

ABSTRACT

GAUGE-VARIABLE WHEELSET AND RAIL VEHICLE

A gauge-variable wheelset and a rail vehicle. The gauge-variable wheelset comprises an axle (10), a pair of wheels (30), a pair of shaft sleeves (20), an outer sleeve (40) and a linkage mechanism. A section of first non-self-locking threads (21) are arranged on the inner periphery of each shaft sleeve, rotating directions of the pair of first non-self-locking threads are opposite one another, and the pair of wheels (30) are fastened to the pair of shaft sleeves; two sections of second non-self-locking threads (14) which form a non-self-locking thread pair together with the first non-self-locking threads are arranged on the axle (10) at an interval; the wheels (30) are mounted on the axle (10) by means of the shaft sleeves, and the first non-self-locking threads match the second non-self-locking threads; and the outer sleeve (40) is rotatably connected outside the axle (10), the linkage mechanism is mounted between the axle (10) and the outer sleeve (40) and used for locking or unlocking the rotation of the outer sleeve relative to the axle, and when the linkage mechanism unlocks the rotation of the outer sleeve (40) relative to the axle (10) and the wheels (30) are in an unloaded state, the pair of wheels (30) are pushed to synchronously rotate, such that the pair of wheels (30) are close to or far away from each other in order to achieve a variable gauge. The gauge-variable wheelset has simple gauge-variable operation and high gauge-variable reliability.

FIGURE. 7