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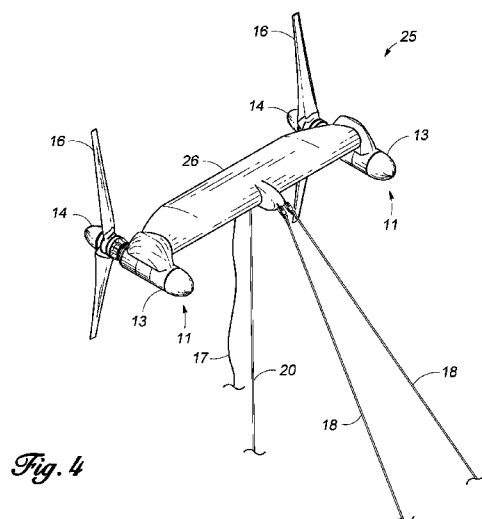
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Declarations under Rule 4.17:

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[Continued on next page]

(54) **Title:** MULTI-MEGAWATT OCEAN CURRENT ENERGY EXTRACTION DEVICE*Fig. 4*

(57) **Abstract:** An underwater apparatus for generating electric power from ocean currents and deep water tides. A submersible platform including two or more power pods, each having a rotor with fixed-pitch blades, with drivetrains housed in pressure vessels that are connected by a transverse structure providing buoyancy, which can be a wing depressor, hydrofoil, truss, or faired tube. The platform is connected to anchors on the seafloor by forward mooring lines and a vertical mooring line that restricts the depth of the device in the water column. The platform operates using passive, rather than active, depth control. The wing depressor, along with rotor drag loads, ensures the platform seeks the predetermined operational current velocity. The rotors are directly coupled to a hydraulic pump that drives at least one constant-speed hydraulic-motor generator set and enables hydraulic braking. A fluidic bearing decouples non-torque rotor loads to the main shaft driving the hydraulic pumps.



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