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Reddy et al.

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(54) **DRILLING RIG CARRIAGE MOVABLE ALONG RACKS AND INCLUDING PINIONS DRIVEN BY ELECTRIC MOTORS**

(58) **Field of Classification Search**
CPC E21B 19/083; E21B 3/02; E21B 15/00
See application file for complete search history.

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(57) **ABSTRACT**

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According to one aspect, a drilling rig carriage is adapted to move along a drilling mast, and includes a body structure, electric motors coupled to the body structure, and pinions operably coupled to the electric motors, respectively. The pinions are adapted to engage racks, respectively. According to another aspect, a drilling mast includes a longitudinally-extending frame having a first side portion and a second side portion spaced therefrom. Racks are coupled to the frame at the first side portion thereof. According to yet another aspect, an apparatus includes a drilling mast or tower extending longitudinally along an axis, the tower including racks spaced in a parallel relation. A top drive is movable along the axis and relative to the tower. Electric motors are coupled to the top drive and movable therewith. Pinions are operably coupled to the electric motors, respectively, and engage the racks, respectively, to move the top drive.

Related U.S. Application Data

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(51) **Int. Cl.**

E21B 19/083 (2006.01)

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(52) **U.S. Cl.**

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18 Claims, 9 Drawing Sheets

