Dental Implant Modification

Kisielewski, R.W., Hastings, C.K., McCarthy, G.R. (FDA) Filed 19 Apr 95 Serial No. 08/424,786.

Description of the Invention: Implanted dental prostheses are subjected to large forces acting in different directions within severelylimited space. Screw and/or nut connections, while useful in the construction of these prostheses, are subject to relative rotations which can lead to undesirable loosening of the implant at inopportune times. The present invention greatly inhibits the undesirable loosening of the dental prosthesis by providing for a linear, axial transmission of forces from the prosthesis to a tubular spacer and an implanted base by the retaining nut. This invention has the additional advantage of permitting relatively easy retrofitting of existing dental prostheses which were prone to failure due to loosening when the retaining nut or screw turned under the forces normally found in previously available prostheses.

Potential Areas of Application: Applicable to improvement of dental prostheses used world-wide; design adaptable to other prosthetic securing applications.

Main Advantages of Invention: Inexpensive to apply to existing prostheses; much improved functional design. [portfolio: Dental Technology— Therapeutics, implants]

Drycleaning Secondary Vapor Isolation and Removal System

Earnest, G.S., Froehlich, P.A. (NIOSH) Filed 27 Oct 94 Serial No. 08/329,920.

Description of the Invention: A system which reduces environmental emissions and operator exposure to solvent vapors associated with dry cleaning machines. Dry cleaning solvents such as perchloroethylene are known to cause liver and kidney damage and to contribute to ozone depletion. Due to the operational nature of dry cleaning machines, which involves continuous loading and unloading, operators are exposed to solvent vapors which are emitted each time the machines are opened. The invention involves a ventilation system which isolates, contains and removes residual solvent vapors before a dry cleaning machine chamber is opened.

Potential Âreas of Application: Closed circuit dry cleaning machines; exhausting dry cleaning machines; single and multiple bath processing machines.

Main Advantages of Invention: Reduce worker exposure to hazardous solvent vapors; reduce emission of hazardous vapors into the environment; can be retrofitted onto existing dry cleaning machines.

Stage of Development: Conceptual only. [portfolio: Devices/ Instrumentation—Environmental Technology, prevention, apparatus]

An Integrating Sphere Which Delivers a Homogeneous Beam of Laser Light for Use in Photodynamic Therapy

Smith, P.D., Cole, J., Harrington, F., Bernstein, E. (NCRR) Filed 24 May 94 Serial No. 08/248,918.

Description of the Invention: An irradiation attachment for an optical fiber which provides an output of light that has a highly uniform intensity. Frequently, optical fibers are used in illumination delivery systems. However, in general the output from optical fibers is irregular due to a number of factors which include: imprecise introduction of light into the fiber; imperfect cleaving or polishing of the fiber output face; and distortions introduced by handling the fiber. The inventive device simply attaches to the end of a delivery optical fiber and overcomes the irregularities and produces a uniform level of illumination. The inventive device permits uniform irradiation of irregularly shaped objects.

Potential Areas of Application: Photodynamic therapy; treatment of psoriasis; uniform illumination of flat and raised surfaces.

Main Advantages of Invention: Simple attachment to optical delivery fibers; hand held; uniform illumination of flat and raised surfaces.

Stage of Development: Prototype built and tested on laboratory animals. [portfolio: Devices/Instrumentation—Therapeutics, instruments]

Ventilated Casting Grinding Workstation With Turntable

Gressel, M.G. (CDC) Filed 20 May 94 Serial No. 08/247,181.

Description of the Invention: A new ventilated workstation which reduces worker exposure to hazardous particulate materials has been invented. In conventional foundry casting operations, castings are cleaned by hand using pneumatic chipping and grinding tools. The grinding and chipping of sand burnt into the castings results in a discharge of respirable silica particles. The workstation of the present invention is equipped with a rotatable workpiece holder which allows all

surfaces of the workpiece to be positioned so that particles discharged by grinding or machining are directed toward a ventilation area at which the discharged particles are removed.

Potential Areas of Application: Cleaning foundry castings; machining workpieces.

Main Advantages of Invention: Reduces worker exposure to hazardous particulate materials; easy to retrofit to existing ventilated workstations.

Stage of Development: Prototype built, tested, and evaluated.

Recent Publications: Abstract entitled "An Evaluation of a Local Exhaust Ventilation Control System for Casting Cleaning in a Foundry," May 21–27 meeting of the American Industrial Hygiene Conference and Exhibition (1994); NTIS Technical Report. [portfolio: Devices/Instrumentation— Environmental Technology, equipment and machinery]

Magnetic Resonance Monitor

(Bowman, J.D., Engel, D.P. (NIOSH) Filed 29 Apr 94 Serial No. 08/235,833.

This invention relates to measurement of static and extremely low frequency magnetic fields. Further, it permits measurement of environmental magnetic fields which are in magnetic resonance with magnetic moments in a biological organism, particularly the human body. This invention overcomes deficiencies in current systems, such as: only measuring oscillating magnetic fields, measuring static and oscillating fields with Hall-effect or flux-gate probes, and measuring static and oscillating fields and all their characteristics without taking into consideration chemical and biological effects. [portfolio: Devices/ Instrumentation—Environmental Technology, methods of testing]

Dated: June 8, 1995.

Barbara M. McGarey,

Deputy Director, Office of Technology Transfer.

[FR Doc. 95–14899 Filed 6–16–95; 8:45 am]

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

The inventions listed below are owned by agencies of the U.S. Government and are available for licensing in the U.S. in accordance with 35 U.S.C. 207 to achieve expeditious commercialization of results of federally