Kelly Device Design, LLC Product Design & Engineering Consulting

Extensive medical, laboratory, and diagnostic device experience Expert advisor to your team, solutions to problems, complete designs





Please visit: www.kellydevicedesign.com, or contact Chris Kelly at: kellydevicedesign@gmail.com

SUMMARY

Highly creative, highly practical, and very cost-effective industrial design and mechanical engineering solutions for your firm's product development efforts.

Thirty five years of experience developing exceptionally well-designed and engineered medical devices, laboratory & scientific instruments, and consumer products. Important contributions to several hundred product development projects. Areas of expertise include:

- Foresight in recognizing challenges early and adept at conceiving practical solutions
- Strong brainstorming, conceptualization, invention, and problem-solving abilities
- Plastic part design and injection molding tooling (in-depth knowledge)
- Device ergonomics
- Mechanisms and control linkages
- Liquid handling and microfluidics
- Highly functional thermoformed packaging
- Interface and lightpipe design
- Advanced CAD modeling skills (Solidworks)

2003 – Present

PROFESSIONAL EXPERIENCE

KELLY DEVICE DESIGN, LLC

Principal, Product Design Consultant

Provide accurate problem analysis, propose innovative and practical design solutions, identify and address project challenges early in the design process, provide maximum design quality and client satisfaction while integrating seamlessly with your company's team.

Partial list of recent projects:

Immunoassay Cartridge & Instrument – Correlia Biosystems

Influenza Diagnostic Test Device – Lucira Health

Exercise Equipment Lift Mechanism - AlterG

Smart Household Air Freshener - Proctor & Gamble

Microfluidics Chip Package – 10X Genomics

Hearing Aid Storage Case – Whisper

Molded & Thermoformed Packaging – Yuto Creative Design

SpaceSaver, GreenPak, and TerraRack Packaging – Rainin Instrument

Cell Thawing Instrument – Biocision

Aids Diagnostic Test Cartridge – Zyomyx

Experimental Product Explorations – Rainin Instrument

Quantitative PCR Instrument – QuantaLife (now Bio-Rad)

Handheld Steam Therapy Inhaler - Vapore

Microfluidics Chip Design – QuantaLife (now Bio-Rad)

TransPyloric Shuttle Implant – BAROnova

Solar Power Wall Display Monitoring Unit – SunPower

Laparoscopic Needle Driver – Novare Surgical Systems

Blood Oxygen Sensor Handpiece - ViOptix

Vascular Closure Device – Access Closure

Cardiac Surgical Device – Medtronics

Drug Delivery Devices - Alza Therapeutics

Surgical Handpiece and Deployment Mechanism – SurX

Wearable Blood Glucose Monitor – iSense

Cardiac Surgical Stapler - Arbor Surgical Technologies

Atrial Fibrillation Ablation Treatment Device - Guidant Cardiac Surgery

Also: Abbott Vascular, Accuray, AMES Technology, Aragon Surgical, Archus Orthopedics, Aspire Medical, Bass Medical, Datascope, Dolby Laboratories, Estech, Fox Hollow, Insound Medical, Intuity Medical, Jazz Pharmaceuticals, Laserscope, MagArray, Medical CV, Microreactor Technologies, Mizuho-OSI, Neovista, Satiety, Sound Innovations, Tau Science

XRADIA (now Carl Zeiss X-ray Microscopy), Concord, CA

2001 - 2003

Principal Product Development Engineer (R&D)

Led the design and mechanical engineering of the world's highest resolution photon microscope. Team winners of an 2003 R&D 100 Award: Nano XCT X-ray Imaging System.

OPIENT, Berkeley, CA

2000 - 2001

Principal Product Development Engineer (R&D)

Invention and engineering of an innovative electro-mechanical tunable fiber optic device.

HIEMSTRA PRODUCT DEVELOPMENT, San Francisco, CA Principal Design Engineer

1999 - 2000

Added engineering capabilities and functions to the firm's industrial design services. Built and managed the engineering team. Engineering of hand-held medical devices, surgical instruments, and drug delivery devices. Determine product requirements, regulatory requirements, and challenges. Conceptualize solutions. Evaluate ergonomics. Guide industrial design development. Mechanism and enclosure design and engineering. Mechanical breadboarding. Plastic part and sheet metal design. 3D CAD solid modeling. Prototype fabrication, procurement, and assembly. Functional testing and evaluation. Also a contributor as a senior advisor and consulting engineer on most of the company's projects from 2003 through 2007.

WILD PLANET TOYS, San Francisco, CA

1998 - 1999

Engineering Manager

Direct development of multiple simultaneous projects with accelerated timelines. Managed and directed multiple resources including industrial designers, engineers, testing laboratories, and offshore turn-key manufacturers.

RAININ INSTRUMENT COMPANY, Oakland, CA Senior Project Engineer

1991 – 1998

Design and mechanical engineering of high-precision fluidics instruments & injection molded consumables. Managed multiple engineering and product development projects, including budgets and schedules. Invention and design engineering of high-volume sterile disposable products. Conceptualized tooling designs and served as a chief technical resource for the company's internal high-volume injection molding facility. Invention and design engineering of high-volume sterile and non-sterile thermoformed packaging. Sixteen US patents and numerous international patents granted for significant competitive product innovations including the market-leading LTS pipette tip design and SpaceSaver packaging.

INDUSTRIAL DESIGN AND MECHANICAL ENGINEERING CONSULTANT

1989 - 1991

- Chromatography Column Sepragen
- Capillary Electrophoresis Instrument Bio-Rad Laboratories
- Econosystem™ Peristaltic Pump Bio-Rad Laboratories

THETA RESOURCES, San Francisco, CA

1986 - 1989

Industrial Designer, Mechanical Engineer, Project Manager

- Prosthetic Hip Implant Zimmer
- Disposable Antibiotic Resistance Diagnostic Device Abbott Laboratories
- Medical Vial Sealing Tool Wheaton Scientific
- Arthroscopic Surgical System American Edwards Laboratories

GORDON KELLY DESIGN, Elm Grove, WI **Industrial Designer**

1982 - 1985