

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent of: Poeze et al.  
U.S. Patent No.: 10,258,265      Attorney Docket No.: 50095-00006IP1  
Issue Date: April 16, 2019  
Appl. Serial No.: 16/212,440  
Filing Date: December 6, 2018  
Title: MULTI-STREAM DATA COLLECTION SYSTEM FOR  
NONINVASIVE MEASUREMENT OF BLOOD  
CONSTITUENTS

**DECLARATION OF DR. THOMAS W. KENNY**

**Declaration**

I declare that all statements made herein on my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable under Section 1001 of Title 18 of the United States Code.

By:   

---

Thomas W. Kenny, Ph.D.

## Contents

I. QUALIFICATIONS AND BACKGROUND INFORMATION.....	5
II. OVERVIEW OF CONCLUSIONS FORMED .....	11
III. LEVEL OF ORDINARY SKILL IN THE ART .....	13
IV. LEGAL STANDARDS .....	14
A. Terminology .....	14
B. Legal Standards for Anticipation.....	14
C. Legal Standards for Obviousness .....	15
V. HISTORICAL AND TECHNICAL OVERVIEW.....	20
VI. THE '265 patent .....	20
A. Overview of the '265 patent.....	20
VII. SUMMARY OF THE PRIOR ART.....	25
A. Overview of Aizawa.....	25
B. Overview of Inokawa .....	28
C. Overview of Ohsaki.....	32
D. Overview of Mendelson-1988.....	34
E. Overview of Mendelson-2006 .....	36
F. Overview of Beyer, Jr.....	40
VIII. GROUND 1A – Claims 1-4, 6-14, 16, 17, 19-23, and 26-29 Are Rendered Obvious by Aizawa in view of Inokawa.....	41
A. Claim 1 .....	41
B. Claim 2 .....	58
C. Claim 3 .....	59
D. Claim 4 .....	60
E. Claim 6 .....	63
F. Claim 7 .....	63
G. Claim 8 .....	64
H. Claim 9 .....	65
I. Claim 10 .....	67
J. Claim 11 .....	68

K. Claim 12 .....	69
L. Claim 13 .....	71
M. Claim 14 .....	71
N. Claim 16 .....	72
O. Claim 17 .....	72
P. Claim 19 .....	73
Q. Claim 20 .....	73
R. Claim 21 .....	74
S. Claim 22 .....	75
T. Claim 23 .....	76
U. Claim 26 .....	77
V. Claim 27 .....	79
W. Claim 28 .....	80
X. Claim 29 .....	81
 IX. GROUND 1B –Claims 1-4, 6-14, 16, 17, 19-23, and 26-29 Are Rendered Obvious by Aizawa in view of Inokawa and Ohsaki .....	81
A. Claims 1-4, 6-14, 16, 17, 19-23, and 26-29 .....	81
 X. GROUND 1C – Claims 23-24 Are Rendered Obvious by Aizawa in view of Inokawa and Mendelson-2006 .....	84
A. Claim 23 .....	84
B. Claim 24 .....	88
 XI. GROUND 1D – Claims 23-24 Are Rendered Obvious by Aizawa in view of Inokawa, Goldsmith, and Lo .....	89
A. Claim 23 .....	89
B. Claim 24 .....	93
 XII. GROUND 1E – Claim 25 Is Rendered Obvious by Aizawa in view of Inokawa, Mendelson-2006, and Beyer, Jr. ....	93
A. Claim 25 .....	93
 XIII. GROUND 2A – Claims 1-4, 6-14, 16-22, and 26-30 Are Rendered Obvious by Mendelson-1988 in View of Inokawa .....	96
A. Claim 1 .....	97
B. Claim 2 .....	108

C. Claim 3 .....	109
D. Claim 4 .....	110
E. Claim 6 .....	111
F. Claim 7 .....	111
G. Claim 8 .....	112
H. Claim 9 .....	113
I. Claim 10 .....	113
J. Claim 11 .....	114
K. Claim 12 .....	115
L. Claim 13 .....	117
M. Claim 14 .....	118
N. Claim 16 .....	118
O. Claim 17 .....	118
P. Claim 18 .....	119
Q. Claim 19 .....	119
R. Claim 20 .....	120
S. Claim 21 .....	121
T. Claim 22 .....	122
U. Claim 26 .....	123
V. Claim 27 .....	126
W. Claim 28 .....	127
X. Claim 29 .....	130
Y. Claim 30 .....	130
 XIV. GROUND 2B – Claims 23-24 Are Rendered Obvious by Mendelson-1988 in view of Inokawa and Mendelson-2006.....	131
A. Claim 23 .....	131
B. Claim 24 .....	133
 XV.GROUND 2C – Claim 25 Is Rendered Obvious by Mendelson-1988 in view of Inokawa, Mendelson-2006, and Beyer, Jr. ....	134
A. Claim 25 .....	134
 XVI. CONCLUSION.....	138

## **I. QUALIFICATIONS AND BACKGROUND INFORMATION**

1. My education and experience are described more fully in the attached curriculum vitae (APPLE-1004). For ease of reference, I have highlighted certain information below.
2. My academic and professional background is in Physics, Mechanical Engineering, Sensing, and Robotics, with a research specialization focused on microfabricated physical sensors, and I have been working in those fields since the completion of my Ph.D. more than 30 years ago. The details of my background and education and a listing of all publications I have authored in the past 35 years are provided in my curriculum vitae, attached as Exhibit A. Below I provide a short summary of my education and experience which I believe to be most pertinent to the opinions that I express here.
3. I received a B.S. in Physics from University of Minnesota, Minneapolis in 1983, and a Ph.D. in Physics from University of California at Berkeley in 1989. I was educated as a Physicist specializing in sensors and measurement. My Physics Ph.D. thesis involved measurements of the heat capacity of monolayers of atoms on surfaces, and relied on precision measurements of temperature and power using time-varying electrical signals, and also on the design and construction of miniature sensor components and associated electrical circuits for conditioning and conversion to digital format.

# 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.