C L A I M S

1. A conveying apparatus comprising:

a first placement portion having a door that is configured to be opened and closed, the first placement portion being configured to drop a package in a conveying apparatus main body that is configured to be moved along a rail;

a second placement portion formed of a plurality of plate members, the second placement portion being configured to be moved in a first direction along a rail (55) of the conveying apparatus main body, the second placement portion being provided at a predetermined height from the first placement portion between a first position that is configured to cover the first placement portion and a second position that is configured to open an upper part of the first placement portion;

a moving device configured to move the plate members between the first position and the second position; and

a projecting portion that is provided on an end of the second placement portion opposite to a winding side in order to move the plate members formed of the second placement portion to the second position when the second placement portion is in the first position, the projecting portion being configured to project on an upper surface of the plate members so as to extend in a direction intersecting the first direction, and the projecting

portion being configured to push the package out while being in contact with the package when the second placement portion moves from the first position to the second position.

2. A package sorting apparatus comprising:

a conveying apparatus including:

a rail;

a first chute provided below the rail;

a second chute provided on a side of the rail;

a first placement portion having a door that is configured to be opened and closed to drop a package and feed the package into the first chute in a conveying apparatus main bodythat is configured to be moved along the rail;

a second placement portion formed of a plurality of plate members, the second placement portion being is configured to be moved in a first direction along a rail of the conveying apparatus main body, the second placement portion being provided at a predetermined height from the first placement portion between a first position that is configured to cover the first placement portion and a second position that is configured to open an upper part of the first placement portion; a moving device configured to move the plate members between the first position and the second position; and

a projecting portion that is provided on an end

of the second placement portion opposite to a winding side in order to move the plate members formed of the second placement portion to the second position when the second placement portion is in the first position, the projecting portion being configured to project on an upper surface of the plate members so as to extend in a direction intersecting the first direction, and being configured to push the package to the second chute in contact with the package when the second placement portion moves from the first position to the second position;

a first device that is provided along the rail and is configured to open the door portion at a timing when the conveyance apparatus passes through the first chute;

a second device that is provided along the rail and is configured to operate the moving device at a timing when the conveyance apparatus passes through the second chute; and

a control device that is configured to control the first device and the second device.

3. The package sorting apparatus according to claim 2, wherein

the moving device includes a biasing portion that is configured to bias the second placement portion from the first position toward the second position,

the second placement portion includes an engaged portion and a guided portion,

in the conveying apparatus, an engaging portion is

provided in a portion corresponding to the engaged portion, the engaging portion holding the second placement portion at the first position by engaging the engaged portion of the second placement portion when the second placement portion is at the first position, and

the package sorting apparatus includes a guide rail that guides the second placement portion from the second position to the first position by abutting on the guided portion as the conveyance apparatus moves along the rail.

4. A conveyance apparatus comprising,

a conveyance apparatus main body including a first base portion and a door portion that is supported by the first base portion so as to be rotatable and that is configured to open and close between a closed position where a package is placed on the door portion and an open position where the package is dropped; and

a conveyance assisting apparatus including:

a placement portion having a placement surface on which a package is placed,

a second base portion fixed to the conveyance apparatus main body,

a support portion that is provided on the second base portion and supports the placement portion so that the placement portion is movable in a first direction between a first position where the placement portion covers the door portion and a second position where the placement portion uncovers the door portion,

a moving device that is provided on the second base portion and is configured to move the placement portion, and

a projecting portion provided on the placement surface and extends in a second direction intersecting the first direction.

5. A package sorting apparatus comprising:

a rail;

a first chute provided below the rail;

a second chute provided on a side of the rail;

a conveyance apparatus includinga conveyance apparatus main body and a conveyance assisting apparatus,

the conveyance apparatus main body including:

a first base portion movably supported by the rail and

a door portion that is rotatably supported by the first base portion and that is configured to be opened and closed between a closed position where a package is placed on the door portion and an open position where the package is fed into the first chute,

the conveyance assisting apparatus including:

a placement portion having a placement surface on which a package is placed,

a second base portion fixed to the conveyance apparatus main body,

a support portion that is provided on the second base portion and supports the placement portion so that

the placement portion is movable in a first direction between a first position where the placement portion covers the door portion and a second position where the placement portion uncovers the door portion to feed the package into the second chute,

a moving device that is provided on the second base portion and is configured to move the placement portion, and

a projecting portion that is provided on the placement surface and extends in a second direction intersecting the first direction;

a first device that is provided along the rail and is configured to open the door portion at a timing when the conveyance apparatus passes through the first device;

a second device that is provided along the rail and is configured to operate the moving device at a timing when the conveyance apparatus passes through the second device; and

a control device that is configured to control the first device and the second device.

6. The package sorting apparatus according to claim 5, wherein

the moving device includes a biasing portion that is configured to bias the placement portion from the first position toward the second position,

the placement portion includes an engaged portion and a guided portion,

the second base portion includes an engaging portion that engages with the engaged portion when the placement portion is at the first position to hold the placement portion at the first position, and

the rail includes a guide rail that guides the placement portion from the second position to the first position by abutting on the guided portion as the conveyance apparatus moves.