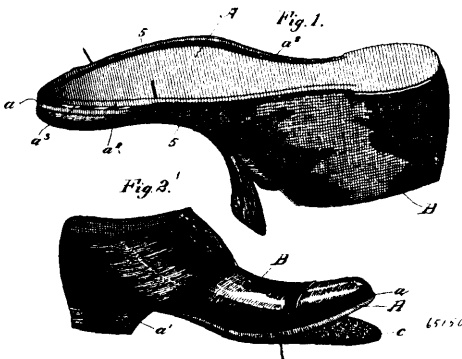


in the cavity and projecting beyond each end of the pen seat, the air tube filling the inner portion of the cavity in the pen seat and being firmly engaged with the inner walls of the plug of the pen seat, and the outer portion of the cavity being enlarged at its outer portion to form an ink reservoir and the air tube being formed with a longitudinally extending external groove forming an ink duct, the outer portion of the air tube serving to hold the pen point against the inner wall of the outer portion of the pen seat. 2nd. A fountain pen, having a barrel, a pen seat fitted in the open end thereof, and comprising a plug hermetically engaging the inner walls of the barrel and an outer portion projecting beyond the barrel, the pen seat being formed with a longitudinal cavity extending through it from end to end, and an air tube fitting in the cavity and projecting beyond the inner end thereof, the air tube filling the inner portion of the cavity in the pen seat and being firmly engaged with the inner walls of the plug of the pen seat, the cavity being enlarged at its outer portion to form an ink reservoir, and the air tube being formed with a longitudinally extending external passage forming an ink duct, and a pen point fixed in the outer portion of the pen seat.

No. 65,150. Shoe. (Chaussure.)



Albert Many, St. Hyacinthe, Quebec, Canada, 1st December, 1899; 6 years. (Filed 24th October, 1899.)

Claim.—1st. An inner sole for boots and shoes, comprising a blank, an extension integral therewith and extending from the toe portion of said blank to and terminating at the front of the heel portion, a groove or cut formed in the bottom of said sole adjacent to and parallel with said extension and terminating at substantially the same point, a second groove or cut formed substantially at the point of junction between said extension and said sole, substantially as described. 2nd. A boot or shoe comprising an upper, an inner sole adapted to be secured thereto and having an extension integral therewith and extending from the toe portion thereof to and terminating at the front of the heel portion, a groove formed in the bottom of said sole, adjacent to and parallel with said extension and terminating at substantially the same point, a second groove formed substantially at the point of junction between said extension and said sole, stitching passing through the bottom of said grooves and the upper, and an outer sole secured to the said extension of the inner sole, substantially as described.

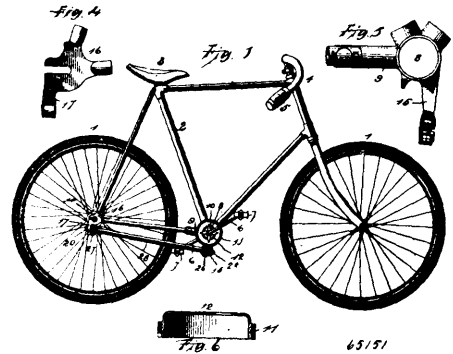
No. 65,151. Vehicle Driving Mechanism.

(*Mécanisme de commande pour véhicules.*)

Moses Carlyle Johnson, Hartford, Connecticut, U.S.A., 1st December, 1899; 6 years. (Filed 14th March, 1899.)

Claim.—1st. In combination in a vehicle, a geared driving mechanism including a driving member, a spiral gear fast to such driving member, a driven member with the spiral gear, a connecting shaft bearing spiral pinions in mesh with the gears on the driving member and driven member respectively, and means for imparting motion to the driving member. 2nd. In a geared driving mechanism for vehicles, in combination, a driving member provided with the spiral gear, a driven member placed at an angle with the driving member and having a spiral gear in mesh with the first named gear, the teeth of the intermeshing gears consisting of short sections of screw threads, all pitched to the same angle and in the same direction. 3rd. In a geared driving mechanism for vehicles, in combination with the frame and wheels, a crank shaft, a driving wheel shaft or hub, a connecting shaft, gears on the crank shaft and driving wheel respectively, pinions on the connecting shaft in mesh with the crank shaft gear and driving wheel gear respectively, all of said gears and intermeshing pinions having teeth consisting of short sections of screw threads or spirals pitched to the same angle and in the same direction on the respective gear wheels and pinions, the said angle of pitch of the teeth with reference to the axis of the

gear being equal substantially to one half the included angle formed by the axes of the intermeshed gears and pinions. 4th. In a bicycle,



in combination, a pair of wheels, a frame supported by the wheels, a crank shaft supported by the frame, a spiral gear connected with the crank shaft, a spiral gear connected with the hub of the driving wheel, and a pair of spiral pinions connected together by a hollow shaft and supported by bearings on the frame in such manner that the teeth of the pinions mesh with the teeth of the spiral gears, substantially as specified. 5th. In a bicycle, in combination, the wheels, the frame supported by the wheels, a crank shaft supported in the crank shaft bracket, a spiral gear connected with the hub of the driving wheel, a spiral pinion meshing with the spiral gear connected to the crank shaft, a spiral pinion meshing with the spiral gear at the driving wheel hub, a shaft connecting the spiral pinions, and means including ball bearing devices for supporting and connecting the said shaft with arms projecting from portions of the frame of the wheel and the arms. 6th. In a bicycle, in combination, the wheels, the frame supported by the wheels, the crank shaft supported by the frame, a spiral gear connected with the crank shaft, a spiral gear connected with the hub of the driving wheel, a spiral pinion meshing with the spiral gear at the crank shaft, a spiral pinion meshing with the spiral gear at the driving wheel hub, a hollow shaft connecting the spiral pinions, a rod extending through the hollow shaft and through arms projecting from a portion of the frame, said rod bearing near each end a ball cone, one of said ball cones being threaded and free to turn in a threaded opening in the arm, a binding bolt for clamping the threaded ball cone in position, and balls between the ball cones and spiral pinions, substantially as specified. 7th. In a bicycle having a rear driving wheel, geared driving mechanism extending between the crank shaft bracket and the driving wheel, a driving gear including a pair of screw gear wheels at the pedal crank axle, a pair of similar screw gear wheels at the driving wheel axle, and a shaft supported on the bicycle frame at its side and carrying the driven wheel of the front pair of gears and the driving wheel of the rear pair. 8th. In a bicycle, in combination with the frame, wheels and crank shaft, the crank shaft and the hub of the driving wheel having screw or spiral gears thereon, of a shaft carried by the frame and having screw or spiral pinions thereon each meshing with the gears on the crank shaft and driving wheel hub respectively, the pitch of the teeth of said gears and pinions being in the same direction and of the same angle whereby motion is communicated from the crank shaft to the driving wheel, and the end thrusts of the intermediate connecting pinions and shaft are eliminated, substantially as and for the purpose specified.

No. 65,152. Nut Lock. (Arrête-écrou.)

Richard Titus and William S. Walker, both of Bowling Green, Ohio, U.S.A., 1st December, 1899; 6 years. (Filed 6th November, 1899.)

Claim.—1st. In a nut lock, the combination with a bolt and a nut having a hollow extension which is internally and externally threaded and split longitudinally, of a clamping nut for the extension, and a key adapted to be inclosed by the clamping nut and having an interlocking engagement with the bolt and with the clamping nut, substantially as shown and described. 2nd. In a nut lock, the combination with a bolt, of a nut having a hollow conical extension split longitudinally forming opposite clamping jaws, the latter being externally and internally threaded, a clamping nut adapted to be fitted upon the conical extension and clamp the jaws thereof upon the bolt, and means whereby the clamping nut may be locked against being accidentally turned upon the extension, substantially as shown and described. 3rd. In a nut lock, the combination with a bolt, of a nut having a hollow conical extension split longitudinally forming opposite clamping jaws, the latter being externally and internally