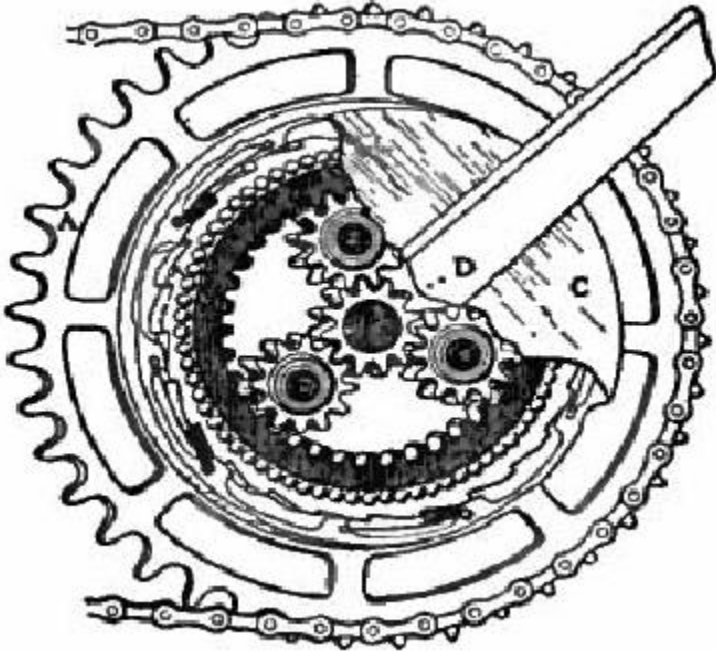


Material Drawing: Gear Assembly



A fixed-gear bicycle (or fixed-wheel bicycle, commonly known in some places as a fixie) is a bicycle that has a drivetrain with no freewheel mechanism. The freewheel was developed early in the history of bicycle design but the fixed-gear bicycle remained the standard track racing design. More recently the "fixie" has become a popular alternative among mainly urban cyclists, offering the advantages of simplicity compared with the standard multi-gear bicycle.

Most bicycles incorporate a freewheel to allow the pedals to remain stationary while the bicycle is in motion, so that the rider can coast, i.e., ride without pedalling using forward momentum. A fixed-gear drivetrain has the drive sprocket (or cog) threaded or bolted directly to the hub of the back wheel, so that the rider cannot stop pedalling. When the rear wheel turns, the pedals turn in the same direction.[1] This allows a cyclist to apply a braking force with the legs and bodyweight, by resisting the rotation of the cranks. It also makes it possible to ride backwards although learning to do so is much more difficult than riding forward.

As a general rule, fixed-gear bicycles are single-speed. A derailleur cannot be fitted because the chain cannot have any slack, but hub gearing can, for example a Sturmey-Archer fixed-gear 3-

speed hub, in which case is a fixed-gear multi-speed arrangement. Most fixed-gear bicycles only have a front brake, and some have no brakes at all.[2]