



## Donald G. Parent, PE East Coast Manager

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### Expertise

- Systems Engineering
- Electromechanical Systems
- Failure Analysis
- Mechanical Design and Fabrication
- Accident Investigation
- Fires and Explosions
- Forensic Engineering
- Freeze-Thaw Analysis
- Automation, Conveyors, and Robotics
- Metallizing and Coating Machines
- Heaters, Dryers, Appliances
- Product Failures
- Consumer Products
- Patents and Intellectual Property

### Professional Summary

Mr. Parent has more than 35 years of experience in product development, mechanical design, and forensic analysis relating to machines, conveyors, heaters, appliances, and electromechanical products. He is a named inventor on more than 25 US and international patents and a Registered Professional Engineer. Mr. Parent provides expert engineering services relating to accident investigation, failure analysis and forensic engineering, computer-based engineering analysis (Finite Element Analysis and Computational Fluid Dynamics), product liability, patents and intellectual property analysis, design, and manufacturing.

In prior roles, Mr. Parent developed compact heater devices used in consumer and commercial products; integrated molding and metalizing systems used for producing consumer and medical products; and led the design of computer-controlled machines used worldwide for making CD and DVD discs. He has worked with counsel in drafting patent applications, researching prior art, and reviewing patents and other relevant documents.

As an engineering practitioner with depth and breadth in engineering methods, Mr. Parent excels at conveying complex engineering principles to both technical and non-technical audiences. His experience as a presenter at conferences, as a technical sales person and as a teacher of engineers, has taught him how to communicate technical facts to varied audiences.

Mr. Parent holds a Master of Science in Mechanical Engineering from Stanford, and graduated Summa Cum Laude with a Bachelor of Science in Mechanical Engineering from Northeastern University. His broad range of skills include mechanical engineering, electromechanical systems engineering, heat transfer, engineering mechanics, fluid mechanics, electrical systems analysis, computer modeling, and engineering design.

### Education

Degree	College/University	Year
Graduate work in electric motors and servo systems	University of New Hampshire	1982
Master of Science, Mechanical Engineering	Stanford University	1980
Bachelor of Science, Mech. Eng. (summa cum laude)	Northeastern University	1979
Machine Tool Technology	Central Maine Tech. College	1974

# Donald G. Parent, PE - Resume

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## Experience

**Principal**, Parent Technology Group, LLC, Cumberland, ME, 2013 - Present

Engineering consulting relating to patents, intellectual property analysis, failure analysis, safety, and product liability for more than 13 years.

**East Coast Manager**, Steinke Beyer, Inc., Los Altos Hills, CA, 2000 - Present

Engineering consulting relating to patents, intellectual property analysis, failure analysis, safety, and product liability for more than 15 years.

**Board Member**, ClimateWork Maine

**Past Member**, Northeastern University Industrial Advisory Board, Boston, MA

Term ended 2022

**VP Sales and Innovation**, Marca Coating Technologies, LLC, Scarborough, ME, 2009 - 2011

Sales, engineering development and intellectual property protection of vacuum coating machines and technologies. (Formerly D2 Inline Solutions, LLC)

**President**, D2 Inline Solutions, LLC, Scarborough, ME, 2001 - 2009

Development, intellectual property protection and reduction to practice of new production processes for coating plastic parts. (Spin-off from D2 Systems)

**President**, D2 Systems, Gray, ME, 1998 - 2013

Engineering consulting relating to patents, intellectual property, product design and process automation.

**Dir. of Engineering, Dir. of Tech. Development**, First Light Technology, Saco, ME 1991 - 1998

Design and development of patented DVD manufacturing processes. Design and development of optical disc production machinery.

**Vice President of Engineering**, Chapman Corp, Portland, ME, 1985 - 1991

Design of patented static elimination equipment.

**Senior Engineer**, GTE Products Corporation, Standish, ME, 1982 - 1985

Design of high power heater devices for industrial, automotive and home applications.

**Member of Technical Staff**, Bell Telephone Laboratory Whippany, NJ, 1979 - 1982

Design of digital tape backup systems. Responsible for magnetic tape and magnetic head components.

## Donald G. Parent, PE - Resume

### Partial List of Issued and Pending US Patents

Patents	Date	Description
10,280,505	5/7/2019	Integrated 3D Metallizer
16/253,670	1/22/2019	Photovoltaic Textile
10,060,027	8/28/2018	In-line metallizer assemblies and part-coating conveyor systems incorporating the same
10,014,484	7/3/2018	Photovoltaic Textiles
9,419,236	8/16/2016	Photovoltaic Textiles
9,297,064	3/29/2016	In-Line Metallizer Assemblies and Part-Coating Conveyor Systems Incorporating the Same
6,983,925	1/10/2006	Rotary Barrel Gate Valve
6,889,564	5/10/2005	Peak flow meter
6,676,810	1/13/2004	Method of coating insulative substrates
6,511,616	1/28/2003	System and method for curing a resin disposed between a top and bottom substrate with thermal management
6,500,297	12/31/2002	Method of forming bonded storage disks with low power light assembly
6,430,803	8/13/2002	Method for maintaining concentricity of a combination of a top and bottom substrate during the assembly of a bonded storage disk
6,355,129	3/12/2002	System and method for thermally manipulating a combination of a top and bottom substrate before a curing operation
6,352,612	3/5/2002	System for forming bonded storage disks with low power light assembly.
6,254,809	7/3/2001	System and method for curing a resin disposed between a top and bottom substrate with thermal management
6,103,039	8/15/2000	System and method for thermally manipulating a combination of a top and bottom substrate before a curing operation
6,098,272	8/8/2000	System for maintaining concentricity of a combination of a top and bottom substrate during the assembly of a bonded storage disk
5,709,785	1/20/1998	Metallizing machine
5,491,602	2/13/1996	Air distributing and ionizing systems
5,430,923	7/11/1995	Method for removing a cap from a container with a cap engaging unit
5,271,296	12/21/1993	Automated container cap remover and method
5,008,594	4/6/1991	Self-balancing circuit for convection air ionizers
4,780,286	10/25/1988	Insecticide dispenser containing eutectic disconnecter

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## Publications and Presentations

1. *Inline Metallization: The Next Game-Changing Technology in Cosmetic Packaging*, Health and Beauty Association Global Expo, New York City, 2010
2. *Sputtered Metal Coatings and UV Coatings, Working Together*, RadTech Report, November/December 2008
3. *PVD and UV Coatings, Working Together*, Presenter, RadTech 2008, May 2008
4. *Gazebo Project Report*, Mikkeli International Industrial Coating Seminar (MIICS), Mikkeli, Finland, March 2003
5. *Innovations in Sputtering Technology Workshop*, Panelist and Presenter, Replitech Europe, Utrecht, Netherlands, 1998
6. *DVD-9, Perfecting the Process*, Panelist and Presenter, Replitech USA, San Francisco, CA, 1998
7. *Practical Solutions for Gold Sputtering of Recordable Compact Discs*, Society of Vacuum Coaters Conference, 1995
8. *Design for CE compliance*, Presented to American Society of Quality Control, Maine Chapter
9. *A Comparison of Various Ionizer Balancing Methods*, Electrostatic Society of America Conference, Stanford University, Palo Alto, CA, 1988
10. *Benchtop Ionization Workshop*, Panelist, EOS/ESD Symposium
11. *Balancing of Benchtop Ionizers*, Magazine Article, Evaluation Engineering Magazine
12. *DC Motor Selection with Personal Computer Software*, Power Conversion & Intelligent Motion Magazine, August, 1986
13. *DC Motor Selection with Personal Computer Software*, Motor-Con Conference, 1985.
14. *Monitoring Heat Transfer Coefficients using Liquid Crystals*, Master's Project, Stanford University, 1980.

## Professional Honors, Affiliations, Achievements

- Registered Professional Mechanical Engineer, Maine #4832
- Member, Climatework Maine Board of Directors
- Past Member, Northeastern University Engineering Department Industrial Advisory Board
- Member, National Society of Professional Engineers
- Member, American Society of Mechanical Engineers
- Member, American Society of Safety Engineers
- Member, Institute of Electrical and Electronic Engineers
- Past President, Windham Educational Foundation Board of Directors
- Past instructor, PE Exam review class, University of Southern Maine
- Participant, State of Maine Commission on Science and Technology Literacy