Sand Free Device

Khawaldeh, Mosab

The problem recognized was the huge amounts of dust that accumulate on solar panels and glass fronts of shops, stores and hotels etc, during sandstorms in particular, as well as the daily build-up of the same. The resulting reduced efficiency of solar panels and unattractive dust stains on glass fronts are detrimental, repulsive, and are also an expensive on-going concern for those owners and businesses who have to hire expensive cleaning companies or labor to keep doing the cleaning work. The project, hence, came as a solution to this problem, utilizing the DC current. The objective of this device or system is to shield glass panels and building fronts from sand and dust storms by about 90% of the total dust load, to keep solar panels efficient and glass fronts clean, providing great savings in cleaning costs and even the dangers inherent in the process. The idea rests on making use of the setting up a continuous electric field between the two metal plates, one charged positively and other negatively. They will be directly charged through a Direct Current supplied by a solar panel. The system would be installed on glass panels of any size. The magnetic field will be insulated from the panels or building using silicon or rubber with wood. When the storm arrives carrying positive, and negative (as well as neutral ions that do not actually stick to glass), the charged ions will be separated into the positive ions being attracted to the negative pole, while the negatively charged ions will go to the positive pole. The charge is thus neutralized and the devices is lowered to empty its dust particles into a designated receiver. Thus our purpose will be achieved, keeping the solar panels efficient and glass fronts clean.