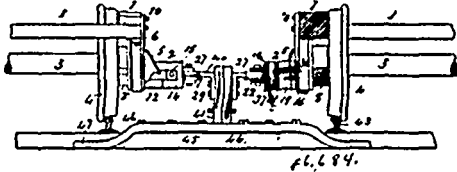


ing of a body A², formed with a flange M, and an inclined face P, in combination with the safety attachment, consisting of a body A³, formed with an inclined recess N, and the rails R, R¹, R² and R³, clasps C, bolts D, and bars B and B¹, substantially as shown and described, and for the purpose specified. 12th. A safety attachment for railroad switches, consisting of a body A², formed with a flange M, an inclined face P, and a recess O, in combination with a safety attachment, consisting of a body A³, formed with an inclined recess N, and with an inclined upper face, and the rails R, R¹, R² and R³, clasps C, bolts D, and bars B and B¹, substantially as shown and described, and for the purpose specified.

No. 46,684. Device for Preventing Railway Cars from Leaving the Rails. (*Appareil pour empêcher les chars de dérailler.*)



Charles W. McBryer and Henry B. Schilling, both of St. Louis, Missouri, U.S.A., 1st August, 1894; 6 years.

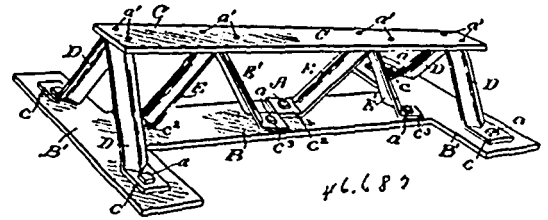
Claim.—1st. Improved devices for preventing railway cars from leaving the rails, having a car attachment comprising a three-sided rectangular frame, the back plate of which has upwardly projecting arms secured to the truck beam, a three-sided rectangular frame bolted within the sides of said outer frame, bracket arms holding said inner frame to the journal supporters, a horizontal opening in the front of said inner frame, projecting ears or plates upon an interior casting, projecting through said opening, said casting comprising a plate normally adjacent the inner side of the inner frame, a projecting plate intermediate of the length of said side plate at right angles therewith, an outwardly projecting plate at right angles with the cross-plate and adapted to be located adjacent the inner frame, and said casting having a roller pivotally mounted between the projecting ears and loosely mounted to move horizontally and rock independent of the car-body and truck, substantially as set forth. 2nd. Improved devices for preventing railway cars from leaving the rails, having a car attachment comprising an exterior frame secured to and carried by the truck, an inner frame secured in said outer frame, a casting carrying a roller located within said inner frame, a horizontal rod secured in said outer frame and engaging said adjustable casting and a spring upon said rod between said said parts to determine the movement of the roller carried by said adjustable casting, substantially as set forth. 3rd. Improved devices for preventing railway cars from leaving the rails, having a car attachment comprising an exterior frame secured to and carried by the truck, an inner frame secured in said outer frame, a vertically rocking and horizontally movable casting carrying a roller, located within said frame, a horizontal rod secured in said outer frame and engaging said adjustable casting, a spring upon said rod between said parts to control the horizontal movement of said roller carried by said casting, said casting engaging, a horizontally mounted oscillatory plate by means of which the same is vertically rockable, substantially as set forth. 4th. The improved double-track derailment-preventing mechanism, comprising an attachment 2 applied to each side of the car-trucks and having two outwardly projecting end-plates 12 forming with its back-plates 11 a three-sided casing, an elongated rectangular frame 13 loosely fitted within said casing, braces 15 bolted to the sides of said casing near its outer end-plate 16 and to the truck of the car, a bolt 17 passing through the sides 12 and 14 and having a nut 18 upon one end, a plate 19 mounted to rock or tilt upon said bolt between said side-plates of the said rectangular frame, the forward plate of said frame having a horizontal opening 21 extending from one of its side-plates to the other, two perforated plates 22 fixed upon the outer end of the casing 23 and loosely located in said opening and projecting therethrough beyond the outer end of said frame, the casting 23 loosely mounted within said frame to rock vertically and move horizontally therein and provided with a slot at its rear end loosely engaging the free edge of said plate 19, a flanged roller mounted to revolve between said perforated plates outside of said frame, a spring which normally holds said casing in contact with the outer end of said frame, parallel double tracks, a guide-rail 40 having a laterally projecting flange and extending one along each side of the double tracks so as to be engaged by the flanged-roller of said attachment, the ties of the double tracks, horizontal strips 42 applied to said ties and having vertical standards 41 to which said guide-rails are bolted, the standards of adjacent tracks being bolted together, and means for securing said strips in position, substantially as herein specified.

No. 46,685. Truss for Bridges. (*Tirant de pont.*)

George T. Hawes, Owensborough, Kentucky, U.S.A., 1st August, 1894; 6 years.

Claim.—1st. In a trestle, abutment or pier, the combination of the metal cap piece, the inclined, counter, end struts, made of plate

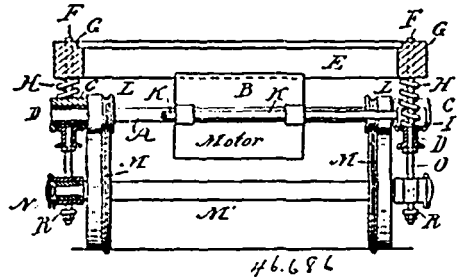
metal of approximately triangular form in cross-section, and having horizontal bolting ends or flanges, inclined intermediate struts formed of plate metal of the same form as the end struts, and applied in pairs and as counter braces, and against the cap-plate or piece, and those of each pair diverging from the cap plate out of line with one another, longitudinally of the base plate, downwardly and laterally, so that their proximate lower ends stand out of line with one another longitudinally of the base plate, substantially as described. 2nd. In a trestle, abutment or pier, the combination of the cap-plate or piece, the base plate or piece widened at its ends, the inclined counter end struts having an approximately triangular cross-sectional form, and provided with upper and lower horizontal



bolting ends, the intermediate counter struts having an approximately triangular cross sectional form, and provided with horizontal bolting ends of flanges, and set to abut against one another and bear against the cap-plate or piece and to diverge from the cap-plate downwardly and laterally out of line with one another longitudinally of the base plate, substantially as described. 3rd. The counter end and intermediate triangular struts, formed with bolting flanges which abut against one another, in combination with the cap and base plates, substantially as described. 4th. In a trestle, counter intermediate struts formed of angle iron and with horizontal bolting ends, and abutting at the centre of the base plate, and diverging downward, and laterally attaching to the base plate near its edges, substantially as described.

No. 46,686. Electric Locomotive.

(*Locomotive électrique.*)



Alexander Philipsborn and Max Schuenemann, both of Berlin, Germany, 1st August, 1894; 6 years.

Claim. 1st. The combination, in an electro-locomotive car, of the traction wheels a truck frame and electro-motor supported by the same and movable relative to the traction wheels, means for frictionally transmitting power from the motor shaft to said traction wheels, and a car body exerting its weight upon the transmission means and elastically supported upon said truck frame to vibrate independent of the motor and traction wheels. 2nd. The combination in an electro locomotive car, of the traction wheels, axle boxes therefor guided so as to be capable of vertical motion, a truck frame and electro-motor supported by the same and movable relative to the traction wheels, means for frictionally transmitting power from the motor shaft to said traction wheels, and a car body exerting its weight upon the transmission means and elastically supported upon said truck frame, the arrangement being such that the traction wheels, motor, and car body may conjointly vibrate or the said wheels and motor vibrate relative to the body, so as to preserve the frictional engagement, substantially as set forth. 3rd. The combination, in an electro locomotive car, of the traction wheels, a truck frame and an electro-motor supported by the same and movable relative to the traction wheels, means for frictionally transmitting power from the motor shaft to said traction wheels, a car body exerting its weight upon the transmission means and springs interposed between said truck frame and car body to permit the latter to vibrate independent of the motor and traction wheels, substantially as set forth. 4th. In an electro-motive car, the combination of the traction wheels having internal rims, an electro-motor, a suitable carrying frame supporting the motor and the car, a tubular shaft for the motor concentric with and surrounding the car axle, journal boxes for the said shaft located between the traction wheels supporting the carrying frame, frictional power transmitting wheels on the extremities of said motor shaft, and a transmitting wheel interposed in vertical line between the said wheels on the motor shaft