

No. 36,519. Combined Vehicle Shaft Support, Anti-Rattler and Eyebolt.
(*Support pour essieux de voiture, arrête-écrou et boulon combinés.*)

Adolph Jaenicke, Davenport, Iowa, U.S.A., 2nd May, 1891; 5 years.

Claim.—The combination, with a vehicle axle clip bolt, having shackle bars and a pole or shaft eye, of the eyebolt provided with a head at one end, such head elongated at one side, such elongated side provided with two parallel upright posts, the horizontal pin through such posts, the swinging bar hinged to such pin, and when in an operative position resting upon the upper surface of the shackle bars, the inverted U-shaped spring pendently and centrally attached to such swinging bar, and when in an operative position located in the space between the shackle bars and the rear side of the shaft eye and front side of the clip bolt, substantially as described.

No. 36,520. Electric Heating Apparatus.
(*Appareil de chauffage électrique.*)

Mark Wesley Dewey, Syracuse, New York, U.S.A., 2nd May, 1891; 5 years.

Claim.—1st. A floor mat, composed partly or wholly of metallic material, and containing one or more heat developing and radiating electric conductors, and a suitable source of electricity connected to said mat. 2nd. A floor mat, composed partly of metallic electric conducting material, and partly of non-conducting material and containing one or more heat developing and radiating electric conductors, and a suitable source of electricity connected to said mat. 3rd. In an electric heating apparatus, a floor mat composed partly of electric conducting material and partly of non-conducting material, said non-conducting material projecting above the plane of the conducting material to serve as a protecting shield for the latter, one or more heat developing and radiating electric conductors in said mat, and a suitable source of electricity connected to said mat. 4th. In an electric heating apparatus, a floor mat comprising one or more heat developing electric conductors, and a covering or shield of non-heat conducting material, and a suitable source of electricity connected to said mat. 5th. In an electric heating apparatus, a floor mat comprising one or more heat developing electric conductors, and a ventilated covering or shield of non-heat conducting material, and a suitable source of electricity connected to said mat. 6th. A floor mat, comprising one or more flexible metallic heat developing electric conductors, and a suitable source of electricity connected to said mat. 7th. An electric heating apparatus comprising a suitable source of electricity, and a floor mat composed partly or wholly of heat developing electric conductors removably connected to the aforesaid source of electricity. 8th. An electric heater consisting of two or more floor mats comprising one or more heat developing electric conductors, a detachable electric connection between the mats, and a suitable source of electricity connected to said mats. 9th. An electric heating apparatus consisting of a suitable source of electricity, two or more floor mats comprising one or more heat developing electric conductors detachably connected to said source of electricity, and a detachable electric connection between the mats. 10th. In an electric heating apparatus, a floor mat comprising one or more heat developing electric conductors, a suitable source of electricity connected to said mat, and a thermostatic current controller to prevent an excessive heating of the mat. 11th. In an electric heating apparatus consisting of a suitable source of electricity, a floor mat comprising one or more heat developing electric conductors connected to said source of electricity, a thermostatic current controller to prevent an excessive heating of the mat, and a regulator for controlling the action of the said current controller, as set forth. 12th. In an electric heating apparatus consisting of a suitable source of electricity, a floor mat comprising one or more heat developing electric conductors connected to said source of electricity, a thermostatic current controller to prevent an excessive heating of the mat, a regulator for controlling the action of said current controller, and a stop for limiting the movement of the regulator, as set forth. 13th. In an electric heating apparatus, a removable floor mat comprising one or more heat developing electric conductors, a suitable source of electric heating current, and stationary clamps adapted to connect the said mat in circuit with the source of heating current. 14th. In an electric heater, a floor mat comprising one or more heat developing and radiating electric conductor or conductors countersunk in the floor, a suitable source of electricity and connections leading from said source and beneath the floor to said mat.

No. 36,521. Repeater for Telegraphs.

(*Appareil à répétition pour télégraphe.*)

Richard Johnston McIlhenny, Wilmington, North Carolina, U.S.A., 2nd May, 1891; 5 years.

Claim.—1st. In a repeating telegraphic system, the combination of a relay in a main line circuit, and a local circuit closed through the relay contacts when its armature is in its attracted position, said relay being provided with a magnet located in a branch of said local circuit of greater resistance than the main local circuit, and adapted to hold the armature lever in its attracted position, substantially as described. 2nd. In a repeating telegraph system, the combination of a relay in a main line circuit, said relay being provided with an armature lever provided with two armatures on opposite faces, and on opposite sides of its pivot, and a local circuit closed through the relay contacts when the armature of the relay is in its attracted position, said relay being provided with a supplemental magnet located in a branch of said local circuit of greater resistance than the main local, and adapted to act upon one of the armatures of the relay, substantially as described. 3rd. In a re-

peating telegraph system, the combination of a relay in the main line circuit having a supplemental magnet for holding the relay armature in its attracted position, a combined sounder and transmitter, a main local circuit through the said sounder and transmitter magnet and relay points, having a branch through the supplemental magnet and relay points, and through the magnet of the said sounder and transmitter, a repeating line circuit and a local repeating circuit, and an electric circuit controller in the local repeating circuit for closing the branch local circuit in the main line, substantially as described. 4th. In a repeating telegraph system, the combination of a relay in the main line circuit, having a supplemental magnet for holding the relay armature in its attracted position, a combined sounder and transmitter, a main local circuit through the sounder and transmitter magnet, and through the relay points, having a loop or branch through the sounder and transmitter magnet, and through the supplemental magnet, a repeating line circuit, and a local repeating circuit, and an electric circuit controller in the local repeating circuit for closing the branch of the main line local through the main line sounder and transmitter, and the supplemental relay magnet, substantially as described. 5th. In a repeating telegraph system, the combination, with a relay and transmitter in the main line circuit, and a relay and transmitter in the repeating circuit, of a supplemental magnet for each relay adapted to close the relay points, a main local circuit through the relay points and the magnet of the main line transmitter, having a branch circuit through the supplemental relay magnet and through the magnet of the main line transmitter, a local repeating circuit through the repeating relay points, and the magnet of the repeating transmitter having a branch through the supplemental magnet of the repeating relay and the magnet of the repeating transmitter, the main line transmitter being provided with a circuit controller for closing the branch local of the repeating line, and the repeating transmitter having a circuit controller for closing the branch local of the main line, substantially as described. 6th. In a repeating telegraph system, the combination of a relay in the main circuit having a supplemental magnet for holding the relay armature in its attracted position, a combined sounder and transmitter, a main local circuit through the sounder and transmitter magnet, and through the relay points, having a loop or branch through the sounder and transmitter magnet and through the supplemental magnet, a repeating line circuit, a relay in the main local circuit, a local repeating circuit, a circuit controller in the local repeating circuit for closing the branch of the main line local through the main line sounder and transmitter magnet, the supplemental magnet of the main line relay, and points located on the main line transmitter for cutting the relay points of the main repeating line relay out of circuit when the circuit controller is operated to make the branch local, substantially as described.

No. 36,522. Boat for Towing. (*Remorqueur.*)

Alexander McDougall, Duluth, Minnesota, U.S.A., 2nd May, 1891; 5 years.

Claim.—1st. The hull for a tow boat, having a curved bow with a top ellipsoidal in form for a greater part of its length, with straight sides and with a bottom rounded at the corners, substantially as set forth. 2nd. The hull for a tow boat, having a top ellipsoidal in form for the length of the main portion of the hull, a bow oval in cross-section for its greater part, and circular in cross-section at its extreme, and a similarly constructed stern provided with a skeag parallel sides for the length of the main portion of the hull, and a bottom rounded at the corners. 3rd. In a tow boat, a boiler located near its stern, a steam windlass near its bow, a line of steam conducting pipes extending from said boiler to the windlass on one side of the hatchways adjacent to the deck, and a return line of exhaust steam conducting pipe extending from said windlass to the said boiler, and on the other side of the hatchways adjacent to the deck so that said deck will be heated from said lines of conducting pipes, for the purposes mentioned.

No. 36,523. Regulator for Dynamo Electric Machines. (*Régulateur pour machines dynamo-électriques.*)

Royal E. Ball, New York, State of New York, U.S.A., 2nd May, 1891; 5 years.

Claim.—1st. As a means for shifting the brushes to regulate a magneto-electric machine, a movable magnetic body carrying the commutator brushes and arranged in the yoke-piece of the field magnets adjacent to the commutator, substantially as described. 2nd. As a means for shifting the brushes to regulate a magneto-electric machine, a movable magnetic body carrying the commutator brushes and arranged in the yoke-piece of the field magnets adjacent to the commutator, and a sleeve extending from said yoke piece around the armature shaft for supporting said body, substantially as described. 3rd. As a means for shifting the brushes to regulate a magneto-electric machine, a movable magnetic body having axes of different magnetic resistances carrying the commutator brushes and arranged in the yoke piece of the field magnets adjacent to the commutator, and a sleeve extending from said yoke piece around the armature shaft for supporting said body, substantially as described. 4th. As a means for shifting the brushes to regulate a magneto-electric machine, a movable magnetic body suitably counterbalanced, and having axes of different magnetic resistances, and arranged in the yoke piece of the field magnets adjacent to the commutator supports for the commutator brushes carried by said magnetic body, and a sleeve extending from said yoke piece around the armature shaft for supporting said body, substantially as described. 5th. As a means for shifting the brushes to regulate a magneto-electric machine, a movable magnetic body carrying the commutator brushes and supported about the armature shaft by anti-friction ball bearings in the yoke piece of the field magnets adjacent to the commutator, substantially as described.