

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国际局



(10) 国际公布号
WO 2025/256249 A1

(43) 国际公布日
2025 年 12 月 18 日 (18.12.2025)

(51) 国际专利分类号:
B65G 1/04 (2006.01)

(21) 国际申请号: PCT/CN2025/088266

(22) 国际申请日: 2025 年 4 月 10 日 (10.04.2025)

(25) 申请语言: 中文

(26) 公布语言: 中文

(30) 优先权:
202410744264.1 2024年6月11日 (11.06.2024) CN

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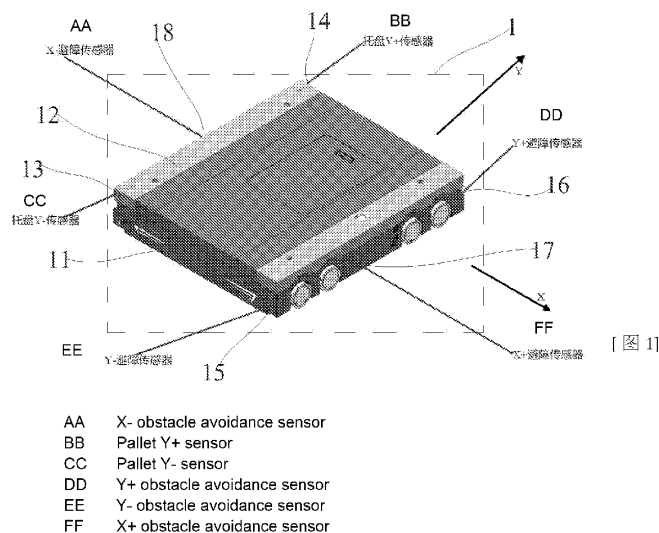
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(54) Title: BODY AND PALLET OBSTACLE AVOIDANCE DETECTION DEVICE OF FOUR-WAY SHUTTLE AND OPERATING METHOD THEREFOR

(54) 发明名称: 四向穿梭车的车体及托盘避障检测装置及其工作方法



(57) Abstract: Disclosed in the present invention are a body and pallet obstacle avoidance detection device of a four-way shuttle and an operating method therefor. The device comprises a four-way shuttle, pallets with goods, and orthogonally arranged Y-direction and X-direction tracks, wherein the four-way shuttle can run along the track directions of the Y-direction and X-direction tracks; shelf supports are provided on two sides of each Y-direction track, and the pallets are supported on the shelf supports; an X+ direction distance sensor and an X- direction distance sensor are respectively provided on the front and rear sides of the body of the four-way shuttle in the X direction; a Y+ direction distance sensor and a Y- direction distance sensor are respectively provided on the front and rear sides of the body of the four-way shuttle in the Y direction; a pallet Y+ distance measurement sensor and a pallet Y- distance measurement sensor are respectively provided on the front and rear sides of a jacking structure of the four-way shuttle in the Y direction; and the

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本国际公布:

— 包括国际检索报告(条约第21条(3))。

distance between the four-way shuttle and an obstacle is measured, in order to prevent the four-way shuttle from colliding with the obstacle or the pallets on the shelf supports.

(57) 摘要: 本发明公开了一种四向穿梭车的车体及托盘避障检测装置及其工作方法, 包括四向穿梭车、和带有货物的托盘、横纵交错的Y向轨道和X向轨道; 所述四向穿梭车能沿Y向轨道和X向轨道的轨道方向运行; 各所述Y向轨道的两侧设置有货架支撑, 货架支撑上支撑有托盘; 所述四向穿梭车的车体在X方向上前后两侧分别设置有X+方向距离传感器和X-方向距离传感器; 所述四向穿梭车的车体在Y方向上前后两侧分别设置有Y+方向距离传感器和Y-方向距离传感器; 所述四向穿梭车的顶升结构在Y方向上的前后侧分别设置有托盘Y+距离检测传感器和Y-距离检测传感器; 检测四向穿梭车与障碍物的距离, 避免了四向穿梭车与障碍物或货架支撑上的托盘产生碰撞。