

EXHIBIT E

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

WHIRLPOOL CORPORATION,

Plaintiff,

v.

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

Defendants.

Civil Action No. 2:25-cv-01042

PATENT CASE

JURY TRIAL DEMANDED

DECLARATION OF EMAD TANBOUR, PH.D.

1. My name is Emad Tanbour. I declare, under penalty of perjury, as follows:
2. I have been retained as an expert witness in the above-captioned case. This declaration is based on my personal knowledge, education, expertise, and investigation. If called as a witness, I could and would testify competently to the contents herein.

A. Introduction and Professional Background

3. I am a Professor of Mechanical Engineering at Gameabove College of Engineering and Technology at Eastern Michigan University in Ypsilanti, Michigan, where I have taught since 2016.

4. I graduated third in my cohort from Jordan University of Science and Technology in 1987 with a B.S. in Mechanical Engineering. I then graduated in 1990 with a Master of Science in Mechanical Engineering also from Jordan University of Science and Technology. I then received a full scholarship to pursue graduate studies toward my Ph.D. in Mechanical Engineering from the University of Iowa in the United States. During my time at Iowa, I worked on thermal design of all control circuits for NASA Cassini spacecraft ultimately launched to Saturn. I graduated from University of Iowa in 1997–1998 with my doctorate degree in Mechanical Engineering.

5. Upon graduation from my undergraduate institution, I worked for several years in engineering and technical teaching in the areas of Mechanical Engineering. Upon retaining my master's degree, I worked in other engineering capacities until I joined Gail Industries, a manufacturer of high-pressure plunger pumps and hydraulics systems until graduation from my Ph.D. program. Upon completing my doctorate degree in Mechanical Engineering, I joined the corporate tech center of HNI, the office furniture and fireplace manufacturer for eight years where I managed R&D of hearth appliances and office furniture components and systems. I then joined

A. O. Smith, the largest water heater manufacturer in North America as the Product Development Engineering Manager. I stayed in that position for over 4 years. I then transitioned to academia and served in many capacities in teaching and leadership, and I am currently a full professor and chair of Mechanical Engineering at Eastern Michigan University. While serving in academia for the past 16+ years, I served as a technical expert on several patent-related cases related to various appliances such as water heaters, heat exchangers, condensers, air conditioners, microwaves, refrigerators, and ice makers. I also worked on designs of various appliances such as combined heat pumps and water heaters.

6. I now have more than 38 years of combined experience in Mechanical Engineering in both academia and industry. My industry experience spans over 18 years working for corporate America with focus on the areas of product development—specifically with respect to energy efficient appliances—as well as with thermal systems design and engineering management.

7. I am also an innovator with over 21 U.S. pending and issued patents, many if not all of which resulted in products sold in North America. Most of my innovations are in the field of sustainable design of domestic and commercial appliances.

8. I am the recipient of the Arch T. Colwell Award from the Society of Automotive Engineers and served for five years as an ABET industry consultant.

9. I am a product design and development expert with decades of proven field experience in designing appliances and appliance systems and components. I also lead the capstone design courses in my Mechanical Engineering program at Eastern Michigan University where I teach principles of product development engineering and product realization. I am a named inventor in over 21 U.S. patents and prior art publications related to appliance design and improvements.

10. I am an expert engineering designer of various appliance components and assemblies, and I have designed appliance components made of wire structures such as the dish racks relevant in the current case. I have extensive experience in designing appliance components to provide functions similar to the dish rack of a dishwasher. I also have significant experience in designing moving parts common in most appliances that are more complex than the dish rack.

11. I have attached to this Declaration a copy of my curriculum vitae and litigation work experience as **Exhibit A**, which details my professional qualifications and lists my publications, awards, research grants, and other professional activities.

B. Technology Background

12. The technology at issue in this case relates to the market category of household dishwashers. My understanding is that well-known brands, such as Whirlpool, KitchenAid, Maytag, JennAir, Samsung, LG, Bosch, GE, and Frigidaire, exist within this category that is divided into price segments. This matter concerns dishwashers sold at the premium price point.

13. I understand that a dishwasher is a common household appliance used for cleaning soiled dishware. I understand that a dishwasher tub is defined by its plain meaning and is the interior cavity that holds the dirty dishes and contains the water, sprayers, filters, and other components needed for the washing cycle.

14. I have reviewed and examined the two patents at issue.

C. Patent Overview

1. The '385 Patent

15. I understand that U.S. Patent No. 10,512,385 (“the ’385 Patent”) was filed on March 30, 2018, and issued on December 24, 2019. The ’385 Patent is attached to my Declaration as **Exhibit B**.

16. The named inventors of the '385 Patent are Barry E. Tuller, Steven B. Balinski, David Jason Brightbill, Frederick Thomas Roderick, Joseph T. Ferencevich, Ryan Kevin Roth, and William J. Snell.

17. The '385 Patent claims priority to U.S. Provisional Pat. App. No. 61/946,101, which was filed on February 28, 2014.

18. Claim 17 of the '385 Patent recites:

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.

19. Claim 18 of the '385 Patent recites:

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.

20. Claim 19 of the '385 Patent recites:

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

21. Claim 20 of the '385 Patent recites:

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

22. Claim 21 of the '385 Patent recites:

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

23. The specification of the '385 Patent discloses at 2:55–58:

“A spray system may be provided for spraying liquid in the treating chamber and may be provided in the form of, for example, an upper spray assembly, a middle spray assembly, and a lower spray assembly.”

24. The specification of the '385 Patent discloses as listed in its abstract:

“A dishwasher can include a tub defining a treating chamber receiving dishes for treatment, a spray system providing treating liquid to the treating chamber, a first dish rack located in the tub and having a bottom wall tiered to form multiple levels defining an effective inclination angle for the bottom wall, and a second dish rack located below the first dish rack and having an inclined non-tiered bottom wall.”

25. Figure 1, Figure 8, and Figure 9 illustrate embodiments that cover all claim elements of asserted claims 17, 18, 19, 20, and 21:

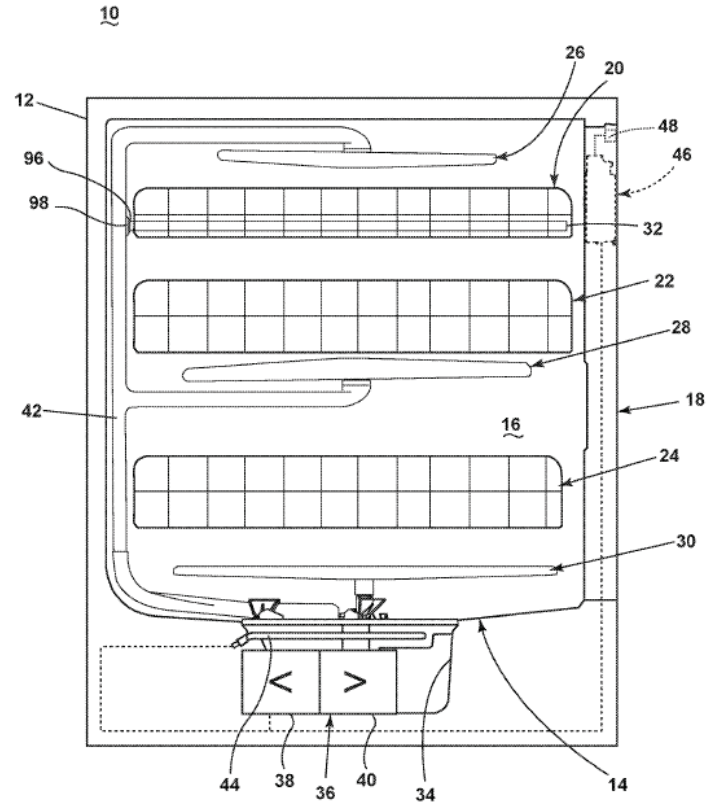


FIG. 1

Figure 1 of the '385 Patent

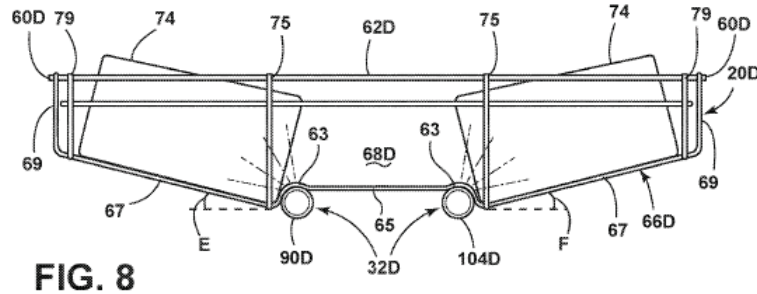


FIG. 8

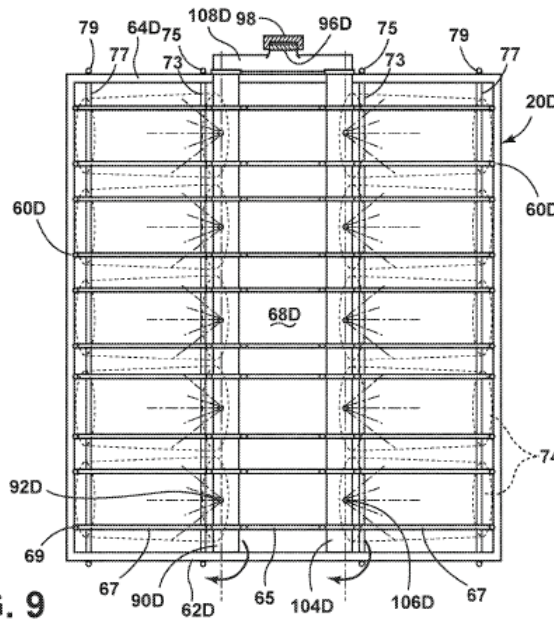


FIG. 9

Figures 8 and 9 of the '385 Patent

2. The '681 Patent

26. I understand that U.S. Patent No. 12,232,681 ("the '681 Patent") was filed on December 11, 2023, and issued on February 25, 2025. The '681 Patent is attached to my Declaration as **Exhibit C**.

27. The named inventors of the '681 Patent were originally Mark S. Feddema, William J. Snell, and Sachie Kakehi. But I understand that Whirlpool filed to have inventorship corrected on October 3, 2025. All inventors, including both those originally listed and also those originally unintentionally excluded, agreed with the inventorship correction. The United States Patent and Trademark Office granted that request on October 9, 2025. That grant is attached as **Exhibit D**.

28. The '681 Patent is a continuation of application No. 17/830,947, filed on Jun. 2, 2022, now Pat. No. 11,864,712, which is a continuation of application No. 16/833,984, filed on Mar. 30, 2020, now Pat. No. 11,375,874.

29. Claim 14 of the '681 Patent recites:

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.

30. Claim 15 of the '681 Patent recites:

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.

31. The specification of the '681 Patent discloses at the abstract:

“An automatic dishwasher configured to implement an automatic treating cycle of operation. The automatic dishwasher having a tub and a dish rack located within the dish treating chamber. The dish rack comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of bottom wall and second portion defined by a depression portion extending across a second portion of bottom wall.”

32. Figure 1 and Figure 3 illustrate embodiments that cover all claim elements of asserted Claims 14 and 15 of the '681 Patent:

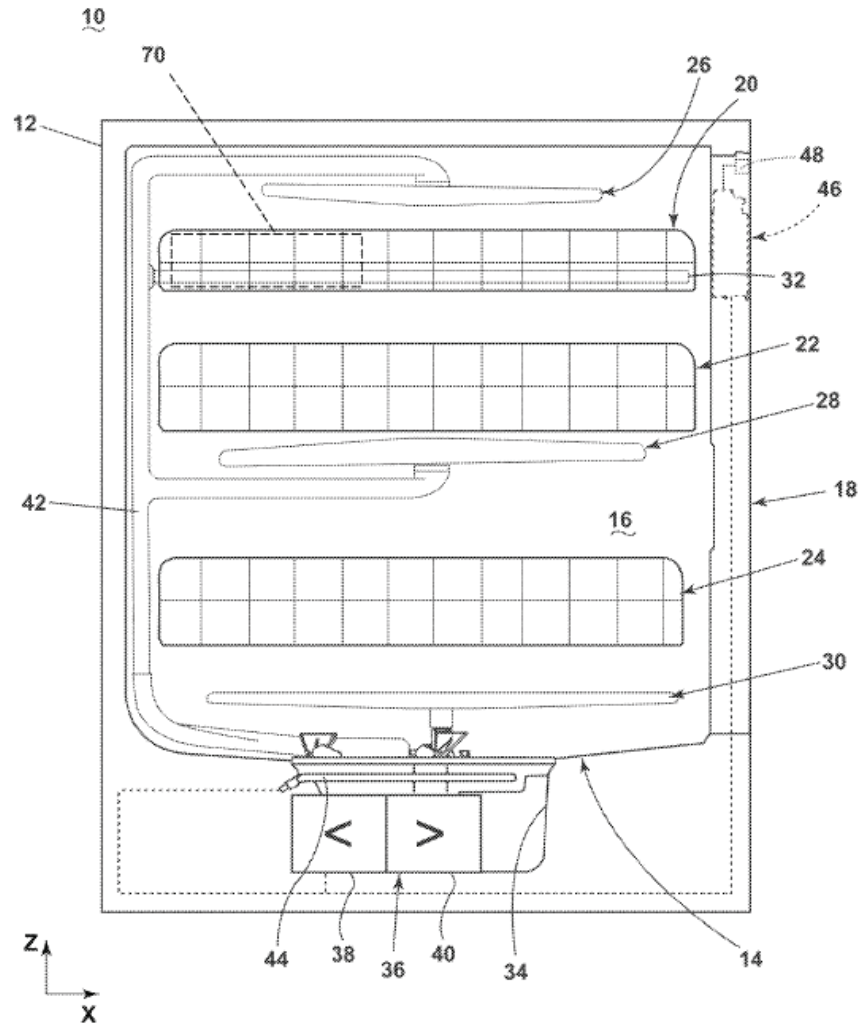


FIG. 1

Figure 1 of the '681 Patent

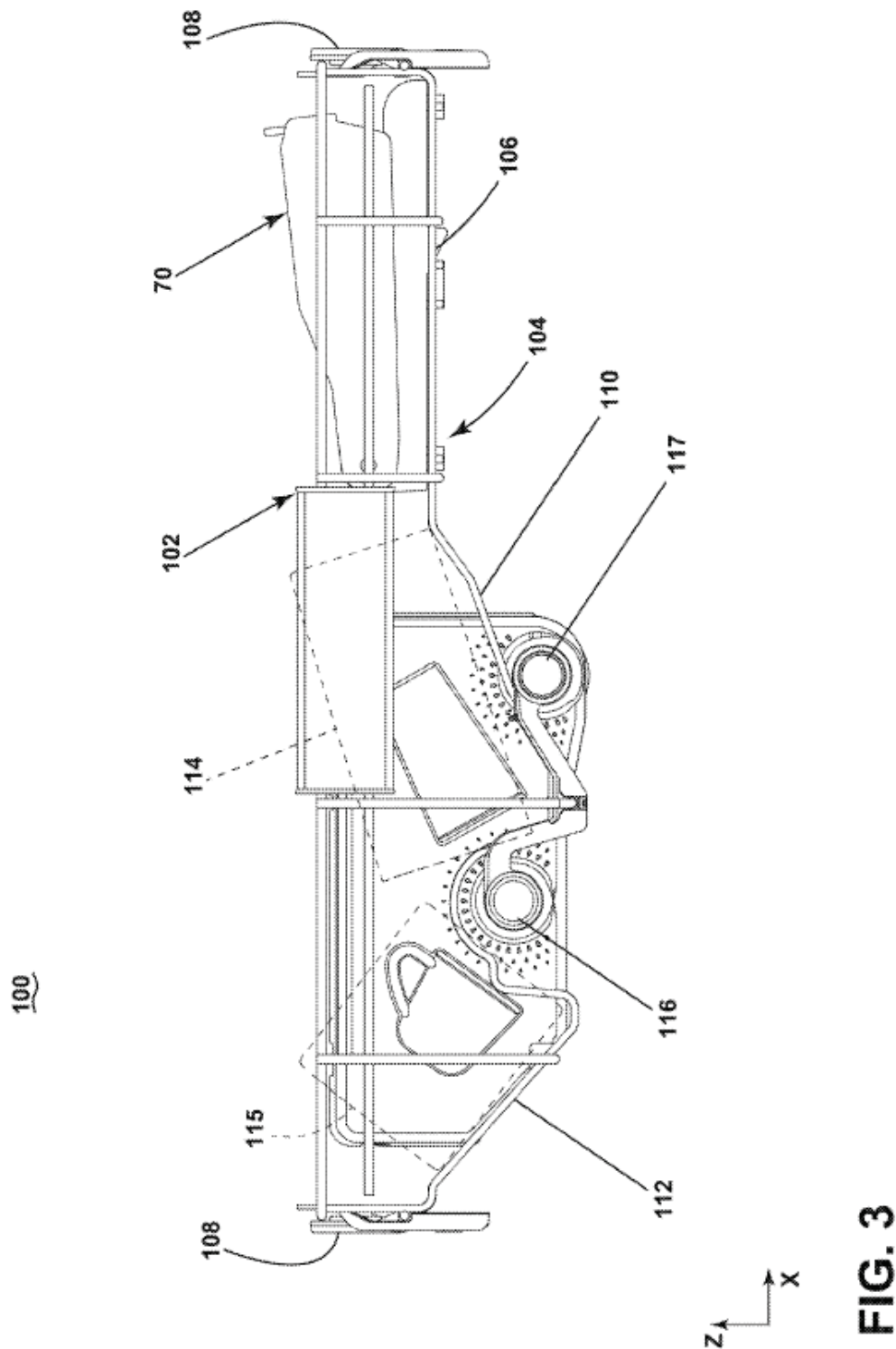


Figure 3 of the '681 Patent

D. Samsung's Accused Products

33. I was asked to consider the infringement of Whirlpool's '385 and '681 patents by Samsung dishwashers with an enhanced top rack modeled after the KitchenAid dishwasher technology that provides for an enhanced top rack that can hold both drinkware and utensils and silverware ("Accused Products"). The Samsung 38 dBA Bespoke Smart Dishwasher with 3rd Rack Washing System (DW90F89) is one such Accused Product. I understand that the release of these dishwashers has been publicly announced through Samsung's marketing and that they are currently available for purchase online.

34. By October 3, 2025, Samsung's webpage for one of the Accused Products, Samsung's DW90F89 Bespoke Smart Dishwasher with the 3rd Rack Washing System, listed a "3rd rack washing system" as the first feature highlighted for the dishwasher.

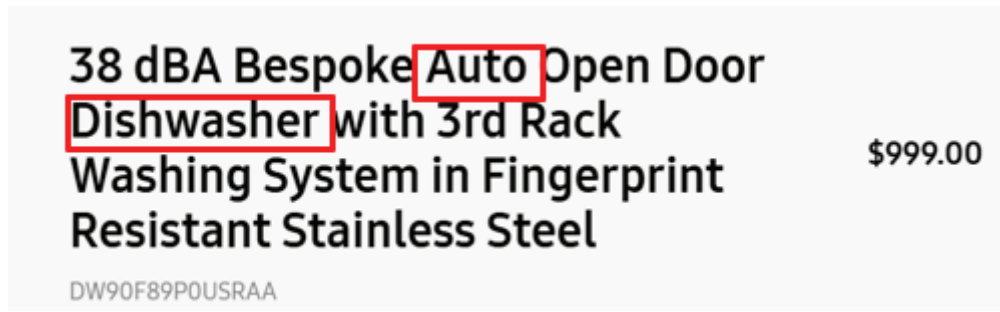
35. On October 1, 2025, Whirlpool provided me with the third (or top) rack of both its premium KitchenAid dishwashers that practice the patents-in-suit as well as the third (or top) rack of Samsung's Bespoke Smart Dishwasher with 3rd Rack Washing System. I have investigated the products.

36. I have also reviewed the Dishwasher User Manual for the Samsung DW90F89 product. A copy of that User Manual is attached as **Exhibit E**. I have also reviewed the corresponding marketing materials and have reviewed the third dish racks of both the Samsung DW90F89 product and of Whirlpool products that practice the at-issue patents.

37. I also frequently visited the Samsung website <https://www.samsung.com/us/home-appliances/dishwashers> and inspected various product pictures and specifications. This included looking at the available marketing, use, and design materials for Samsung's DW90F89 Bespoke Smart Dishwasher with 3rd Rack Washing System to the degree they were available online.

38. As with any automatic dishwasher, the automatic treating cycle of operation is inherent in the functionality of the Accused Products.

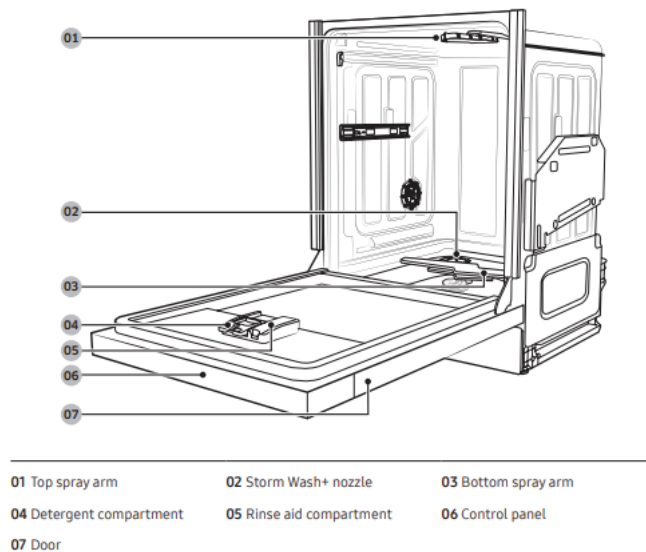
39. For example, the marketing materials disclose that Samsung's DW90F89 Bespoke Smart Dishwasher is an automatic dishwasher. For example:



<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/>

Product overview

Dishwasher at a glance



https://downloadcenter.samsung.com/content/UM/202504/20250409080928151/OID81932_IB_DW9000F_SimpleUX_EN_MES_CFR_250408.pdf



<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/>

40. This is also demonstrated by the below warranty for Samsung’s DW90F89 Bespoke Smart Dishwasher, which provides protection against leakage for the “Tub.”

Warranty (U.S.A)

SAMSUNG DISHWASHER

LIMITED WARRANTY TO ORIGINAL CONSUMER PURCHASER WITH PROOF OF PURCHASE AND/OR PROOF OF DELIVERY

This SAMSUNG brand product, as supplied and distributed by SAMSUNG ELECTRONICS AMERICA, INC. (SAMSUNG) and delivered new, in the original carton to the original consumer purchaser, is warranted by SAMSUNG against manufacturing defects in materials or workmanship for the following limited warranty periods, starting on the date of delivery to the original consumer purchaser:

One (1) year parts and labor

Five (5) years, Printed Circuit Board, Racking and Stainless Door Liner & **Tub** or leakage (Parts Only)

https://downloadcenter.samsung.com/content/UM/202504/20250409080928151/OID81932_IB_DW9000F_SimpleUX_EN_MES_CFR_250408.pdf

41. These facts open the door for application of the '385 and '681 patents.

E. Infringement of the Asserted Patents

42. I analyzed the claims of the '385 and '681 patents and concluded that each and every limitation of Claims 17, 18, 19, 20, and 21 of the '385 patent and each and every limitation of Claims 14 and 15 of the '681 patent is met by Samsung's Accused Products.

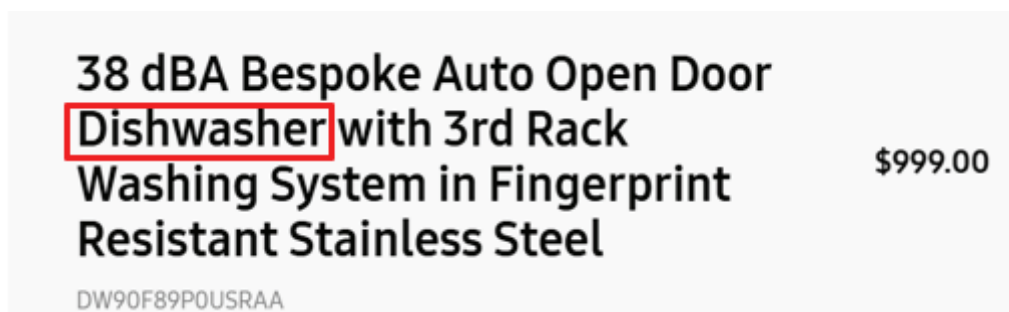
43. I have also reviewed Samsung's own technical material cited above and below, as well as its marketing material, and have investigated the third dish rack of the Accused Products in-person.

1. Claim 17 of the '385 Patent

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

44. To the extent the preamble is found to be limiting, the preamble is met in Samsung's Accused Products. See the analysis and evidence below.

45. Each Accused Product comprises a dishwasher as evidenced by title descriptions of the product. For example:



<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/>

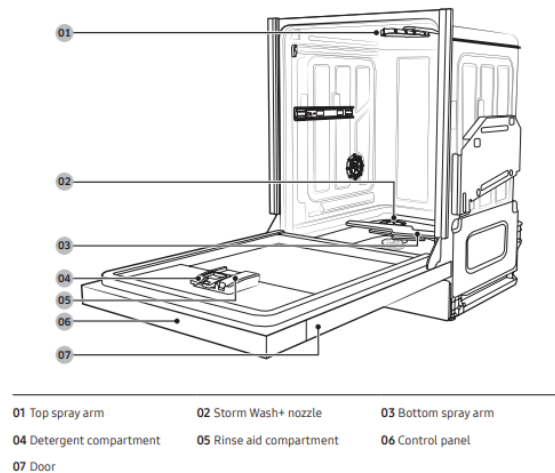
(2) 17[a] a tub defining a treating chamber receiving dishes for treatment:

46. This claim limitation is met in Samsung's Accused Products. See the analysis and evidence below.

47. As set forth above, each Accused Product comprises a dishwasher. Further, each Accused Product is configured by Samsung such that it contains a tub defining a treating chamber receiving dishes for treatment:

Product overview

Dishwasher at a glance



https://downloadcenter.samsung.com/content/UM/202504/20250409080928151/OID81932_IB_DW9000F_SimpleUX_EN_MES_CFR_250408.pdf



<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/>

48. This also is demonstrated by the below warranty for the dishwasher providing protection against leakage for the “Tub”:

Warranty (U.S.A)

SAMSUNG DISHWASHER

LIMITED WARRANTY TO ORIGINAL CONSUMER PURCHASER WITH PROOF OF PURCHASE AND/OR PROOF OF DELIVERY

This SAMSUNG brand product, as supplied and distributed by SAMSUNG ELECTRONICS AMERICA, INC. (SAMSUNG) and delivered new, in the original carton to the original consumer purchaser, is warranted by SAMSUNG against manufacturing defects in materials or workmanship for the following limited warranty periods, starting on the date of delivery to the original consumer purchaser:

One (1) year parts and labor

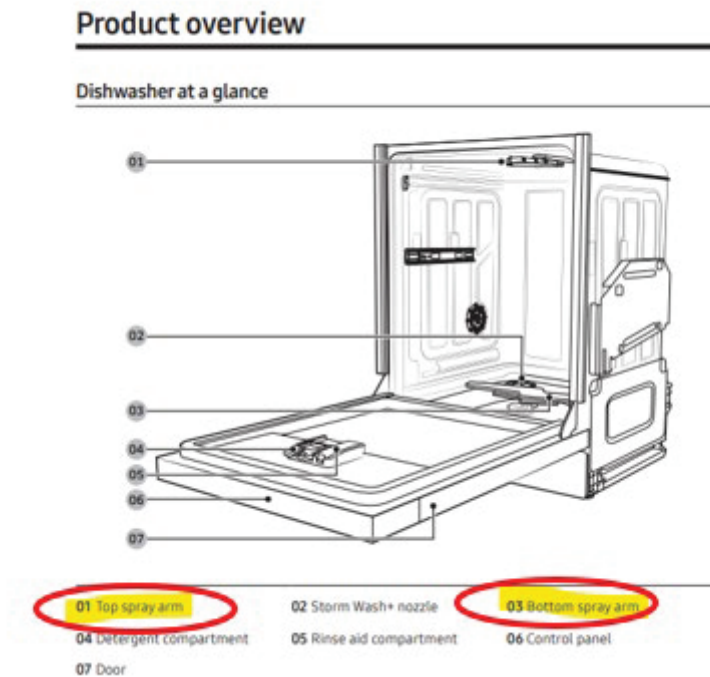
Five (5) years, Printed Circuit Board, Racking and Stainless Door Liner & **Tub** or leakage (Parts Only)

https://downloadcenter.samsung.com/content/UM/202504/20250409080928151/OID81932_IB_DW9000F_SimpleUX_EN_MES_CFR_250408.pdf

(3) 17[b] a spray system providing treating liquid to the treating chamber; and

49. This claim limitation is met in Samsung's Accused Products. See the analysis and evidence below.

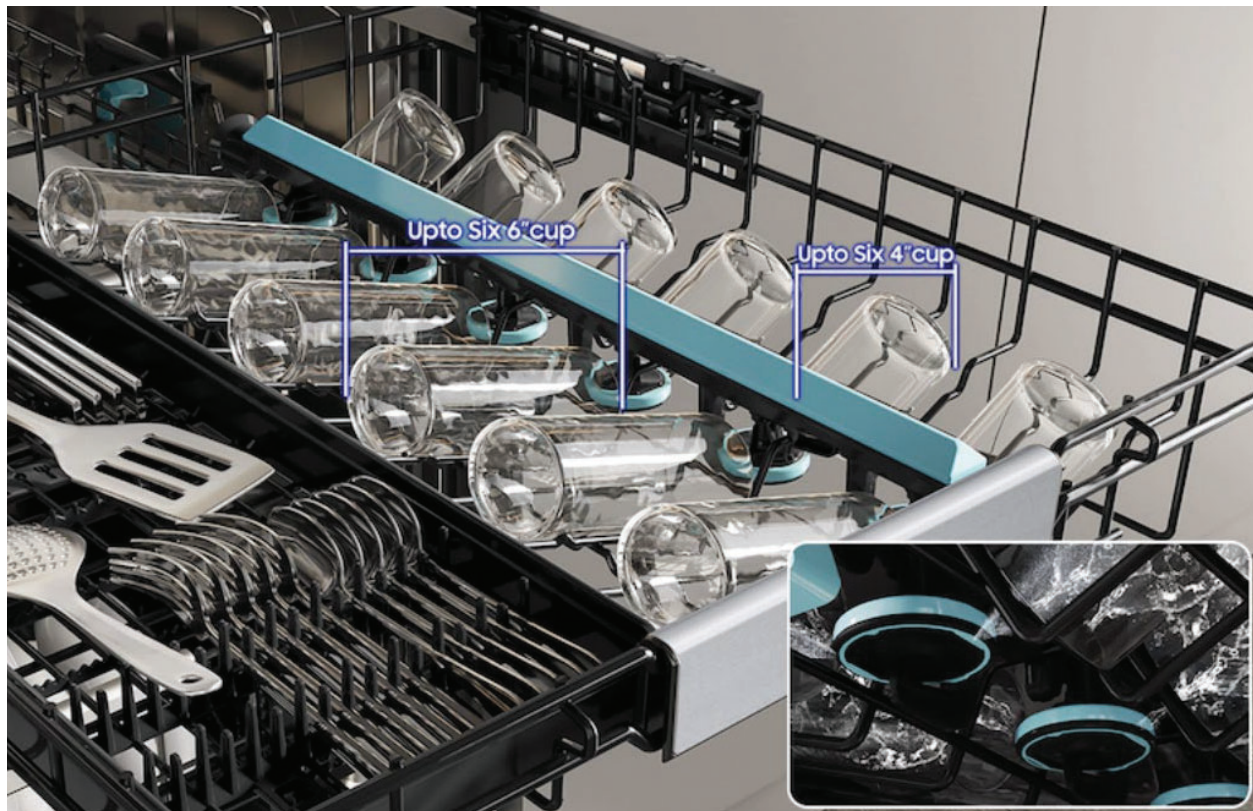
50. As set forth above, each Accused Product comprises a dishwasher configured by Samsung such that it contains a tub defining a treating chamber receiving dishes for treatment. Further, each Accused Product is configured by Samsung such that it comprises a spray system providing treating liquid to the treating chamber:





https://downloadcenter.samsung.com/content/UM/202504/20250409080928151/OID81932_IB_DW9000F_SimpleUX_EN_MES_CFR_250408.pdf

51. Although 17[b] does not explicitly require it, the third rack of each Accused Product comprises its own sprayer dedicated to the third rack:



<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/>

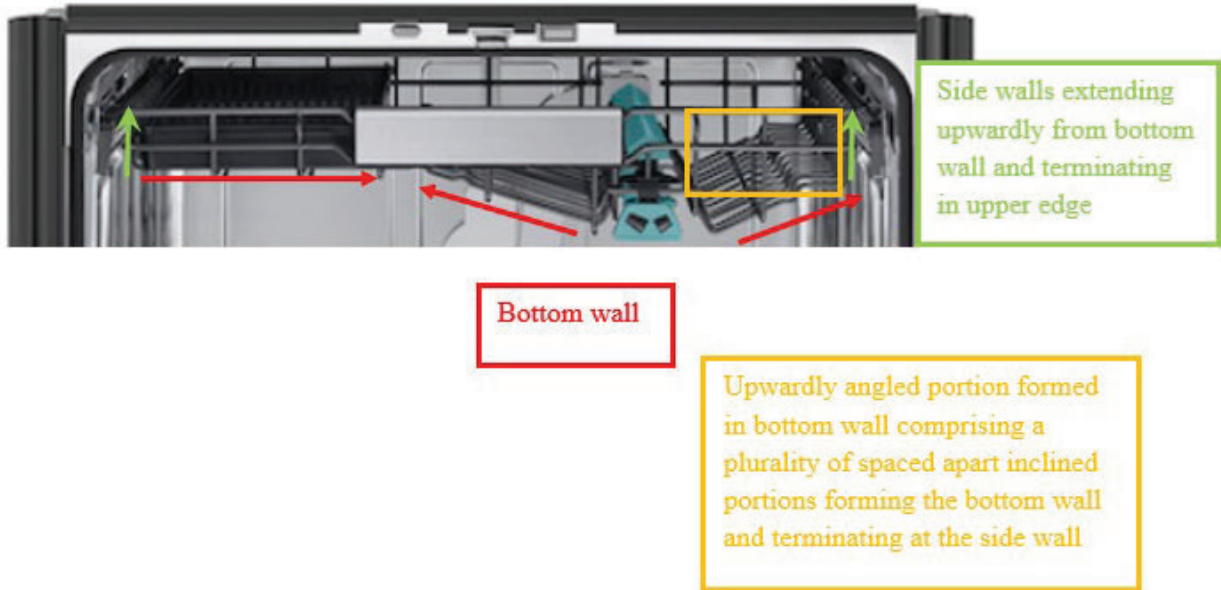
- (4) 17[c] a dish rack located in the tub and selectively moveable into and out of the tub, the dish rack having a bottom wall, a side wall extending upwardly from the bottom wall and terminating in an upper edge, with an upwardly angled portion formed in the bottom wall comprising a plurality of spaced 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

52. This claim limitation is met in Samsung's Accused Products. See the analysis and evidence below.

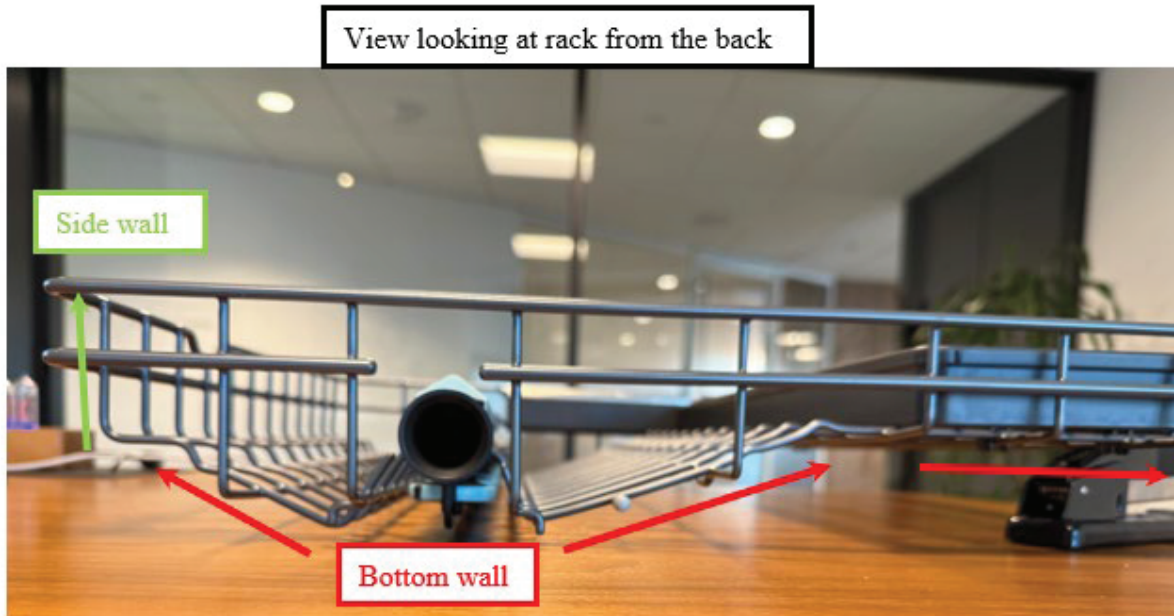
53. As set forth above, each Accused Product comprises a dishwasher configured by Samsung such that it contains a tub defining a treating chamber receiving dishes for treatment and a spray system providing treating liquid to the treating chamber. Further, each Accused Product is configured by Samsung such that it comprises 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.

54. **First**, the Samsung product has a dish rack located in the tub and selectively movable into and out of the tub:

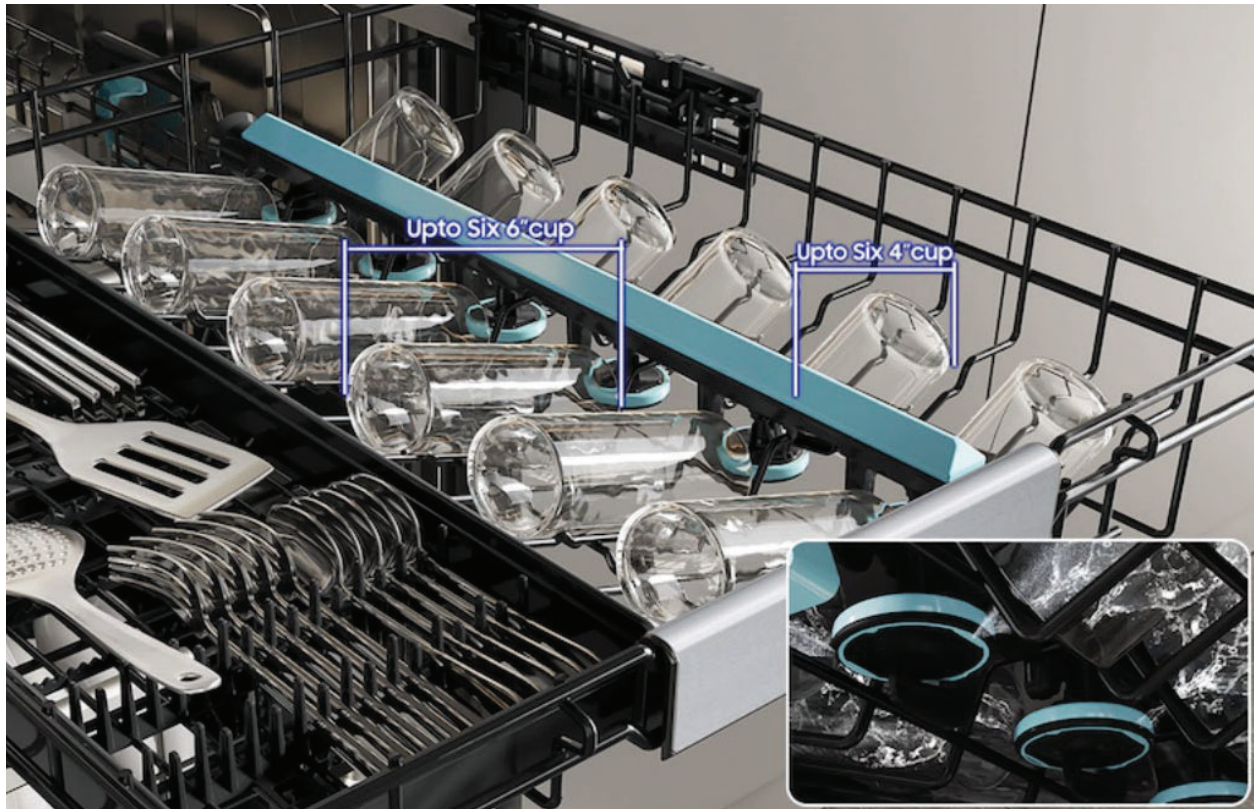
angled portion formed in the bottom wall comprising a plurality of spaced apart inclined portions forming the bottom wall and terminating at the side wall”:



<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/>

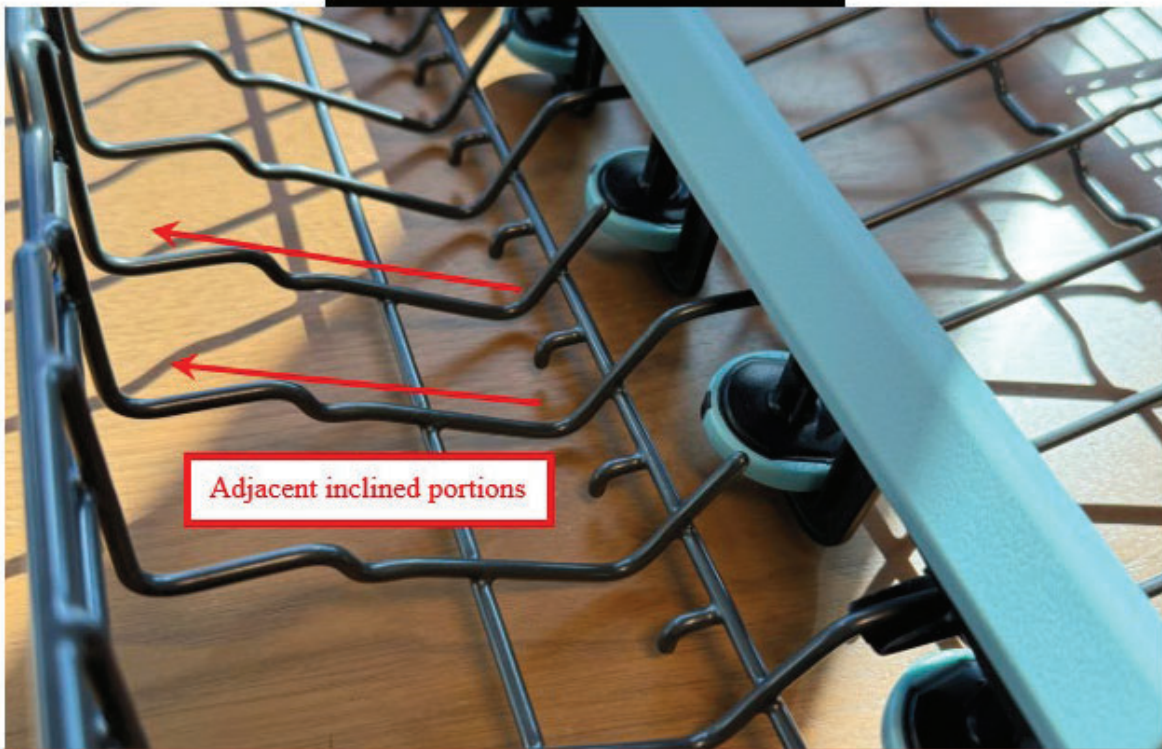


56. ***Third***, wherein the Samsung dish rack has “two adjacent inclined portions of the plurality of spaced apart inclined portions are configured to cradle a glass at an inclined angle and prevent the glass from rolling and a contoured portion formed in the bottom wall configured to prevent glasses from sliding down the inclined angle”:

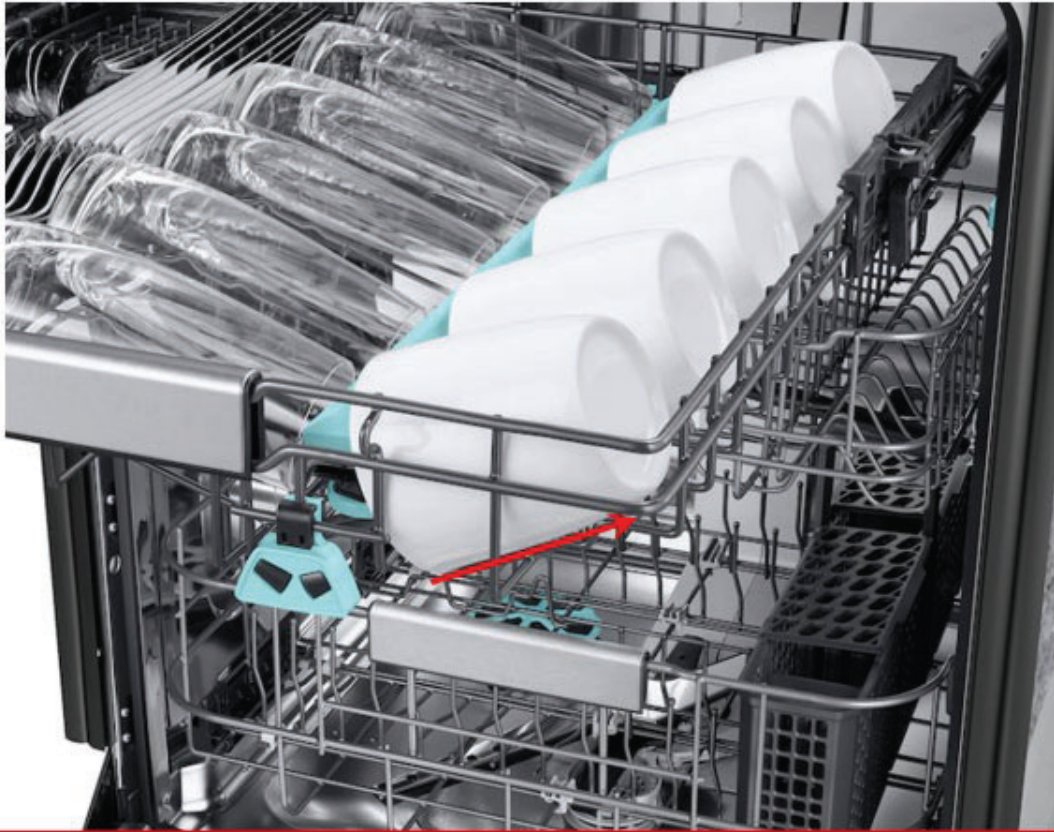


<https://www.samsung.com/us/home-appliances/dishwashers/rotary/38-dba-bespoke-auto-open-door-dishwasher-with-3rd-rack-washing-system-in-fingerprint-resistant-stainless-steel-dw90f89p0usraa/>

View looking at rack from the back

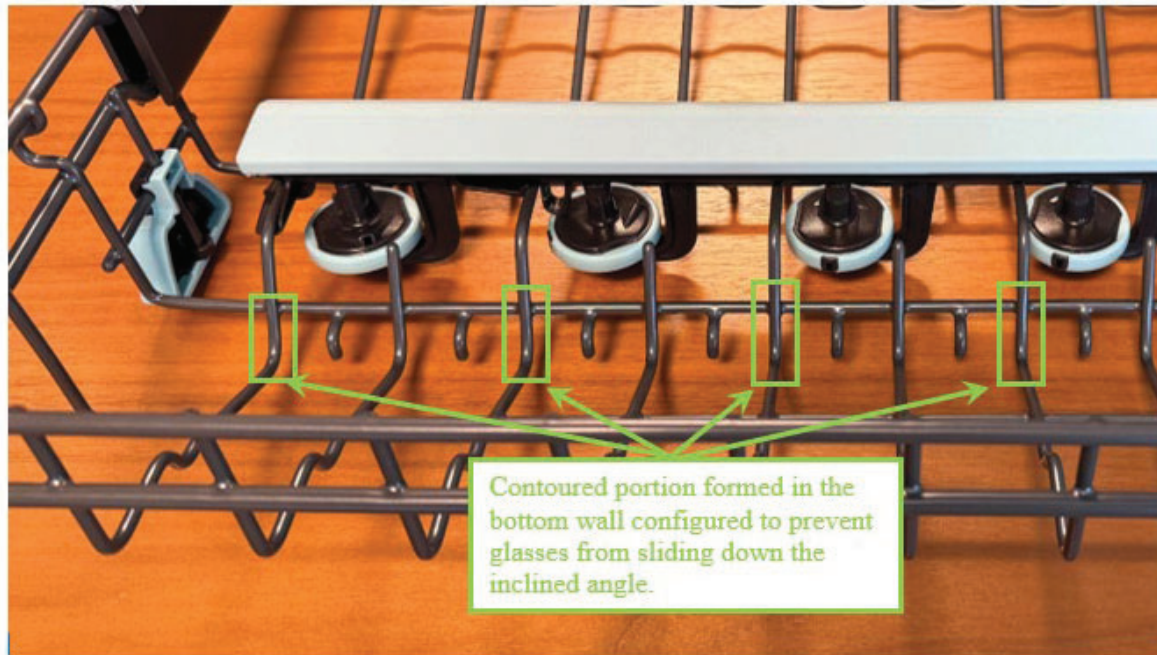
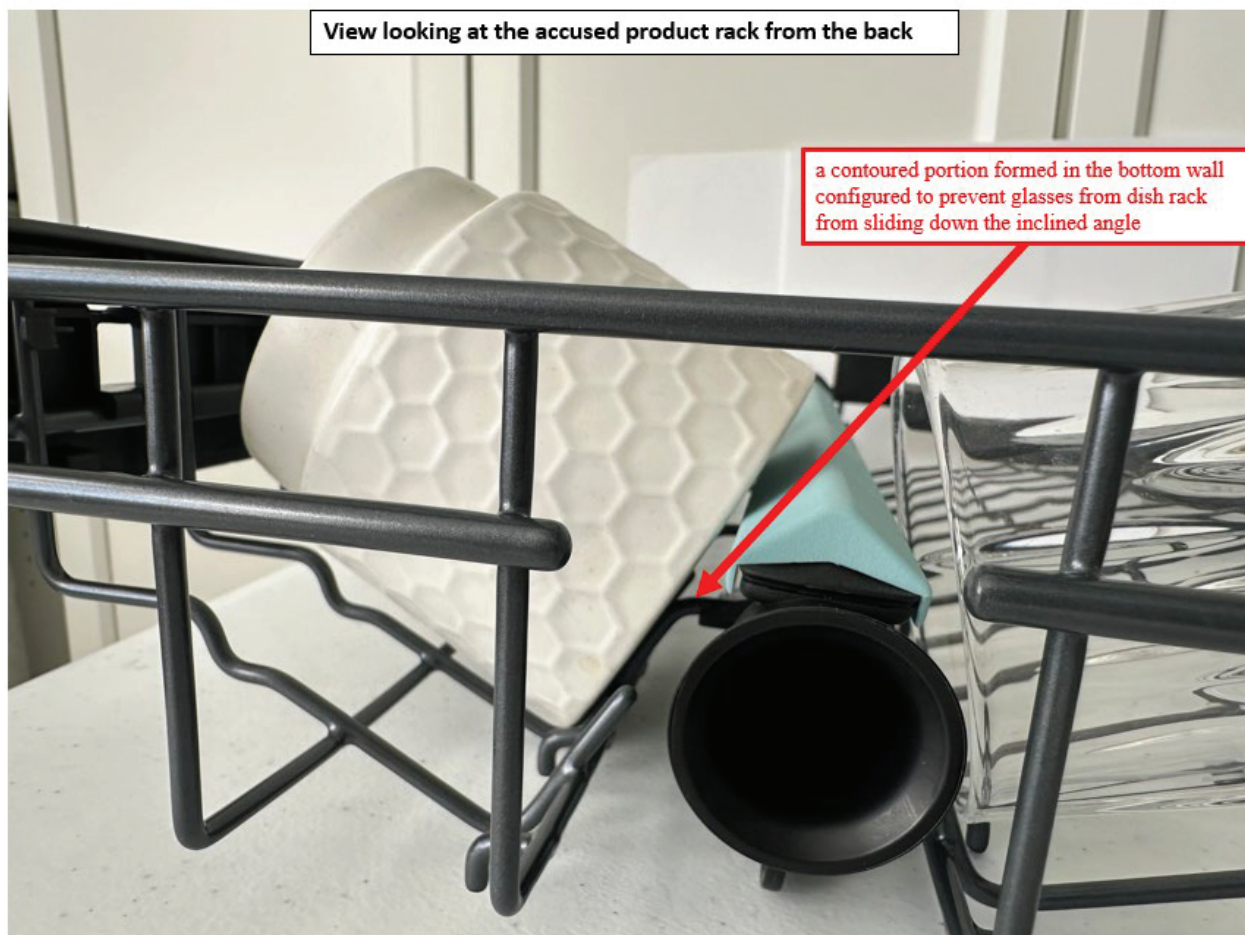


Bottom wall with an upwardly angled portion formed in the bottom wall comprising a plurality of spaced apart inclined portions forming the bottom wall and terminating at the side wall, wherein two **adjacent inclined portions of the plurality of spaced apart inclined portions** are configured to cradle a glass at an inclined angle and prevent the glass from rolling



Bottom wall 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

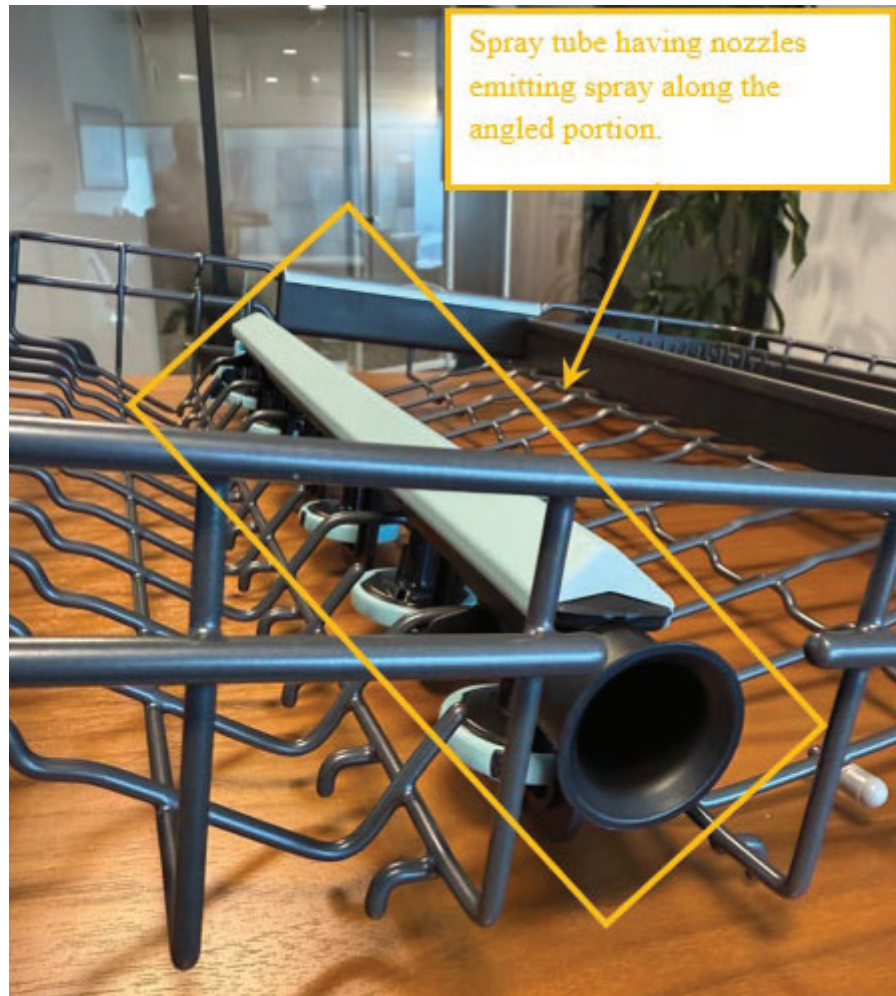
<https://www.samsung.com/us/home-appliances/dishwashers/rotary/38-dba-bespoke-auto-open-door-dishwasher-with-3rd-rack-washing-system-in-fingerprint-resistant-stainless-steel-dw90f89p0usraa/>



(5) 17[d] a spray tube having nozzles emitting spray along the angled portion;

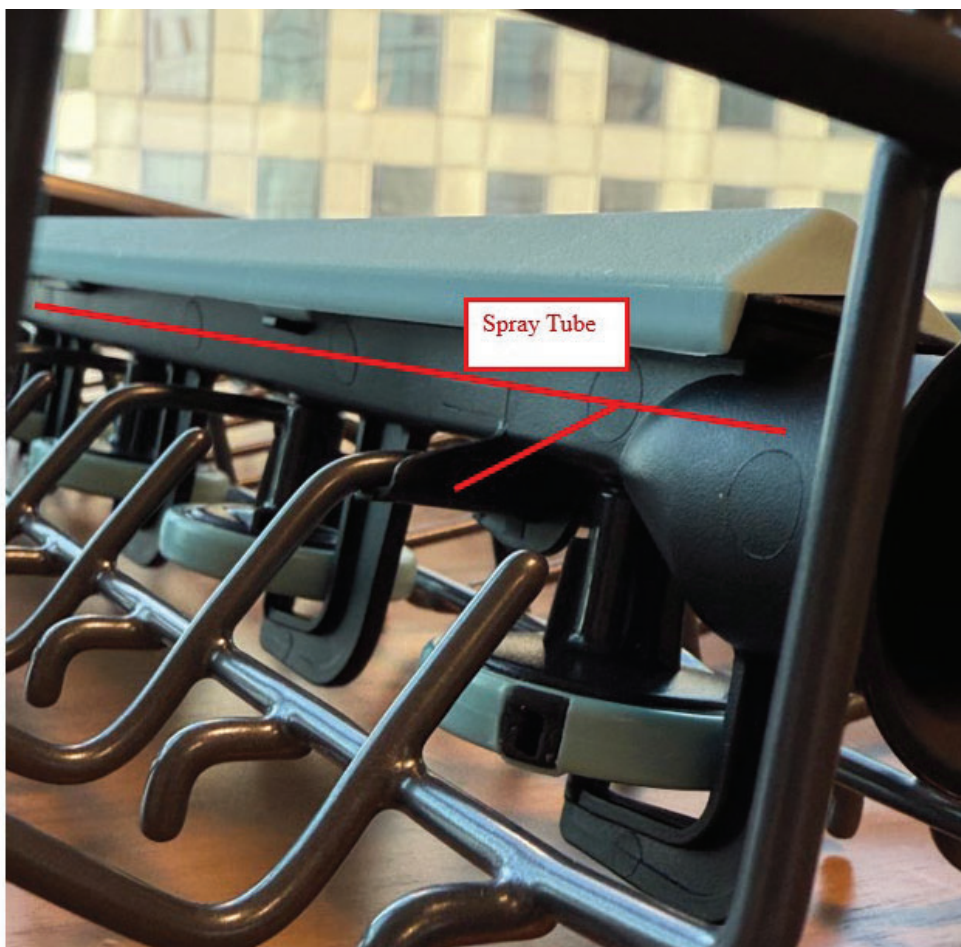
57. This claim limitation is met in Samsung's Accused Products. See the analysis and evidence below.

58. As set forth above, each Accused Product comprises a dishwasher configured by Samsung such that it contains a tub defining a treating chamber receiving dishes for treatment and 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. Further, each Accused Product is configured by Samsung such that it comprises a spray tube having nozzles emitting spray along the angled portion:



Spray nozzles emitting spray along the angled portion

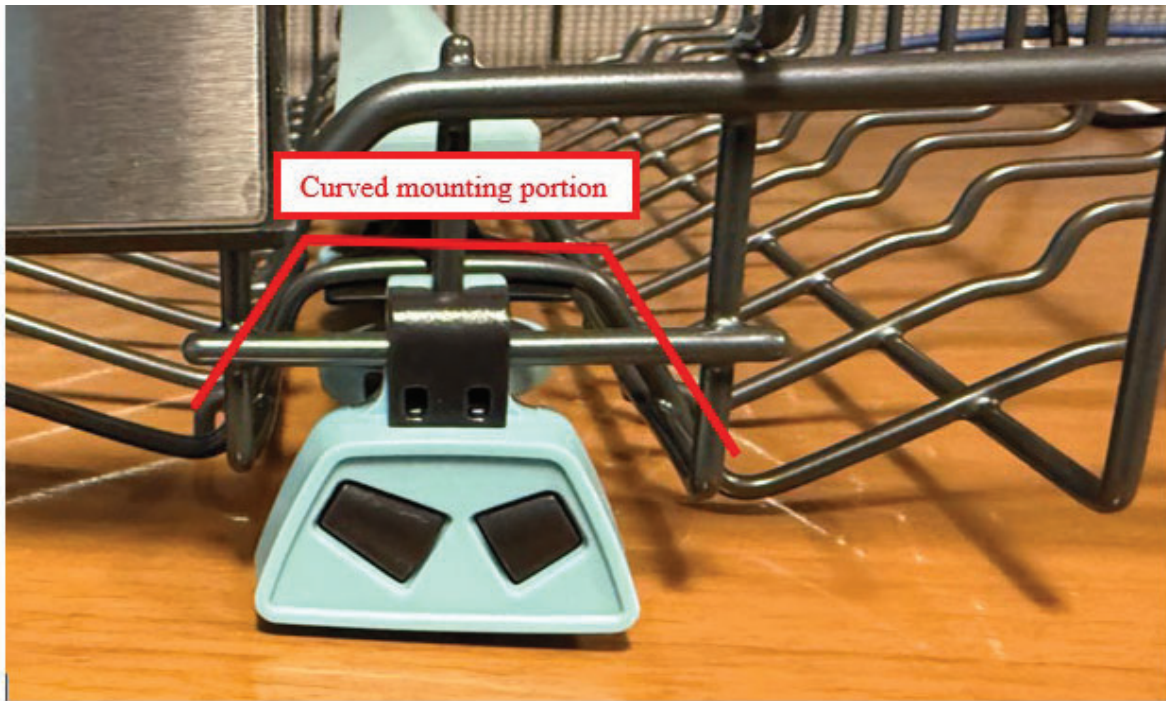
<https://www.samsung.com/us/home-appliances/dishwashers/rotary/38-dba-bespoke-auto-open-door-dishwasher-with-3rd-rack-washing-system-in-fingerprint-resistant-stainless-steel-dw90f89p0usraa/>

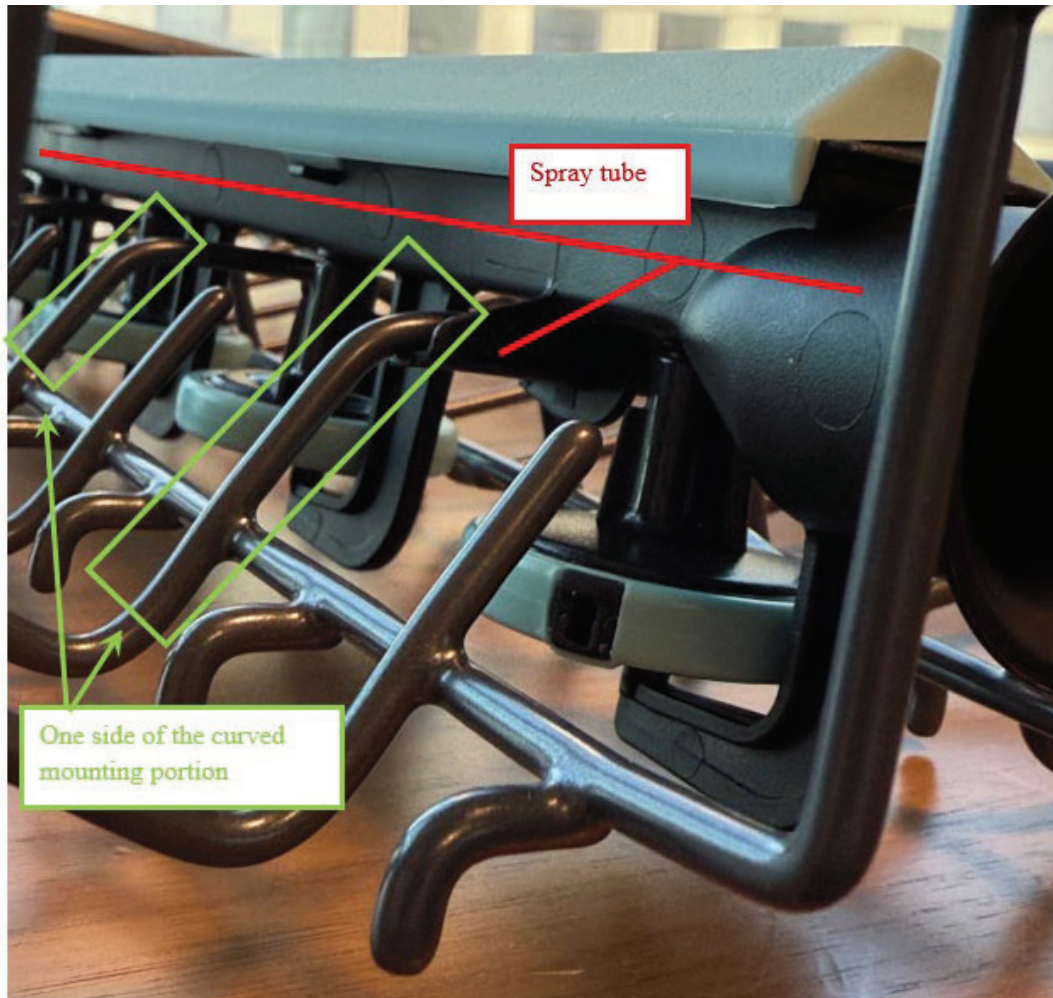
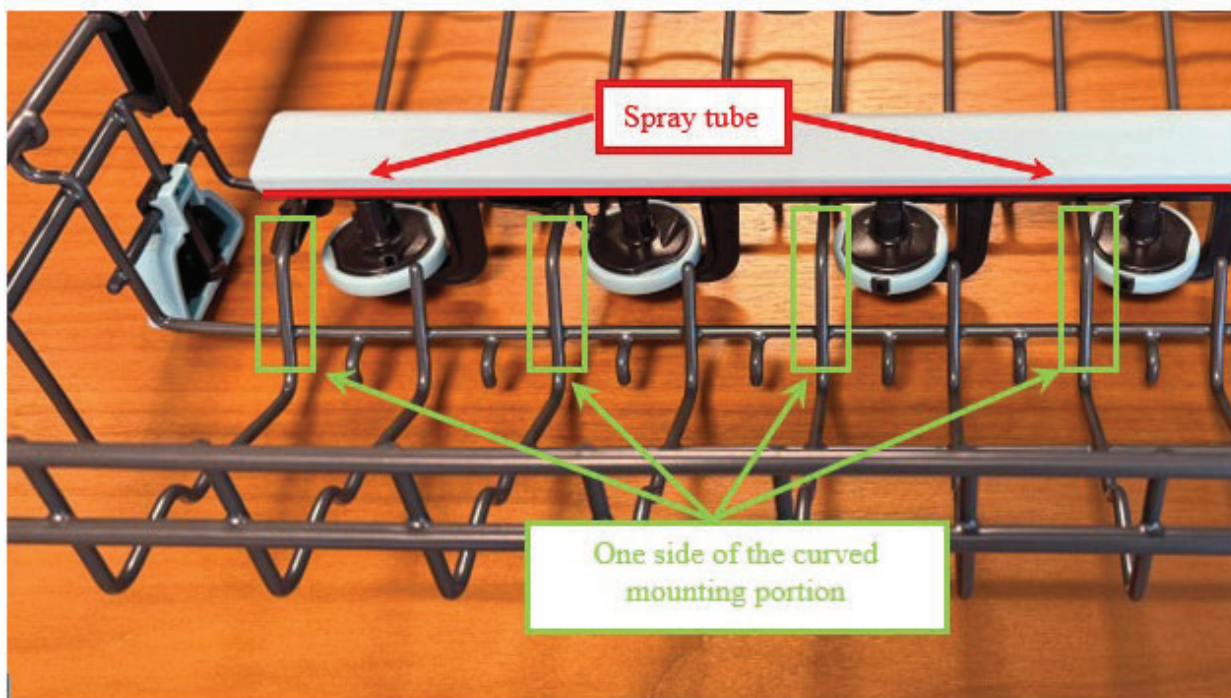


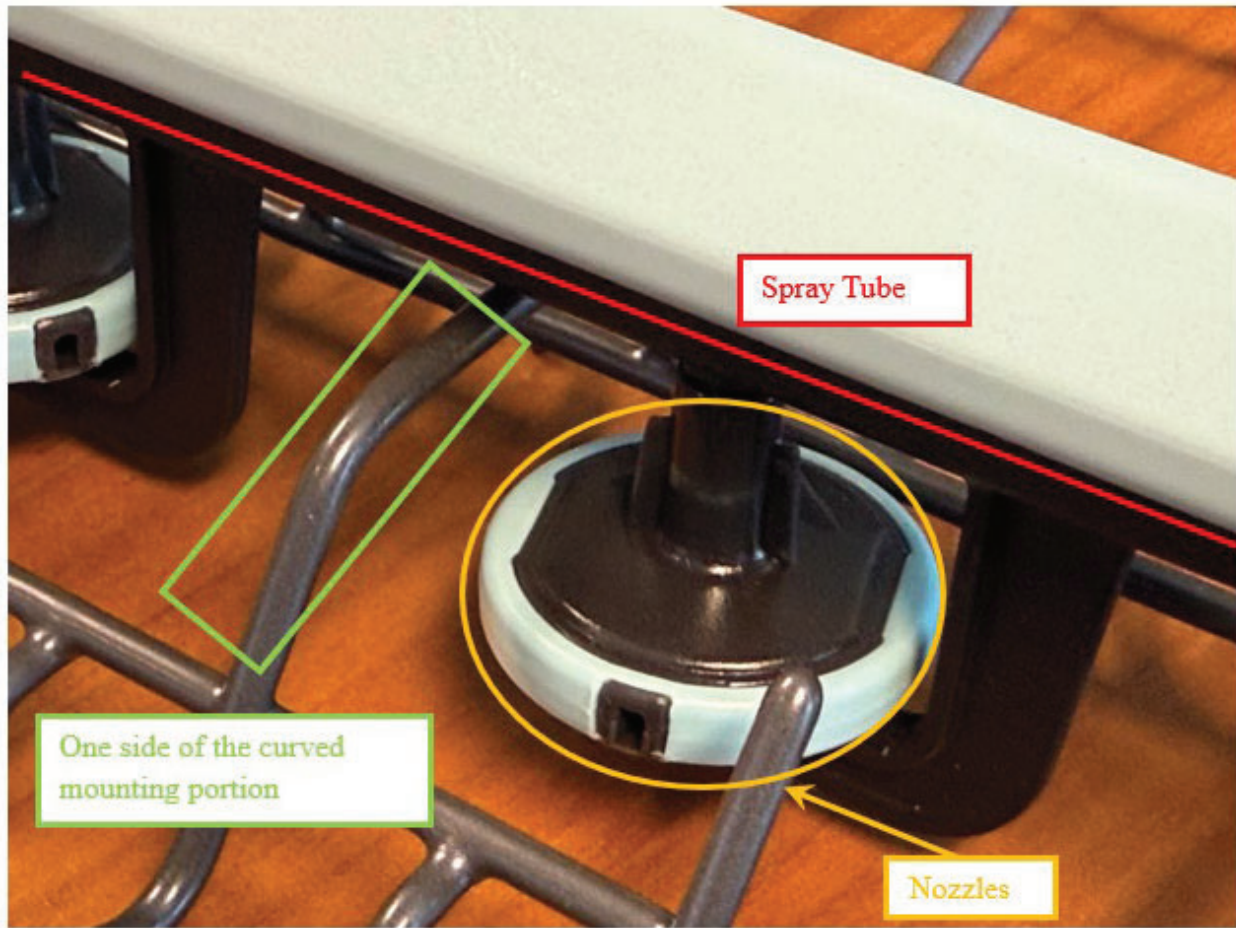
- (6) 17[e] wherein the contoured portion is further configured to form a curved mounting portion adjacent which the spray tube is mounted such that the spray tube is carried with the dish rack.

59. This claim limitation is met in Samsung's Accused Products. See the analysis and evidence below.

60. As set forth above, each Accused Product comprises a dishwasher configured by Samsung such that it contains a tub defining a treating chamber receiving dishes for treatment and 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 is configured by Samsung such that it comprises a spray tube having nozzles emitting spray along the angled portion. Further, each Accused Product is configured by Samsung 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:







2. Claim 18 of the '385 Patent

- (1) 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.

61. This claim limitation is met in Samsung's Accused Products. See the analysis and evidence below.

62. As set forth above, each Accused Product comprises an automatic dishwasher configured by Samsung to satisfy each element of Claim 17. Further, each Accused Product is configured by Samsung such that 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:



Length of **green line** longer than
height of **red line**.

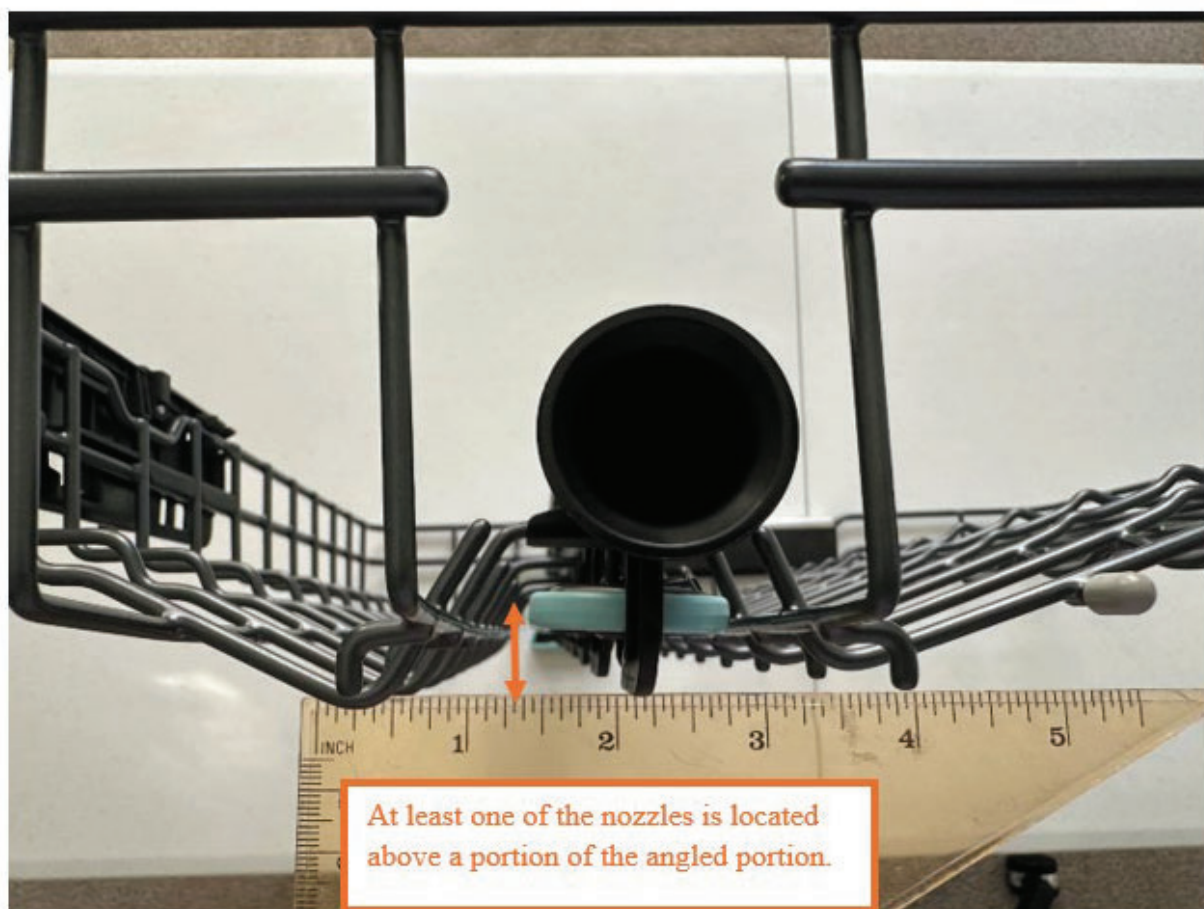
<https://www.samsung.com/us/home-appliances/dishwashers/rotary/38-dba-bespoke-auto-open-door-dishwasher-with-3rd-rack-washing-system-in-fingerprint-resistant-stainless-steel-dw90f89p0usraa/>

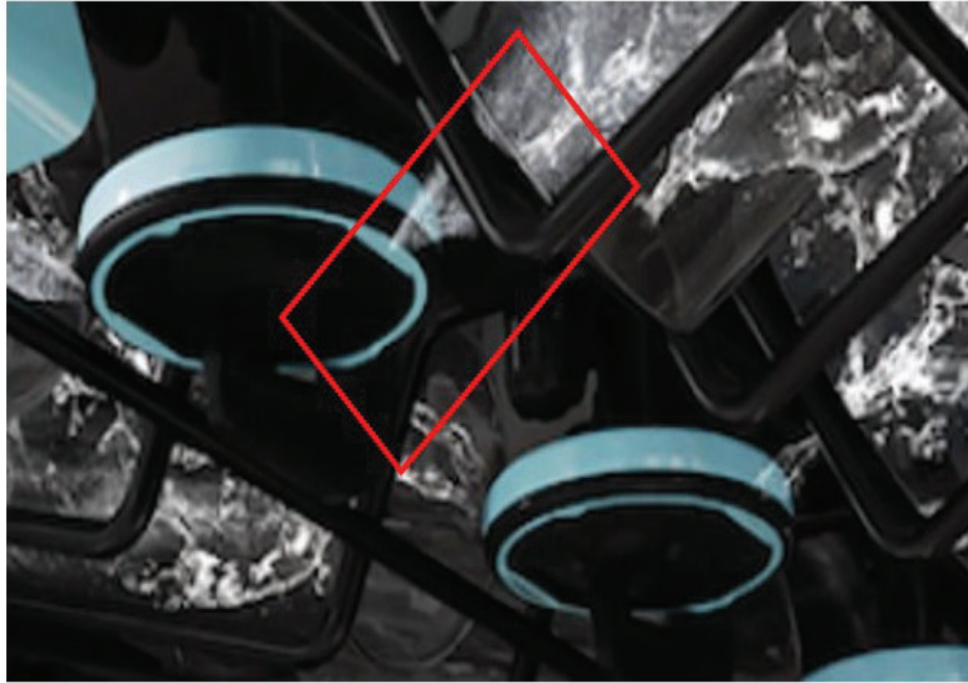
3. Claim 19 of the '385 Patent

- (1) The dishwasher of claim 18 wherein at least one of the nozzles is located above a portion of the angled portion.

63. This claim limitation is met in Samsung's Accused Products. See the analysis and evidence below.

64. As set forth above, each Accused Product comprises an automatic dishwasher configured by Samsung to satisfy each element of Claim 18. Further, each Accused Product is configured by Samsung such that at least one of the nozzles is located above a portion of the angled portion:





Nozzles are higher than lowest spot of bottom 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/>

4. Claim 20 of the '385 Patent

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

65. This claim limitation is met in Samsung's Accused Products. See the analysis and evidence below.

66. As set forth above, each Accused Product comprises an automatic dishwasher configured by Samsung to satisfy each element of Claim 18. Further, each Accused Product is configured by Samsung such that the shortest height is located along a portion of the side wall transverse to the angled portion:

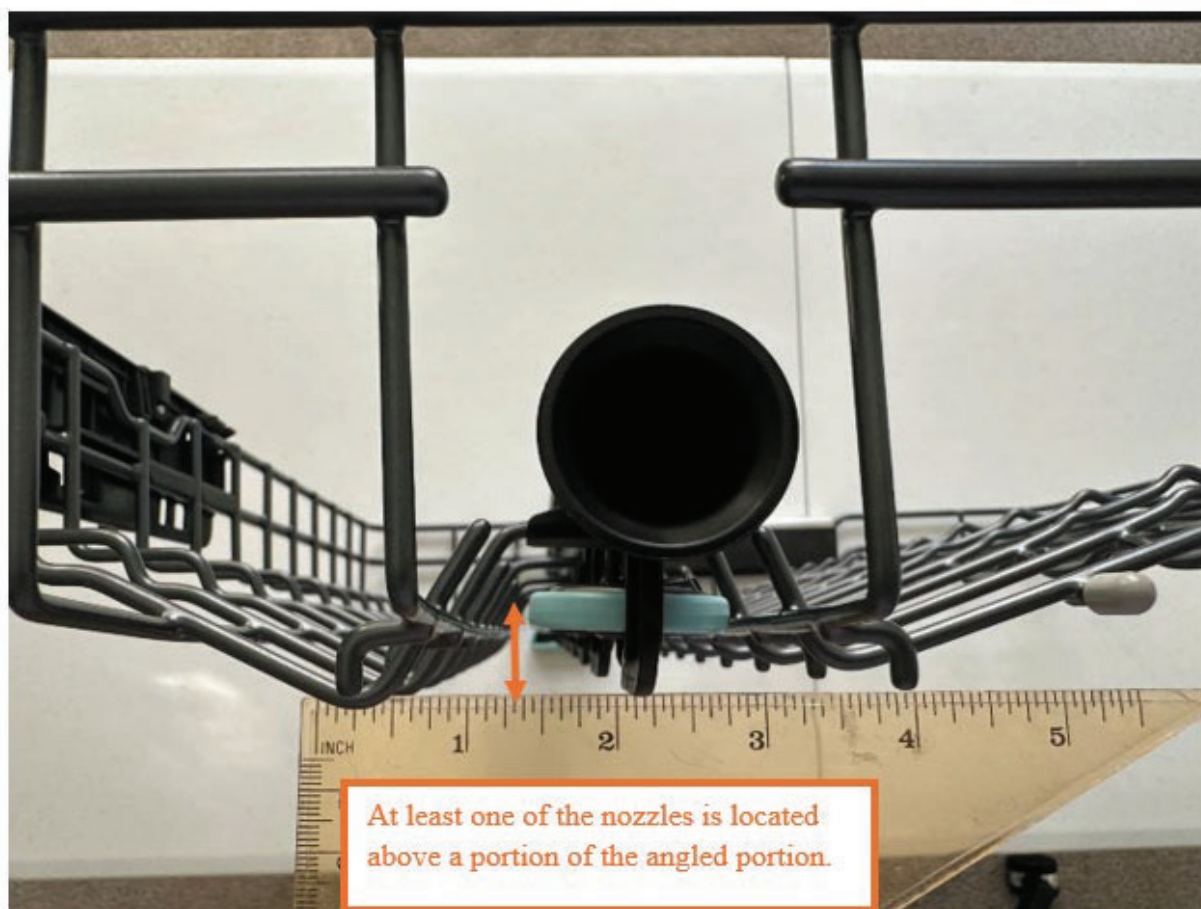


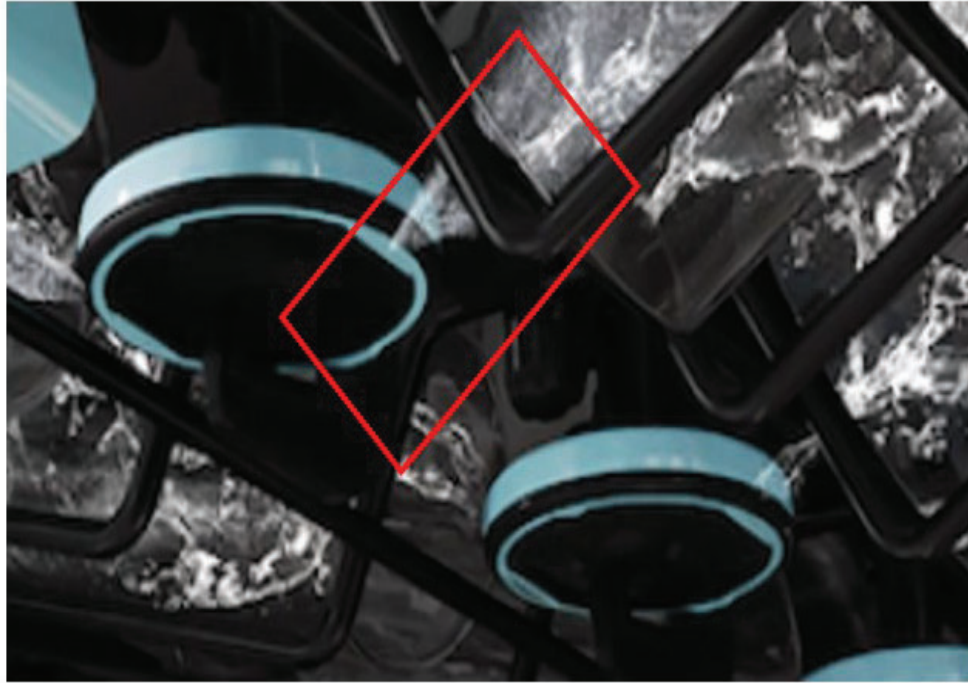
<https://www.samsung.com/us/home-appliances/dishwashers/rotary/38-dba-bespoke-auto-open-door-dishwasher-with-3rd-rack-washing-system-in-fingerprint-resistant-stainless-steel-dw90f89p0usraa/>

5. Claim 21 of the '385 Patent

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

67. As set forth above, each Accused Product comprises an automatic dishwasher configured by Samsung to satisfy each element of Claim 17. Further, each Accused Product is configured by Samsung such that at least one of the nozzles is located above a portion of the angled portion:





Nozzles are higher than lowest spot of bottom 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/>

6. Claim 14 of the '681 Patent

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

68. To the extent the preamble is found to be limiting, this limitation is met in Samsung's Accused Products. See the analysis and evidence below.

69. Each Accused Product comprises an automatic dishwasher as evidenced by title descriptions of the product. For example:

38 dBA Bespoke Auto Open Door Dishwasher with 3rd Rack Washing System in Fingerprint Resistant Stainless Steel

DW90F89P0USRAA

\$999.00

<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/>

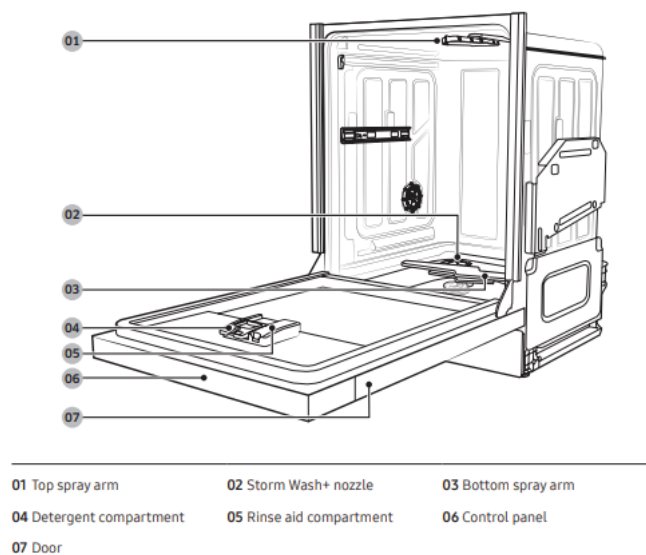
(2) 14[a] a tub defining a dish treating chamber; and

70. This claim limitation is met in Samsung’s Accused Products. See the analysis and evidence below.

71. As set forth above, each Accused Product comprises an automatic dishwasher configured to implement an automatic treating cycle of operation. Further, each Accused Product is configured by Samsung such that it contains a tub defining a dish treating chamber:

Product overview

Dishwasher at a glance



https://downloadcenter.samsung.com/content/UM/202504/20250409080928151/OID81932_IB_DW9000F_SimpleUX_EN_MES_CFR_250408.pdf



<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/>

72. This also is demonstrated by the below warranty for the dishwasher providing protection against leakage for the “Tub.”

Warranty (U.S.A)

SAMSUNG DISHWASHER

LIMITED WARRANTY TO ORIGINAL CONSUMER PURCHASER WITH PROOF OF PURCHASE AND/OR PROOF OF DELIVERY

This SAMSUNG brand product, as supplied and distributed by SAMSUNG ELECTRONICS AMERICA, INC. (SAMSUNG) and delivered new, in the original carton to the original consumer purchaser, is warranted by SAMSUNG against manufacturing defects in materials or workmanship for the following limited warranty periods, starting on the date of delivery to the original consumer purchaser:

One (1) year parts and labor

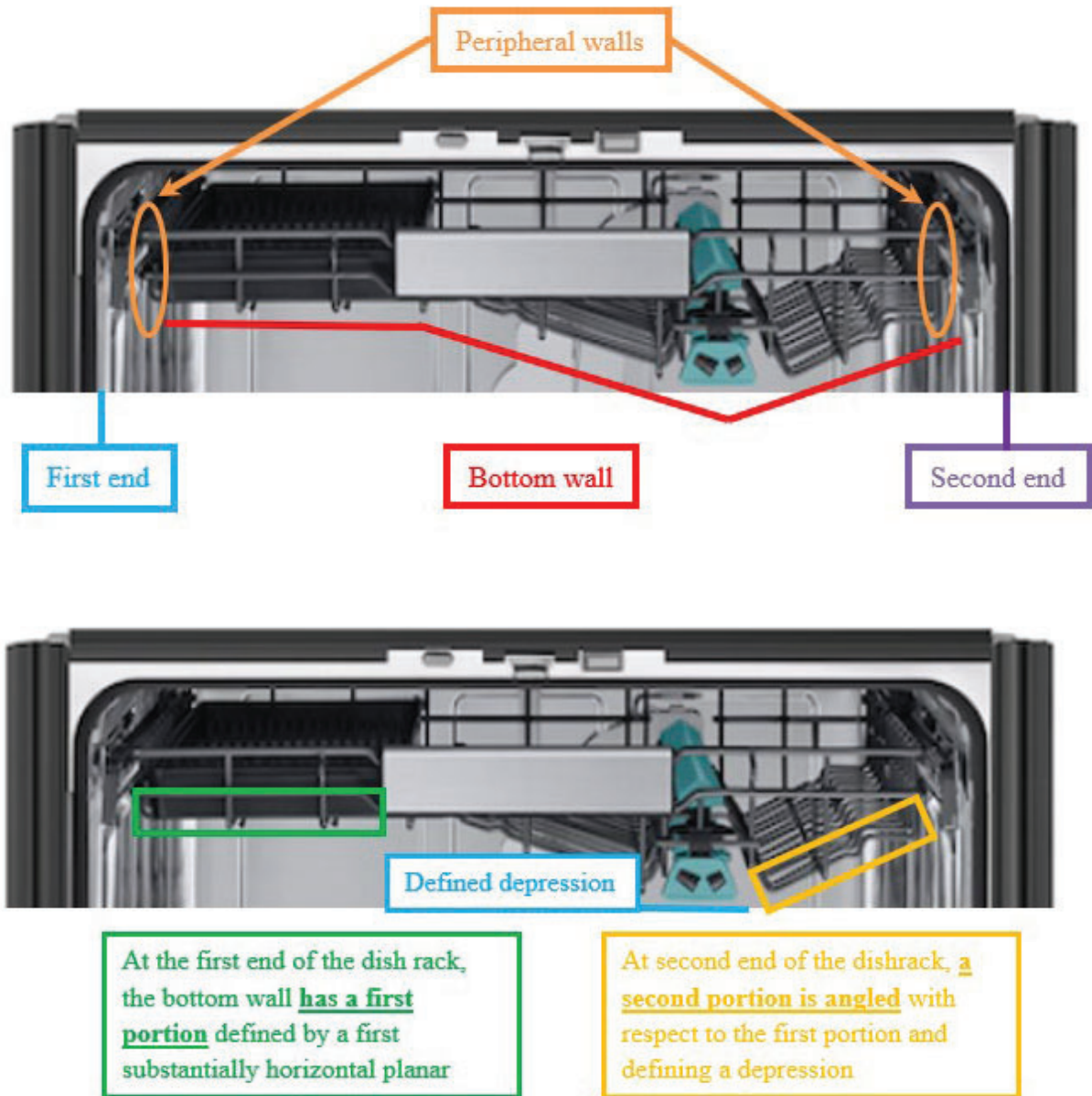
Five (5) years, Printed Circuit Board, Racking and Stainless Door Liner & Tub for leakage (Parts Only)

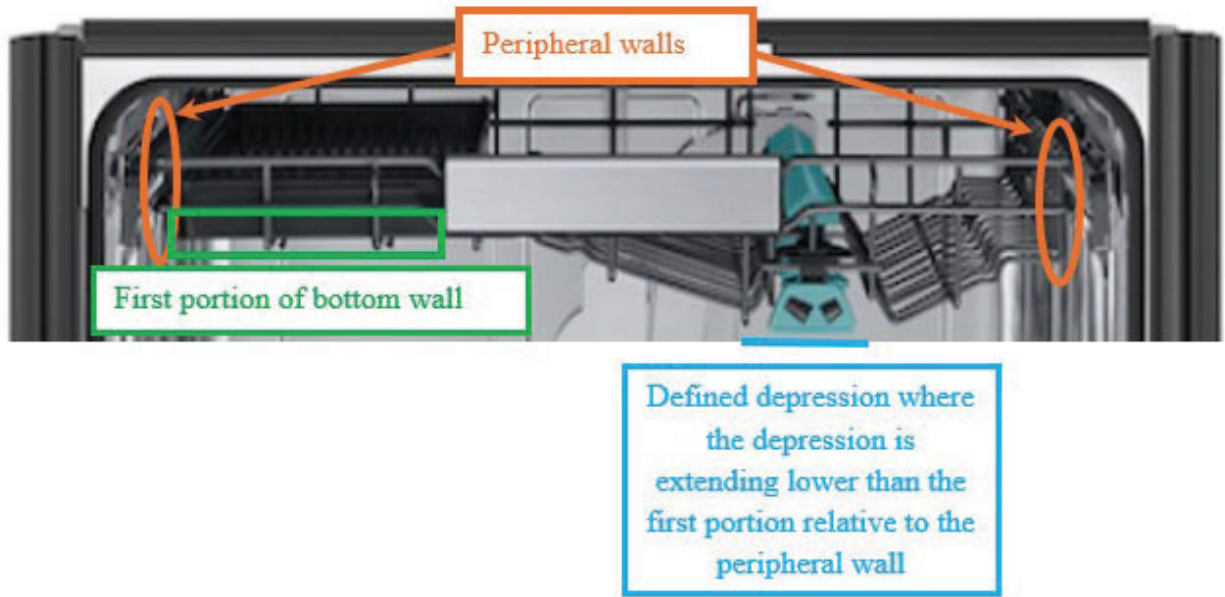
https://downloadcenter.samsung.com/content/UM/202504/20250409080928151/OID81932_IB_DW9000F_SimpleUX_EN_MES_CFR_250408.pdf

- (3) 14[b] 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;

73. This claim limitation is met in Samsung's Accused Products. See the analysis and evidence below.

74. As set forth above, each Accused Product comprises an automatic dishwasher configured to implement an automatic treating cycle of operation, comprising a tub defining a dish treating chamber. Further, each Accused Product is configured by Samsung such that it contains 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:





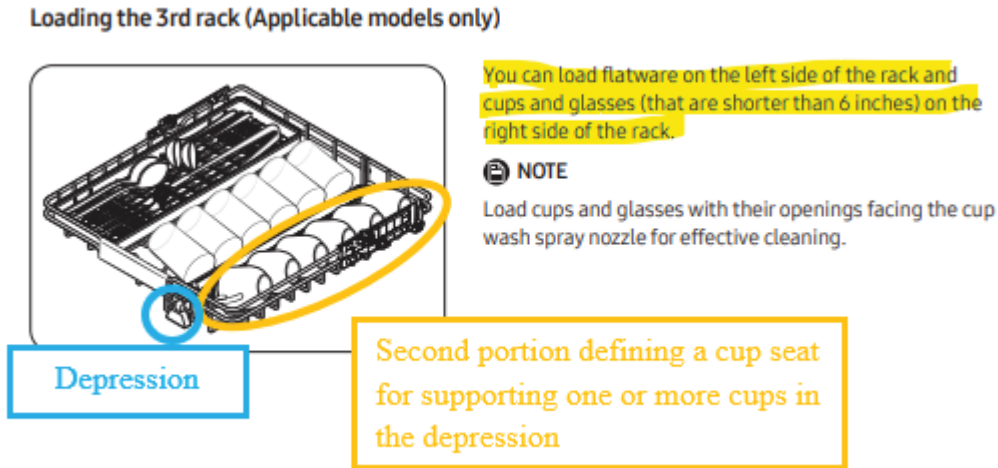
<https://www.samsung.com/us/home-appliances/dishwashers/rotary/38-dba-bespoke-auto-open-door-dishwasher-with-3rd-rack-washing-system-in-fingerprint-resistant-stainless-steel-dw90f89p0usraa/>

- (4) 14[c] 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.

75. This claim limitation is met in Samsung's Accused Products. See the analysis and evidence below.

76. As set forth above, each Accused Product comprises an automatic dishwasher configured to implement an automatic treating cycle of operation, comprising a tub defining a dish treating chamber, configured by Samsung such that it contains 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. Further, each Accused Product

is configured by Samsung such the first portion supports 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:



https://downloadcenter.samsung.com/content/UM/202504/20250409080928151/OID81932_IB_DW9000F_SimpleUX_EN_MES_CFR_250408.pdf



Image on Samsung dishwasher
rack showing users how to load
cups in the depression

77. Marketing material showing the first portion supporting one or more utensils and the second portion defining a cup seat for supporting one or more cups in the depression:



<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/>

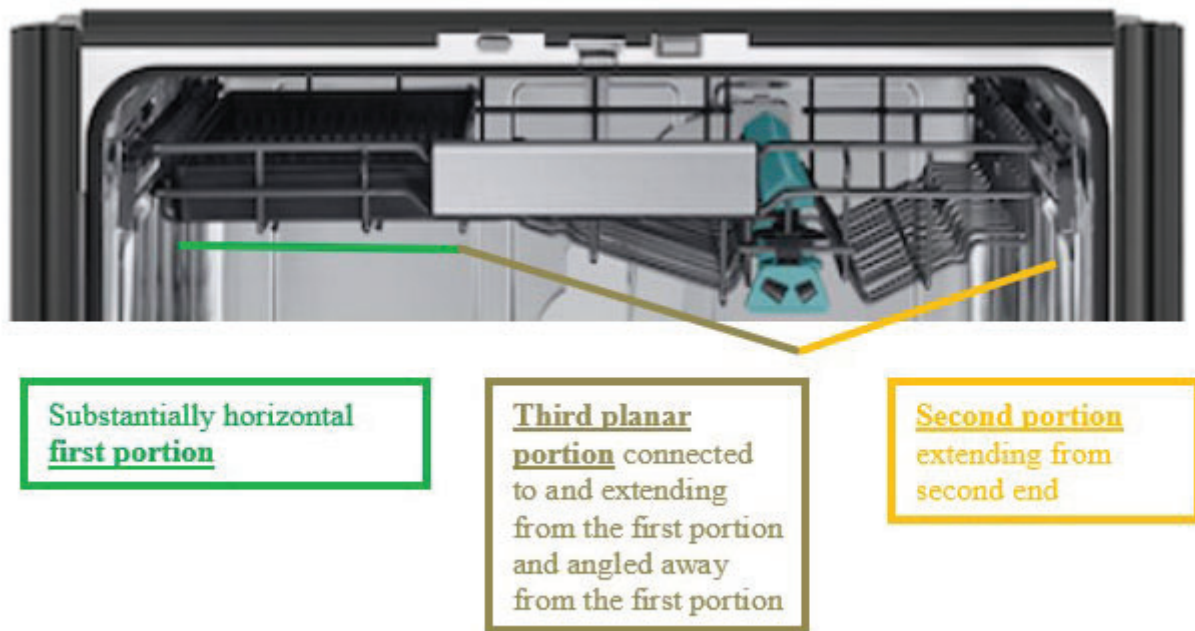
7. Claim 15 of the '681 Patent

- (1) 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.

78. This claim limitation is met in Samsung's Accused Products. See the analysis and evidence below.

79. As set forth above, each Accused Product comprises an automatic dishwasher configured by Samsung to satisfy each element of Claim 14. Further, each Accused Product is

configured by Samsung such that it comprises 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:



<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/>

F. Technical Compliance with Whirlpool's Proposed Injunction

1. Whirlpool's Proposed Injunction is Narrowly Tailored

80. I have reviewed the form of the proposed injunction order, which I understand is being filed concurrently with the motion for preliminary injunction. From a technical perspective, I found Whirlpool's proposed preliminary injunction to be reasonably tailored to Samsung's infringement of Whirlpool's patents.

81. The proposed injunction would forbid Samsung from making, selling, offering to sell, using, or importing Samsung's Accused Products without modification.

82. For infringing products that are in production, the proposed injunction requires only that Samsung stop selling the Accused Products. I further note that Samsung has non-infringing dishwashers with a narrow third rack that holds only utensils and silverware, including the following models: DW80BB707012AA, DW80CB545012AA, DW80B7071US, DW80CG5451SRAA, DW80CG4051SRAA, and DW80CG5451MTAA. Samsung can continue to sell these dishwashers regardless of the limited proposed injunction, as these models do not appear to infringe the '385 and '681 patents. Examples of images of these Samsung dishwashers with a non-infringing third rack are as follows, as pulled from the Samsung website:



[AutoRelease Smart 42dBA Dishwasher with StormWash+™ and Smart Dry in Stainless Steel | Samsung US](#)



[AutoRelease 51dBA Fingerprint Resistant Dishwasher with 3rd Rack in Stainless Steel | Samsung US](#)

83. Samsung could also modify the third rack and sprayer systems of the Accused Products to not infringe. Samsung would be able to sell the Accused Products so long as the features described in the aforementioned claims are removed. The proposed injunction does not impose on Samsung any restriction on making dishwashers without the infringing features. In addition, the injunction provides Samsung with a mechanism to vet any prospective dishwasher that it wishes to make and sell with the Court.

2. Samsung Could Comply with the Proposed Injunction Without Hardship

84. From a technical perspective, it would not be difficult for Samsung to comply with the proposed injunction.

85. Samsung could remove all infringing elements from its Accused Products. Samsung could then offer to sell its dishwashers with the infringing elements removed.

86. Samsung could also remove its infringing dishwashers from the market and focus on selling its non-infringing products.

I declare under penalty of perjury under the laws of the United States of America and the States of Michigan and Texas that the foregoing is true and correct.

Executed on: October 10, 2025

A handwritten signature in black ink, appearing to read "Emad Tanbour", written over a horizontal line.

Emad Tanbour, PhD