Application Number: 10202300455T IPOS reference: 2026/00087302PF12X
My reference: BKOPFRS

Claims

1. A pedal-powered vehicle comprising:

- a frame;
- a front wheel and a rear wheel;
- a drive system configured to drive the front wheel;
- a steering system configured to steer the rear wheel; and
- a pedal drive assembly comprising a first pedal and a second pedal,

characterised in that

the pedal drive assembly comprises first and second pedal drive axles that are arranged independently of one another and positioned away from the axis of the front wheel,

wherein each pedal drive axle is operatively coupled to the front wheel via a respective transmission means such that rotation of each pedal contributes to forward rotation of the front wheel,

and wherein the pedal drive assembly is arranged such that the rider's shoe does not clash with the front wheel when pedalling whilst turning**.**

2. A pedal powered vehicle as claimed in claim 1 is a bicycle.

3. A bicycle as claimed in claim 2 having dimensions suitable for carriage on public transport without the need to fold the main frame that carries the wheels.

4. A bicycle as claimed in any preceding claim, further comprising a cargo carrying means integrated within the overall volume of the bicycle such that the bicycle is suitable for carriage on public transport.

5. A bicycle as claimed in claim 4, wherein the cargo carrying means is fixed or detachable, and comprises two or more auxiliary wheels positioned within the overall volume of the bicycle, the detachable cargo carrying means being usable as a shopping trolley .

6. A bicycle as claimed in any preceding claim, wherein the configuration reduces or eliminates wheel flop.

7. A bicycle as claimed in any preceding claim, wherein the arrangement enables a reduced wheelbase relative to a conventional bicycle while maintaining clearance between the rider's shoe and the front wheel when pedalling whilst turning.

8. A bicycle of as claimed in claim 1 or 2, wherein the frame comprises a front head tube and a rear head tube, both oriented substantially vertical.

9. A bicycle as claimed in any preceding claim, wherein the configuration enables a rider's legs to

extend and retract without additional vertical displacement during turning.

10. A bicycle as claimed in any preceding claim, wherein the steering is effected such that rider's arms movement during turning is substantially horizontal compared to conventional bicycles..

11. A method of forming a pedal-powered vehicle comprising the steps of:

- providing a frame supporting a front wheel and a rear wheel;
- configuring the front wheel to be driven and the rear wheel to be steered; and
- providing a pedal drive assembly,

characterised by

mounting a first pedal and a second pedal on respective pedal drive axles that are arranged independently of one another and positioned away from the axis of the front wheel,

and coupling each pedal drive axle to the front wheel via a respective transmission means, wherein the pedal drive assembly is arranged such that the rider’s shoe does not clash with the front wheel when pedalling whilst turning.