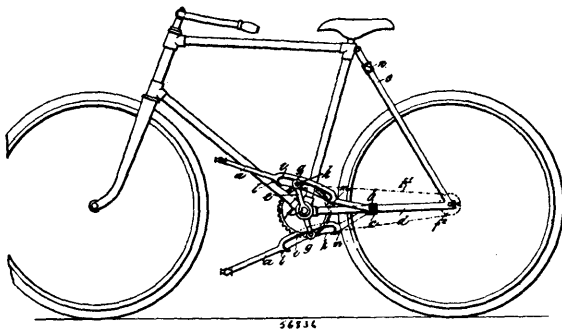


tube connecting the casing of the first-mentioned bracket with the last-mentioned bracket. 6th. In a bicycle, a crank-shaft bracket comprising a tubular body portion having a laterally-disposed and a longitudinally disposed gear-receiving case at one end thereof, and opening one case into the other and provided, each case, with a removable cap, in combination with a crank-shaft having a bearing at one end in the cap of the longitudinally-disposed case, and at its opposite end in the tubular body portion thereof, and carrying a bevel-gear inclosed by said longitudinally-disposed case, a bevel-gear inclosed by and having fixed bearings in the laterally-disposed case, and adapted for movable connection with the side shaft. 7th. In a bicycle, the combination with the pedal-shaft and its gear, and the driving-wheel and its gear, of a tubular bracket inclosing the pedal-shaft and pedal-shaft gear and having a lateral cup-shaped extension to form a casing for a side-shaft gear, a bracket adjacent to the driving-wheel and having a casing inclosing the driving-wheel gear and adapted to receive and inclose a side-shaft gear, a side tube having cup-shaped extensions at opposite ends in removable engagement with the side-shaft gear casings, and two side-shaft gears supported one at each end of the side-shaft in fixed bearings in the two casings, respectively, and connected with the side-shaft so as to permit a lateral movement of said shaft relative to said gears. 8th. In a bicycle, the combination of a relatively rigid crank-shaft bracket having a longitudinally-disposed and a laterally-disposed gear-case secured thereto, a relatively rigid driving-wheel bracket having a laterally-disposed gear-receiving case fixedly secured thereto, two relatively flexible side tubes one of which has an enlarged extension at each end thereof one extension being removably secured to the laterally-disposed case of the crank-shaft bracket and the other extension being removably secured to the laterally-disposed case of the driving-wheel bracket, a crank-shaft journaled in the crank-shaft bracket and carrying a gear-wheel inclosed by one of the cases of said bracket, a driving-wheel carried by the driving-wheel bracket and having a gear-wheel inclosed by the case of said bracket, two independent gears one of which meshes with the gear of said driving-wheel and has a fixed bearing in the driving-wheel-bracket case adapted to support the outer end of said gear and the other of which meshes with the crank-shaft gear and has a fixed bearing in the laterally-disposed case of the crank-shaft bracket adapted to support the outer end of said gear, adjustable bearings in the enlarged extensions of the side tube and adapted to support the inner ends of said respective gears, and a side shaft incased by said side tube and having laterally and longitudinally movable connections at its opposite ends with two independent gears.

**No. 56,836. Cycle Propelling Mechanism.**  
(*Mécanisme de propulsion pour cycles.*)



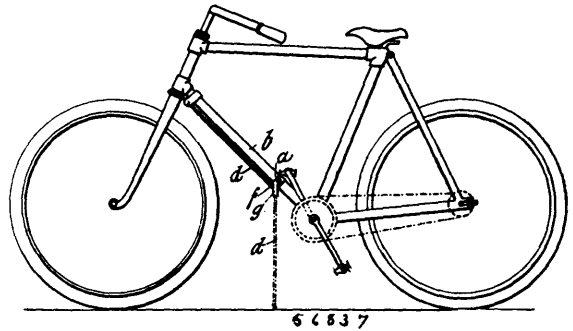
George Thomas Booth and William Scott, both of Canterbury, New Zealand, 28th July, 1897; 6 years. (Filed 23rd June, 1897.)

**Claim.**—1st. In a cycle propelling mechanism the combination of a sprocket pinion upon the driving wheel of the machine driven from a sprocket which has rotary motion communicated to it by cranks upon its axle carrying rollers engaging with curved slots in vibratory pedal levers pivoted upon the frame of the machine, substantially as specified. 2nd. In combination, vibratory pedal levers *a*, journaled upon pins *b*, carried upon brackets *c*, secured to the chain stays *d*, curved brackets *e*, upon the levers *a*, rollers *g*, journaled upon pins *k*, of the cranks *e*, secured to spindle *f*, having a sprocket driving wheel fixed upon it, communicating motion to a pinion *f*<sup>2</sup>, substantially as specified. 3rd. In combination the pivoted pedal lever *a*, the spindle *f*, having a crank *e*, carrying a flanged roller *g*, a curved bracket *i*, upon the lever and a correspondingly curved guard *k*, hinged at one end to the bracket and secured by a bolt at the other, substantially as specified. 4th. In combination a vibratory pedal lever pivoted at one end to a frame of a cycle and a spring clip *n*, secured to the frame above it, substantially as and for the purposes herein described.

**No. 56,837. Bicycle Support.** (*Support de bicycles.*)

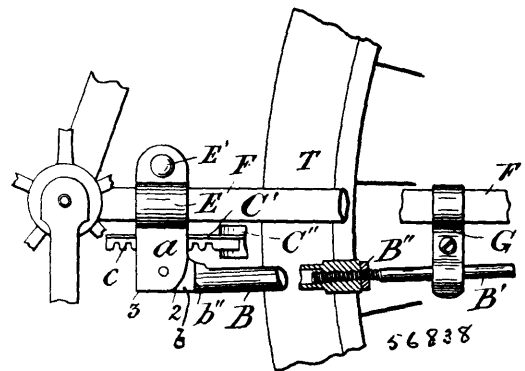
Edwin Robert Stanfield and Thomas De Renzy Harman, both of Canterbury, New Zealand, 28th July, 1897; 6 years. (Filed 23rd June, 1897.)

**Claim.**—1st. In bicycle support consisting of a prop pivotally connected to a bracket clamped to the frame, means for preventing side-



play of the prop and for retaining it at the best angle to support the machine, substantially as herein described. 2nd. In combination, a prop pivotally connected to a bracket clamped to the frame of a bicycle, a sheath projecting from the bracket having channels, into one or other of which the prop takes when required to support the machine, substantially as and for the purposes herein described. 3rd. A prop having a bifurcated end in which are oblong holes receiving a pin, hinging the prop to a swivel piece pivoted upon a bracket, clamped to the frame of a bicycle, an ear upon the bracket, passing between the bifurcation and a lip under the prop taking into a recess in the ear, substantially as and for the purposes herein described. 4th. A prop, one end having an eye in which is an oblong hole receiving a pin, hinging the prop to a swivel piece pivoted upon a bracket clamped to the frame of a bicycle, a projection upon the prop taking into a recess in the underside of the bracket when the prop is in supporting position, substantially as and for the purposes herein described.

**No. 56,838. Bicycle Support.** (*Support de bicycles.*)



Horace Walter Chamberlin, Ottawa, Ontario, Canada, 28th July, 1897; 6 years. (Filed 25th June, 1897.)

**Claim.**—1st. In a bicycle support, the combination of a saddle plate with angularly disposed lugs, a pair of legs each having one end shouldered and flattened and pivoted to one of the said lugs, a toothed sector formed on each flat end of each leg, a plate secured slidingly in the gullet of said saddle plate and provided near each edge with a toothed rack adapted to gear into one of said sectors, a brake shoe at one end of said sliding plate adapted to press against the wheel tire, a spring clip secured to the upper face of said saddle plate and adapted for attachment to the parts of a bicycle between the crank axle and the rear wheel tire, a cross-piece or stay secured to the pivots of the legs and forming washers on the flat ends, a bow spring on said stay pressing on the underside of said sliding plate and spring clips secured to the rear wheel fork bars adapted to carry said legs, substantially as set forth. 2nd. In a bicycle support, the combination of a saddle plate with angularly disposed lugs, each having one corner rounded and the other square, a pair of legs having shouldered and flattened ends pivoted to said angular sides, one on each, a toothed sector formed on the edge of each flattened end, a groove in each angular lug near the upper plate, a sliding plate in the gullet of said saddle plate having its edges secured slidingly in said grooves, and rack teeth formed on each side of said sliding plate, angularly disposed to be parallel to the angular lugs and adapted to gear in said sectors, substantially as set forth. 3rd. In a bicycle support, the combination with the rear wheel fork bars, of a saddle plate having angularly disposed sides, having their forward corners square and the rear corners rounded, a pair of legs having their upper ends flattened and shouldered and one pivoted to the inner face of each angular lug, a toothed sector formed on the edge of each flattened end of said legs, a plate secured slidingly in the gullet of said saddle plate and provided near each edge with a toothed rack angularly disposed to be parallel to the