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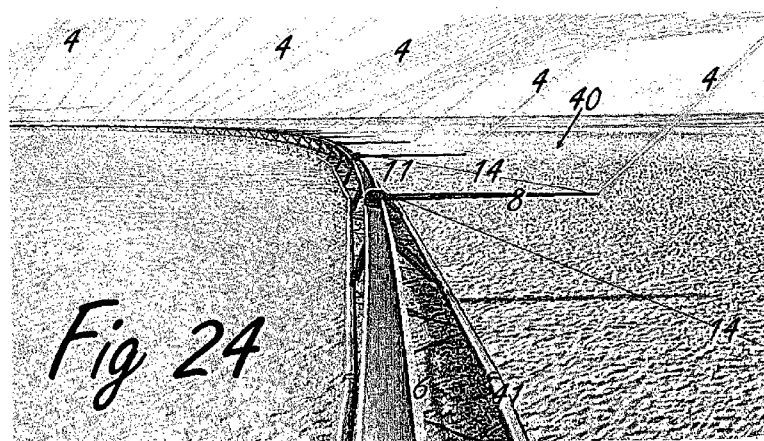
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(54) **Title:** WIND ENERGY CONVERSION SYSTEM WITH KITES TOWING MODULES ON A RAIL



(57) **Abstract:** A wind system (1) for converting energy is described, comprising: at least one kite (2) adapted to be driven from ground immersed in a wind current (W); at least one module (5) adapted to translate on a rail (6; 7) placed next to ground, the module (5) being connected through a rope (4) to the kite (2), the kite (2) being adapted to be driven by the module (5) in order to drag the module (5) on the rail (6; 7) and perform said conversion of wind energy into electric energy through a generating system co-operating with module (5) and rail (6; 7), the rope (4) being adapted both to transmit mechanical energy from and to said kite (2) and to control a flight trajectory of the kite (2), the generating system comprising at least one generator/motor (20) which is adapted to convert wind energy into electrical energy by means of a movement of the module (5) relative to the rail (6; 7), the module (5) being equipped with at least one trolley (11) to translate along the rail (6; 7); the trolleys (11) are adapted to translate on the rails (6; 7) by means of a monolithic rotor (42) to which the trolleys (11) are connected, the monolithic rotor (42) being operatively coupled with a plurality of magnetic sliding elements (46) capable of sliding along a magnetic rail (54) without direct contact therewith.

