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 (54) Title: An inter-axle differential assembly, a driving axle assembly and a motor vehicle
 (56) Cited documents: DE 102008015227 A1
 (57) Abstract:

An inter-axle differential assembly (8) for distribution of torque between two driving axles in a motor vehicle, comprising a driving input shaft (11), a forward differential wheel (12), a rear differential wheel (23), a differential spider (15) connected for common rotation with the input shaft and on which differential pinions (19) configured to meshingly engage with said differential wheels (12, 23) are rotatably mounted, and a differential housing (21) to which the differential spider is connected for common rotation. The assembly further comprises an output wheel (26) via which torque is transferable to a rear driving axle, and a connection means (30) movable between:

- an open position in which it connects the output wheel to the rear differential wheel, and in which the differential housing can rotate independently of the rear differential wheel,
- a locking position in which it connects both of the differential housing and the output wheel to the rear differential wheel, and
- a disconnecting position in which it connects the differential housing to the rear differential wheel, and in which the output wheel can rotate independently of the rear differential wheel.

