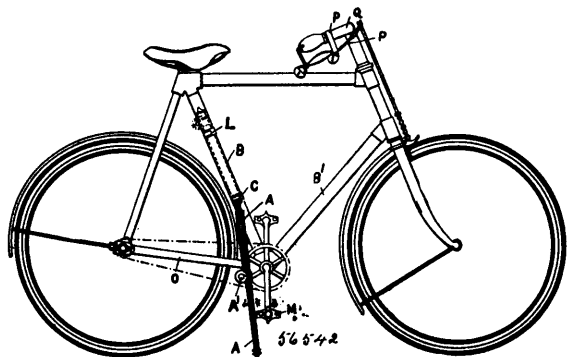


ate of said hub and carrier, and a side shaft extending into the end of said hub and movable relatively thereto. In a bicycle, the combination of a casing having an annular open end, and also having interior screw-threads, a transverse shaft carrying a gear, a side-shaft gear meshing with and adjustable toward and from said transverse shaft-gear, and having an elongated hub, a carrier surrounding said hub, and having screw-threads on its exterior face engaging with the screw-threads of the casing, ball bearings intermediate of said hub and carrier, a side shaft connected with, and laterally movable within and relatively to said hub, a tubular holder for the said side shaft in juxtaposition with said casing, and a clamping-collar connecting said holder and casing, and rotatable with respect thereto, and having internal differential holding means engaging corresponding external differential holding means upon the holder and casing, respectively, for securing said holder and tubular casing removably together. 5th. In a bicycle, the combination of a casing, a transverse shaft, a gear upon said shaft, a side-shaft gear, a carrier for said side-shaft gear, adjustably mounted in said casing, a side shaft connected with said side-shaft gear, and laterally movable relatively to and at its point of connection therewith, a tubular holder inclosing said side shaft, and constituting a side bar of the frame, and a clamping collar in connection with, and adapted for adjusting and locking, said holder and casing relatively to one another, longitudinally. 6th. In a bicycle, the combination of a casing having an annular open end, and having interior screw-threads, a transverse gear-shaft, an exteriorly-threaded side-shaft gear-carrier engaging the interiorly-threaded casing, and longitudinally adjustable relatively thereto, a tubular holder for inclosing the side shaft, and in juxtaposition with said casing, and a clamping-collar connecting said holder and casing, and rotatable relatively thereto, and having internal differential holding means upon the holder and casing, respectively, said collar being rotatively movable, longitudinally, with respect to one of said parts, but fixed longitudinally with respect to the other part. 7th. In a bicycle, the combination of a casing, a transverse shaft having a gear, a side-shaft gear, a side shaft connected with said side-shaft gear, and movable relatively thereto, a tubular holder inclosing said side shaft, and constituting a side bar of the frame, and having an enlarged end having its free edge in parallelism with, and engaging the free edge of the casing, and removable means encircling said enlarged end of the holder and casing and rotatable relatively thereto, for securing said holder and casing removably and adjustably together. 8th. In a bicycle, the combination of a casing having interior screw-threads, an adjustable gear-carrier having screw-threads on its exterior, and adapted to engage the screw-threads of the casing, and having a longitudinal adjustment relatively to said casing, a tubular side-shaft holder, and a clamping-collar connecting said holder and casing, and rotatable relatively thereto, and having internal differential holding means engaging corresponding differential holding means upon the holder and casing, for securing said holder and casing removably and adjustably together.

No. 56,542. Bicycle Rest or Support.

(Support et appui pour bicycles.)



Donald Gunn Ross, Dundee, Natal, 8th July, 1897; 6 years. (Filed 29th September, 1896.)

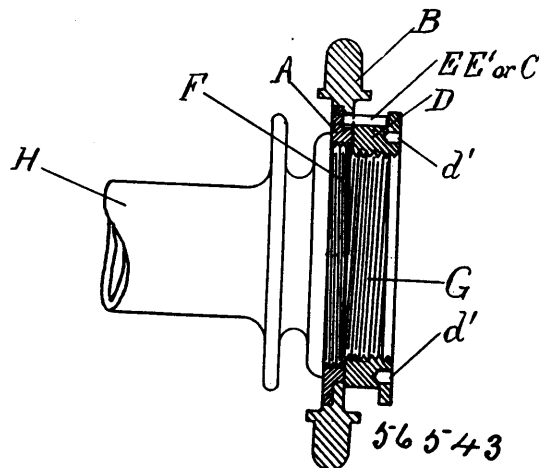
Claim.—1st. A stand for bicycles, consisting of a telescopic leg hinged or coupled to the bicycle frame, and a coupling hook N hinged to the leg and capable of engaging the thrust rod or other part of the bicycle frame, whereby the telescopic leg can be held rigid at a given angle with the bicycle and form a rigid support therefor when standing, substantially as described. 2nd. A leg for supporting bicycles when standing, comprising an outer tube a and one or more inner tubes a^1 arranged telescopically, in combination with means such as screw A^1 and lugs A^2 for clamping the inner and outer tubes together substantially as and for the purpose described.

No. 56,543. Sprocket-Wheel for Bicycles.

(Roue dentée pour bicycles.)

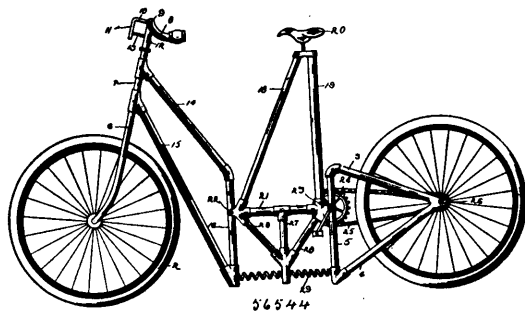
Edgar Descum Misner, Toronto, Ontario, Canada, 8th July, 1897; 6 years. (Filed 11th February, 1897.)

Claim.—1st. In a bicycle hub on which are systems of screw-threads intended for a sprocket-wheel and its locking nut, the apply-



ing to one of these systems of screw-threads a detachable sprocket-wheel centre A upon which a sprocket-wheel may be placed, substantially as described. 2nd. In a bicycle hub on which are systems of screw-threads intended for a sprocket-wheel and its locking nut, the applying to one of these systems of a detachable sprocket-wheel centre A upon which a sprocket-wheel may be placed, the detachable sprocket-wheel centre A having a notched flange, the notches a^1 , a^2 , a^3 , capable of receiving keys or the ends of a ring so as to furnish a driving connection between the sprocket-wheel and its detachable centre, all substantially as hereinbefore set forth and described with reference to the accompanying drawings.

No. 56,544. Bicycle. (Bicycle.)



Daniel Carpenter, Goshen, New York, U.S.A., 8th July, 1897; 6 years. (Filed 1st May, 1897.)

Claim.—1st. In a wheeled vehicle, the combination with front and rear frames in which the carrying-wheels are mounted, of an intermediate frame pivotally connected thereto on horizontal axis and a spring interposed between the front and rear frames and connected to the intermediate frame, substantially as and for the purpose specified. 2nd. In a wheeled vehicle, the combination with separate and independently movable front and rear frames, of an intermediate frame pivotally connected thereto, on horizontal axis, a seat supported on said intermediate frame, and one or more springs connecting the front and rear frames and the intermediate frame, substantially as and for the purpose specified. 3rd. In a bicycle, the combination with the front and rear wheels, of separate and independently movable frames in which said wheels are journaled, said frames comprising substantially vertical bars, a seat frame arranged between said wheel frame and pivotally connected thereto on horizontal axis and also provided with a depending portion lying intermediate the vertical bars of the wheel frames, and one or more springs interposed between the wheel frames and the seat frames, substantially as described. 4th. In a foot propelled vehicle, the combination with a handle bar stem, of a handle bar pivotally connected thereto on a horizontal axis and provided with an extension projecting in front of said stem and a spring interposed between said stem and extension and connected to said parts, substantially as and for the purpose specified. 5th. In a bicycle, the combination with an oscillatory handle bar, of a spring for cushioning the movement of said handle bar, substantially as described. 6th. In a bicycle, the machine frame composed of three sections, the end sections being hinged connected to the intermediate section, and one or more springs connecting the several sections and permitting the same to oscillate relatively to each other, substantially as described.