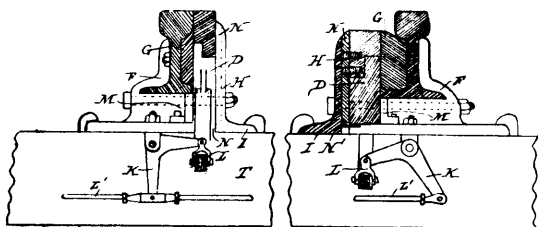
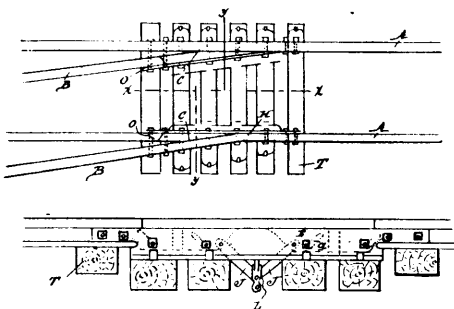


Claim.—1st. The process of producing a new compound or alloy of titanium and iron, containing some carbon, and titanium in industrially important proportions, that is to say, in excess of five per centum of titanium, which consists in supporting in a bath of molten iron and while subjected to intense heat, say not less than 3,500 degrees Fahrenheit, a mixture of carbon and of titanitic acid, substantially as and for the purposes described. 2nd. The process of producing a new compound or alloy of titanium and iron, containing some carbon, and titanium in industrially important proportions, that is to say, in excess of five per centum of titanium, which consists in supporting in a bath of molten iron and while subjected to intense heat, say not less than 3,500 degrees Fahrenheit, a mixture of carbon and of a compound, containing titanitic acid as one of its important constituents, substantially as and for the purposes described. 3rd. The process of producing a new compound or alloy of titanium and iron, containing some carbon, and titanium in industrially important proportions, that is to say, in excess of five per centum of titanium, which consists in supporting in a bath of molten iron and while subjected to intense heat, say not less than 3,500 degrees Fahrenheit, a mixture of carbon and of titaniferous iron ore, substantially as and for the purposes described. 6th. As a new article of manufacture, a new compound containing an important quantity of iron, say not less than ten per centum of the mass, some carbon, and titanium in industrially important proportions, that is to say, not less than five per centum of the mass, substantially as and for the purposes described.

No. 63,100. Railway Switch. (*Aiguille de chemin de fer.*)



63400

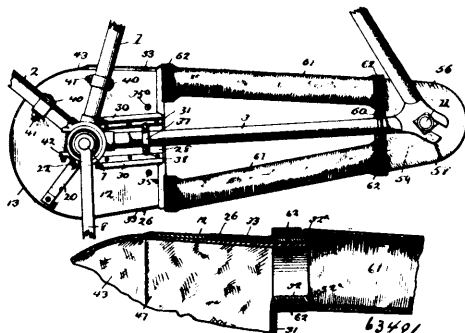
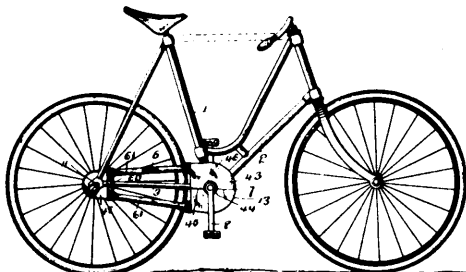
Thorn Copeman, Edgar Mills, Ontario, Canada, 7th July, 1899; 6 years. (Filed 2nd June, 1899.)

Claim.—1st. In a railway switch, the combination with the stationary rails of a main track and siding, of a vertically movable switch points in line with the inner rails at the junction with the outer rails, one switch point being depressed and the other at the level of the rails, a pair of sliding bearing blocks supporting each switch point and having inclined slots oppositely inclined in the two blocks, stationary bolts passing transversely through these slots, toggles connecting the inner ends of each pair of bearing blocks together, and operative connection for actuating the toggles in opposite directions by the movement of the switch-rod. 2nd. In a railway switch, the combination with the stationary rails of a main track and siding, of vertically movable switch points in line with the inner rails at the junction with the outer rails, one switch point being depressed and the other at the level of the rails, a pair of sliding bearing blocks supporting each switch point and provided with inclined slots formed with horizontal offsets, toggles connecting the inner ends of each pair of bearing blocks and adapted to move the same in opposite directions, stationary bolts extending transversely through the slots in the bearing blocks, means at the ends of said bearing blocks adapted to support said ends when the blocks are in raised position and operative connection with the switch rod for actuating the toggles of the two pair of bearing blocks in opposite directions. 3rd. In a railway switch, the vertically movable switch points in combination with sliding bearing blocks below the same and having inclined guide slots formed with horizontal offsets, bolts passing transversely through these slots and supporting the bearing blocks slidably in position, and means for operating the bearing blocks. 4th. In a railway switch, the combination with the stationary rails of a main and side track,

of the vertically movable switch points *c*, the bearing blocks *D* having inclined slots *a* formed with horizontal offsets *a*¹, the bolts *E* passing through said slots, the chairs *F* and cover plate *H* in which said bolts are supported upon the ties, the vertical guides *N* secured to the switch points and projecting beneath the bearing blocks, the toggles *J*, the bell cranks *K* adapted to move said toggles in opposite directions and the connecting rod *L* for operating the same.

No. 63,101. Gear Casing for Bicycles.

(*Etui d'engrenage de bicyclet.*)



63401

Charles H. Wills, New Philadelphia, Ohio, U.S.A., 7th July, 1899; 6 years. (Filed 30th January, 1899.)

Claim.—1st. In a gear case for bicycles, a metal case to close the periphery and one side of the sprocket wheel, combined with a diaphragm of flexible material secured to said case to inclose the other side of the sprocket wheel, said diaphragm comprising a main body portion having a central opening to receive a crank shaft or other rotating member and being cut in a substantially horizontal plane from said opening to one edge to form a folding section, and a flap secured at its lower horizontal edge to the lower edge formed by said cut and adapted to be secured at its upper and outer vertical edge to the casing, and said folding section being adapted to be secured at its edges to the flap, substantially as described. 2nd. In a gear case for bicycles, a metal case for the front sprocket wheel consisting of two metal sections adapted to have a sliding connection to each other on a horizontal plane to inclose the periphery and one side of the wheel, means to detachably lock the sections together, and to the bicycle frame, a diaphragm of flexible material secured to said case to inclose the other side of the sprocket wheel, said diaphragm comprising a main body portion having a central opening to receive the crank shaft, and being cut on a horizontal plane from said opening to one edge to form a folding section, and a flap secured at its lower horizontal edge to the lower edge formed by the said cut and adapted to be secured at its upper and outer vertical edges to the casing, and said folding section being adapted to be secured at its edges to the flap, substantially as described and for the purpose specified. 3rd. In a gear casing for bicycles, a metal case for the front sprocket wheel, consisting of two metal sections adapted to have a sliding connection with each other, one of said sections having a slot to receive the crank hanger, and a curved lateral flange to embrace the lower portion of the hanger, an elbow brace connected to the casing and the lateral flange, and having a hook extending parallel with said flange, means to detachably lock the sections together, and a clip embracing the crank hanger and engaging in said hook, substantially as described. 4th. In a gear casing for bicycles, a metal case for the front sprocket wheel formed of two sections adapted to be slidably connected to each other, each section having a plate portion, one of which has guideways and the other flanges to slide in said guideways, one section having a lateral flange around its sides and front end and the other section having sleeves at its rear end for the passage of the sprocket chain, and a lateral flange extending from its rear end between the sleeves to partially close the rear end of the case, and said plate portions having threaded openings adapted to register with each other when the sections are in position around the sprocket wheel, combined with screws to fit in said registering openings, perforated spring strips secured to one casing and adapted to engage pins on the other