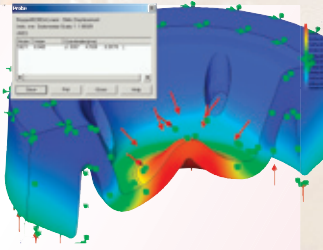


ASCENT DESIGN PROJECTS

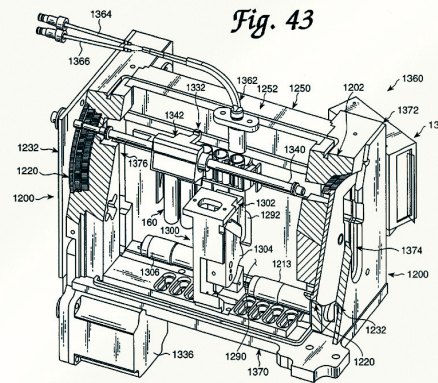
CHALLENGE Design and produce an effective, dual-dose drug syringe within narrow patent confines.

SOLUTION Creative concept incorporated a valve intrinsic to the rubber stopper, and tuned design parameters using large displacement non-linear FEA analysis.

RESULT Executed high-risk concept successfully for functioning, molded first prototypes.



Patents include fluid valving, robotics, blood diagnostics and water filtration.



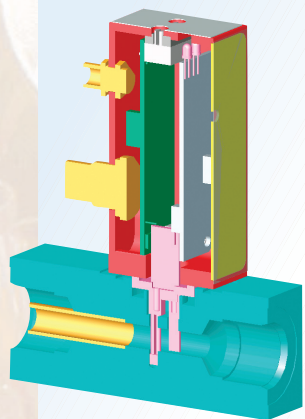
Patented module detects very low levels of HIV & HCV viral infection by counting photons from a chemiluminescent reaction.

U.S. Patent
Jan. 1, 2002
Sheet 37 of 46
US 6,335,166 B1



Ascent Design, Inc.
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CHALLENGE Redesign flow meter to increase signal sensitivity, resolve thermal management and gas-tight seal issues, simplify assembly and reduce production costs.

SOLUTION Integrated design systematically addresses device issues while reducing part count and increasing robustness.

RESULT A market-ready, higher performing, durable product with cost reduced approximately 25%.



Ascent Design, Inc.
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& Product Development Services

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Ascent Design's experience spans every stage of product development, from concept to high-volume production. Whether you are an entrepreneur striving to get your dream into production or an established manufacturer, an investment in Ascent Design's services will pay off fast. Ralph Burns, President of Ascent Design, has successfully developed medical therapeutic and diagnostic devices, consumer and instrumentation products, and manufacturing automation tooling.

Many of my designs have been patented and are in use today. All of them met their functional and commercial goals.

EXPERTISE IN ALL PHASES OF PRODUCT DEVELOPMENT

CONCEPT FEASIBILITY Need to create a quick proof of principle? Estimate costs? Proven feasibility allows you to make sound business decisions.

SPECIFICATION Forward-minded goals alleviate project ambiguity. We'll work together to specify project requirements and determine exactly what you want to produce.

DESIGN I bring creativity to the table. I'll try upside down and backward approaches to build novel solutions that include detailed design analysis and costing.

PROTOTYPING Experience with numerous fabricators enables me to pinpoint the best process for your project. The prototype we produce will meet your specifications and let you move forward with confidence.

PRE-PRODUCTION I create, validate and document production manufacturing processes and tooling.

PILOT TO VOLUME PRODUCTION Ascent Design will ramp from first production run to full-scale manufacturing, to guide production from the first build and respond to evolving production volumes.

REAL WORLD SUCCESSES



CHALLENGE Rapidly produce an appealing prototype for telecom technology demonstration.

SOLUTION Designed product on short schedule integrating technical and ergonomic requirements.

RESULT Enabled client to demonstrate an integrated product technology and license it to industry.

CHALLENGE Create a fixture to test more complex and miniature circuit board assemblies than previously achieved.

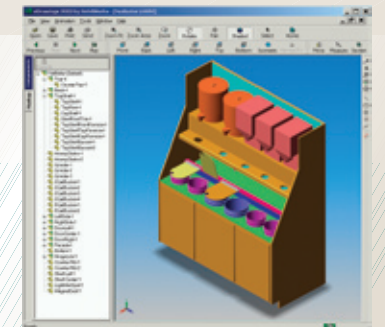


SOLUTION Applied innovative design and robust mechanical alignment principles with thorough tolerance analysis.

RESULT Design of in-process circuit board test fixture achieved new standards in test miniaturization. Asian implementation yielded 100% differentiation between specified and rejected tape drive circuit board assemblies.

COMMUNICATION

Ascent Design delivers interactive, 3-D project updates via email and the Web, keeping even remote clients current with design progress.



15 Years' Experience
State of the Art Solidworks
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FDA Quality System Regulation