CLAIMS

1. A transport device comprising:

a support for suspending and supporting a transported object;

a vertically moving portion for vertically moving the support to vertically move the transported object, that is suspended and supported by the support, between a transport position and a transfer position which is lower than the transport position;

a pair of fall prevention members spaced apart from each other horizontally at locations below the transported object in the transport position;

a distance adjustment actuator portion for adjusting a distance between the pair of fall prevention members in a spaced-apart direction along which the pair of fall prevention members are spaced apart from each other;

a movable member for supporting the support, the vertically moving portion, the pair of fall prevention members, and the distance adjustment actuator portion; and

a transport driving member for moving the movable member with the transported object located in the transport position;

a controller for controlling operation of the distance adjustment actuator portion;

wherein one of a smaller transported object and a larger transported object having a larger width in the spaced-apart direction than the smaller transported object is provided as the transported object; and

further comprising a measurement portion for performing measurement for obtaining information on one of the width of the larger transport object in the spaced-apart direction and the width of the smaller transported object in the spaced-apart direction,

wherein the pair of fall prevention members are configured such that the distance between the pair of fall prevention members are adjustable by causing the pair of fall prevention members to be linearly moved in mutually opposite directions along the spaced-apart direction,

wherein the distance adjustment actuator portion is configured to be able to adjust the distance between the pair of fall prevention members to any of:

a distance for retraction greater than the width of the larger transported object in the spaced-apart direction;

a distance for the larger transported object which is less than the distance for retraction and which corresponds to the width of the larger transported object in the spaced-apart direction; and

a distance for the smaller transported object which is less than the distance for the larger transported object and which corresponds to a width of the smaller transported object in the spaced-apart direction, and

wherein the controller is configured to control operation of the distance adjustment actuator portion based on the measurement information from the measurement portion to adjust the distance between the pair of fall prevention members from the distance for retraction to the distance for the larger transported object or to the distance for the smaller transported object.

2. The transport device as defined in claim 1, wherein the larger transported object is formed to be larger than the smaller transported object in a vertical direction,

wherein the measurement portion includes an optical light emitter for emitting detection light along the spaced-apart direction, and a light receiver for receiving the detection light emitted by the light emitter,

wherein the light emitter emits the detection light at such a height that the detection light is blocked by the larger transported object in the transport position and that the detection light is not blocked by the smaller transported object in the transport position.

3. The transport device as defined in claim 1, wherein the controller is configured to receive transported object information which indicates a size of the transported object, from an external controller, and the controller is configured to perform a predetermined emergency control if the transported object information does not correspond to the width of the transported object in the spaced-apart direction according to the measurement information from the measurement portion.

4. The transport device as defined in claim 1, wherein the larger transported object is formed to be larger than the smaller transported object in a vertical direction, wherein each of the pair of fall prevention members is provided with restriction members for restricting movement of the transported object along horizontal directions,

   wherein an upper end of each of the restriction members is located above a lower end of the smaller transported object in the transport position, and

   wherein the restriction members include a front side restriction member located on a front side of the transported object in the transport position, along a fore and aft direction which is perpendicular to the spaced-apart direction, a back side restriction member located on a back side, along the fore and aft direction, of the transported object in the transport position, and a lateral side restriction member located outwardly, along the spaced-apart direction, of the transported object in the transport position.

5. The transport device as defined in claim 1, wherein

   a moving member is connected to each of the pair of fall prevention members wherein each of the moving members is connected to one end portion, along a fore and aft direction, of corresponding one of the pair of fall prevention members, with the fore and aft direction being perpendicular to the spaced-apart direction, and

   wherein the distance adjustment actuator portion is provided on one side, along the fore and aft direction, in which the moving members are located with respect to the pair of fall prevention members, and is configured to move the moving member connected to one of the pair of fall prevention members and the moving member connected to the other of the pair of fall prevention members, in mutually opposite directions along the spaced-apart direction.

6. The transport device as defined in claim 1, wherein

   a guided member is connected to each of the pair of fall prevention members wherein each of the guided members is connected to an outward end portion, in the spaced-apart direction, of the corresponding one of the pair of fall prevention members, and

wherein there are provided a guide member for guiding, along the spaced-apart direction, the guided member connected to one of the pair of fall prevention members, and a guide member for guiding, along the spaced-apart direction, the guided member connected to the other of the pair of fall prevention members.

7. A transport device comprising:

a support for suspending and supporting a transported object;

a vertically moving portion for vertically moving the support to vertically move the transported object, that is suspended and supported by the support, between a transport position and a transfer position which is lower than the transport position;

a pair of fall prevention members spaced apart from each other horizontally at locations below the transported object in the transport position;

a distance adjustment actuator portion for adjusting a distance between the pair of fall prevention members in a spaced-apart direction along which the pair of fall prevention members are spaced apart from each other;

a movable member for supporting the support, the vertically moving portion, the pair of fall prevention members, and the distance adjustment actuator portion; and

a transport driving member for moving the movable member with the transported object located in the transport position;

wherein one of a smaller transported object and a larger transported object having a larger width in the spaced-apart direction than the smaller transported object is provided as the transported object,

wherein the pair of fall prevention members are configured such that the distance between the pair of fall prevention members are adjustable by causing the pair of fall prevention members to be linearly moved in mutually opposite directions along the spaced-apart direction,

wherein the distance adjustment actuator portion is configured to be able to adjust the distance between the pair of fall prevention members to any of:

a distance for retraction greater than the width of the larger transported object in the spaced-apart direction;

a distance for the larger transported object which is less than the distance for retraction and which corresponds to the width of the larger transported object in the spaced-apart direction; and

a distance for the smaller transported object which is less than the distance for the larger transported object and which corresponds to a width of the smaller transported object in the spaced-apart direction,

wherein the larger transported object is formed to be larger than the smaller transported object in a vertical direction, wherein each of the pair of fall prevention members is provided with restriction members for restricting movement of the transported object along horizontal directions,

wherein an upper end of each of the restriction members is located above a lower end of the smaller transported object in the transport position,

wherein the restriction members include a front side restriction member located on a front side of the transported object in the transport position, along a fore and aft direction which is perpendicular to the spaced-apart direction, a back side restriction member located on a back side, along the fore and aft direction, of the transported object in the transport position, and a lateral side restriction member located outwardly, along the spaced-apart direction, of the transported object in the transport position, and

wherein, with the distance between the pair of fall prevention members adjusted to the distance for the smaller transported object, a distance between the lateral side restriction member provided in one of the pair of fall prevention members and the lateral side restriction member provided in the other of the pair of fall prevention members is set to be greater than the width of the smaller transported object in the spaced-apart direction and less than the width of the larger transported object in the spaced-apart direction.