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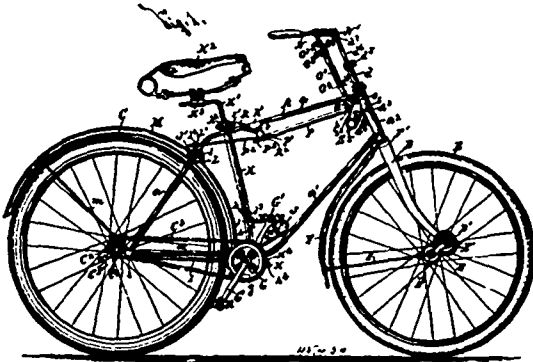
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INVENTIONS PATENTED.

NOTE.—Patents are granted for 15 years. The term of years for which the fee has been paid, is given after the date of the patent.

No. 45,450. Bicycle. (Bicycle.)



Henry La Casse, Rochester, New York, U.S.A., 1st March, 1894
6 years.

Claim. 1st. In a bicycle, the combination of a front wheel B having an axle *b*, a pair of links E E extending upwardly and forwardly from the axle, and having their lower ends rigidly secured to the opposite ends of the axle, a fork D hinged to the upper ends of the links, a spring E¹, having one end secured to the fork, and the other end to one of the links, and shoulders D² E², formed on said link, and fork for limiting the movement of the link, substantially as and for the purpose set forth. 2nd. In a bicycle, the combination of a front wheel B having a hub *b*¹, and an axle *b*, a pair of links E E extending upwardly and forwardly from the axle, and having their lower ends rigidly secured to the opposite ends of the axle, a fork D hinged to the upper ends of the links E, springs E¹ E¹, having their upper ends secured to the fork and their lower ends to the corresponding links, shoulders D², D², formed on said links and fork for limiting the movement of the links, and anti-friction balls *b*⁴, *c*¹, between the axle *b*, and the front wheel hub *b*¹, and between the upper ends of the links E and the fork D, substantially as and for the purpose specified. 3rd. In a bicycle, the combination of the front and rear wheels B, C, a frame A supported on the wheels, a pedal-shaft G, a knuckle-joint H interposed between the pedal-shaft and the frame, and comprising a series of levers pivoted to each other, and also to the pedal-shaft and to the frame, and a spring J for supporting said knuckle-joint H in its normal position,

substantially as and for the purpose set forth. 4th. In a bicycle, the combination of the front and rear wheels B, C, a frame A supported on said wheels, a pedal-shaft G, a knuckle-joint H interposed between the pedal-shaft, and the frame and comprising a series of levers pivoted to each other, and also to the pedal-shaft and to the frame, a spring J for supporting said knuckle-joint in its normal position, and a link I, having one end connected to said knuckle-joint, and the other end hinged to the frame at a point at the rear of the point of support of the knuckle-joint upon the frame, substantially as and for the purpose specified. 5th. In a bicycle, the combination of a frame A, a pedal-shaft G, a lever H projecting from the pedal-shaft, a pair of levers H¹, H², having their adjacent extremities hinged together, and having their opposite ends hinged respectively, to the frame A, and to said lever H² projecting from the pedal-shaft, and anti-friction balls *b*⁴, between said levers and between said frame and the one of said levers hinged to the frame, substantially as and for the purpose set forth. 6th. In a bicycle, the combination of a frame A, a seat K², a seat support K, a knuckle-joint H between the frame and the seat support, and an adjustable spring J secured to said frame and to said seat support, substantially as and for the purpose specified. 7th. In a bicycle, the combination of the front and rear wheels B, C, a frame A supported on said wheels, a pedal-shaft G, a knuckle-joint H interposed between the pedal-shaft and the frame and comprising a series of levers pivoted to each other and also to the pedal-shaft and to the frame, a spring J for supporting said knuckle-joint H in its normal position, a link I having one end connected to said knuckle-joint and the other hinged to the frame at a point at the rear of the point of support for the knuckle-joint upon the frame, and a seat support K mounted on said knuckle-joint and provided with a seat K², substantially as and for the purpose set forth. 8th. In a bicycle, the combination of a frame A, a pedal-shaft G, a knuckle-joint H interposed between the pedal-shaft and the frame, and comprising a series of levers pivoted to each other and also to the pedal shaft and to the frame, a link I having one end connected to said knuckle-joint, and the other hinged to the frame at a point at the rear of the point of support of the knuckle-joint upon the frame, a seat support K provided at its upper end with a seat K² and having its lower end supported on said knuckle-joint H and provided with a series of notches or seats *k*, and a spring J having one end hinged to the frame A and the other end removably engaged with the notches or seats *k*, substantially as and for the purpose specified. 9th. In a bicycle, the combination of a frame A provided at its rear end with a screw-threaded arm *a*¹, a rear wheel C provided with an axle *c*, an arm or connecting piece C² having one end supported on the rear axle and the other movable on said screw-threaded end of the frame, nuts C³ movable upon said screw-threaded frame end and engaged with the arm or connecting plate C⁴ for holding the same in position, a pedal-shaft G supported on the frame and power transmitting mechanism connecting said rear wheel and the pedal-shaft, substantially as and for the purpose set forth. 10th. In a bicycle, the combination of a frame A, a rear wheel C movable lengthwise of the frame, means, substantially as described, for securing the wheel in its adjusted position on the frame, a pedal-shaft G, a link I having one end hinged to the frame and the other connected to support the pedal-shaft, and a spring J holding the pedal-shaft in position, substantially as and for the purpose specified. 11th. In a bicycle, the combination of a frame A, a pedal-shaft G, a movable link I for supporting the pedal-shaft secured to the frame, and a handle bar N connected, substantially as described, to said support, whereby the handle bar vibrates in unison with the pedal-shaft, substantially as and for the purpose set forth. 12th. In a bicycle, the combination of a frame A, a seat support K movably supported on the frame, a handle bar N connected, substantially as described, to said seat support, whereby the handle bar vibrates in unison with the