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(54) Title: OFFSHORE WIND TURBINE AND ASSOCIATED SYSTEMS AND METHOD OF WIND TURBINE INSTALLATION

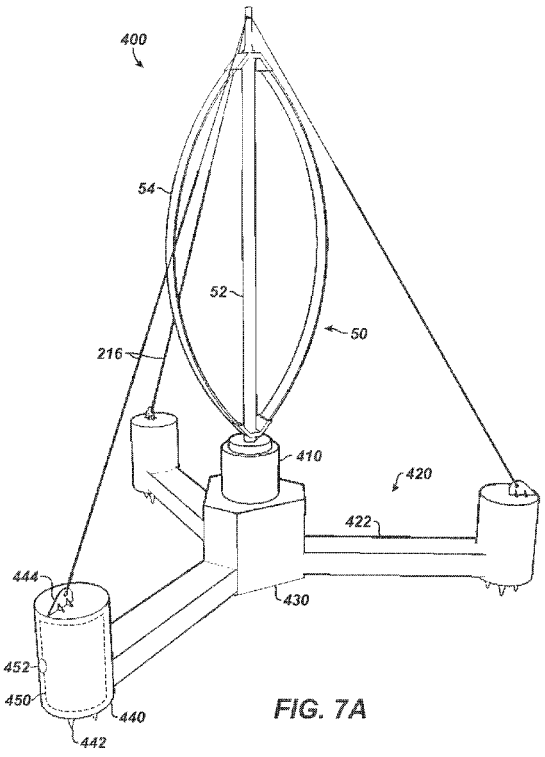


FIG. 7A

(57) Abstract: An offshore wind turbine has a vertical-axis wind turbine (VAWT) mounted on a platform. The VAWT has a vertical rotor and curved blades coupled to a gearbox and an electric generator. The VAWT can fixedly extend from the platform or may be capable of reclining on the platform either manually or automatically. The platform can be composed of modular elements coupled together. Offshore, the platform can be semi-submersible with the VAWT extending out of the water and with a counterbalance extending below the platform. Alternatively, the platform can float on the water's surface and can have several arms that extend outwardly from the VAWT to increase the platform's footprint. To anchor the turbine offshore, anchoring systems can anchor the platform to the seabed while allowing the floating wind turbine to adjust passively or actively to changes in sea level due to tidal variations or storm swells.

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