INERTIAL HYDRODYNAMIC PUMP AND WAVE ENGINE

ABSTRACT OF THE INVENTION

A buoyant hydrodynamic pump is disclosed that can float on a surface of a body of water over which waves tend to pass. The pump incorporates an open-bottomed tube with a constriction. The tube partially encloses a substantial volume of water with which the tube's constriction interacts, creating and/or amplifying oscillations therein in response to wave action. Wave-driven oscillations result in periodic upward ejections of portions of the water inside the tube that can be collected in a reservoir that is at least partially positioned above the mean water level of the body of water, or pressurized by compressed air or gas, or both. Water within such a reservoir may return to the body of water via a turbine, thereby generating electrical power (making the device a wave engine), or else the device's pumping action can be used for other purposes such as water circulation, propulsion, or cloud seeding.

(No Suitable Fig.)