Claim

1. A carrying robot configured to carry warehouse goods, comprising:

a mobile bracket extending in a vertical direction and being movable;

a first carrying mechanism configured to carry a container group located above a target container or a container group stacked above a to-be-stored position of a target container, the container group comprising at least one container, and the first carrying mechanism being arranged on a first side of the mobile bracket;

a second carrying mechanism configured to carry the target container, the second carrying mechanism being arranged on the first side of the mobile bracket and located below the first carrying mechanism;

a first lifting mechanism configured to drive the first carrying mechanism to move in the vertical direction;

a second lifting mechanism configured to drive the second carrying mechanism to move in the vertical direction independently of the first carrying mechanism; and

a buffer mechanism fixed on a second side of the mobile bracket and configured to store the target container carried by the second carrying mechanism;

wherein the first lifting mechanism comprises:

a first driving wheel configured to be driven to rotate around a horizontal direction;

a first synchronizing wheel spaced apart from the first driving wheel in the vertical direction and rotatable around the horizontal direction;

a first synchronizing belt connected to the first driving wheel and the first synchronizing wheel, and configured to drive the first synchronizing wheel to rotate along with the first driving wheel;

a first connecting block connected to the first synchronizing belt and the first carrying mechanism, and configured to drive the first carrying mechanism to move in the vertical direction along with the first synchronizing belt;

and/or,

wherein the second lifting mechanism comprises:

a second driving wheel configured to be driven to rotate around the horizontal direction;

a second synchronizing wheel spaced apart from the second driving wheel in the vertical direction and rotatable around the horizontal direction;

a second synchronizing belt connected to the second driving wheel and the second synchronizing wheel, and configured to drive the second synchronizing wheel to rotate along with the second driving wheel; and

a second connecting block connected to the second synchronizing belt and the second carrying mechanism, and configured to drive the second carrying mechanism to move in the vertical direction along with the second synchronizing belt.

2. The carrying robot according to claim 1, wherein the buffer mechanism comprises a plurality of buffer shelves arranged at intervals in the vertical direction, and the buffer shelves are fixedly connected to the mobile bracket to store the target container.

3. The carrying robot according to claim 1, wherein the first carrying mechanism comprises:

a first mounting member connected to the first lifting mechanism to move up or down in the vertical direction;

two first telescopic arms both movably connected to the first mounting member, and the two first telescopic arms being arranged opposite to each other and synchronously reciprocally translatable in a first direction relative to the first mounting member to carry the container group, wherein the first direction belongs to the horizontal direction.

4. The carrying robot according to claim 3, wherein the first mounting member comprises:

a top wall extending in the first direction;

two side walls extending in the first direction and connected below the top wall, the two side walls being arranged opposite to each other;

wherein the two first telescopic arms are connected to opposite surfaces of the two

side walls, respectively.

5. The carrying robot according to claim 4, wherein a first end of each first telescopic arm is provided with an extension arm extending towards the second carrying mechanism, and the first end is an end of the first telescopic arm away from the side wall in an extended state.

6. The carrying robot according to claim 5, wherein one end of each extension arm away from the first telescopic arm is provided with a catch portion, and the catch portions are extendable and retractable in opposite directions between the two first telescopic arms to connect and disengage from one corresponding container.

7. The carrying robot according to claim 1, wherein the second carrying mechanism comprises:

a second mounting member connected to the second lifting mechanism to move up or down in the vertical direction;

a third mounting member connected below the second mounting member, the third mounting member configured to be translatable in a horizontal direction relative to the second mounting member, or translatable and rotatable around a horizontal direction;

two second telescopic arms both movably connected to the third mounting member, the two second telescopic arms being arranged opposite to each other and synchronously reciprocally translatable in a first direction relative to the third mounting member, wherein the first direction belongs to the horizontal direction.