

vehicle, electrical connections between said motor and working conductor, and suitable means to create electrical resistance or counter electro-motive force in said conductor between the connections. 2nd. In an electric railway, a permanently continuous line working conductor, a vehicle, an electric motor to propel said vehicle, electrical connections between said motor and working conductor, a portion of the line working conductor between the connections, and suitable means to create electrical resistance or counter electro-motive force in said conductor between the connections. 3rd. In an electric railway, a permanently continuous line working conductor, a vehicle, an electric motor to propel said vehicle, two electrical connections carried by the vehicle and making contact with the working conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said conductor between the connections. 4th. In an electric railway, a permanently continuous line working conductor, a vehicle, an electric motor to propel said vehicle, two electrical connections carried by the vehicle and making contact with the working conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said conductor between the connections, and consisting of a sheath of paramagnetic material partially or entirely surrounding the line working conductor. 5th. In an electric railway, a permanently continuous line working conductor, a vehicle, an electric motor to propel said vehicle, two electrical connections carried by the vehicle and making contact with the working conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said line conductor between the connections, and consisting of a sheath of paramagnetic material partially or entirely surrounding the line working conductor. 6th. In an electric railway, a source of irregular or alternating currents, a permanently continuous line working conductor connected to the source, a vehicle, an electric motor to propel said vehicle, electrical connections carried by the vehicle and making contact with the line conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said line conductor between the connections. 7th. In an electric railway, a slotted conduit, a permanently continuous line working conductor in said conduit, a vehicle, an electric motor to propel said vehicle, two electrical connections carried by the vehicle and making contact with the working conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said conductor between the connections. 8th. In an electric railway, a source of irregular or alternating currents, a permanently continuous line working conductor connected to the source, a vehicle, an alternating current electric motor to propel said vehicle, electrical connections carried by the vehicle and making contact with the line conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said line conductor between the connections. 9th. In a current collector for a vehicle, the combination, of two electrical connections carried by the vehicle and making contact with a line conductor along the path of the vehicle and disposed one in advance of the other, and a suitable counter electro-motive force device carried by said vehicle and located between the electrical connections. 10th. The combination, in an electric railway, of two tracks leading from the generating station, a permanently continuous line working conductor extending from the generating station along one of said tracks and returning to said station along the other track, a vehicle, an electric propelling motor on the vehicle, electrical connections between the motor and line conductor, and means to create resistance or counter electro-motive force in said line conductor between said connections. 11th. The combination, in an electric railway, of two parallel tracks leading from the generating station, a permanently continuous line working conductor extending from the generating station along one of said tracks and returning to said station along the other track, a vehicle, an electric propelling motor on the vehicle, electrical connections between the motor and line conductor, and means to create resistance or counter electro-motive force in said line conductor between said connections. 12th. The combination, in an electric railway, of two tracks leading from the generating station, a slotted conduit for each track, a permanently continuous line working conductor extending from the generating station along one of said tracks and returning to said station along the other track and in said conduit, a vehicle, an electric propelling motor on the vehicle, electrical connections between the motor and line conductor, and means to create resistance or counter electro-motive force in said line conductor between said connections. 13th. In an electric railway, a permanently continuous line working conductor, supports for said conductor, a vehicle, an electric motor to propel said vehicle, two electrical connections carried by the vehicle and making contact with the working conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said conductor between the connections, and consisting of a sheath of paramagnetic material entirely surrounding the line working conductor, and a normally closed longitudinal yielding passage through the sheath to permit said supports to pass through. 14th. In an electric railway, a permanently continuous line working conductor, a vehicle, an electric motor to propel said vehicle, two electrical connections carried by the vehicle and making contact with the working conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said conductor between the connections, and consisting of a sheath of paramagnetic material partially or entirely surrounding the line working conductor, and a coil of insulated wire wound upon said sheath and connected with a source of electricity. 15th. In an electric railway, a permanently continuous line working conductor, a vehicle, an electric motor to propel said vehicle, two electrical connections carried by the vehicle and making contact with the working conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said conductor between the connections, and consisting of a sheath of paramagnetic material partially or entirely surrounding the line working conductor, and a coil of insulated wire wound upon said sheath and connected with a source of electricity. 16th. In an electric railway, a source of irregular or alternating currents, a permanently continuous line working conductor connected to the source, a vehicle, an electric motor to propel said vehicle, electrical connections carried by the vehicle and making contact with the line conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said line conductor between the connections, and consisting of a sheath of paramagnetic material partially or entirely surrounding the line working conductor, and a coil of insulated wire wound upon said sheath and connected with a source of irregular or alternating currents derived from or induced by the source connected to the line conductor. 17th. In an electric railway, a permanently continuous line working conductor, supports for said conductor, a vehicle, an electric motor to propel said vehicle, an electric motor to propel said vehicle, two electrical connections carried by the vehicle and making contact with the working conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said conductor between the connections, and consisting of a sheath of paramagnetic material entirely surrounding the line working conductor, a longitudinal slot through the sheath to permit said supports to pass through, and an iron brush or brushes fixed to or in the side or sides of the slot and extending transversely across the same to maintain the slot closed. 18th. In an electric railway, a permanently continuous line working conductor, insulated supports of paramagnetic material for said conductor, a vehicle, an electric motor to propel said vehicle, two electrical connections carried by the vehicle and making contact with the working conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said conductor between the connections, and consisting of a sheath of paramagnetic material entirely surrounding the line working conductor, a longitudinal slot through the sheath to permit said supports to pass through, and an iron brush or brushes fixed to or in the side or sides of the slot and extending transversely across the same to maintain the slot closed. 19th. In an electrical railway, a permanently continuous line working conductor, a vehicle, an electric motor to propel said vehicle, two electrical connections carried by the vehicle and making contact with the working conductor to supply electricity to the motor, and means carried by the vehicle to create electrical resistance or counter electro-motive force in said conductor between the connections, a shunt circuit around the motor on the vehicle, and means to regulate the current flowing through the shunt circuit. 20th. In an electric railway, a line working conductor, a vehicle, an electric motor to propel said vehicle, electrical connections between said motor and working conductor, and suitable means to create counter electro-motive force or a tendency thereto in the line conductor between the connections.

#### No. 39,326. Electric Heating Apparatus.

(Appareil de chauffage électrique.)

Mark Wesley Dewey, Syracuse, New York, U.S.A., 13th July, 1892; 6 years.

*Claim.*—1st. In an electric heater, the combination, with the supply conductors, of a radiating device connected thereto, consisting of perforated flat sheets of metal, connected together in series, substantially as described. 2nd. In an electric heater, the combination, with the supply conductors, of a radiating device connected thereto, consisting of a plurality of perforated flat sheets of metal, connected together in series, substantially as described. 3rd. In an electric heater, the combination, with the supply conductors, of a radiating device connected thereto, consisting of a plurality of perforated flat sheets of metal, substantially as described. 4th. In an electric heater, the combination, with the supply conductors, of a radiating device connected thereto, consisting of a plurality of perforated parallel flat sheets of metal arranged side by side and connected together in series, substantially as described. 5th. In an electric heater, the combination, with the supply conductors, of a radiating device connected thereto, consisting of a plurality of parallel flat sheets of metal arranged side by side, with air spaces between, and connected together in series by posts of metal, substantially as described. 6th. In an electric heater, the combination, with the supply conductors, of a radiating device connected thereto, consisting of a plurality of parallel flat sheets of metal arranged side by side, with air spaces between, and connected together in series by posts of metal, and non-conducting pieces to stay and support the posts, substantially as described. 7th. In an electric heater, the combination, with the supply conductors, of a radiating device