

EXHIBIT 1

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

WHIRLPOOL CORPORATION,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD. and
SAMSUNG ELECTRONICS AMERICA, INC.,

Defendants.

Civil Action No. 2:25-cv-01042-JRG-RSP

JURY TRIAL DEMANDED

**EXPERT DECLARATION OF DR. KIMBERLY K. CAMERON REGARDING
NON-INFRINGEMENT AND INVALIDITY OF THE ASSERTED PATENTS**

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I. INTRODUCTION

1. My name is Dr. Kimberly K. Cameron. I have been retained to provide this declaration on behalf of Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, “Samsung” or “Defendant”) in connection with the above-captioned case. If called to testify as to the contents of this declaration, I can and will testify truthfully and competently.

2. I understand that Whirlpool Corporation (“Whirlpool” or “Plaintiff”) has accused certain dishwashers manufactured by Samsung and including a top rack capable of holding both drinkware and silverware, including Samsung’s 38 dBA Bespoke Smart Dishwasher with 3rd Rack Washing System (“Accused Products”), of infringing Claims 17-21 of U.S. Patent No. 10,512,385 (“the ’385 Patent”), and Claims 14-15 of U.S. Patent No. 12,232,681 (“the ’681 Patent”) (collectively, “Asserted Claims” of the “Asserted Patents”).

3. I further understand that Whirlpool has filed a Motion for Preliminary Injunction, seeking to enjoin Samsung from offering the Accused Products for sale in the United States, while its case is pending. I understand that, with its Motion, Whirlpool filed an expert declaration by Dr. Emady Tanbour (“Tanbour Declaration”), primarily addressing alleged infringement by the Accused Products.

A. Background And Qualifications

4. I am a Principal Engineer at Engineering Systems Incorporated (ESi), a leading scientific and engineering firm. I specialize in mechanical engineering, materials science and metallurgy, and have extensive experience with materials evaluation, mechanical design, mechanical testing, stress analysis, failure analysis, fatigue analysis, and fracture mechanics.

5. I graduated with high honors from Princeton University with a degree in Mechanical Engineering and minors in Materials Science, Applied Mathematics and Engineering Physics. I have also received a master’s and doctorate in Mechanical Engineering with a minor in

Materials Science and Engineering from Stanford University. I have received numerous awards including fellowships from the Department of Defense, the National Science Foundation, and Lucent Technologies. I am a Registered Professional Engineer in both Mechanical Engineering and Metallurgy in the State of California. I am also a registered patent agent. I have taught classes for engineers studying to take the fundamentals of engineering exam and the licensing exam for mechanical engineering.

6. Throughout my career, I have applied my deep understanding of the fundamentals of metallurgy, materials science, engineering physics, computational mathematics, and engineering mechanics to help understand and solve complex problems. Particularly relevant to my declaration here, I have worked on numerous projects for various consumer products. For example, I have experience with dishwashers, refrigerators, washing machines, irons, as well as various consumer electronics and medical devices. Further details about my education and professional experience is found in my current curriculum vitae, attached hereto as Ex. A.

B. Compensation

7. I am being compensated at my usual rate of \$590 per hour, for my analysis. My compensation does not depend on the outcome of this proceeding.

C. Materials Considered

8. In preparing this declaration, I have considered the Asserted Patents, including their specifications, claims, and figures; the references cited by the Asserted Patents; the prosecution histories of the Asserted Patents, the prior art references I identify in this declaration; documents concerning the Accused Products; and the Tanbour Declaration (including all materials cited therein). In addition, my opinions are further based on my education, training, experience, and knowledge in the relevant field.

II. SUMMARY OF OPINIONS

9. This declaration sets forth the opinions I have formed, the conclusions I have reached, and the bases for each. The following is a summary of my opinions set forth in this declaration.

10. First, it is my opinion that Samsung does not infringe any of the Asserted Claims of the Asserted Patents. In particular, there is no infringement because Samsung's Accused Products do not satisfy at least the following limitations of the independent Asserted Claims, and Whirlpool and the Tanbour Declaration have failed to demonstrate otherwise:

- '385 Patent (limitations below are in independent Claim 17 and incorporated in dependent Claims 18-21):
 - “an upwardly angled portion formed in the bottom wall ... and terminating at the side wall”;
 - “a spray tube having nozzles”; and
 - “a curved mounting portion adjacent which the spray tube is mounted.”
- '681 Patent (limitations below are in independent Claim 14 and incorporated in dependent claim 15):
 - “at the second end of the dishrack, a second portion is angled with respect to the first portion and defining a depression.”

11. Second, it is my opinion that the Asserted Claims of the Asserted Patents are anticipated under 35 U.S.C. § 102, and/or would have been obvious under 35 U.S.C. § 103 on the following grounds:

- '681 Patent:
 - Claims 14 and 15 of the '681 Patent are anticipated by and/or obvious over Carr;

- Claims 14 and 15 of the '681 Patent are anticipated and/or obvious in view of the Bosch 800 Series Dishwasher; and
- Claims 14 and 15 of the '681 Patent are obvious over Mailander in view of Cao.
- '385 Patent:
 - Claims 17 and 21 of the '385 Patent are obvious over Bosch in view of Ochoa; and
 - Claims 18-20 of the '385 Patent are obvious over Bosch in view of Ochoa and Schessl.

III. THE ASSERTED PATENTS

12. The Asserted Patents are both directed to certain features of a dish rack for use within a conventional dishwasher. Specifically, the Asserted Patents describe structural aspects of an upper or “third” rack (highlighted in Figure 1 of each patent, below), such as the shape of the bottom wall and the placement of a dedicated spray tube carried with the rack.

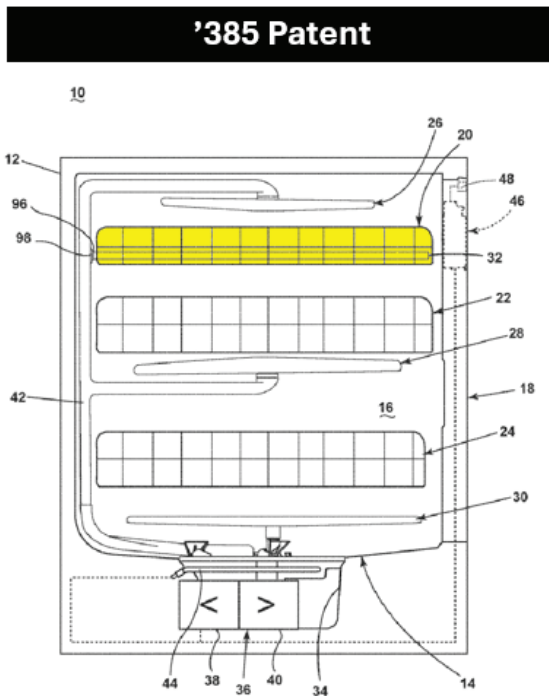


FIG. 1

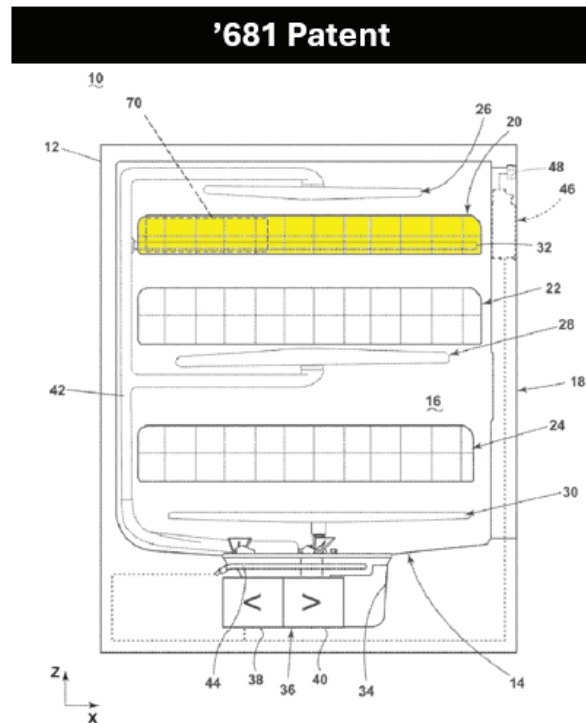


FIG. 1

Thus, the focus of the Asserted Patents is limited to a narrow subset of the overall dishwasher—namely, a single rack within existing, known multiple rack dishwashers that include a conventional tub, spray arms, pumps, and related components. *See, e.g.*, ’385 Patent, 1:24-25 (admitting, in the “Background” section, that three-rack dishwashers were known); ’681 Patent, 1:28-32 (same).

A. The ’385 Patent

1. Overview

13. The ’385 Patent was filed March 30, 2018, published August 9, 2018, and issued December 24, 2019. ’385 Patent, Cover. The ’385 Patent claims priority, through a chain of continuation applications, to Provisional Appl. No. 61/946101 (“the ’101 Provisional”), filed February 28, 2014.¹

14. The ’385 Patent is directed to a dishwasher rack for holding glasses. ’385 Patent, Title. The patent expressly acknowledges that household dishwashers with upper, middle, and lower racks were already known in the art, but asserts that the upper racks in such three-rack dishwashers were typically used only to hold “silverware and other low profile utensils.” ’385 Patent, 1:24-25. The patent purports to improve upon such known “third” racks by configuring the disclosed rack to accommodate glassware positioned at an incline, and by mounting one or more spray tubes to the rack, to direct washing liquid into the interiors of those glasses using nozzles on the tube(s). ’385 Patent, 8:59-9:13, 9:23-43.

¹ In my opinion, the Asserted Claims of the ’385 Patent are not entitled to the priority date of the ’101 Provisional. As Dr. Tanbour acknowledges, the “dish rack” recited in Claim 17 corresponds to the embodiment depicted in Figures 8 and 9 of the ’385 Patent. *See* Tanbour Decl., ¶ 25. But those Figures 8 and 9 were not present in the ’101 Provisional. *See* Ex. B (’101 Provisional). Rather, Figures 8 and 9 (along with the accompanying text in the specification) first appeared in U.S. Patent Appl. No. No. 14/620,688, filed Feb. 12, 2015, and which was the first utility application in the patent family. Accordingly, the Asserted Claims of the ’385 Patent are entitled to a priority date no earlier than February 12, 2015. Regardless, the priority date issue need not be resolved at this stage, as the prior art references I rely upon in this declaration are prior art to the ’385 Patent, even assuming the earlier filing date of the ’101 Provisional.

15. I understand that Whirlpool has accused Samsung of infringing Claims 17-21 of the '385 Patent. These claims are reproduced below:

17. A dishwasher, comprising:

a tub defining a treating chamber receiving dishes for treatment;

a spray system providing treating liquid to the treating chamber;

and

a dish rack located in the tub and selectively moveable into and out of the tub, the dish rack having a bottom wall, a side wall extending upwardly from the bottom wall and terminating in an upper edge, with an upwardly angled portion formed in the bottom wall comprising a plurality of spaced apart inclined portions forming the bottom wall and terminating at the side wall, wherein two adjacent inclined portions of the plurality of spaced apart inclined portions are configured to cradle a glass at an inclined angle and prevent the glass from rolling and a contoured portion formed in the bottom wall configured to prevent glasses from sliding down the inclined angle; and

a spray tube having nozzles emitting spray along the angled portion;

wherein the contoured portion is further configured to form a curved mounting portion adjacent which the spray tube is mounted such that the spray tube is carried with the dish rack.

18. The dishwasher of claim 17 wherein the dish rack is a low profile dish rack where the length of the angled portion is greater than a shortest height of an upstanding portion of the side wall.

19. The dishwasher of claim 18 wherein at least one of the nozzles is located above a portion of the angled portion.

20. The dishwasher of claim 18 wherein the shortest height is located along a portion of the side wall transverse to the angled portion.

21. The dishwasher of claim 17 wherein at least one of the nozzles is located above a portion of the angled portion.

16. I agree with Dr. Tanbour that these Asserted Claims correspond to the embodiments illustrated in Figures 1, 8, and 9 of the '385 Patent. *See* Tanbour Decl., ¶ 25.

17. For instance, as illustrated below, Figure 1 depicts the “dishwasher,” “tub,” and “spray system,” recited in Claim 17:

a spray system providing treating liquid to the treating chamber; and ...

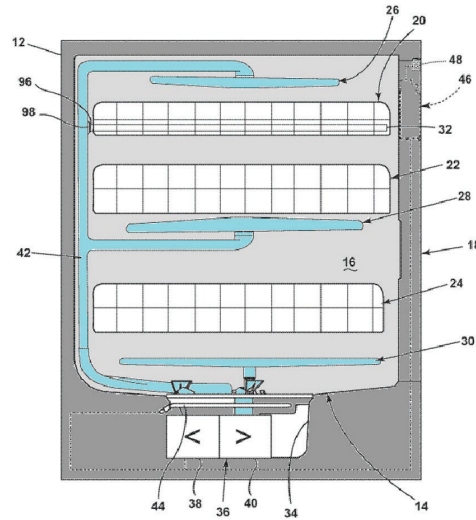


FIG. 1

18. Figures 8 and 9 present two different views of the claimed “dish rack” and “spray tube”:

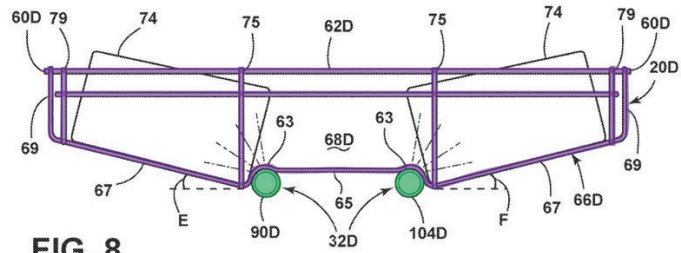


FIG. 8

a spray tube having nozzles emitting spray along the angled portion;

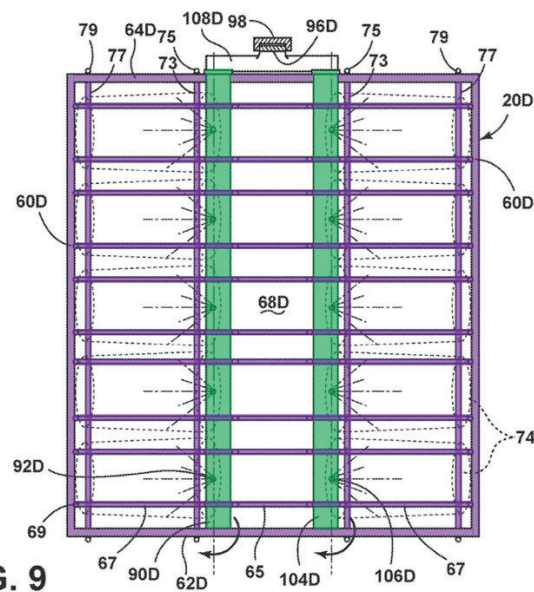
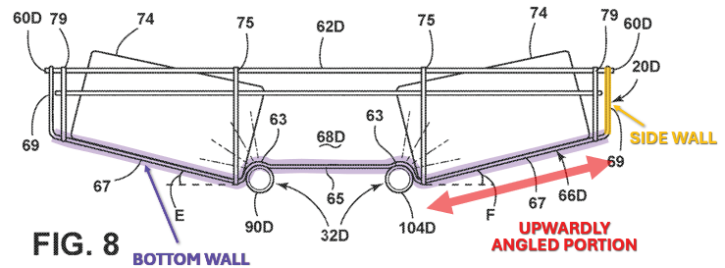
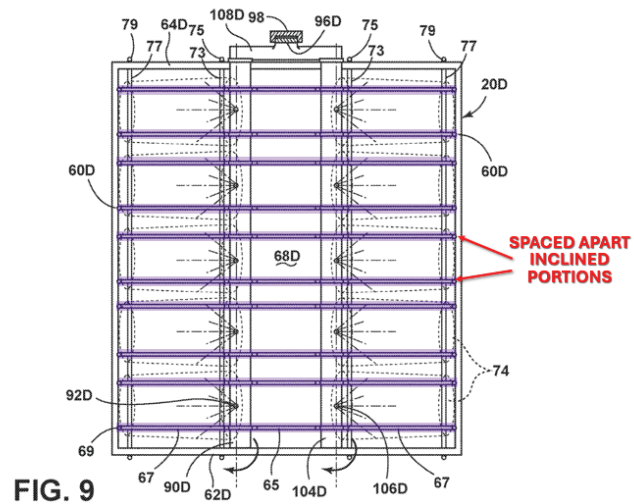


FIG. 9

19. As these figures illustrate, the dish rack includes “an upwardly angled portion formed in the bottom wall” and “terminating at the side wall,” where the upwardly angled portion is formed from “a plurality of spaced apart inclined portions”:

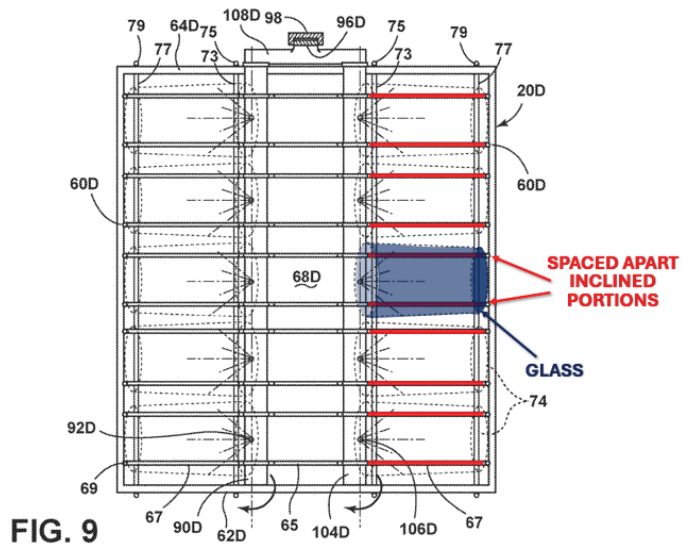


17. A dishwasher, comprising: ...
a dish rack located in the tub ... the dish rack having **a bottom wall, a side wall extending upwardly from the bottom wall** and terminating in an upper edge, with **an upwardly angled portion formed in the bottom wall comprising a plurality of spaced apart inclined portions** forming the bottom wall and terminating at the side wall ...



20. As Figure 9 illustrates, “two adjacent inclined portions of the plurality of spaced apart inclined portions are configured to cradle a glass at an inclined angle and prevent the glass from rolling”:

17. A dishwasher, comprising: ...
a dish rack located in the tub ... with
an upwardly angled portion formed
in the bottom wall comprising a
plurality of spaced apart inclined
portions ... wherein **two adjacent
inclined portions of the plurality
of spaced apart inclined portions**
are configured to cradle **a glass** at
an inclined angle and prevent the
glass from rolling ...



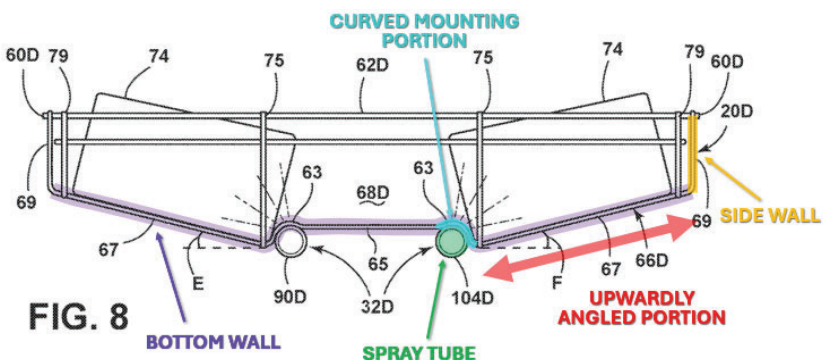
As the '385 Patent explains, two adjacent inclined portions are able to “cradle” a glass, because they are spaced apart such that the glass can rest on both inclined portions:

The opposing inclined portions 67 may form a cradle for each of the glasses 74 to retain the glasses 74 in a particular location and prevent the glasses 74 from rolling within the dish rack 20D, as seen in FIG. 9, where the plurality of opposing inclined portions 67 are *spaced apart to allow the glasses 74 to rest on two adjacent inclined portions 67* in order to prevent the glasses 74 from rolling.

'385 Patent, 8:59-65 (emphasis added).

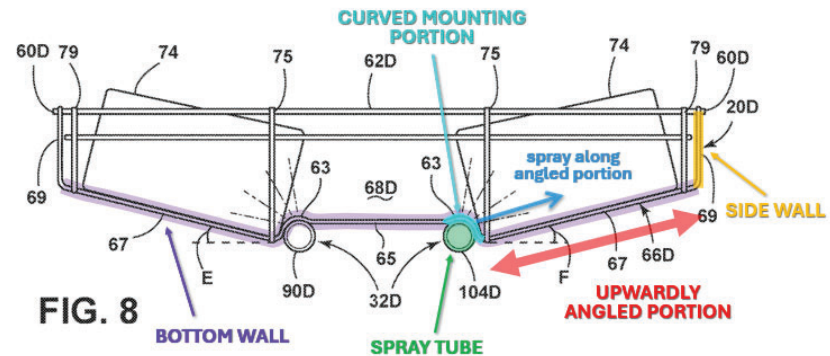
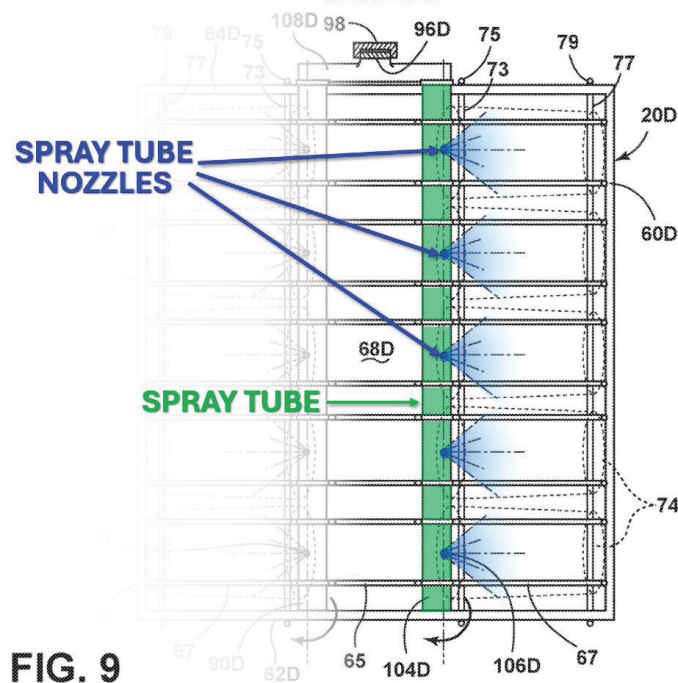
21. Figure 8 illustrates “a contoured portion formed in the bottom wall configured to prevent glasses from sliding down the inclined angle,” “wherein the contoured portion is further configured to form a curved mounting portion adjacent which the spray tube is mounted”:

17. A dishwasher, comprising: ...
a dish rack located in the tub ...
wherein ... a contoured portion
formed in the bottom wall
configured to prevent glasses from
sliding down the inclined angle; and
a spray tube having nozzles
emitting spray along the angled
portion;
wherein **the contoured portion is
further configured to form a
curved mounting portion** adjacent
which the spray tube is mounted
such that the spray tube is carried
with the dish rack.



See also '385 Patent, 8:65-9:1 (“Furthermore, the glasses 74 may abut the curved spray tube mount portions 63 (FIG. 8) to prevent the glasses 74 from sliding down the inclined portions 67.”

22. Finally, Figures 8 and 9 illustrate that the spray tube has “nozzles emitting spray along the angled portion”:



17. A dishwasher, comprising: ...
a spray tube having nozzles
emitting spray along the angled
portion ...

The '385 Patent distinguishes its nozzle-containing spray tube from “other types of sprayers,” such as “rotating spray arms, individual spray nozzles, stationary spray heads with multiple spray nozzles, spray discs, flexible spray tubes, translating front to back sprayers, etc.” '385 Patent, 10:49-53.

2. Prosecution History

23. As originally filed, the application that issued as the '385 Patent—U.S. Patent Appl. No. 15/941,761—included 26 claims. Following an initial rejection, the Applicant added a set of new claims. *See* Ex. C ('385 Prosecution History) at 87-90 (Amendment filed 09/05/2018). New claim 27 corresponds to issued Claim 17. In its initial form, claim 27 recited:

27. (New) A dishwasher comprising:

- a tub defining a treating chamber receiving dishes for treatment;
- a spray system providing treating liquid to the treating chamber; and
- a dish rack located in the tub and selectively moveable into and out of the tub, the dish rack having a bottom wall, a side wall extending upwardly from the bottom wall and terminating in an upper edge, with an angled portion formed in the bottom wall and a contoured portion formed in the bottom wall; and
- a spray tube having nozzles emitting spray along the angled portion;

wherein the contoured portion is configured to form a curved mounting portion adjacent which the spray tube is mounted such that the spray tube is carried with the dish rack.

24. On January 28, 2019, the Examiner rejected claim 27 as obvious over U.S. Patent No. 2,910,207 to Andrew, in view of U.S. Patent Pub. No. 2003/0192578 to Ochoa. *See* Ex. C at 59-78 (Final Office Action dated 01/28/2019). On March 27, 2019, the Applicant amended claim 27 as follows:

27. (Currently Amended) A dishwasher, comprising:

- a tub defining a treating chamber receiving dishes for treatment;
- a spray system providing treating liquid to the treating chamber; and
- a dish rack located in the tub and selectively moveable into and out of the tub, the dish rack having a bottom wall, a side wall extending upwardly from the bottom wall and terminating in an upper edge, with an upwardly angled portion formed in the bottom wall comprising a plurality of spaced apart inclined portions forming the bottom wall and terminating at the side wall, wherein two adjacent inclined portions of the plurality of spaced apart inclined portions are configured to cradle a glass at an inclined angle and prevent the glass from rolling and a contoured portion formed in the bottom wall, configured to prevent glasses from sliding down the inclined angle; and
- a spray tube having nozzles emitting spray along the angled portion;
- wherein the contoured portion is further configured to form a curved mounting portion adjacent which the spray tube is mounted such that the spray tube is carried with the dish rack.

See Ex. C at 57 (Amendment filed 03/27/2019). According to the Applicant, the prior art failed to teach claim 27, as amended, because “[n]either Andrew ’207 nor Ochoa et al ’578 teach the details of upwardly angled portion formed in the bottom wall comprising a plurality of spaced apart inclined portions forming the bottom wall and terminating at the side wall, wherein two adjacent inclined portions of the plurality of spaced apart inclined portions are configured to cradle a glass at an inclined angle and contoured portion.” Ex. C at 52 (Response dated 03/27/2019).

25. Based on Applicant’s argument, the Examiner agreed that amended claim 27 overcame the prior art rejection, as stated in an Office Action dated May 8, 2019. See Ex. C at 34 (Non-Final Office Action dated 05/08/2019). But the Examiner did not allow the claim, instead issuing a Section 112 rejection, on the ground that “[i]t is unclear what is defined by ‘*two adjacent inclined portions of the plurality of spaced apart inclined portions.*’” *Id.* at 32-33.

26. During an interview with the Examiner, the Applicant argued that claim 27 was definite, “in view of FIG. 9.” See Ex. C at 18-21 (Applicant Initiated Interview Summary dated 08/22/2019). The Applicant summarized the Examiner Interview as follows:

As discussed with the Examiner, *the plurality of spaced apart inclined portions is illustrated in FIG. 9* along, for example, the depth of the right hand side of the rack. The plurality of spaced apart inclined portions forming the bottom of the rack from the front of the rack (where labeled in the bottom of the figure as 67) to the back of the rack (close to the numeral 73 at the top of the figure). As illustrated, two adjacent of the plurality of spaced apart inclined portions (front to back in the rack) can retain a glass in the space between the two adjacent portions as illustrated by the phantom glass 74.

Ex. C at 28 (Response dated 07/24/2019). The Examiner subsequently withdrew the Section 112 rejection, and allowed the claims. *See* Ex. C at 8 (Notice of Allowance dated 09/05/2019).

B. The '681 Patent

1. Overview

27. The '681 Patent was filed December 11, 2023, published March 28, 2024, and issued February 25, 2025. '681 Patent, Cover. The '681 Patent claims priority, through two continuation applications, to March 30, 2020. *Id.*

28. Like the '385 Patent, the '681 Patent also purports to address the alleged inability of conventional “third” racks to accommodate anything more than “silverware or other low profile utensils.” '681 Patent, 1:28-32. The patent purports to improve upon such known “third” racks by configuring the disclosed rack to accommodate both utensils and glassware. '385 Patent, 5:55-6:2, 6:9-26.

29. I understand that Whirlpool has accused Samsung of infringing Claims 14-15 of the '681 Patent. These claims are reproduced below:

14. An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within the dish treating chamber having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack, at the first end of the dish rack, the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall and at the second end of the dishrack, a second portion is

angled with respect to the first portion and defining a depression; the depression extending lower than the first portion relative to the peripheral wall;

the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion defining a cup seat for supporting one or more cups in the depression.

15. The automatic dishwasher of claim 14, further comprising a third portion of the bottom wall defined by an angled third planar portion relative to the substantially horizontal first portion and extending across a third portion of the bottom wall;

the third portion connected to and extending from the first portion and angled away from the first portion.

30. I agree with that Dr. Tanbour that these Asserted Claims correspond to the embodiments illustrated in Figures 1 and 3 of the '681 Patent. *See* Tanbour Decl., ¶ 32.

31. For instance, as illustrated below, Figure 1 depicts the overall “dishwasher” and “tub,” recited in Claim 14:

14. An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising: **a tub defining a dish treating chamber;** and ...

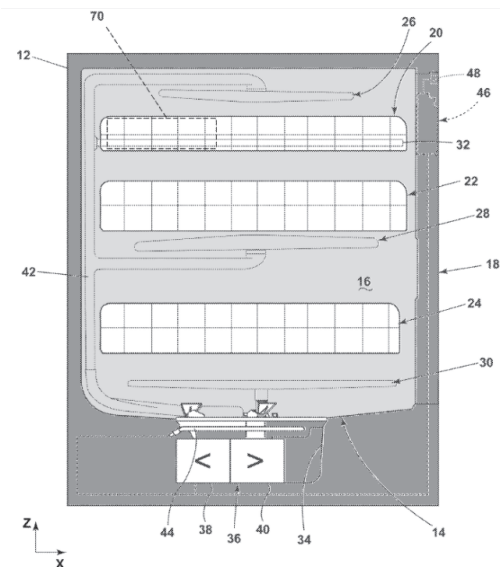


FIG. 1

32. Figure 3 illustrates the claimed “dish rack”:

14. An automatic dishwasher ... comprising: ... **a dish rack** located within the dish treating chamber ...

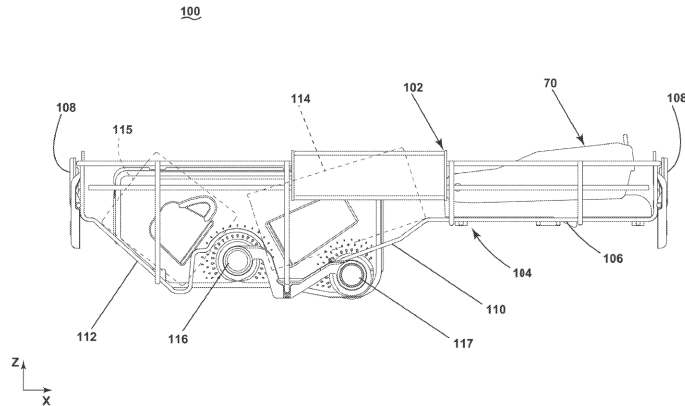


FIG. 3

33. As illustrated in Figure 3, the claimed “dish rack” has “a first end spaced from a second end” and includes “a bottom wall from which extends a peripheral wall defining side walls of the dish rack” (bottom wall is in purple and goes from the two side walls marked in yellow):

14. An automatic dishwasher ... comprising: ...

a dish rack ... having a **first end** spaced from a **second end** and comprising a **bottom wall** from which extends a **peripheral wall** defining **side walls of the dish rack**

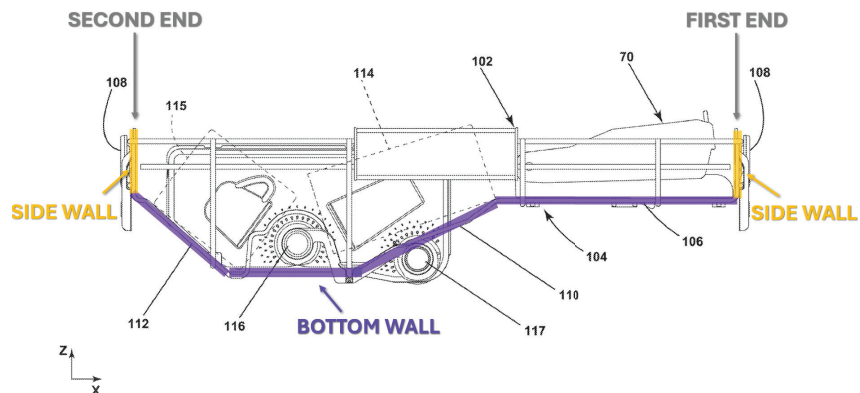


FIG. 3

34. Figure 3 further illustrates that “the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall” (red portion) which supports “a first set of utensil holders for supporting one or more utensils” (shown in pink):

14. An automatic dishwasher ... comprising: ...
a dish rack ... comprising a bottom wall ... at the first end of the dish rack, the bottom wall has **a first portion** defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall ... the first portion supporting **a first set of utensil holders** for supporting one or more utensils...

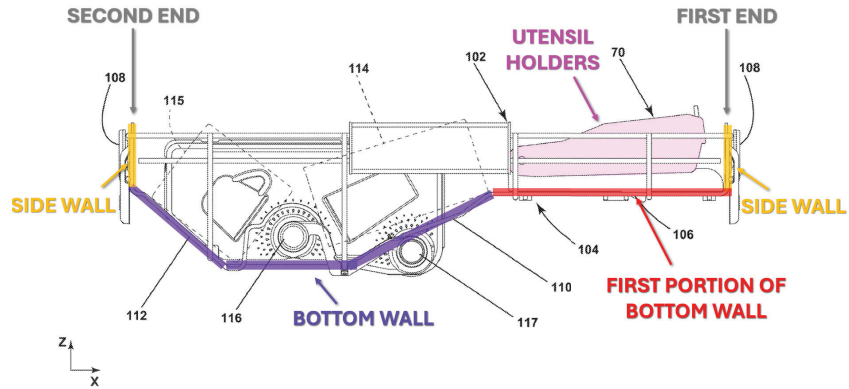


FIG. 3

35. At the second end of the dishrack, “a second portion” (in blue) of the bottom wall “is angled with respect to the first portion,” and defines “a depression” (also in blue) “extending lower than the first portion relative to the peripheral wall,” thereby “defining a cup seat for supporting one or more cups in the depression”:

14. An automatic dishwasher ... comprising: ...
a dish rack ... comprising a bottom wall ... at the second end of the dishrack, **a second portion** is angled with respect to the first portion and defining **a depression**; the depression extending lower than the first portion relative to the peripheral wall; ... the second portion defining **a cup seat** for supporting one or more cups in the depression ...

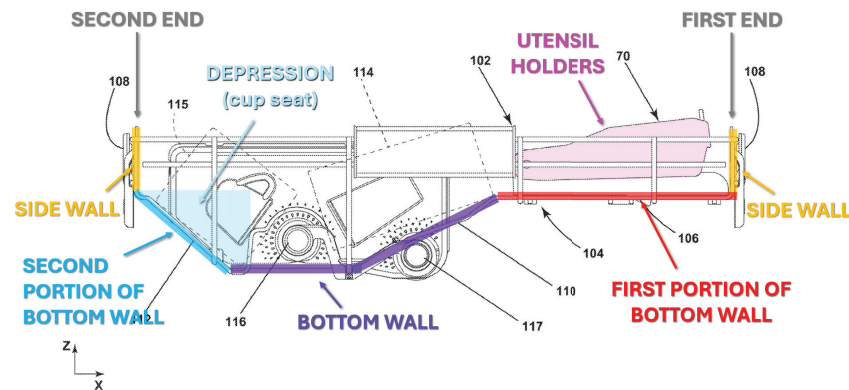


FIG. 3

36. Figure 3 further illustrates “a third portion of the bottom wall defined by an angled third planar portion relative to the substantially horizontal first portion and extending across a third portion of the bottom wall” (in green) where “the third portion [is] connected to and extend[s] from the first portion and angled away from the first portion,” as recited in Claim 15:

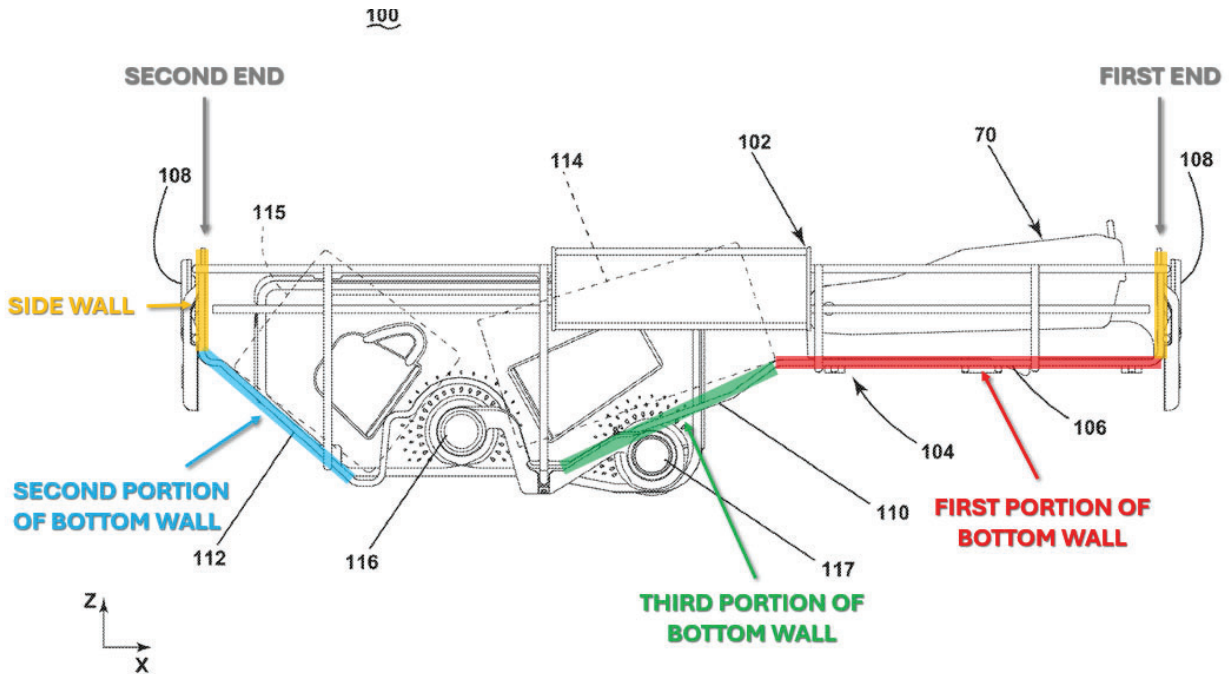


FIG. 3

2. Prosecution History

37. Claim 14 of the '681 Patent corresponds to claim 15 of U.S. Patent Appl. No. 18/535,327—the application from which the '681 Patent ultimately issued. As originally filed, claim 15 recited:

15. An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:
a tub defining a dish treating chamber; and
a dish rack located within the dish treating chamber and comprising a bottom wall defining a first substantially planar portion extending across a portion of the bottom wall and at least one of a second and third planar portion angled with respect to the first planar portion and defining a depression relative to the first planar portion.

38. On July 5, 2024, the Examiner issued an Office Action rejecting all claims as anticipated by U.S. Patent Pub. No. 2006/0237051 to Bengston. Ex. D ('681 Prosecution History)

at 30-37 (Non-Final Office Action dated 07/05/2024). In response, the Applicant amended claim 15 as follows:

15. (Currently Amended) An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:
a tub defining a dish treating chamber; and
a dish rack located within the dish treating chamber having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack, at the first end of the dish rack, the bottom wall has a first portion defining defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall and at least one of at the second end of the dish rack, a second and third planar portion is angled with respect to the first planar portion and defining a depression; relative to the first planar portion the depression extending lower than the first portion relative to the peripheral wall.
the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion defining a cup seat for supporting one of more cups in the depression.

Ex. D at 23 (Amendment filed 10/03/2024).

39. As illustrated in the excerpt below, the Applicant argued that Bengston failed to teach these additional limitations:

Nothing in Bengston et al. '051, including element 18, teaches 1) the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall, 2) a second portion is angled with respect to the first portion and defining a depression; the depression extending lower than the first portion relative to the peripheral wall, and 3) the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion defining a cup seat for supporting one of more cups in the depression. At best element 18 in Bengston teaches a substantially horizontal planar portion extending across a first portion of the top wall of a dish rack. This is not the same as the claimed limitations. In addition, Bengston does not teach or suggest items 2) or 3) in the list above.

Ex. D at 28 (Response dated Oct. 3, 2024).

40. Following this amendment, claim 15 (issued Claim 14) was allowed, on October 28, 2024. *See* Ex. D at 3 (Notice of Allowance dated 10/28/2024).

IV. THE ACCUSED SAMSUNG PRODUCTS

41. I understand that Whirlpool has accused certain Samsung dishwashers, including Samsung's 38 dBA Bespoke Smart Dishwasher with 3rd Rack Washing System (illustrated below), that include a "top rack that can hold both drinkware and utensils and silverware" ("Accused Products") of infringing the Asserted Patents. *See* Tanbour Decl. ¶ 33.



<https://www.samsung.com/us/home-appliances/dishwashers/rotary/38-dba-bespoke-auto-open-door-dishwasher-with-3rd-rack-washing-system-in-fingerprint-resistant-stainless-steel-dw90f89p0usraa/>

42. As illustrated in the image below, the top rack of the Accused Products includes multiple flat portions and two angled portions. Between the two angled portions is a flat portion, to which a sprayer system is mounted. The sprayer system includes a long manifold with a triangular cross-section, extending along the length of the rack. Multiple branches are attached to and extend downward from the manifold. At the end of each branch, a sprayer disc is attached.

Each sprayer disc is equipped with nozzles for spraying liquid into the regions of the rack on either side of the manifold.



<https://www.samsung.com/us/home-appliances/dishwashers/rotary/38-dba-bespoke-auto-open-door-dishwasher-with-3rd-rack-washing-system-in-fingerprint-resistant-stainless-steel-dw90f89p0usraa/>

43. The cross-section of the top rack is illustrated in the image below:



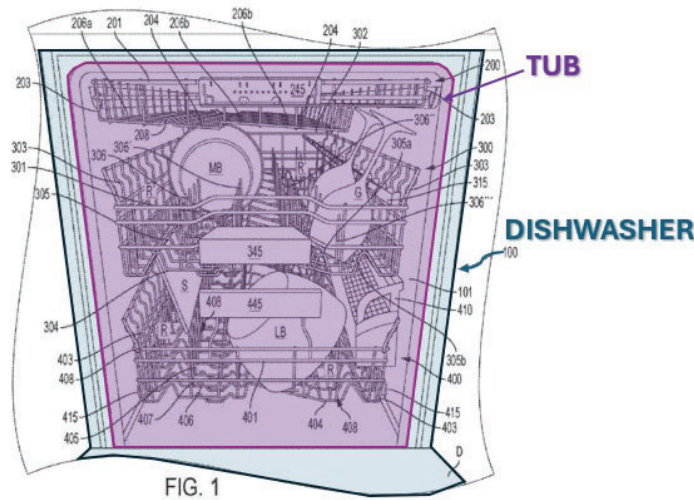
V. OVERVIEW OF THE RELEVANT PRIOR ART

A. Prior Art Relevant to the '681 Patent

1. Carr

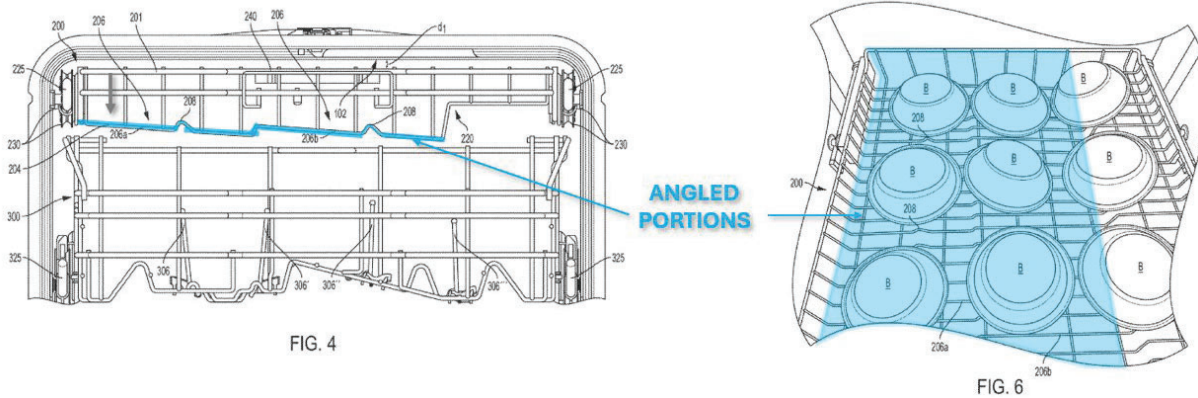
44. Carr (U.S. Patent Publication No. 2018/0220867) was published August 9, 2018, and is prior art to the '681 Patent under 35 U.S.C. § 102(a)(1). Ex. E ("Carr").

45. Carr teaches a dishwasher appliance 100 (blue, below). Carr, [0037]. Carr discloses that “as is known in the art, the dishwasher appliance 100 includes a tub, a pump and filter assembly, a heating element, one or more wash arms, and a drain hose.” Carr, [0037]. Carr provides a “dishwasher, comprising: a dishwashing compartment having a loading opening.” Carr, [0010]; *see also id.*, [0013]. Figure 1, annotated below, shows Carr’s dishwashing appliance (blue) “with the door open so as to reveal the dishwashing compartment,” colored in purple. Carr, [0028].



46. Carr’s dishwasher includes a “top washware rack configured for movement out of and into the dishwashing compartment.” Carr, [0013]. The top washware rack, shown in Figures 1 and 4 below, is “formed of wire thereby to hold washware including cutlery and washware larger than cutlery and to enhance drying performance.” Carr, [0013]. Carr’s “top washware rack 200 is configured as a basket and includes front 201, rear 202, and opposing side walls 203 interconnected with a bottom portion 204.” Carr, [0041].

“configured to hold bowls” at a slight tilt in order to drain water off from the bowls. Carr, [0043]-[0044].



49. In my opinion, Carr discloses and/or renders obvious all asserted claims of the '681 Patent. The bases for my opinions are detailed below in Section VIII.A.1.

2. Bosch 800

50. Bosch 800 is a prior art dishwasher product (i.e., the Bosch 800 Series Dishwasher (SHPM88Z75N)) that was publicly available by no later than February 2019. In particular, the customer brochure for the Bosch 800 Series Dishwasher was published in 2019. Ex. F (“Brochure”), 26. Based on press releases from the relevant time period, the dishwasher itself was available for purchase at least as early as May 2013:

- “Bosch Takes Silence to the Next Level with Innovative Dishwasher Line” available at <https://www.bosch-home.ca/en/press/pressrelease-320>, explaining that “Bosch has made the 800 Plus, the quietest dishwasher in **North America**.”
- “New Bosch Dishwashers Have Arrived At Grand,” available at <https://grandapplianceandtv.wordpress.com/2013/05/31/new-bosch-dishwashers-have-arrived-at-grand>, explaining that the new Bosch dishwashers included a new and improved third rack.

- “Four new Bosch dishwashers added to our list of top picks” available at <https://www.consumerreports.org/cro/news/2013/07/four-new-bosch-dishwashers-added-to-our-list-of-top-picks/index.html>, explains that “[t]he other newly recommended Bosch dishwashers..., which has three racks”
- “Bosch Home Appliances Revolutionizes Dishwasher Category with New Advanced Drying Technologies” available at, <https://www.globenewswire.com/news-release/2019/02/19/1734216/0/en/Bosch-Home-Appliances-Revolutionizes-Dishwasher-Category-with-New-Advanced-Drying-Technologies.html> explains that the Bosch 800 was available for purchase at least as early as February 19, 2019 “with the introduction of its new CrystalDry™ and AutoAir™ drying technologies.”

Thus, Bosch 800 is prior art to the '681 Patent under 35 U.S.C. § 102(a)(1).

51. Details of the Bosch 800 dishwasher are described and shown in the Bosch Brochure published in 2019 (“Brochure”) and the video titled, “Bosch 800 Series Dishwasher SHPM88Z75N” (available at <https://www.youtube.com/watch?v=2I-i2s7Jjv4>) (“Dishwasher video”).

52. Bosch 800 teaches an automatic dishwasher configured to implement an automatic treating cycle of operation. Specifically, Bosch 800 includes advanced cleaning with “Precision Wash,” which allows a user to “simply start [the] dishwasher and walk away.” Brochure, 8. Bosch 800 uses “intelligent sensors” that “scan and check the progress of dishes throughout the cycle, and powerful, precision spray arms go to work targeting every item of every load.” *Id.*, 34.

53. Bosch 800 includes a third rack, “MyWay rack,” which “easily fits those hard-to-place items like cereal bowls and large utensils.” Brochure, 17. “Unlike traditional 3rd racks, the

MyWay rack offers more room for more kinds of items, such as cereal bowls, whisks, tongs, and large measuring cups, creating more freedom in loading below.” *Id.* By putting things like bowls and lids “up top instead of in the bottom rack, it frees up more space for your larger pots and pans.” *Id.*

54. Bosch 800 includes a third rack of the same configuration as disclosed by Carr, above. Specifically, Carr was filed by and assigned to “BSH Hausgeraete GmbH” and “BSH Home Appliances Corp,” which is a subsidiary of Bosch (manufacturers of Bosch 800). *See* Carr, (71). It is my understanding that BSH Home Appliances Corp. is wholly owned by the Bosch Group, which is the Bosch brand in North America. *See, e.g.*, “Our Complete Global Brand Portfolio,” available at <https://www.bsh-group.com/us/about-bsh/company-portrait>.



55. In my opinion, Bosch 800 discloses and/or renders obvious all asserted claims of the '681 Patent. The bases for my opinions are detailed below in Section VIII.A.2.

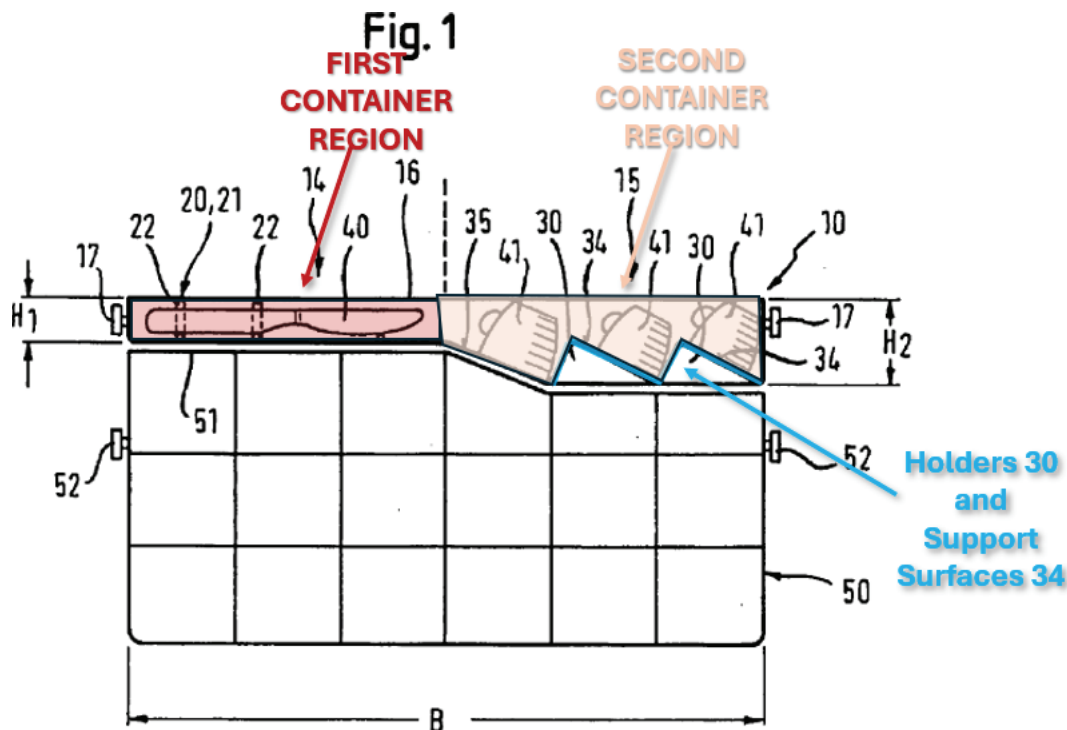
3. Mailander

56. Mailander (U.S. Patent Publication No. 2008/0169009) was published July 17, 2008, and is prior art to the '681 Patent under 35 U.S.C. § 102(a)(1). Ex. G (“Mailander”).

57. Mailander teaches “a washing items support for a dishwasher.” Mailander, [0001]. Mailander explicitly claims a “dishwasher,” which includes “a washing space that can be sealed by a door, the washing space having at least one spraying device and at least one removable crockery basket therein; and a washing items support assembly disposed in the washing space.”

Mailander, Cl. 22. Mailander's washing items support is arranged above a cutlery basket in order to prevent "formation of accumulations of water in the spoon lips or the like because the cutlery lying on its side during washing and drying and not mutually touching," which can "also considerably shorten the drying programme time." Mailander, [0007].

58. Mailander's washing item support 10 "has a base basket 11 produced from a surrounding wire frame 12, a few base wires 13 running continuously in the transverse or longitudinal direction being located in its base region." Mailander, [0028]. Mailander's washing item support 10 includes two container regions, first and second container region 14 and 15, "each of them occupying half width B of washing items support 10." Mailander, [0025]. As shown in Figure 1 below, the first container region 14 (red) is configured to "arrange pieces of cutlery 40 ..., lying one next to the other, ... throughout the depth of washing items support 10." *Id.*, [0026].



59. Washing items support 10 includes second container region 15 (peach), which is "designed with washing items holders 30, each of which has a support surface 34 inclined to the

horizontal,” so that pieces of crockery can be placed at an angle for an increased drying effect. Mailander, [0027]. Pieces of crockery include “smaller washing items, e.g. cups, shallow glasses, dessert bowls, or alternatively cutlery in the transverse and longitudinal directions, long knives, cooking spoons etc.” *Id.* Mailander teaches that washing items holders 30 and support surface 34 may be inserts or “may be formed integrally together.” *Id.* Mailander also teaches that the “incline” or angle of “support surface 24 of washing goods holder 30 may also be adjustable.” *Id.*

60. Mailander’s washing items support 10 has, “in the second container region, a height H2 which is greater than height H1.” Mailander, [0029]. Mailander teaches that the “bottom end of first container region 14 is higher in the vertical direction than the bottom end of second container region 15 in the vertical direction.” *Id.* Mailander further teaches that the second container region 15 is provided with a “transition region,” which “represents a support surface 35.” Mailander, [0029]. Transition region 35 “represents an integral part of the adjacent washing items holder 30” and is angled in order to transition from the first container region height H1 to the second container region height H2. *Id.*

61. In my opinion, Mailander discloses and/or renders obvious all asserted claims of the ’681 Patent. The bases for my opinions are detailed below in Section VIII.A.3.

4. Cao

62. Cao (CN 106343937) was published and was issued by the Chinese patent office no later than December 31, 2019. Exs. H (original), I (translation, “Cao”). Cao is prior art to the ’681 Patent under 35 U.S.C. § 102(a)(1).

63. Cao discloses a knife and fork tray assembly for a dishwasher. Cao, Abstract. The “knife and fork tray assembly 100 for the dishwasher according to the embodiment of the present invention may comprise a tray body 1, a connecting rod bracket 2, and a crank bracket 3.” Cao, [0043]. Cao teaches that the rod bracket 2 and crank bracket 3 are movable and are “disposed in

the opening 11.” *Id.*, [0044]. The “rod bracket 2 and crank bracket 3 are cooperative connected to be suitable for placing tableware such as knives and forks 5 to be washed.” *Id.*, [0045]. As shown in Figure 9 below, “when the connecting rod bracket 2 [(blue)] is located at the second position, the crank bracket 3 [(green)] is located at the fourth position, at this time, the side of the connecting rod bracket 2 that is connected with the crank bracket 3 may recess downwards to form the accommodating cavity 15.” Cao, [0047].

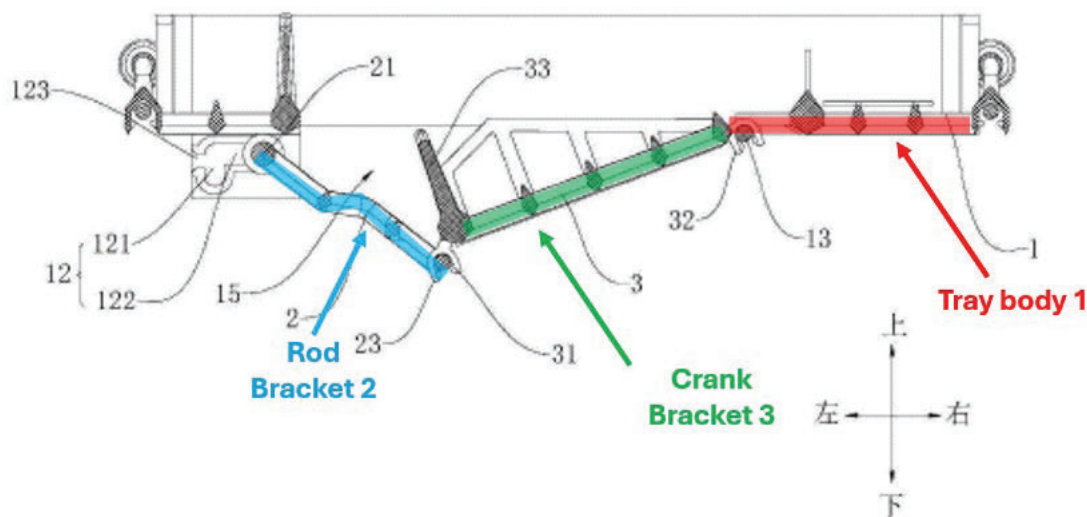
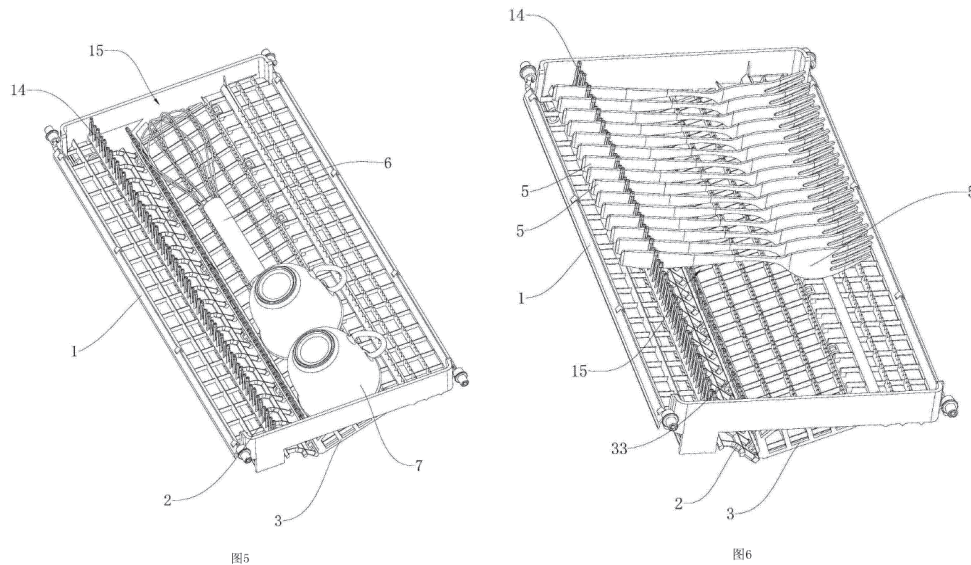


图9

64. Cao explains that by having its rod bracket 2 and crank bracket 3 “cooperatively connected,” the bracket is “suitable for placing tableware,” such as knives, forks, spoons, teacups or the like to be washed. Cao, [0045], [0047]. Figures 5 and 6 below show how the knives, forks, spoons, and teacups can be washed.



65. In my opinion, Cao renders obvious, in combination with other references, all asserted claims of the '681 Patent. The bases for my opinions are detailed below in Section VIII.A.3.

B. Prior Art Relevant to the '385 Patent

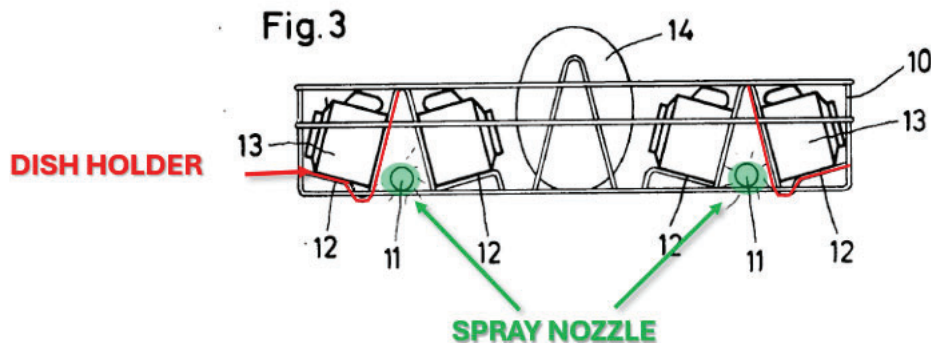
1. Bosch

66. Bosch (German Patent No. DE6810173) was published August 14, 1969, and is prior art to the '385 Patent under 35 U.S.C. § 102(a)(1). Exs. J (original), K (translation, "Bosch").

67. Bosch discloses a dishwasher having a dish rack that can be pulled out at the front. Bosch, 005.² Bosch teaches that "the device for spraying the dishes is designed in the form of two spray tubes 11." Bosch, 006-007. The "spray tubes are arranged within the dish rack between dish holders for accommodating hollow vessels 13, such as cups or glasses." Bosch, 007. The spray tubes apply "washing liquid" to the dish items. *Id.*, 006. As shown below in Figure 3, Bosch further teaches that the spray tubes (green) are arranged within the dish rack by being arranged

² Four-digit pin citations that begin with 0 are to the branded numbers added by Samsung in the bottom right corner of the exhibit. All other pin citations are to original page, column, paragraph, or line numbers.

“fixedly” in dish rack 10. Bosch, 007, 009 (Cl. 4). Bosch’s dish rack 2 also includes “dish holders 12,” annotated in red, “for accommodating hollow vessels, such as cups or glasses.” Bosch, 007.



68. Bosch’s “dish holders 12” are upwardly angled portions formed in the bottom wall in order to hold the cup or glass at an angle because Bosch further explains the disadvantage of when the spray jets lift the “cups and glasses” which can damage them “when they subsequently drop back onto the dish rack.” Bosch, 002-003. Bosch ensures that “these dish items are no longer lifted by the spray jets and therefore also cannot drop back into the disk rack.” *Id.*, 004.

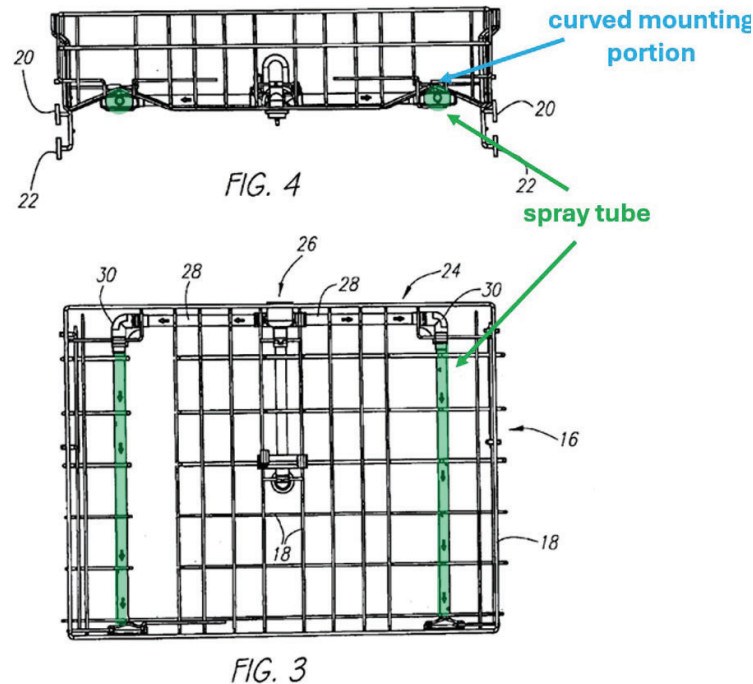
69. In my opinion, Bosch renders obvious, in combination with other references, all asserted claims of the ’385 Patent. The bases for my opinions are detailed below in Section VIII.B.1.

2. Ochoa

70. Ochoa (U.S. Patent No. 6,869,029) issued March 22, 2005, and is prior art to the ’385 Patent under 35 U.S.C. § 102(a)(1). Ex. L (“Ochoa”).

71. Ochoa teaches a dish rack comprising of a “wire basket constructed in a conventional manner with a plurality of crisscrossing and encircling wire segments connected to each other to provide space for supporting cups, glasses, small dishware, long utensils and the like in the usual manner.” Ochoa, 3:2-9. Ochoa also teaches that the upper rack 12 includes a “water spraying system ... that is mounted on the underside of the rack 6 and moves into and out of the

front of the dishwasher 10 with the rack 16.” Ochoa, 3:15-19. As shown below in Figures 3 and 4, Ochoa further teaches a curved mounting portion adjacent to which the spray tube is mounted in order for the dish rack to have the spray tube carried with the dish rack.



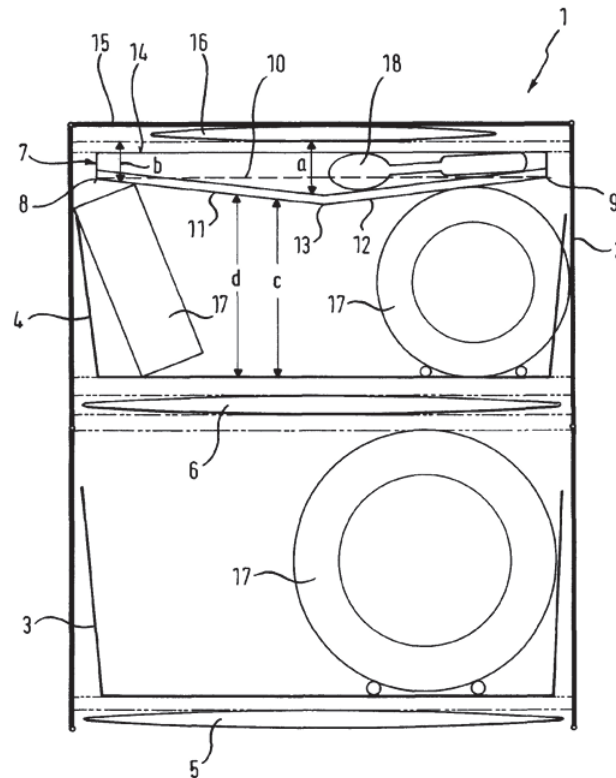
72. In my opinion, Ochoa renders obvious, in combination with other references, all asserted claims of the '385 Patent. The bases for my opinions are detailed below in Section VIII.B.1.

3. Schessl

73. Schessl (U.S. Patent No. 10,045,681) issued August 14, 2018, and is prior art to the '385 Patent under 35 U.S.C. § 102(a)(1). Ex. M (“Schessl”).

74. Schessl discloses a “dishwasher including a washing compartment, and at least one cutlery basket arranged in the washing compartment, wherein the at least one cutlery basket hold items of cutlery horizontally, wherein at least some sections of the cutlery basket have different clearance heights.” Schessl, Abstract. In particular, Schessl teaches a low profile “cutlery basket,” shown below as element 7, to hold “items of cutlery in a horizontal position, with for example an

item of cutlery 18 in the form of a spoon or a ladle being shown.” *Id.*, 3:16-18. Schessl explains that its cutlery basket is “for holding items of cutlery in a horizontal position for use in a dishwasher which, for optimum utilization of space in the washing compartment, can accept items of cutlery with larger dimensions for washing and simultaneously produces a good cleaning and drying result for said items.” *Id.*, 1:28-34. Schessl also teaches having different clearance heights, which optimizes space usage and provides angled storage, which improves draining-off of water during the drying process, “meaning that less energy is required for drying.” *Id.*, 1:38-54.



75. In my opinion, Schessl renders obvious, in combination with other references, all asserted claims of the '385 Patent. The bases for my opinions are detailed below in Section VIII.B.2.

VI. LEVEL OF ORDINARY SKILL IN THE ART

76. I have been informed and understand that a patent is to be understood from the perspective of a hypothetical “person of ordinary skill in the art” (“POSITA”). Such an individual is considered to possess normal skills and knowledge in a particular technical field (as opposed to being a genius). I understand that in considering what the claims of a patent require, what was known prior to that patent, what a prior art reference discloses, and whether an invention is obvious or not, one must use the perspective of such a POSITA.

77. Based on my experience in the relevant field, and based on my review of the Asserted Patents’ specifications, claims, file histories, and prior art, it is my opinion that one of ordinary skill in the art around the time of the alleged inventions of the Asserted Patents would have had at least a bachelor’s degree in mechanical engineering or a related field, and 2 years of experience in the design or development of consumer appliances, including dishwashers or comparable fluid-delivery systems, with additional education substituting for experience and vice versa.

78. In determining the level of ordinary skill in the art, I considered, for example, the type of problems encountered in the art, prior art solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field.

VII. NON-INFRINGEMENT OF THE ASSERTED PATENTS

A. Samsung Does Not Infringe the '385 Patent

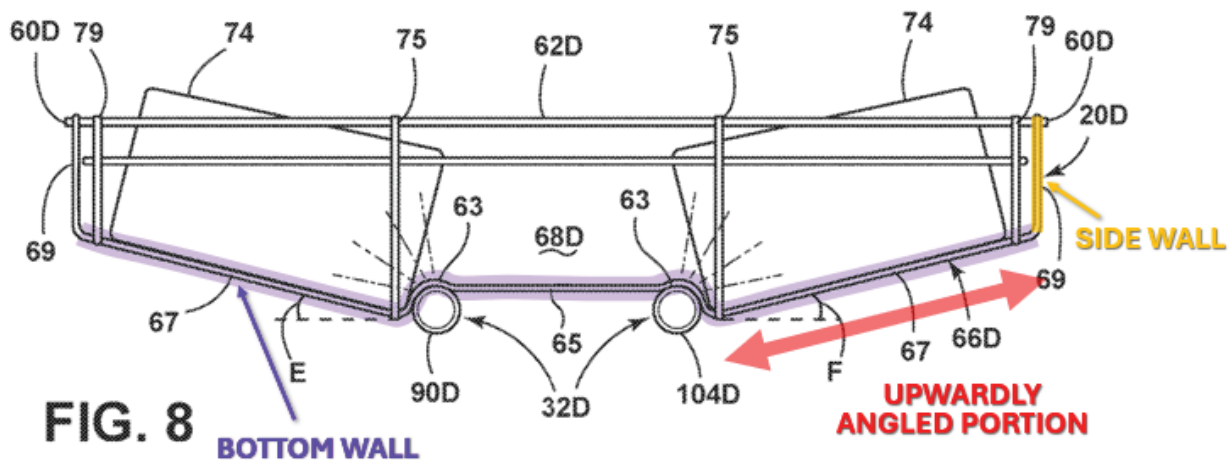
1. The Accused Products Do Not Infringe Claim 17 of the '385 Patent

- a. The Accused Products do not include “an upwardly angled portion formed in the bottom wall ... and terminating at the side wall”

79. As excerpted in the table below, Claim 17 of the '385 Patent recites a dish rack that includes “an upwardly angled portion formed in the bottom wall,” where that upwardly angled portion includes “a plurality of spaced apart *inclined portions ... terminating at the side wall.*”

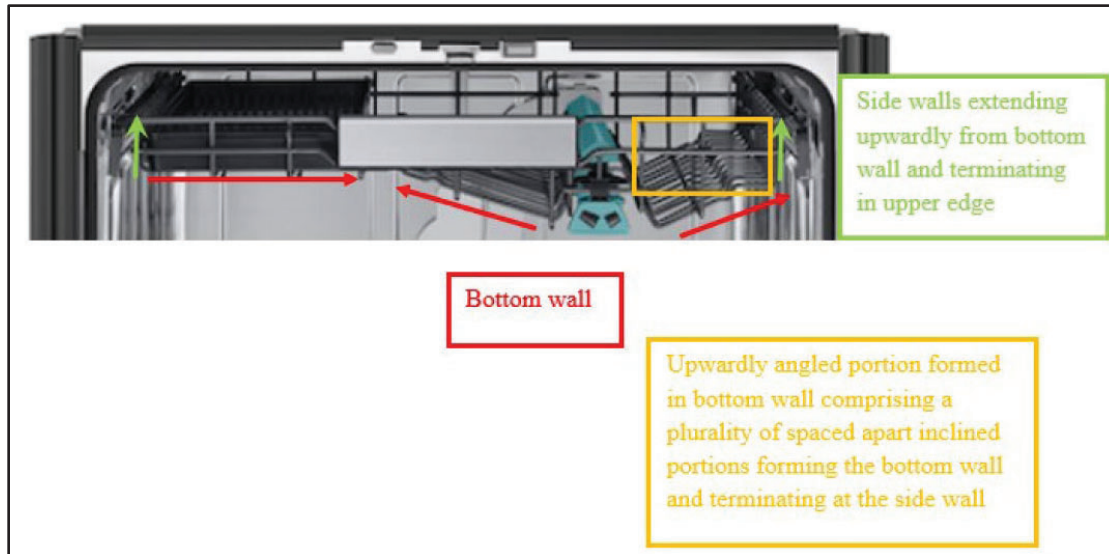
Claim 17	... a dish rack located in the tub and selectively moveable into and out of the tub, the dish rack having a bottom wall, a side wall extending upwardly from the bottom wall and terminating in an upper edge, with <u>an upwardly angled portion formed in the bottom wall</u> comprising a plurality of spaced apart inclined portions forming the bottom wall <u>and terminating at the side wall</u> ...
-----------------	--

Thus, by its plain language, Claim 17 requires that the inclined portions of the bottom wall extend all the way up to (“terminat[e] at”) the side wall, rather than ending short of, or before reaching, the side wall. This feature of the claimed dish rack is illustrated in Figure 8 of the '385 Patent, annotated below:



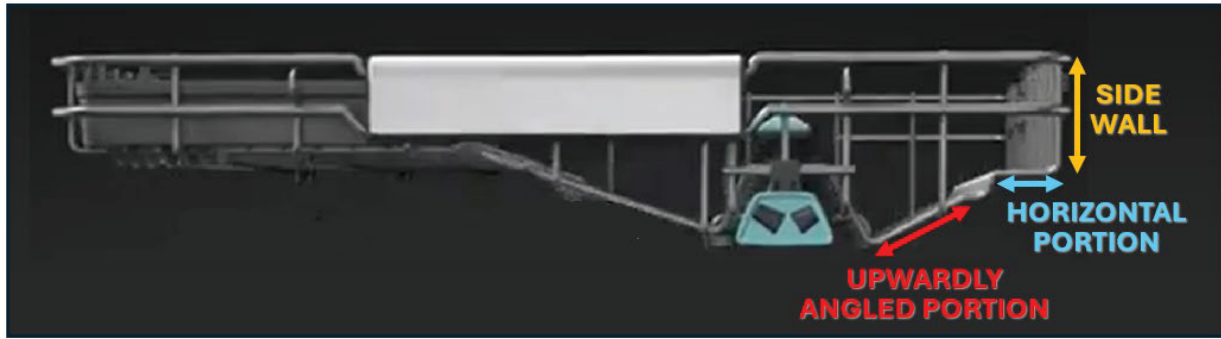
'385 Patent, Fig. 8 (annotated).

80. The Accused Products do not meet this claim requirement, because they do not include an upwardly angled portion formed in the bottom wall that “*terminat[es] at the side wall.*” As illustrated below, in his declaration, Dr. Tanbour maps the right-hand side of the Accused Products’ third rack (as viewed from the front of the dishwasher) to the claimed “upwardly angled portion”:



Tanbour Decl. ¶ 55 (excerpted).

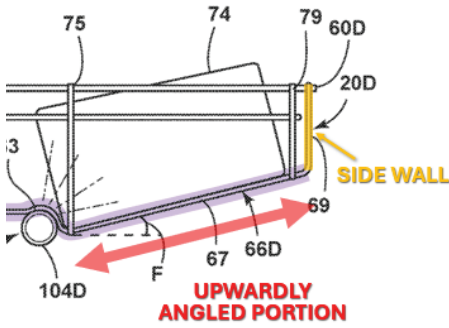
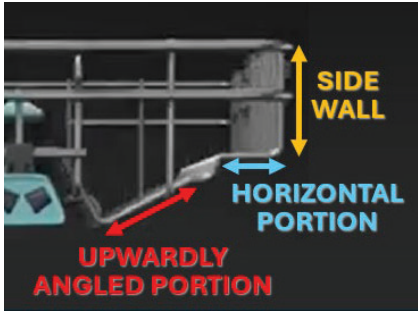
81. But only part of this portion of the bottom wall of the rack is “upwardly angled,” and that upwardly angled part does not terminate at the side wall. Instead, as illustrated in the image below, the upwardly angled portion of the bottom wall terminates well short of the side wall, and a horizontal portion of the bottom wall extends between the upwardly angled portion and the side wall:



<https://www.samsung.com/us/home-appliances/dishwashers/rotary/38-dba-bespoke-auto-open-door-dishwasher-with-3rd-rack-washing-system-in-fingerprint-resistant-stainless-steel-dw90f89p0usraa/>

82. As explained in Section III.A.2, the claimed requirement that the upwardly angled portion of the bottom wall terminate at the side wall was one of the limitations added by the Applicant during prosecution to achieve allowance. In particular, the Applicant was able to overcome the Examiner’s prior art rejection based on “Andrew ’207” and “Ochoa et al ’578,” by amending the claim to add this limitation, and then arguing that “[n]either Andrew ’207 nor Ochoa et al ’578 teach the details of *upwardly angled portion formed in the bottom wall* comprising a plurality of spaced apart inclined portions forming the bottom wall and *terminating at the side wall*, wherein two adjacent inclined portions of the plurality of spaced apart inclined portions are configured to cradle a glass at an inclined angle and contoured portion.” Ex. C at 52 (Response dated 03/27/2019 (emphasis added)). Because the Accused Products do not meet this key requirement, it is my opinion that they do not infringe Claim 17 of the ’385 Patent.

Claim 17	’385 Patent, Fig. 8	Accused Products
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<p>the dish rack having a bottom wall ... with <u>an upwardly angled portion formed in the bottom wall</u> comprising a plurality of spaced apart inclined portions forming the bottom wall <u>and terminating at the side wall</u></p>	 <p>A technical drawing of a dish rack cross-section. It shows a side wall (20D) and a bottom wall. The bottom wall includes an upwardly angled portion (66D) and a horizontal portion (67). A spray tube (69) is shown with nozzles (67) along its length. Other components labeled include 75, 74, 79, 60D, 104D, and 3. A force vector F is indicated.</p>	 <p>A 3D perspective view of a dish rack. It highlights the side wall (yellow arrow), the horizontal portion (blue arrow), and the upwardly angled portion (red arrow).</p>
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b. The Accused Products do not include “a spray tube having nozzles”

83. As excerpted in the table below, Claim 17 of the '385 Patent recites a dishwasher that includes “a spray tube having nozzles.”

Claim 17	... <u>a spray tube having nozzles</u> emitting spray along the angled portion ...
-----------------	---

Thus, the Asserted Claims require a tubular member that itself contains or defines the nozzles through which liquid is sprayed. An example of such a spray tube is illustrated in Figure 9 of the '385 Patent (annotated below), which illustrates a set of nozzles along the tube’s length and on the tube’s surface:

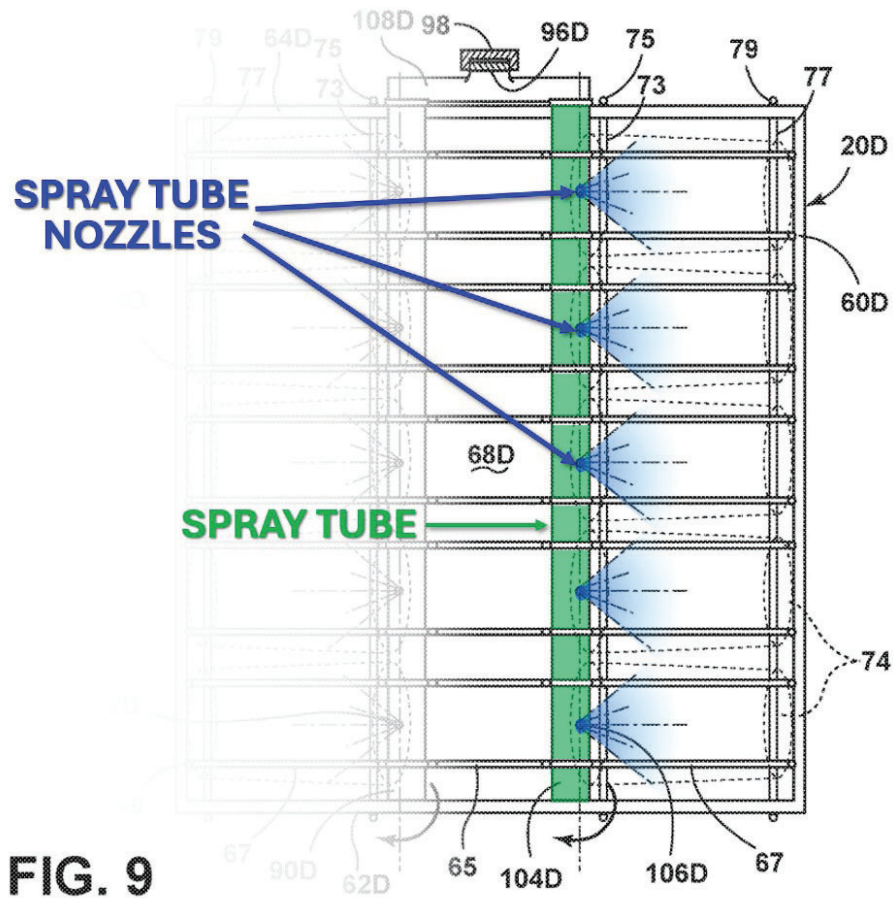
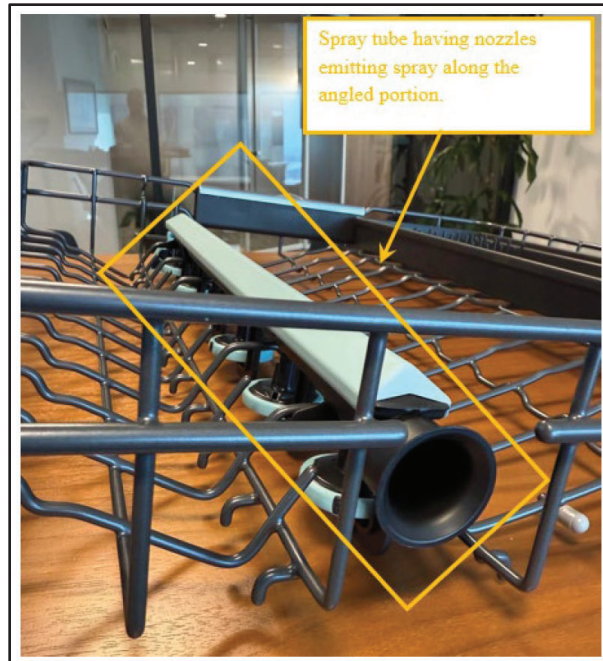


FIG. 9

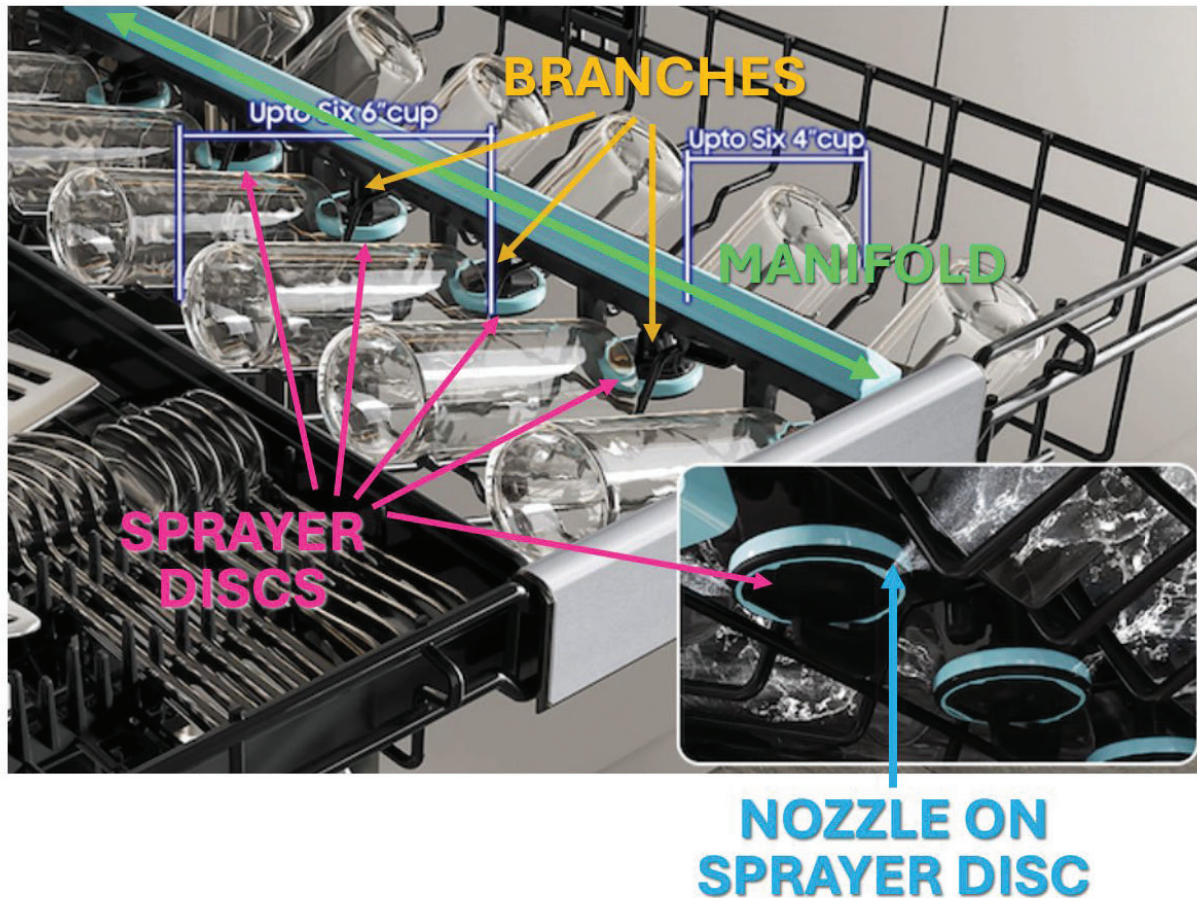
'385 Patent, Fig. 9 (annotated).

84. The Accused Products do not meet this limitation, because they do not include a spray tube *having nozzles*. As illustrated below, in his declaration, Dr. Tanbour maps the claimed “spray tube having nozzles” to a spray assembly including a set of sprayer discs carried with the top rack of the Accused Products:



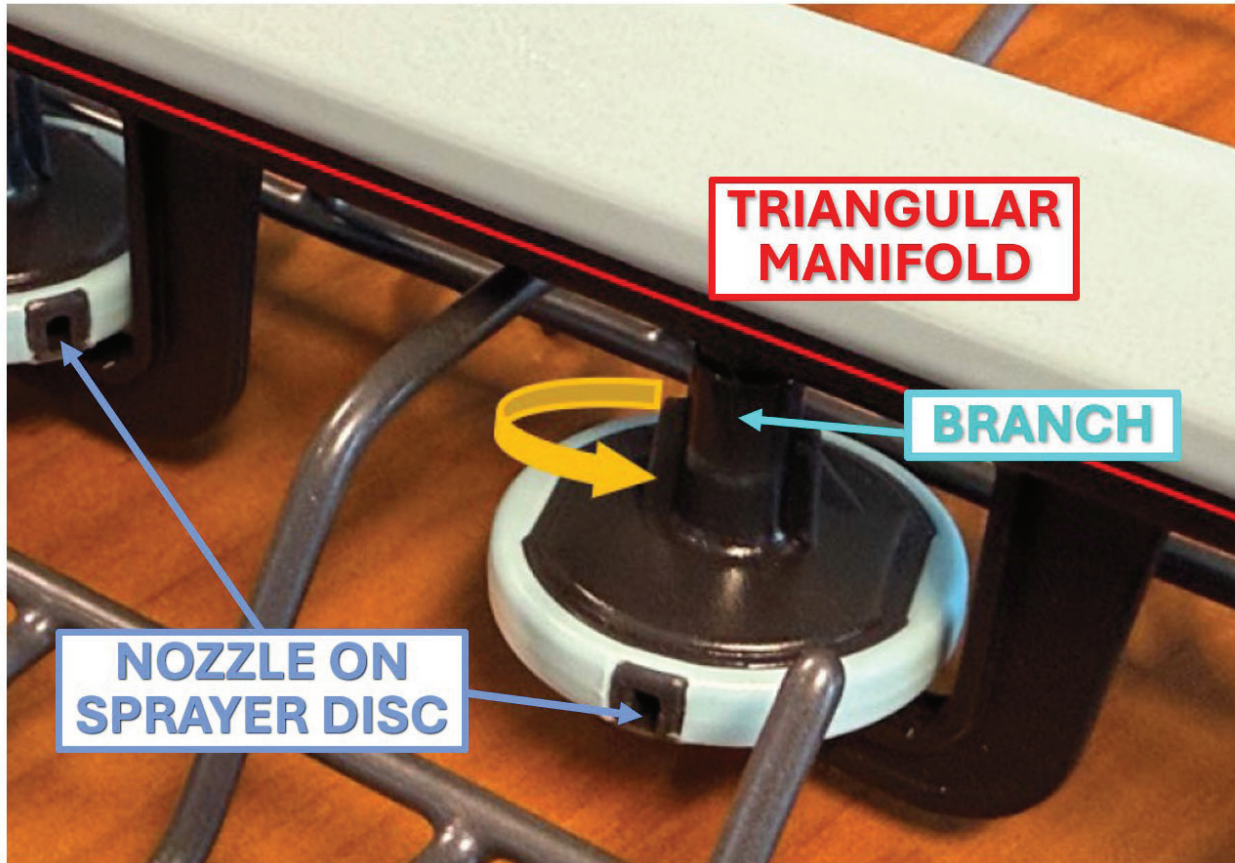
Tanbour Decl. ¶ 58 (excerpted).

85. But this is a fundamentally different geometry than that described and claimed in the '385 Patent. As illustrated in the images below, the Accused Products include a long manifold with a triangular cross-section, from which a set of branches extends, where a sprayer disc is attached at the end of each branch. In other words, the nozzles in the Accused Products are part of the sprayer discs indirectly connected to the manifold, not part of the manifold itself.



<https://www.samsung.com/us/home-appliances/dishwashers/rotary/38-dba-bespoke-auto-open-door-dishwasher-with-3rd-rack-washing-system-in-fingerprint-resistant-stainless-steel-dw90f89p0usraa/>

86. Indeed, the images that Dr. Tanbour presents for this limitation clearly illustrate that the sprayer discs of the Accused Products are separate from the accused “spray tube,” and that it is those separate sprayer discs that have “nozzles,” *not* the accused member (labeled by Dr. Tanbour as “spray tube” in the image below):



Tanbour Decl. ¶ 58 (annotated to label nozzles on sprayer discs, triangular manifold, and a branch extending from the manifold and to which a sprayer disc is attached).

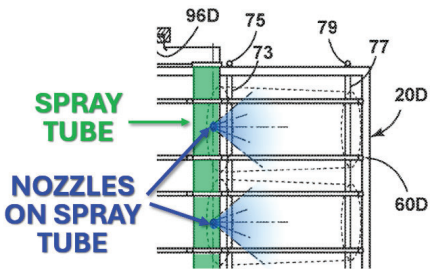
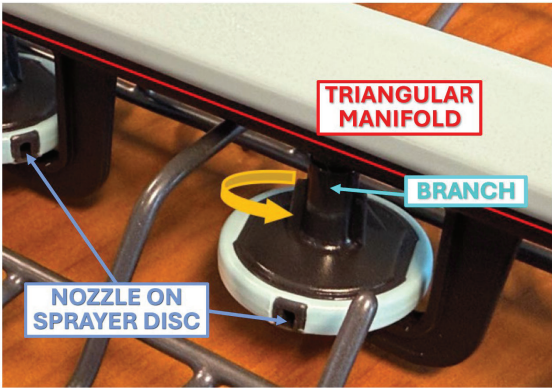
87. Claim 17 of the '385 Patent, by contrast, requires a tube that itself has nozzles along its length.

88. Further, the '385 Patent expressly distinguishes a “spray tube having nozzles” from other types of sprayers, such as rotating spray arms, stationary spray heads, and *sprayer discs*, identifying those as *alternative* configurations:

The rack spray assembly 32 has been shown and described as having stationary and rotating spray tubes with spray nozzles. ... ***[O]ther types of sprayers are acceptable*** for use with the rack spray assembly 32. Examples of ***other types of sprayers include***, but are not limited to, rotating spray arms, individual spray nozzles, stationary spray heads with multiple spray nozzles, ***spray discs***, flexible spray tubes, translating front to back sprayers, etc.

'385 Patent, 10:45-53 (emphasis added). This confirms that in the patent, the claimed “spray tube” is a single unitary tube structure through which liquid is conveyed and from which it is emitted from nozzles on the tube itself—*not* a structure that is attached to separate sprayer discs that contain their own nozzles.

89. Because the member that Dr. Tanbour accuses of being the “spray tube having nozzles,” does not actually have spray nozzles or itself spray any treating liquid—as the liquid is instead delivered from nozzles on separate sprayer discs—it is my opinion that the Accused Products do not infringe Claim 17 of the '385 Patent.

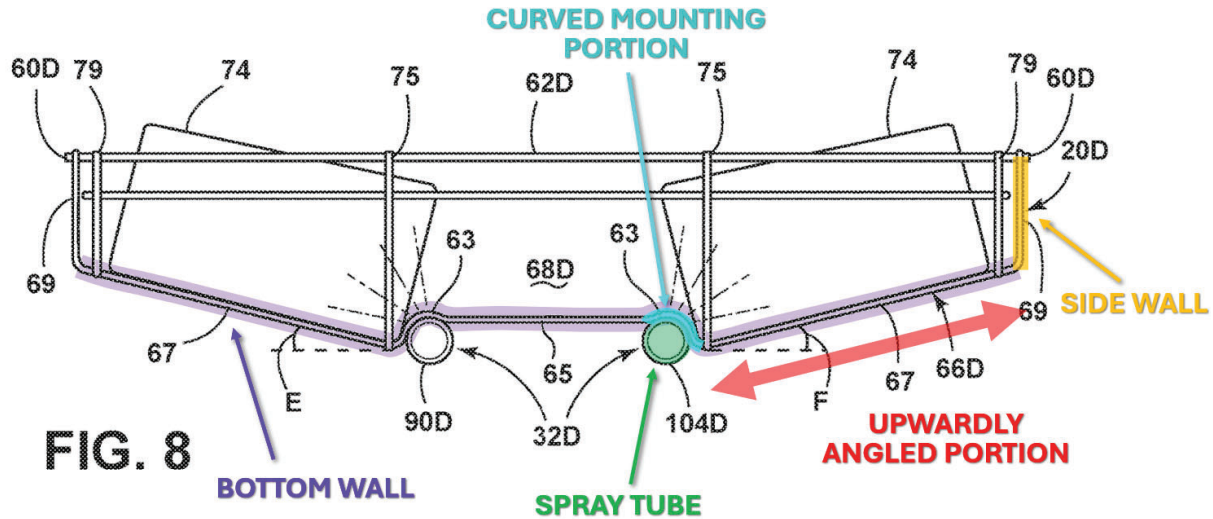
Claim 17	'385 Patent, Fig. 9	Accused Products
<u>a spray tube having nozzles</u>	 The diagram shows a cross-section of a spray tube assembly. A central vertical tube (96D) has several horizontal branches (75, 73, 79, 77) extending from it. Nozzles (20D, 60D) are located at the ends of these branches. A label 'SPRAY TUBE' points to the central tube, and 'NOZZLES ON SPRAY TUBE' points to the nozzles on the branches.	 The photograph shows a physical component of the accused product. A red label 'TRIANGULAR MANIFOLD' points to a central hub. A blue label 'NOZZLE ON SPRAYER DISC' points to a nozzle on a separate disc. A yellow arrow indicates a 'BRANCH' of the manifold.

c. The Accused Products do not include “a curved mounting portion adjacent which the spray tube is mounted”

90. As excerpted in the table below, Claim 17 of the '385 Patent recites that the bottom wall of the claimed dish rack includes “a contoured portion” that is “configured to form a curved mounting portion adjacent which the spray tube is mounted.”

Claim 17	... a contoured portion formed in the bottom wall configured to prevent glasses from sliding down the inclined angle; and ... wherein <u>the contoured portion is further configured to form a curved mounting portion adjacent which the spray tube is mounted</u> such that the spray tube is carried with the dish rack.
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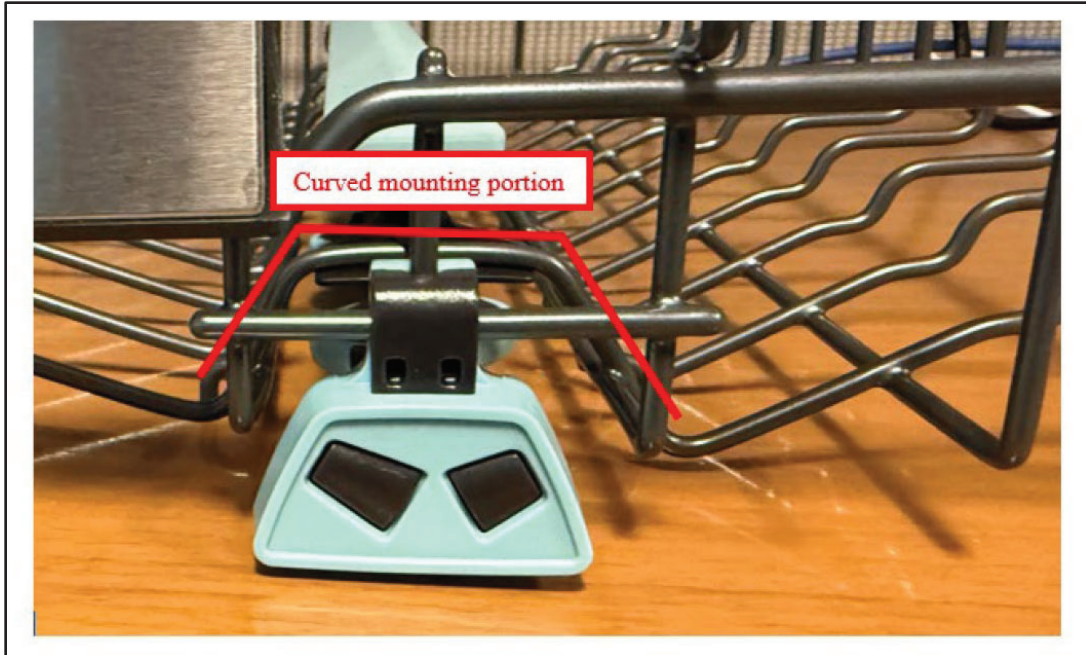
Thus, the Asserted Claims require that the spray tube be mounted adjacent to a curved mounting portion of the bottom wall of the rack. Such a curved mounting portion is illustrated in Figure 8 of the '385 Patent, illustrating that the contour in the bottom wall provides the mounting geometry for the spray tube.



'385 Patent, Fig. 8 (annotated).

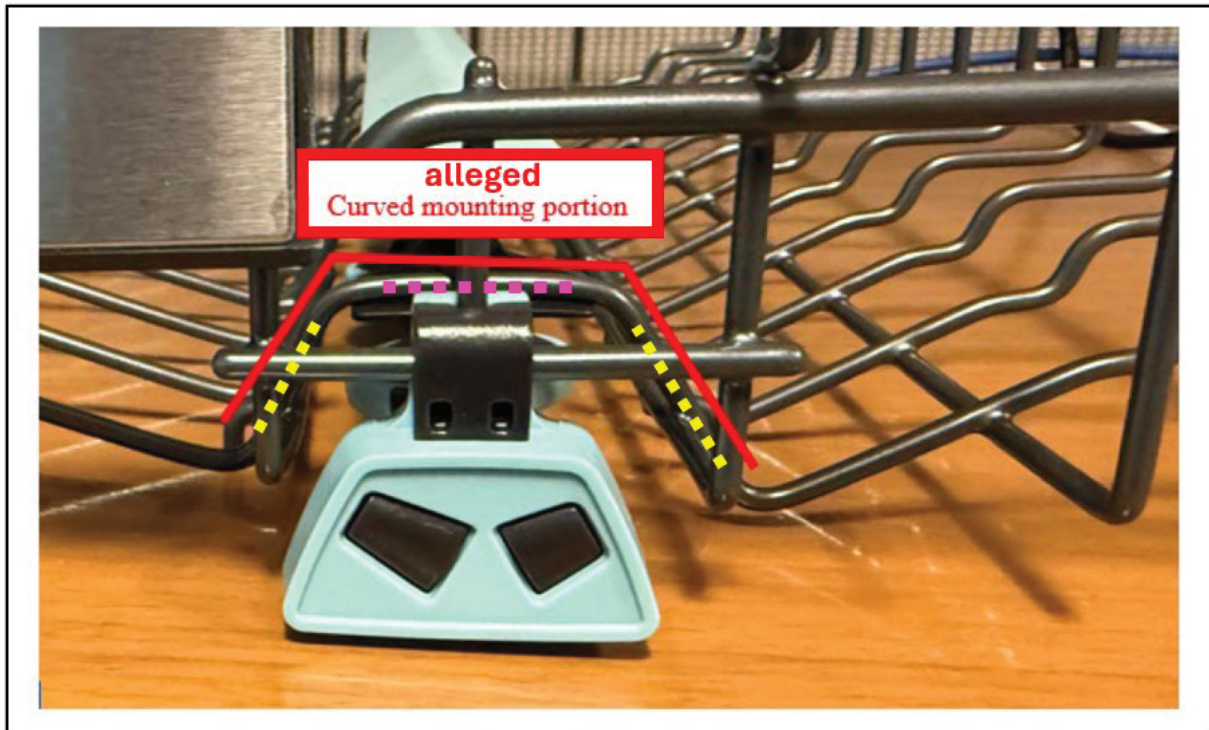
91. The Accused Products do not meet this claim requirement, because the spray system carried by the upper rack is not mounted to a “curved mounting portion.”

92. In his declaration, Dr. Tanbour maps the “curved mounting portion” to a portion of the bottom rack between the two angled portions:

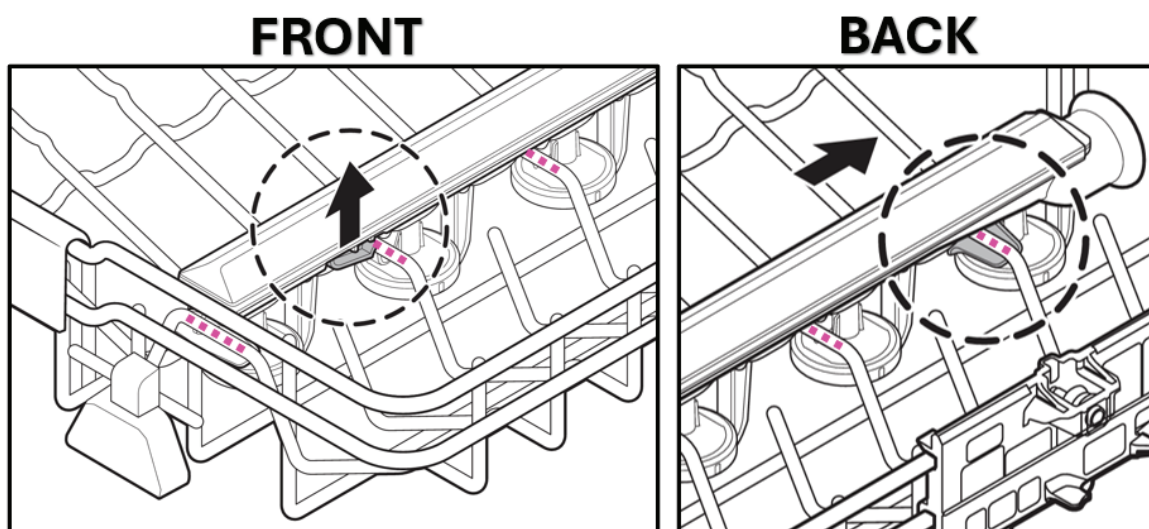


Tanbour Decl. ¶ 60.

93. But, as indicated by Dr. Tanbour’s own annotations in the image above, this portion of the bottom wall is formed from three flat segments. While these flat segments are connected to one another by short curved portions, the presence of those connecting curves does not make the entire structure a “curved portion.” Only the areas that are actually curved can properly be described as curved portions; the flat segments between them remain flat. Below I have placed dashed yellow and pink lines onto his annotations showing the three flat segments.

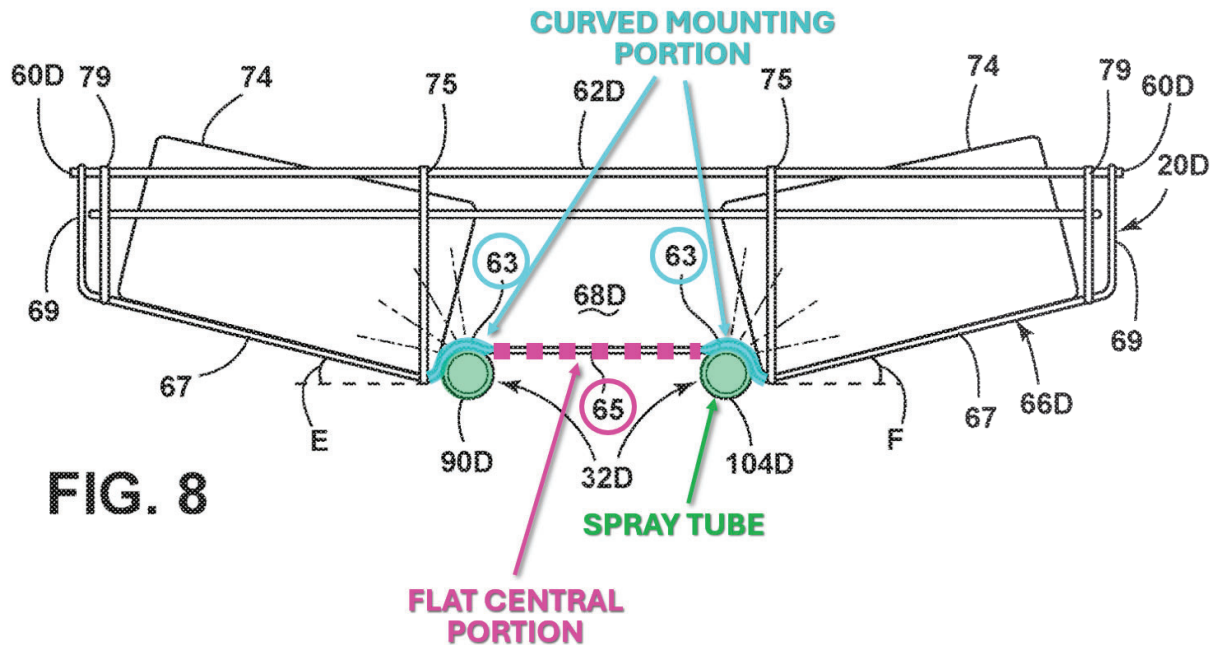


94. Moreover, as illustrated in the images above and schematics below, the alleged spray tube pointed to by Dr. Tanbour in the Accused Products is mounted adjacent (on top of) the middle flat segment (pink dashed line) of the set of three flat segments identified by Dr. Tanbour, not adjacent either curved connecting portion.



Tanbour Decl., Exhibit E (Samsung DW90F89 User Manual) at 44 (excerpted and annotated).

95. Dr. Tanbour’s attempt to characterize these flat mounting portions as part of a larger “curved mounting portion” is inconsistent not only with the plain meaning of the term “curved mounting portion,” but also with the express disclosure of the ’385 Patent. As Dr. Tanbour acknowledged, Claim 17 corresponds to the embodiment illustrated in Figures 8 and 9 of the ’385 Patent. Tanbour Decl., ¶ 25. As illustrated below, Figure 8 depicts a rack with a bottom wall whose center portion includes a similar geometry to that of the Accused Products—namely, a portion of bottom wall extending between two angled portions of the bottom wall:

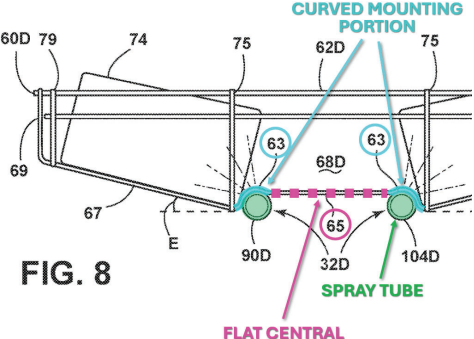
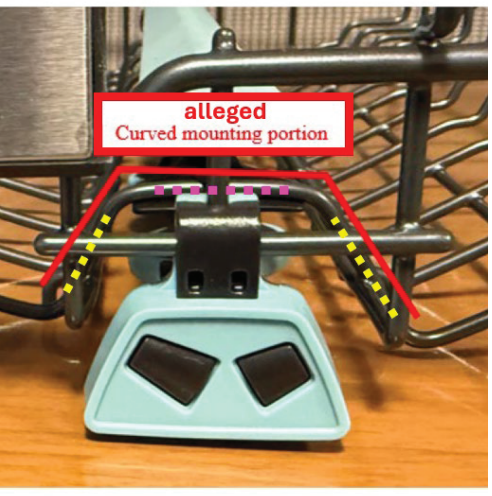


’385 Patent, Fig. 8 (annotated). Like the Accused Products, this portion of the bottom wall includes two short curved segments connected to one another with a flat central segment. The ’385 Patent makes clear that this flat central segment is *not* part of, and is distinct from, the “curved mounting portion,” explaining:

The bottom walls 66D may be contoured, as illustrated by example, to form a *curved spray tube mounting portions 63*, *flat central portions 65*, opposing inclined portions 67 and opposing upstanding portions 69.

'385 Patent, 8:19-23 (emphasis added). Thus, the patent explicitly distinguishes between the “curved spray tube mounting portions” and the “flat central portions” of an overall “contoured” portion of the bottom wall. *Id.* As this disclosure makes clear, while the patent contemplates that a “contoured” shape may include both “flat” portions and “curved” portions, those flat and curved portions are mutually exclusive of one another.

96. Because the tube in the Accused Products is mounted adjacent to a flat central portion of the bottom wall, rather than a “curved mounting portion,” it is my opinion that the Accused Products do not infringe Claim 17 of the '385 Patent.

Claim 17	'385 Patent, Fig. 8	Accused Products
wherein <u>the contoured portion is further configured to form a curved mounting portion adjacent which the spray tube is mounted</u> such that the spray tube is carried with the dish rack.	 <p>FIG. 8</p>	

2. The Accused Products Do Not Infringe Claims 18-21 of the '385 Patent

97. Claims 18-21 depend from Claim 17. Samsung therefore does not infringe Claims 18-21 for at least the reasons discussed above regarding Claim 17.

B. Samsung Does Not Infringe the '681 Patent

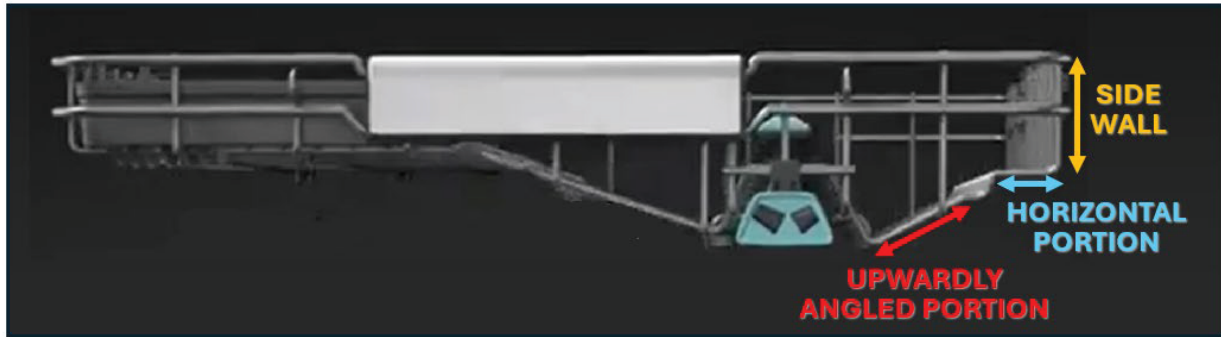
1. The Accused Products Do Not Infringe Claim 14 of the '681 Patent at least because they do not include “a bottom wall” where, “at the second end of the dishrack, a second portion” of the bottom wall “is angled with respect to the first portion”

98. As excerpted in the table below, Claim 14 of the '681 Patent recites a dish rack that includes a bottom wall that extends from a “first end” to a “second end,” where a “first portion” of the bottom wall is horizontal, while a “second portion” of the bottom wall, which is located “at the second end of the dishrack,” is “angled with respect to the first portion.”

Claim 14	... a dish rack located within the dish treating chamber having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack, at the first end of the dish rack, the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall and <u>at the second end of the dishrack, a second portion is angled with respect to the first portion</u> ...
-----------------	--

By specifying that the angled second portion of the bottom wall is located “at the second end” of the bottom wall—not merely near it—the claim requires that the angled portion extend to the boundary of the bottom wall, where the wall meets the peripheral side wall at that second end. In other words, the claim requires that the angled portion terminates at the side wall at the second end.

99. But, as I explained in Section VII.A.1.a for Claim 17 of the '385 Patent, in the Accused Products, the upwardly angled portion of the bottom wall terminates well short of the side wall, with a horizontal portion of the bottom wall extending between the upwardly angled portion and the side wall:



<https://www.samsung.com/us/home-appliances/dishwashers/rotary/38-dba-bespoke-auto-open-door-dishwasher-with-3rd-rack-washing-system-in-fingerprint-resistant-stainless-steel-dw90f89p0usraa/>

And, similar to the prosecution of the '385 Patent, the requirement that the second portion of the bottom wall “is angled” “at the second end of the dishrack” was added during prosecution of the '681 Patent to achieve allowance, as explained in Section III.B.2. In particular, the amendments made by the Applicant to overcome the Examiner’s prior art rejection included limiting the shape of the bottom wall from including “at least one of a second and third planar portion angled with respect to the first planar portion,” to “*at the end of the dishrack*, a second portion *is angled* with respect to the first portion.” Ex. D at 23 (Amendment filed 10/03/2024 (emphasis added)). Because the Accused Products do not meet this key requirement, it is my opinion that they do not infringe Claim 14 of the '681 Patent.

2. The Accused Products Do Not Infringe Claim 15 of the '681 Patent

100. Claim 15 depends from Claim 14. Samsung therefore does not infringe Claim 15 for at least the reasons discussed above regarding Claim 14.

VIII. INVALIDITY

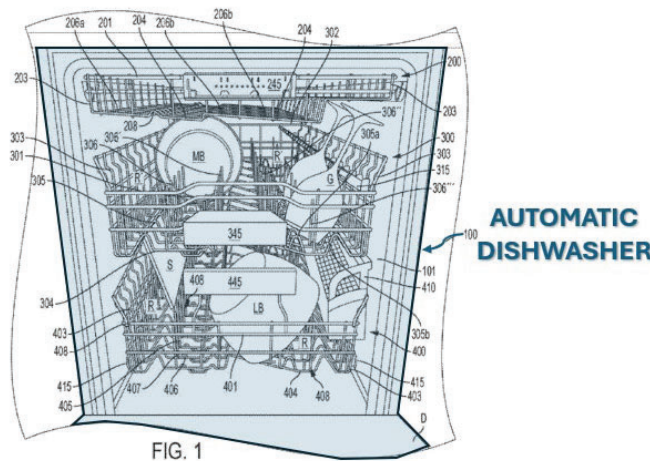
A. '681 Patent

1. Carr anticipates or renders obvious independent Claim 14 and dependent Claim 15

a. Independent Claim 14

(1) Element 14[pre]: An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

101. To the extent that the preamble is limiting, Carr discloses and/or renders obvious the preamble of Claim 14. Carr teaches a dishwasher appliance 100 (blue, below). Carr, [0037]. Carr discloses that “as is known in the art, the dishwasher appliance 100 includes a tub, a pump and filter assembly, a heating element, one or more wash arms, and a drain hose.” Carr, [0037].



102. While Carr’s apparatus “increases [a] dishwasher capacity, flexibility, and versatility, as well as enhancing the drying performance of [a] dishwasher,” (Carr, [0006]), Carr incorporates by reference U.S. Patent No. 9,445,703 to Hiedel et al. for the detailed description of the “suitable structure and operation of the dishwasher appliance.” Carr, [0037]. I have been informed that when a document is incorporated by reference by another document, as Carr does with respect to Hiedel, the incorporated document (here, Hiedel) becomes a part of the incorporating document (here, Carr). Hiedel teaches that the dishwasher acts on “actuators of the

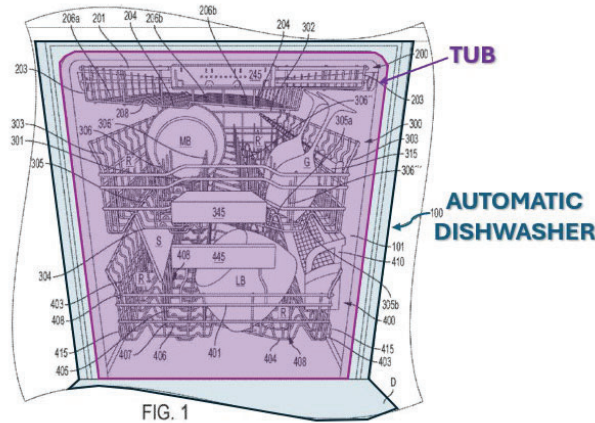
dishwashers in a controlling and/or regulating manner, thereby allowing wash processes, also referred to as wash cycles or wash runs, in which the items being washed can be cleaned using water, to be *carried out automatically*.” Hiedel, 1:39-46.

103. Carr discloses that its dishwasher appliance 100 is an “automatic dishwasher” that implements “an automatic treating cycle of operation.”

**(2) Element 14[a]: a tub defining a dish treating chamber;
and**

104. Carr discloses and/or renders obvious Element 14[a]. Specifically, Carr’s dishwasher appliance 100 includes a “tub defining a dish treating chamber.” Carr discloses that “as is known in the art, the dishwasher appliance 100 includes **a tub**, a pump and filter assembly, a heating element, one or more wash arms, and a drain hose.” Carr, [0037]. As I described above, Carr incorporates by reference U.S. Patent No. 9,445,703 to Hiedel et al. for detailed description of its dishwasher’s structure and operation. *Id.* Hiedel teaches that the dishwasher “further comprises **a wash container 5**, which can be closed off by a door 6, so that a closed wash chamber 7 results for washing items to be washed.” Hiedel, 6:21-23.

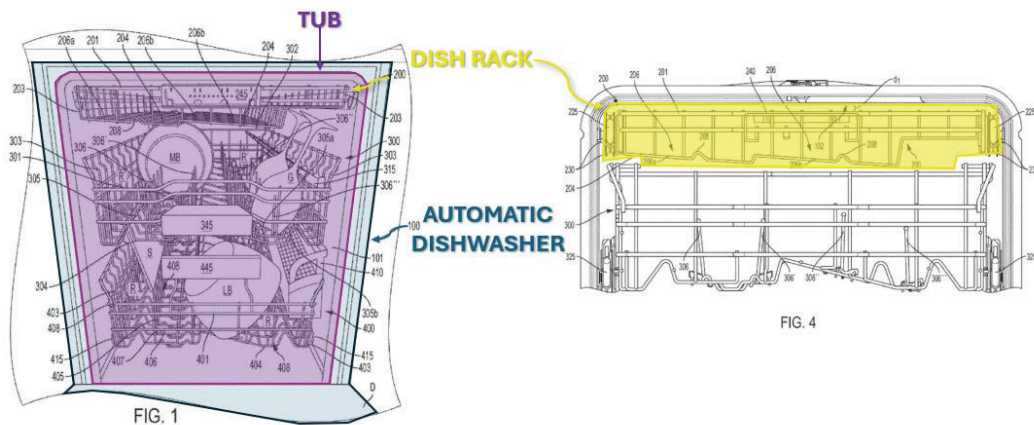
105. Carr provides a “dishwasher, comprising: **a dishwashing compartment** having a loading opening.” Carr, [0010]; *see also id.*, [0013]. Figure 1, annotated below, shows Carr’s dishwashing appliance (blue) “with the door open so as to reveal the **dishwashing compartment**,” colored in purple. Carr, [0028].



106. Carr’s tub defines its dishwashing compartment or wash container which is a “dish treating chamber” for washing items to be washed.

- (3) **Element 14[b][i]: a dish rack located within the dish treating chamber having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack**

107. Carr discloses and/or renders obvious Element 14[b][i]. Carr discloses a “dish rack located within the dish treating chamber.” Carr’s dishwasher includes a “top washware rack configured for movement out of and into the dishwashing compartment.” Carr, [0013]. The top washware rack, shown in Figures 1 and 4 below, is within the dish treating chamber and is “formed of wire thereby to hold washware including cutlery and washware larger than cutlery and to enhance drying performance.” Carr, [0013].



108. Carr’s dish rack discloses “having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack.” Carr’s “top washware rack 200 is configured as a basket and includes front 201, rear 202, and **opposing side walls 203 interconnected with a bottom portion 204.**” Carr, [0041]. Carr’s side walls are peripheral walls of the dishrack. As shown in Figure 4 below, Carr’s dish rack has a first end (gray) spaced from a second end (gray) by a bottom wall (bottom portion 204, blue), from which extends a peripheral wall defining side walls of the dish rack (opposing side walls 203, gold).

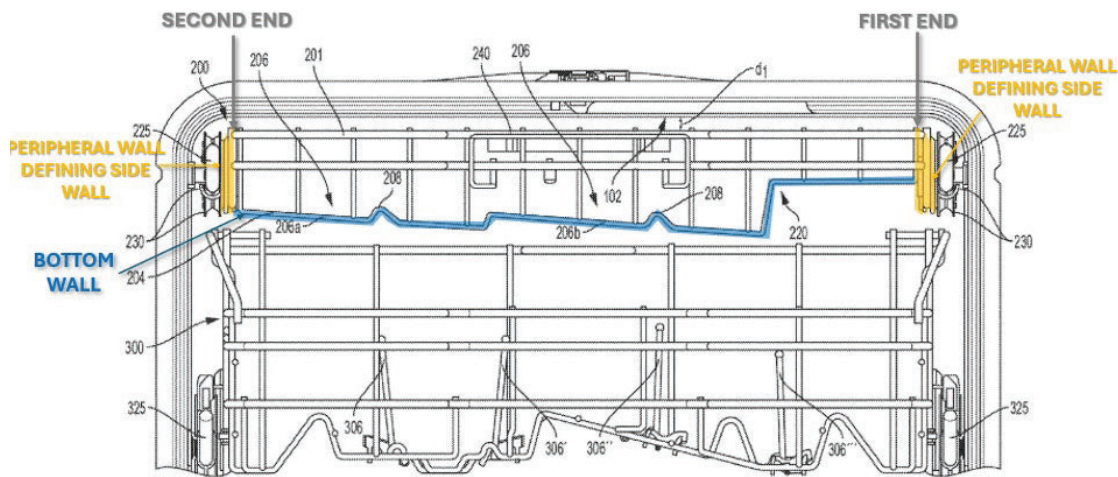


FIG. 4

- (4) **Element 14[b][ii]: at the first end of the dish rack, the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall and**

109. Carr discloses and/or renders obvious Element 14[b][ii]. Specifically, at the first end of the dish rack, the bottom wall has a first portion defined by a substantially horizontal planar portion extending across a first portion of the bottom wall. As shown in Figure 4, “top washware rack 200 is formed with a notch section 220 [(red)] along at least one side ... in the bottom portion 204.” Carr, [0047].

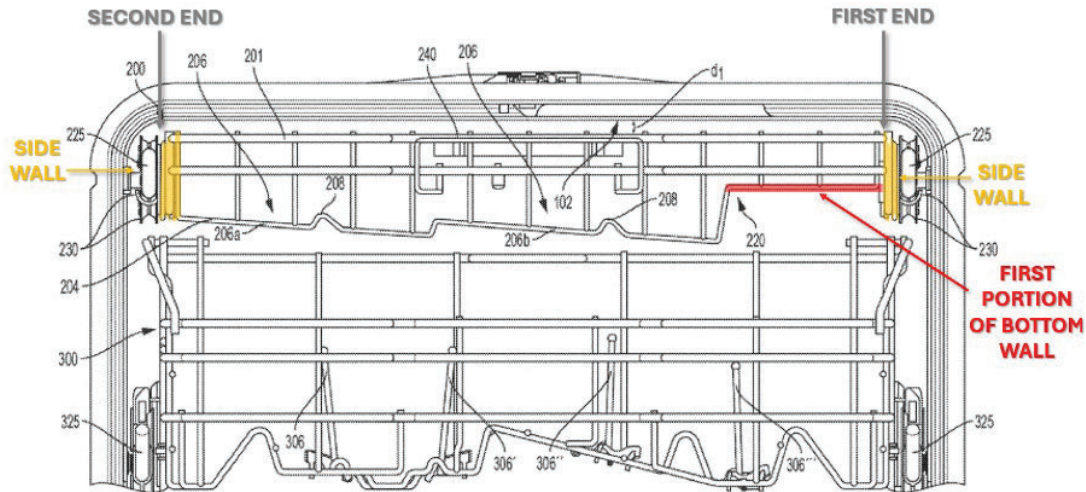


FIG. 4

110. Notch section 220 is substantially horizontal and planar to accommodate “at least one of cutlery or utensils” (Carr, [0018]). As shown in Figure 3, a cutlery/utensil accessory insert 235 (pink) is shown disposed above notch section 220. *Id.*, [0048].

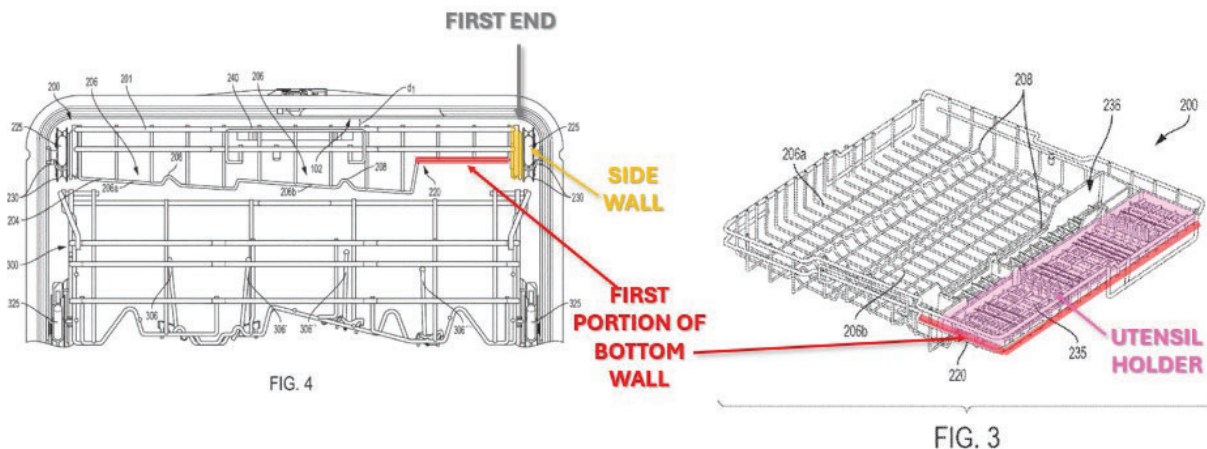


FIG. 3

111. Carr’s top washware rack 200 discloses a first portion with a first substantially horizontal planar portion extending across first portion of the bottom wall.

- (5) **Element 14[b][iii]: at the second end of the dishrack, a second portion is angled with respect to the first portion and defining a depression;**

112. Carr discloses and/or renders obvious Element 14[b][iii]. Specifically, at the second end of the dish rack, the bottom wall has a second portion that is angled with respect to the

first portion. The bottom portion 204 of washware rack 200 “includes one or more angled portions 206 that is/are configured to hold bowls at a slight tilt with respect to horizontal in order to drain off water from the bowls.” Carr, [0043]. Carr discloses that the angled portion 206 is “tilted at an angle in a range of 3 to 5 degree with respect to horizontal, and preferable is tilted at an angle of approximately 4 degrees with respect to horizontal.” *Id.* Figure 4, annotated below, shows that second portion (blue) is angled 3-5 degrees with respect to the first portion, the horizontal notch portion 220 (red).

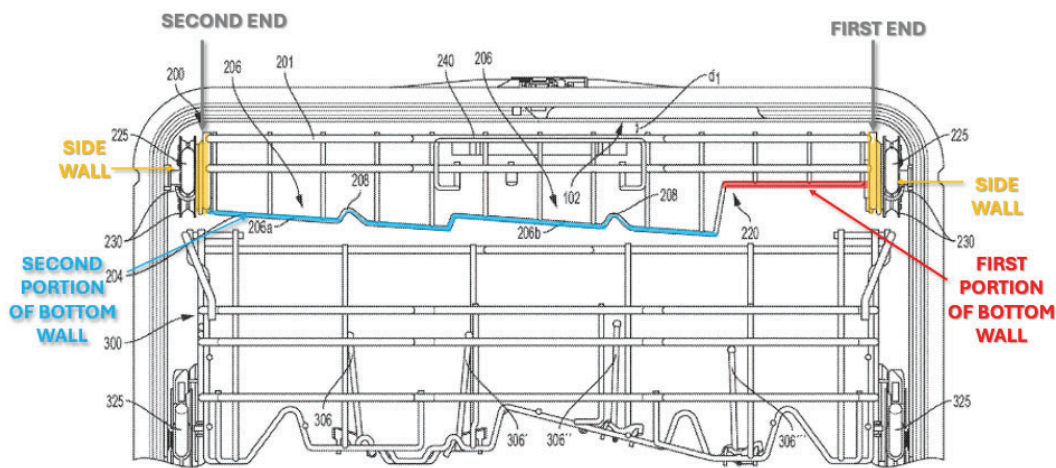


FIG. 4

113. Carr’s second portion defines a depression. As I described in the previous paragraph, each angled portion is “configured to hold bowls” at a slight tilt in order to drain water off from the bowls. Carr, [0043]-[0044]. Therefore, the angled portion(s) defines a depression, as shown in Figure 4 in orange, in order to provide space for the bowls to sit at an angle.

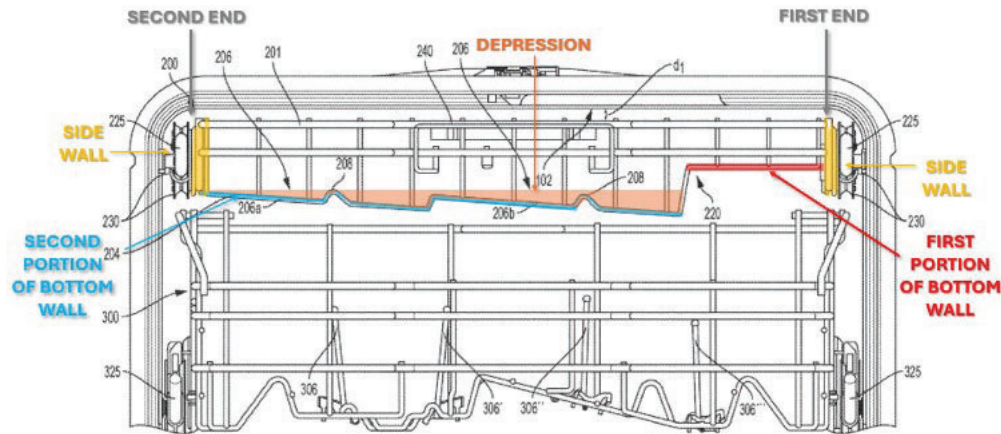


FIG. 4

114. Carr's second portion (angled portion(s) 206, blue) is angled with respect to the first portion (notch portion 220, red) and defines a depression (orange).

(6) Element 14[b][iv]: the depression extending lower than the first portion relative to the peripheral wall;

115. Carr discloses and/or renders obvious Element 14[b][iv]. Specifically, Carr's depression extends lower than the first portion relative to the peripheral wall. As I described in the previous section, Carr's angled portion(s) 206 create a depression at an angle relative to notch portion and extend lower than the first portion so that a bowl can sit within the depression. Carr, [0043]-[0044].

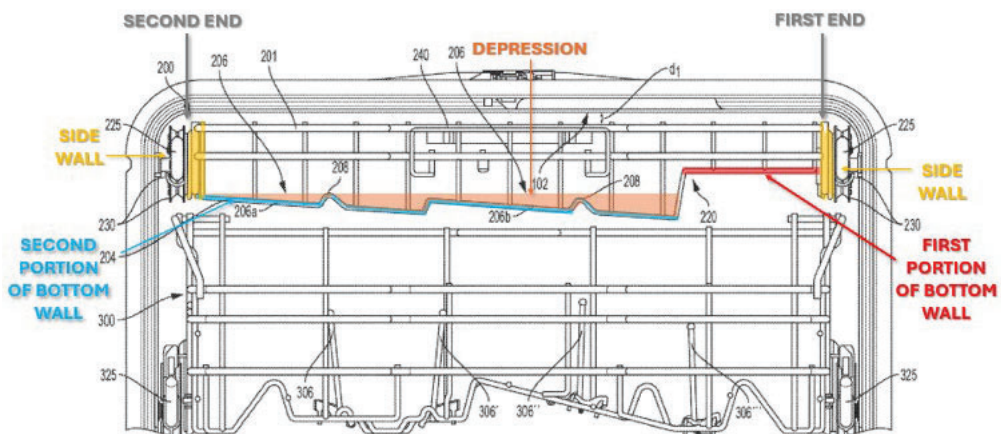
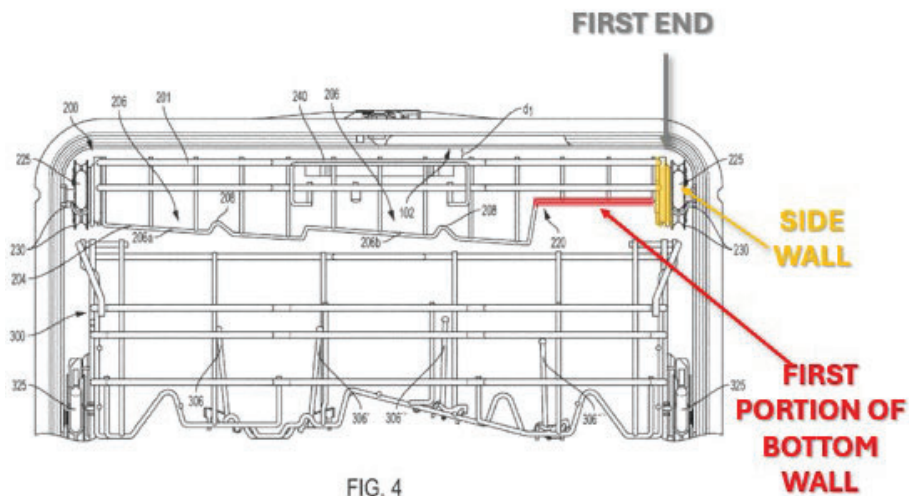


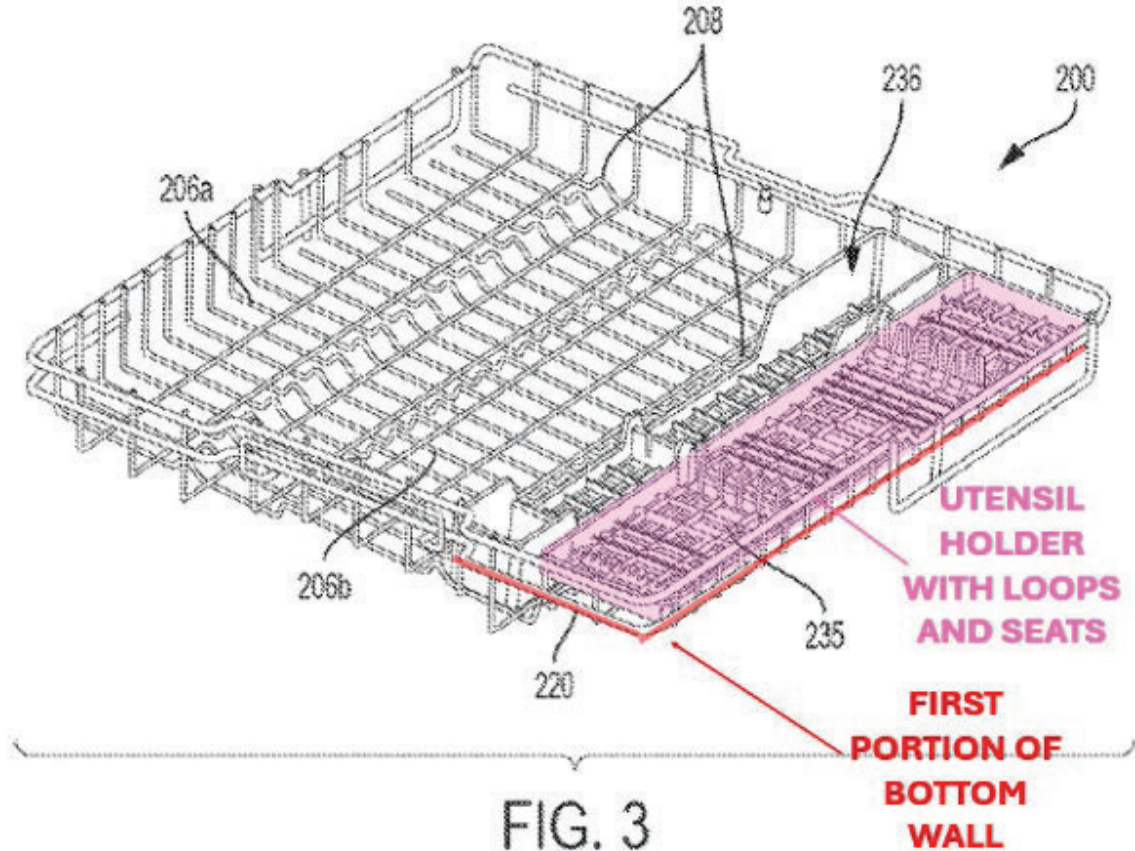
FIG. 4

116. Carr's top washware rack 200 discloses a depression that is lower than the first portion relative to the peripheral wall.

(7) Element 14[b][v]: the first portion supporting a first set of utensil holders for supporting one or more utensils and

117. Carr discloses and/or renders obvious Element 14[b][v]. Carr discloses that the first portion supports a first set of utensil holders for supporting one or more utensils. Specifically, notch section 220 accommodates "at least one of cutlery or utensils" (Carr, [0018]). As shown in Figure 3, a cutlery/utensil accessory insert 235 is shown disposed above the notch section 220. *Id.*, [0048]. Figure 3 further shows the series of loops and seats in order for cutlery/utensils to sit in the top rack. The utensil accessory insert is thus a utensil holder which supports one or more utensils, in the same way described by the '681 Patent: "first set of utensil holders illustrated as a set of utensil seats 126 or loops 128. The utensil holders can be configured to retain or hold a set of utensils such as, but not limited to, spoons, forks, sporks, knives, ladles, spatulas, or the like." '681 Patent, 6:61-65.





118. Carr's first portion supports a first set of utensil holders for supporting one or more utensils.

(8) Element 14[b][vi]: the second portion defining a cup seat for supporting one or more cups in the depression.

119. Carr discloses and/or renders obvious Element 14[b][vi]. Carr discloses that the second portion defines a cup seat for supporting one or more cups in the depression. As I described in Element 14[b][iii], each angled portion is “configured to hold bowls” at a slight tilt in order to drain water off from the bowls. Carr, [0043]-[0044]. In Figure 6, Carr shows how the angled portion(s) provide a seat for supporting one or more bowls. *Id.*, [0033], [0050].

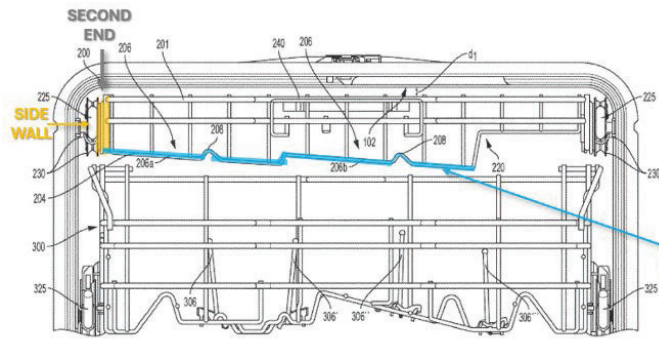


FIG. 4

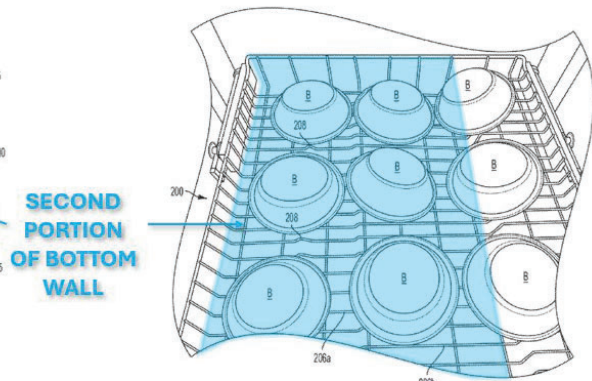


FIG. 6

120. While Carr describes an example using bowls, Carr states that the “top washware rack 200 is configured to hold cutlery and washware..., but not limited to, small dishes, bowls, *cups*, as well as cooking utensils.” Carr, [0041]. As I have annotated below in Figure 4, the depression (orange) defines a cup seat for cups to fit on the Carr’s dishrack, unlike the first portion (notch section 220, red), which has a shorter height to fit utensils and thus could not fit cups.

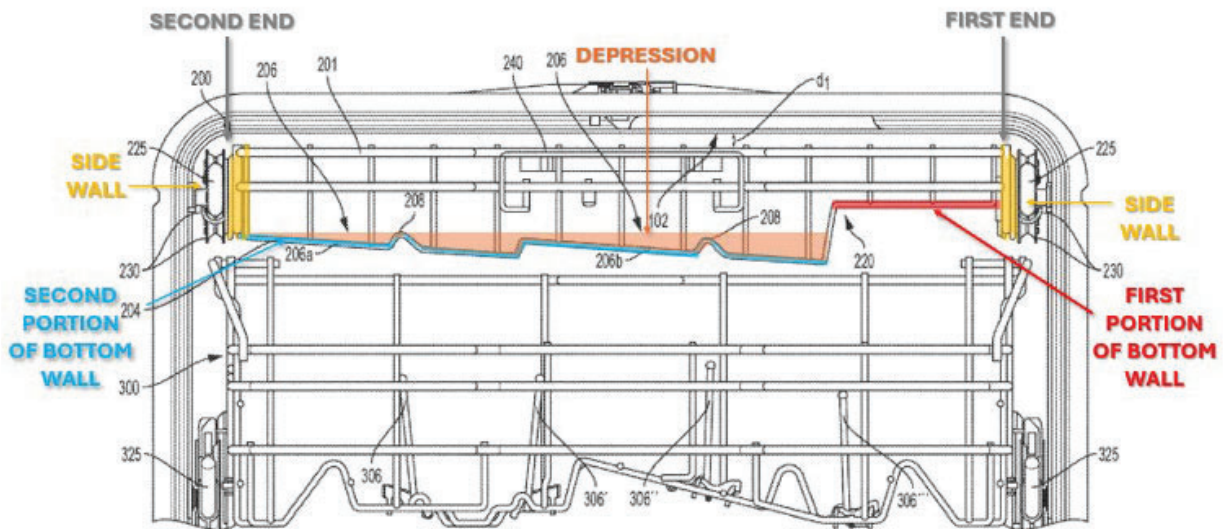
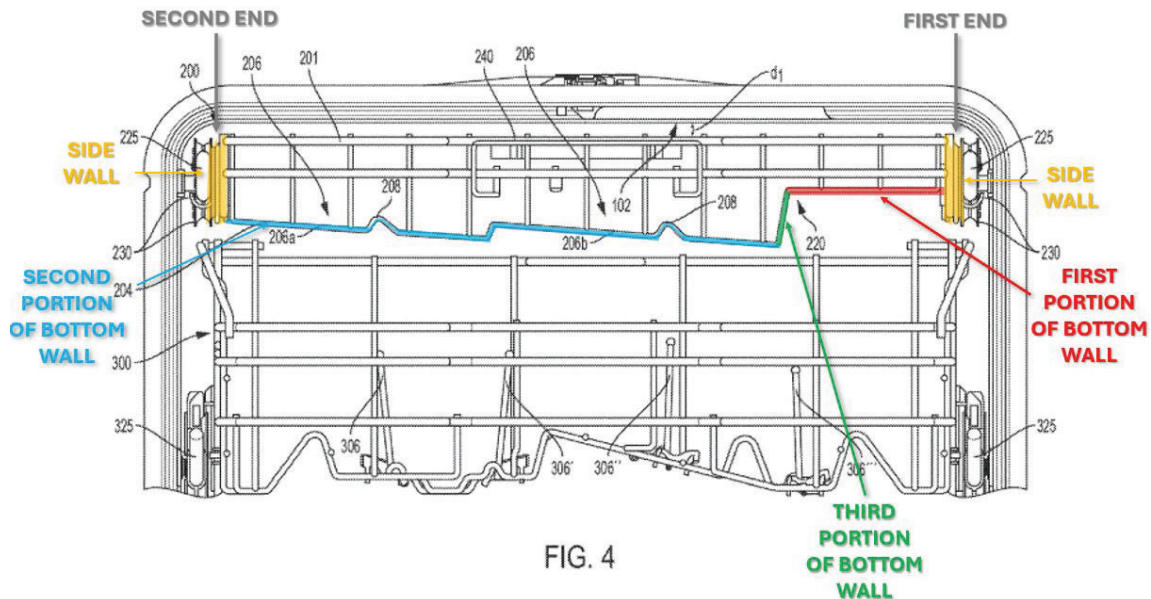


FIG. 4

121. Therefore, the angled portion(s) defines a depression, as shown in Figure 4 in orange, in order to provide seats for one or more cups in the depression.

(1) **Element 15[a]: The automatic dishwasher of claim 14, further comprising a third portion of the bottom wall defined by an angled third planar portion relative to the substantially horizontal first portion and extending across a third portion of the bottom wall;**

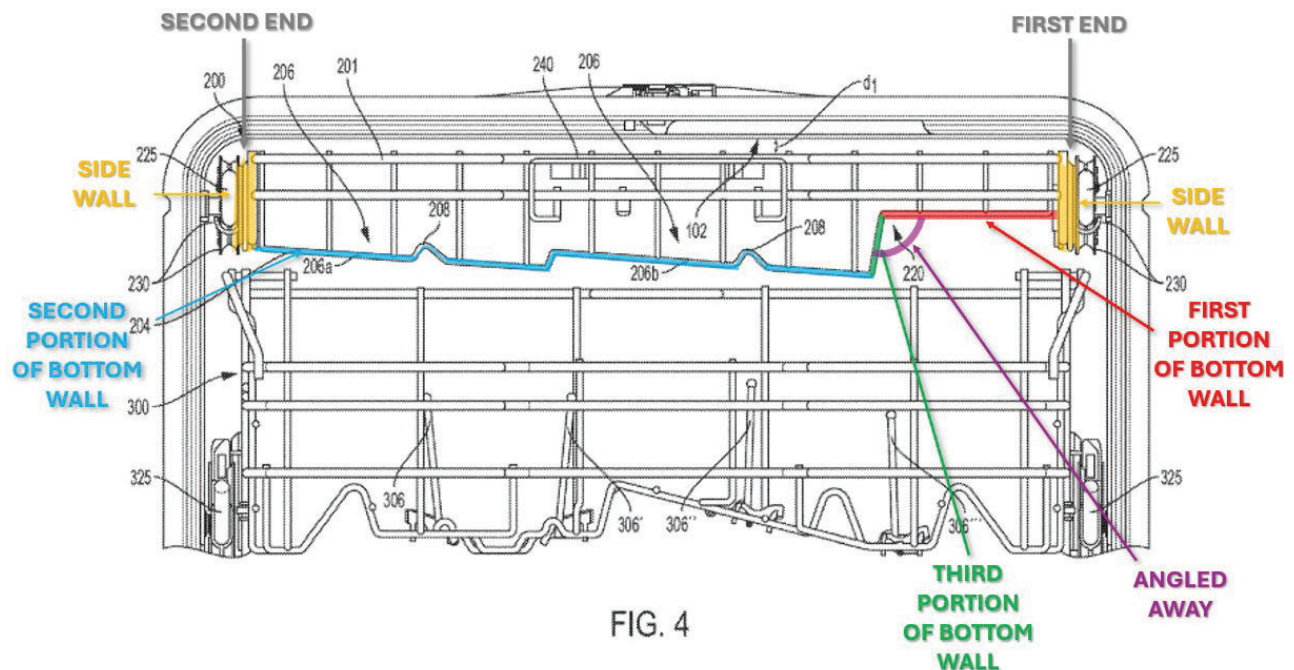
122. Carr discloses and/or renders obvious Element 15[a]. Carr discloses a third portion of the bottom wall defined by an angled third planar portion relative to the substantially horizontal first portion, extending across a third portion of the bottom wall. As shown in Figure 4 below, Carr's bottom portion of washware rack 200 includes an angled portion (green), which is angled away from the first portion (red) and extends across the bottom wall. As I described in the previous section, bottom portion 204 of Carr's top washware rack 200 includes one or more angled portions that are configured to hold bowls at a slight tilt with respect to the horizontal. Carr, [0043]. The angled portion (green) that allows the angled portions (blue) to form a depression from the first portion is a third angled planar portion.



123. Therefore, Carr's planar portion that connects the angled portion(s) and notch section 220 at an angle is the third portion of the bottom wall.

(2) **Element 15[b]: the third portion connected to and extending from the first portion and angled away from the first portion.**

124. Carr discloses and/or renders obvious Element 15[b]. Carr discloses that the third portion is connected to and extends from the first portion and is angled away from the first portion. As I described in the previous section, Carr's third portion (green) is connected to and extends from the notch portion 220 (red) in order to provide the depression defined by the angled portions. Carr's third portion is angled away from the first portion by being angled greater than 90 degrees from the notch portion.



2. **Bosch 800 Series anticipates or renders obvious independent Claim 14 and dependent Claim 15**

a. **Independent Claim 14**

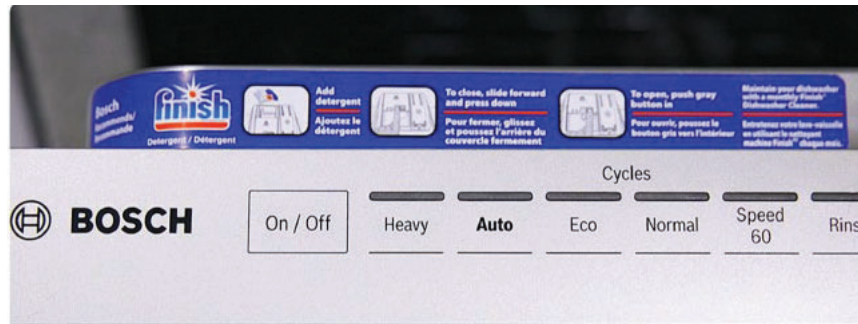
(1) **Element 14[pre]: An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:**

125. To the extent that the preamble is limiting, Bosch 800 Series discloses and/or renders obvious the preamble of Claim 14. Bosch 800 teaches an automatic dishwasher configured to implement an automatic treating cycle of operation. Specifically, Bosch 800 includes advanced cleaning with “Precision Wash,” which allows a user to “simply start [the] dishwasher and walk away.” Brochure, 8. Bosch 800 uses “intelligent sensors” that “scan and check the progress of dishes throughout the cycle, and powerful, precision spray arms go to work targeting every item of every load.” *Id.*, 34.

126. Bosch 800 discloses automatic treatment cycles of operation. Specifically, Bosch 800 includes the following cycles:

Cycles.*			
Heavy	Auto	Normal	Glass
NSF certified and best for cleaning items with baked-on food or grease.	Recommended for everyday use. Best for mixed loads or dishes with varying amounts of food soil.	Cleans a full load of normally dirty dishes.	Best for temperature-sensitive dishes and ideal for glassware.
Express	Rinse	Eco	Speed60®
Quickly wash a lightly soiled load.	A quick rinse until you're ready to run a full cycle.	Reduces energy usage. Our most efficient cycle.	Washes and dries lightly soiled loads in about 60 minutes. Perfect for when you need a quick turnaround.

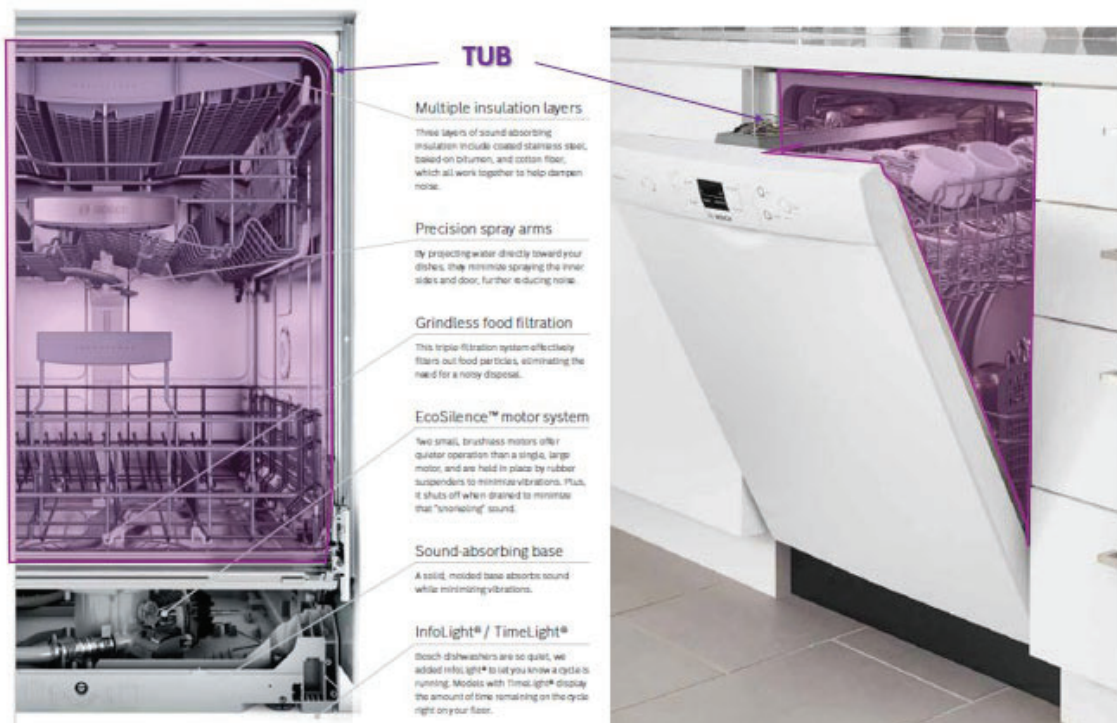
Brochure, 39



Dishwasher video, 0:12.

**(2) Element 14[a]: a tub defining a dish treating chamber;
and**

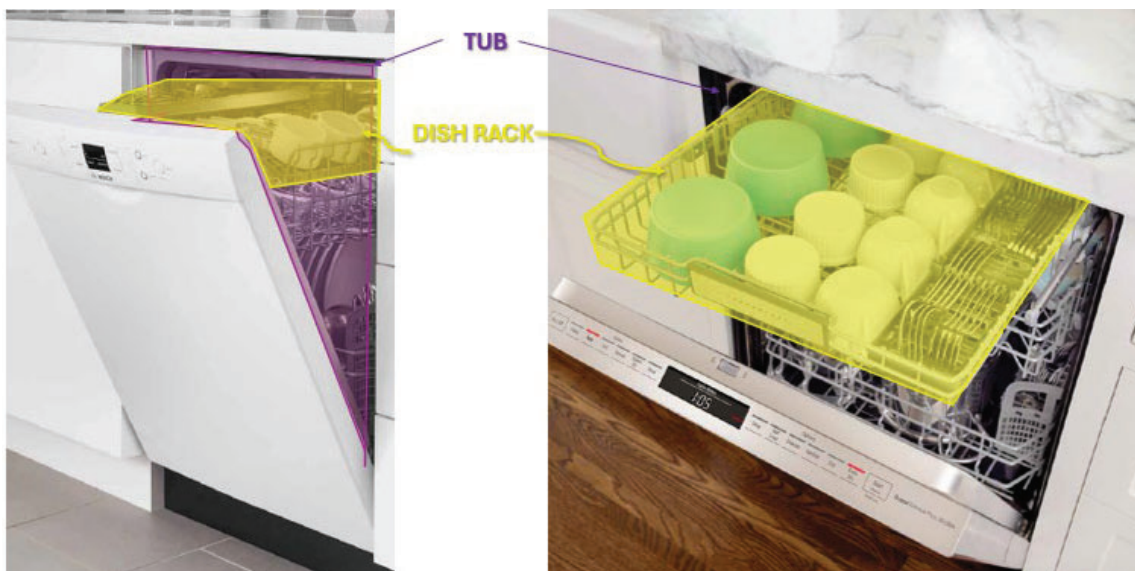
127. Bosch 800 discloses and/or renders obvious Element 14[a]. Specifically, Bosch 800 discloses a tub defining a dish treating chamber. As shown below, the dishwasher has a tub with dishes included in a rack. Brochure, 27, 33. Bosch 800 further details having a “deeper stainless-steel tub” (annotated purple) available in all models of the Bosch 800 Series dishwashers. Brochure, 22. Bosch 800’s tub defines a “dish treating chamber.”



Brochure, 23, 27.

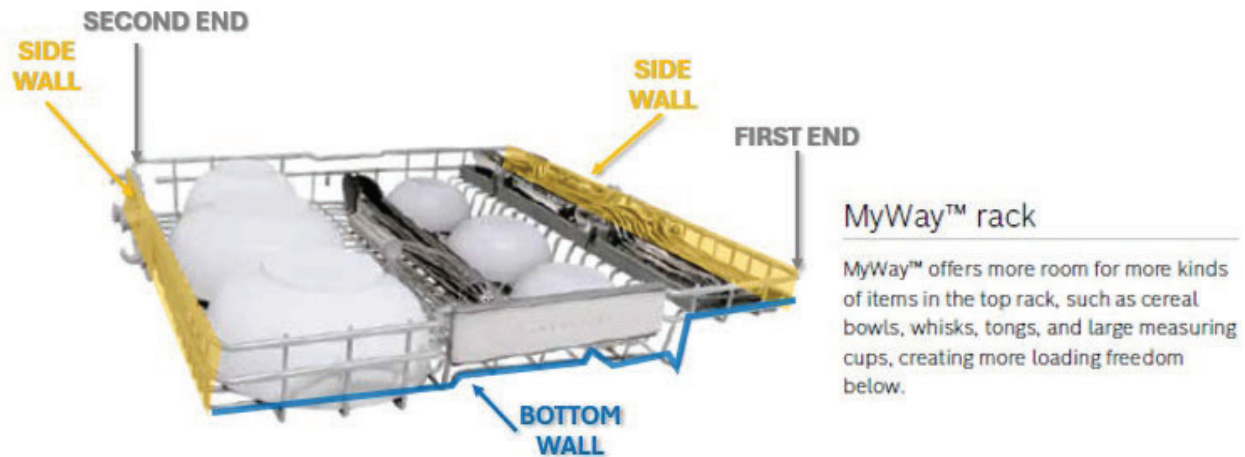
- (3) **Element 14[b][i]: a dish rack located within the dish treating chamber having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack**

128. Bosch 800 discloses and/or renders obvious Element 14[b][i]. Bosch 800 discloses a “dish rack located within the dish treating chamber.” Bosch 800 includes a 3rd dish rack (yellow) in the tub of its dishwasher (purple). Brochure, 18.

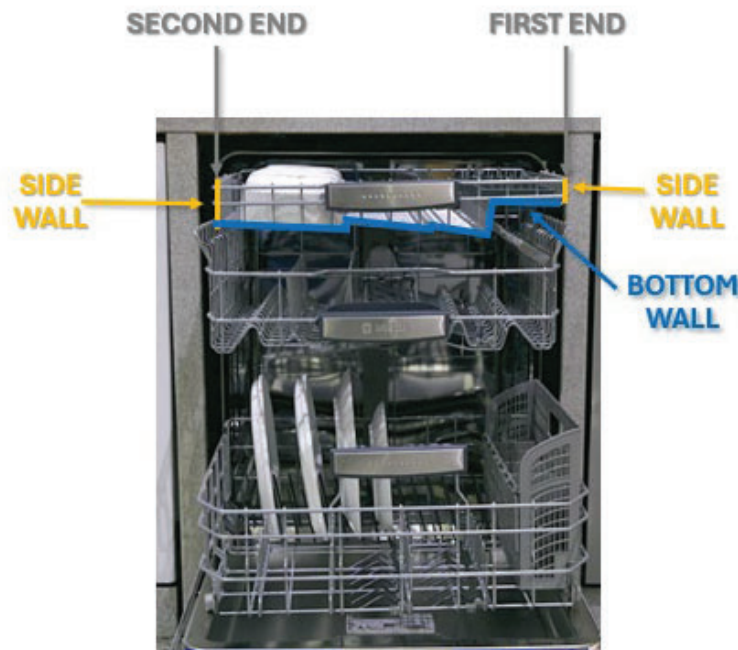


Brochure, 17, 27.

129. Bosch 800’s 3rd rack discloses a first end spaced from a second end comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack. As shown below, in Bosch 800’s 3rd rack (called “MyWay rack”) includes two ends (gray) comprised of two side walls (yellow) spaced away from each other by a bottom wall (blue). Brochure, 19; *see also* Dishwasher video, 0:25. For better clarity in the photo below and several to follow, I have only highlighted the front outline of the bottom wall or a portion of the bottom wall.



Brochure, 19.

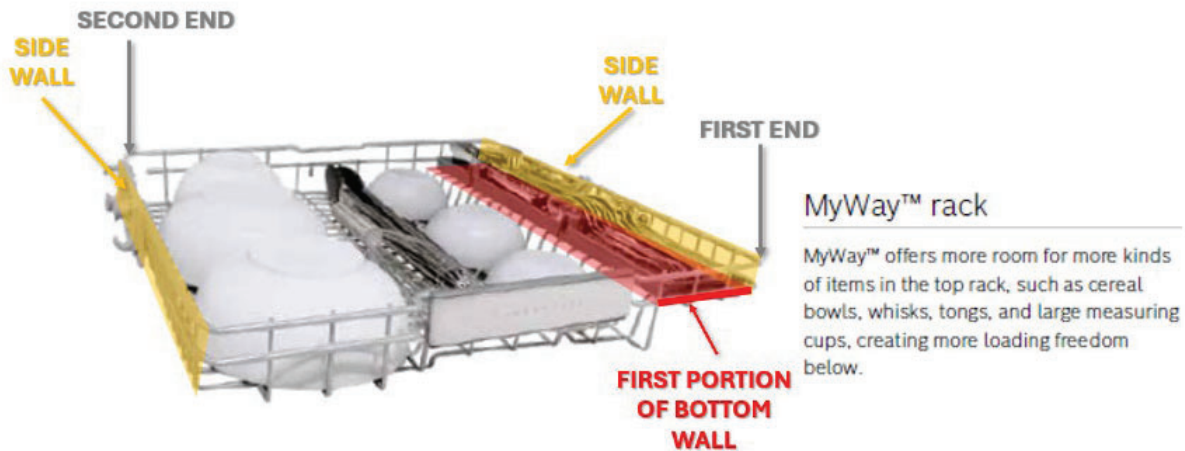


Dishwasher video, 0:25.

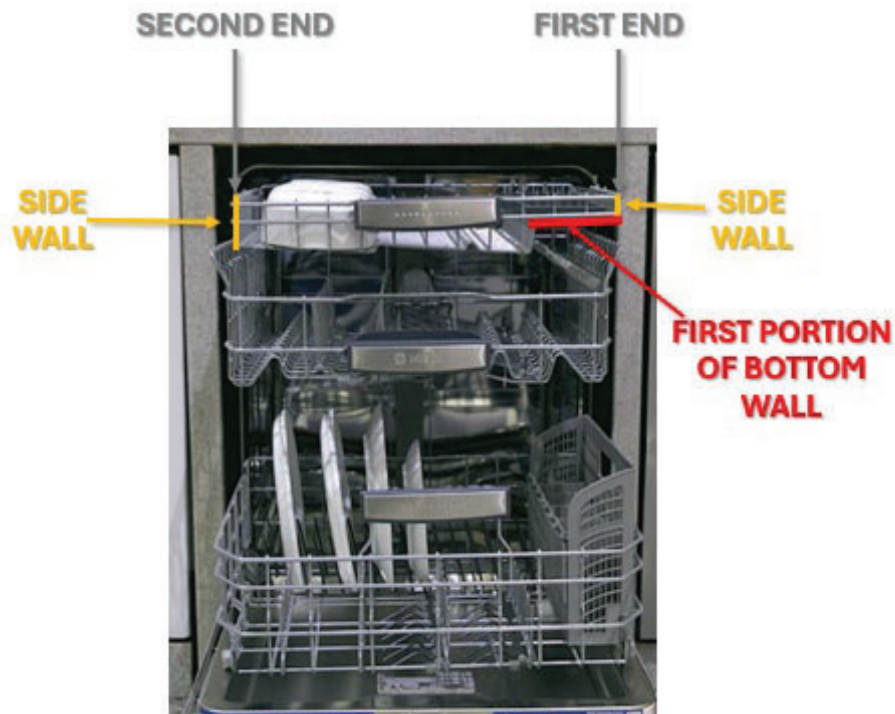
- (4) **Element 14[b][ii]: at the first end of the dish rack, the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall and**

130. Bosch 800 discloses and/or renders obvious Element 14[b][ii]. Specifically, at the first end of Bosch 800's dish rack, the bottom wall has a first portion defined by a substantially horizontal planar portion extending across a first portion of the bottom wall. As shown below,

Bosch 800's MyWay rack includes a first substantially horizontal planar portion (red) at the first end of the dish rack (gray) which extends across a first portion of the bottom wall. Brochure, 19; *see also* Dishwasher video, 0:25.



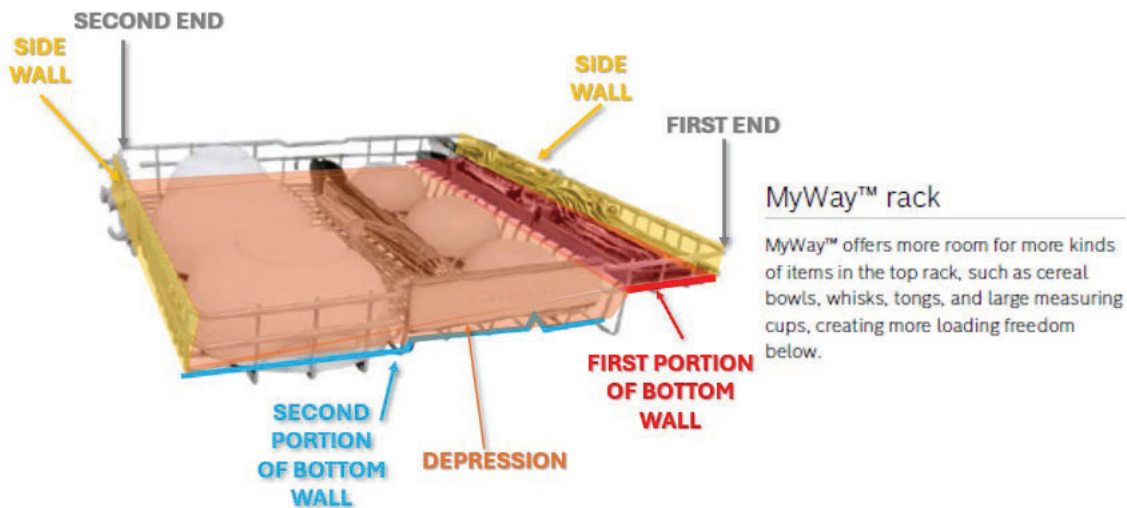
Brochure, 19.



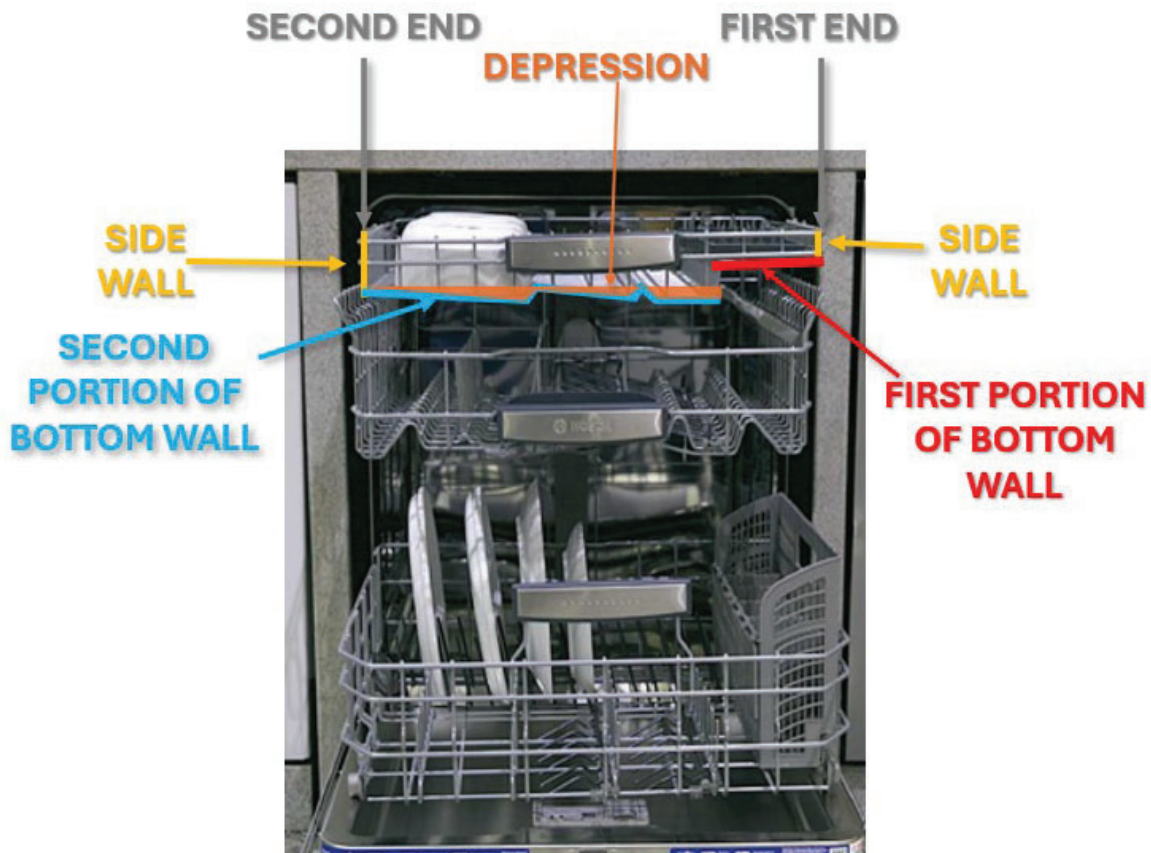
Dishwasher video, 0:25.

- (5) **Element 14[b][iii]: at the second end of the dishrack, a second portion is angled with respect to the first portion and defining a depression;**

131. Bosch 800 discloses and/or renders obvious Element 14[b][iii]. Specifically, at the second end (gray) of the Bosch 800's dish rack, the bottom wall has a second portion (blue) that is angled with respect to the first portion (red) to define a depression (orange) for "cereal bowls, whisks, tongs, and large measuring cups" to sit. Brochure, 19; *see also* Dishwasher video, 0:25.



Brochure, 19.

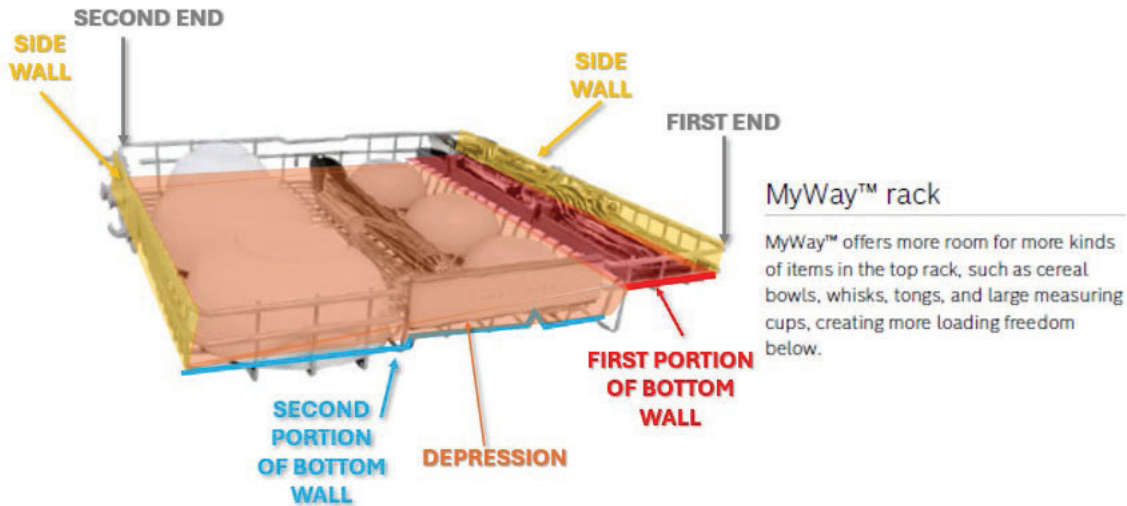


Dishwasher video, 0:25.

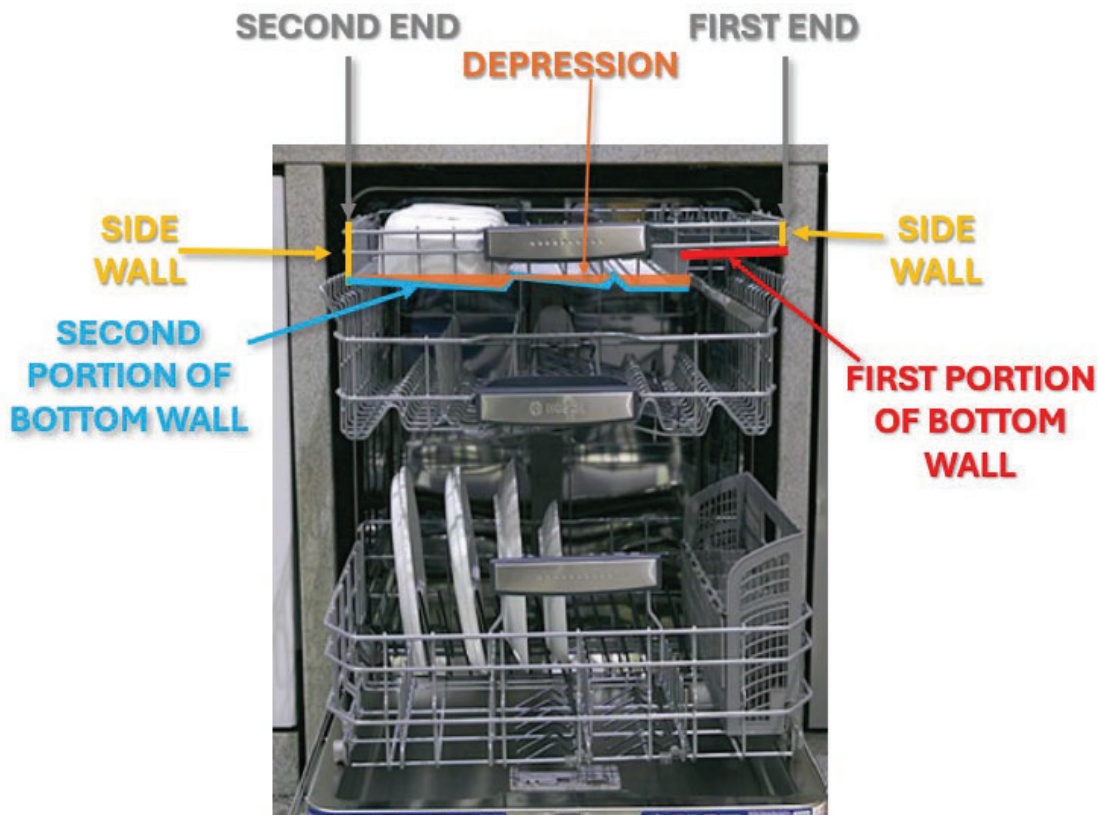
(6) Element 14[b][iv]: the depression extending lower than the first portion relative to the peripheral wall;

132. Bosch 800 discloses and/or renders obvious Element 14[b][iv]. Specifically, Bosch 800's depression extends lower than the first portion relative to the peripheral wall. As I described in the previous section, Bosch 800's depression (orange) is lower than the first horizontal portion (red) in order for "cereal bowls, whisks, tongs, and large measuring cups" to sit on the third rack. Brochure, 19; *see also* Dishwasher video, 0:25. I have again only highlighted the first and second portion of the bottom wall as well as the depression on the front of the rack. Specifically, the MyWay rack "easily fits those hard-to-place items like cereal bowls and large utensils." Brochure, 17. "Unlike traditional 3rd racks, the MyWay rack offers more room for more kinds of items, such

as cereal bowls, whisks, tongs, and large measuring cups, creating more freedom in loading below.” *Id.* By putting things like bowls and lids “up top instead of in the bottom rack, it frees up more space for your larger pots and pans.” *Id.*



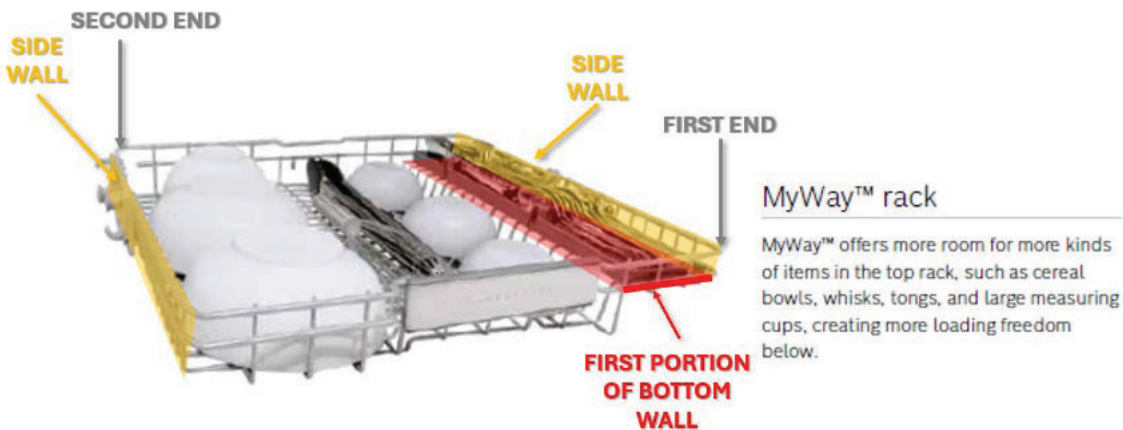
Brochure, 19.



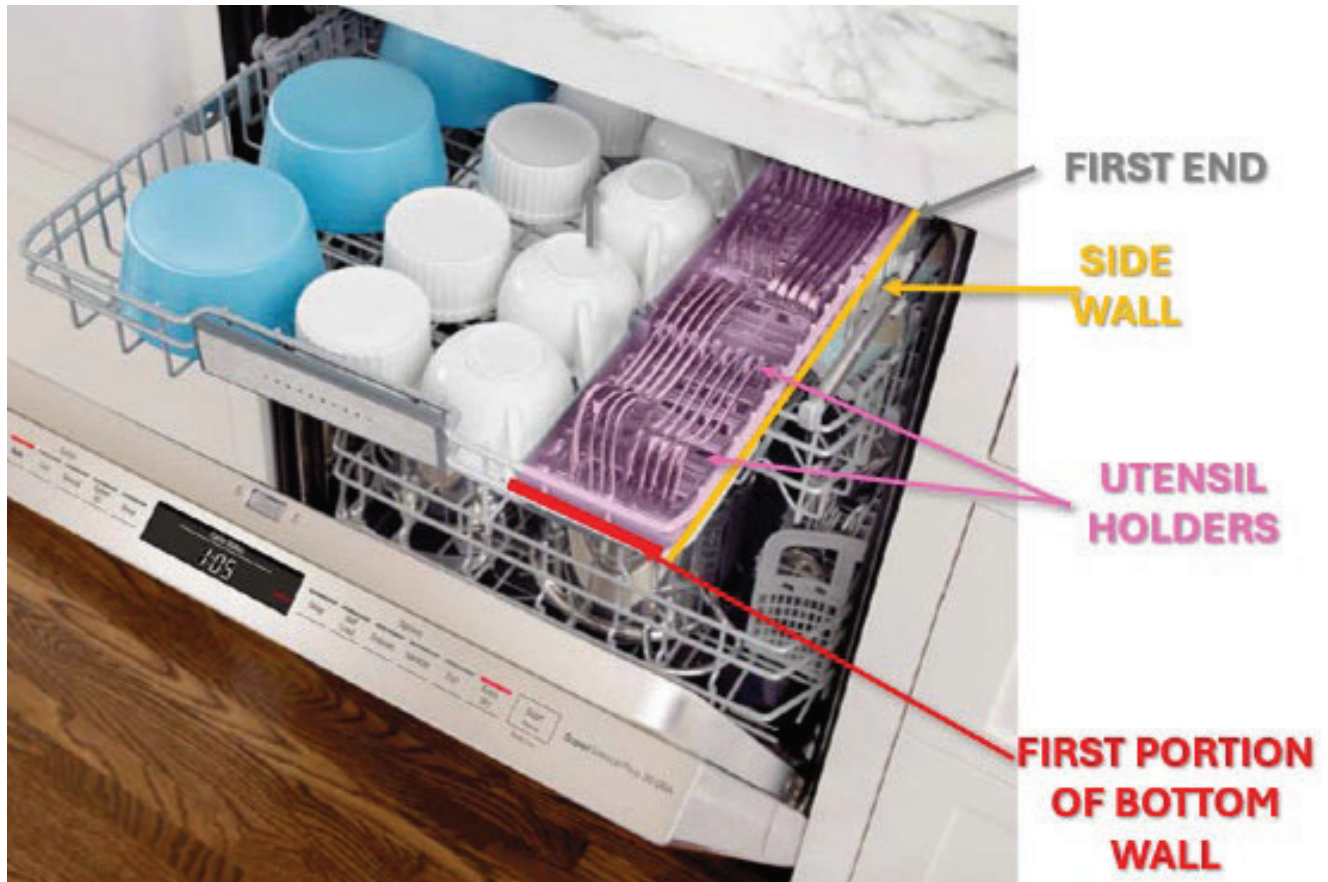
Dishwasher video, 0:25.

(7) **Element 14[b][v]: the first portion supporting a first set of utensil holders for supporting one or more utensils and**

133. Bosch 800 discloses and/or renders obvious Element 14[b][v]. Bosch 800 discloses that the first portion supports a first set of utensil holders for supporting one or more utensils. Specifically, Bosch 800's MyWay rack includes a "removable insert that holds up to 18 pieces of **flatware.**" Brochure, 17. As shown below, the utensil holders (pink) are located on the first portion of the bottom wall because it is the planar portion. Brochure, 19. The Brochure's images also show that the flat first portion holds forks and other utensils.



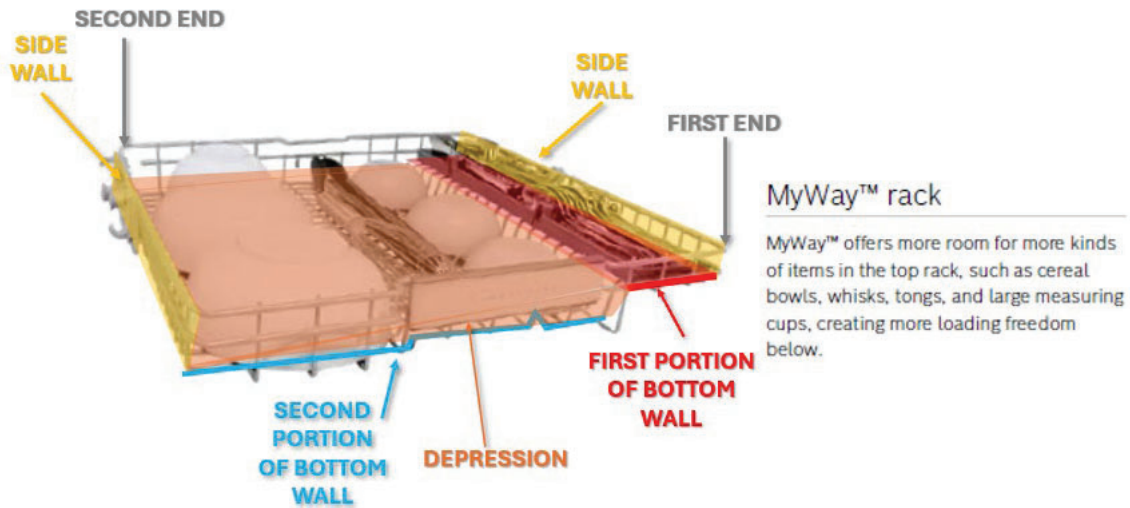
Brochure, 19.



Brochure, 17.

(8) Element 14[b][vi]: the second portion defining a cup seat for supporting one or more cups in the depression.

134. Bosch 800 discloses and/or renders obvious Element 14[b][vi]. Bosch 800 discloses that the second portion defines a cup seat for supporting one or more cups in the depression. As I described in Element 14[b][iii], the second portion is angled so that “cereal bowls, whisks, tongs, and large measuring *cups*” can sit. Brochure, 19.



Brochure, 19.

135. While Bosch 800 shows bowls in several of its images, the second portion is also angled as a cup seat to support one or more cups in the depression, as shown below. Brochure, 17.



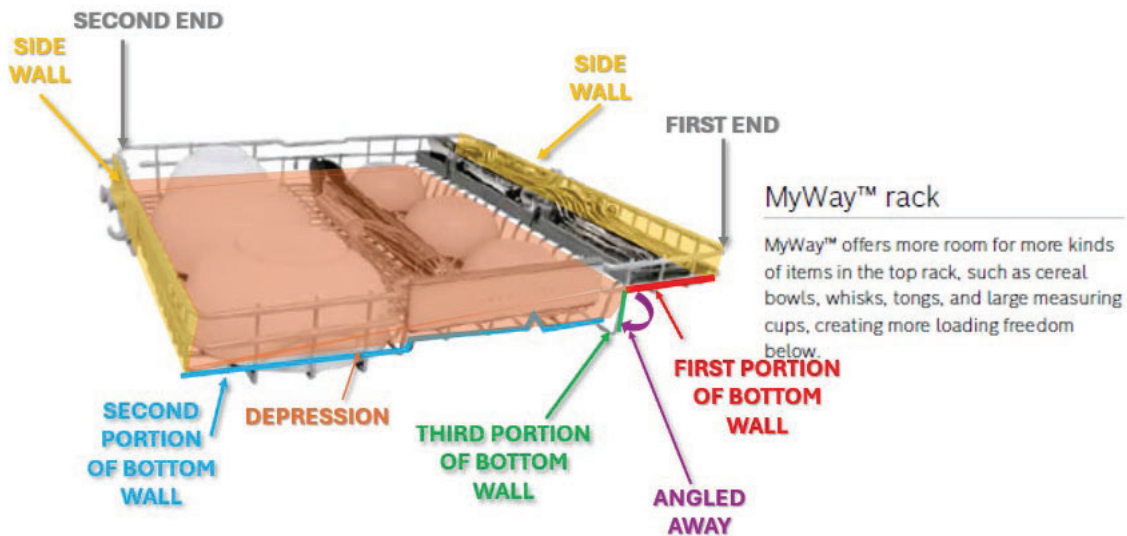
Brochure, 17.

b. Dependent Claim 15

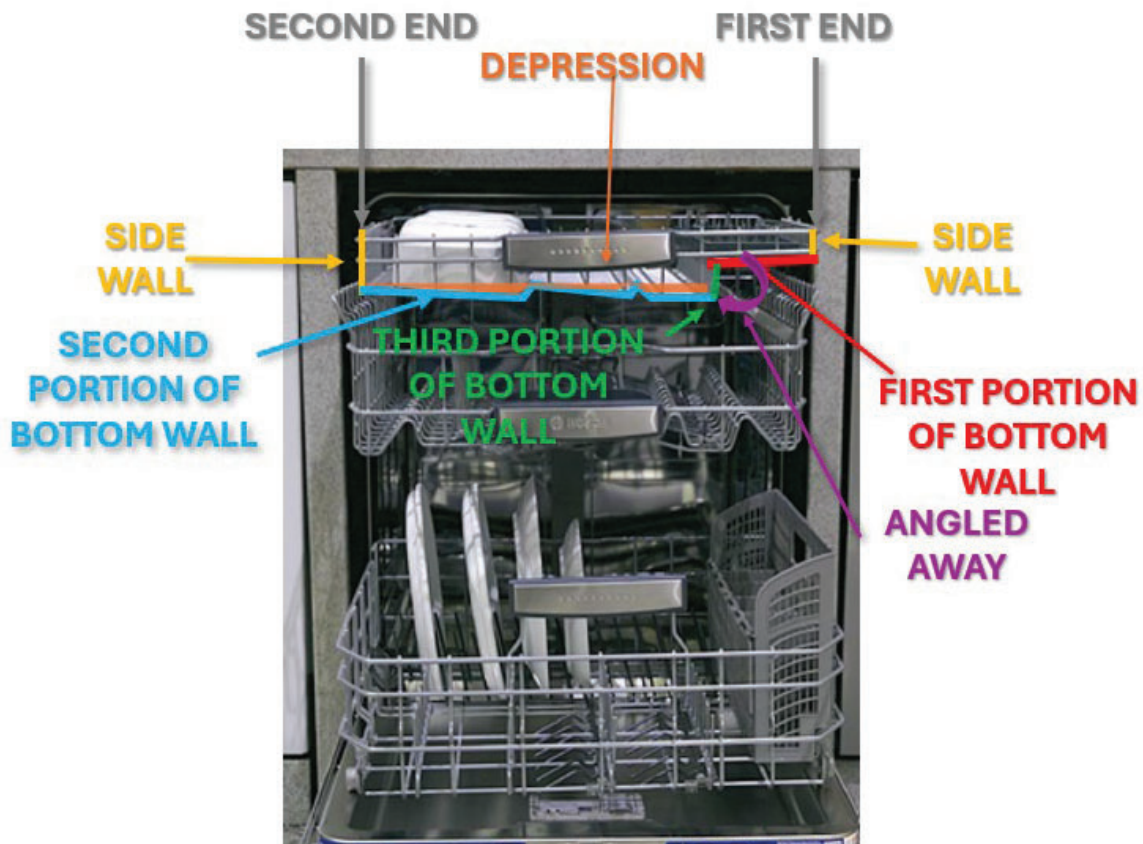
- (1) Element 15[a]: The automatic dishwasher of claim 14, further comprising a third portion of the bottom wall defined by an angled third planar portion relative to the substantially horizontal first portion and extending across a third portion of the bottom wall;**

136. Bosch 800 discloses and/or renders obvious Element 15[a]. Bosch 800 discloses a third portion of the bottom wall defined by an angled third planar portion relative to the substantially horizontal first portion, extending across a third portion of the bottom wall. As shown below, Bosch 800's top rack includes a portion that is angled down relative to the substantially horizontal first portion and extends across as a third portion of the bottom wall, in green. I have

again only highlighted the first, second, and third portions of the bottom wall as well as the depression on the front of the rack



Brochure, 29.

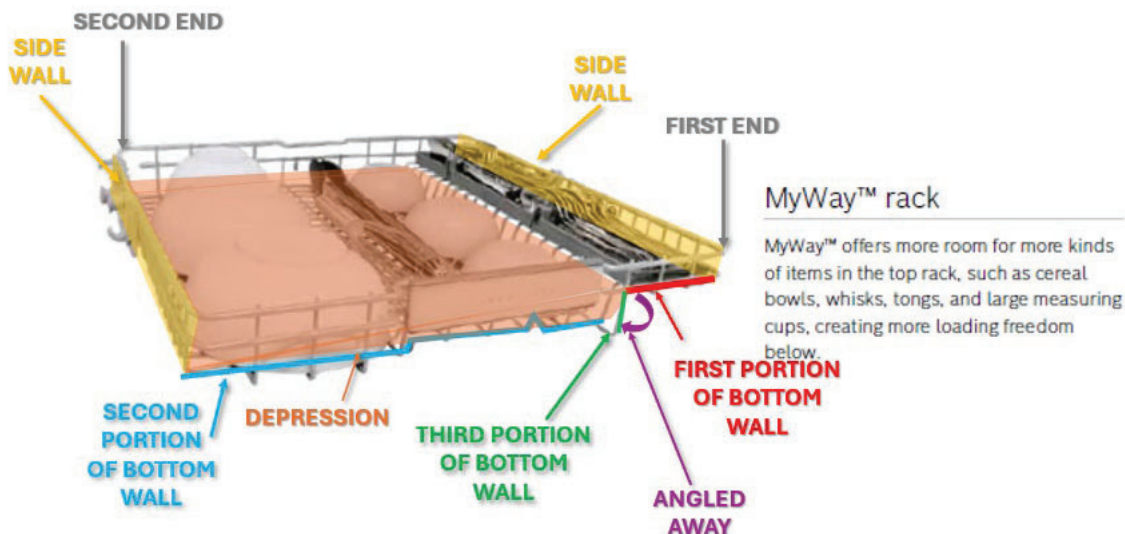


Dishwasher video, 0:25.

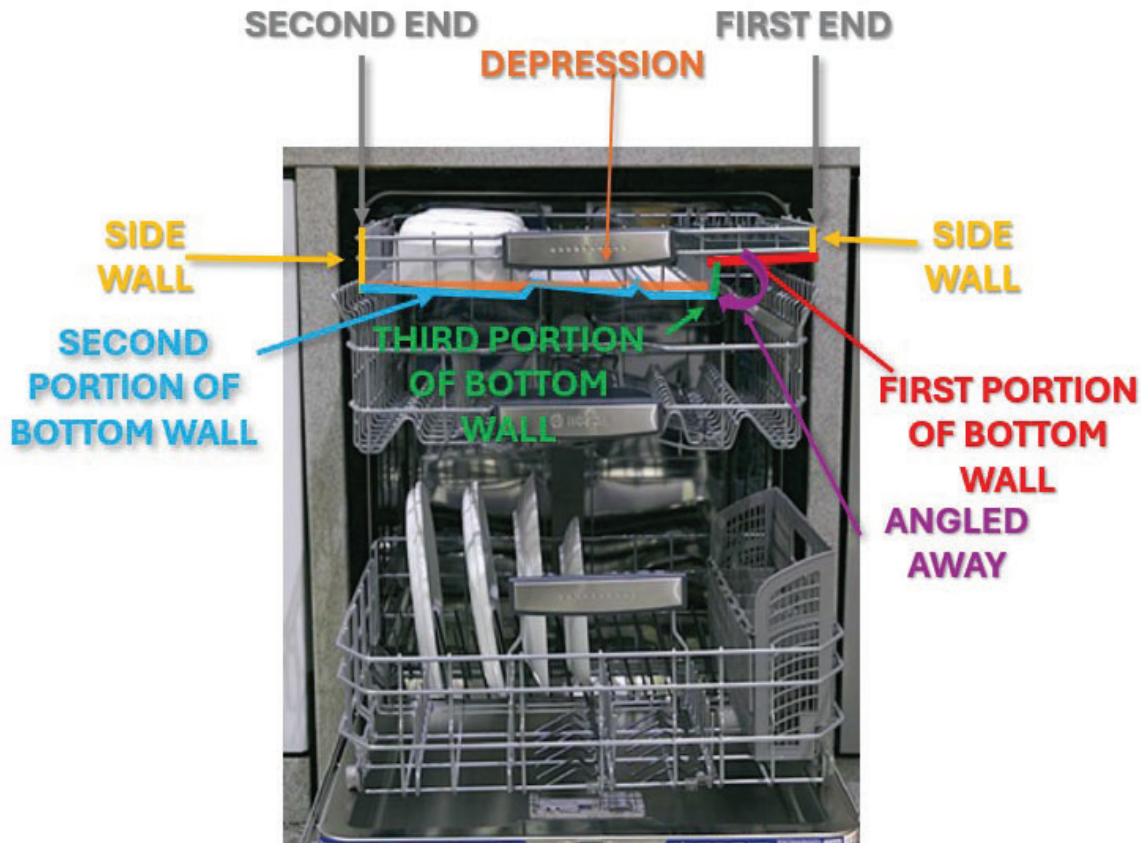
137. This third portion that allows the angled portions (blue) to form a depression from the first portion is an angled third planar portion. The third portion is angled away from the first portion and extends across the bottom wall by being angled away from the first portion at an angle greater than 90 degrees. Therefore, Bosch 800's planar portion that connects the second portion of the bottom wall (blue) at an angle to the first portion of the bottom wall (red) is the third portion of the bottom wall.

(2) Element 15[b]: the third portion connected to and extending from the first portion and angled away from the first portion.

138. Bosch 800 discloses and/or renders obvious Element 15[b]. Bosch 800 discloses that the third portion is connected to and extends from the first portion and is angled away from the first portion. As I described in the previous section, Bosch 800's third portion is connected to and extends from the first portion (red) to provide the depression.



Brochure, 29.



Dishwasher video, 0:25.

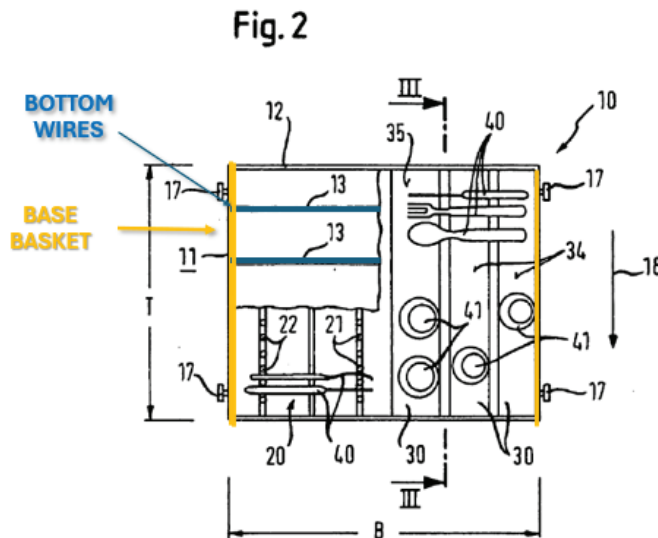
3. Mailander in view of Cao renders obvious Independent Claim 14 and Dependent Claim 15

a. Motivation to combine Mailander's and Cao's teachings

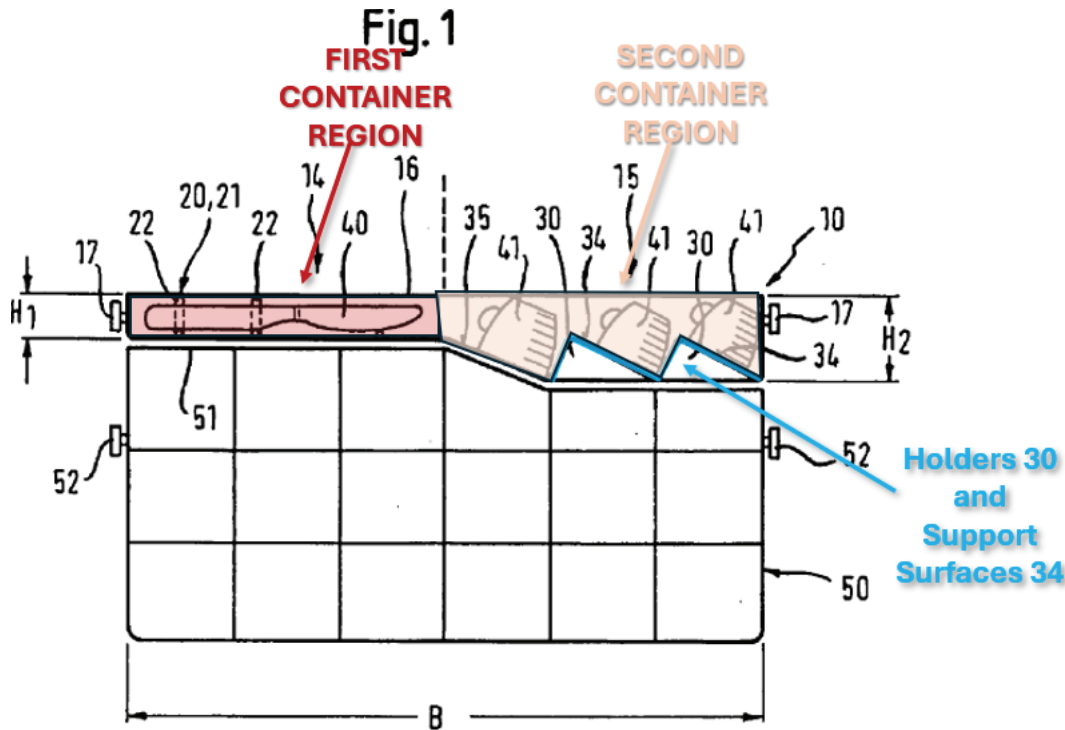
139. In my opinion, Mailander in view of Cao renders obvious Claims 14 and 15 of the '681 Patent. As detailed below, a POSITA would have found it obvious and would have been motivated to combine Mailander and Cao.

140. A POSITA would have been motivated to combine Mailander and Cao based on at least their teachings because they are both directed to a top rack of a dishwasher. For example, Mailander teaches a "dishwasher," which includes "a washing space that can be sealed by a door, the washing space having at least one spraying device and at least one removable crockery basket therein; and a washing items support assembly disposed in the washing space." Mailander, Cl. 22.

Mailander's washing item support 10 "has a base basket 11 produced from a surrounding wire frame 12, a few base wires 13 running continuously in the transverse or longitudinal direction being located in its base region." Mailander, [0028]. While wires 13 are only shown in a section of Figure 2 below "wires 13 extend over the entire width of washing items support 10." *Id.*, [0032].



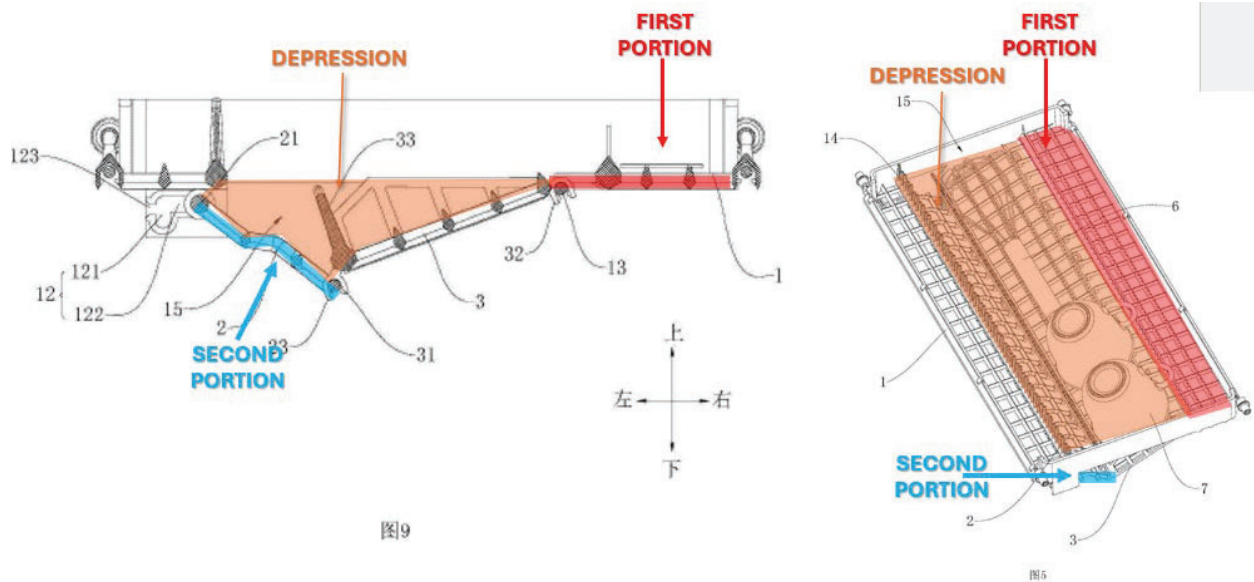
141. Mailander's washing item support 10 has two container regions, first and second container region 14 and 15, "each of them occupying half width B of washing items support 10." *Id.*, [0025]. First container region 14 supports a first set of utensil holders, such as the cutlery insert 20 so that the utensils can be arranged by "lying one next to the other, ... throughout the depth of washing items support 10." *Id.*, [0026]. Second container region 15 is "designed with washing items holders 30, each of which has a support surface 34 inclined to the horizontal," so that pieces of crockery can be placed at an angle for an increased drying effect. *Id.*, [0027]. Mailander teaches that washing items holders 30 and support surface 34 may be inserts, or "may be formed integrally together." *Id.* Mailander also teaches that the "incline" or angle of "support surface 24 of washing goods holder 30 may also be adjustable." *Id.*, [0027]. The pieces of crockery include "smaller washing items, e.g. cups, shallow glasses, dessert bowls, or alternatively cutlery in the transverse and longitudinal directions, long knives, cooking spoons etc." *Id.*



142. While Mailander recognizes that its washing items holders 30 and support surface 34 may be inserts or “may be formed integrally together” with the bottom surface to form washing item support 10 (Mailander, [0028]), a POSITA would have understood Mailander’s bottom wall includes the item holders 30 and support surfaces 34 to support cups the second container region 15 because doing so was a well-known technique, as exemplified by Cao.

143. Cao teaches a tray assembly for a dishwasher. Cao, Abstract. The tray assembly 100 for the dishwasher comprises a bottom wall with “a tray body 1, a connecting rod bracket 2, and a crank bracket 3.” Cao, [0043]. Cao teaches that the rod bracket and crank bracket are “disposed in the opening 11.” *Id.*, [0044]. The rod bracket and crank bracket are “cooperatively connected” to be suitable for placing tableware such as knives and forks to be washed. *Id.*, [0045]. As shown in Figure 9 below, “when the connecting rod bracket 2 is located at the second position, the crank bracket 3 is located at the fourth position, at this time, the side of the connecting rod bracket 2 that is connected with the crank bracket 3 may recess downwards to form the

accommodating cavity 15.” Cao, [0047]. Therefore, Cao explicitly teaches forming the bottom wall with angled portions.



144. A POSITA looking to implement Mailander’s holder 30 and support surface 34 as part of the bottom wall would have found that Cao disclosed helpful details of implementing an incline angled bottom wall that would have been advantageous for its versatility. Indeed, Cao specifically explains the benefit of having its rod bracket 2 and crank bracket 3 to be “cooperatively connected to be suitable for placing tableware,” such as knives, forks, spoons, teacups or the like to be washed in a cavity 15 formed by two angled portions of the bottom wall. Cao, [0045], [0047]. As such, a POSITA would have been motivated to look to references that include details for implementing angled portions that meets Mailander’s goal of providing an incline to aid in washing and drying of a wide variety of smaller items, like cups, utensils, or smaller bowls.

145. A POSITA would also have recognized that Cao’s design is compatible with and meets the requirements of Mailander’s washing items support 10 because the combination would have been an obvious design choice. Cao simply expounds on the details of implementing angled portions in the bottom wall to make a depression to accommodate small washing items, which

Mailander already teaches. In my opinion, implementing Cao's teachings of its rod bracket 2 and crank bracket 3 to make a depression in the bottom wall would not result in a difference in structure or provide any unexpected results because a POSITA would have recognized that Cao's teachings could be readily incorporated into Mailander's washing items support 10.

b. Independent Claim 14

(1) Element 14[pre]: An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

146. To the extent that the preamble of Claim 14 is limiting, Mailander teaches the preamble. Mailander teaches "a washing items support for a dishwasher." Mailander, [0001]. Mailander explicitly claims a "dishwasher," which includes "a washing space that can be sealed by a door, the washing space having at least one spraying device and at least one removable crockery basket therein; and a washing items support assembly disposed in the washing space." Mailander, Cl. 22.

147. Mailander also discloses an automatic dishwasher configured to implement an automatic treating cycle of operation. Specifically, Mailander's dishwasher includes a washing space having at least one spraying device and removable crockery basket. Mailander, Cl. 22. Mailander's washing items support is arranged above a cutlery basket in order to prevent "accumulations of water in the spoon lips or the like because of the cutlery lying on its side during washing and drying and not mutually touching," which can "also considerably shorten the *drying programme time*." Mailander, [0007]. Mailander would thus have been understood that an automatic dishwasher that carries out an automatic treating cycle according to programs would run in an electronic controller in the dishwasher.

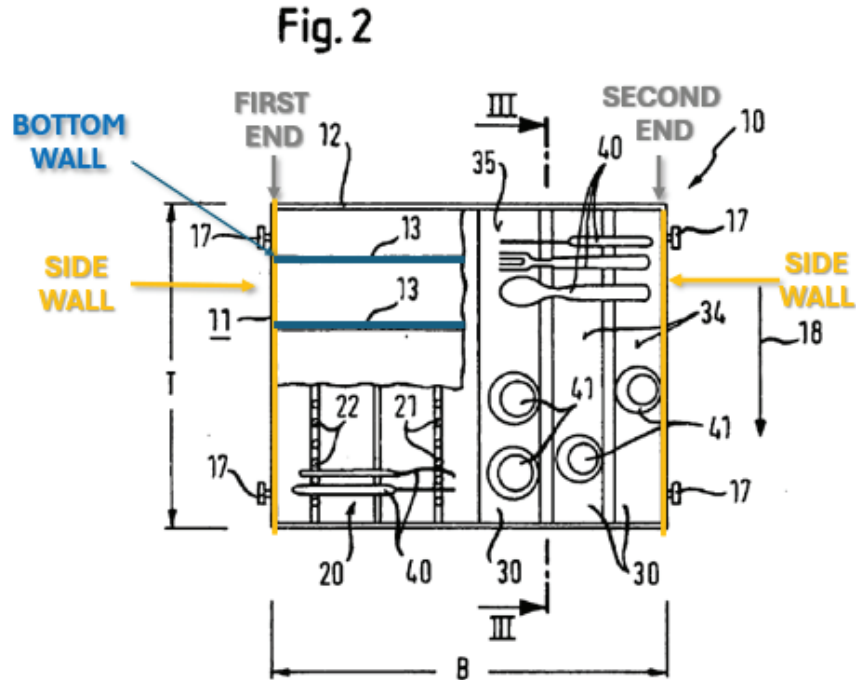
**(2) Element 14[a]: a tub defining a dish treating chamber;
and**

148. Mailander teaches Element 14[a]. Specifically, Mailander's dishwasher includes a "washing space that can be sealed by a door." Mailander, Cl. 22. Specifically, Mailander's dishwasher washing space has at least one spraying device, at least one removable crockery basket, and washing items support assembly. *Id.* Mailander's "washing space that can be sealed by a door" is thus a tub defining a dish treating chamber because it is a sealed space that includes a crockery basket and washing items support assembly.

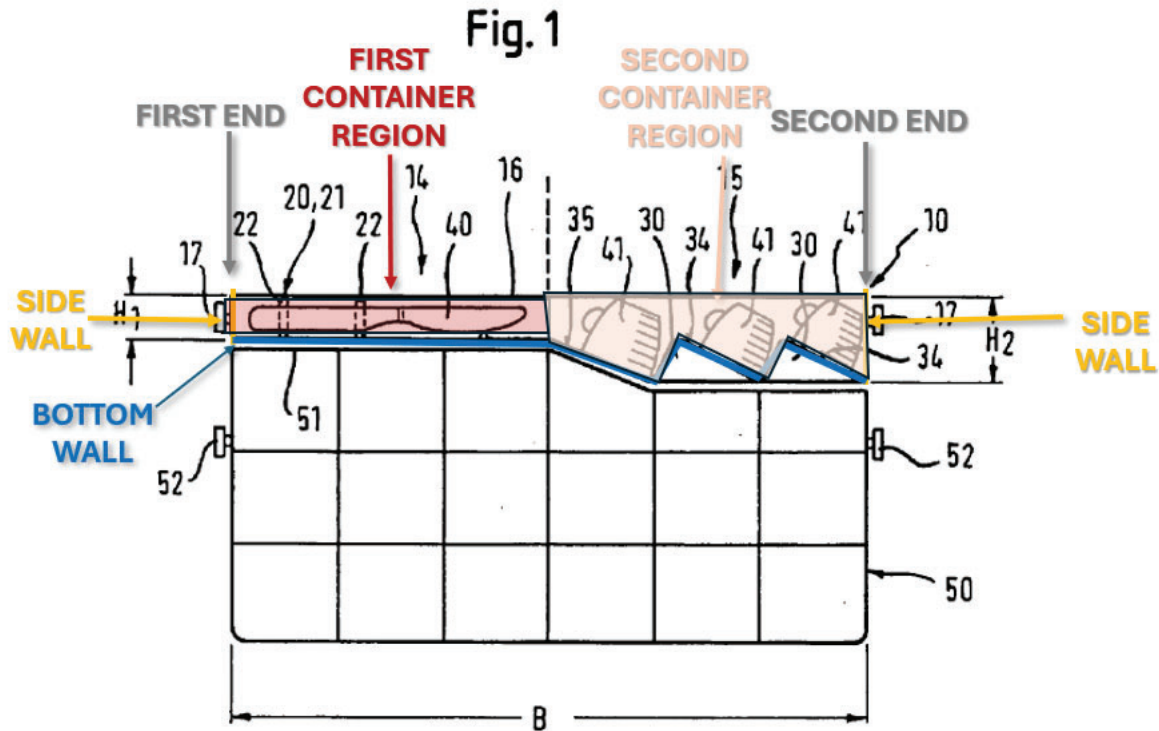
**(3) Element 14[b][i]: a dish rack located within the dish
treating chamber having a first end spaced from a
second end and comprising a bottom wall from which
extends a peripheral wall defining side walls of the dish
rack**

149. Mailander teaches Element 14[b][i]. Mailander teaches a dish rack located within the dish treating chamber. Specifically, Mailander teaches a washing item support 10, which is a cutlery rack that is "arranged above a crockery basket 50 in the washing space of a dishwasher." Mailander, [0025].

150. Mailander teaches a dish rack having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack. Mailander's washing item support 10 "has a base basket 11 produced from a surrounding wire frame 12, a few base wires 13 running continuously in the transverse or longitudinal direction being located in its base region." Mailander, [0028]. As shown in Figure 2, Mailander's item support 10 therefore has a first end spaced from a second end comprising a bottom wall by its base basket 11 comprising "surrounding wire frame 12" with bottom wall 13. While wires 13 are only shown in a section, "wires 13 extend over the entire width of washing items support 10." *Id.*, [0032].



151. Moreover, Mailander has a first end spaced from a second end comprising a bottom wall between side walls of the dish rack in order to support two container regions, first and second container region 14 (red) and 15 (peach), “each of them occupying half width B of washing items support 10.” Mailander, [0025]. As shown in Figure 1 below, cutlery is supported in first container region 14 and smaller washing items, e.g. cups, shallow glasses, dessert bowls, etc. are supported in second container region 15. *Id.*, [0026]-[0027].



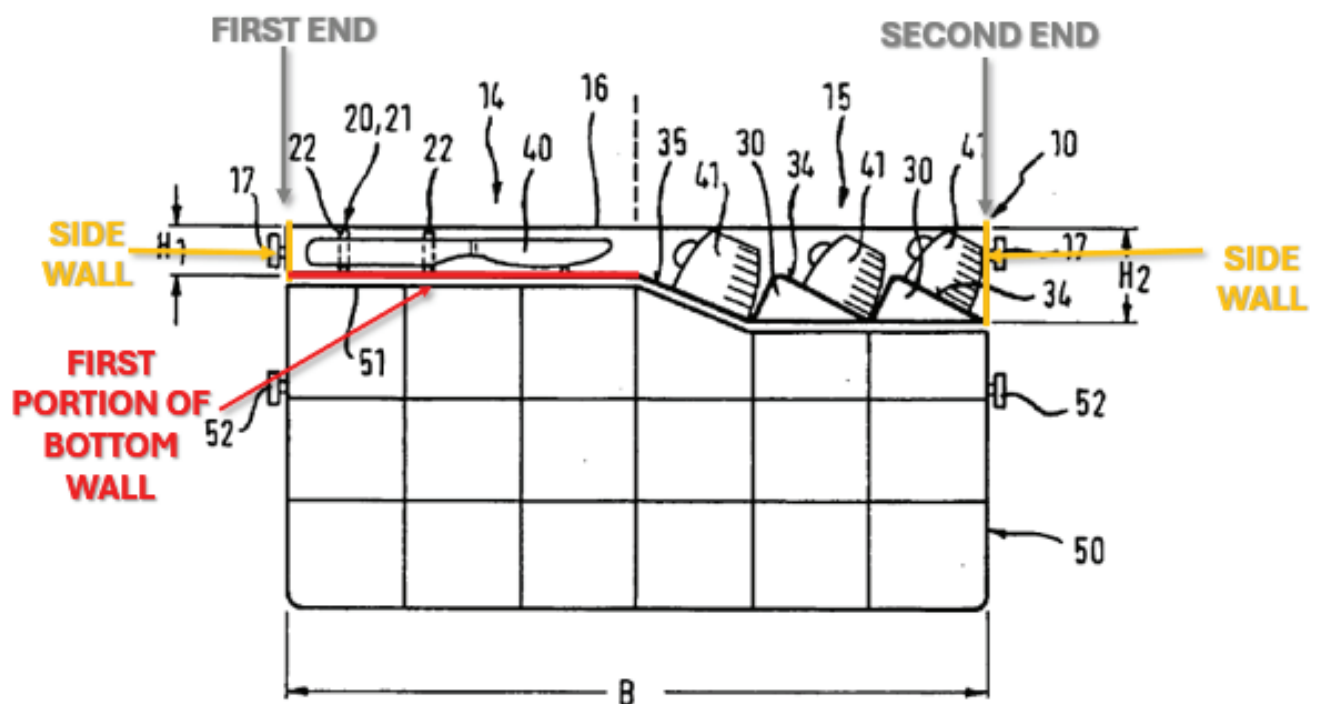
152. Figure 1 shows the front of Mailander's dish rack, but a POSITA would have understood that Mailander's entire dish rack 10 includes a bottom wall that extends from one end to the other end. Similar to the Bosch 800 ground, I have again only highlighted the first and second portion of the bottom wall on the front of the rack. Therefore, a POSITA would have understood that the first and second regions 14, 15 represent a bottom wall (blue) between the walls (yellow) of the dish rack at a first end and second end (gray), as viewed from the user opening the dishwasher door.

- (4) **Element 14[b][ii]: at the first end of the dish rack, the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall and**

153. Mailander teaches Element 14[b][ii]. Mailander teaches that the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall at the first end of the dish rack. Washing items support 10 includes first

container region 14 to arrange a cutlery insert 20 on it. Mailander, [0026]. As shown in Figure 1 below, the first container region 14 (red) is thus the first portion of the bottom wall at the first end of the dish rack with a substantially horizontal planar portion in order to “arrange piece of cutlery 40 ..., lying one next to the other, ... throughout the depth of washing items support 10.” *Id.*, [0026].

Fig. 1

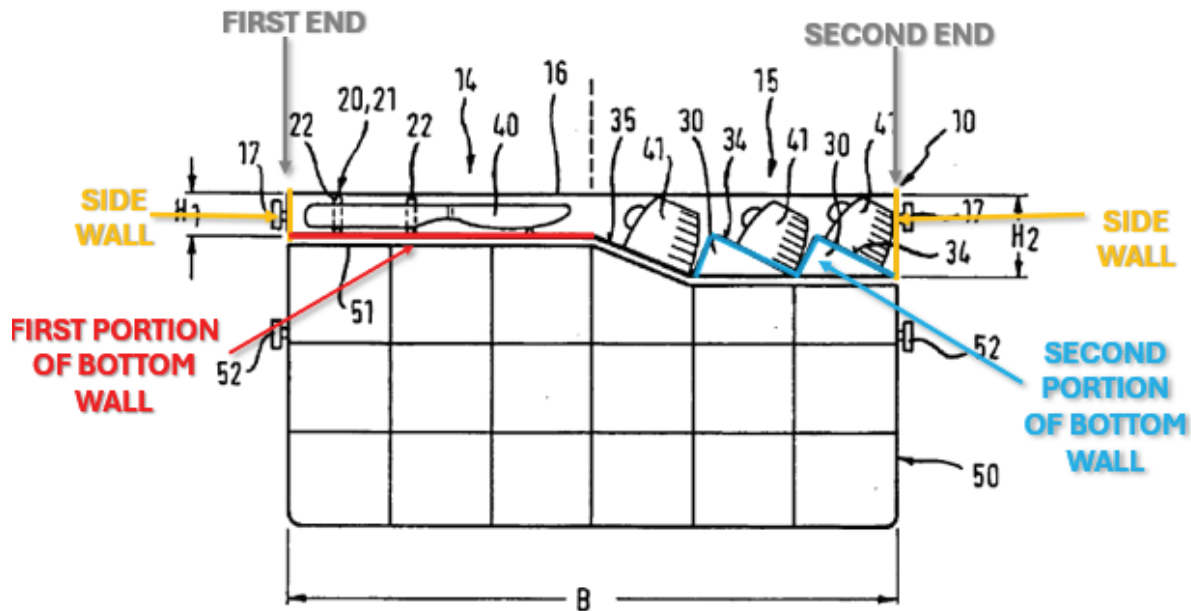


- (5) Element 14[b][iii]: at the second end of the dishrack, a second portion is angled with respect to the first portion and defining a depression;

154. Mailander itself or in combination with Cao teaches Element 14[b][iii]. Mailander teaches that the bottom wall has a second portion at the second end of the dishrack, which is angled with respect to the first portion and defines a depression. Washing items support 10 includes second container region 15, which is “designed with washing items holders 30, each of which has a support surface 34 inclined to the horizontal,” so that pieces of crockery can be placed at an angle

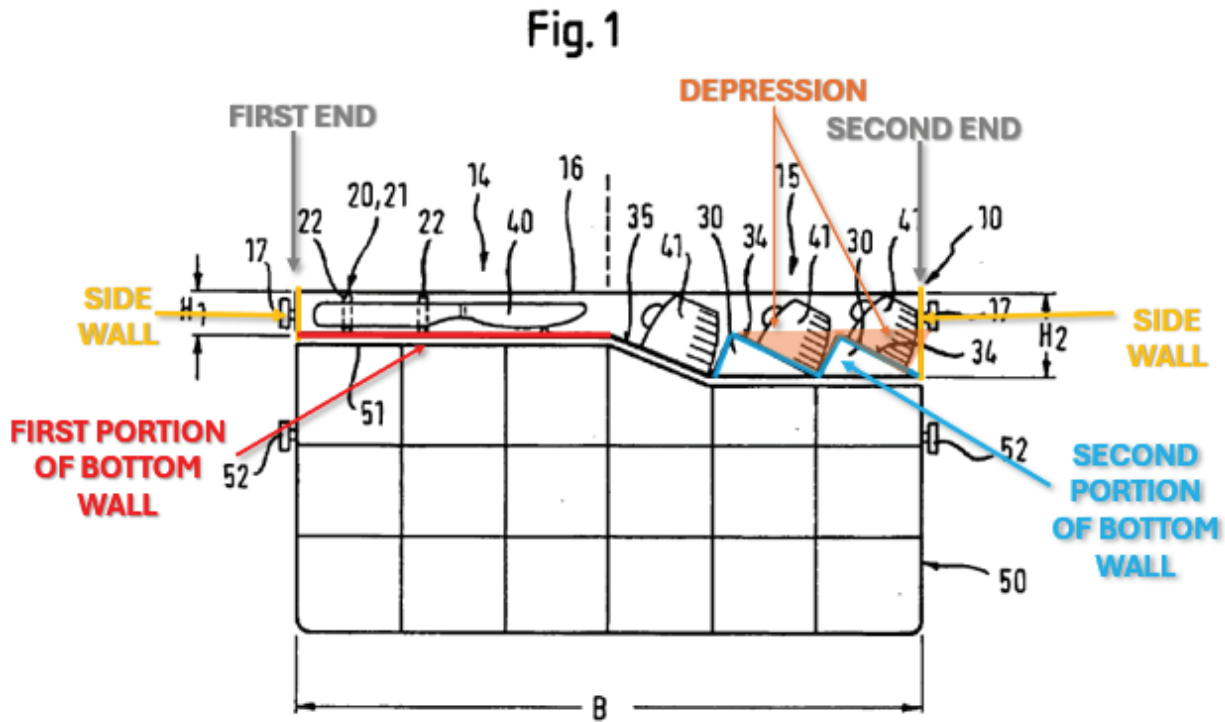
for an increased drying effect. Mailander, [0027]. Mailander teaches that washing items holders 30 and support surface 34 may be inserts, or “may be formed integrally together.” *Id.* Mailander also teaches that the “incline” or angle of “support surface 24 of washing goods holder 30 may also be adjustable.” *Id.* Therefore, Mailander’s washing items support 10 has a second portion of the bottom wall at the second end, which is angled with respect to the first portion by being inclined down so that items may be held at an incline.

Fig. 1



155. Mailander’s washing items holder and support surface 34 define a depression. As explained above, holder 30 and surface 24 provide an angle for each crockery item can be placed at an angle. The pieces of crockery include “smaller washing items, e.g. cups, shallow glasses, dessert bowls, or alternatively cutlery in the transverse and longitudinal directions, long knives, cooking spoons etc.” *Id.* As shown in Figure 1 below, second container region 15 (blue) is thus the second portion of the bottom wall at the second end of the dish rack, which is angled to the

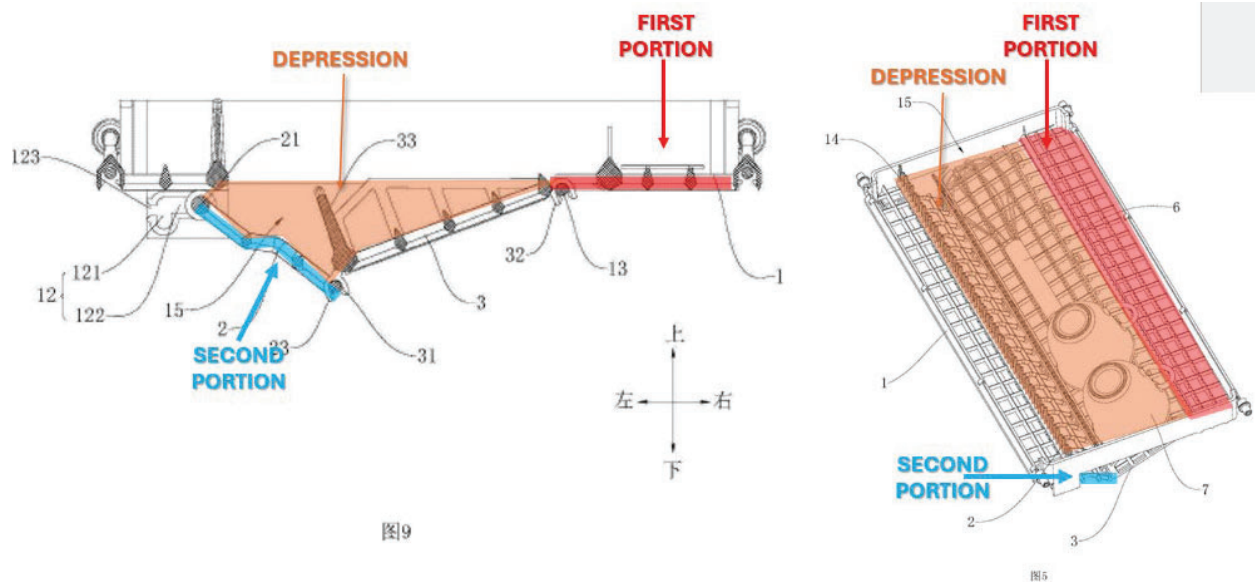
first portion and defines a depression (orange) so that smaller washing items can be held at an angle.



156. To the extent that Whirlpool argues that Mailander’s holder 30 and surface 34 are not a portion of the bottom wall because they are angled-wire inserts placed onto bottom wires 13 of base basket 11, Mailander further teaches that washing item support 10 “may consist of only one material, e.g. plastic, i.e., without base basket 11.” Mailander, [0028]. Thus, a POSITA would have understood in that configuration, Mailander’s bottom wall would be angled up to form holder 30 and surface 34, without requiring inserts. Indeed, a POSITA would have been motivated to curve bottom wires 13 making up Mailander’s washing item support 10 in order to accommodate the tableware, as taught in Cao.

157. As I described above in Section VIII.A.3.a, a POSITA would have understood Mailander’s washing item support 10 includes a bottom wall providing support for the utensils and cups in first and second container regions 14, 15 because doing so was a well-known technique,

as exemplified by Cao. Cao teaches a “tray assembly 100,” with a bottom wall comprising a “tray body 1, a connecting rod bracket 2, and a crank bracket 3.” Cao, [0043]. As shown in Figure 9 below, “when the connecting rod bracket 2 is located at the second position, the crank bracket 3 is located at the fourth position, at this time, the side of the connecting rod bracket 2 that is connected with the crank bracket 3 may recess downwards to form the accommodating cavity 15.” Cao, [0047]. Rod bracket 2 and crank bracket 3 are cooperatively connected, so as to be suitable for placing tableware to be washed. *Id.*, [0045]. A POSITA would have been motivated for Mailander’s second portion to thus be angled with respect to the first portion and define a depression, without being an insert, as taught by Cao’s bottom wall including rod bracket 2 being angled to form cavity 15.

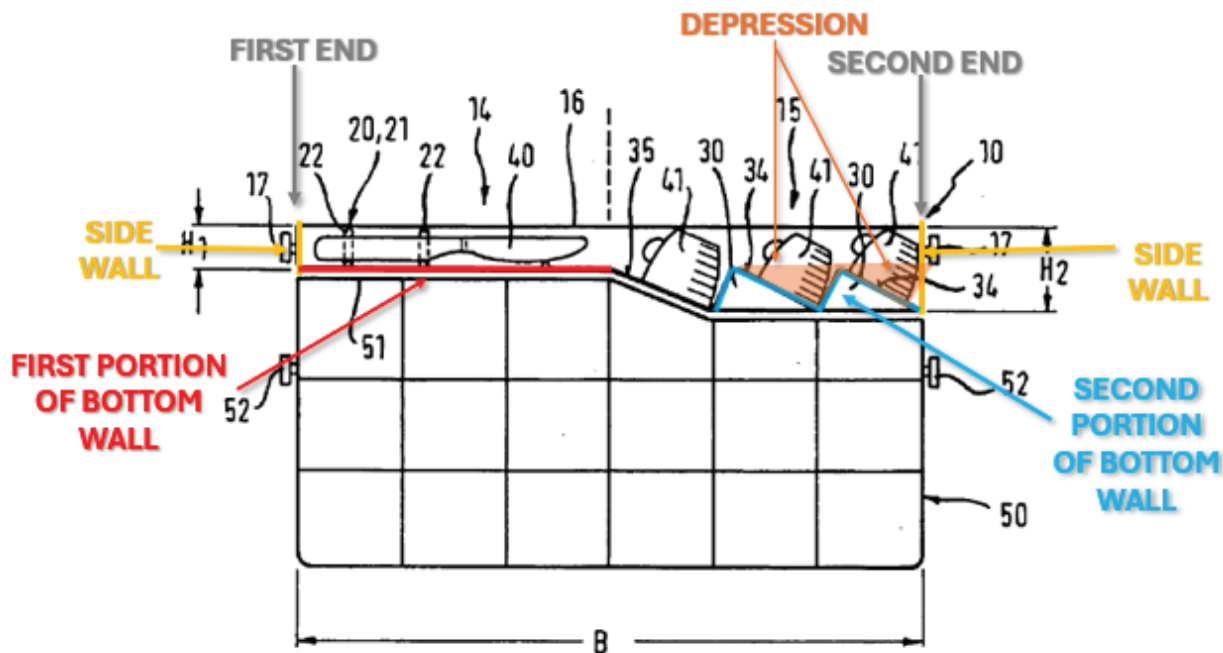


158. Accordingly, a POSITA would have been understood that Mailander’s washing items 10’s second container region provides a bottom wall with inclined portions that define a depression, because doing so was well known, as taught by Cao.

(6) **Element 14[b][iv]: the depression extending lower than the first portion relative to the peripheral wall;**

159. Mailander teaches Element 14[b][iv]. Mailander teaches that its depression extends lower than the first portion relative to the peripheral wall. Mailander's washing items support 10 has, "in the second container region, a height H2 which is greater than height H1." Mailander, [0029]. Mailander teaches that the "bottom end of first container region 14 is higher in the vertical direction than the bottom end of second container region 15 in the vertical direction." *Id.* Therefore, the depression provided by the inclined portion of the bottom wall in the second container region 15 is thus lower than the first portion in the first container region 14 (red).

Fig. 1

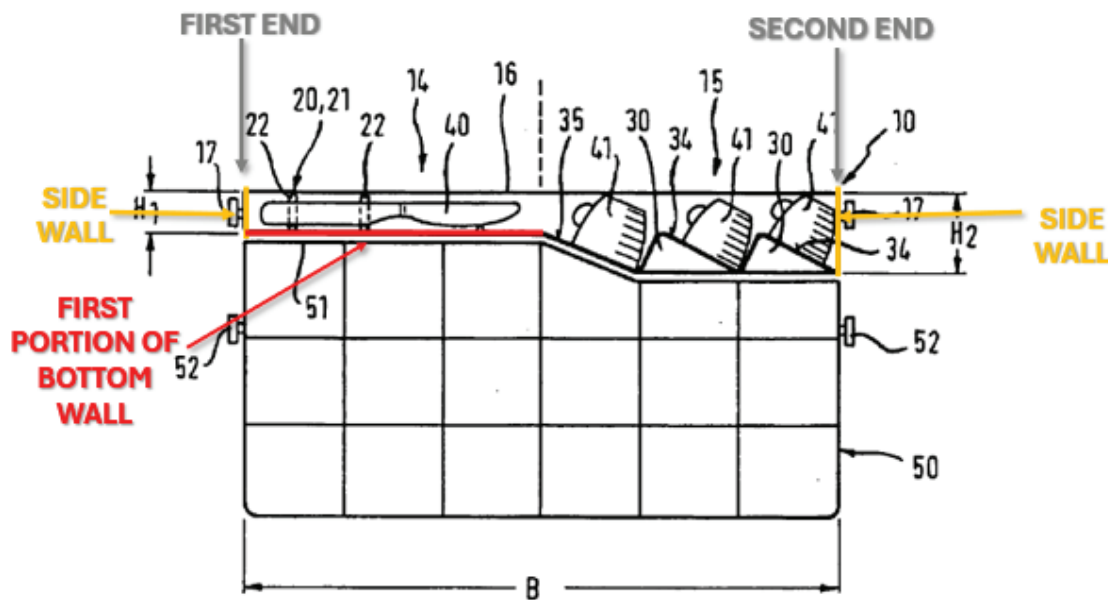


(7) **Element 14[b][v]: the first portion supporting a first set of utensil holders for supporting one or more utensils and**

160. Mailander teaches Element 14[b][v]. Mailander teaches that the first portion supports a first set of utensil holders for supporting one or more utensils. Specifically, first container region 14 supports a first set of utensil holders, such as the cutlery insert 20. Mailander,

[0026]. As shown in Figure 1 below, the utensil holder supports one or more utensils so that the utensils can be arranged by “lying one next to the other, ... throughout the depth of washing items support 10.” *Id.*, [0026]. Indeed, cutlery insert 20 “enables pieces of cutlery 40 to be filled sorted, is arranged in first container region 14, so that can be loaded with a sufficient quantity of washing fluid without washing shadows.” *Id.*, [0031].

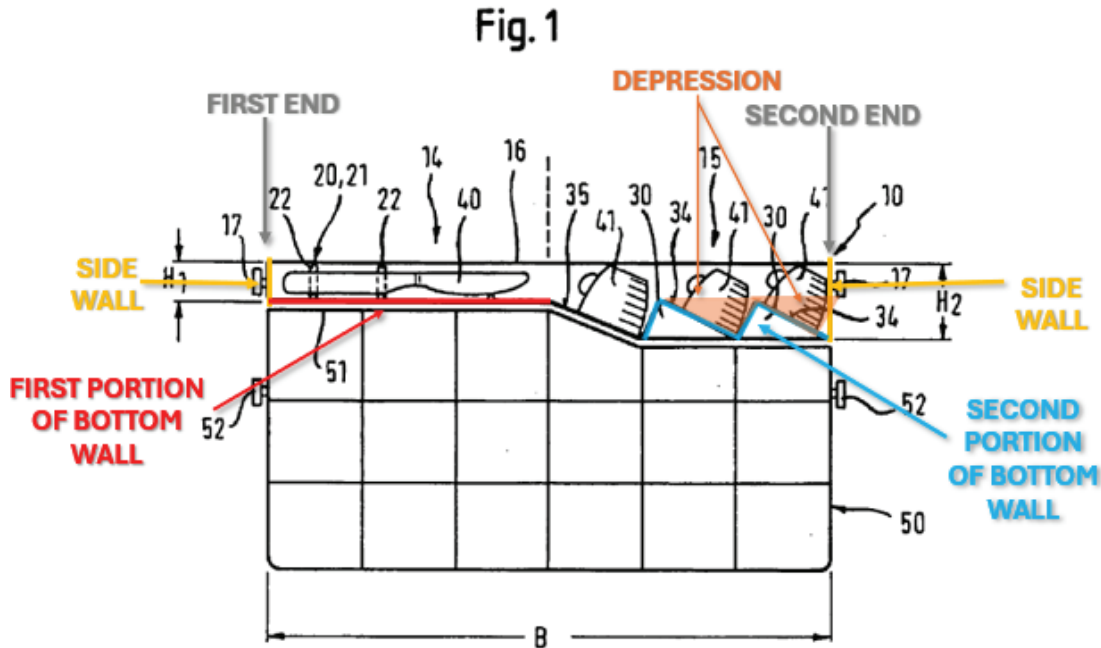
Fig. 1



(8) **Element 14[b][vi]: the second portion defining a cup seat for supporting one or more cups in the depression.**

161. Mailander teaches Element 14[b][vi]. Mailander teaches that the second portion defines a cup seat for supporting one or more cups in the depression. Washing items support 10 includes second container region 15, which is “designed with washing items holders 30, each of which has a support surface 34 inclined to the horizontal,” so that pieces of crockery can be placed at an angle for an increased drying effect. Mailander, [0027]. Pieces of crockery include “smaller washing items, e.g. *cups*, shallow glasses, dessert bowls, or alternatively cutlery in the transverse and longitudinal directions, long knives, cooking spoons etc.” *Id.* As shown in Figure 1 below,

the second container region 15 (blue) is thus the second portion defining a cup seat for supporting one or more cups in the depression.



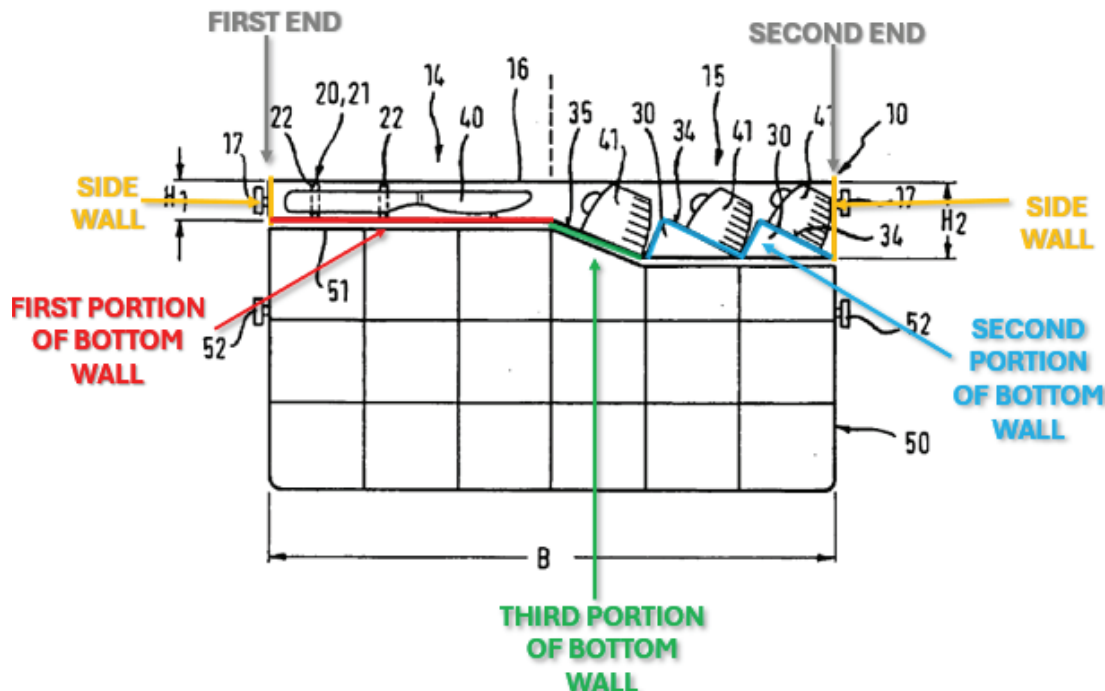
c. Dependent Claim 15

- (1) **Element 15[a]: The automatic dishwasher of claim 14, further comprising a third portion of the bottom wall defined by an angled third planar portion relative to the substantially horizontal first portion and extending across a third portion of the bottom wall;**

162. Mailander itself or in combination with Cao teaches Element 15[a]. Mailander's dishwasher rack has a third portion of the bottom wall defined by an angled third planar portion relative to the substantially horizontal first portion and extends across a third portion of the bottom wall. Mailander teaches that the second container region 15 is provided with a "transition region," which "functional represents a support surface 35." Mailander, [0029]. As shown in Figure 1 below, transition region 35 "represents an integral part of the adjacent washing items holder 30" and is angled in order to transition from the first container region height H1 to the second container

region height H2. *Id.* Therefore, transition region 35 (green) is a third portion of the bottom wall, which consists of a planar angled portion that extends across a third portion of the bottom wall.

Fig. 1



163. Alternatively, to the extent that Whirlpool argues the third portion of the bottom wall is defined by an angled third portion that forms a different angle as the second angled portion, Mailander-Cao teaches Element 15[a]. Cao teaches that its dish rack includes rod bracket 2 and crank bracket 3, which are cooperatively connected, so as to be suitable for placing tableware such as knives and forks to be washed. Cao, [0045]. As shown in Figure 9 below, “when the connecting rod bracket 2 is located at the second position, the crank bracket 3 is located at the fourth position, at this time, the side of the connecting rod bracket 2 that is connected with the crank bracket 3 may recess downwards to form the accommodating cavity 15.” *Id.*, [0047]. As shown in Figure 5, Cao teaches that the third portion may be at an angle that is different than the second portion’s angle, to create a cavity 15 to allow tea cups 7 to sit on the third portion.

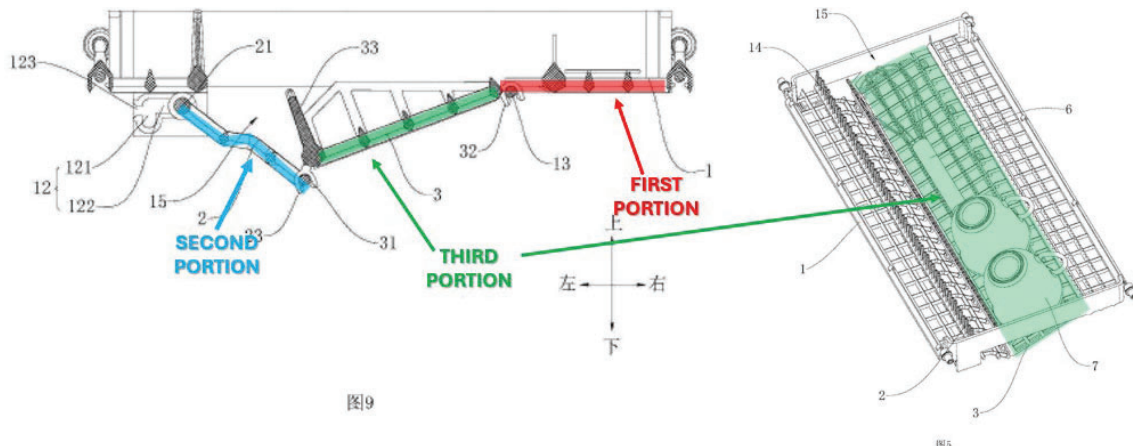
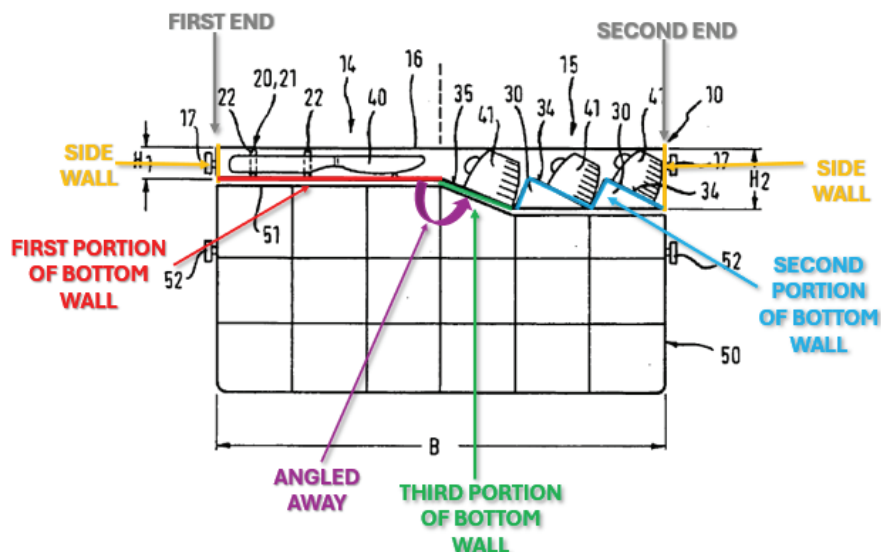


图9

- (2) **Element 15[b]: the third portion connected to and extending from the first portion and angled away from the first portion.**

164. Mailander itself or in combination with Cao teaches Element 15[b]. Mailander's third portion is connected to and extends from the first portion and angled away from the first portion. As described in the previous section, transition region 35 is angled in order to transition from the first container region height $H1$ to the second container region height $H2$. Mailander, [0029]. Therefore, Mailander's third portion (transition region 35, green) is connected to and extends from the first portion (first container region 14, red) and is angled away from the first portion.

Fig. 1



165. Alternatively, to the extent that the third portion of the bottom wall defined by an angled third portion must be at a different angle compared to the angled second portion, Mailander-Cao teaches Element 15[b] for the same reasons I described in the previous section for Element 15[a].

B. '385 Patent

1. Bosch in view of Ochoa render obvious independent Claim 17 and dependent Claim 21

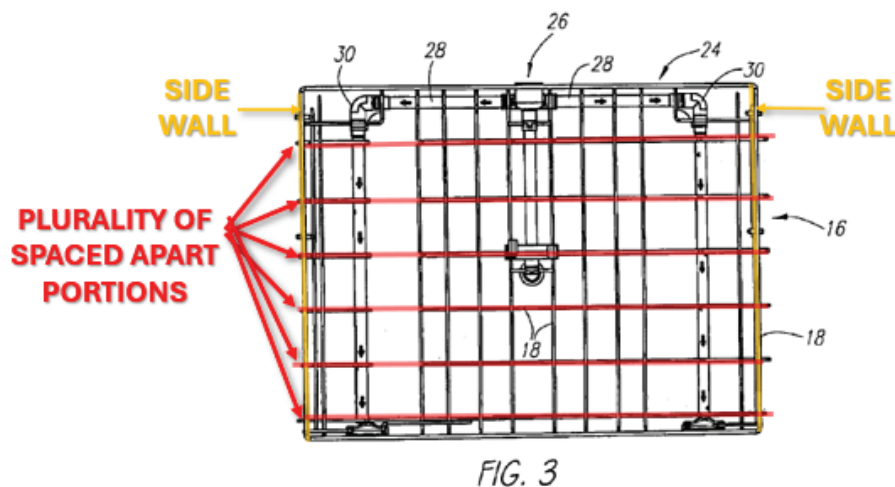
a. Motivation to combine Bosch's and Ochoa's teachings

166. In my opinion, Bosch in view of Ochoa renders obvious Claims 17 and 21 of the '385 Patent. As detailed below, a POSITA would have found it obvious and would have been motivated to combine Bosch and Ochoa.

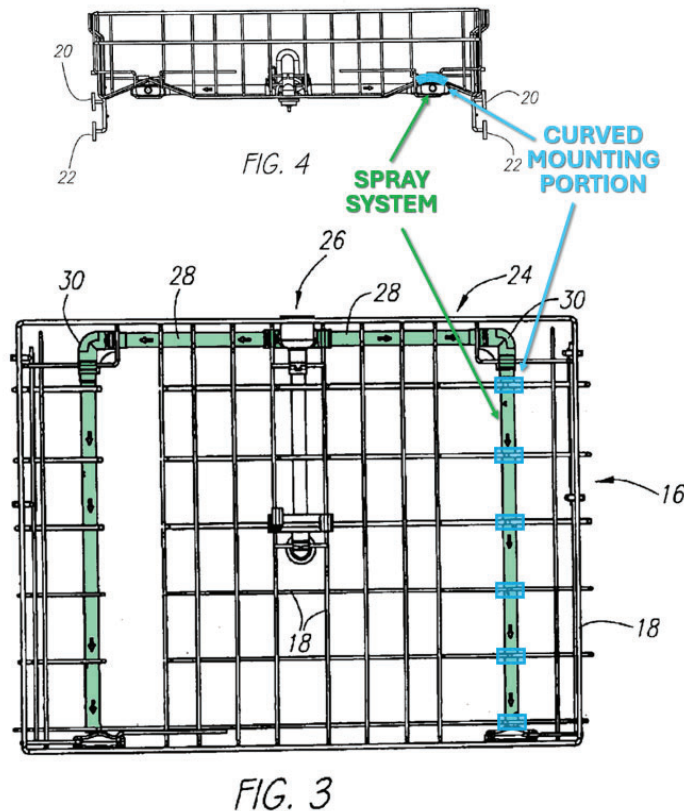
167. A POSITA would have been motivated to combine Bosch and Ochoa based on at least their teachings because they are both directed to a dish rack of a dishwasher. For example, Bosch teaches a dishwasher having a dish rack that can be pulled out at the front. Bosch, 005. Bosch teaches that "the device for spraying the dishes is designed in the form of two spray tubes 11." Bosch, 006-007. The "spray tubes are arranged within the dish rack between dish holders for accommodating hollow vessels 13, such as cups or glasses." Bosch, 007. The spray tubes apply "washing liquid" to the dish items. *Id.*, 6. Bosch further teaches that the spray tubes are arranged within the dish rack by being arranged "fixedly" in dish rack 10. Bosch, 007, 009 (Cl. 4).

168. Bosch's dish rack 2 also includes "dish holders 12 for accommodating hollow vessels, such as cups or glasses." Bosch, 007. A POSITA would have understood that Bosch's dish rack includes a plurality of spaced apart portions forming the bottom wall and terminating at the side wall, but Bosch leaves the implementation details of its spaced apart portions to a POSITA.

169. Ochoa is a reference that a POSITA would have considered to teach the implementation details of a plurality of spaced apart portions. Specifically, Ochoa teaches a dish rack comprising of a “wire basket constructed in a *conventional manner* with a plurality of crisscrossing and encircling wire segments connected to each other to provide space for supporting cups, glasses, small dishware, long utensils and the like in the usual manner.” Ochoa, 3:2-9. As shown in Figure 3, Ochoa’s wire basket shows a plurality of spaced apart portions forming the bottom wall (red) and terminating at the side wall (yellow).



170. Ochoa also teaches that the upper rack 12 includes a “water spraying system ... that is mounted on the underside of the rack 6 and moves into and out of the front of the dishwasher 10 with the rack 16.” Ochoa, 3:15-19. As shown below in Figure 4, Ochoa further teaches a curved mounting portion adjacent to which the spray tube is mounted in order for the dish rack to have the spray tube carried with the dish rack.



171. A POSITA looking to design a dishwasher rack would have understood to make the rack have a plurality of wires that are spaced apart, as taught in Ochoa, to support dishes while also allowing the spray from its spray nozzles to reach (through the gaps in the wires) and clean the contents in the rack and to also prevent the contents from hitting each other. Specifically, Ochoa explains that its design “provides space for supporting cups, glasses, small dishware, long utensils and the like in the usual manner.” Ochoa, 3:5-9. A POSITA would also have been motivated to look to Ochoa for its implementation details for the spray nozzle fixed within the dish rack in order to move with the dish rack, while still allowing the water spray system to spray water in the lateral extremities and corners of the dishwasher by rotating about its axis. Ochoa, 1:41-45.

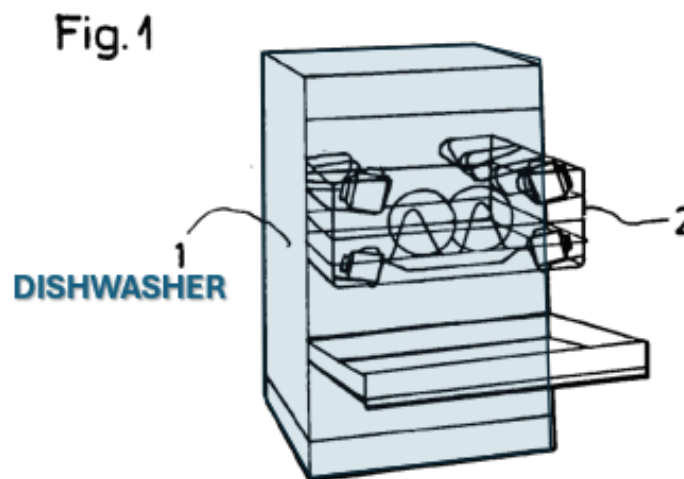
172. A POSITA would have recognized that Ochoa’s design is compatible with and meets the requirements of Bosch’s dishwasher rack design because the combination would have been an obvious design choice. Ochoa simply expounds on the details of implementing a plurality

of crisscrossing and encircling wire segments to construct a wire basket “in a conventional manner.” Ochoa, 3:2-9. In my opinion, implementing Ochoa’s teachings of its wire basket having a plurality of wires spaced apart would not result in a difference in structure or provide any unexpected results because a POSITA would have recognized that Ochoa’s teachings could be readily incorporated into Bosch’s dish rack design.

b. Independent Claim 17

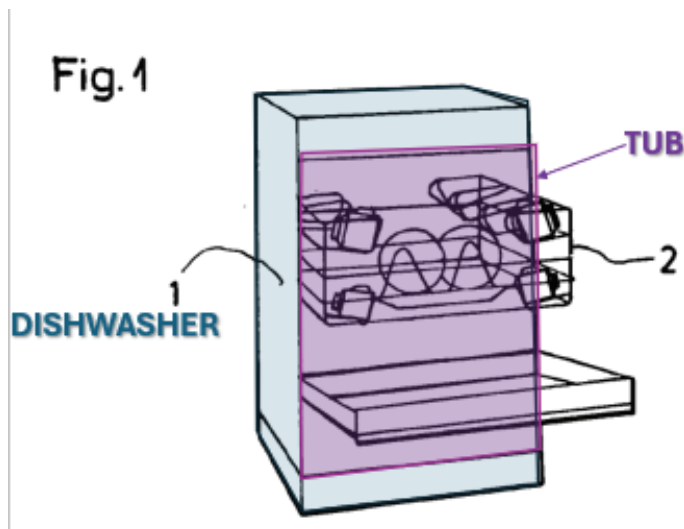
(1) Element 17[pre]: A dishwasher, comprising:

173. Bosch teaches the preamble of Claim 17, to the extent it is limiting. Bosch teaches a dishwasher. For example, Figure 1 shows a “dishwasher having a dish rack 2.” Bosch, 005.



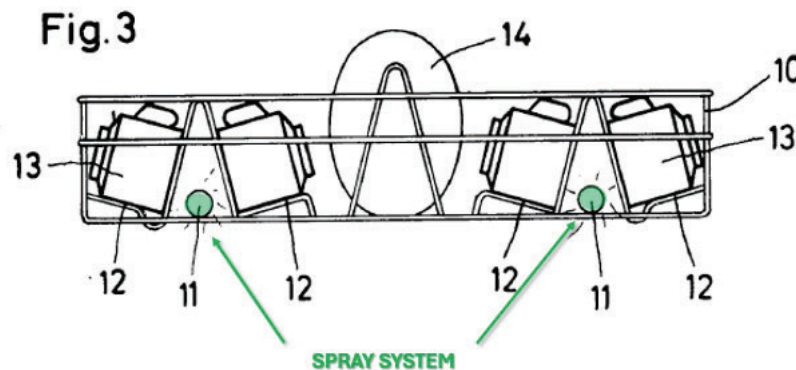
(2) Element 17[A]: a tub defining a treating chamber receiving dishes for treatment;

174. Bosch teaches Element 17[A]. Bosch teaches a tub defining a treating chamber receiving dishes for treatment. Bosch’s dishwasher has a “dish rack 2” that can be pulled out at the front. Bosch, 005. The dish rack has “dish holders 12 for accommodating hollow vessels, such as cups or glasses” and “dish holder for plates 14.” Bosch, 007. As shown in Figure 1 below, a POSITA would have understood that the dish rack is pulled out from a tub defining a treating chamber for receiving dishes for treatment in the dish holders for cups and plates.



(3) **Element 17[B]: a spray system providing treating liquid to the treating chamber; and**

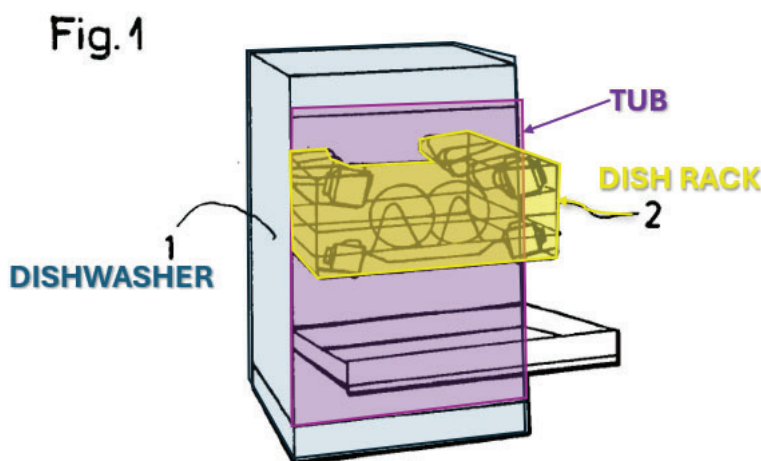
175. Bosch teaches Element 17[B]. Bosch’s dishwasher has a spray system providing treating liquid to the treating chamber. Bosch teaches that “the device for spraying the dishes is designed in the form of two spray tubes 11.” Bosch, 006-007. As shown in Figure 3 below, the “spray tubes are arranged within the dish rack between dish holders for accommodating hollow vessels 13, such as cups or glasses.” Bosch, 007. The spray tubes apply “washing liquid” to the dish items. *Id.*, 006.



176. Accordingly, Bosch’s spray tubes 11 are a spray system providing treating liquid to the treating chamber because tubes 11 are arranged within the dish rack, which is inside of the dishwasher’s tub defining a treating chamber for plates and cups.

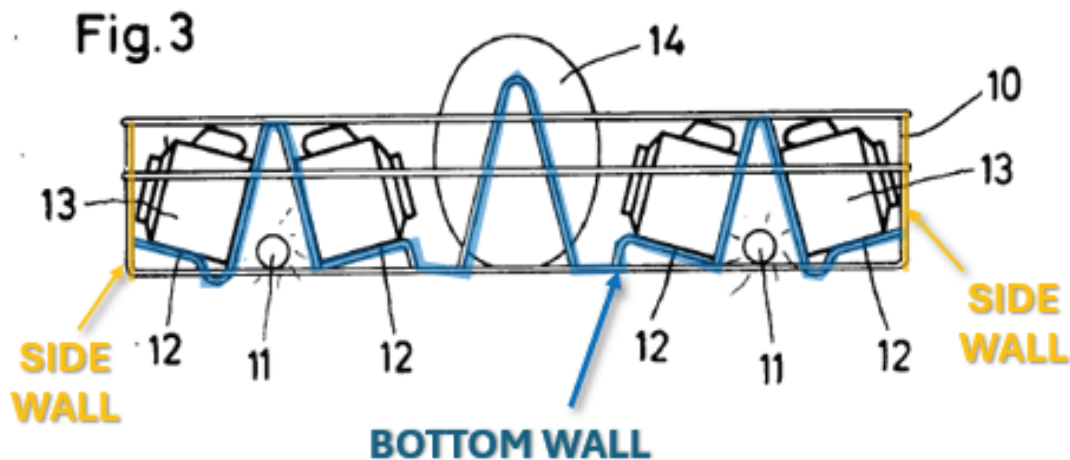
(4) Element 17[C(i)]: a dish rack located in the tub and selectively moveable into and out of the tub,

177. Bosch teaches Element 17[C(i)]. Bosch teaches a dish rack located in the tub that is selectively moveable into and out of the tub. As shown in Figure 1 below, Bosch's dishwasher (blue) includes dish rack 2 (yellow) that "can be pulled out at the front" of the tub (purple). Bosch, 005. While Figure 1 shows the dish rack 2 in the embodiment of Figure 2, a POSITA would have understood that Bosch's dish rack 2 illustrated in Figure 3 would similarly be located in a tub and be selectively moveable into and out of the tub.



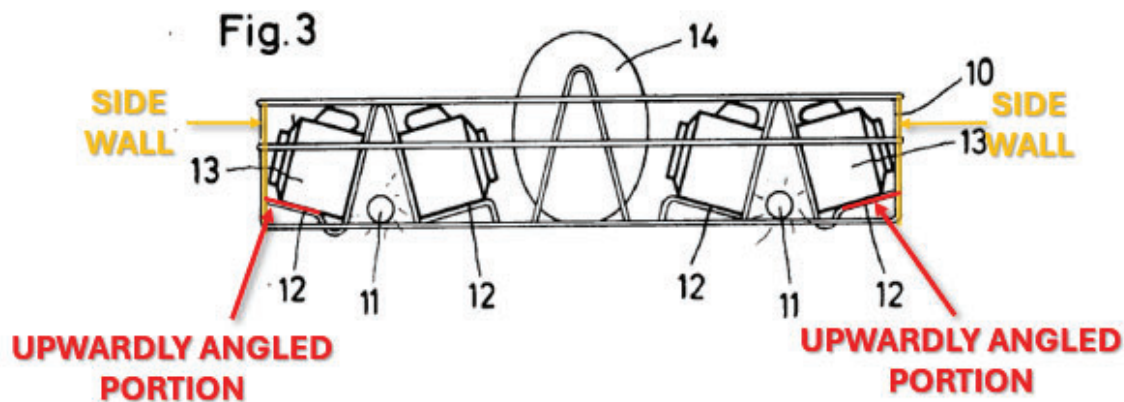
(5) Element 17[C(ii)]: the dish rack having a bottom wall, a side wall extending upwardly from the bottom wall and terminating in an upper edge,

178. Bosch teaches Element 17[C(ii)]. Bosch's dish rack has a bottom wall and side wall extending upwardly from the bottom wall, terminating in an upper edge. Specifically, Bosch's dish rack 2 includes "dish holders 12 for accommodating hollow vessels, such as cups or glasses." Bosch, 007. As shown in Figure 3, a POSITA would have understood that one example of Bosch's dish rack includes a bottom wall made of wire (purple) and a side wall (yellow) that extends upwardly from the bottom in order to provide the moveable dish rack structure.

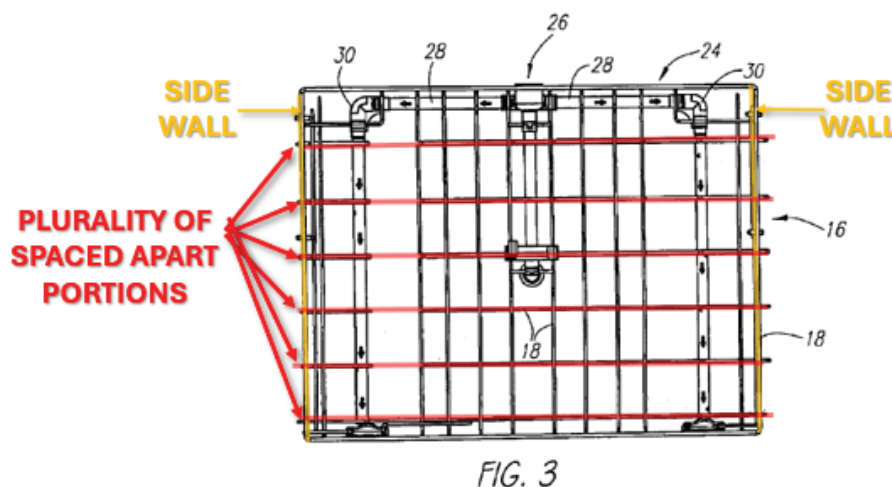


- (6) **Element 17[C(iii)]: with an upwardly angled portion formed in the bottom wall comprising a plurality of spaced apart inclined portions forming the bottom wall and terminating at the side wall,**

179. Bosch teaches Element 17[C(iii)]. Bosch's dish rack includes an upwardly angled portion formed in the bottom wall. Bosch's dish rack 2 includes "dish holders 12 for accommodating hollow vessels, such as cups or glasses." Bosch, 007. As shown in Figure 3 below, Bosch's dish holders are upwardly angled portions formed in the bottom wall to hold the cup or glass at an angle because Bosch further explains the disadvantage of when the spray jets lift the "cups and glasses" which can damage them "when they subsequently drop back onto the dish rack." Bosch, 002-003. Bosch ensures that "these dish items are no longer lifted by the spray jets and therefore also cannot drop back into the disk rack." *Id.*, 004.

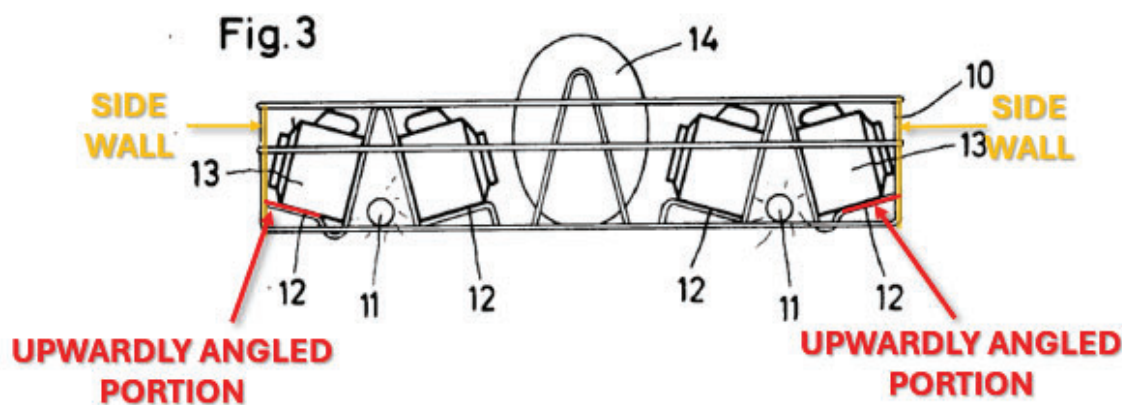


180. A POSITA would have understood that Bosch's dish rack includes a plurality of a plurality of spaced apart portions forming the bottom wall and terminating at the side wall, but the additional bottom wall portions are not visible in Bosch's Fig. 3. Ochoa is a reference that a POSITA would have considered to teach the implementation details of a plurality of spaced apart portions. Specifically, Ochoa teaches a dish rack comprising of a "wire basket constructed in a conventional manner with a plurality of crisscrossing and encircling wire segments connected to each other to provide space for supporting cups, glasses, small dishware, long utensils and the like in the usual manner." Ochoa, 3:2-9. As shown in Figure 3, Ochoa's wire basket shows a plurality of spaced apart portions forming the bottom wall (red) and terminating at the side wall (yellow).



(7) **Element 17[C(iv)]: wherein two adjacent inclined portions of the plurality of spaced apart inclined portions are configured to cradle a glass at an inclined angle and prevent the glass from rolling and**

181. Bosch in view of Ochoa teaches Element 17[C(iv)]. Bosch teaches that two adjacent inclined portions are configured to cradle a glass at an angle and prevent the glass from rolling. Specifically, Bosch's dish rack 2 includes "dish holders 12 for accommodating hollow vessels, such as cups or glasses." Bosch, 007. As shown in Figure 3 below, Bosch's dish holders are upwardly angled portions formed in the bottom wall in order to hold the cup or glass at an angle because Bosch further explains the disadvantage of when the spray jets lift the "cups and glasses" which can damage them "when they subsequently drop back onto the dish rack." Bosch, 002-003. Bosch ensures that "these dish items are no longer lifted by the spray jets and therefore also cannot drop back into the disk rack." *Id.*, 004. A POSITA would have understood that the inclined angles cradle a glass so that it is not lifted and dropped back onto the dish rack, and also prevents the glass from rolling.



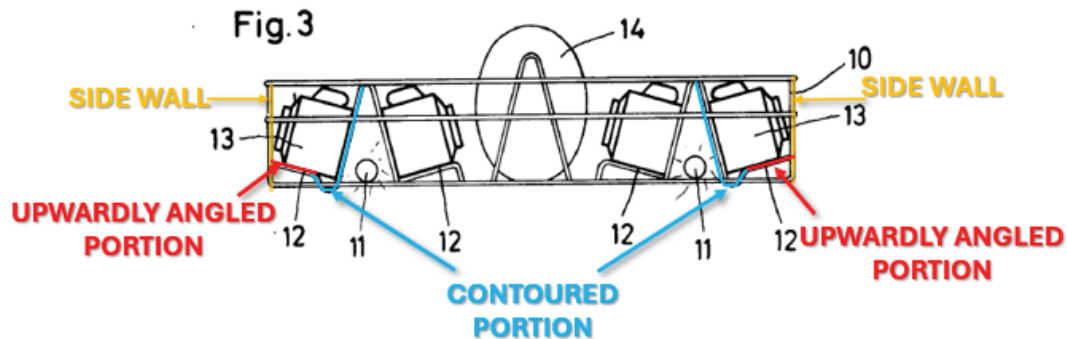
182. As I described above, a POSITA would have understood that Bosch includes a plurality of inclined portions despite the fact that Fig. 3 only shows the rack from a front view. Ochoa shows, in its figures and description, the concept of having a plurality of spaced apart

portions making up the bottom wall. A POSITA would have already understood that there are multiple inclined portions similar to the one shown in Fig. 3 of Bosch and those multiple inclined portions are wire structures that cradle a glass and prevent the glass from rolling. A POSITA would not expect a cup such as that seen in Fig. 3 to be able to perfectly balance on only one wire but rather would understand the cup to rest on multiple inclined wire structures. To the extent that it is argued that a POSITA would not already understand that this element is present in Bosch, a POSITA would have been motivated for Bosch's inclined portions are formed by spaced apart wire structures, as taught in Ochoa, and that these portions are configured to cradle a glass and prevent the glass from rolling in order to further Bosch's goal and teachings. Specifically, Bosch already teaches using cup holders to hold a cup in place to ensure effective cleaning, while preventing damage to the cup. By implementing Ochoa's teachings of multiple spaced apart wire structures to construct Bosch's inclined portions, the glass at the inclined portion is cradled in order to prevent the glass from rolling. A POSITA would have understood that implementing Ochoa's teachings into Bosch furthers Bosch's goal of wanting to ensure stability of the cup.

(8) Element 17[C(v)]: a contoured portion formed in the bottom wall configured to prevent glasses from sliding down the inclined angle; and

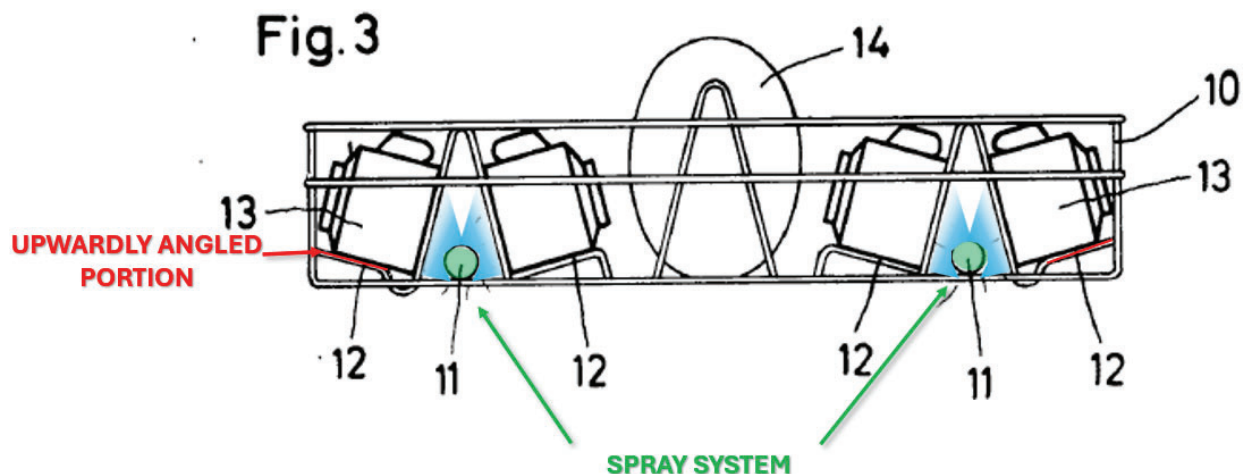
183. Bosch teaches Element 17[C(v)]. Bosch teaches a contoured portion formed in the bottom wall configured to prevent glasses from sliding down the inclined angle. As explained in the previous section, Bosch's dish rack 2 includes "dish holders 12 for accommodating hollow vessels, such as cups or glasses." Bosch, 007. As shown in Figure 3 below, Bosch's dish holders are upwardly angled portions and further include a contoured portion (blue) to prevent the glass from slide down the inclined angle. Bosch further identifies the disadvantage of when the spray jets lift the "cups and glasses" which can damage them "when they subsequently drop back onto the dish rack." Bosch, 002-003. Bosch uses the angled and contoured portions to ensure that

“these dish items are no longer lifted by the spray jets and therefore also cannot drop back into the disk rack.” *Id.*, 004.



(9) Element 17[D]: a spray tube having nozzles emitting spray along the angled portion;

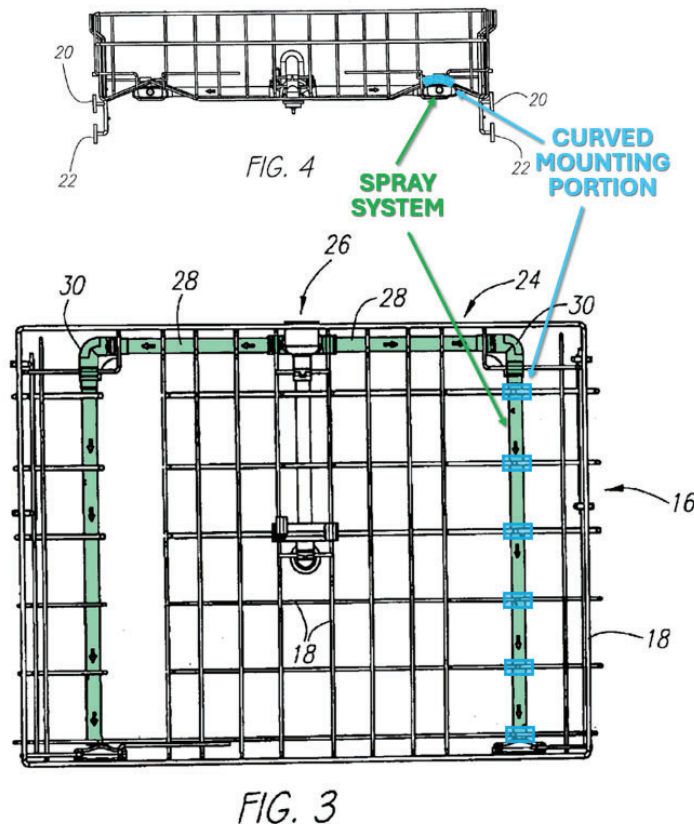
184. Bosch teaches Element 17[D]. Bosch teaches a spray tube having nozzles emitting spray along the angled portion. As discussed above, Bosch teaches two spray tubes 11. The spray tubes may be “fixed or... rotate about their longitudinal axis.” Bosch, 007. As shown in Figure 3 below, a POSITA would have understood that Bosch’s spray tube is along the angled portions because Bosch shows spray (blue) from spray tubes 11 (green) going upwards along the upward angle. Specifically, Bosch teaches that the angled portions ensure that the spray is able to clean the hollow part of a glass without lifting and dropping the glass back onto the rack, thereby preventing damage.



- (10) Element 17[E]: wherein the contoured portion is further configured to form a curved mounting portion adjacent which the spray tube is mounted such that the spray tube is carried with the dish rack.**

185. Bosch in view of Ochoa teaches Element 17[E]. Bosch-Ochoa teaches that the contoured portion is configured to form a curved mounting portion adjacent with the spray tube, such that the spray tube is carried with the dish rack. As I explained above, Bosch teaches two spray tubes 11 that are arranged “fixedly” within the dish rack 10. Bosch, 007, 009 (Cl. 4).

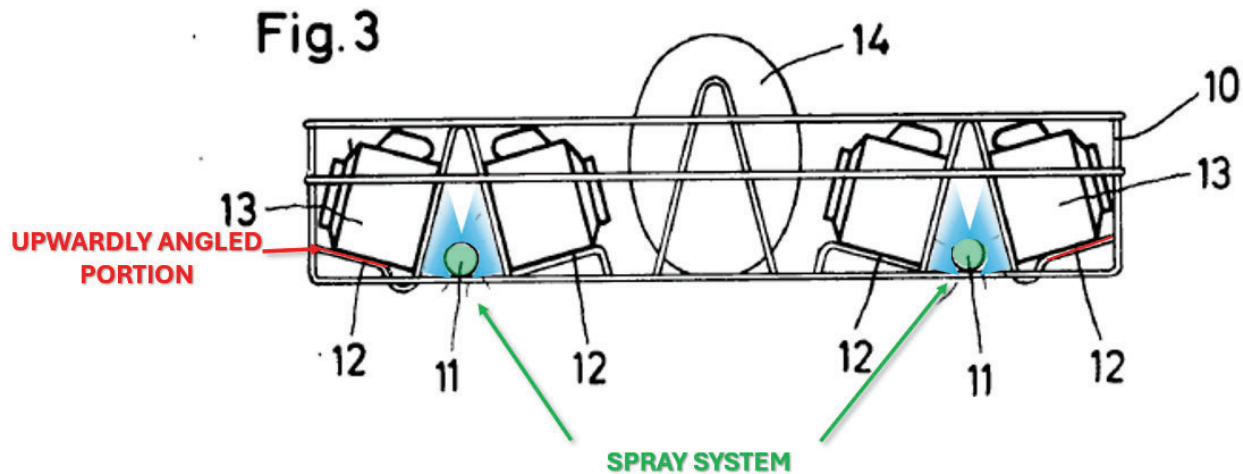
186. It would have been obvious in view of Ochoa to mount these tubes adjacent to a curved mounting portion that is carried with the dish rack. Ochoa teaches that the upper rack 12 includes a “water spraying system ... that is mounted on the underside of the rack 6 and moves into and out of the front of the dishwasher 10 with the rack 16.” Ochoa, 3:15-19. As shown in Figure 4, Ochoa also teaches a curved mounting portion adjacent to which the spray tube is mounted in order for the dish rack to have the spray tube carried with the dish rack.



c. **Dependent Claim 21**

- (1) **Claim 21: The dishwasher of claim 17 wherein at least one of the nozzles is located above a portion of the angled portion.**

187. Bosch-Ochoa teaches Claim 21. Bosch teaches that at least one of the nozzles is located above a portion of the angled portion. As discussed above, Bosch teaches two spray tubes 11, “fixed or ... rotate[d] about their longitudinal axis.” Bosch, 007. As shown in Figure 3 below, a POSITA would have understood that Bosch’s spray tube is located above a portion of the angled portion because the bottom of the upwardly angled portion (red) is below all or most of the circular cross-section of the spray tube that has nozzles all along its surface (green).



2. **Bosch in view of Ochoa and Schessl render obvious dependent Claims 18-20**

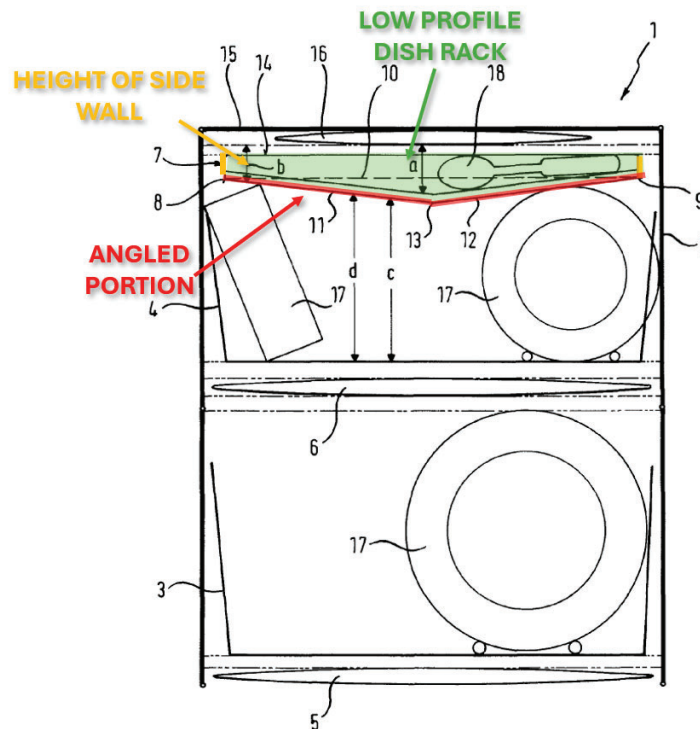
a. **Motivation to combine Bosch-Ochoa's teachings with Schessl's teachings**

188. In my opinion, Bosch in view of Ochoa and Schessl renders obvious Claims 18-20 of the '385 Patent. As detailed below, a POSITA would have found it obvious and would have been motivated to combine Bosch, Ochoa, and Schessl.

189. A POSITA would have been motivated to combine Bosch and Ochoa based on at least their teachings because they are directed to a dish rack of a dishwasher. For example, Bosch teaches a dishwasher having a dish rack that can be pulled out at the front. Bosch, 005. Bosch teaches that "the device for spraying the dishes is designed in the form of two spray tubes 11." Bosch, 006-007. Ochoa further teaches a dish rack comprising of a "wire basket constructed in a *conventional manner* with a plurality of crisscrossing and encircling wire segments connected to each other to provide space for supporting cups, glasses, small dishware, long utensils and the like in the usual manner." Ochoa, 3:2-9.

190. Schessl teaches a "cutlery basket 7" which has a "floor area consisting of a first part area 11 and a second part area 12. The first and the second part area 11, 12 adjoin each other at an

oblique angle.” Schessl, 3:1-5. As shown below, Schessl teaches that the angled portions 11, 12 between a first and second side walls 8, 9 (yellow) produce a design with “varying clearance heights.” *Id.*, 3:9-15.



191. Bosch-Ochoa teaches a dishrack that can move in and out of the dishwasher but leaves the implementation details of the sizing to a POSITA. A POSITA would have considered references like Schessl, which disclose top angled rack sizing. A POSITA looking to implement angled portions that prevent glasses from slipping, while optimizing space and ensuring proper washing and drying as taught by Bosch, would have considered Schessl because Schessl furthers Bosch’s goal. Specifically, Schessl “allow[s] a maximum utilization of space for the cutlery basket and for a crockery basket arranged below it” while “improving the draining of the washing liqu[id] thus providing an improved drying result.” Schessl, 4:1-7.

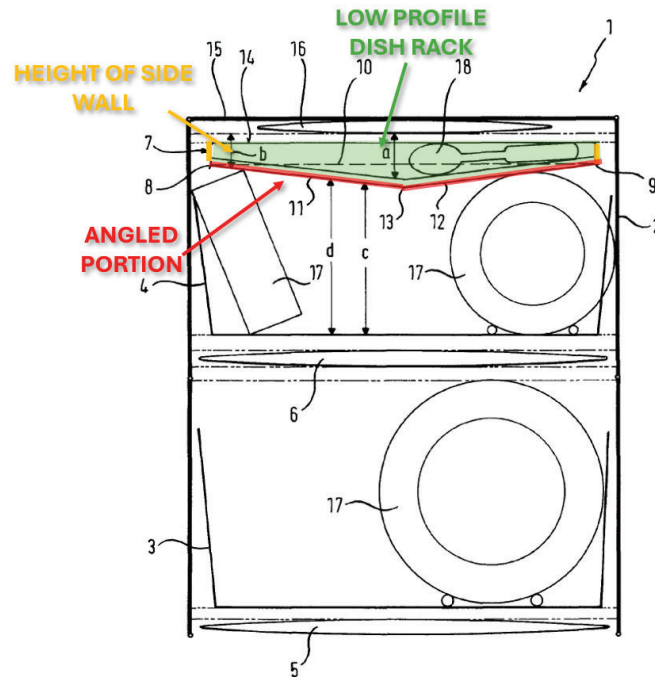
192. A POSITA would also have recognized that Schessl’s design is compatible with and meets the requirements of Bosch-Ochoa’s dish rack because the combination would have been

an obvious design choice. Schessl simply expounds on the details of implementing a low profile dish rack with angled portions to accommodate small washing items, which Bosch-Ochoa already teaches. In my opinion, implementing Schessl's teaching would not result in a difference in structure or provide any unexpected results because a POSITA would have recognized that Schessl's teachings could be readily incorporated into Bosch-Ochoa's dish rack.

b. Dependent Claims 18-20

- (1) Claim 18: The dishwasher of claim 17 wherein the dish rack is a low profile dish rack where the length of the angled portion is greater than a shortest height of an upstanding portion of the side wall.**

193. Bosch-Ochoa in view of Schessl teaches Claim 18. Bosch-Ochoa-Schessl teaches that the disk rack is a low profile dish rack. As I explained in the previous section, Bosch-Ochoa leaves the implementation details of sizing its dishwasher rack to a POSITA. A POSITA would have considered references like Schessl, which teaches a low profile dish rack. Specifically, Schessl teaches a "cutlery basket 7" with a "floor area consisting of a first part area 11 and a second part area 12. The first and the second part area 11, 12 adjoin each other at an oblique angle." Schessl, 3:1-5. As shown below, Schessl teaches that the angled portions 11, 12 (red) between a first and second side edge 8,9 (yellow) produce a design with "varying clearance heights." *Id.*, 3:9-15. Schessl teaches that the narrowing of the cutlery basket occurs from the center outwards towards the first and second side walls, such that the clearance height "b" at or near the side wall (in yellow) is less than the length of the angled portions (first and second portions 11, 12 in red) across the length of the dishwasher. *Id.*



194. A POSITA would have been motivated for Bosch-Ochoa's dish rack to be low profile such that the length of the angled portion is greater than the side wall, as taught in Schessl for optimum utilization of space in the washing compartment while "simultaneously producing a good cleaning and drying result for said items." Schessl, 4:1-7.

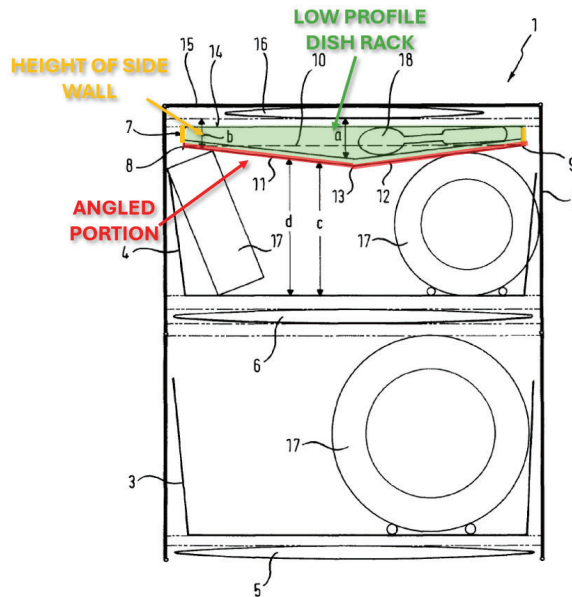
(2) Claim 19: The dishwasher of claim 18 wherein at least one of the nozzles is located above a portion of the angled portion.

195. Bosch-Ochoa-Schessl teaches Claim 19. Bosch teaches at least one of the nozzles is located above a portion of the angled portion for the same reasons I explained in regards to Claim 21 (Section VIII.B.1.c).

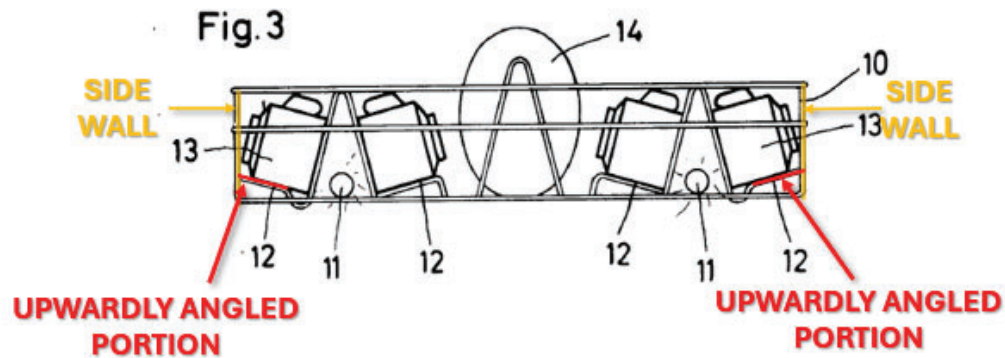
(3) Claim 20: The dishwasher of claim 18 wherein the shortest height is located along a portion of the side wall transverse to the angled portion.

196. Bosch-Ochoa-Schessl teaches Claim 20 for the same reasons I explained above in regards to Claim 18 (Section VIII.B.2.b.1). Specifically, Bosch-Ochoa-Schessl's shortest height is located along a portion of the side wall transverse to the angled portion. Schessl teaches that

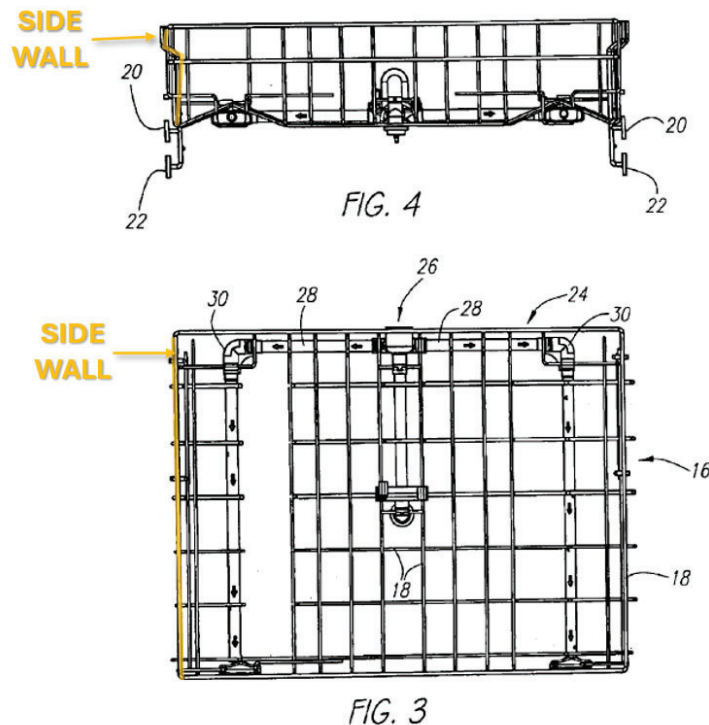
the that the cutlery basket has different “clearance heights, which guarantee an optimized utilization of space.” Schessl, 1:38-44, 1:46-54. As shown below, the side wall (yellow) is transverse to the angled portion (red) and is the shortest height of the dish rack because clearance height “b” is less than the clearance height “a.”



197. A POSITA would have understood that Bosch-Ochoa-Schessl’s shortest height is a portion of the side wall transverse to the angled portion because, as explained in Section VIII.B.1.b.6, Bosch-Ochoa’s upwardly angled portion in the bottom wall is the dish holder that holds the cup or glass at an angle and is connected to the side wall. Specifically, Bosch teaches that the angled portion is the angled dish holder (red):



Ochoa further teaches that the dish rack's wire basket includes a plurality of spaced apart portions forming the bottom wall, which terminate at and are transverse to the side wall (yellow):



198. Therefore, in the Bosch-Ochoa combination, the side wall is transverse to the angled portion and in the Bosch-Ochoa-Schessl combination, the side wall (yellow) transverse to the angled portion is the shortest height. A POSITA would have been motivated to implement Schessl's teachings into Bosch-Ochoa for the same reasons I explained in Section VIII.B.2.a.

IX. CONCLUSION

199. For the reasons stated above, it is my opinion that all of the Asserted Claims of the Asserted Patents are (1) not infringed by the Accused Products and (2) invalid as being either anticipated or rendered obvious in view of prior art.

200. I declare that all statements made in this Declaration of my knowledge are true, and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

DATED: December 12, 2025


Dr. Kimberly K. Cameron