

ABSTRACT OF THE DISCLOSURE

A pallet lifting device for a shuttle vehicle including a shuttle vehicle and a pallet and a working method of the pallet lifting device are provided. Lifting plates are disposed on an upper part of the shuttle vehicle, and a driving device on the shuttle vehicle drives the lifting plates to perform lifting movement. Several support feet are disposed at the bottom of the pallet, and one of the several support feet close to a center of the pallet is marked as an anti-deviation foot. A front clamping claw and a rear clamping claw are disposed on the shuttle vehicle along a traveling direction. The front clamping claw and the rear clamping claw are linked and connected to the lifting plates via linkage structures. The pallet is placed on the lifting plates, so that the front clamping claw and the rear clamping claw get close to each other while performing upward movement under the transmission of the linkage structures, and are located on front and rear sides of the anti-deviation foot in the traveling direction. The front clamping claw and the rear clamping claw limit sliding between the anti-deviation foot of the pallet and the lifting plate of the shuttle vehicle and limit deviation of the pallet after upright posts of a goods shelf are scratched by goods. A front guide notch and a rear guide notch are disposed on the front clamping claw and the rear clamping claw, thus eliminating placement errors of the pallet and stop errors of the shuttle vehicle.

FIG. 1