**ROCKER-BOGIE**

The **rocker-bogie** system is the [suspension](https://en.wikipedia.org/wiki/Suspension_(vehicle)) arrangement used in the [Mars rovers](https://en.wikipedia.org/wiki/Mars_rover) (mechanical [robot](https://en.wikipedia.org/wiki/Robot)) introduced for the [Mars Pathfinder](https://en.wikipedia.org/wiki/Mars_Pathfinder) and also used on the [Mars Exploration Rover (MER)](https://en.wikipedia.org/wiki/Mars_Exploration_Rover) and [Mars Science Laboratory (MSL)](https://en.wikipedia.org/wiki/Mars_Science_Laboratory) missions. It is currently [NASA](https://en.wikipedia.org/wiki/NASA)'s favored design.

The term “rocker” comes from the rocking aspect of the larger links [on each side of the suspension system. These rockers are connected to each other and the vehicle chassis through a [differential](https://en.wikipedia.org/wiki/Differential_(mechanical_device)). Relative to the chassis, when one rocker goes up, the other goes down. The chassis maintains the average pitch angle of both rockers. One end of a rocker is fitted with a drive wheel and the other end is pivoted to a bogie.

The term “[bogie](https://en.wikipedia.org/wiki/Bogie#Tracked_vehicles)” refers to the links that have a drive wheel at each end. Bogies were commonly used as load wheels in the tracks of army tanks as idlers distributing the load over the terrain. Bogies were also quite commonly used on the trailers of semi trailer trucks. Both applications now prefer [trailing arm suspensions](https://en.wikipedia.org/wiki/Trailing_arm_suspension).