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Lee et al.

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(54) **AUXILIARY GRAY WATER SOURCE DEVICE FOR COMMERCIAL KITCHENS**

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(51) **Int. Cl.**

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A47L 15/00	(2006.01)
C02F 1/00	(2023.01)
C02F 1/76	(2023.01)

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(52) **U.S. Cl.**

CPC ***A47L 15/4291*** (2013.01); ***A47L 15/0076*** (2013.01); ***A47L 15/4206*** (2013.01); ***A47L 15/4217*** (2013.01); ***C02F 1/001*** (2013.01); *A47L 2501/01* (2013.01); *A47L 2501/04* (2013.01); *A47L 2501/07* (2013.01); *C02F 1/76* (2013.01); *C02F 2103/002* (2013.01);
(Continued)

(58) **Field of Classification Search**

None

See application file for complete search history.

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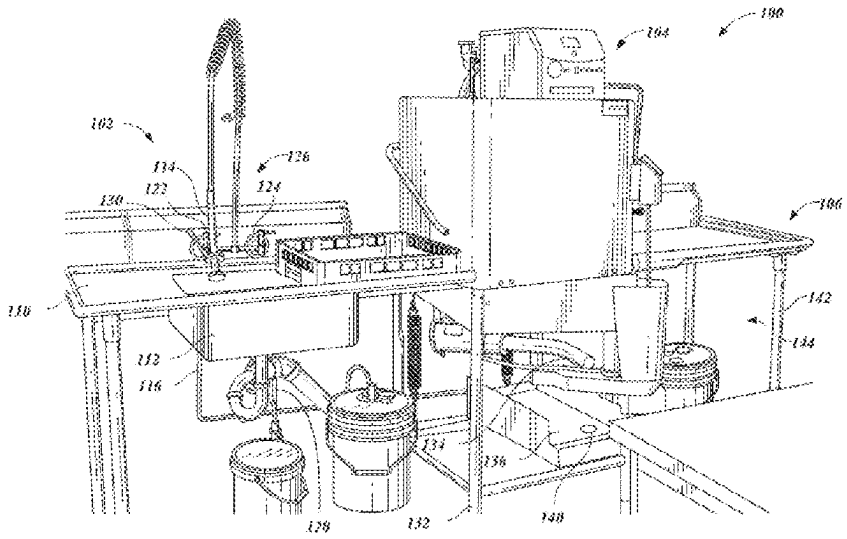
(57) **ABSTRACT**

An auxiliary gray water supply device captures used wash water from a commercial warewashing machine for supply to a pre-rinse station without substantial modification of the commercial warewashing machine. The captured wash water and treatment agent are delivered to a pre-rinse station for pre-rinsing of dishes that will be washed within the commercial warewashing machine.

16 Claims, 10 Drawing Sheets



Related U.S. Application Data

Mar. 2, 2017, now Pat. No. 10,105,033, which is a continuation-in-part of application No. PCT/US2015/051551, filed on Sep. 22, 2015, which is a continuation-in-part of application No. 14/493,808, filed on Sep. 23, 2014, now Pat. No. 9,596,973, said application No. 15/448,486 is a continuation-in-part of application No. 14/493,808, filed on Sep. 23, 2014, now Pat. No. 9,596,973, which is a continuation-in-part of application No. 14/211,332, filed on Mar. 14, 2014, now abandoned, which is a continuation-in-part of application No. 13/815,995, filed on Mar. 21, 2013, now abandoned.

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C02F 103/00 (2006.01)
C02F 103/32 (2006.01)

(52) **U.S. Cl.**
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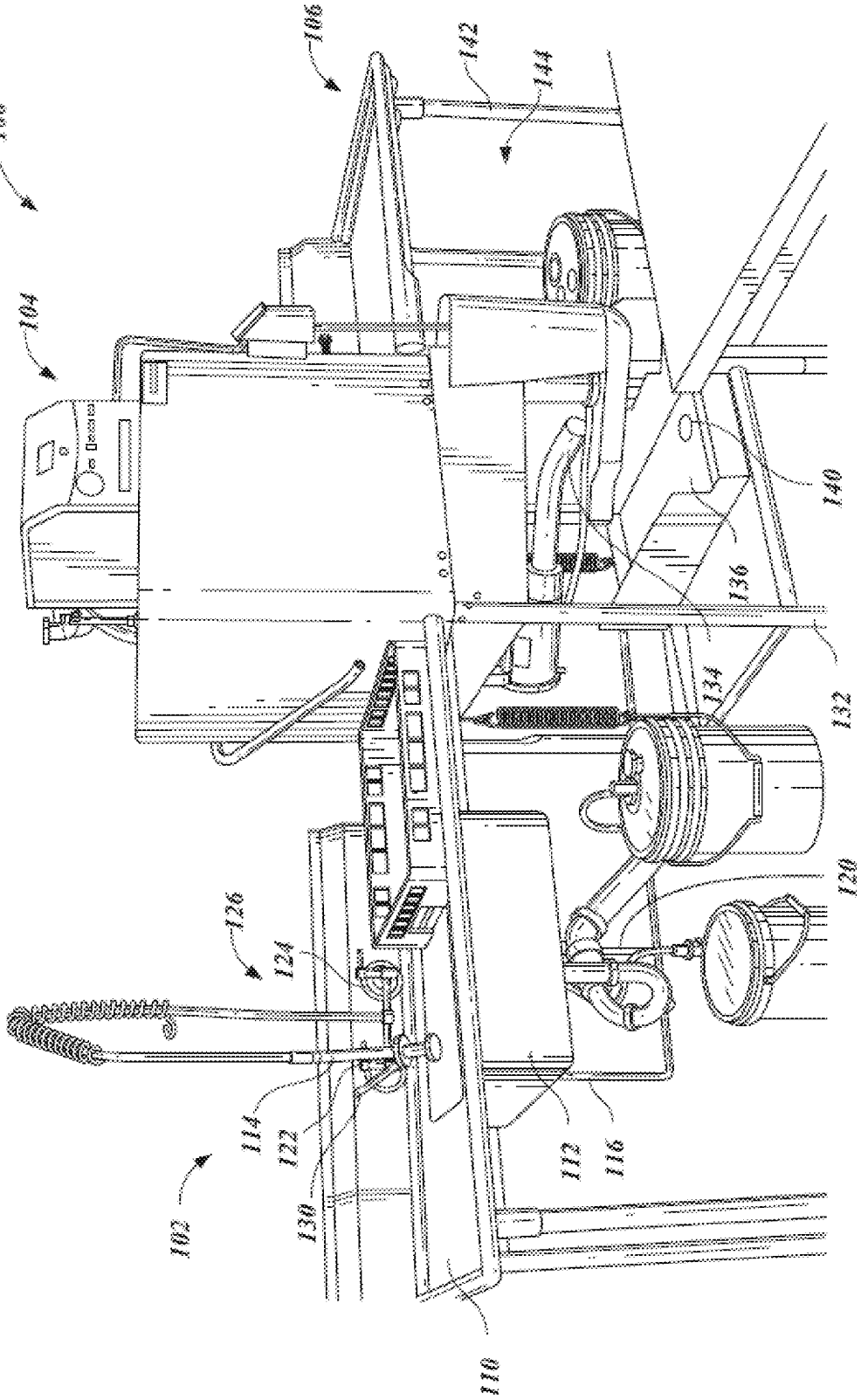
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FIG. 1

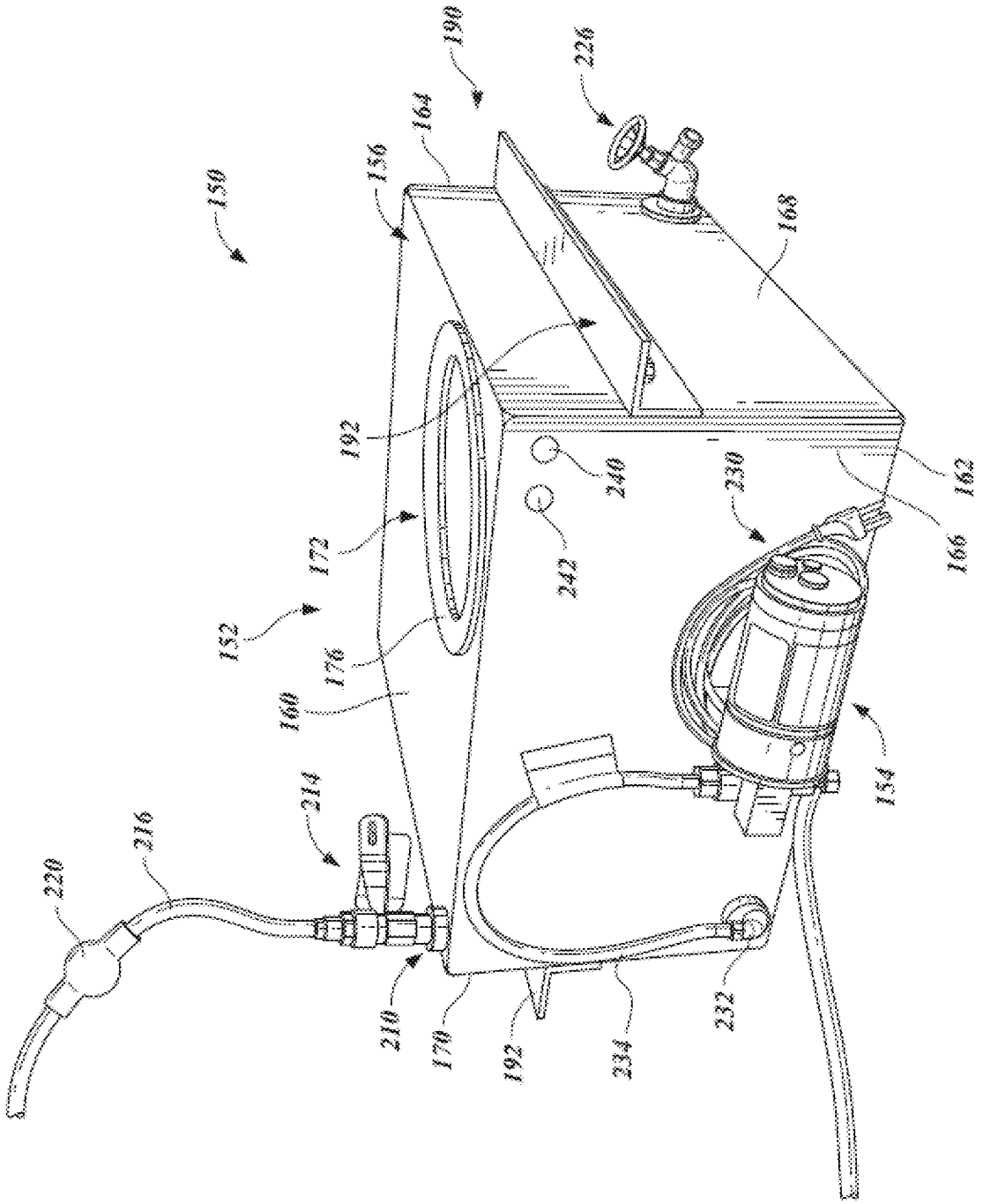
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FIG. 2

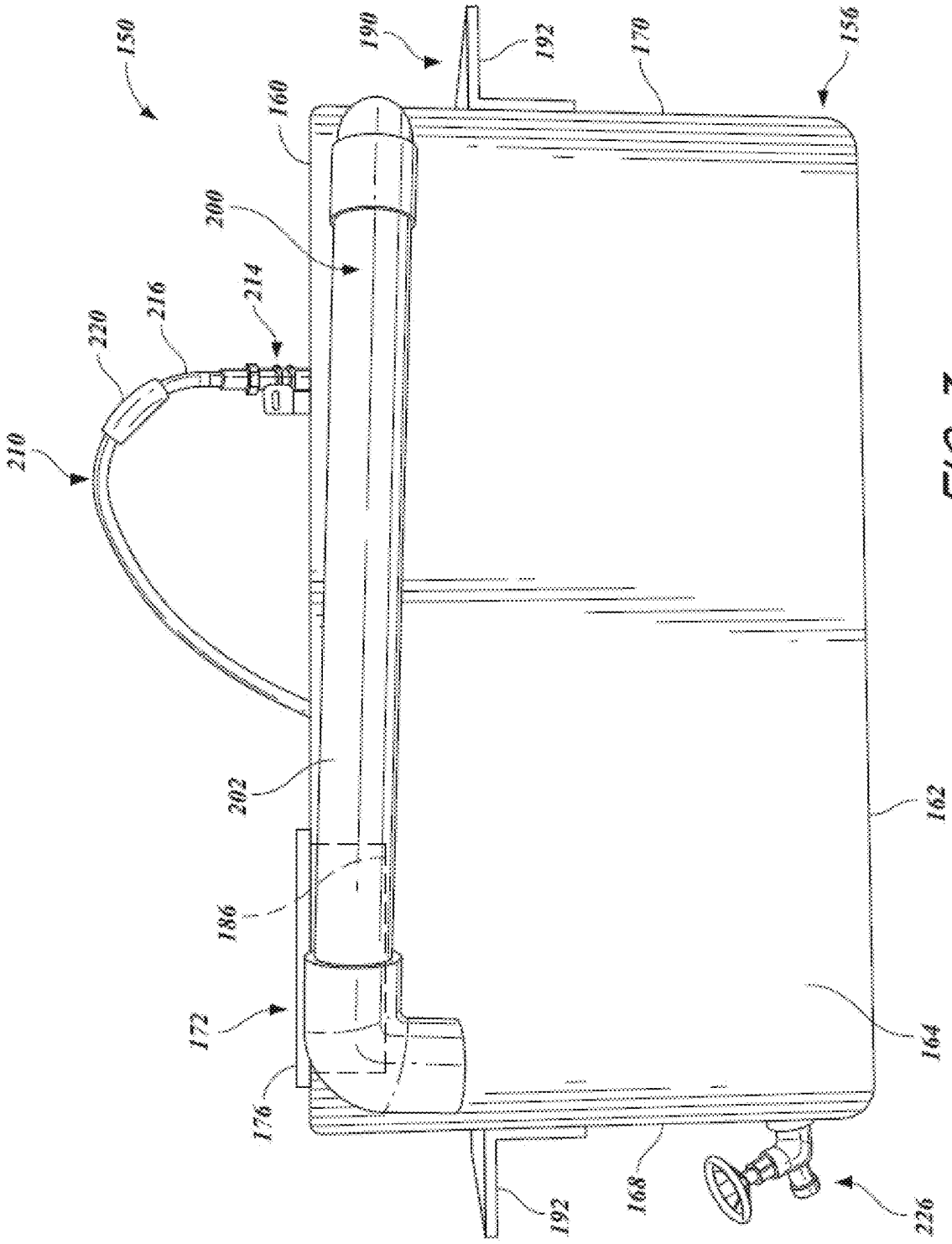
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FIG. 3

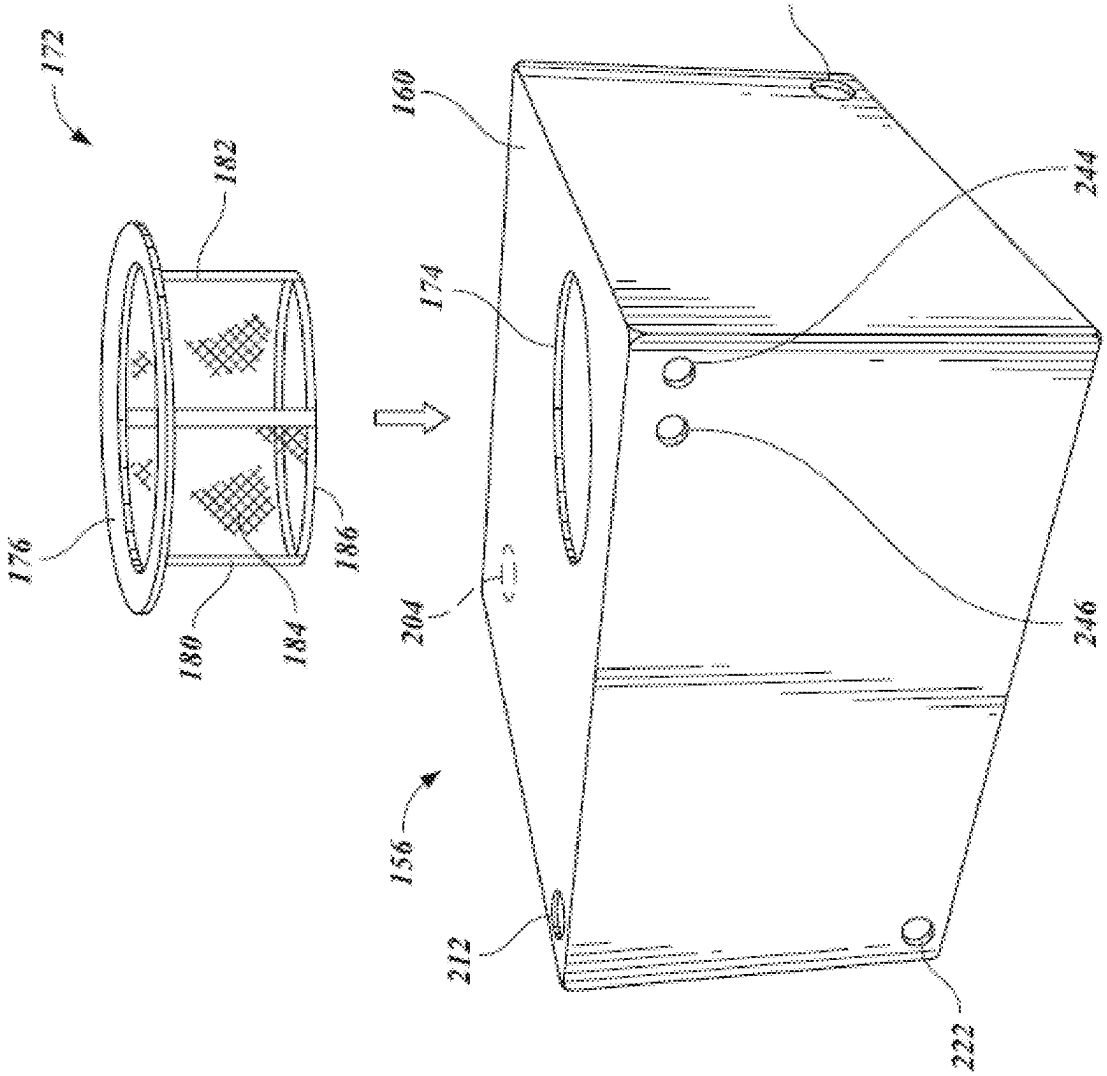
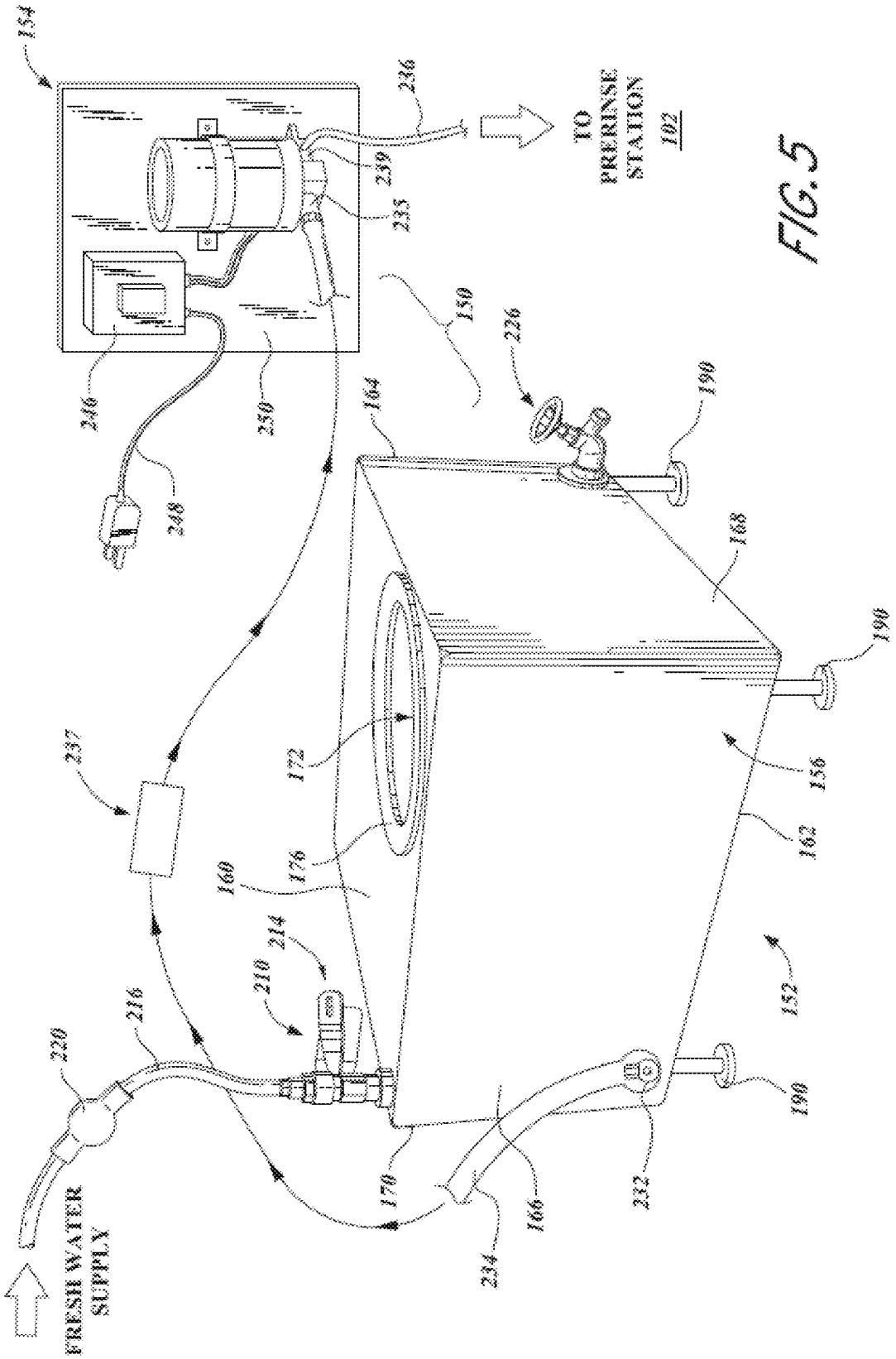


FIG. 4


154
236
TO PRERINSE STATION 102
239
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FRESH WATER SUPPLY

FIG. 5

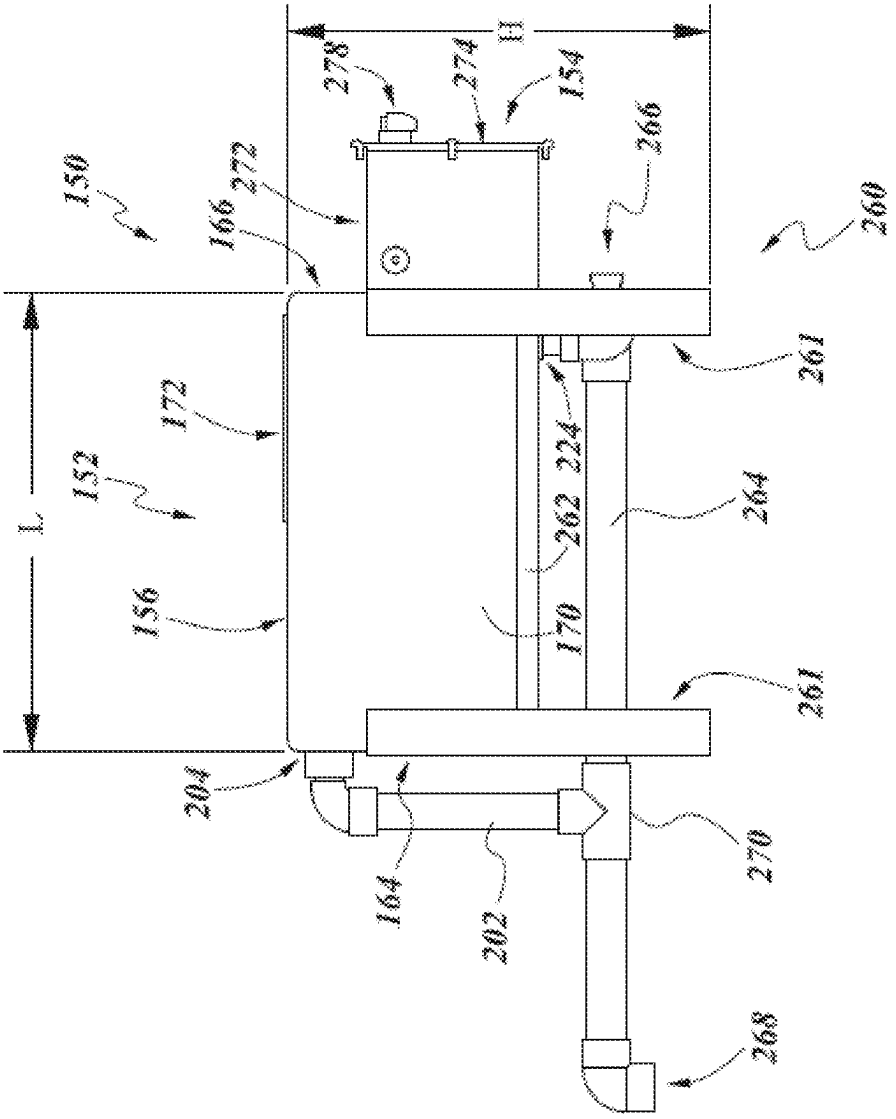
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FIG. 6

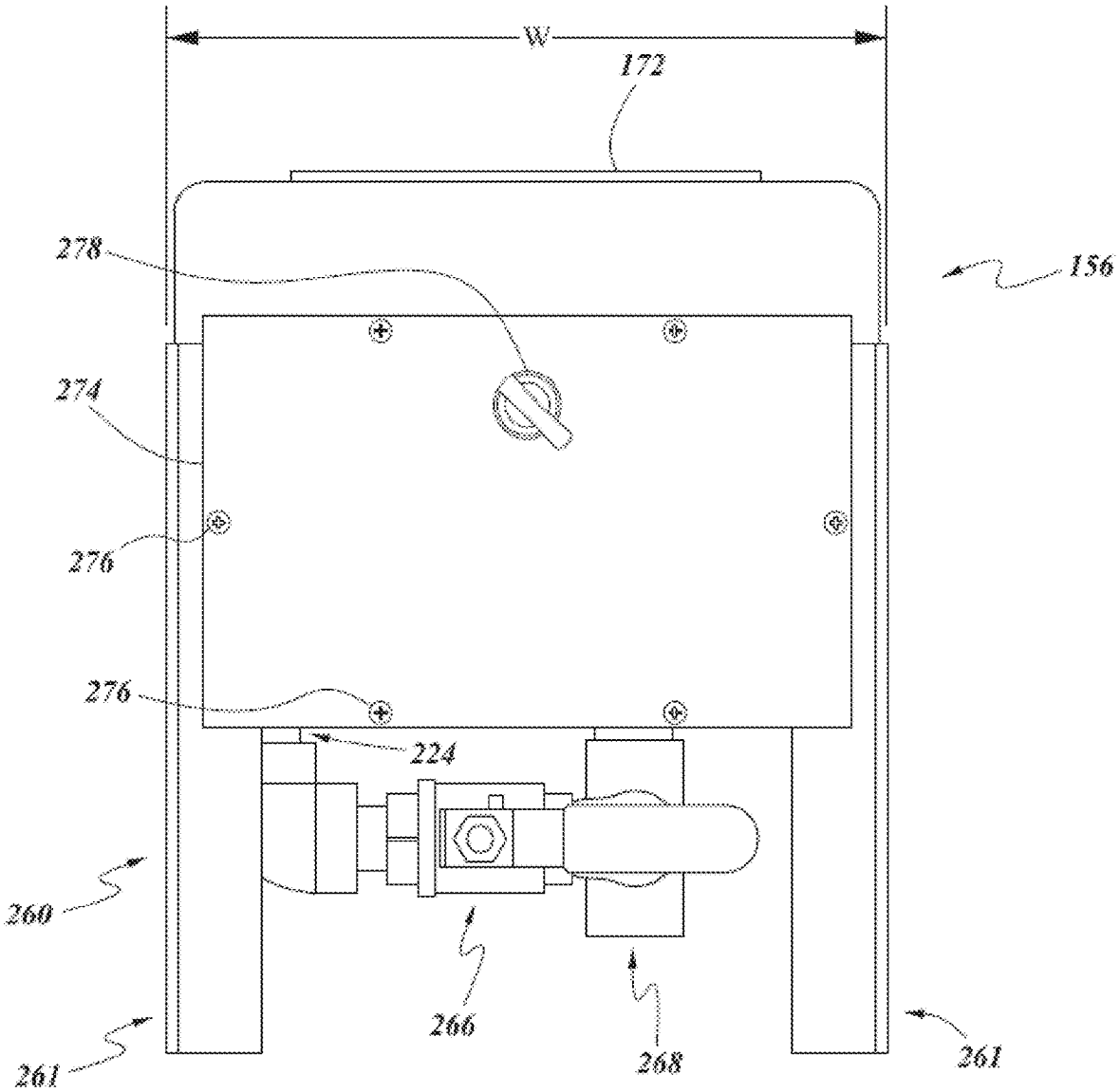

FIG. 7

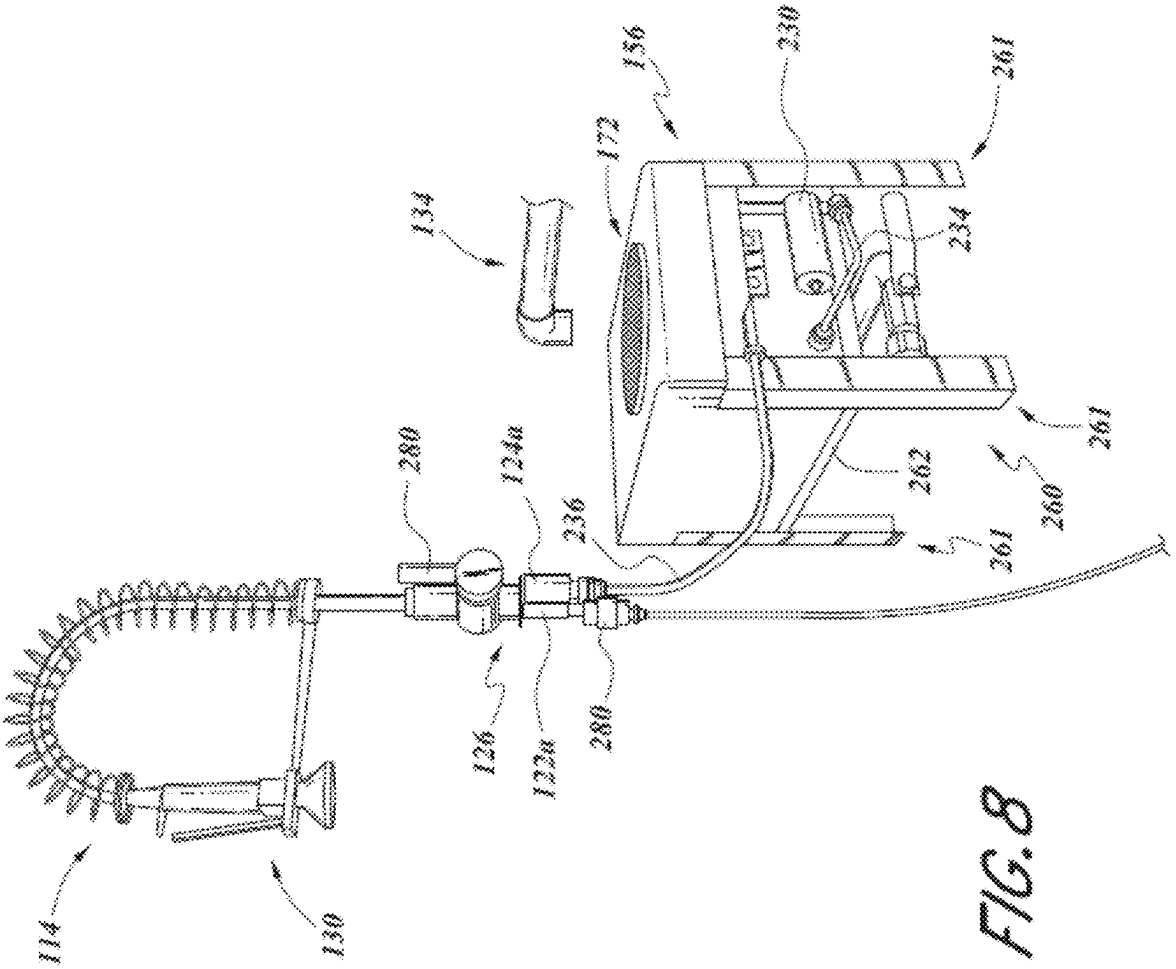
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FIG. 8

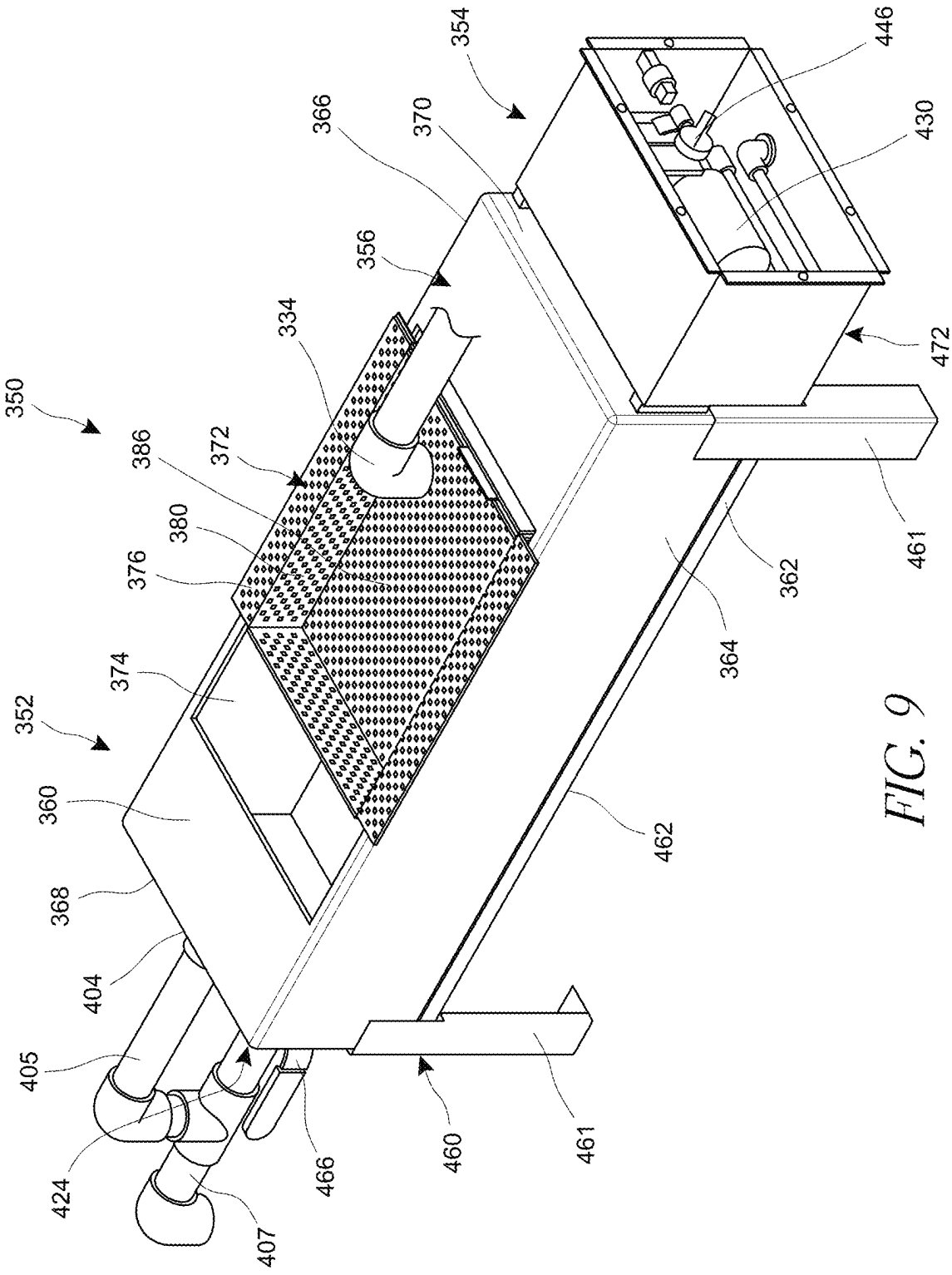
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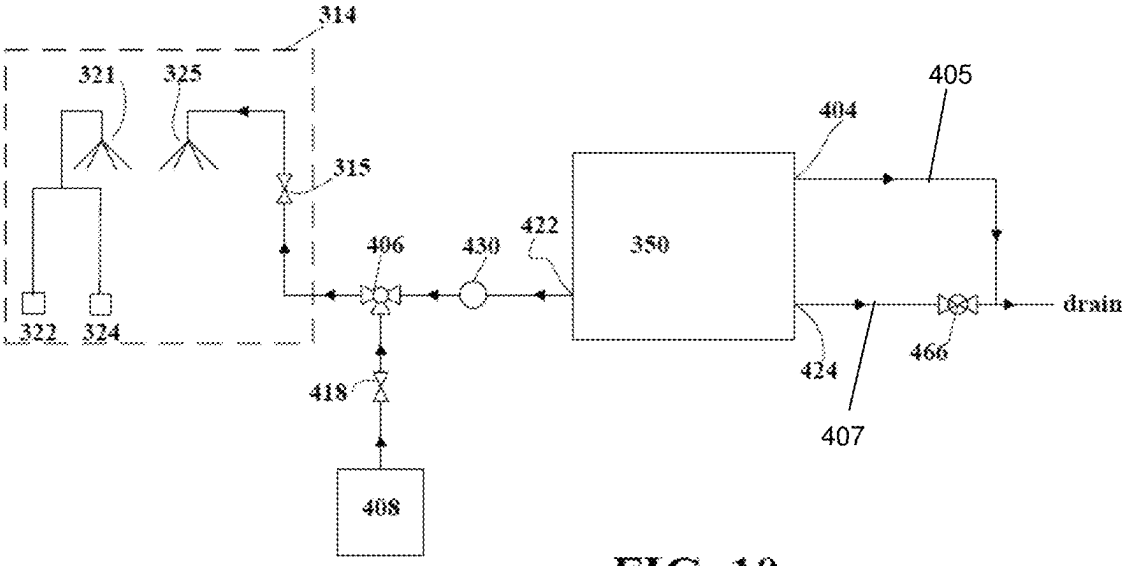
FIG. 9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drain
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FIG. 10

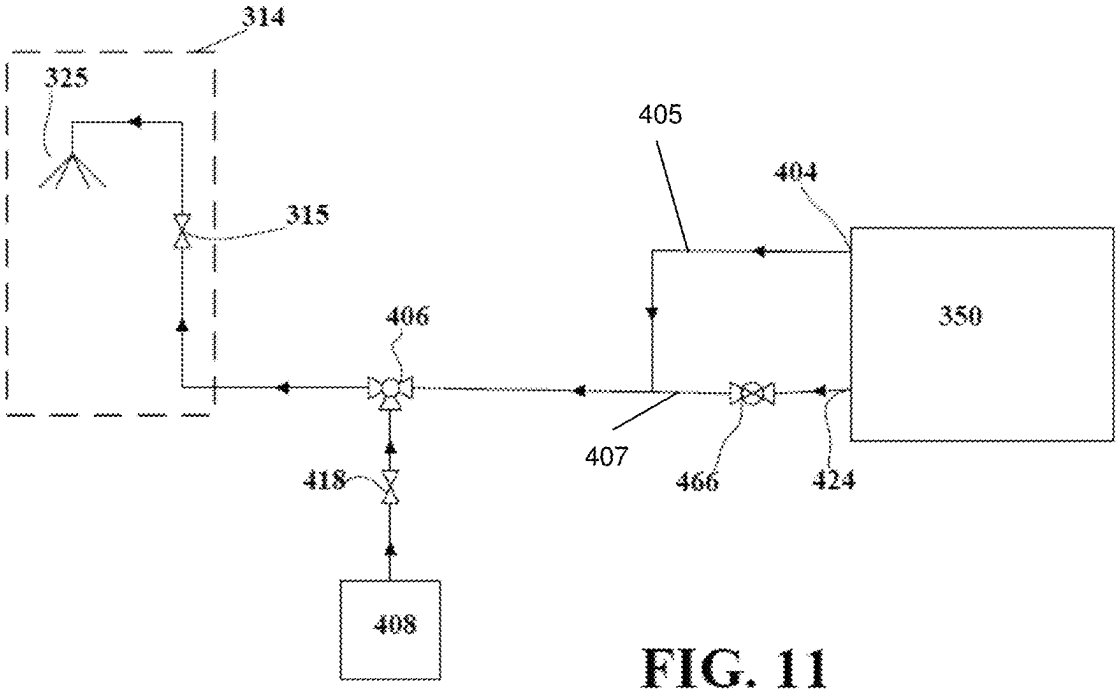
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FIG. 11

AUXILIARY GRAY WATER SOURCE DEVICE FOR COMMERCIAL KITCHENS

CROSS REFERENCE

This application is a continuation of U.S. application Ser. No. 16/921,769, filed Jul. 6, 2020, now U.S. Pat. No. 11,330,960, which is a continuation of U.S. application Ser. No. 16/164,662, filed Oct. 18, 2018, which is a continuation of U.S. application Ser. No. 15/448,486, filed Mar. 2, 2017 (the '486 Application). The '486 Application claims the benefit under at least 35 U.S.C. § 119 of U.S. Provisional Application No. 62/365,315, filed Jul. 21, 2016.

In addition, the '486 application claims the benefit under at least 35 U.S.C. §§ 120 and 365(c) as a continuation-in-part of International Application No. PCT/US2015/051551, designating the United States, with an international filing date of Sep. 22, 2015, which claims the benefit under at least 35 U.S.C. § 120 as a continuation-in-part of U.S. application Ser. No. 14/493,808, filed Sep. 23, 2014, which is a continuation-in-part of U.S. application Ser. No. 14/211,332, filed Mar. 14, 2014, which is a continuation-in-part application of U.S. application Ser. No. 13/815,995, filed Mar. 21, 2013.

Furthermore, the '486 application claims the benefit under at least 35 U.S.C. § 120 as a continuation-in-part of U.S. application Ser. No. 14/493,808, filed Sep. 23, 2014, which is a continuation-in-part of U.S. application Ser. No. 14/211,332, filed Mar. 14, 2014, which is a continuation-in-part application of U.S. application Ser. No. 13/815,995, filed Mar. 21, 2013.

The entirety of each of the aforementioned applications is incorporated by reference herein and made a part of this specification.

FIELD

The present disclosure generally relates to commercial warewashing facilities. More particularly, the present disclosure relates to an auxiliary apparatus designed to provide a replenishing gray water source for use by a pre-rinse station prior to a warewashing machine in such facilities.

BACKGROUND

The food service industry needs to manage the high number of soiled dishes encountered on a daily basis. The food service industry includes restaurants and numerous institutional food service establishments present in schools, prisons, municipal buildings, military mess halls, and the like.

In such food service industry establishments, the warewashing process typically begins with scraping of dishes into a garbage can or other refuse container. Scraping is performed to remove the larger scraps of food and the like. Following scraping, pre-rinse sprayers are used to rinse the dishes prior to placement of the dishes into commercial warewashing machines.

The commercial warewashing machine market is different that of most other commercial food service equipment markets. Warewashing machines often are not owned by the individual restaurant or food service operator. Rather, warewashing machines are leased to the individual restaurant or food service operator by a chemical sales company. As a term of many leases, the food establishment is not able to modify, service or repair the warewashing machine. Rather, the food establishment is simply able to use the machine to wash the dishes.

SUMMARY OF CERTAIN FEATURES

Commercial warewashing machines come in several different configurations. One of the configurations is a fill-and-dump machine. In such machines, the water is dumped after each wash. One example of such a machine is the ES2000 Dishmachine by EcoLab. In the ES2000 Dishmachine, between one and five gallons of used dishwashing water is dumped into a drain following each wash cycle. This dishwashing water comprises a plurality of soaps and rinsing agents.

One aspect of the present disclosure involves the recognition that it is desired to save both water and gas/electric while not significantly modifying a warewashing machine. Accordingly, certain features, aspects and advantages of the present disclosure provide for an auxiliary device that is separate of a commercial warewashing machine but that can capture some or all of the used dishwashing water for use with a pre-rinse station. In some configurations, the auxiliary device can capture the used dishwashing water without substantial modification of the commercial warewashing machine. In some configurations, the auxiliary device can be integrated into a commercial warewashing machine.

Certain features, aspects and advantages of the present disclosure provide for a method of installing an auxiliary device that is separate of a commercial warewashing machine but that can capture some or all of the used dishwashing water for use with a pre-rinsing station.

In accordance with certain features, aspects and advantages of the present disclosure, an auxiliary gray water supply device for use in a commercial food service facility is provided. The auxiliary gray water supply device comprises a tank. The tank comprises an inlet. The inlet receives a removable scrap trap. The tank further comprises an overflow outlet and a freshwater supply inlet. The overflow outlet is vertically lower than the freshwater supply inlet. A pump has an inlet in fluid communication with the tank and an outlet in fluid communication with a delivery conduit.

In accordance with certain features, aspects and advantages of the present disclosure, a method of installing an auxiliary gray water supply device is provided. The method comprising disconnecting a pre-rinse unit from a hot water faucet and a cold water faucet, locating the auxiliary gray water supply device proximate a warewashing station, connecting a delivery conduit to the hot water faucet and the cold water faucet and positioning an inlet of the auxiliary gray water supply device vertically below an outlet from a warewashing machine whereby a tank of the auxiliary gray water supply device captures substantially all of a load of gray water being evacuated from the warewashing machine through the inlet of the auxiliary gray water supply device without significant modification of the warewashing machine.

BRIEF DESCRIPTION OF THE DRAWINGS

Certain features, aspects and advantages of the present invention will now be described with reference to the drawings, which embodiment are intended to illustrate and not to limit the invention, and in which figures:

FIG. 1 is a perspective view of a typical commercial warewashing station;

FIG. **2** is a perspective view of an auxiliary device that can be used with the commercial warewashing station of FIG. **1**;

FIG. **3** is a rear view of the auxiliary device of FIG. **2**;

FIG. **4** is a perspective view of a tank and a fine scrap trap of the auxiliary device of FIG. **2**;

FIG. **5** is a perspective view of the auxiliary device of FIG. **2** with a holding portion and a transfer portion separated from each other;

FIG. **6** is a side elevation view of the auxiliary device of FIG. **2** with an elevated holding portion and a transfer portion;

FIG. **7** is a rear elevation view of the auxiliary device of FIG. **6**;

FIG. **8** is a perspective view of the auxiliary device of FIG. **6** and certain associated components of the commercial warewashing station of FIG. **1**, with an enclosure of the auxiliary device not shown for purposes of presentation;

FIG. **9** is a perspective view of another auxiliary device that can be used with a commercial warewashing station;

FIG. **10** schematically illustrates a configuration of the auxiliary device of FIG. **9** and certain associated components; and

FIG. **11** schematically illustrates another configuration of the auxiliary device of FIG. **9** and certain associated components.

DETAILED DESCRIPTION OF CERTAIN EMBODIMENTS

With reference now to FIG. **1**, a typical commercial warewashing station **100** will be introduced. The station **100** can include three main regions. The first region can include a pre-rinse station **102**. Following the pre-rinse station **102** is a second region that includes a warewashing machine **104**. The third region, which is downstream of the first and second regions, can include an air-drying table **106**.

In the illustrated configuration, the station **100** is laid out in a straight-through configuration. In some configurations, the station **100** can be L-shaped or U-shaped. In some configurations, the station **100** has a counter depth of 24 inches. These differing configurations can result in variations of certain features, aspects and advantages of the present invention, as will be explained below. In other words, some of the components can be relocated to better facilitate access to those components, such as spigots, faucets, valves and scrap traps, for example but without limitation.

With continued reference to FIG. **1**, the pre-rinse station **102** comprises a table **110**. A sink **112** can be mounted to the table **110**. A pre-rinse unit **114** can be positioned generally above the sink **112**. The pre-rinse unit **114** can be connected to one or more of a hot water supply **116** and a cold water supply **120**. The hot water supply **116** and the cold water supply **120** can comprise a hot water faucet **122** and a cold water faucet **124**. Generally, the pre-rinse unit **114** will comprise an inlet **126** that will be connected to at least one of, and typically both of, the hot water faucet **122** and the cold water faucet **124**. The pre-rinse unit **114** also can include a valve **130** to control the flow out of the pre-rinse unit **114**. When the valve **130** is actuated, flow from the hot water supply **116** and the cold water supply **120** can pass through the hot water faucet **122** and the cold water faucet **124**, through the pre-rinse unit **114** and into the sink **112**. In most configurations, the pre-rinse station **102** will use a low flow nozzle or spray head due to various local water-use regulations.

The warewashing machine **104** can have any suitable configuration. In some configurations, the warewashing machine **104** can be a machine, such as the ES2000 by EcoLab. Because some embodiments involve providing an auxiliary device to the warewashing machine **104** without significant modification to the warewashing machine **104**, many features of the warewashing machine **104** will not be described in detail.

The illustrated warewashing machine **104** is supported by a frame **132**. Any suitable support or frame **132** can be used so long as access is available to an outlet **134** from the washing chamber (not shown). In the illustrated configuration, the outlet **134** is positioned generally above a scrap trap **136**. The scrap trap **136** can comprise a perforated tray that serves to separate larger food waste and the like from water emitted through the outlet **134**. Water that has passed through the scrap trap **136** flows through a drain outlet **140** that can be plumbed to the nearest floor sink or the like. The drain outlet **140** can be connected to the floor sink or the like using a conduit, for example but without limitation.

When the warewashing machine **104** is in use, the warewashing machine **104** is supplied fresh water and pre-rinsed dishes to wash as a batch. Upon completion of a wash cycle, the warewashing machine **104** dumps the used wash water (i.e., the gray water) through the outlet **134**, onto the scrap trap **136** and ultimately through the drain outlet **140**, which is plumbed to the city sewer system. The amount of gray water disposed can vary depending upon the make and model of the warewashing machine in use. In some configurations, the warewashing machine **104** can emit between one and five gallons per cycle.

The air-drying table **106** can have any suitable configuration. In some configurations, the air-drying table **106** includes a frame **142**. The frame **142** can have an open configuration to define an open racking area **144**. In some configurations, the frame **142** can be positioned above the floor sink, floor drain or the like.

Auxiliary Devices for the Capture of Gray Water

An auxiliary device **150** that is arranged and configured in accordance with certain features, aspects and advantages of the present invention is shown in FIGS. **2**, **3** and **5**. The auxiliary device **150** captures the gray water being emitted from the warewashing machine **104**. The auxiliary device **150** can supply the captured gray water to the pre-rinse station **102**. The gray water captured by the auxiliary device **150** has been sanitized, softened and soaped during the wash cycle of the warewashing machine **104**.

Advantageously, the auxiliary device **150** is separate of the warewashing machine **104** and is not permanently connected to the warewashing machine **104**. While the illustrated configuration is separate of the warewashing machine **104** and not permanently connected to the warewashing machine **104**, it is possible to integrate the auxiliary device **150** or at least some components of the auxiliary device **150** into a warewashing machine **104** to provide an improved warewashing machine **104**. More advantageously, the auxiliary device **150** is adapted to be fluidly connected to the warewashing machine **104** through an air gap. For example, an air gap can be disposed between the water outlet of the warewashing machine **104** and the inlet into the auxiliary device **150**. In some configurations, the air gap is defined between the outlet **134** and the inlet into the auxiliary device **150** with no physical components interposed there between. In some configurations, including the illustrated configuration, the air gap can be defined between the drain outlet **140** (or the outlet end of a conduit connected to the drain outlet **140**) and the inlet into the auxiliary device **150** with no

physical components interposed there between. In other words, the air gap preferably is positioned between the outlet and the inlet. The air gap can be more than about 2 times the effective inner diameter of the outlet pipe of the warewashing machine **104**. In some configurations, the air gap can be between 2 and 3 times the effective inner diameter of the outlet pipe of the warewashing machine **104**.

Broadly speaking, the auxiliary device **150** can include a holding portion **152** and transfer portion **154** that is in fluid communication with the holding portion **152**. The holding portion **152** receives and collects the gray water. The transfer portion **154** conveys the gray water from the holding portion **152** to the pre-rinse station **102**.

With reference now to FIG. **2**, the holding portion **152** of the auxiliary device **150** generally comprises a tank **156**. The tank **156** can be formed from any suitable materials keeping in mind that the tank will handle gray water that is at least about 115 degrees Fahrenheit. In some instances, the tank **156** will handle gray water that is between about 120 and 140 degrees Fahrenheit. Preferably, the tank **156** is formed of a material that can tolerate temperatures below about 190 degrees Fahrenheit (rinse water at temperatures of 194 degrees Fahrenheit and above is believed to simply cook food onto the surface of the dishes being washed).

In some configurations, the tank **156** can be formed of a material that is at least partially translucent. In some configurations, the tank **156** is formed of a material that is sufficiently translucent to provide visual confirmation of the contents of the tank **156**. Moreover, the tank **156** preferably is formed of a material that admits light into the tank **156** to facilitate cleaning and drying of the tank **156** at the end of a day. The tank **156** can be formed of a material, such as polystyrene, that can provide easy formation of the tank **156**. In some configurations, the tank **156** can be formed of a material that incorporates recycled materials, such as recycled plastic bottles, for example but without limitation.

Using a plastic material to form the tank **156** can provide insulating properties. In addition, the thickness of the walls can help insulate the tank **156**. For example, as will be explained, a pump including a pump motor may be secured to the tank **156** and, therefore, forming the tank **156** of a plastic-based material will reduce motor vibrations and reduce or eliminate the need for an isolator or damper to be positioned between the tank **156** and the pump motor. In addition, as discussed above, the tank desirably can handle water having elevated temperatures and, therefore, being somewhat insulating is desired to help retain the heat in the gray water for use in pre-rinsing operations.

The tank **156** can have any suitable shape, size and configuration. Given a counter depth of about 24 inches, the tank preferably extends front to rear a total of less than the counter depth (i.e., 24 inches) but other dimensions are possible. In some configurations, the shape and sizing of the tank **156** is less important than the internal volume of the tank **156**. For example, in some configurations, the tank **156** is designed to retain a full release of wash water from the warewashing machine **104** and the warewashing machine **104** releases about 1.4 gallons per cycle. Thus, in such configurations, the tank **156** is sized and configured to define an internal volume of at least about 1.4 gallons. Other warewashing machines can release more or less gallons per cycle (e.g., 2-3 gallons) and the size of the tank **156** can be determined based upon the application.

The outer dimensions of the tank **156** also can be determined based upon a desire to position the tank under one or more of the pre-rinse station **102**, the warewashing machine **104** and the air-drying table **106**. For instance, in applications in which the tank **156** will be positioned directly below the warewashing machine **104**, the vertical height can be selected based upon the required height when the width and depth of the tank **156** are specified to fit within the frame **132** of the warewashing machine **104**. Similarly, in applications in which the tank **156** will be positioned under the air-drying table **106**, the width of the tank may be greater than the width when the tank **156** is designed to be placed below the warewashing machine **104** due to the difference in the configuration of the frame **142** of the air-drying table **106** relative to the frame **132** of the warewashing machine **104**. As such, the height of the tank **156** may be reduced in such applications. In some configurations, the height of the tank is less than about 8 inches. In some configurations, the tank height is determined based upon the application. For example, the tank can have a height that is short enough to fit under a support bar of the warewashing machine **104** or the like.

The illustrated tank **156** comprises a top **160**, a bottom **162**, and at least one sidewall that extends generally between the top **160** and the bottom **162**. In the illustrated configuration, the tank **156** includes a front wall **164**, an opposing rear wall **166**, a left wall **168** and an opposing right wall **170**. To facilitate cleaning, the internal junctures of two or more walls, especially the junctures of the side walls **164**, **166**, **168**, **170** with the bottom **162**, are radiused to reduce the occurrence of tight corners that can be difficult to clean and/or dry.

With reference still to FIG. **2**, a fine scrap trap **172** (also referred to as a screen) can be assembled to the tank **156**. In some configurations, the fine scrap trap **172** defines a basket. As described above, the tank **156** captures water from the warewashing machine **104**. While the warewashing machine **104** may include a scrap trap (e.g., scrap trap **136**) of its own, the fine scrap trap **172** can be interposed between the drain outlet **140** of the warewashing machine **104** such that the gray water has already been filtered once or can be interposed between the outlet **134** of the warewashing machine **104** such that the fine scrap trap **172** performs as a primary scrap trap for the system. Because of the difference in the ultimate treatment of the gray water (i.e., from the drain outlet **140**, the water goes to the city sewer system; from the tank **156**, the water goes to the pre-rinse station **102**), the fine scrap trap **172** advantageously is configured to limit or eliminate the infiltration of finer particles (e.g., tomato skins, rice, etc.) that could clog the pre-rinse station **102**. In some applications, the fine scrap trap **172** incorporates a mesh (e.g., a stainless steel mesh). In some applications, the mesh has sufficiently small openings such that almost no rice can pass through the mesh intact.

In the illustrated configuration, the tank **156** includes an opening **174**. The opening **174** can have any suitable size and configuration. In the illustrated configuration, the opening **174** is sized to be more than two times the inner effective diameter of the drain outlet **140** of the warewashing machine **104**. The opening **174** receives the fine scrap trap **172**. To facilitate capture of the gray water, the opening **174** can be in the top surface **160** of the tank **156**. In some configurations, the opening **174** can be encircled by a splash curb or the like (e.g., an upwardly extending protrusion); the splash curb can contain and control splashing of water that may be caused by the velocity of the water released from the drain outlet **140** or the outlet **134** when the water hits the fine scrap trap **172**.

The fine scrap trap **172** can be sized and configured to cooperate with the opening **174** in the tank **156**. In some configurations, the opening **174** can be configured such that

the fine scrap trap **172** can be formed as a tray. Forming the fine scrap trap **172** as a tray that slides generally transverse to the direction of water flow (e.g., providing a fine scrap trap drawer) can improve access to the fine scrap trap **172**; providing a scrap trap **172** that inserts from the top, however, simplifies construction and reduces a need to seal around the fine scrap trap **172**. In some configurations, the fine scrap trap **172** can be configured to directly underlie an existing scrap trap tray of the warewashing machine **104**. Such a configuration provides for enhanced filtration while providing a more compact construction. In some configurations, the gray water from the warewashing machine can be carried to the tank **156** and/or the fine scrap trap **172** with conduit that is connected to the warewashing machine with a quick disconnect coupling. The conduit can be pivotally connected to the scrap trap of the warewashing machine, for example but without limitation. Thus, the conduit can be pivoted up and access to the fine scrap trap can be improved. In addition, complete removal of the conduit also can improve access to the auxiliary unit for cleaning and the like.

In the illustrated configuration, the fine scrap trap **172** is sized and configured for insertion into a cavity defined by the tank **156** through the opening **174** in the top **160**. The illustrated fine scrap trap **172** is generally cylindrical. The fine scrap trap **172** can comprise an upper flange **176** that extends laterally outward from a side wall **180** of the fine scrap trap **172**. The upper flange **176** can support the fine scrap trap **172** when it has been inserted into the opening **174** in the tank **156**. The side wall **180** can comprise one or more support members **182** that can define a general shape for the side wall **180**. A fine mesh or other suitable material **184** can be used form the balance of the side wall **180**. A similar construction also can be used to form a bottom **186** of the fine scrap trap **172**.

The illustrated fine scrap trap **172** is sized and configured to be recessed into the tank with the bottom **186** of the fine scrap trap **172** being vertically lower than the top **160** of the tank **156**. In some configurations, the bottom **186** of the fine scrap trap **172** can be positioned vertically higher than a high-water level of the tank (which can be controlled by an overflow outlet, as will be discussed). By recessing the bottom **186** (or other surface that may cause splashing when contacted by the water emitted from the warewashing machine **104**), splashing can be at least partially contained. Splashing of water out of the tank **156** is desired to be minimized or eliminated because such splashing of water will require clean-up at the end of operations and, in many installations, the warewashing machine **104** will be in the way during clean-up, which causes clean-up to be more difficult.

In some configurations, the fine scrap trap **172** can incorporate one or more splash reduction features. For example, but without limitation, the fine scrap trap **172** can include a cone or other flow spreading device positioned within the fine scrap trap **172** or forming at least a portion of the fine scrap trap **172**. In some configurations, the bottom **186** of the fine scrap trap **172** can be conical downward or frustoconical downward. The feature can be formed of mesh or can be a solid flow diffusing component. The splash reduction feature or features can help slow the rush of water toward the bottom of the fine scrap trap, which can reduce the splashing experienced when the water contacts the bottom of the fine scrap trap **172**.

With reference again to FIGS. **2** and **3**, the illustrated auxiliary device **150** can include support features **190**. In the illustrated configuration, the support features **190** can include rails **192** that are mounted to the tank **156**. The rails **192** can be mounted to, or formed as a part of, two or more of the front, rear, left and right walls **164**, **166**, **168**, **170**. The rails **192** can be used to fit to existing structures of the warewashing machine **104** (e.g., parts of the frame **132**) or to existing structures of the air-drying table **106**. Thus, such a configuration provides for a compact mounting arrangement.

In some configurations, however, casters, leveling feet (see FIG. **5**), a support superstructure or the like can be provided to support the tank and can define support features **190**. For example, leveling feet can be provided under or alongside of the tank **156**. The leveling feet would allow for the leveling of the tank to reduce the likelihood of extreme floor pitches causing issues with water level maintenance while still allowing for portability of the auxiliary device **150** when empty for purposes of cleaning the auxiliary device **150** and the surrounding area. Moreover, when leveling feet or the like are used, it is possible to vary the pitch of the bottom **162** of the tank **156** such that the fluid contained within the tank **156** can be directed to one end of the tank **156** or another, as desired. For example, by positioning a drain in a lower portion of the tank, it is possible to empty the tank **156** more completely for cleaning.

Furthermore, raising the bottom **162** of the tank **156** above the surface of the floor improves the ability to clean beneath the tank **156**. In some configurations, the bottom **162** of the tank **156** is raised to be at least 2 inches above the floor. In some configurations, the bottom **162** of the tank **156** is raised to be at least 6 inches above the floor. Other heights also are possible.

With reference to FIG. **3**, a water level control assembly **200** is shown. The water level control assembly **200** can define an overflow outlet for the tank **156**. The tank **156** can include an outlet aperture **204** (see FIG. **4**), the bottom of which can correlate to the highest desired water level. In the illustrated configuration, an outlet conduit **202** can be mounted to the outlet aperture **204** to direct any overflow through the outlet conduit **202** to a suitable drain location (e.g., a drain in a floor sink or a floor drain). The illustrated configuration advantageously obviates any need for a pump, any sensors or other mechanical components to maintain the water level below a predetermined level. The outlet conduit **202** preferably terminates at least 1 inch from the top of any floor sink or floor drain; such a location can reduce splashing while providing sufficient clearance to clean the floor or floor sink. Other configurations are possible.

In the illustrated configuration, the outlet aperture **204** can extend through at least one of the sidewalls (e.g., the front, rear, left and right walls **164**, **166**, **168**, **170**) to the outlet conduit **202**. In some configurations, the bottom **186** of the fine scrap trap **172** can define a generally horizontal plane that generally intersects or is positioned vertically higher than the outlet aperture **204**. In some less desired configurations, the bottom **186** of the fine scrap trap **172** can define a generally horizontal plane that is vertically lower than any portion of the outlet aperture, but such configurations allow the contents of the fine scrap trap **172** to float when the water level is at the high water level defined by the water level control assembly **200**.

With reference again to FIG. **2**, the auxiliary device **150** can include a fresh water supply assembly **210**. The fresh water supply assembly **210** can be configured to allow the addition of fresh water to the tank **156** as needed or desired. For example, at the start of each work day, the tank **156** will not have a supply of gray water for use by the pre-rinse station **102** and the fresh water supply assembly **210** can be used to provide an initial priming of the system for the first

load of dishes of the day. In some configurations, about two inches of water is used for the initial priming. In some configurations, sufficient water is provided to fully cover an outlet that leads to a pump. Moreover, when pre-rinsing overly soiled dishes, it may be necessary to use more than the volume of gray water supplied by the warewashing machine **104**; in such instances, the fresh water supply assembly **210** can provide makeup water.

The fresh water supply assembly **210** can be in fluid communication with the cavity of the tank **156** through a fresh water supply opening **212** (see FIG. **4**). In some configurations, the opening **212** is positioned vertically higher than the overflow aperture **204**. In some configurations, the opening **212** is positioned vertically higher than the overflow aperture by at least 2 times the diameter of the opening **212** and/or 2 times an inner diameter of any flow path connected to the opening **212**. In the illustrated configuration, the opening **212** is positioned along the top **160** of the tank **156**. In any event, given the relative vertical positioning of the opening **212** and the overflow aperture **204**, the water level in the tank **156** is unlikely to allow gray water to flow upwardly into the fresh water supply through the fresh water supply assembly **210**.

In the illustrated configuration, the fresh water supply assembly **210** can include a control valve **214** that can be manually manipulated to control the flow of fresh water through a supply conduit **216** into the tank **156**. In some configurations, a backflow prevention device **220** can be integrated into or coupled with the supply conduit **216**. The backflow prevention device **220** can have any suitable configuration and can help to further reduce the risk of any contamination by the gray water.

With reference to FIG. **4**, a first outlet **222** from the tank **156** is illustrated. The outlet **222** advantageously is positioned generally vertically below the fresh water supply assembly **210**, which increases the likelihood of rapid availability of water under low water conditions. Other locations also are possible. Moreover, the location of the fresh water supply assembly **210** can be varied depending upon the construction and layout of the warewashing station **100**. In other words, it is helpful to have easy access to the control valve **214** and, for at least this reason, the location of the fresh water supply assembly **210** may vary depending upon the application.

With reference still to FIG. **4**, the tank **156** also includes a second outlet **224**. One or both of the first and second outlets **222**, **224** can extend through the bottom **162** of the tank **156** or one or more of the sides (e.g., front, rear, right and left walls **164**, **166**, **168**, **170**). Desirably, the first and second outlets **222**, **224** are sufficiently low relative to an inner bottom of the tank **156**. As will be described, the first outlet **222** is fluidly connected to a supply pump while the second outlet **224** is fluidly connected to a drain valve. Thus, the first outlet **222** benefits from a low position because it increases the available water for use and the second outlet **224** benefits from a low position because it helps to more fully drain the tank **156** at the end of operations.

In some configurations, the inner bottom surface of the tank **156** is generally planar but, in some configurations, the inner bottom surface of the tank **156** can include features to help direct flow to one or both of the first and second outlets **222**, **224**. For example, in some configurations, a triangle, a pyramid, a cone or the like can be positioned to cause the water to move toward the sides of the tank **156**. In one configuration, the inner bottom surface slopes gently toward the second outlet **224** throughout the bottom of the tank **156** because the second outlet **224**, which can define an evacuation outlet, is used to substantially fully drain the tank **156** while the first outlet **222** supplies a pump and, therefore, should be fully or substantially submerged during operations and, if not, the fresh water supply assembly **210** can be used to augment the water supply within the tank **156**.

With reference to FIG. **2**, a spigot **226** can be connected to the tank **156** at the second outlet opening **224**. The spigot **226** can be used at the end of operations to drain the gray water from the tank. Accordingly, the sizing of the spigot **226** can be determined, at least in part, by the desired flow rate for emptying the tank **156** at the end of operations. In some configurations, a hose can be used to direct the flow to a floor drain or a floor sink. In some configurations, a bucket can be used to transfer the remnants from the tank **156** via the spigot **226**. Other suitable configurations also can be used.

A pump **230** can be supported by the auxiliary device **150** or can be mounted separate of the auxiliary device **150**. The pump **230** in the configuration illustrated in FIG. **2** is mounted to the tank **156**. More particularly, in the configuration illustrated in FIG. **2**, the pump **230** is mounted to one of the side walls of the tank **156**. The pump **230** can be secured using four fasteners, which allows for rapid replacement and exchange if desired. In some configurations, the pump **230** can be mounted to the top **160** of the tank **156**. By mounting the pump to the top of the tank **156**, the pump **230** and any electrical connections can be positioned above any anticipated water level.

The pump **230** can have any suitable configuration. In one configuration, the pump **230** can provide a maximum flow rate of about two gallons per minute and a pressure of 60 psi. In one configuration, the pump is a FLOJET model number D3835B5011A. The pump **230** preferably is configured to run only on demand. In other words, the pump **230** does not run unless the pre-rinse unit **114** is being used. Other pumps and other configurations can be used. The illustrated configuration is advantageously simple in construction in that no floats or other components are used to indicate or ameliorate a low water condition; rather, the pump **230** simply ingests air with the water and sputtering at the pre-rinse unit **114** will indicate a need for additional water.

A fitting **232** can be used to join a supply conduit **234** to the first outlet **222**. In other words, a first end of the supply conduit **234** can be connected to the first outlet **222** with the fitting **232**. A second end of the supply conduit **234** can be connected to by another fitting **235** to an inlet of the pump **230**. One or both of the fittings **232**, **235** can be formed of brass, stainless steel or plastic. In some configurations, one or more of the fittings **232**, **235** can be formed as a quick-connect type of fitting. In some configurations, a screen or other filter can be disposed at the inlet of the supply conduit **234**, at the outlet of the supply conduit **234** or both. The supply conduit **234** can be a braided conduit or can have any other suitable configuration.

In some configurations, a filter **237** can be positioned at a location between the first outlet **222** of the tank **156** and the inlet of the pump **230**. In some configurations, the filter **237** can be positioned along the supply conduit **234**. The filter **237** can be any suitable filter. In some configurations, the filter **237** is an in-line flow through filter. The filter can filter remnants of food products that remain even after the scrap traps discussed above. For example, in restaurants serving bean-based food items, the beans can be reduced to a paste-like consistency, which may not be captured by either of the scrap traps. Thus, the filter **237** can optionally be installed between the tank **156** and the pump **230**, as schematically illustrated in FIG. **5**.

An outlet of the pump **230** can be connected to the inlet **126** of the pre-rinse unit **114**. In some configurations, a fitting **239** can be used to connect the delivery conduit **236** to the pump **230**. The fitting **239** can be formed of brass, stainless steel or plastic. In some configurations, the fitting **239** can be formed as a quick-connect type of fitting. In some configurations, a delivery conduit **236** extends from the outlet of the pump **230** to the inlet **126** of the pre-rinse unit **114**. The delivery conduit **236** can include a first length that extends to a tee fitting and two lengths that connect the tee fitting to the portions of the pre-rinse unit **114** that otherwise would connect to the hot water faucet **122** and the cold water faucet **124** respectively. By connecting to both portions of the pre-rinse unit **114**, it is possible for the pump **230** to pressurize the line. In some configurations, the delivery conduit **236** may connect to only one of the portions of the pre-rinse unit **114** while the other portion can be plugged to reduce or eliminate the likelihood of the gray water contaminating a fresh water supply and to reduce or eliminate the likelihood that the pump **230** cannot pressurize the delivery conduit **236**.

The tank **156** can be provided with water condition sensing components if desired. For example, in the illustrated configuration, a water temperature sensor **240** can be provided. The water temperature can be sensed in any suitable manner. In some configurations, the water temperature can be sensed using a thermometer. In addition, in some configurations, a water PH sensor **242** can be provided. The water PH sensor also can have any suitable configuration. In some configurations, the tank **156** can be provided with a port to include a PH tester, which could possibly be a dipper rod that enters the tank **156** through the top **160**. Water PH often will be monitored in conjunction with warewashing machines. Typically, water PH is sensed using test strips in the food service industry. The water PH sensor **242** can be an electric PH sensor or the like and can be used to provide an indication of the water PH without the need for repeated testing of PH using the expensive PH test strips. In some configurations, one or more of the temperature and PH can be simply indicated in a go-no go style while, in other configurations, relative values can be provided. For example, a PH of less than 13 is desired and can be indicated by a first color indicator while a PH exceeding that value can be indicated by a second color indicator. In some configurations, a PH of less than 10 is achieved. The PH can be monitored for many reasons, including monitoring for levels that can shorten the life of certain components of the auxiliary device **150**. Ports **244**, **246** for the sensors can be provided through one or more walls of the tank **156**. Any suitable placement and number of ports can be provided.

The pump **230** can be connected to a switch **246** (see FIG. **5**). The switch **246** can have any suitable configuration. In some configurations, the switch **246** can be water tight or suitable rated for water use. The switch **246** can be used to supply power to and remove power from the pump **230**. As such, a power supply cord **248** can be connected to the switch **246**. Any suitable power supply cord **248** can be used and any suitable power supply can be provided to the pump **230**.

In the configuration of FIG. **5**, a mounting panel **250** can be used to support one or more of the components that define the transfer portion **154**. The mounting panel **250** can be formed of any suitable material. In some configurations, the mounting panel **250** is formed from starboard, plastic, stainless steel or the like. In some configurations, the mounting panel **250** is formed of a water-resistant material. In some configurations, the mounting panel **250** can be an enclosure or housing or the like. In some configurations, the mounting panel **250** is white.

In the illustrated configuration, the mounting panel **250** supports the pump **230**. In the illustrated configuration, the mounting panel **250** supports the switch **246**. Other components also can be supported by the mounting panel **250** (e.g., the filter **237**). Through the use of disconnects (for the fluid components and/or the electrical components), the mounting panel **250** provides an easily replaced component in the event of pump or switch failure, for example but without limitation. In addition, the mounting panel facilitates mounting the electrical components at a location that is suitable. Further, by mounting the pump **230** to the mounting panel, the pump **230** is moved upward to a location that removes it from the foot region such that kitchen workers are less likely to make inadvertent contact with the pump **230**.

In some configurations, the transfer portion **154** and the holding portion **152** are elevated above the floor. For example, as shown in the auxiliary device **150** illustrated in FIGS. **6-8**, the tank **156** can be spaced apart from the floor by a frame **260**. This can facilitate cleaning beneath the auxiliary device **150** (e.g., with a broom or mop) and/or can aid in satisfying certain health codes. Because the auxiliary device **150** is configured for use in a wet environment (dishwashing stations), the frame **260** can be made of a corrosion resistant material, such as plastic, stainless steel, aluminum, or otherwise.

As shown, the frame **260** can include a plurality of legs **261**, such as one leg at each corner of the tank **156**. In various embodiments, the legs **261** comprise rigid members, such as beams. For example, as shown in FIGS. **6-8**, the legs **261** can be constructed of L-beams or other structural members (e.g., I-beam, C-beam, hollow structural section, or otherwise). The legs **261** can elevate the tank **156** above the floor. In some implementations, the vertical distance between the bottom of the legs **261** and the bottom **162** of the tank **156** is at least about: 4 inches, 5 inches, 6 inches, or 7 inches. In various embodiments, the bottom **162** of the tank **156** and/or the pump **230** is spaced above the ground between 4 inches and 6 inches.

In some implementations, the frame **260** is configured to maintain the center of gravity of the tank **156** relatively low to the ground, which can reduce the chance of the tank **156** tipping over. In certain embodiments, the top of the tank **156** is at a height H that is less than or equal to the front-to-back length L of the tank **156**. For example, the height H can be less than about 15 inches and the length L can be at least about 16 inches. In some implementations, the side-to-side width W of the frame **260** is less than or equal to the height H of the top of the tank **156**. For example, the height H can be at least about 15 inches and the width W can be less than about 12 inches. In some implementations, the ratio of the width W of the frame **260** to the height H of the top of the tank **156** is at least about: 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, or otherwise.

In some implementations, a portion of the legs **261** is configured to engage with a corresponding portion of the tank **156**. For example, the legs **261** can have a shape that corresponds to a portion of the tank **156**. This can allow the correspondingly shaped portions of the legs **261** and the tank **156** to be mated together. An example of such mating correspondence is illustrated in FIGS. **6-8**. As shown, the corners of the tank **156** can be received in correspondingly shaped corners of the legs **261** (e.g., the internal corner of the L-beam). In some embodiments, an upper portion of the each of the legs **261** can engage with two sides of the tank

156. This can secure the tank **156** within the legs **261**, limit movement of the tank **156**, and/or reduce the chance of the tank **156** falling out of the frame **260**.

The legs **261** have a constant length in the embodiment illustrated. However, certain variants have legs **261** with an adjustable length. For example, the legs **261** can include telescoping elements and/or leveling feet that enable the length of each leg **261** to be individually adjusted. Varying the length of the legs **261** can aid in adjusting the level of the tank **156**, such as to locate the tank **156** at a desirable height under the warewashing machine **104** and/or to pitch the tank **156** to encourage liquid in the tank **156** to flow toward a certain portion of the tank **156** (e.g., the second outlet **224**). In some configurations, the legs **261** facilitate moving the tank **156**. For example, the legs **261** can include casters, wheels, or the like.

As shown, the frame **260** can include a base **262** that is configured to support and/or cradle the tank **156**. The base **262** can connect with one or more of the legs **261**, such as with welds, fasteners, or otherwise. In certain implementations, the base **262** comprises a plurality of rigid members, such as L-beams or other structural members (e.g., I-beam, C-beam, hollow structural section, or otherwise). In some embodiments, the base **262** comprises a shelf on which the tank **156** is positioned. For example, the base **262** can comprise a generally planar member, such as a sheet or plate of metal or plastic. In some embodiments, the base **262** extends generally or completely continuously between the legs **261**.

As illustrated in FIGS. **6-8**, elevating the bottom of the tank **156** above the floor can provide a passageway beneath the tank **156**. Some embodiments include a drain pipe **264** in the passageway. The drain pipe **264** can extend along the entire, a substantial portion of, or at least a majority of the front-to-back length of the tank **156**. The drain pipe **264** can connect the second outlet **224**, which can be located in the bottom **162** of the tank **156**. In some embodiments, the drain pipe **264** includes a valve **266**, such as a manually operated ball valve. The valve **266** can be closed to maintain the water in the tank **156**, and can be opened to allow the water to exit the tank **156**, flow into the drain pipe **264**, and be discharged at a drain pipe outlet **268**. The outlet **268** can be positioned over a floor sink or floor drain. This can be more convenient than attaching a hose to the spigot **226** and/or directing the hose to a floor drain or a floor sink. In some configurations, the drain pipe outlet **268** is configured to allow a bucket to be placed under the drain pipe outlet **268** to collect the contents of the tank **156**.

In certain implementations, the drain pipe **264** includes a fitting **270** (e.g., a tee), which connects with the outlet conduit **202**. As previously discussed, the outlet conduit **202** can connect with the outlet aperture **204** to direct any overflow from the tank **156** through the outlet conduit **202**. The overflow can flow through the drain pipe **264** and be discharged at the drain pipe outlet **268**. In various embodiments, the drain pipe **264** is pitched so that any water in the drain pipe **264** flows by force of gravity toward the drain pipe outlet **268**. In various embodiments, the drain pipe outlet **268** is lower than the outlet aperture **204**, second outlet **224**, valve **266**, and/or drain pipe **264**.

As illustrated in FIGS. **6** and **7**, the auxiliary device **150** can comprise a protective enclosure **272**, such as a metal or plastic box. The enclosure **272** can house and protect certain components of the auxiliary device **150**. For example, the pump **230** can be positioned in the enclosure **272**. This can reduce the chance that kitchen workers will inadvertently contact the pump **230**, which could result in harm to the workers and/or the pump **230**. In various embodiments, the enclosure **272** can connect with one or more of the legs **261** and/or the base **262**, such as with welds, fasteners, or otherwise.

The enclosure **272** can be located on or adjacent to the tank **156**. For example, as illustrated, the enclosure **272** can be positioned on the front, rear, or a side of the tank **156**. This can place the enclosure in a convenient location to access. In some variants, the enclosure **272** is positioned on the top **160** of the tank **156**, which can place the enclosure above the liquid in the tank **156**. Compared to certain embodiments in which the pump **230** is positioned away from the tank **156** (e.g., on a mounting panel **250** on a wall, such as is shown in FIG. **5**), locating the pump on or adjacent to the tank **156** can reduce the distance that the water from the tank **156** needs to travel to reach the pre-rinse unit **114** and/or can reduce the power required to pump the water from the tank **156** to the pre-rinse unit **114**.

As shown, the enclosure **272** can include an access door **274**, which can be opened to enable access to the components in the enclosure **272**. The door **274** can be secured, such as with a lock or latch. In the embodiment illustrated, the door **274** is secured with a plurality of fasteners **276**, such as bolts. In some implementations, the door **274** is configured to allow access to one or more controls without needing to open the door **274**. For example, a switch **278** can be mounted on or through the door **274**. The switch can be actuated, without opening the door **274**, to control operation of the pump **230**. For example, the switch **278** can control the supply of power to the pump **230**.

As illustrated in FIG. **8**, the outlet of the pump **230** can be connected to the inlet **126** of the pre-rinse unit **114**. As mentioned above, in some configurations, a fitting can be used to connect the delivery conduit **236** to the pump **230**. The fitting can be formed of stainless steel or plastic. In some configurations, the fitting can be formed as a quick-connect type of fitting.

As previously described, the pre-rinse unit **114** can be configured to connect with hot and cold water faucets **122**, **124**. For example, the pre-rinse unit **114** can include connection elements **122**A, **124**A configured to connect with the hot and cold water faucets **122**, **124**, respectively. As shown in FIG. **8**, the delivery conduit **236** can be connected to the connection elements **122**A and a fresh water conduit **278** can be connected with the connection element **124**A. In some variants, the connections are reversed, such that the delivery conduit **236** is connected to the connection elements **122**A, **124**A and the fresh water conduit **278** is connected with the connection element **122**A. The connections with the connection elements **122**A, **124**A can be accomplished with a fitting, such as a stainless steel or plastic fitting. In some configurations, the fitting can be formed as a quick-connect type of fitting.

The fresh water conduit **278** can include a backflow inhibitor, such as a check valve **280**. In some embodiments, the check valve **280** comprises a diaphragm valve, umbrella valve, duckbill valve, ball check valve, or otherwise. In various embodiments, the check valve **280** can inhibit or prevent gray water from flowing upstream into the fresh water conduit **278**.

Certain embodiments include a vacuum breaker. The vacuum breaker can be configured to inhibit or prevent liquid from being siphoned backward into the fresh water conduit **278**. Some embodiments are configured to reduce or eliminate a pressure differential (e.g., a vacuum) between ambient and one or more of the conduits of the station **100**. For example, in certain embodiments, the vacuum breaker is

configured to reduce or eliminate a vacuum between ambient and the delivery conduit **236** and/or between ambient and the fresh water conduit **278**. The vacuum breaker can comply with certain inspection standards, such as performance and/or sanitation criteria. For example, the vacuum breaker can be rated, listed, and/or certified by NSF International. In some embodiments, the check valve **280** comprises the vacuum breaker.

As shown, in some embodiments, the pre-rinse unit **114** includes a selector **280**, such as an adjustable valve. The selector **280** can be configured to vary and/or select the relative amounts of gray water and fresh water that is dispensed from the pre-rinse unit **114**. For example, in some implementations, when the selector **280** is in a first position, the pre-rinse unit **114** dispenses 100% gray water, and when the selector **280** is in a second position (e.g., opposite the first position), the pre-rinse unit **114** dispenses 100% fresh water. In some implementations, the selector **280** is a two-position valve, such that the pre-rinse unit **114** either provides 100% gray water or 100% fresh water. In some embodiments, the selector **280** is a variable valve. In certain such embodiments, when the selector **280** is in an intermediate position between the first and second positions, the pre-rinse unit **114** dispenses a blend of gray water and fresh water. The relative amounts of gray water and fresh water can vary based on the location of the selector **280**. For example, as the selector **280** is moved toward the first position, the percentage of gray water can increase and the percentage of fresh water can decrease, and as the selector **280** is moved toward the second position, the percentage of gray water can decrease and the percentage of fresh water can increase. As illustrated, the selector **280** can include a handle, which can enable a user to adjust the relative amounts of gray water and fresh water.

FIGS. **9-11** illustrate another embodiment of an auxiliary device **350**. The device **350** can be similar or identical to the device **150** in many ways and can include any of the features of the device **150**. For example, the device **350** can include a holding portion **352** and transfer portion **354** that are similar or identical to the holding portion **152** and transfer portion **154**, respectively. The device **350** can include a tank **356** that, like the tank **156**, captures water from the warewashing machine.

As shown in FIG. **9**, the tank **356** includes an opening **374** in the top surface **360**. Water output from the warewashing machine can flow through the opening **374** and into the tank **356**. The opening **374** can have any suitable size and configuration. In some configurations, the opening **374** can be surrounded by a splash curb or the like (e.g., an upwardly extending protrusion). The splash curb can be configured to contain and/or control splashing of water, such as may be caused by the velocity of the water released from the outlet **334**.

In some configurations, the opening **374** receives a screen **372** (also called a scrap trap). The screen **372** can comprise a perforated tray, mesh, and/or filter that serves to separate larger food waste and the like from water released from the warewashing machine. In some configurations, the screen **372** comprises a tray, basket, cone, funnel, bag, or other suitable shape. In some configurations, the screen **372** of the auxiliary device **350** acts as the primary screen for the gray water. In some embodiments, the warewashing machine may include a screen of its own, or is connected to an external screen. This can allow the screen **372** to act as a secondary or other filtering mechanism for the gray water.

As shown in FIG. **9**, the screen **372** can be received in the opening **374** such that the bottom **386** of the screen **372** is vertically lower than the top **360** of the tank **356**. In some configurations, the bottom **386** of the screen **372** can be about level with the top **360** of the tank **356**. The screen **372** can comprise an upper flange **376** that extends laterally outward from a side wall **380** of the screen **372**. The upper flange **376** can support the screen **372** when it has been inserted into the opening **374** in the tank **356**. The upper flange **376** can have perforations on the surface or can be continuous. The side wall **380** can comprise one or more support members that can define a general shape for the side wall **380**. A fine mesh, perforated plastic, metal, or other suitable material can be used to form the balance of the side wall **380**. A similar construction can be used to form a bottom **386** of the screen **372**. The screen **372** can be a unitary piece. The screen **372** can have discrete components.

By recessing the bottom **386** (or other surface that may cause splashing when contacted by the water released from the warewashing machine), splashing can be reduced and/or at least partially contained. Splashing of water out of the tank will require clean-up and the warewashing machine may be in the way during clean-up, which causes clean-up to be more difficult. Thus, reducing or eliminating splashing can be desirable.

In some configurations, the bottom **386** of the screen **372** can be positioned vertically higher than a high-water level of the tank, which can be controlled by an overflow outlet **404**. In some configurations, the bottom **386** of the screen **372** can define a generally horizontal plane that generally intersects or is positioned vertically higher than the overflow outlet **404**. In some configurations, the bottom **386** of the screen **372** can extend along a generally horizontal plane that is vertically lower than any portion of the overflow outlet **404**, such that the contents of the screen **372** can float when the water level is at the high water level defined by the overflow outlet **404** position.

In some embodiments, the screen **372** is moveable within the opening **374**. For example, as shown, the screen **372** can be configured to slide in a direction that is generally perpendicular to the direction of water flow from an outlet **334** of the warewashing machine. This can facilitate access to the screen **372** and/or allows insertion from above. In some embodiments, the outlet **334** is connected to the warewashing machine with a conduit (e.g., a metal or plastic pipe), such as with a quick disconnect coupling. The conduit can be configured to be pivotally out of the way to allow access to the screen **372**. In some implementations, the conduit can be removed from the warewashing machine, which can aid in accessing the screen **372** or other components of the device **350**, such as for cleaning, maintenance, or other tasks.

In some embodiments, the screen **372** is configured to move (e.g., slide) within the opening **374** from a first position to a second position. The first position of the screen **372** can allow the screen **372** to be below the outlet **334** and receive the water and food scraps released by the warewashing machine. The second position of the screen **372** can allow the screen **372** to be removed from the outlet **334** of the warewashing machine and not receive the water and food scraps released by the warewashing machine. From the second position, the screen **372** can be lifted from the tank **356** without maneuvering the screen **372** around the outlet **334** of the warewashing machine. Maneuvering the screen **372** around the outlet **334** could involve tilting the tray and spilling the collected food scraps. In some configurations, when the screen **372** is in the second position away from the warewashing machine outlet **334**, an additional screen can be placed in the opening **374** below the warewashing

machine outlet **334**. In some configurations, the opening **374** is between about 1.25 times and about 3 times the area of the screen **372**. In some configurations, the opening **374** is about 1.3 times the area of the screen **372**.

In the embodiment shown in FIG. **9**, the screen **372** is in the first position and in a position to receive the water and food scraps from the outlet **334** of the warewashing machine. In the illustrated configuration, the screen **372** is moveable in a linear direction between the left wall **368** and the right wall **370**. In some configurations, the screen **372** can be moveable in a nonlinear direction, such as being configured to be rotated between the first and second positions. In some configurations, the screen **372** can be moveable between the front wall **364** and the rear wall **366**. In some embodiments, the screen **372** is configured to be removed from (e.g., lifted out of) the opening **374**.

The screen **372** can comprise a plurality of screen elements and/or types, such as two, three, four, or more screen elements. For example, the screen **372** can include a coarse screen, which limits passage of larger particles, and a fine screen, which limits passage of finer particles (e.g., tomato skins, rice, etc.). This can reduce the chance of clogging the pre-rinse station or other components. In some applications, the fine screen incorporates a mesh, such as a stainless steel mesh. In some applications, the mesh has sufficiently small openings such that almost no rice can pass through the mesh intact. The screen elements can have the same or substantially similar shapes and/or sizes. In some variants, the screen elements can have differing shapes and/or sizes.

It may be advantageous to arrange the screen elements in series (e.g., on top of each other), such that the screens **372** are at least partially overlapping each other. This could be advantageous when one screen **372** is a coarse screen and another is a fine screen. The ability to layer the screens **372** allows the user to adjust the amount of filtering. For example, a user may not desire a high level of filtering. The user can move the fine screen to the other side of the opening so that the water from the warewashing machine outlet **334** does not pass through the fine screen. The user can leave the coarse screen in the opening so that the water from the warewashing machine outlet **334** passes through the coarse screen before entering the tank **356**.

It may be advantageous to arrange the screen elements in parallel (e.g., side-by-side or partially overlapping). For example, this could be advantageous when a screen **372** becomes full or nearly full of food scraps. The full screen **372** can be slid out from under the warewashing machine outlet **334** and an empty screen **372** placed under the warewashing machine outlet **334**.

In some embodiments, the device **350** includes a substantially and/or generally unimpeded bottom. For example, as shown in FIG. **9**, some embodiments have no conduits, pipes, or outlets connected to and/or extending along and/or below the bottom of the tank **356**. This can facilitate cleaning under the warewashing machine, such as with a mop.

The tank **356** can include an overflow outlet **404**. In some embodiments, the height of the overflow outlet **404** above the bottom of the tank **356** correlates to the highest desired water level. The overflow outlet **404** can be positioned on the upper half of one or more of the sides of the tank (e.g., front, rear, right, or left walls). In the illustrated configuration, the overflow outlet **404** is positioned on an upper portion of the left wall **368**.

The overflow outlet **404** can direct any overflow fluid to a suitable drain location (e.g., a drain in a sink or a floor drain). In the illustrated configuration, the overflow outlet **404** connects with an overflow conduit **405**, which in turn connects with a drain conduit **407** in fluid communication with a drain outlet **424** of the tank **356**. This can obviate the need for a pump, sensors, or other mechanical components to maintain the water level below a maximum and/or desired level. In some configurations, the overflow conduit **405** can be connected so as to direct the overflow fluid towards the pre-rinse unit **314**.

The drain outlet **424** can be located on one or more sides of the tank **356**. In the illustrated configuration, the drain outlet **424** is located on the same side as the overflow outlet **404**. In some configurations, the drain outlet **424** and the overflow outlet **404** are located on different sides of the tank **356**. The drain outlet **424** can be sufficiently low relative to an inner bottom of the tank **356**. For example, in some configurations, the drain outlet **424** is located on the lower half of a side wall. A low position of the drain outlet **424** can aid in draining the tank and/or can increase the available water for use.

In the illustrated configuration in FIGS. **9** and **10**, the drain conduit **407** includes a valve **466**, such as a manually operated ball valve. The valve **466** can be closed to maintain the water in the tank **356** and can be opened to allow the water to exit the tank **356**. The drain conduit **407** can direct the water to a suitable drain location (e.g., a drain in a sink or a floor drain), which can be plumbed to the sewer system. In some configurations, the drain conduit **407** can direct the gray water towards the pre-rinse unit **314**. In some configurations, the drain conduit **407** connects to a pump, such as to pump, drain, and/or overflow fluid to another location.

In some configurations, the device **350** includes a gray water outlet **422**. The outlet **422** can be configured to provide gray water from the tank **356** to the pre-rinse unit **314** via one or more conduits, such as is shown in FIG. **10**. The outlet **422** can be located on the same side as the drain outlet **424**. The outlet **422** and the drain outlet **424** can be located on different sides. In some configurations, the outlet **422** can be located on the opposite side of the tank **356** as the drain outlet **424**.

In some embodiments, a pump **430** can drive the water from the outlet **422** towards the pre-rinse unit **314**. An outlet of the pump **430** can be connected to the inlet of the pre-rinse unit **314**. As previously described, the pump **430** can be positioned in an enclosure, such as is shown in FIG. **9**. In some embodiments, the pump **430** is a dry pump, such that the pump **430** does not need to be primed and/or is configured to operate without liquid being present.

The pump **430** can be connected to a switch **446**. The switch **446** can have any suitable configuration. In some configurations, the switch **446** can be water tight or suitably rated for water use. The switch **446** can be used to supply power to and remove power from the pump **430**. As such, a power supply cord can be connected to the switch **446**. Any suitable power supply cord can be used and any suitable power supply can be provided to the pump **430**. In some configurations, the pump **430** can be powered by one or more batteries.

In some configurations, the transfer portion **354** and the holding portion **352** of the auxiliary device **350** are elevated above the floor. This can facilitate cleaning beneath the auxiliary device **350** (e.g., with a broom or mop) and/or can aid in satisfying certain health codes. For example, as shown in FIG. **9**, the tank **356** can be spaced apart from the floor by a frame **460**. The frame **460** can comprise a plurality of legs **461**, such as one leg at each corner of the tank. In various embodiments, the legs **461** comprise rigid members, such as beams. In some configurations, a bottom **362** of the tank **356**

is raised to be at least 2 inches above the floor. In some configurations, the bottom **362** of the tank **356** is raised to be at least 6 inches above the floor. Other heights are also possible.

In the illustrated configuration, in FIG. **9**, the outlets are located on the side(s) of the tank **356**. This can allow the tank **356** to have a substantially continuous bottom outer surface **362**. In some configurations, the bottom outer surface of the tank **356** can be substantially flat. In some configurations, the bottom outer surface of the tank **356** can be sloped, rounded, or the like. In some configuration, the bottom of the tank **356** can be completely continuous with no openings. In other words, the bottom **362** of the tank **356** is an uninterrupted surface, such that there are no openings, outlets, or pipes along the bottom **362** of the tank **356**.

Some health code regulations require a minimum height for the outlet **422** and/or outlet **424**. By having the outlet located on the side of the tank **356**, the bottom **362** of the tank **356** can be lower than in configurations when the outlet is located on the bottom **362** of the tank **356**. The bottom **362** of the tank **356** can be under 2 inches above the floor, when the outlet is placed on the side of the tank **356**. The drain outlet **424** is preferably placed on the lower half of a side wall of the tank **356** to aid in emptying the tank **356**, which can aid in emptying the tank **356**.

As illustrated in FIG. **9**, the device **350** can comprise a protective enclosure **472**, such as a metal or plastic box. The enclosure **472** can house and protect certain components of the auxiliary device **350**. For example, the pump **430** can be positioned in the enclosure **472**. This can reduce the chance that kitchen workers will inadvertently contact the pump **430**, which could result in harm to the workers and/or the pump **430**. In various embodiments, the enclosure **472** can connect with one or more of the legs **461** and/or a base **462** of the frame **460**, such as with welds, fasteners, or otherwise.

Some embodiments are configured to introduce and/or mix a treatment agent into the flow of gray water before being dispensed at the pre-rinse unit **314**. For example, as illustrated in FIG. **10**, some embodiments include a valve **406** between the auxiliary device **350** and the pre-rinse unit **314** that allows a flow of the treatment agent to be added to the flow of gray water. The treatment agent can be bleach, a chemical sanitizer, softeners, soaps, or otherwise.

In some configurations, the valve **406** comprises a three-way valve. As shown in FIG. **10**, a first inlet of the valve **406** can be fluidly connected to the auxiliary device **350**. In some configurations, the pump **430** drives water from the tank **356** and into the first inlet of the valve **406**. In various embodiments, the pump **430** can drive the fluid from an outlet of the valve **406** towards the pre-rinse unit **314**.

A second inlet of the valve **406** can be connected to a treatment agent container **408**, such as through a tube or other conduit. The treatment agent container **408** can have any suitable shape, size, and configuration. In some configurations, the shape and sizing of the treatment agent container **408** is less important than the internal volume of the container **408**. For example, the treatment agent container **408** may be designed to hold the amount of treatment agent needed for one cycle of warewashing, one work day worth of cycles, one work week, or the like. In some configurations, the treatment agent container **408** can be a reusable, refillable container. In some configurations, the treatment agent container **408** is translucent to provide visual confirmation of the contents of the container **408**. While the illustrated treatment agent container **408** is separate of the auxiliary device **350**, it is possible to integrate the treatment agent container **408** into the auxiliary device **350**.

The size and shape of the treatment agent container **408** can be determined based upon the application. In some embodiments, the treatment agent container **408** is configured to be positioned under one or more of the pre-rinse station, the warewashing machine, and/or the auxiliary device **350**. The treatment agent container **408** can be designed to be placed on the floor, elevated off the floor, about level with the sink, or above the sink, depending on the spatial needs of the user. There may be local health codes that regulate the location of the treatment agent container **408**.

Some embodiments include a selector **418** in the fluid flow path between the valve **406** and the treatment agent container **408**. In some configurations, the selector **418** is an adjustable valve. The selector **418** can be configured to vary and/or select the amount of treatment agent that is dispensed from the treatment agent container **408**. The selector **418** controls the amount of treatment agent that enters the valve **406**. For example, in some implementations, when the selector **418** is in an open position, the treatment agent container **408** dispenses an amount of treatment agent, and when the selector **418** is in a closed position, the treatment agent container **408** prohibits flow of treatment agent. When the selector **418** is open and the pre-rinse unit **314** is in use, there is a continuous flow of treatment agent into the valve **406**.

Treatment agent from the second inlet of the valve **406** can be introduced and/or mixed with the flow of gray water. In some implementations, the flow of gray water causes a decrease in pressure through the valve **406**. This can automatically pull the treatment agent into the valve **406** by the Venturi effect, thereby reducing or eliminating the need for a pump between the treatment agent container **408** and the valve **406** and/or the pre-rinse unit **314**.

With continued reference to FIG. **10**, the outlet of the valve **406** can be fluidly connected to the pre-rinse unit **314**. In some configurations, the outlet of the valve **406** can be connected to a nozzle, spray head, or the like. In the illustrated configuration, in FIG. **10**, the outlet of the valve **406** connects to a gray water nozzle **325** that is separate from (e.g., spaced apart from) the fresh water nozzle **321**. The fresh water nozzle **321** can be connected to one or more of a hot water supply **322** and a cold water supply **324**. The gray water nozzle **325** can be connected to a valve **315**, which is configured to open and close to allow and disallow gray water to flow out of the nozzle **325**. In some configurations, the valve **315** can be actuated by a foot pedal. In some configurations, the valve **315** can be a foot pedal valve. The fresh water nozzle **321** can be connected to hot and/or cold water faucets. In some configurations, the fresh water nozzle **321** can be connected to a foot pedal valve.

FIG. **11** illustrates another embodiment of a gray water device. As shown, the drain outlet **424** and the overflow outlet **404** are fluidly connected to the valve **406**. In some configurations, a pump (not shown) can aid in encouraging the gray water from the auxiliary device **350** to the pre-rinse station **314**.

Methods of Installation

As discussed above, certain features, aspects and advantages of the present invention relate to the auxiliary device **150** and/or **350** being arranged and configured for installation without significant modification to the warewashing machine **104**. As used herein, "without significant modification" means that the changes are easily reversible (e.g., reversing the changes does not require the use of a welder). For example, simply removing a scrap trap is easily reversible and simply redirecting a conduit through plumbing is

easily reversible. On the other hand, a modification that requires a welding device, a saw, a grinder or the like is not easily reversible.

As such, one method of installation provides a simple connection. The inlet **126** to the pre-rinse unit **114** can be disconnected from the hot and cold water faucets **122**, **124**. The auxiliary device **150** can be moved into position proximate the warewashing station **100**. In configurations having a mounting board, the mounting board can be secured to a desired location (e.g., a wall or other supporting structure). Any connections discussed above (e.g., those with quick-connect fittings) can be made. The auxiliary device **150** can be located such that the drain outlet **140** from the warewashing machine **104** empties into the inlet into the tank **156** (e.g., empties into the fine scrap trap **172**) or the auxiliary device **150** can be located such that the outlet **134** empties into the inlet into the tank **156**. In some techniques, a delivery conduit can be provided to transport the flow from the outlet **134** to the inlet and into the tank **156**.

The first inlet **126** of the pre-rinse unit **114** can be connected to the delivery conduit **236**. A second inlet of the pre-rinse unit **114** can be connected to the check valve **280**. The check valve **280** and/or the fresh water supply assembly **210** can be connected to a source of water, such as one or both of the hot and cold water faucets **122**, **124**. In some configurations, because the pre-rinse unit **114** is disconnected from the public water supply, any low-flow nozzle can be removed and a high-flow (or normal flow) nozzle can be installed in the place of the low-flow nozzle. The outlet conduit **202** of the water level control assembly **200** can be positioned over a floor sink or floor drain. The pump **230** can be connected to an electrical supply. With these very few connections made, the tank **156** can be primed using the fresh water supply assembly **210** and then operations can commence using the gray water captured from the warewashing machine **104** beginning with the second cycle. The selector **280** can be adjusted to vary the amount (e.g., relative percentages) of gray water and fresh water dispensed from the pre-rinse unit **114**. In some embodiments, the selector **280** can be adjusted to provide a blend of gray water and fresh water.

At the end of operations (e.g., the end of the work day), the contents of the tank **156** can be drained through the pre-rinse unit **114** and/or the spigot **226**. Once drained, the auxiliary device **150** can be moved out from beneath the warewashing station **100** to allow cleaning beneath that warewashing station **100**. In addition, the fine scrap trap **172** can be removed from the opening **174**. The opening **174** advantageously can be sized and configured to allow an operator to reach inside of the tank **156** to dry and clean the inside of the tank **156**. Moreover, the opening **174** can be configured to allow visual confirmation that the tank **156** has been cleaned and dried.

In some embodiments, a method of installation includes disconnecting the inlet of the pre-rinse unit **314** from hot and/or cold water conduits **322**, **324**. In some installations, the pre-rinse unit **314** can remain connected to the hot and/or cold water conduits **322**, **324**. In some implementations, the method includes providing the pre-rinse unit **314** with a second output, such as a spray nozzle **325**. In some embodiments, the method includes maintaining flows of potable fresh water and gray water separate (e.g., not mixed until after being dispensed from respective nozzles). In some configurations, because the spray nozzle **325** is not connected from the public water supply, any low-flow nozzle can be removed and a high-flow (or normal flow) nozzle can be installed in the place of the low-flow nozzle. A foot pedal can be installed to control the flow out of the nozzle. The foot pedal can be positioned on or near the floor. The foot pedal can be positioned in a place convenient for the user to access while using the pre-rinse station.

The auxiliary device **350** can be moved into position proximate the warewashing station. The auxiliary device **350** can be located such that the drain outlet **334** from the warewashing machine empties into the inlet **374** into the tank **356** (e.g., empties into the screen **372**). In some embodiments, a delivery conduit can be provided to transport the flow from the outlet **334** to the inlet **374** and into the tank **356**.

The overflow outlet **404** can be positioned over a floor sink or floor drain. The pump **430** can be connected to an electrical supply. As mentioned above, the pump **430** can be a dry pump, which can eliminate the need to add liquid into the tank **356** to prime the pump. The treatment agent container **408** can be connected to the valve **406**, such as with a flexible or rigid tube. The selector **418** can be adjusted to vary the amount (e.g., mL/min) of treatment agent dispensed from the treatment agent container **408**. In some embodiments, the method includes positioning the treatment agent container **408** underneath the tank **356**.

Operations can commence using the gray water captured from the warewashing machine. In some implementations, using the gray water begins with the second cycle of the warewashing machine, since some warewashing machines will not dispense gray water into the tank **356** until after the first cycle. In various embodiments, the gray water can be dispensed from the warewashing machine into the tank **356**. When the nozzle **325** is activated (e.g., opened), the gray water flow out of the outlet **422**, through the valve **406**, and to the nozzle **325**. As previously discussed, the gray water can be mixed with the treatment agent at or near the valve **406**.

At the end of operations (e.g., the end of the work day), the contents of the tank **356** can be drained through the pre-rinse unit **314** and/or the drain outlet **424**. Once drained, the auxiliary device **350** can be moved out from beneath the warewashing station to allow cleaning beneath that warewashing station. The auxiliary device **350** need not be moved since it can have a continuous bottom surface that is easier to clean under. The screen **372** can be removed from the opening **374**. The opening **374** advantageously can be sized and configured to allow an operator to reach inside of the tank **356** to dry and clean the inside of the tank **356**. Moreover, the opening **374** can be configured to allow visual confirmation that the tank **356** has been cleaned and dried. The illustrated configuration in FIG. **9** has a large opening that is larger than the screen **372**, which can ease cleaning and visual confirmation.

The methods described above can be implemented using either the auxiliary device **150** or the auxiliary device **350**. In use, the auxiliary device can save water as well as gas and/or electricity. First, by capturing the gray water from the commercial warewashing machine, the auxiliary device significantly decreases the amount of water used in the warewashing process. In addition, because fresh water is not being used by the pre-rinse station, the fresh water need not be heated, which saves gas and/or electricity that would be used to heat the fresh water supply. Because the gray water has a sufficiently elevated temperature for pre-rinsing, the gray water does not require further heating. The savings for a commercial food service facility can easily exceed $55,000 per year.

Certain Terminology

Terms of orientation used herein, such as "top," "bottom," "horizontal," "vertical," "longitudinal," "lateral," and "end" are used in the context of the illustrated embodiment. However, the present disclosure should not be limited to the illustrated orientation. Indeed, other orientations are possible and are within the scope of this disclosure. Terms relating to circular shapes as used herein, such as diameter or radius, should be understood not to require perfect circular structures, but rather should be applied to any suitable structure with a cross-sectional region that can be measured from side-to-side. Terms relating to shapes generally, such as "circular" or "cylindrical" or "semi-circular" or "semi-cylindrical" or any related or similar terms, are not required to conform strictly to the mathematical definitions of circles or cylinders or other structures, but can encompass structures that are reasonably close approximations.

Conditional language, such as "can," "could," "might," or "may," unless specifically stated otherwise, or otherwise understood within the context as used, is generally intended to convey that certain embodiments include or do not include, certain features, elements, and/or steps. Thus, such conditional language is not generally intended to imply that features, elements, and/or steps are in any way required for one or more embodiments.

Conjunctive language, such as the phrase "at least one of X, Y, and Z," unless specifically stated otherwise, is otherwise understood with the context as used in general to convey that an item, term, etc. may be either X, Y, or Z. Thus, such conjunctive language is not generally intended to imply that certain embodiments require the presence of at least one of X, at least one of Y, and at least one of Z.

The terms "approximately," "about," and "substantially" as used herein represent an amount close to the stated amount that still performs a desired function or achieves a desired result. For example, in some embodiments, as the context may dictate, the terms "approximately", "about", and "substantially" may refer to an amount that is within less than or equal to 10% of the stated amount. The term "generally" as used herein represents a value, amount, or characteristic that predominantly includes or tends toward a particular value, amount, or characteristic. As an example, in certain embodiments, as the context may dictate, the term "generally parallel" can refer to something that departs from exactly parallel by less than or equal to 20 degrees and the term "generally perpendicular" can refer to something that departs from exactly perpendicular by less than or equal to 20 degrees.

Unless otherwise explicitly stated, articles such as "a" or "an" should generally be interpreted to include one or more described items. Accordingly, phrases such as "a device configured to" are intended to include one or more recited devices. Such one or more recited devices can also be collectively configured to carry out the stated recitations. For example, "a processor configured to carry out recitations A, B, and C" can include a first processor configured to carry out recitation A working in conjunction with a second processor configured to carry out recitations B and C.

The terms "comprising," "including," "having," and the like are synonymous and are used inclusively, in an open-ended fashion, and do not exclude additional elements, features, acts, operations, and so forth. Likewise, the terms "some," "certain," and the like are synonymous and are used in an open-ended fashion. Also, the term "or" is used in its inclusive sense (and not in its exclusive sense) so that when used, for example, to connect a list of elements, the term "or" means one, some, or all of the elements in the list.

Overall, the language of the claims is to be interpreted broadly based on the language employed in the claims. The language of the claims is not to be limited to the non-exclusive embodiments and examples that are illustrated and described in this disclosure, or that are discussed during the prosecution of the application.

Summary

Although certain gray water source devices and methods have been disclosed in the context of certain embodiments and examples, this disclosure extends beyond the specifically disclosed embodiments to other alternative embodiments and/or uses of the embodiments and certain modifications and equivalents thereof. Various features and aspects of the disclosed embodiments can be combined with or substituted for one another in order to form varying modes of the invention. The scope of this disclosure should not be limited by the particular disclosed embodiments described herein. Various components may be repositioned as desired. Moreover, not all of the features, aspects and advantages are necessarily required to practice the present invention.

Certain features that are described in this disclosure in the context of separate implementations can also be implemented in combination in a single implementation. Conversely, various features that are described in the context of a single implementation can also be implemented in multiple implementations separately or in any suitable subcombination. Although features may be described above as acting in certain combinations, one or more features from a claimed combination can, in some cases, be excised from the combination, and the combination may be claimed as any subcombination or variation of any subcombination.

Moreover, while operations may be described and/or depicted in a particular order, such operations need not be performed in the particular order shown or in sequential order, and all operations need not be performed, to achieve the desirable results. Other operations that are not depicted or described can be incorporated in the example methods and processes. For example, one or more additional operations can be performed before, after, simultaneously, or between any of the described operations. Further, the operations may be rearranged or reordered in other implementations. Also, the separation of various system components in the implementations described above should not be understood as requiring such separation in all implementations, and it should be understood that the described components and systems can generally be integrated together in a single product or packaged into multiple products. Additionally, other implementations are within the scope of this disclosure.

Some embodiments have been described in connection with the accompanying drawings. The figures are drawn to scale, but such scale should not be limiting, since dimensions and proportions other than what are shown are contemplated and are within the scope of the disclosed invention. Distances, angles, etc. are merely illustrative and do not necessarily bear an exact relationship to actual dimensions and layout of the devices illustrated. Components can be added, removed, and/or rearranged. Further, the disclosure herein of any particular feature, aspect, method, property, characteristic, quality, attribute, element, or the like in connection with various embodiments can be used in all other embodiments set forth herein. Additionally, any methods described herein may be practiced using any device suitable for performing the recited steps.

In summary, various embodiments and examples of receptacle assemblies have been disclosed. Although the receptacle assemblies have been disclosed in the context of

those embodiments and examples, this disclosure extends beyond the specifically disclosed embodiments to other alternative embodiments and/or other uses of the embodiments, as well as to certain modifications and equivalents thereof. This disclosure expressly contemplates that various features and aspects of the disclosed embodiments can be combined with, or substituted for, one another. Thus, the scope of this disclosure should not be limited by the particular disclosed embodiments described above, but should be determined only by a fair reading of the claims that follow.

The following is claimed:

1. A method of installing a gray water system for water-efficient rinsing of dishes, the method comprising:

obtaining the gray water system, the gray water system comprising:

a gray water tank comprising an inlet and an outlet, the gray water tank configured to contain a volume of gray water; and

an electric pump;

positioning the gray water tank under a commercial warewashing machine and such that the gray water tank is separate from the warewashing machine;

fluidly connecting the gray water tank and the warewashing machine such that gray water discharged from the warewashing machine passes through an air gap between the gray water tank and the warewashing machine and into the inlet of the gray water tank with no physical components interposed therebetween, wherein the grey water does not mix with fresh water in the grey water tank.

2. The method of claim **1**, further comprising:

installing a nozzle at a pre-rinse station that is separate from the warewashing machine; and

fluidly connecting the nozzle to the electric pump such that the gray water can be pumped from the gray water tank to the nozzle and dispensed outside of the warewashing machine and the grey water tank.

3. The method of claim **2**, further comprising installing a foot pedal that actuates a valve to control flow from the nozzle.

4. The method of claim **1**, further comprising positioning a scrap trap in the inlet.

5. The method of claim **1**, wherein the gray water tank receives the gray water directly from the warewashing machine.

6. The method of claim **1**, further comprising installing a delivery conduit that transports gray water partly between the warewashing machine and the gray water tank.

7. The method of claim **1**, wherein the installation is performed without significant modification to the warewashing machine.

8. The method of claim **1**, further comprising elevating the gray water tank above a floor.

9. The method of claim **1**, wherein positioning the gray water tank under the warewashing machine comprises positioning the gray water tank directly under the warewashing machine.

10. The method of claim **1**, further comprising positioning the electric pump under the warewashing machine.

11. A water-efficient method of cleaning dishes in a kitchen, the method comprising:

(1) receiving soiled dishes;

(2) rinsing the soiled dishes with gray water from a gray water tank;

(3) loading the rinsed dishes into a commercial warewashing machine;

(4) operating the warewashing machine to clean the loaded dishes;

(5) discharging gray water out of the warewashing machine;

(6) passing the gray water through an air gap with no physical components interposed therebetween;

(7) receiving the gray water through an inlet in the gray water tank;

(8) collecting the gray water in the gray water tank, wherein the grey water collected in the grey water tank is not the grey water used to rinse the soiled dishes in step (2); and

(9) repeating steps (1)-(8).

12. The method of claim **11**, wherein rinsing the soiled dishes further comprises pumping, with an electric pump, gray water out of the gray water tank.

13. The method of claim **12**, wherein rinsing the soiled dishes further comprises operating a nozzle at a pre-rinse station that is separate from the warewashing machine.

14. The method of claim **13**, wherein rinsing the soiled dishes further comprises operating a foot pedal to actuate a valve to control flow from the nozzle.

15. The method of claim **11**, wherein receiving the gray water through an inlet in the gray water tank further comprises passing the gray water through a scrap trap.

16. The method of claim **13**, further comprising discharging potable fresh water from a second nozzle at the pre-rinse station, and maintaining the potable fresh water separate from the gray water at the pre-rinse station until after dispensation from the respective nozzle or second nozzle.

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