

Title (en)
Self propelled submersible suction cleaner and cleaning method

Title (de)
Unterwasserabsaugvorrichtung mit eigenem Antrieb und Reinigungsverfahren

Title (fr)
Aspirateur sous-marin auto-propulsé et méthode de nettoyage

Publication
EP 0558337 B1 19970115 (EN)

Application
EP 93301462 A 19930226

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Abstract (en)
[origin: EP0558337A1] A self-propelled submersible suction cleaner (10) as used to clean the surfaces of a swimming pool transfers a vibratory movement of an oscillator (20) located within the flow path of a suction chamber (14) for propulsion over the submerged surface of the pool. This vibratory movement of the oscillator is also converted to a unidirectional rotational motion used in conjunction with a gear train to cause the cleaner to rotate through at least a 90 angle allowing the cleaner to improve on the random path taken by the cleaner and to maneuver away from obstacles such as pool steps potentially stopping the cleaner movement. The cleaner includes a elevation limiter (100) that keeps the suction chamber submerged as the cleaner climbs a vertical wall and attempts to rise above the water level in the pool. A pressure relief valve (300) eliminates the concern over debris blocking the suction and causing potential damage to the pool pump and motor. Additional features including a shoe (32) dimensioned to improve the forward movement resulting from the vibratory motion, shoe skirts in combination with a shoe flap to control suction, and bellows configurations to aid in better execution of sharp turns up a vertical wall as well as a smoother movement of the cleaner are disclosed.
<IMAGE>

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Cited by
CN110271654A; CN112461748A; EP1379743A4; EP0750083A1; FR2735437A1; US5771987A; CN117451965A; WO2004011743A1

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