

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC

Petitioner

v.

ECOFACTOR, INC.

(record) Patent Owner

Patent No. 9,194,597

DECLARATION OF RAJENDRA SHAH

TABLE OF CONTENTS

I.	ENGAGEMENT AND COMPENSATION	4
II.	QUALIFICATIONS	4
III.	SUMMARY OF OPINIONS	6
IV.	MATERIALS REVIEWED	7
V.	UNDERSTANDING OF THE RELEVANT LAW	8
	A. Anticipation	8
	B. Obviousness.....	8
VI.	LEVEL OF ORDINARY SKILL IN THE ART	12
VII.	RELEVANT TIMEFRAME FOR DETERMINING OBVIOUSNESS	12
VIII.	TECHNICAL INTRODUCTION	13
	A. The '597 Patent Disclosure	13
IX.	CLAIM INTERPRETATION	18
	A. BACKGROUND ON CLAIM INTERPRETATION.....	18
	B. CLAIM INTERPRETATION OF THE '597 PATENT	19
X.	GROUND 1: Claims 1-24 Are Obvious Over Ehlers '330 in view of the knowledge of a POSITA and Wruck.	20
	A. Effective Prior Art Dates of Ehlers '330 and Wruck	21
	B. Overview of the Combination	21
	1. Overview of Ehlers '330.....	21
	2. Overview of Wruck.....	25
	3. Overview of the Combination.....	27
	C. Rationale (Motivation) Supporting Obviousness.....	29

D. Reasonable Expectation of Success29

E. Analogous Art29

F. Claim Mapping.....30

XI. OATH 80

I. ENGAGEMENT AND COMPENSATION

1. My name is Rajendra Shah. (Ex. 1003). I have been retained by Google LLC for the purpose of providing my opinion with respect to the unpatentability of U.S. Pat. No. 9,194,597 (“the ’597 patent”). I am being compensated for my time in preparing this declaration at my standard hourly rate, and my compensation is not dependent upon my opinions or the outcome of the proceedings. My curriculum vitae is attached as Ex. 1003.

II. QUALIFICATIONS

2. I am currently the Principal at AnalyzRS LLC, a company providing, among other things, consulting services for the HVAC industry. I have been employed in this position since 2016.

3. I consider myself to have significant knowledge and experience in Heating, Ventilating and Air Conditioning (“HVAC”) systems, with particular knowledge relating to associated technology integration, control algorithms, modeling and simulation, and data analytics. I have significant knowledge and experience relating to the optimization of the operational efficiency of HVAC systems. My current Curriculum Vitae is attached as Exhibit 1003, and summarizes my qualifications.

4. Prior to my work for AnalyzRS LLC, I was employed at United

Technologies Carrier Corporation in Indianapolis, Indiana from 1991 to 2016. During my career at Carrier, my work focused on the design and development of HVAC systems and associated technologies. From 1991 to 2000, I was employed as a Senior Program Manager for Advanced Systems at Carrier. While in that position, I had responsibility for the launch of new product categories, including two stage air conditioners and heat pumps, variable speed fan coils, digital thermostats, multi zone controls, expandable filters, and fresh air ventilators.

5. From 2000 to 2008 I was employed as an Engineering Manager for Systems Development. In that role I designed and managed the design of premium air conditioners, heat pumps, indoor fan coils, advanced thermostats, multi-zone controls and indoor air quality products. In particular, my team developed Carrier's Infinity® HVAC system, which was originally launched in 2004, and which went on to be a highly successful product.

6. From 2008 to 2016 I held the title of Engineering Fellow, Systems and Controls. I was one of the first eight Fellows selected to what was Carrier's top engineering position out of thousands of engineers worldwide. While in this position, I worked to develop Carrier's Infinity® Touch Control system with internet connectivity, which was first launched in 2012. This product received the Dealer Design Gold award from industry magazine ACHR News in 2013 and has continued to be a top-selling product for Carrier.

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.