

# Linked Round Eccentric Cam Drivetrain

## Concept drivetrain for bicycle

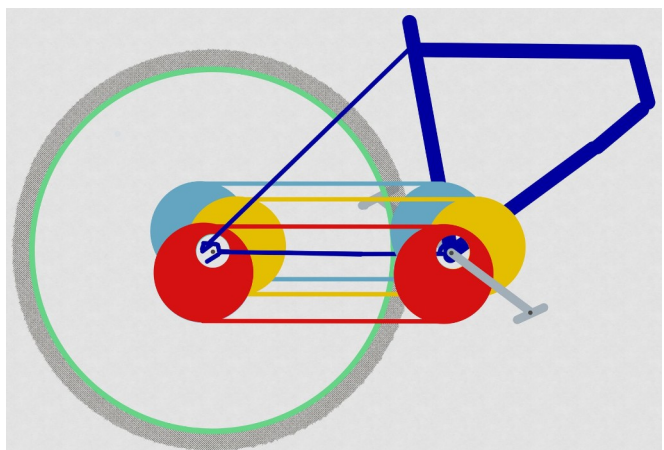
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### Scope

Bicycle cam drivetrain was made to be a simple drivetrain that has minimal wear and easy to maintain, no lubrication or minimal, resistant to mud and dirt, reliable.

### Description (Fig. 4, Fig. 3)

It is made from six round profile cams split in two sets three on the driven shaft (on the wheel axle, in the place of the cassette) and three on the driver shaft (the axle with



pedals, instead of crank arms). In each set the profile centre is shifted by 120 degrees from the each other on the common rotation axis.

The cams makes linked pairs with the cams on the other shaft.

### Variants

It has two variants:

Type A : (Fig. 1) Has on top of the cam profile a guide shaped U, V etc. for a cable, cord, rope, belt or chain. The cams pairs from the driven and driver shaft must be the same size and with the same eccentricity.

Even that has cable, belt or chain are in motion, there is no slippage because transfer of power is done by pulling the cam like a lever and that balance the cable loop on both sides. Because of this the cam profile guide for the cable can be loose for minimizing the friction loss because of the fitting.

Type B : (Fig. 2) Has on top of the cam profile installed a roller bearing. And on top of that is installed a rods or a couple of rods that link to the other cam that is in pair with it. The mechanism is similar eccentric and rod mechanism.

The cams pairs can have different sizes but the eccentricity must be the same. Because there are three pairs the linkage between them can be also flexible instead of rods.

Drawings:

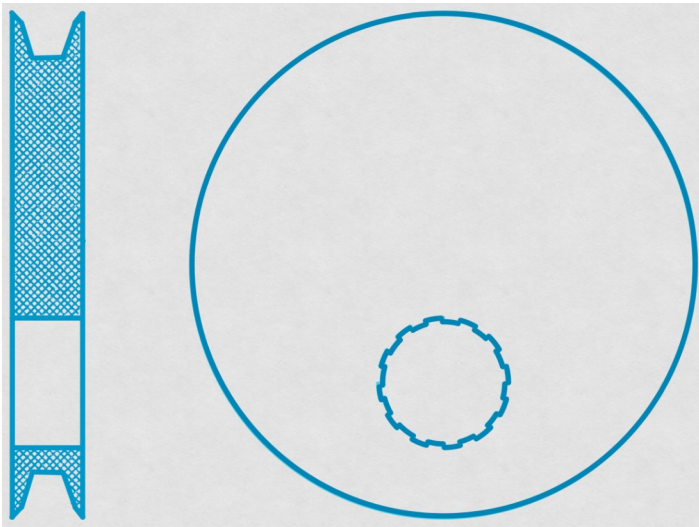


Fig. 1

Type A cam from Linked  
Round Eccentric Cam  
Drivetrain.

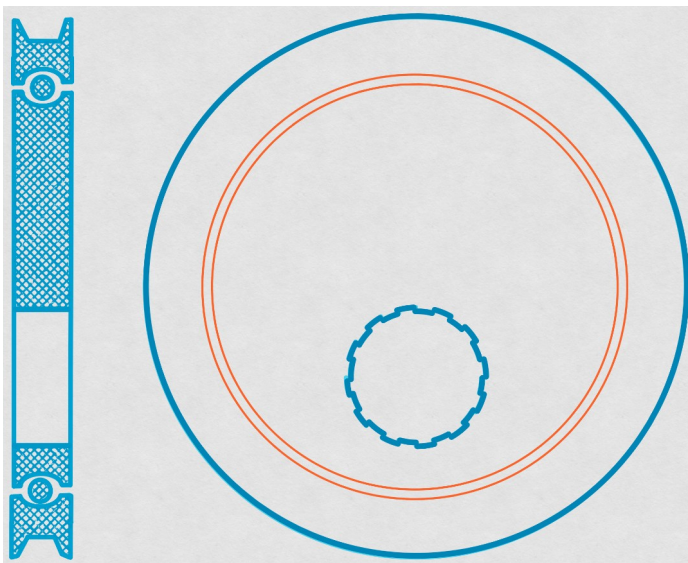


Fig. 2

Type B cam from Linked  
Round Eccentric Cam  
Drivetrain.

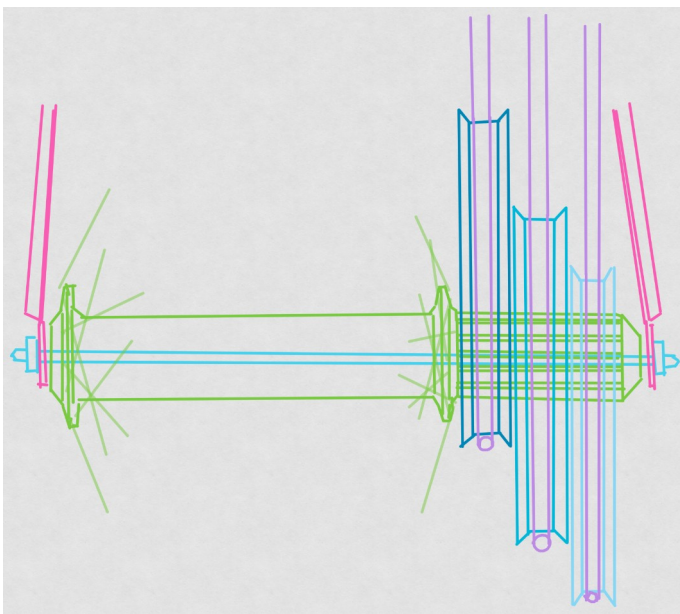


Fig. 3

Back wheel hub and Type  
A  
drivetrain.

