

Title (en)  
COMBINED OUT-IN STROKE MECHANICAL TRANSMISSION FOR FACILITATING AND MULTIPLYING THE SPEED OF CYCLES AND OTHER PEDAL APPLIANCES

Title (de)  
MECHANISCHES ZWEI-WEGE-GETRIEBE ZUR ERHÖHUNG DER GESCHWINDIGKEIT VON FAHRRÄDERN UND ANDEREN PEDALGETRIEBENEN APPARATEN

Title (fr)  
TRANSMISSION MECANIQUE COMBINEE EN ALLER-RETOUR POUR FACILITER ET MULTIPLIER LA VITESSE DES CYCLES ET AUTRES APPAREILS A PEDALES

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Application  
**EP 01980631 A 20011023**

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Abstract (en)  
[origin: FR2815931A1] The invention concerns a combined out-in stroke mechanical transmission for facilitating and multiplying speed of cycles and other pedal systems. The invention is designed to limit the rotation rate of the bottom bracket and the force on the pedals while multiplying speed and it consists in combining elements of transmission from a first multiplying gear element (A2RL) free-wheel mounted (3) on the bottom bracket axle which drives it in its rotation by the movement of the pedals in the forward moving direction, passing through intermediate multiplying gear elements (B, C, ) consisting of concentric toothed wheels rotating on axles fixed in a chassis linked to the frame up to the last sprocket (Z2), fixed on the hub to the rear wheel so as to rotate with it and benefit, through the momentum, of its incremental effect to return energy through the same gears to release the bottom bracket axle by the free wheel effect (3) and thereby relieve pedalling. The invention replaces standard transmission or more frequently takes over therefrom through a clutch when it is mounted in parallel. The invention is applicable in the industry of cycles and other similar means of locomotion.

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