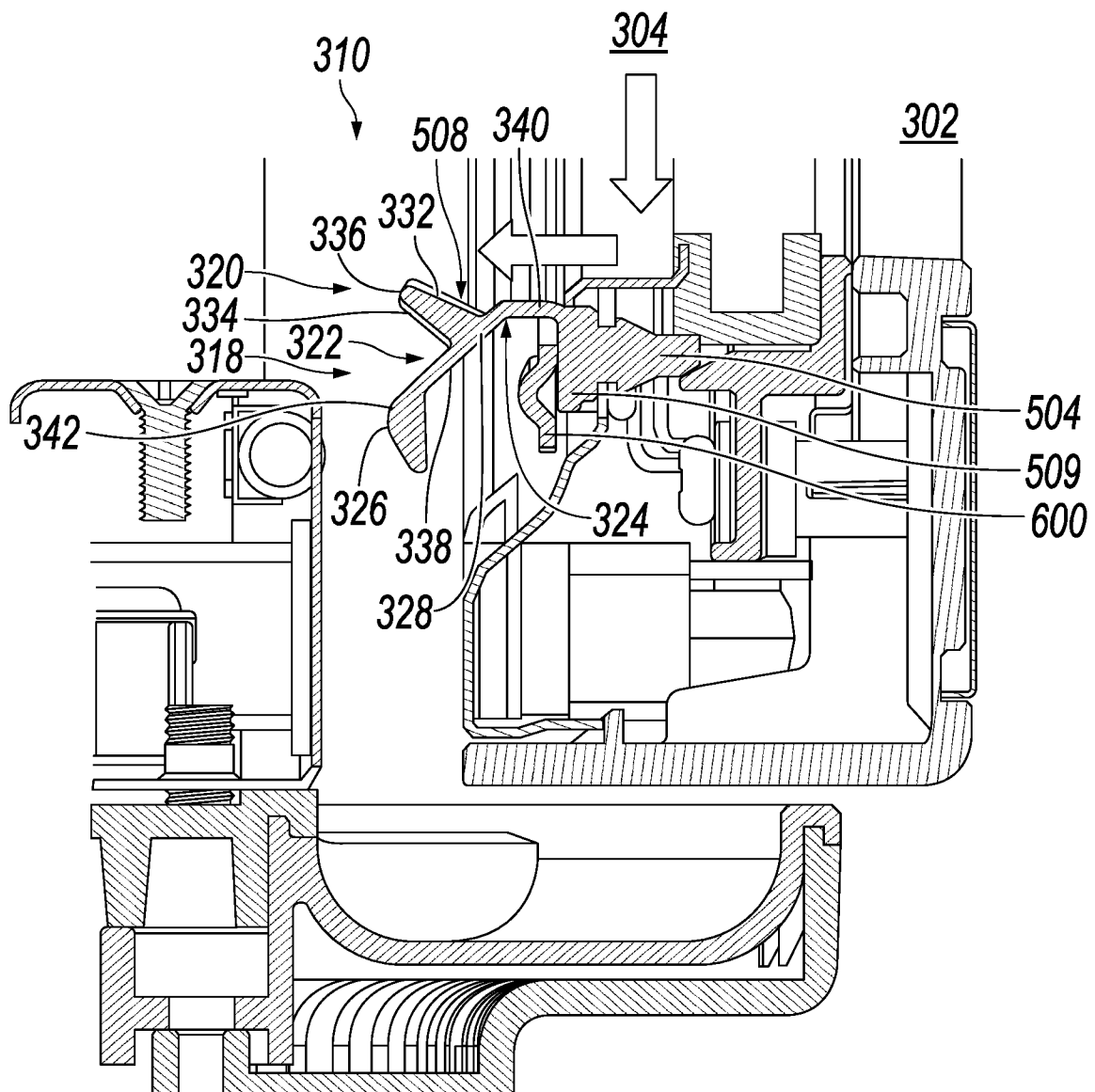


FIG. 8

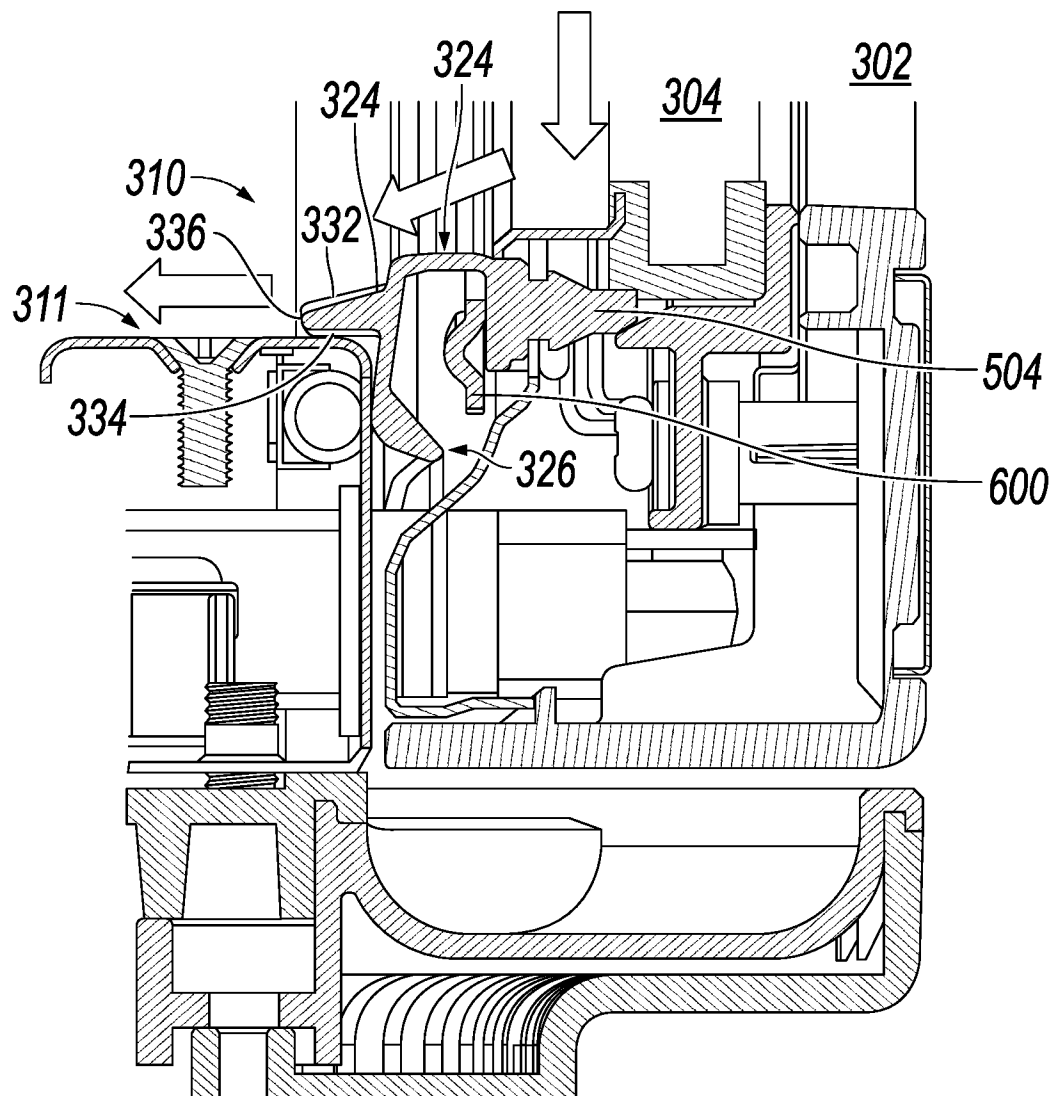


FIG. 9

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2024/038540

A. CLASSIFICATION OF SUBJECT MATTER INV. A47J37/06 F24C15/02 ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) A47J F24C Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 10 2016 224305 A1 (BSH HAUSGERAETE GMBH [DE]) 7 June 2018 (2018-06-07) paragraph [0032] - paragraph [0039]; claims; figures -----	1 - 20
E	EP 4 421 391 A1 (SHARKNINJA OPERATING LLC [US]) 28 August 2024 (2024-08-28) paragraph [0015] - paragraph [0039]; claims; figures -----	1 - 20
A	CN 116 157 628 A (BSH HAUSGERAETE GMBH) 23 May 2023 (2023-05-23) paragraph [0001] - paragraph [0089]; claims; figures -----	1 - 20
A	EP 3 045 820 A1 (BSH HAUSGERAETE GMBH [DE]) 20 July 2016 (2016-07-20) paragraph [0025] - paragraph [0039]; claims; figures -----	1 - 20
☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance;; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance;; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 25 October 2024		Date of mailing of the international search report 11/11/2024
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Moulié, Andreas

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2024/038540

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		US 2023296260 A1	21-09-2023
		WO 2022017794 A1	27-01-2022
EP 3045820 A1	20-07-2016	NONE	