CLAIMS

1. A tray configured to be transported along a transport route by a transport device,

the tray comprising:

a main body section that is plate-shaped,

wherein with a front-rear direction being a direction along the transport route, and a width direction being a direction intersecting the front-rear direction in a plan view,

the transport route includes a curved route section shaped as a curved line in a plan view,

the transport device includes a pair of guide walls in at least the curved route section, the guide walls each extending along a corresponding edge, with respect to the width direction, of the transport route and including a guiding surface facing inward in the width direction,

the main body section has an upper surface used as a placement surface on which an article is placeable,

the main body section includes:

an intermediate section;

a front section adjacent to the intermediate section on a front side in the front-rear direction; and

a rear section adjacent to the intermediate section on a rear side in the front-rear direction,

the intermediate section is rectangular in a plan view,

the front section is shaped as a trapezoid that becomes smaller in the width direction while extending toward the front side in a plan view,

the rear section is shaped as a trapezoid that becomes smaller in the width direction while extending toward the rear side in a plan view

the transport route further includes a transport surface angle change section in which an angle of a transport surface relative to a horizontal plane changes,

the intermediate section has a bottom surface including a reference surface

section shaped as a flat surface extending along the transport surface,

the front section has a bottom surface including a front inclined surface section that is inclined relative to the reference surface section in such a manner as to approach an upward side while extending toward the front side, and

the rear section has a bottom surface including a rear inclined surface section that is inclined relative to the reference surface section in such a manner as to approach the upward side while extending toward the rear side.

2. The tray according to claim 1,

wherein the front inclined surface section and the rear inclined surface section are each inclined relative to the reference surface section by an inclination angle corresponding to an intersection angle of the transport surface in the transport surface angle change section in which a change in an angle of the transport surface is largest in the transport route.

3. The tray according to claim 1 or 2,

wherein the front inclined surface section and the rear inclined surface section each include, in a central section in the width direction, a projection projecting downward relative to portions on two sides in the width direction, and

the projections each have a bottom surface extending parallel with the reference surface section at a height corresponding to the reference surface section or on the upward side of the reference surface section.

4. A tray configured to be transported along a transport route by a transport device,

the tray comprising:

a main body section that is plate-shaped,

wherein with a front-rear direction being a direction along the transport route, and a width direction being a direction intersecting the front-rear direction in a plan view,

the transport route includes a curved route section shaped as a curved line in a plan view,

the transport device includes a pair of guide walls in at least the curved route section, the guide walls each extending along a corresponding edge, with respect to the width direction, of the transport route and including a guiding surface facing inward in the width direction,

the main body section has an upper surface used as a placement surface on which an article is placeable,

the main body section includes:

an intermediate section;

a front section adjacent to the intermediate section on a front side in the front-rear direction; and

a rear section adjacent to the intermediate section on a rear side in the front-rear direction,

the intermediate section is rectangular in a plan view,

the front section is shaped as a trapezoid that becomes smaller in the width direction while extending toward the front side in a plan view,

the rear section is shaped as a trapezoid that becomes smaller in the width direction while extending toward the rear side in a plan view, and

the intermediate section includes, on each of surfaces on two sides in the width direction in a central region in the front-rear direction, a constricted section recessed in such a manner as to approach a central section in the width direction while extending toward a center position in the front-rear direction.

5. The tray according to any one of claims 1 to 4,

wherein the main body section includes, in each of two end sections in the front-rear direction, an end stopper projecting upward relative to the placement surface.

6. The tray according to claim 5,

wherein the main body section has a bottom surface including, in each of two portions corresponding to formation positions of the end stoppers, a recess recessed toward the upward side and shaped to allow an upper end section of a corresponding one of the end stoppers to be fitted into the recess.

7. The tray according to any one of claims 1 to 6,

wherein the placement surface is inclined in such a manner as to approach a downward side while extending toward a central section in the front-rear direction.

8. A transport facility comprising:

a first tray; and

a transport device;

the first tray including a main body section that is plate-shaped and being configured to be transported along a transport route by the transport device,

wherein with a front-rear direction being a direction along the transport route, and a width direction being a direction intersecting the front-rear direction in a plan view,

the transport route includes a curved route section shaped as a curved line in a plan view,

the transport device includes a pair of guide walls in at least the curved route section, the guide walls each extending along a corresponding edge, with respect to the width direction, of the transport route and including a guiding surface facing inward in the width direction,

the main body section has an upper surface used as a placement surface on which an article is placeable,

the main body section includes:

an intermediate section;

a front section adjacent to the intermediate section on a front side in the front-rear direction; and

a rear section adjacent to the intermediate section on a rear side in the front-rear direction,

the intermediate section is rectangular in a plan view,

the front section is shaped as a trapezoid that becomes smaller in the width direction while extending toward the front side in a plan view,

the rear section is shaped as a trapezoid that becomes smaller in the width

direction while extending toward the rear side in a plan view,

the transport facility further comprises a second tray configured to be transported along the transport route by the transport device,

with the main body section being a first main body section, the second tray includes a plate-shaped second main body section having a shorter length in the front-rear direction than the first main body section, and

the first tray and the second tray are not coupled to each other while being transported.

9. The transport facility according to claim 8,

wherein the first main body section includes an end section on the front side that has a smaller width in the width direction than an end section of the second main body section on the front side, and

the first main body section includes an end section on the rear side that has a smaller width in the width direction than an end section of the second main body section on the rear side.

10. A transport facility, comprising:

a first tray; and

a transport device,

the first tray including a main body section that is plate-shaped and being configured to be transported along a transport route by the transport device,

wherein with a front-rear direction being a direction along the transport route, and a width direction being a direction intersecting the front-rear direction in a plan view,

the transport route includes a curved route section shaped as a curved line in a plan view,

the transport device includes a pair of guide walls in at least the curved route section, the guide walls each extending along a corresponding edge, with respect to the width direction, of the transport route and including a guiding surface facing inward in the width direction,

the main body section has an upper surface used as a placement surface on

which an article is placeable,

the main body section includes:

an intermediate section;

a front section adjacent to the intermediate section on a front side in the front-rear direction; and

a rear section adjacent to the intermediate section on a rear side in the front-rear direction,

the intermediate section is rectangular in a plan view,

the front section is shaped as a trapezoid that becomes smaller in the width direction while extending toward the front side in a plan view,

the rear section is shaped as a trapezoid that becomes smaller in the width direction while extending toward the rear side in a plan view,

the transport facility further comprises a second tray configured to be transported along the transport route by the transport device,

with the main body section being a first main body section, the second tray includes a plate-shaped second main body section having a shorter length in the front-rear direction than the first main body section,

the intermediate section has a bottom surface including a first reference surface section shaped as a flat surface extending along a transport surface of the transport device,

the front section has a bottom surface including a first front inclined surface section that is inclined relative to the first reference surface section in such a manner as to approach an upward side while extending toward the front side,

the rear section has a bottom surface including a first rear inclined surface section that is inclined relative to the first reference surface section in such a manner as to approach the upward side while extending toward the rear side,

the second main body section includes, in an intermediate portion in the front-rear direction, a bottom surface including a second reference surface section shaped as a flat surface extending along the transport surface,

the second main body section includes, in a portion on the front side, a bottom surface including a second front inclined surface section that is inclined relative to the second reference surface section in such a manner as to approach

the upward side while extending toward the front side,

the second main body section includes, in a portion on the rear side, a bottom surface including a second rear inclined surface section that is inclined relative to the second reference surface section in such a manner as to approach the upward side while extending toward the rear side,

the first front inclined surface section has a longer length in the front-rear direction than the second front inclined surface section, and

the first rear inclined surface section has a longer length in the front-rear direction than the second rear inclined surface section.

11. A transport facility, comprising:

a first tray; and

a transport device,

the first tray including a main body section that is plate-shaped and being configured to be transported along a transport route by the transport device,

wherein with a front-rear direction being a direction along the transport route, and a width direction being a direction intersecting the front-rear direction in a plan view,

the transport route includes a curved route section shaped as a curved line in a plan view,

the transport device includes a pair of guide walls in at least the curved route section, the guide walls each extending along a corresponding edge, with respect to the width direction, of the transport route and including a guiding surface facing inward in the width direction,

the main body section has an upper surface used as a placement surface on which an article is placeable,

the main body section includes:

an intermediate section;

a front section adjacent to the intermediate section on a front side in the front-rear direction; and

a rear section adjacent to the intermediate section on a rear side in the front-rear direction,

the intermediate section is rectangular in a plan view,

the front section is shaped as a trapezoid that becomes smaller in the width direction while extending toward the front side in a plan view,

the rear section is shaped as a trapezoid that becomes smaller in the width direction while extending toward the rear side in a plan view,

the transport facility further comprises a second tray configured to be transported along the transport route by the transport device,

with the main body section being a first main body section, the second tray includes a plate-shaped second main body section having a shorter length in the front-rear direction than the first main body section,

the intermediate section includes, on each of surfaces on two sides in the width direction in a central region in the front-rear direction, a constricted section recessed in such a manner as to approach a central section in the width direction while extending toward a center position in the front-rear direction, and

the intermediate section has, in a portion in which the constricted sections are formed, a minimum dimension in the width direction that is smaller than a width in the width direction of a central section of the second main body section in the front-rear direction.

12. A transport facility, comprising:

a first tray; and

a transport device,

the first tray including a main body section that is plate-shaped and being configured to be transported along a transport route by the transport device,

wherein with a front-rear direction being a direction along the transport route, and a width direction being a direction intersecting the front-rear direction in a plan view,

the transport route includes a curved route section shaped as a curved line in a plan view,

the transport device includes a pair of guide walls in at least the curved route section, the guide walls each extending along a corresponding edge, with respect to the width direction, of the transport route and including a guiding

surface facing inward in the width direction,

the main body section has an upper surface used as a placement surface on which an article is placeable,

the main body section includes:

an intermediate section;

a front section adjacent to the intermediate section on a front side in the front-rear direction; and

a rear section adjacent to the intermediate section on a rear side in the front-rear direction,

the intermediate section is rectangular in a plan view,

the front section is shaped as a trapezoid that becomes smaller in the width direction while extending toward the front side in a plan view,

the rear section is shaped as a trapezoid that becomes smaller in the width direction while extending toward the rear side in a plan view,

the transport facility further comprises a second tray configured to be transported along the transport route by the transport device,

with the main body section being a first main body section, the second tray includes a plate-shaped second main body section having a shorter length in the front-rear direction than the first main body section,

the first main body section includes, in each of two end sections in the front-rear direction, a first end stopper projecting upward relative to a first placement surface as the placement surface,

the second main body section has an upper surface used as a second placement surface on which an article is placeable,

the second main body section includes, in each of two end sections in the front-rear direction, a second end stopper projecting upward relative to the second placement surface, and

the first end stopper projects from the first placement surface to a height higher than a height to which the second end stopper projects from the second placement surface.