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(57) Abstract :

**ABSTRACT PHOTOVOLTAIC MOUTH MIRROR- SOLAR POWERED FLEXIBLE LED MOUTH MIRROR** A Photovoltaic Mouth Mirror is disclosed, providing a self-powered, cord-free illuminated handheld dental instrument. The device comprises a handle, a reflective mirror head, and an integrated LED illumination source. Characterized in that, the handle integrally houses a photovoltaic (PV) energy harvesting system and a sealed rechargeable energy storage means (e.g., Ni-MH battery). The PV system is configured to continuously convert ambient dental operatory light into electrical energy to power the LED (e.g., 0.5W, 20 lumens). This design provides consistent, shadow-free intraoral illumination while eliminating the need for disposable batteries or external cords. Infection control is simplified by a modular mirror head and the use of a disposable protective sleeve over the sealed electronic handle, overcoming the limitations of bulk, maintenance, and sterilization in prior art illuminated mirrors. Fig. 1

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