

[54] **AERATING APPARATUS UTILIZING ROTATING IMPELLER VANE**

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[58] Field of Search ..... 210/219, 220; 261/87, 261/93; 416/176 R, 177; 415/115; 366/101-104

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[57] **ABSTRACT**

An apparatus for aerating a body of stagnant water to neutralize the pollutants therein. The apparatus draws fresh ambient air above the surface of the water and forcibly discharges the air under the surface into the body of water for oxidation purposes. The apparatus comprises a hollow rotatable cylindrical casing provided with a helical vane mounted on one end of the casing. A series of holes in the casing wall adjacent the vane creates regions of sub-atmospheric pressure in the vicinity of the holes when the cylinder is rotating; thus drawing air from the interior of the casing and, by a scooping action, forcing the air generally radially outwardly and below the surface of and into the body of water. The cylinder is driven by a motor. The helical vanes may be formed of torroidal disc or washer that is cut and spread apart axially and secured to cylindrical casing. The apparatus also displays improved means of conveying fluids by helient conveyor when the blades of helient screw are inclined at an angle acute the normal to the longitudinal axis of the helical screw.

7 Claims, 7 Drawing Figures

