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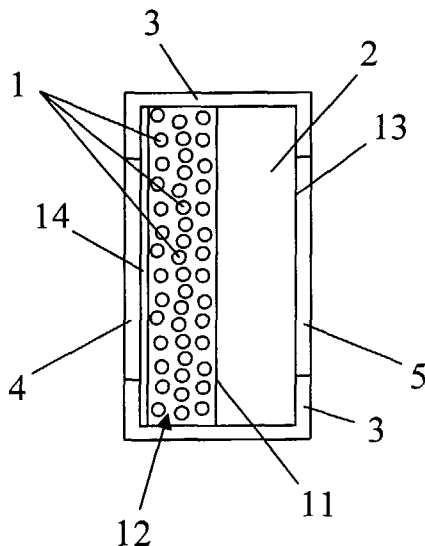
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(54) Title: FILTERING DEVICE INCORPORATING NANOPARTICLES



(57) Abstract: A filtering device incorporating nanoparticles (1) that are known to be capable of destroying bacteria, fungi, viruses, or toxins. The nanoparticles (1) are combined with a filter (2). The nanoparticles (1) may be pellets adjacent to the filter (2), a powder (12) of nanoparticles (1) coating at least one side of a filter (2), or impregnated into a filter (2). Optionally, two or more filters (2) are contained within an encasement (3) having an inlet (4) and an outlet (5). Preferably, at least one filter (2) has an electrical charge that is the same as the electrical charge of at least one target particle. Also preferably, coating is accomplished by having a filter (2) to be coated carry an electrical charge that is opposite to an electrical charge carried by the nanoparticles (1) in the powder (12). Optionally, a filter (2) can be either hydrophobic or hydrophilic.

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