

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CARRIER GLOBAL CORPORATION,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. _____
)	
ECOFACTOR, INC.,)	JURY TRIAL DEMANDED
)	
Defendant.)	

COMPLAINT FOR DECLARATORY JUDGMENT

Plaintiff Carrier Global Corporation (“Plaintiff” or “Carrier”), by its attorneys, files this Complaint against Defendant EcoFactor, Inc. (“Defendant” or “EcoFactor”) and alleges as follows:

NATURE OF THE ACTION

1. This is an action for declaratory judgment of noninfringement of US. Patent Nos. 8,423,322 (the “322 Patent”), 8,019,567 (the “567 Patent”), 10,612,983 (the “983 Patent”), 8,596,550 (the “550”), 8,886,488 (the “488 Patent”) (collectively, “Asserted Patents”), attached as Exhibits 1-5 respectively against EcoFactor, pursuant to the Declaratory Judgment Act, 28 USC §§ 2201-02, and the patent laws of the U.S., 35 U.S.C. § 1 et seq., and for other relief the Court deems just and proper.

2. Carrier requests this relief because EcoFactor has filed a complaint with the International Trade Commission (“ITC”), Docket No. 337-3535, claiming Carrier, among other proposed respondents, has infringed the Asserted Patents because Carrier manufactures outside of the U.S. and has sold for importation into the U.S., imported into the U.S., and/or sold within the U.S. after importation, certain “Carrier Accused Products” as defined therein. A true and correct copy of EcoFactor’s public ITC complaint is attached as Exhibit 6. The products accused in the ITC Investigation are Carrier’s smart thermostat system (e.g., Infinity System Control), including device-side and cloud-base features thereof, and related accessories (e.g., Infinity Series, Infinity System products, and ecobee3 light Pro and ecobee Smart Thermostat Pro

with voice control) (collectively “Accused Products”). Carrier denies infringement of the claims of the Asserted Patents.

PARTIES

3. Plaintiff Carrier is a corporation organized and existing under the laws of the State of Delaware with a principle place of business located at 13995 Pasteur Blvd, Palm Beach Gardens, Florida 33148.

4. On information and belief, EcoFactor, Inc. is a privately held company organized and existing under the laws of the State of Delaware with a principal place of business located at 441 California Avenue, Number 2, Palo Alto, California 94306.

JURISDICTION AND VENUE

5. Carrier files this complaint against EcoFactor pursuant to the patent laws of the United States, Title 35 U.S.C. § et seq, with a specific remedy sought based upon the laws authorizing actions for declaration judgment in the federal courts of the United States, 28 U.S.C. §§ 2201 and 2202, and under patent laws of the United States, 35 U.S.C. §§ 1-390.

6. This Court has subject matter jurisdiction over this action pursuant to the patent laws of the United States’ patent laws, and 28 U.S.C. §§ 1331, 1338(a), and 2201(a).

7. This Court has personal jurisdiction over EcoFactor, which on information and belief is incorporated within this District.

8. A substantial controversy of sufficient immediacy and reality exists between the parties to warrant the issuance of a declaratory judgment. EcoFactor has filed a complaint in the ITC, alleging that Carrier directly and indirectly infringes claims of each of the Asserted Patents through Carrier’s sale for importation, importation, and/or sale within the United States after importation of the Accused Products. Exhibit 6 (Public Complaint in *Certain Smart Thermostat Systems, Smart HVAC Systems, Smart HVAC Control Systems, and Components Thereof*, 337-DN-3535 (I.T.C. Feb. 26, 2021)) at ¶¶ 78, 104-111; Exhibit 6 (claim charts for Carrier accused products attached as Exhibits 21-25 to the ITC Complaint). Carrier denies infringement of the claims of the Asserted Patents.

9. Venue in this District is proper pursuant to 28 U.S.C. § 1391(b)-(c).

FACTUAL BACKGROUND

PATENTS-IN-SUIT

10. The '322 Patent is entitled "System and Method for Evaluating Changes in the Efficiency of an HVAC System" and attached hereto as Exhibit 1, states on its cover that it was issued on April 16, 2013 to named inventors John Steinberg of Millbrae, California and Scott Hublou of Redwood City, California. The '322 Patent also states that the initial assignee was EcoFactor, Inc., of Millbrae, California. On information and belief, the '322 Patent is currently assigned to EcoFactor.

11. The '567 Patent is entitled "System and Method for Evaluating Changes in the Efficiency of an HVAC System" and attached hereto as Exhibit 2, states on its cover that it was issued on September 13, 2011 to named inventors John Steinberg of Millbrae, California and Scott Hublou of Redwood City, California. The '567 Patent also states that the initial assignee was EcoFactor, Inc., of Millbrae, California. On information and belief, the '567 Patent is currently assigned to EcoFactor.

12. The '983 Patent is entitled "System and Method for Evaluating Changes in the Efficiency of an HVAC System" and attached hereto as Exhibit 3, states on its face that it was issued on April 7, 2020 to named inventors John Steinberg of Millbrae, California and Scott Hublou of Redwood City, California. The '983 Patent also states that the initial assignee was EcoFactor, Inc., of Redwood City, California. On information and belief, the '983 Patent is currently assigned to EcoFactor.

13. The '550 Patent is entitled "System, Method and Apparatus for Identifying Manual Inputs to and Adaptive Programming of a Thermostat" and attached hereto as Exhibit 4, states on its cover that it was issued on December 3, 2013 to named inventors John Steinberg of Millbrae, California; Scott Hublou of Redwood City, California; and Leo Cheung of Sunnyvale, California. The '550 Patent also states that the initial assignee was EcoFactor, Inc., of Millbrae, California. On information and belief, the '550 Patent is currently assigned to EcoFactor.

14. The '488 Patent is entitled "System and Method for Calculating the Thermal Mass of a Building" and attached hereto as Exhibit 5, states on its face that it was issued on November 11, 2014 to named inventors John Steinberg of Millbrae, California and Scott Hublou of Redwood City, California. The '488 Patent also states that the initial assignee was EcoFactor, Inc., of Millbrae, California. On information and belief, the '488 Patent is currently assigned to EcoFactor.

15. Carrier's Accused Products do not directly or indirectly infringe any asserted claim of the Asserted Patents, either literally or under the doctrine of equivalents. Carrier has not caused, directed, requested, or facilitated any such infringement, and it did not have any specific intent to do so.

**DISPUTE BETWEEN CARRIER AND ECOFACTOR
CONCERNING THE ASSERTED PATENTS**

16. On February 26, 2021, EcoFactor filed the ITC Complaint alleging that Carrier, among others, purportedly infringes certain claims of the Asserted Patents. Exhibit 6 at ¶¶ 78, 104-111; (claim charts for Carrier accused products attached as Exhibits 21-25 to the ITC Complaint). EcoFactor's ITC Complaint alleges that the Accused Products purportedly infringe "either literally or pursuant to the doctrine of equivalents, and either directly or indirectly under a theory of inducement or contributory infringement." Exhibit 6 at ¶ 110.

17. Accordingly, an actual and justiciable controversy exists between Carrier and EcoFactor concerning whether Carrier infringes one or more claims of any of the Asserted Patents. Carrier now seeks a declaratory judgment that Carrier does not infringe the claims of the Asserted Patents.

**COUNT I:
DECLARATORY JUDGMENT OF NONINFRINGEMENT OF THE '322 PATENT**

18. Carrier hereby restates and incorporates by reference the allegations set forth in paragraphs 1 through 17 of this Complaint as if fully set forth herein.

19. In its ITC complaint, EcoFactor alleges that Carrier directly and indirectly infringes the '322 Patent. See e.g., Ex. 6, ¶¶ 4, (Table 1), 84, 85.

20. The Accused Products do not include or practice multiple claim limitations of the '322 Patent, including but not limited to the following limitations of claim 1: “one or more processors that receive measurements of outside temperatures from at least one source other than said HVAC system and compare said temperate measurements from said first structure”, “wherein said one or more processor compares the inside temperature of said first structure and the outside temperature over time”, and “wherein said one or more processors compares an inside temperature recorded inside the first structure with an inside temperature of said first structure recorded at a different time to determine whether the operational efficiency of the HVAC system has decreased over time.”

21. The Accused Products do not include or practice multiple claim limitations of the '322 Patent, including but not limited to the following limitations of claim 8: “one or more processors that receive measurements of outside temperatures from at least one source other than said first and second HVAC systems and compare said temperature measurements from said first HVAC system and said second HVAC system and said outside temperature measurements over time to determine the relative efficiency of the first HVAC system and the second HVAC system.”

22. An actual and justiciable controversy therefore exists between Carrier and EcoFactor regarding whether any of the Accused Products have infringed the '322 Patent. A judicial declaration is necessary to determine the parties' respective rights regarding the '322 Patent.

23. Carrier seeks a judgment declaring that Carrier does not directly or indirectly infringe any asserted claims of the '322 Patent, either literally or under the doctrine of equivalents and is not liable for any infringement.

COUNT II:
DECLARATORY JUDGMENT OF NONINFRINGEMENT OF THE '567 PATENT

24. Carrier hereby restates and incorporates by reference the allegations set forth in paragraphs 1 through 23 of this Complaint as if fully set forth herein.

25. In its ITC complaint, EcoFactor alleges that Carrier directly and indirectly infringes the '567 Patent. See e.g., Ex. 6, ¶¶ 4, (Table 1), 84, 85.

26. The Accused Products do not include or practice multiple claim limitations of the '567 Patent, including but not limited to the following limitations of claim 1: “one or more processors that receive measurements of outside temperatures from at least one source other than said HVAC system and compare said temperature measurements from said first structure”, “wherein said one or more processors compares the inside temperature of said first structure and the outside temperature over time to derive an estimation for the rate of change in inside temperature of said first structure when said HVAC system is in a first state of repair”, “wherein said one or more processors compares an inside temperature recorded inside the first structure with said estimation for the rate of change in inside temperature of said first structure to determine whether the operational efficiency of the HVAC system has decreased over time,” and “wherein if said operational efficiency has decreased, said one or more processors analyzes the changes in the operational efficiency over time to suggest a cause of degradation.”

27. The Accused Products do not include or practice multiple claim limitations of the '567 Patent, including but not limited to the following limitations of claim 8: “one or more processors that receive measurements of outside temperatures from at least one source other than said first and second HVAC systems and compare said temperature measurements from said first HVAC system and said second HVAC system and said outside temperature measurements over time to determine the relative efficiency of the first HVAC system and the second HVAC system.”

28. The Accused Products do not include or practice multiple claim limitations of the '567 Patent, including but not limited to the following limitations of claim 15: “comparing with one or more processors said temperature measurements from said first structure with outside temperature measurements over time to derive expected temperature measurements of a rate of change in inside temperature of said first structure when the HVAC system is in a first state of repair”, “wherein the expected temperature measurements are based at least in part upon past temperature measurements and based at least in part on outside temperature measurements”, and “wherein said one or more processors compares an inside temperature recorded inside the first structure with said expected temperature measurements to determine whether the operational efficiency of the HVAC system has decreased.”

29. An actual and justiciable controversy therefore exists between Carrier and EcoFactor regarding whether any of the Accused Products have infringed the '567 Patent. A judicial declaration is necessary to determine the parties' respective rights regarding the '567 Patent.

30. Carrier seeks a judgment declaring that Carrier does not directly or indirectly infringe any asserted claims of the '567 Patent, either literally or under the doctrine of equivalents and is not liable for any infringement.

COUNT III:
DECLARATORY JUDGMENT OF NONINFRINGEMENT OF THE '983 PATENT

31. Carrier hereby restates and incorporates by reference the allegations set forth in paragraphs 1 through 30 of this Complaint as if fully set forth herein.

32. In its ITC complaint, EcoFactor alleges that Carrier directly and indirectly infringes the '983 Patent. See e.g., Ex. 6, ¶¶ 4, (Table 1), 84, 85.

33. The Accused Products do not include or practice multiple claim limitations of the '983 Patent, including but not limited to the following limitations of claim 1: “the one or more

processors further configured to predict, based at least on the first data from the sensor, the second data from the network connection, and the first temperature setpoint, the time necessary for the HVAC system to operate in order to reach the temperature value by the time value,” and “the one or more processors further configured to control the HVAC system to operate to cause the building to reach the temperature value by the time value.”

34. The Accused Products do not include or practice multiple claim limitations of the '983 Patent, including but not limited to the following limitations of claim 24: “the processor configured to receive a second data from a second sensor device located external to the system”, “the processor configured to predict, based at least on analyzing the first data, the second data, and the first setpoint, the time necessary for a HVAC system at the user's building to operate in order to reach the temperature value by the time value”, “the processor configured to control the HVAC system to operate to cause the building to reach the temperature value by the time value.”

35. An actual and justiciable controversy therefore exists between Carrier and EcoFactor regarding whether any of the Accused Products have infringed the '983 Patent. A judicial declaration is necessary to determine the parties' respective rights regarding the '983 Patent.

36. Carrier seeks a judgment declaring that Carrier does not directly or indirectly infringe any asserted claims of the '983 Patent, either literally or under the doctrine of equivalents and is not liable for any infringement.

COUNT IV:
DECLARATORY JUDGMENT OF NONINFRINGEMENT OF THE '550 PATENT

37. Carrier hereby restates and incorporates by reference the allegations set forth in paragraphs 1 through 36 of this Complaint as if fully set forth herein.

38. In its ITC complaint, EcoFactor alleges that Carrier directly and indirectly infringes the '550 Patent. See e.g., Ex. 6, ¶¶ 4, (Table 1), 84, 85.

39. The Accused Products do not include or practice multiple claim limitations of the '550 Patent, including but not limited to the following limitations of claim 1: “using the stored data to predict a rate of change of temperatures inside the structure in response to at least changes in outside temperatures,” “calculating with one or more computer processors, scheduled programming of the thermostatic controller for one or more times based on the predicted rate of change, the scheduled programming comprising at least a first automated setpoint at a first time,” and “generating with one or more computer processors, a difference value based on comparing an actual setpoint at the first time for said thermostatic controller to the first automated setpoint for said thermostatic controller.”

40. The Accused Products do not include or practice multiple claim limitations of the '550 Patent, including but not limited to the following limitations of claim 9: “using the stored data to predict a rate of change of temperatures inside the structure in response to at least changes in outside temperatures,” “calculating scheduled programming of setpoints in the thermostatic controller based on the predicted rate of change, the scheduled programming comprising at least a first automated setpoint at a first time and a second automated setpoint at a second time,” “changing the second automated setpoint at the second time based on at least one rule for the interpretation of said manual change.”

41. The Accused Products do not include or practice multiple claim limitations of the '550 Patent, including but not limited to the following limitations of claim 17: “computer hardware comprising one or more computer processors configured to use the stored data to predict a rate of change of temperatures inside the structure in response to changes in outside temperatures,” “the one or more computer processors configured to calculate scheduled setpoint programming of the programmable communicating thermostat for one or more times based on the predicted rate of

change, the scheduled programming comprising one or more automated setpoints”, “at least a database that stores the one or more automated setpoints associated with the scheduled programming for said programmable communicating thermostat,” and “the one or more computer processors configured to compare the one or more automated setpoints associated with said scheduled setpoint programming with said actual setpoint programming.”

42. An actual and justiciable controversy therefore exists between Carrier and EcoFactor regarding whether any of the Accused Products have infringed the '550 Patent. A judicial declaration is necessary to determine the parties' respective rights regarding the '550 Patent.

43. Carrier seeks a judgment declaring that Carrier does not directly or indirectly infringe any asserted claims of the '550 Patent, either literally or under the doctrine of equivalents and is not liable for any infringement.

COUNT V:
DECLARATORY JUDGMENT OF NONINFRINGEMENT OF THE '488 PATENT

44. Carrier hereby restates and incorporates by reference the allegations set forth in paragraphs 1 through 43 of this Complaint as if fully set forth herein.

45. In its ITC complaint, EcoFactor alleges that Carrier directly and indirectly infringes the '488 Patent. See e.g., Ex. 6, ¶¶ 4, (Table 1), 84, 85.

46. The Accused Products do not include or practice multiple claim limitations of the '488 Patent, including but not limited to the following limitations of claim 1: “wherein said one or more processors are configured to calculate one or more predicted rates of change in said inside temperature measurements at said first location based on the status of the HVAC system and to relate said one or more predicted rates of change to said outside temperature measurements,” and “said one or more processors further configured to compare at least one predicted temperature

based on the one or more predicted rates of change, with an actual inside temperature measurement.”

47. The Accused Products do not include or practice multiple claim limitations of the '488 Patent, including but not limited to the following limitations of claim 9: “calculating with computer hardware comprising one or more computer processors one or more predicted rates of change in said inside temperatures at said first location based on the status of the HVAC system, where said predicted rates of change are related to said outside temperature measurements,” and “comparing with the one or more processors, at least one predicted temperature based on the one or more predicted rates of change, with at least one actual inside temperature measurement.”

48. An actual and justiciable controversy therefore exists between Carrier and EcoFactor regarding whether any of the Accused Products have infringed the '488 Patent. A judicial declaration is necessary to determine the parties' respective rights regarding the '488 Patent.

49. Carrier seeks a judgment declaring that Carrier does not directly or indirectly infringe any asserted claims of the '488 Patent, either literally or under the doctrine of equivalents and is not liable for any infringement.

PRAYER FOR RELIEF

WHEREFORE, Carrier prays for judgment as follows:

A. Declaring that Carrier does not directly or indirectly infringe any claim of the '322 Patent, either literally or under the doctrine of equivalents;

B. Declaring that Carrier does not directly or indirectly infringe any claim of the '567 Patent, either literally or under the doctrine of equivalents;

C. Declaring that Carrier does not directly or indirectly infringe any claim of the '983 Patent, either literally or under the doctrine of equivalents;

D. Declaring that Carrier does not directly or indirectly infringe any claim of the '550 Patent, either literally or under the doctrine of equivalents;

E. Declaring that Carrier does not directly or indirectly infringe any claim of the '488 Patent, either literally or under the doctrine of equivalents;

F. Declaring that judgment be entered in favor of Carrier and against EcoFactor and/or any of its successors and attorneys, and all persons in active concert or participation with any of them, are enjoined from directly or indirectly asserting or instituting any further action for infringement of the Asserted Patents against Carrier, or any of Carrier's customers, potential customers, end-users, agents, suppliers, contractors, consultants, successors, and assigns;

G. Order that this case is "exceptional" pursuant to 35 U.S.C. § 285 entitling Carrier to an award of its reasonable and necessary attorneys' fees, expenses, and costs, and pre-judgment interest thereon;

H. Order awarding Carrier its costs of suit incurred in this action; and

I. Granting to Carrier such other and further relief as this Court deems just and proper.

Pursuant to Federal Rule of Civil Procedure 38 and Civil Local Rule 38.1, Carrier demands a jury trial on all issues and claims so triable.

POLSINELLI PC

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March 3, 2021