

Abstract

An ultrathin vehicle parking and access apparatus with full-floating mechanical manipulators

An ultra thin car parking device with full-floating manipulators, consists of a longitudinal motion trolley(1) and full-floating manipulators (2), the full-floating manipulators(2) symmetrically installed at two sides of the longitudinal motion trolley(1). In which, the longitudinal motion trolley (1) comprises an under frame (3), an electric engine (6) of a running mechanism, drive wheels (9), a transmission shaft (7) of a drive wheel and drive gears (10) of drive wheels, the manipulator (2) includes a mechanical arm transmission mechanism (18), a manipulator sliding board (20), a mechanical arm (12), linear guide rails (5) installed in the inside and outside of an extension beam of the trolley and a guide slot (4) of a swinging arm, wherein, the manipulator sliding boards (20) drive the mechanical arm (12) to move. The device is an ultra thin type; the two sets of independent full-floating manipulators (2) float in a set range freely and can be placed on the trolley (1) to form a planar mobile mechanical parking device or placed on the stacker to form a roadway stacking mechanical parking device.

FIG. 2