

PICK-AND-PLACE MECHANISM AND TRANSFER ROBOT

ABSTRACT

Embodiments of the present disclosure provide a pick-and-place mechanism and a transfer robot. The pick-and-place mechanism comprises: a base; an extendable/retractable structure arranged on the base, a free end of the extendable/retractable structure can selectively extend out of or retract back to the base; an item pick-up assembly arranged at the free end, wherein the item pick-up assembly can be driven by the free end to move relative to the base, and the item pick-up assembly is configured to act on the front end face of a target item when picking up and returning the target item, so as to transfer the target item, wherein the front end face of the target item is the end face of the target item facing the item pick-up assembly when the target item is to be picked up or returned; a driving structure connected to the extendable/retractable structure, the driving structure driving the free end to extend out of or retract back to the base so as to drive the item pick-up assembly to reciprocate between a target goods allocation and the base; and an air source device, wherein the item pick-up assembly comprises a suction cup, the air source device is communicated with the suction cup, and the air source device is configured to reduce the pressure of an inner cavity of the suction cup, so that the target item is attached to the suction cup, or the air source device is configured to increase the pressure of the inner cavity of the suction cup, so that the target item is detached from the suction cup.

[FIG. 2]