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GRILL UNIT

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Abstract

A solid fuel grill unit comprising a housing with at least one sidewall of insulated facing and a plurality of secondary removable internal insulation panels, a grill bracket removably attached to the top of the housing for retaining the removable secondary insulation panels and at least one air intake formed on the sidewall extending into the internal cavity.

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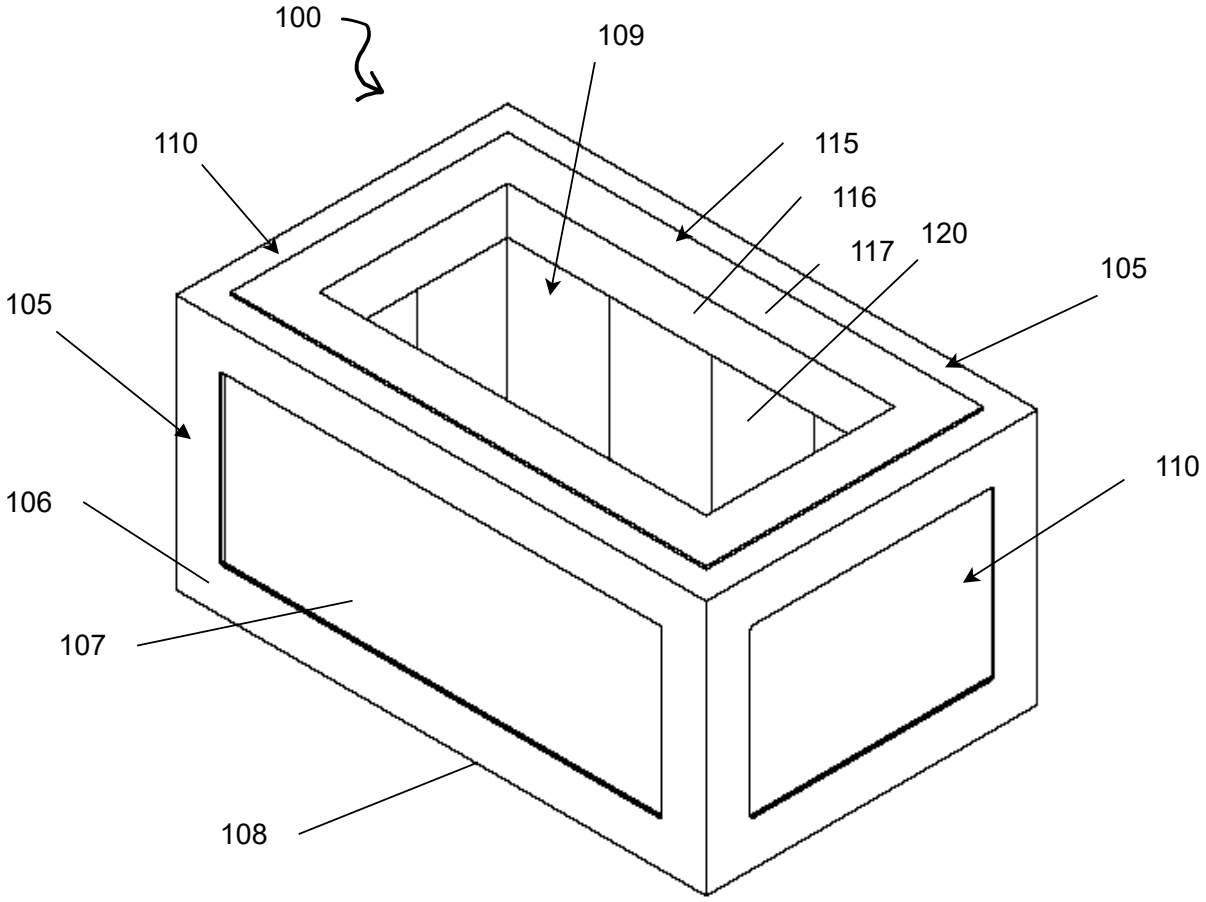

FIG.1A

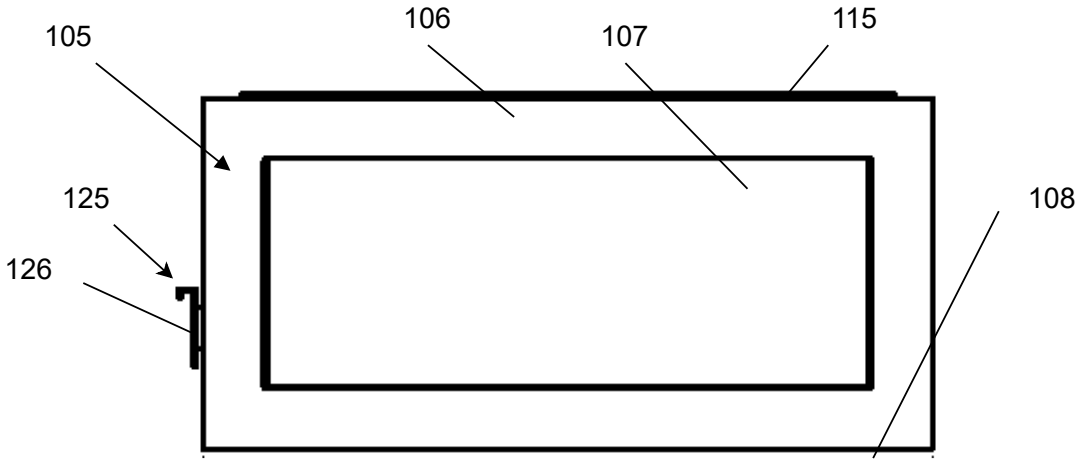

FIG.1B

GRILL UNIT

FIELD OF INVENTION

The present invention relates generally to cooking devices and in particular, to direct heat cooking devices.

BACKGROUND OF THE INVENTION

In the field of barbeque and direct heat grilling equipment, many different forms of vessels for heating elements exist. Although the principles of grilling food require only that a heat source is applied to a foodstuff, particular flavours and textures can be achieved by varying the type of grilling element used along with the type of fuel source. In some cuisines, a solid fuel source such as charcoal or briquettes are used and are thought to enhance the flavour of the food being cooked when compared to techniques such as gas cooking.

However, burning solid fuels produces a number of particular challenges to overcome. Considerations are generally made towards the proximity of the food to the fuel source, the degree of exposure of the food source to the fuel source while cooking, management of heat through air control in a vessel, and disposal of ash and food waste that arises as a result of the cooking process.

Particular reference is made to the ‘hibachi’ type of grill, which typically involves a small sized rectangular grill unit (or circular drum), above which a grate is placed. Hibachi grills are typically small in size, allowing for direct grilling of food on a tabletop. However, they are fundamentally limited by the cooking area and their relative small size compared to larger more unwieldy barbecue equipment.

Accordingly, to enjoy the benefits of a hibachi grill using existing solutions means that the volume of food being cooked is relatively low, and the types of food that can be prepared are relegated to small pieces of thinly sliced meat. Attempting to cook food is too large in size can drastically impact the airflow of a hibachi grill, which relies from ambient air from the exposed top, and therefore reduce cooking capability. Therefore, a hibachi grill user has a relatively low degree of control over the heat of the fuel source, particularly compared to gas cooking methods, which are thought to not provide the same enhanced flavour that burnt solid fuel does. Additionally, existing hibachi grills can easily sustain damage by utensils or the burnt fuel source itself, requiring replacement of the

entire grill unit.

Accordingly, it is desired to address or ameliorate one or more shortcomings associated with the field of the invention, or at least provide a useful alternative thereto.

The above references to and descriptions of prior proposals or products are not intended to be, and are not to be construed as, statements or admissions of common general knowledge in the art. In particular, the above prior art discussion does not relate to what is commonly or well known by the person skilled in the art, but assists in the understanding of the inventive step of the present invention of which the identification of pertinent prior art proposals is but one part.

STATEMENT OF INVENTION

The invention according to one or more aspects is as defined in the independent claims. Some optional and/or preferred features of the invention are defined in the dependent claims.

In accordance with one aspect, the present invention provides a grill unit comprising: a housing, defining an internal cavity, the housing comprising at least one sidewall interconnected to a base to form a receptacle for a solid fuel; wherein the housing is substantially open at a top end, opposite the base, to allow for direct grilling of food when the solid fuel is ignited; the at least one sidewall, comprising an insulated facing; a removable secondary insulation layer, comprising a plurality of insulation panels, configured to be removably retained against the at least one sidewall in the internal cavity; a grill bracket, removably attachable to the top end of the housing, and configured to retain the removable secondary insulation layer against the at least one sidewall; and at least one air intake, formed on the at least one sidewall, extending into the internal cavity.

The grill bracket may further comprise a cooking peripheral attachment surface, extending above the top end of the housing, to contact an engaged cooking peripheral.

The at least one sidewall may comprise: two elongate sidewalls, adjacent two end sidewalls; the sidewalls thereby defining a substantially rectangular profile.

The at least one sidewall may comprise a frame member to frame the insulated facing.

The removable secondary insulation layer may comprise firebrick panels.

The grill bracket may further comprise an upper surface in connection with a retaining flange, the retaining flange extending at a substantially 90° angle with respect to upper surface; and wherein the retaining flange is configured to extend at least partway down a length of the removable secondary insulation layer when in use.

The at least one air intake may comprise a linear air intake slot, position at a lower portion of the sidewall adjacent to the base.

The at least one air intake may further comprise a shutter, actuatable between an open and closed position, to allow for control of airflow into the internal cavity.

The at least one air intake may further comprise an air chute, configured to penetrate and abut the sidewall.

The at least one insulated facing may be a low-density insulation layer, and the removable secondary insulation layer may be a high-density insulation layer.

Some embodiments relate to a kit of parts, comprising the grill unit of any one of the preceding claims, and one or more of: a cooking hood, comprising a cabinet frame having at least one mount of an elongate rod member for suspension of foodstuffs, and attachable to the top end of the housing; a cold smoker silo, attachable to the at least one air intake; a coal grate, configured to create a raised platform for solid fuel within the internal cavity; a pizza hood, attachable to the top end of the housing; a biomass kiln, comprising a tray with a lid, configured to sit within the internal cavity; a work burner, attachable to the top end of the housing, comprising a wok mount and foot; a ventilation base, comprising an elongate base portion and upright air channel, wherein the upright air channel is in fluid communication with the elongate base portion and is attachable to the air intake; and wherein the elongate base portion is configured to act as an insulator to the base of the grill.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention may be better understood from the following non-limiting description of preferred embodiments, in which:

FIG.1A is a perspective view of a grill unit according to some embodiments;

FIG.1B is a side view of a grill unit according to some embodiments;

FIG.2A is a top view of a grill unit according to some embodiments;

FIG.2B is a sectional view of a grill unit along reference line A-A according to some embodiments;

FIG.3A is a perspective view of a grill unit with hood attachment according to some embodiments;

FIG.3B is a side view of a grill unit with hood attachment according to some embodiments;

FIG.3C is a front view of a grill unit with hood attachment according to some embodiments;

FIG.3D is a perspective view of a grill unit with cold smoking attachment according to some embodiments;

FIG.4A is an exploded perspective view of a grill unit and coal grate according to some embodiments;

FIG.4B is top perspective view of a grill unit and coal grate according to some embodiments;

FIG.5A is a perspective view of a grill unit and pizza hood attachment according to some embodiments;

FIG.5B is a perspective view of a grill unit and combination pizza hood and hood attachment according to some embodiments;

FIG.6A is an exploded perspective view of a grill unit and bio-mass burner according to some embodiments;

FIG.6B is a top view of a grill unit and bio-mass burner according to some embodiments;

FIG.7 is a perspective view of a grill unit ¬-¬and wok burner attachment according to some embodiments;

FIG. 8A is a front view of a grill unit and insulating base unit according to some embodiments;

FIG.8B is a perspective view of a grill unit and insulating base unit according to some embodiments;

FIG.9A is a first perspective view of a grill unit and parrilla attachment according to some embodiments;

FIG.9B is a second perspective view of a grill unit and parrilla attachment according to some embodiments;

FIG.9C is a front perspective view of a parrilla attachment according to some embodiments;

FIG.9D is a partial rear perspective view of a parrilla attachment according to some embodiments; and

FIG.9E is an example view of a chain attachment as part of a parrilla attachment according to some embodiments.

DETAILED DESCRIPTION OF THE DRAWINGS

Preferred features of the present invention will now be described with particular reference to the accompanying drawings. However, it is to be understood that the features illustrated in and described with reference to the drawings are not to be construed as limiting on the scope of the invention.

Embodiments generally refer to grill units for preparation of foodstuffs that use burnt fuel sources as a means of providing heat. In some embodiments, a grill unit is provided that comprises a five-sided rectangular structure, having an open top to allow fuel sources such as charcoal to be retained within an internal cavity defined by at least one sidewall and a base. When the retained fuel source is ignited, it provides a heating effect to food placed on a grill on top of the grill unit, while insulating the fuel on the sides and bottom of the grill unit. Typical embodiments may comprise four sidewalls and a base, providing a substantially square or rectangular profile. In some embodiments a single circular or ovaloid sidewall may be provided.

In embodiments of the grill unit comprising four sides in connection with a base, the grill unit may comprise frame panels having an external insulating facing. The external insulating facings may be configured to reduce heat radiating from the fuel source from contacting a user during handling of the grill unit. A secondary layer of insulation may be provided within the cavity of the grill unit, the secondary layer of insulation comprising a plurality of removable insulation panels. The plurality of removable insulation panels may be retained within the cavity by a retaining flange of a grill bracket. The grill bracket may be configured to sit on top of the grill unit providing a contact surface for a cooking

attachment, thereby reducing potential damage to the frame panels by the cooking elements. The retaining flange of the grill bracket may extend downwards into the cavity of the grill unit on an inner perimeter of the bracket, thereby retaining the secondary insulation panels against the frame panels by friction. This arrangement provides a two-layer insulation effect, which provides improved heat retention and keeps the external parts of the grill unit cooler and safer than single insulation arrangements. Furthermore, the replaceability of the secondary insulation panels means that the grill unit has improved lifespan over existing solutions which require replacement of the entire grill unit in the event of internal damage. The robustness and reliability of the described embodiments further allow for more complicated cooking surfaces and peripherals to be used while retaining the advantages of a hibachi style grill, compared to the simple metal grate arrangement of existing solutions.

FIG.1A and 1B depict a perspective view of grill unit 100 according to some embodiments. Grill unit 100 may comprise two elongate sides 105, adjacent and in connection with end sides 110, thereby creating a substantially rectangular frame. Each of the sides 105, 110, may be connected to base 108 at a lower end, which together define an internal cavity 109 into which a solid fuel source such as charcoal may be placed. Each of the side panels 105, 110, may comprise a frame 106 in connection with an external insulating facing 107. External insulating facings 107 may comprise metal panels. In some embodiments stainless steel may be used for the external insulating facings 107. In other embodiments specialty finishes may be applied such as copper, brass, or other material. In such embodiments polish or patina may be applied to enhance visual appeal. Frame 106 may comprise stainless steel or other suitably rigid material. The inward facings of sides 105, 110, may be lined with kiln grade calcium silicate to further improve insulation.

Grill unit 100 may further comprise a plurality of secondary insulation panels 120. Secondary insulation panels 120 may be rectangular insulation panels arranged to be retained against the inner facings of panels 105, 110, and as shown in FIG.2A, along the base 108. Secondary insulation panels 120 may comprise a dense firebrick construction to resiliently and effectively provide an insulating surface to a solid fuel source stored within the cavity 109. Accordingly, relative to the external insulated facings 107, the secondary insulation panels 120 may be of a higher density insulation. In some embodiments, this comprises a dense material such as firebrick. In such embodiments, the external insulated facings 107 comprise a low-density insulation layer. In some embodiments, this comprises calcium silicate. In such

embodiments, the secondary insulation panels 120 may be a high-density insulation layer. This arrangement allows for better heat retention of a burning fuel source within the grill unit 100, and better heat dissipation on external elements – which allow a user to handle and operate the box with reduced risk of burning. The size of the secondary insulation panels 120 may conform to generally accepted industry dimensions such as generic refractory panel dimensions, thereby allowing for easy replacement in many countries in the world. As a plurality of secondary insulation panels 120 are provided, an improved insulation effect is achieved by the increased surface area when compared to existing solutions which utilise custom single piece insulation layers. Furthermore, repairing damage to the internal cavity 109 can be achieved simply by removal and replacement of the specific secondary insulation panels 120 which are affected. This allows for cheap and easy repair of the grill unit 100 anywhere in the world.

Secondary insulation panels 120 may be retained against the sides 105, 110, by grill bracket 115. Grill bracket 115 may comprise of upper surface 117 with a retaining flange 116 extending downward along an inner perimeter of the bracket, disposed at a substantially 90° angle. Accordingly grill bracket 115 may have L-shaped profile, which allows for the upper surface to rest on the top side of the grill unit 100, and for the retaining flange 116 to extend downwards into the internal cavity 109. The configuration of the upper surface of grill bracket 115 is such that the upper surface 117 at least partially contacts the frame 106 of each side 105, 110. The configuration of retaining flange 116 is such that it extends at least part way down the length of secondary insulation panels 120, thereby ensuring that when the secondary insulation panels 120 are arranged against the sides 105, 110, they are retained in position by the retaining flange 116 preventing them from undue movement. Upper surface 117 of bracket 115 may extend upwardly beyond the top of the grill unit 100 as defined by the upper portions of frames 106. Accordingly, grill bracket 115 may serve as the primary contact area for grill attachments such as grates or other peripherals, thereby reducing contact damage to the frames 106 of the sides 105, 110. FIG.2B depicts an embodiment of this arrangement showing a sectional view of grill unit 100 along reference line A-A. In the depicted embodiment secondary insulation panels 120 are retained against the sides 105, 110, by grill bracket 115. Grill bracket 115 effectively providing a compressive retaining force to secondary insulation panels 120, by way of friction. Furthermore, the depicted embodiment shows air chute 210 within cavity 109 disposed at a substantially bottom portion of a cavity 109, as defined by the inner facing surfaces of secondary insulation

panels 120. Secondary insulation panels 210 may comprise an air chute receiving aperture 121. Air chute receiving aperture 121 is configured to allow air to flow in through the air shoot 210 from the external environment, without unduly impacting the insulation capabilities of the secondary insulation panels 120.

Grill unit 100 may further comprise linear air intake 125. Linear air intake 125 may be formed on an end side 110 at a lower portion substantially close to the bottom of the internal cavity 109. Linear air intake 125 may comprise a slot formed in end side 110, providing smooth linear intake of air from the ambient environment to aid in the burning of the fuel source retained in cavity 109. As a fuel source within cavity 109 burns, hot air escapes upward through the open top of the grill unit 100. The rising of this hot air causes cool air to be drawn in through linear air intake 125 to further fuel the combustion of the fuel source. Accordingly, due to the low point of entry and slot configuration of linear air intake 125, a burning fuel source retained in cavity 109 may smoothly and evenly draw in air thereby providing a consistent burn of the fuel source. Linear air intake 125 may further comprise a shutter 126. Shutter 126 may allow a user to control the amount of air that the linear air intake 125 is able to draw in, by opening and closing the shutter between corresponding open and closed positions. In some embodiments, shutter 126 may have variable positions between totally open and totally closed to allow a higher degree of control over the air intake into the cavity 109. Shutter 126 may be configured to act as a tray, in order to mitigate ash or ember spillage out onto external work surfaces. In some embodiments linear air intake may comprise a series of apertures formed in an end side 110. In other embodiments linear air intake 125 may comprise a mesh or grate configuration. In some embodiments linear air intake 125 further comprises an air chute 210, extending part way into the cavity 109. Furthermore, the position of linear air intake 125 on an end side 110 alleviates a problem in the art of the formation of ash piles, which fall out of typical air slots during cooking. Known solutions that have air intakes on the bottom side of a grilling unit face the challenge of ash clogging intakes during cooking. Accordingly, the linear air intake 125 reduces the risk of clogging, which in turn allows for the use of alternative cooking methods with grill unit 100 which would otherwise be impacted by irregular heat control or by the pollution of ash in the cooking environment (such as cold smoking for example).

Grill unit 100 may be a relatively compact hibachi type grill. In some embodiments the length of each long gate sides 105 may be approximately 600 mm in length. In some embodiments the height of the grill unit may be approximately 290 mm high. In some embodiments the height of the grill unit

may be 300 mm high. In some embodiments the width of end decides 110 may be approximately 375 mm in width. In some embodiments the internal cavity 109 is approximately 210 mm in width and approximately 440 mm in length. It should be understood that these dimensions are exemplary of rectangular type hibachi configuration of grill unit 100 and differing dimensions may still be used without impact on the functionality of grill unit 100.

Grill unit 100 may further comprise a hood 300, as depicted in the embodiment of fig. 3A to 3C. Hood 300 may comprise a frame 301 having two opposing sidewalls 305 and a back wall 306. Sidewalls 305 may be connected at one side to the back wall 306. This arrangement providing an open front from which a user may access the grill unit 100 and the internal components of the hood 300. The internal components of the hood 300 may comprise a plurality of mounting brackets 310 disposed at intervals along the length of the sidewalls 305, and a plurality of rod members 315 configured to be suspended transversely between the sidewalls 305 by connection with the mounting brackets 310. Mounting brackets 310 may have one or more recesses formed along their length, such that a rod member 315 may be mounted therein. The arrangement of the opposing side walls 305 and back wall 306 further provides a heat shield effect when using the grill 100 in this configuration. Accordingly, heat from cooking is directed upwards from the burnt fuel source within internal cavity 109 towards food items hung from the rod members 315. The frame 301 of hood 300 may comprise a rectangular cuboid frame 316 comprising afoot member 316 of similar proportion to the top of the grill unit 100. Accordingly, a user may simply mount the hood 300 on the top of the grill unit 100, with the foot 316 contacting the grill frame 115. In some environments the foot member 316 may extend part way down the external perimeter of the grill unit 100 providing a more secure and flush fit for the hood 300. This configuration of grill 100 allows for an improved cooking capacity when compared to existing hibachi type grills.

FIG.3D depicts an arrangement of the grill unit 100 and hood 300 in a smoker configuration. In the depicted embodiment, hood 300 further comprises door 350. Door 350 cooperates with the other components of hood 302 provide closed environment for smoking. Door 350 may be hingeably attached to frame 316, allowing for a used to open and close the hood 300. Hood 300 may further comprise chimney 355. Chimney 355 may comprise an aperture on a top mounted facing of hood 300. Chimney 355 may further comprise hood shutter 356 which allows user to selectively open and close the chimney 355 to control the amount of air flow and smoke used in the smoking process. In the depicted embodiment smoking chip silo 360 is provided which comprises a cylindrical

vessel, configurable to store a solid fuel source such as charcoal or briquettes, as well as wood chips for smoking. Air entry port 361 is provided to allow oxygen into the silo 360 allowing the stored fuel source to burn. Smoke exit chute 362 is provided to dispense the accumulating smoke from the combustion process within silo 360, advent into the internal cavity 109 of grill unit 100, which is then vented into the hood 300 to smoke the stored foodstuffs therein. The smoke is then subsequently vented into the atmosphere through chimney 355. Accordingly, an effective smoker arrangement is provided Gaining the benefits of the hibachi type grill while allowing for a wider variety of food preparation techniques when compared to existing solutions. Furthermore, the described embodiment allows for either hot or cold smoking of food. The depicted embodiment can be used without the silo 360 for hot smoking of food.

FIG.4A and FIG.4B depict an embodiment of grill unit 100 further comprising a coal grate 400. Coal grate 400 may further comprise coal bed 405 in connection with a plurality of legs 410. Legs 410 may extend downwardly from the coal bed 405 allowing coal grate 400 to act as a ventilated platform for a combustible solid fuel source placed within internal cavity 109. Coal bed 405 comprises our tray having a series of apertures along its length. In the embodiment depicted in FIG.4A and FIG.4B these apertures comprise rectangular slots. It will be appreciated that any suitable aperture may be used instead such as a plurality of circular apertures or a mesh type aperture. Coal grate 400 may further comprise a support s 415 to better support a solid fuel source placed on the coal grate 400, and thereby reduce the risk of buckling or deformation of the grate 400. Coal grate 400 may be removable, as shown in FIG.4A and FIG.4B. In some embodiments, the coal grate may be a permanent fixture defining a cooking area above it, and a ventilation region below in in the internal cavity 109. In such embodiments, the secondary insulation layer 120 may extend from the top of the grill unit 100 to the coal grate 400. Accordingly, the coal grade 400 improves airflow by providing an extended air gap region within the internal cavity 109, as defined by the height of the legs 410. This also allows ash another cooking particulate too fall into the air gap region within the internal cavity 109 and to avoid comingling and contamination of the solid fuel source in use. Coal grate 400 may comprise stainless steel construction. Other suitable metals or resilient materials may be used in other embodiments.

FIG.5A and FIG.5B depict an embodiment of grill unit 100 further comprising a pizza oven 500. Pizza oven 500 may comprise cooking surface 502. Cooking surface 502 may be connected to opposing sidewalls 510. Opposing sidewalls 510 may be at least partly circular in profile. Opposing sidewalls 5-10 may be

connected to pizza hood 515. Pizza hood 515 may comprise and arcuate sheet member matching the circular profile of opposing sidewalls 510. The opposing side walls 5-10, pizza hood 515, and cooking surface 502, may be connectable to grill unit 100 by foot 505. Foot 505 may comprise a rectangular fixture configured to sit on top grill unit 100 in a substantially flush manner to reduce heat loss. The curved profile of pizza hood 500 allows for efficient circulation of heat within pizza hood 500, creating a desirable high temperature environment to cook pizzas upon the cooking surface 502. The flush configuration of foot 505 and curved profile of pizza hood 500 cooperate to create an ideal heating environment for the cooking of pizzas, which are optimally thought to be cooked in very high temperature environments. Accordingly, pizza hood 500 allows for improved diversity of cookable food types using a hibachi style grill when compared to existing solutions. Pizza hood 500 may be comprised of stainless-steel construction, or other appropriate material.

FIG.5B depicts a combination cooking arrangement with grilled unit 100 in combination with pizza hood 500 and hood 300. In the depicted embodiment hood 300 sits on the top of grill unit 100 contacting the grill unit 100 around the outer perimeter on the top surface, and pizza hood 500 sits within the frame of hood 300 such that foot 505 is substantially flush with the bottom portion of the frame of hood 300. Accordingly with the specific configuration an arrangement of these parts a combination cooking environment is provided. This is further enabled by the removable rod members 315, which can be removed or added in to the hood 300 in any configuration the user desires.

FIG. 6A and FIG.6B depict an embodiment of grill unit 100 further comprising biomass kiln 600. Biomass kiln 600 may comprise a substantially rectangular tray 601, configured to sit within the internal cavity 109. The removable top 602 may allow a user to place food scraps and other organic waste within the biomass kiln 600 to then be sealed with the removable LED 602. Removable lid 602 may further comprise ventilation apertures 605. In the depicted embodiment ventilation apertures 605 are disposed at one end of the removable lid 602. In use the biomass kiln loaded with combustible organic waste is placed in the bottom of the internal cavity 109 upon which a combustible solid fuel source is placed during a normal cooking operation. The radiant heat of the combustible fuel source placed on top of the biomass kiln 600 reduces the stored organic waste to a burnable fuel source similar to charcoal, or carbon based soil amendment.

FIG.7 depicts an embodiment of grill unit 100 further comprising a wok burner attachment 700. Wok burner attachment 700 comprises a foot 705 onto which an

elevated cooking surface is formed, which assists in channelling heat and flame to the wok mount 710. Wok burner attachment 700 is configured such that fuel stored within the internal cavity 109, when burned, provides a high source of heat to a wok placed on the wok mount 710.

FIG.8A and FIG.8B depict an embodiment of grill unit 100 further comprising ventilation base 800. Ventilation base 800 comprises an elongate base portion 805 in connection with an upright air channel 810. Elongate base portion 805 is a substantially hollow member featuring air inlets 810 at an opposing end to the air channel 810. Upright air channel 810 is connectable to linear air chute 125. Accordingly, ventilation base 800 direct air from the environment under the grill unit 100 and into the air chute 125. This separates the grill unit 100 from the surface on which it is placed and allows for cooking using the grill unit on table tops outdoor benches and other services that may otherwise be damaged by the use of a grill unit.

FIG.9A to FIG.9E depict an embodiment of grill unit 100 further comprising parrilla attachment 900. Parrilla attachment 900 comprises an elevator rack 905, configured to raise and lower grill 910 by operation of hand crank 906. Hand crank 906 is connected to axle 907. Axle 907 may be connected to gear 920, such that rotation of the hand crank 906 causes the gear 920 to turn and move the chain 940. This action in turn causes the grill mount 908 to raise and lower the grill 910 with respect to the top of the grill box 100, in order to provide a user with a greater degree of temperature control. Grill mount 908 comprises a fixing bracket for the grill 910 to connect it to upright frame 902. The parrilla attachment may further comprise anchors 901, arranged on a rear side of the attachment 900. Anchors 901 may comprise rounded studs, allowing engagement with brackets 310 of hood 300. Grill 910 comprises a frame 912 attached to grill mount 908, and grate 911. Grate 911 may comprise a series of elongate elements, such as those depicted in FIG,9A-9E. Grate 911 may comprise a mesh type grate in other embodiments. Accordingly, the parrilla attachment 900 provides a height-adjustable grill that is compatible with the other elements and peripherals of the grill unit 100.

It should be understood that any of the peripheral attachments described herein may be usable in combination with one another to provide a dynamic and versatile cooking experience with all of the advantages of hibachi type grills. Throughout the specification and claims the word “comprise” and its derivatives are intended to have an inclusive rather than exclusive meaning unless the contrary is expressly stated or the context requires otherwise. That is, the word

"comprise" and its derivatives will be taken to indicate the inclusion of not only the listed components, steps or features that it directly references, but also other components, steps or features not specifically listed, unless the contrary is expressly stated or the context requires otherwise.

It will be appreciated by those skilled in the art that many modifications and variations may be made to the methods of the invention described herein without departing from the spirit and scope of the invention.

The claims defining the invention are as follows:

1. A grill unit comprising:

a housing, defining an internal cavity, the housing comprising at least one sidewall interconnected to a base to form a receptacle for a solid fuel; wherein the housing is substantially open at a top end, opposite the base, to allow for direct grilling of food when the solid fuel is ignited;

the at least one sidewall, comprising an insulated facing;

a removable secondary insulation layer, comprising a plurality of insulation panels, configured to be removably retained against the at least one sidewall in the internal cavity;

a grill bracket, removably attachable to the top end of the housing, and configured to retain the removable secondary insulation layer against the at least one sidewall; and

at least one air intake, formed on the at least one sidewall, extending into the internal cavity.

2. The grill unit of claim 1, wherein the grill bracket further comprises a cooking peripheral attachment surface, extending above the top end of the housing, to contact an engaged cooking peripheral.

3. The grill unit of claim 1 or claim 2, wherein the at least one sidewall comprises: two elongate sidewalls, adjacent two end sidewalls; the sidewalls thereby defining a substantially rectangular profile.

4. The grill unit of any one of the preceding claims, wherein the at least one sidewall comprises a frame member to frame the insulated facing.

5. The grill unit of any one of the preceding claims wherein the removable secondary insulation layer comprises firebrick panels.

6. The grill unit of any one of the preceding claims, wherein the grill bracket further comprises an upper surface in connection with a retaining flange, the retaining flange extending at a substantially 90° angle with respect to upper surface; and wherein the retaining flange is configured to extend at least partway down a length of the removable secondary insulation layer when in use.

7. The grill unit of any one of the preceding claims, wherein the at least one air intake comprises a linear air intake slot, position at a lower portion of the sidewall adjacent to the base.

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8. The grill unit of claim 7, wherein the at least one air intake further comprises a shutter, actuatable between an open and closed position, to allow for control of airflow into the internal cavity.

9. The grill unit of claim 7 or claim 8, wherein the at least one air intake further comprises an air chute, configured to penetrate and abut the sidewall.

10. The grill unit of any one of the preceding claims, wherein the at least one insulated facing is a low-density insulation layer, and the removable secondary insulation layer is a high-density insulation layer.

11. A kit of parts, comprising the grill unit of any one of the preceding claims, and one or more of:

a cooking hood, comprising a cabinet frame having at least one mount of an elongate rod member for suspension of foodstuffs, and attachable to the top end of the housing;

a cold smoker silo, attachable to the at least one air intake;

a coal grate, configured to create a raised platform for solid fuel within the internal cavity;

a pizza hood, attachable to the top end of the housing;

a biomass kiln, comprising a tray with a lid, configured to sit within the internal cavity;

a work burner, attachable to the top end of the housing, comprising a wok mount and foot;

a ventilation base, comprising an elongate base portion and upright air channel, wherein the upright air channel is in fluid communication with the elongate base portion and is attachable to the air intake; and wherein the elongate base portion is configured to act as an insulator to the base of the grill;

a parrilla unit, comprising a height adjustable grill plate, attachable to an elevator rack, the elevator rack being mountable within the cooking hood.

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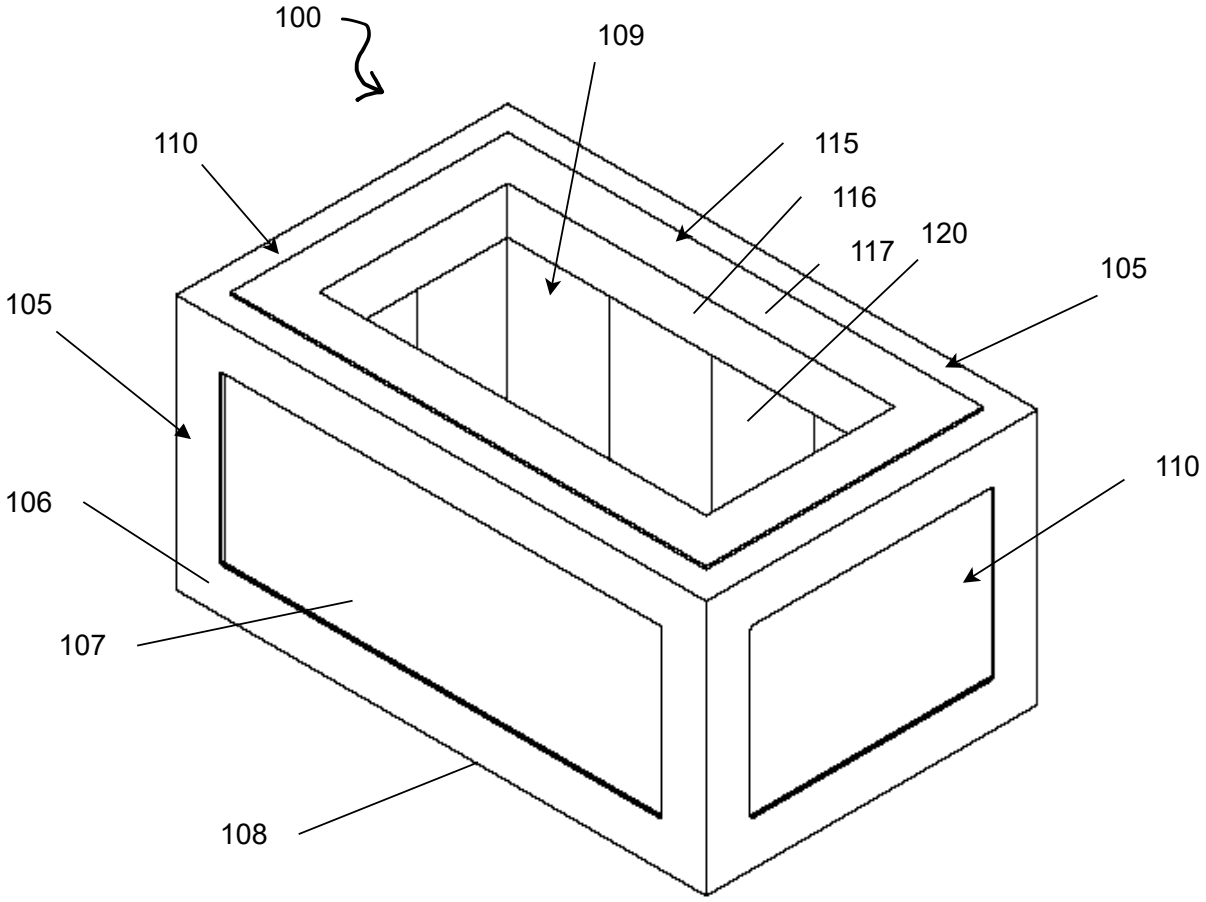

FIG.1A

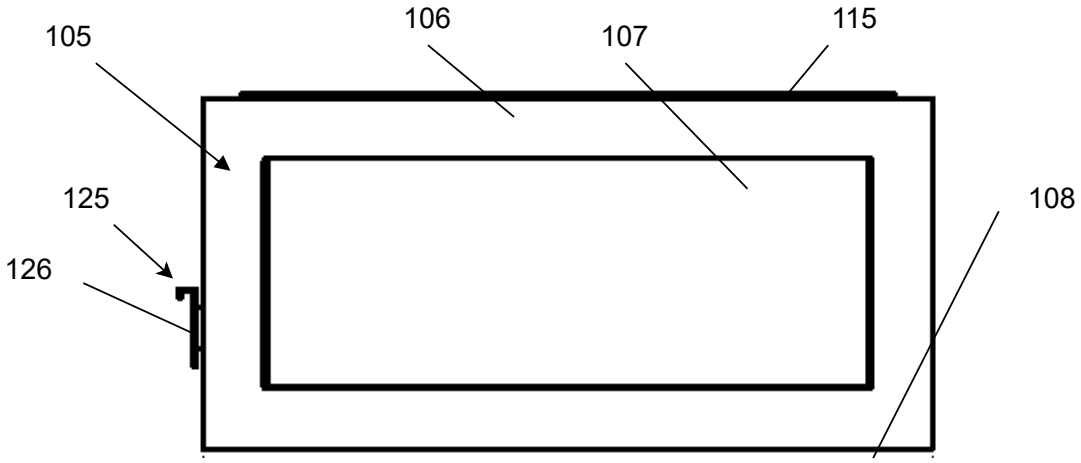

FIG.1B

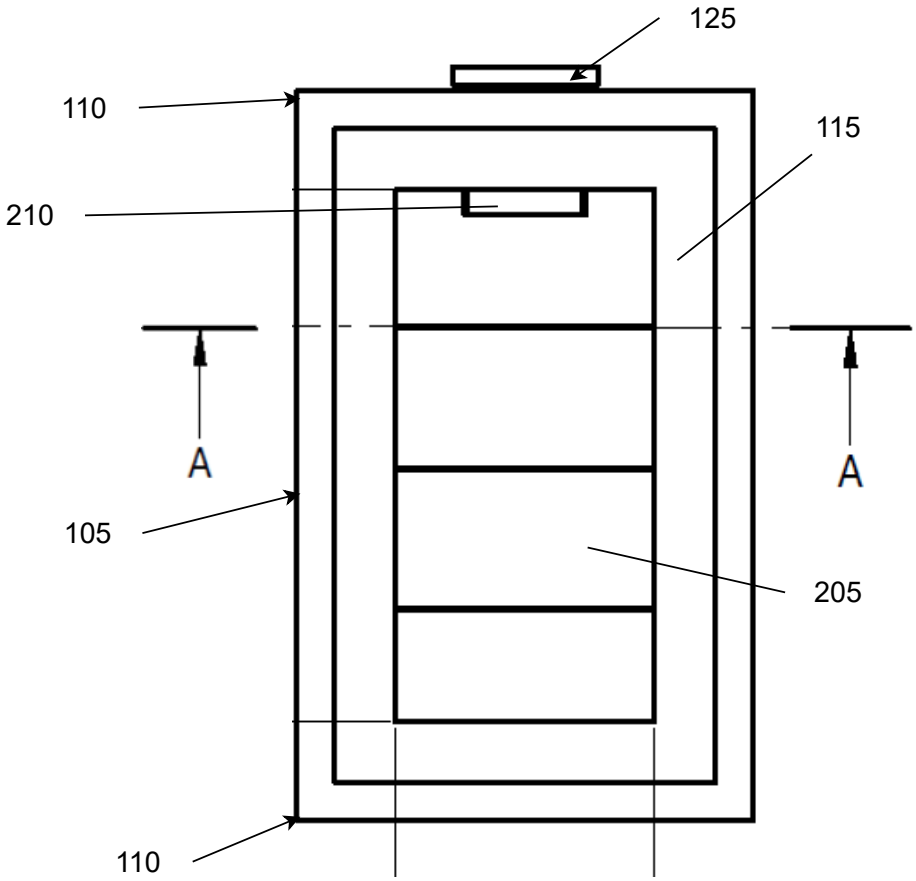

FIG.2A

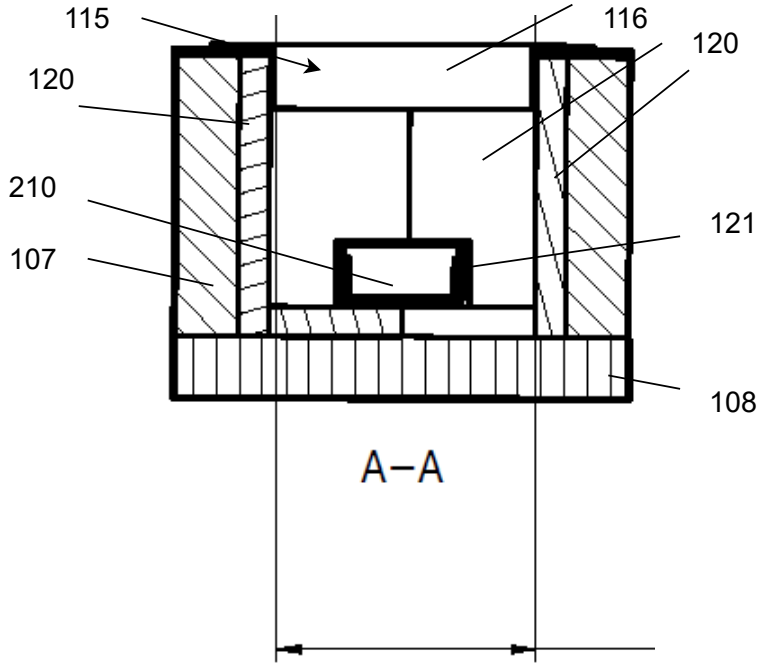

FIG.2B

2024216500 30 Aug 2024

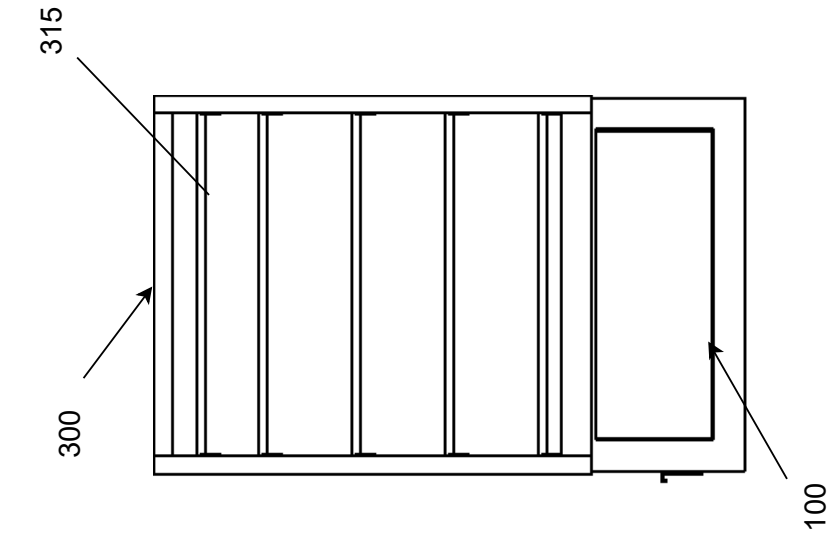

FIG.3C

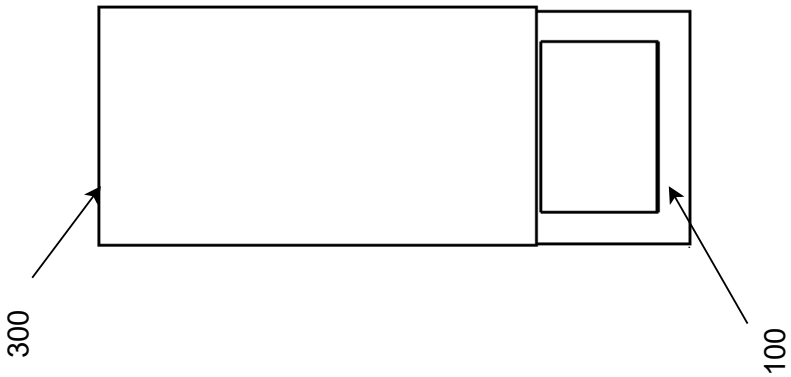

FIG.3B

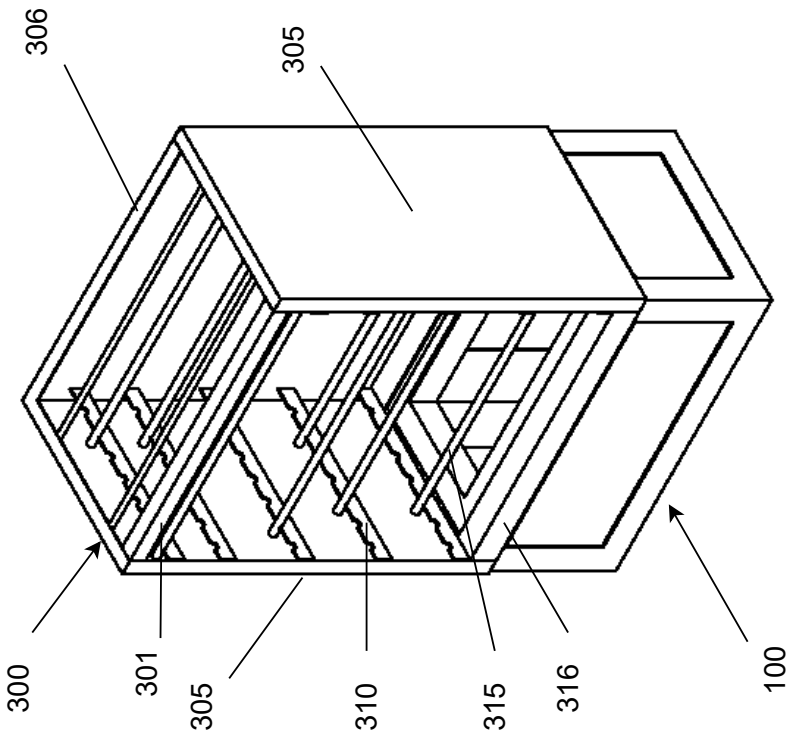

FIG.3A

2024216500 30 Aug 2024

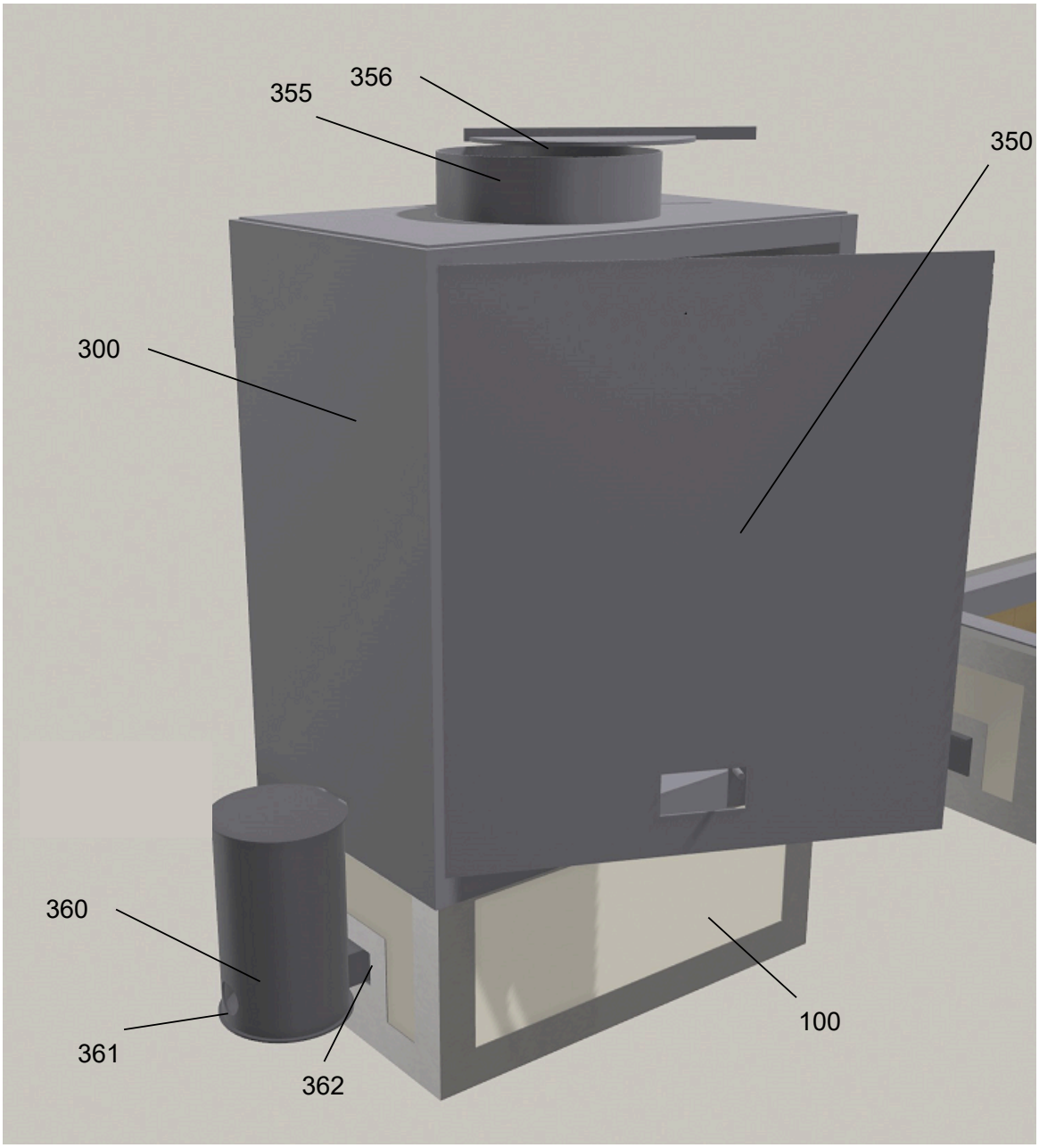

FIG.3D

30 Aug 2024
2024216500

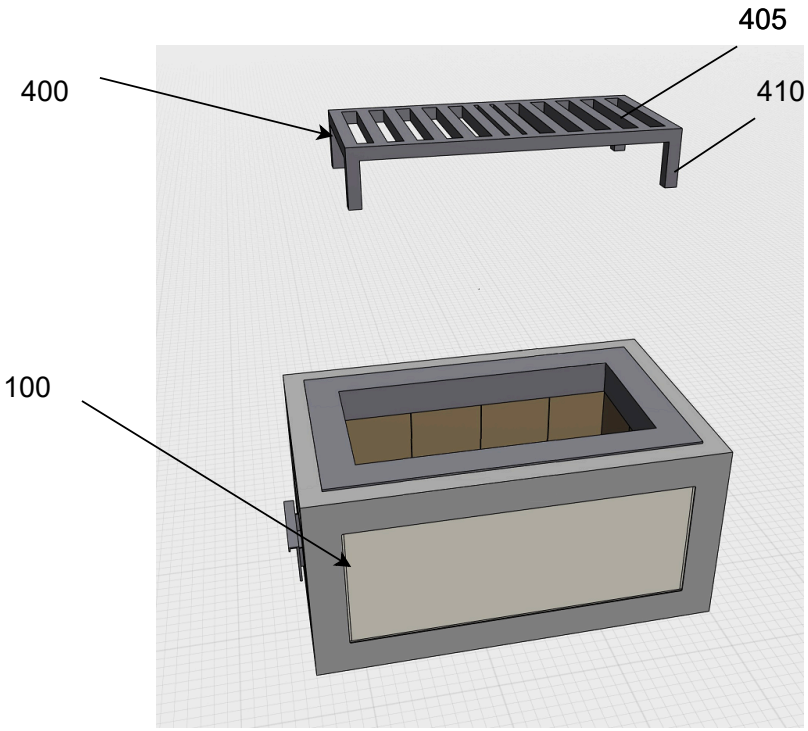

FIG.4A

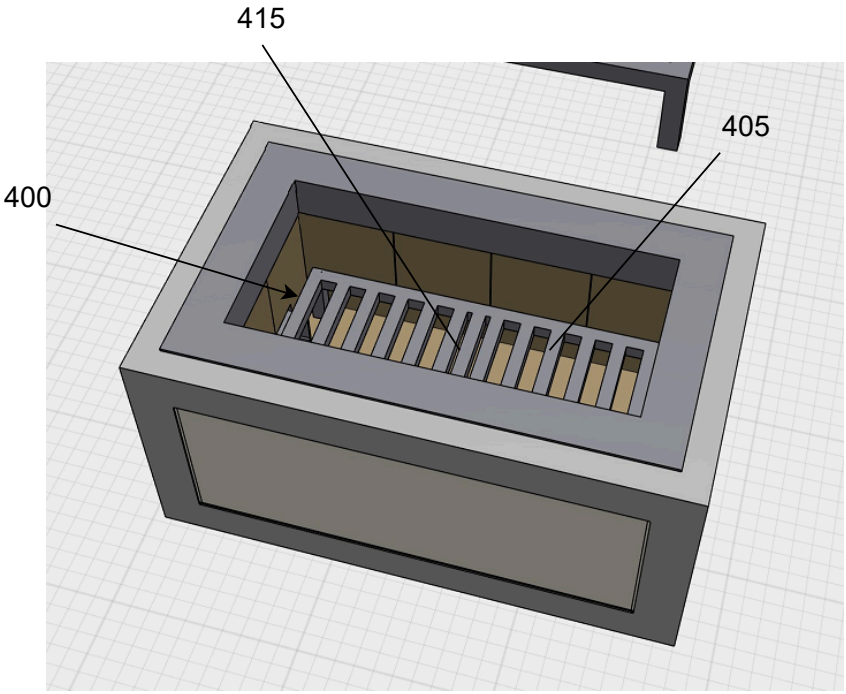

FIG.4B

30 Aug 2024
2024216500

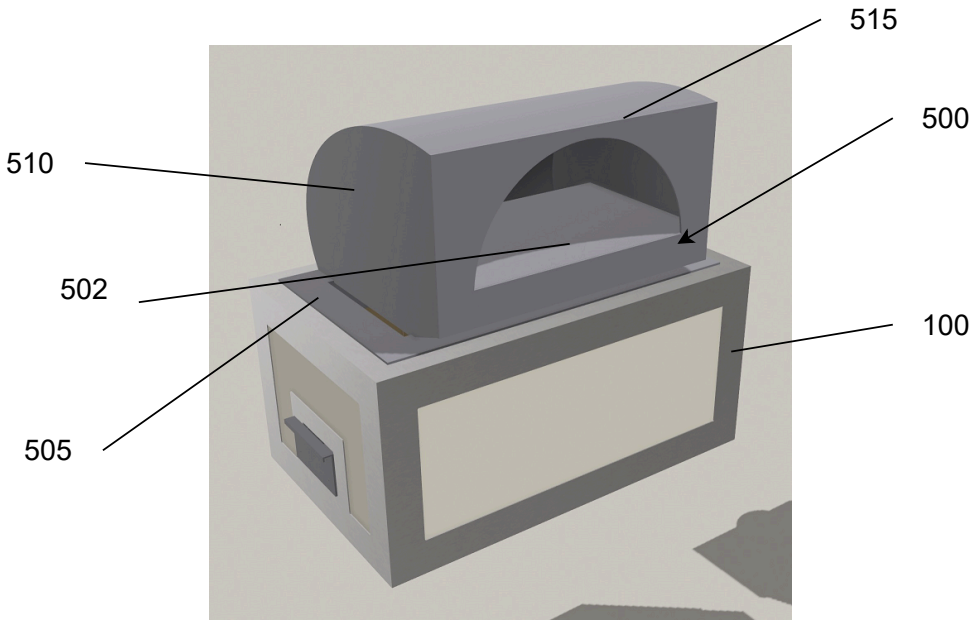

FIG.5A

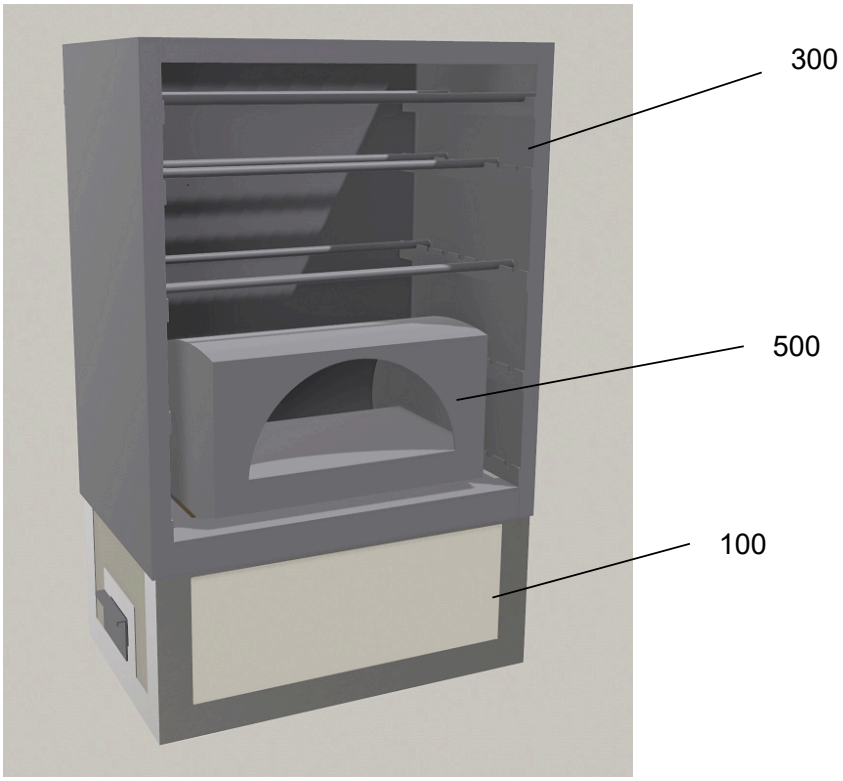

FIG.5B

30 Aug 2024
2024216500

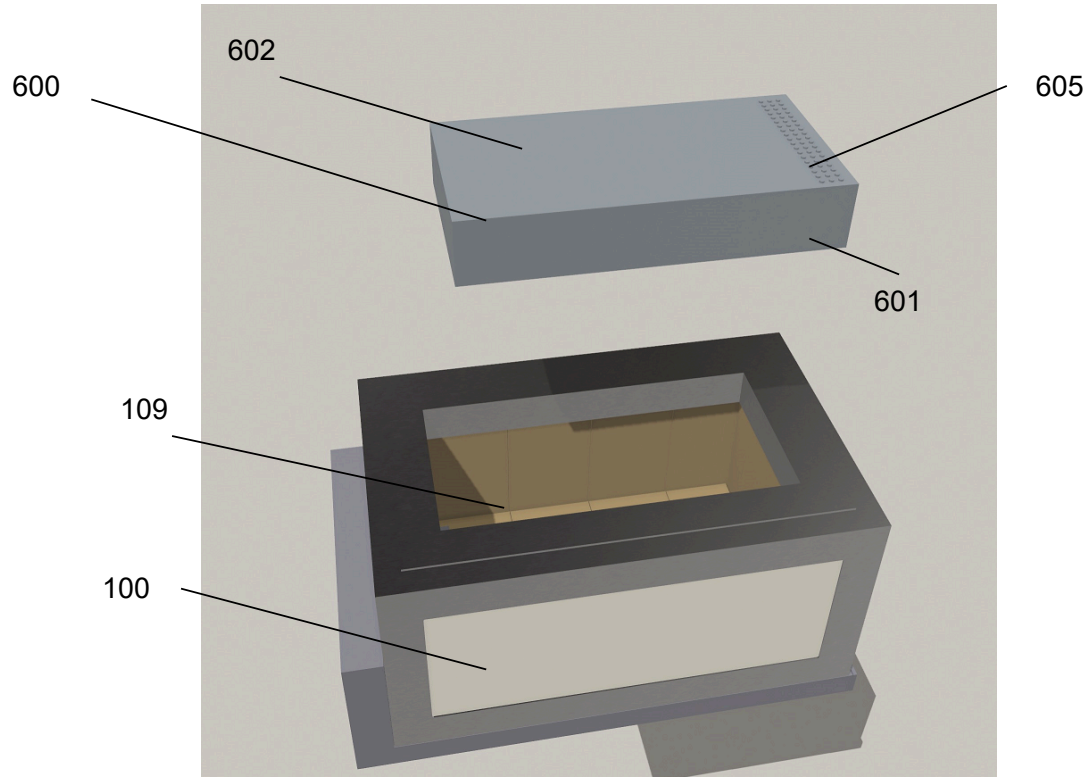

FIG.6A

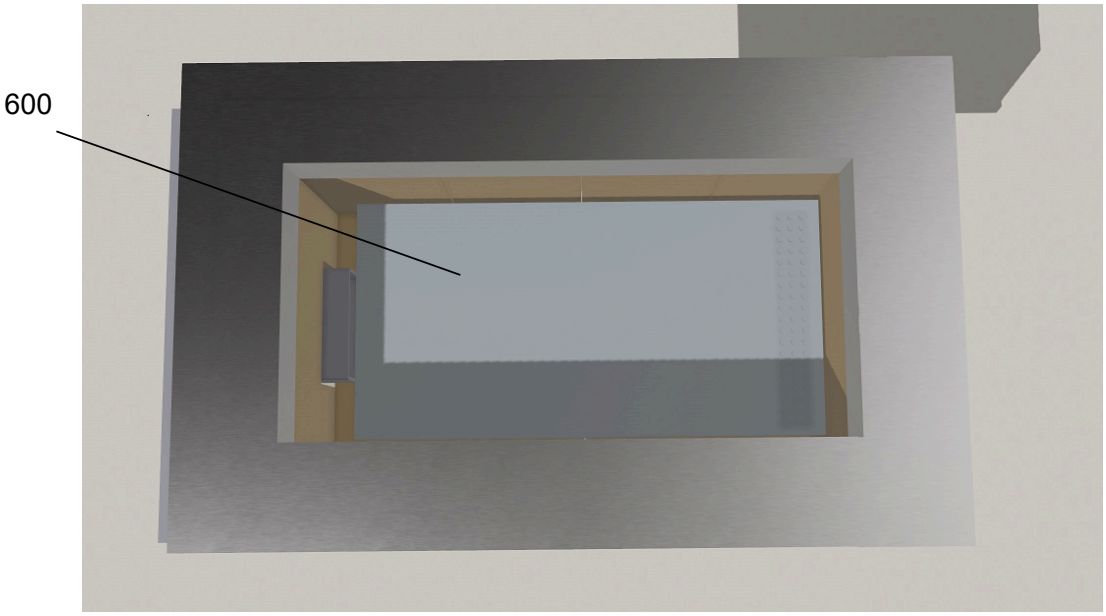

FIG.6B

30 Aug 2024
2024216500

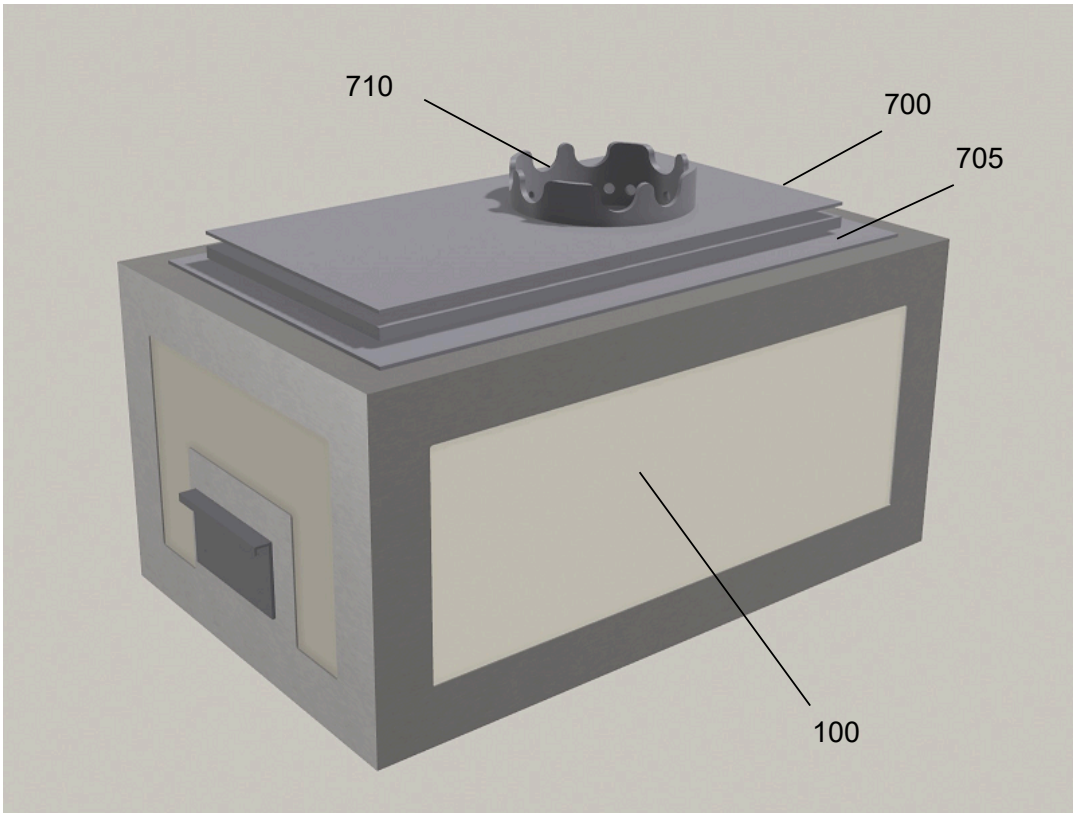

FIG.7

30 Aug 2024
2024216500

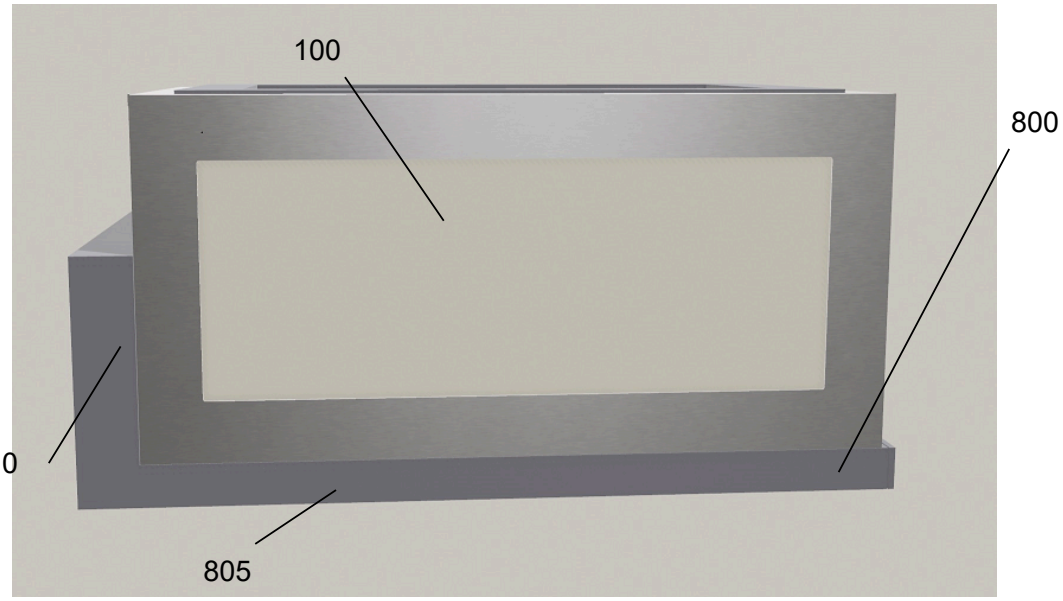

FIG.8A

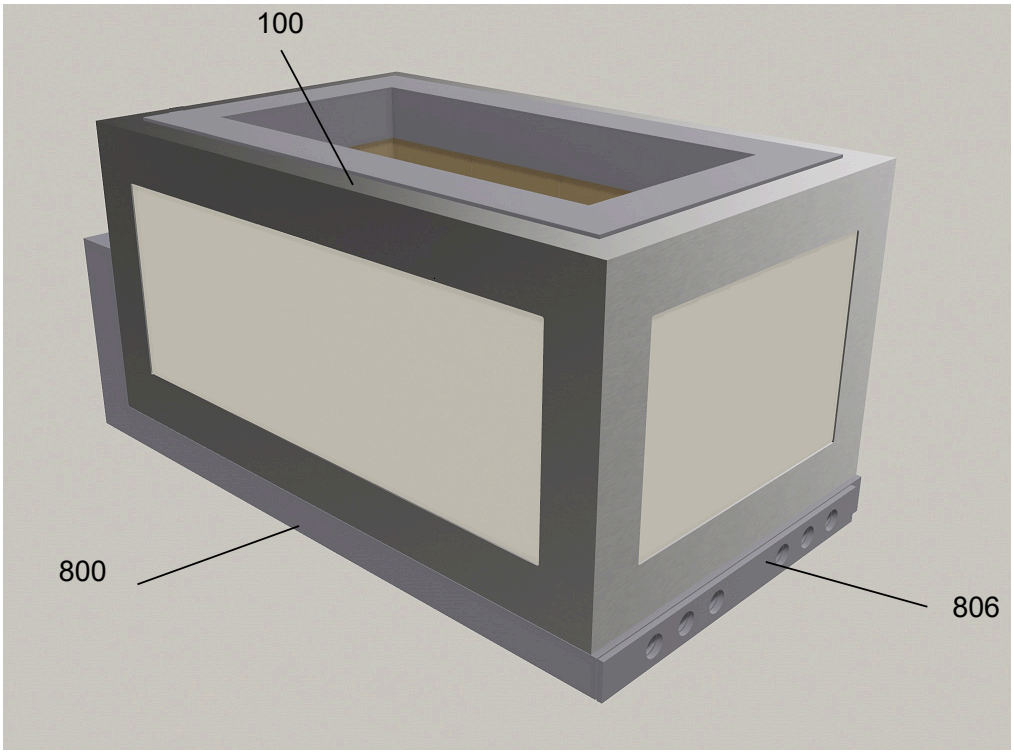

FIG.8B

30 Aug 2024
2024216500

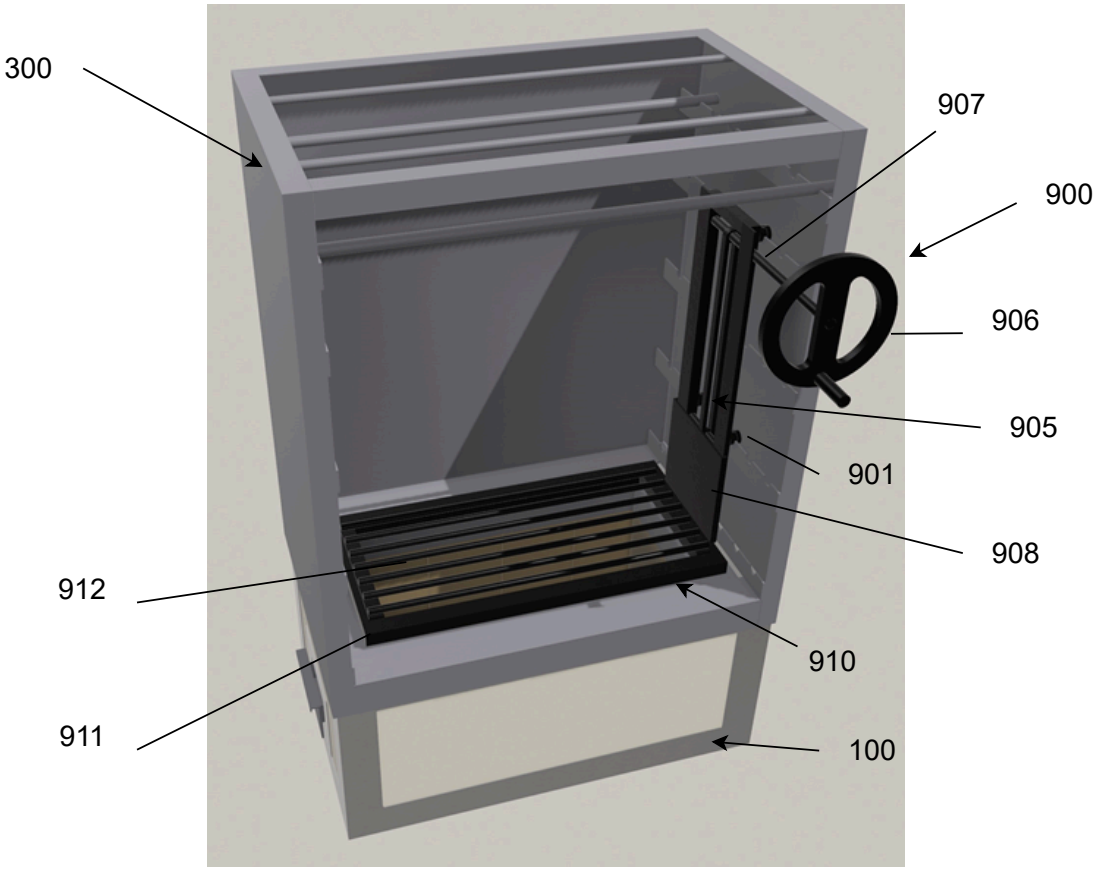

FIG.9A

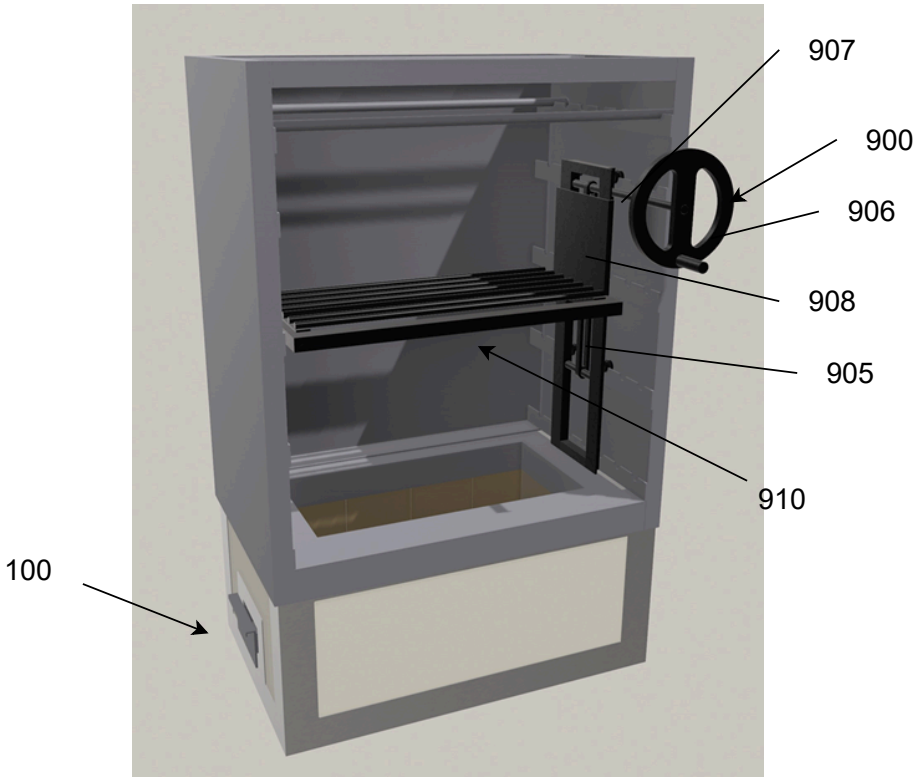

FIG.9B

30 Aug 2024
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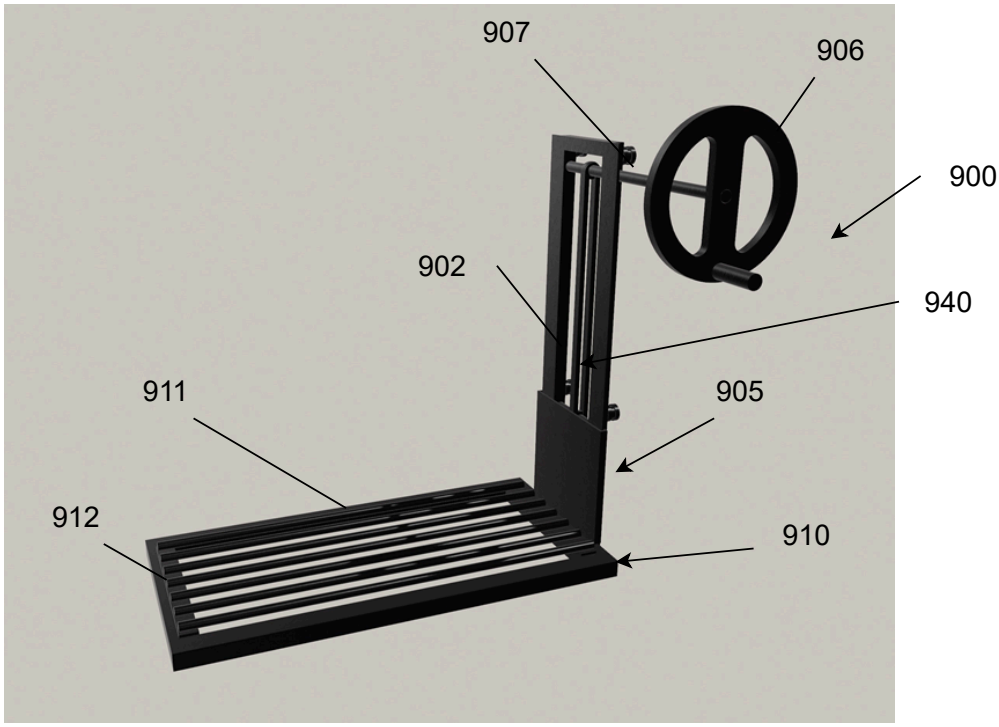

FIG.9C

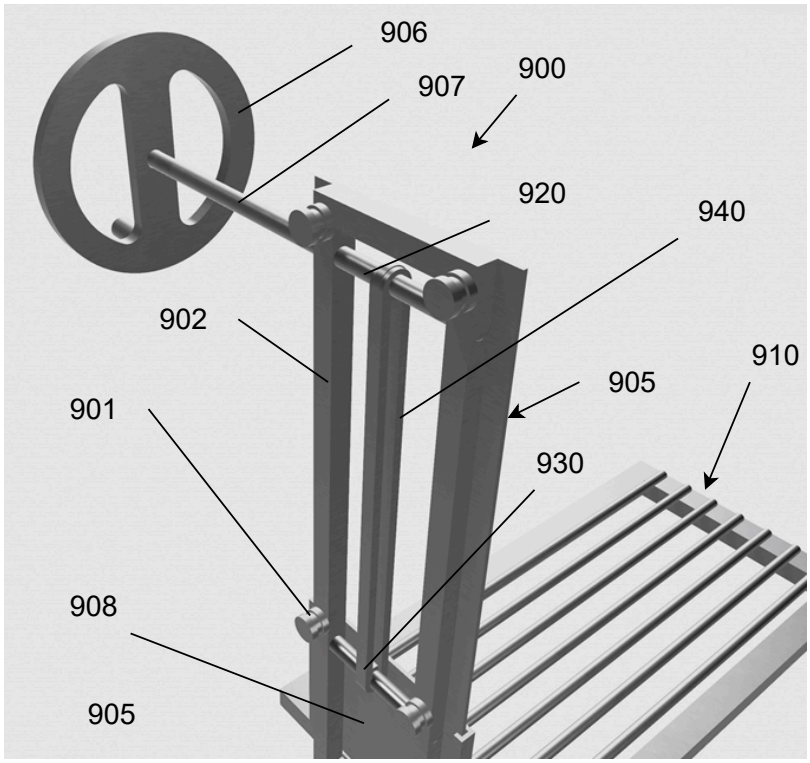

FIG.9D

30 Aug 2024
2024216500

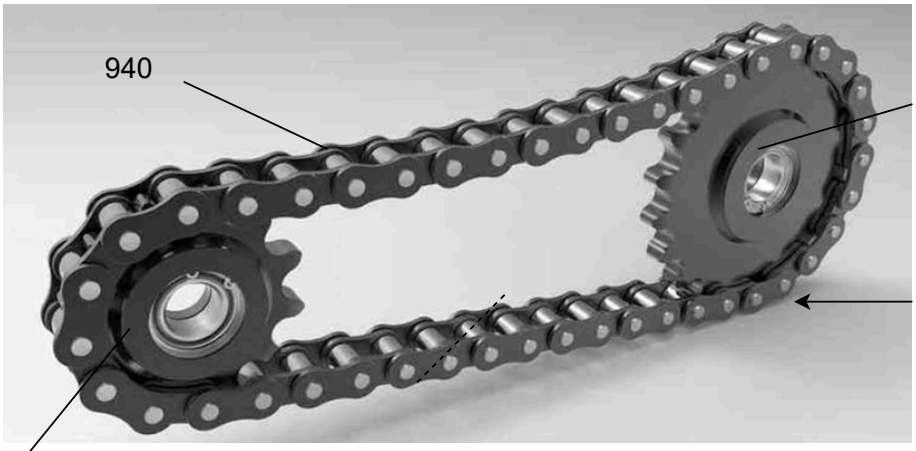

FIG.9E