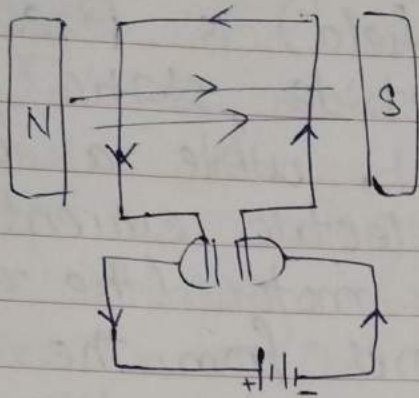


WORKING OF DC MOTOR



When a wire is connected to a battery as demonstrated above, a direct current (DC) flows through it, producing a temporary magnetic field all around it. This temporary field repels the original field from the permanent magnet, causing the wire to flip over. Normally the wire would stop at that point and then flip back again, but if we use an ingenious, rotating connection called a commutator, we can make the current reverse every time the wire flips over, and that means the wire will keep rotating in the same direction for as long as the current keeps flowing.

In A Nutshell : A DC electric motor is based on a loop of wire turning around inside the fixed magnetic field produced by a permanent magnet. The commutator (a slip ring) and brushes (carbon contacts to the commutator) reverse the electric current every time the wire turns over, which keeps it rotating in the same direction.

PROPERLY EXPLAINED:

In a DC motor, the magnet (and its magnetic field) is fixed in place and forms the outside, static part of the motor (the stator), while a coil of wire carrying the electric current forms the rotating part of the motor (the rotor). The magnetic field comes from the stator, which is a permanent magnet, while we feed the electric power to the coil that makes up the rotor. The interaction between the permanent magnetic field of the stator and the temporary magnetic field produced by the rotor is what makes the motor spin.