

Title: HEALTHCARE CUM OPTIMAL ILLUMINATION DEVICE

Abstract: A multifunction healthcare cum optimal illumination device comprising a modular frame (12) enclosed by treated fabric filter cover (24) with anti-glare and air cleaning properties. A chassis (20) placed at the upper end of the frame (12) and fitted with a non-incandescent light source (26), ionizer (46) and essential oil (42) to form an inventive device to clean and detoxify indoor air and surfaces in the surrounding. The light source (26) emits visible light, invisible infra-red radiation and UV radiation with the visible light illuminating the surrounding, the infra-red radiation heating the air in the cavity of the device. Hot air rises to form a convection current which draws the cooler air from the surrounding into the device through the enclosed filter cover (24) which will capture the harmful pollutants in the air current. Photo-catalyst coated on the filter cover, when exposed to the said UV radiation, will decompose the captured hazardous virus, bacteria, fungi, odors, V.O.C., particulates, etc. by strong redox reaction. The inventive device thus makes full / optimal utilization of all radiation emitted by the light source by harnessing the unused invisible IR and UV radiation for air cleaning to improve indoor air quality. With the novel chassis (20), base plate (22) and modular frames (12), the inventive device can be configured to form illuminators of various shapes, sizes and functions with flexi-add-on capabilities. Electric fan (44) is usually fixed on the base plate to greatly increase the speed and volume of airflow to enhance air cleaning by centrifugal vortex airflow upward in the cavity of the device. Audio system (52) with MP3/MP4 player, speakers, microphone, etc., and programmable controller (50) can be fitted onto the base plate. For healthy indoor living and to suit their physical, mental and social well-being, the users may play their favorite recordings, choose their essential oils and their preferred deco-matching fabric covers that can all be easily fitted onto the inventive device to create an ambience of pleasant sound, smell and sight in the surrounding of clean air catering to their mood and health requirements.

Fig. 3a-1