[Name of Document] CLAIMS

[Claim 1]

A board that is pmounted in a printing apparatus and is configured to come into contact with a plurality of apparatus-side terminals, the printing apparatus including a printing head, a liquid introduction portion that introduces a liquid to the printing head, an accommodation section that accommodates a liquid accommodation container and is provided with the liquid introduction portion, and the plurality of apparatus-side terminals provided at the accommodation section, the board comprising:

a base member;

a device provided at the base member; and

a plurality of terminals provided at the base member, wherein

the plurality of terminals include at least a first terminal, a second terminal, a third terminal, a fourth terminal, and a fifth terminal,

the first terminal is coupled to the device and includes a first contact portion that is to come into contact with a corresponding first apparatus-side terminal among the plurality of apparatus-side terminals,

the second terminal is coupled to the device and includes a second contact portion that is to met a corresponding second apparatus-side terminal among the

plurality of apparatus-side terminals,

the third terminal is coupled to the device and includes a third contact portion that is to come into contact with a corresponding third apparatus-side terminal among the plurality of apparatus-side terminals,

the fourth terminal is coupled to the device and includes a fourth contact portion that is to come into contact with a corresponding fourth apparatus-side terminal among the plurality of apparatus-side terminals,

the fifth terminal is coupled to the device and includes a fifth contact portion that is to come into contact with a corresponding fifth apparatus-side terminal among the plurality of apparatus-side terminals,

the first terminal is used to detect whether or not the first terminal has a short circuit with at least one of the second terminal, the third terminal, and the fourth terminal,

in a plan view,

when two orthogonal straight lines are set as a first virtual line and a second virtual line, and all contact portions of all the terminals provided at the base member are projected onto the second virtual line, all the contact portions are projected at different positions, and the first virtual line passes through a middle between two projection positions that are farthest from each other among

projection positions of all the contact portions,

when one region with respect to the first virtual line is set as a first region and the other region is set as a second region, some contact portions among all the contact portions are arranged in the first region, remaining contact portions are arranged in the second region, the some contact portions include the first contact portion, the second contact portion, the third contact portion, and the fourth contact portion, and the remaining contact portions include the fifth contact portion, and

the some contact portions and the remaining contact portions are asymmetrically arranged with respect to the first virtual line.

[Claim 2]

The board according to Claim 1, wherein

at least one of the second contact portion, the third contact portion, and the fourth contact portion is arranged to be projected between a projection position of the first contact portion and a projection position of the fifth contact portion.

[Claim 3]

The board according to Claim 1 or 2, wherein

any two or more of the second contact portion, the third contact portion, and the fourth contact portion are arranged to be projected between a projection position of

the first contact portion and a projection position of the fifth contact portion.

[Claim 4]

The board according to any one of Claims 1 to 3, wherein

the first contact portion is arranged to be projected between projection positions of any two contact portions of the second contact portion, the third contact portion, and the fourth contact portion.

[Claim 5]

The board according to any one of Claims 1 to 4, wherein

the first contact portion is a data contact portion, and the first terminal is a data terminal,

the second contact portion is a clock contact portion, and the second terminal is a clock terminal,

the third contact portion is a reset contact portion, and the third terminal is a reset terminal,

the fourth contact portion is a power-source contact portion, and the fourth terminal is a power source terminal, and

the fifth contact portion is a ground contact portion, and the fifth terminal is a ground terminal.

[Claim 6]

The board according to Claim 5, wherein

any one or both of the data contact portion and the reset contact portion are arranged to be projected between a projection position of the power-source contact portion and a projection position of the clock contact portion, and the reset contact portion is arranged to have a projection position that is next to the projection position of the power-source contact portion.

[Claim 7]

The board according to Claim 5 or 6, wherein

the power-source contact portion is arranged to have a projection position that is next to a projection position of the data contact portion.

[Claim 8]

The board according to any one of Claims 5 to 7, wherein

the clock contact portion is arranged to be projected at a position that is farthest from a projection position of the ground contact portion, and

the data contact portion, the power-source contact portion, and the reset contact portion are arranged to be projected in order in a direction from a projection position of the clock contact portion toward the projection position of the ground contact portion on the second virtual line.

[Claim 9]

The board according to any one of Claims 5 to 8,

wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the clock contact portion.

[Claim 10]

The board according to any one of Claims 5 to 9, wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the reset contact portion.

[Claim 11]

The board according to any one of Claims 5 to 10, wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the power-source contact portion.

[Claim 12]

The board according to any one of Claims 5 to 11, wherein

when a gap of a contact portion projected at a position farthest from a projection position of the ground contact portion when projection onto the second virtual line is performed, among contact portions other than the ground contact portion in the first region, from the ground contact portion provided in the second region in a direction along

the second virtual line is set as Wa,

a gap of a contact portion projected at a position closest to the projection position of the ground contact portion when projection onto the second virtual line is performed, among contact portions other than the ground contact portion in the first region, from the ground contact portion provided in the second region in the direction along the second virtual line is equal to or more than Wa/2.

[Claim 13]

The board according to any one of Claims 5 to 12, wherein

there is no other contact portion between a contact portion projected at a position closest to a projection position of the ground contact portion when projection onto the second virtual line is performed, among contact portions other than the ground contact portion in the first region, and the ground contact portion provided in the second region.

[Claim 14]

The board according to any one of Claims 5 to 13, wherein

there is no other contact portion on a virtual line segment connecting the data contact portion and the clock contact portion.

[Claim 15]

The board according to any one of Claims 5 to 14, wherein

there is no other contact portion on a virtual line segment connecting the data contact portion and the reset contact portion.

[Claim 16]

The board according to any one of Claims 5 to 15, wherein

there is no other contact portion on a virtual line segment connecting the data contact portion and the power-source contact portion.

[Claim 17]

The board according to any one of Claims 5 to 16, wherein

when the board is mounted in a direction along a gravity direction,

the clock contact portion, the power-source contact portion, and the reset contact portion are arranged closer in the gravity direction than the data contact portion, and

at least one of the clock contact portion, the power-source contact portion, and the reset contact portion is arranged to be projected between a projection position of the data contact portion and a projection position of the ground contact portion.

[Claim 18]

The board according to any one of Claims 5 to 17, wherein

the clock contact portion, the data contact portion, the power-source contact portion, the reset contact portion, and the ground contact portion are arranged to form a plurality of rows.

[Claim 19]

The board according to Claim 18, wherein

the plurality of rows includes two rows, and

two contact portions on the base member, which are projected to be next to each other when projection onto the second virtual line is performed, form different rows.

[Claim 20]

The board according to Claim 19, wherein

the data contact portion and the ground contact portion are arranged in different rows, and

any one of the clock contact portion, the power-source contact portion, and the reset contact portion is arranged to be projected between a projection position of the data contact portion and a projection position of the ground contact portion.

[Claim 21]

The board according to any one of Claims 1 to 20, wherein

the first terminal is further used to detect whether or

not the board is mounted in the printing apparatus.

[Claim 22]

The board according to any one of Claims 1 to 21, wherein

the fifth terminal is a ground terminal, and

voltages supplied to the first terminal, the second terminal, the third terminal, and the fourth terminal are configured to be received by the device.

[Claim 23]

The board according to any one of Claims 1 to 22, wherein

the first virtual line is directed along a direction including a component of a mounting direction in which the board is mounted in the printing apparatus.

[Claim 24]

The board according to any one of Claims 1 to 23, wherein

a voltage supplied to the fourth terminal is used to drive the device.

[Claim 25]

The board according to any one of Claims 1 to 24, wherein

the device outputs signals indicating that the first terminal does not have a short circuit with the terminal other than the first terminal among the plurality of

terminals and that the board is being mounted in the printing apparatus.

[Claim 26]

The board according to any one of Claims 1 to 25, wherein

the device stores information regarding a liquid accommodated in the liquid accommodation container.

[Claim 27]

A board that is mounted in a printing apparatus and is configured to come into contact with a plurality of apparatus-side terminals, the printing apparatus including a printing head, a liquid introduction portion that introduces a liquid to the printing head, an accommodation section that accommodates a liquid accommodation container provided with the liquid introduction portion, and the plurality of apparatus-side terminals provided at the accommodation section, the board comprising:

a base member;

a device provided at the base member; and

a plurality of terminals provided at the base member, wherein

the plurality of terminals include

a first terminal that is coupled to the device and includes a first contact portion that is to come into contact with a corresponding first apparatus-side terminal

among the plurality of apparatus-side terminals, and

an other terminal group,

the other terminal group includes at least

a second terminal that is coupled to the device and includes a second contact portion that is to come into contact with a corresponding second apparatus-side terminal among the plurality of apparatus-side terminals, and

a third terminal that is coupled to the device and includes a third contact portion that is to come into contact with a corresponding third apparatus-side terminal among the plurality of apparatus-side terminals,

the second terminal is used to detect whether or not the second terminal has a short circuit with at least one of terminals other than the second terminal in the other terminal group,

in a plan view,

when two orthogonal straight lines are set as a first virtual line and a second virtual line, and all contact portions of all the terminals provided at the base member are projected onto the second virtual line, all the contact portions are projected at different positions, and the first virtual line passes through a middle between two projection positions that are farthest from each other among projection positions of all the contact portions,

when one region with respect to the first virtual

line is set as a first region and the other region is set as a second region, some contact portions among all the contact portions are arranged in the first region, remaining contact portions are arranged in the second region, the some contact portions include the second contact portion and the third contact portion, and the remaining contact portions include the first contact portion, and

the some contact portions and the remaining contact portions are asymmetrically arranged with respect to the first virtual line.

[Claim 28]

The board according to Claim 27, wherein

the first contact portion is a ground contact portion, and the first terminal is a ground terminal,

the second contact portion is a data contact portion, and the second terminal is a data terminal, and

the third contact portion is a clock contact portion, and the third terminal is a clock terminal.

[Claim 29]

The board according to Claim 28, wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the clock contact portion.

[Claim 30]

The board according to Claim 28 or 29, wherein

there is no other contact portion on a virtual line segment connecting the data contact portion and the clock contact portion.

[Claim 31]

The board according to any one of Claims 28 to 30, wherein

the other terminal group includes a reset terminal including a reset contact portion that is to come into contact with a corresponding apparatus-side terminal among the plurality of apparatus-side terminals, and

the some contact portions include the reset contact portion.

[Claim 32]

The board according to Claim 31, wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the reset contact portion.

[Claim 33]

The board according to Claim 31 or 32, wherein

there is no other contact portion on a virtual line segment connecting the data contact portion and the reset contact portion.

[Claim 34]

The board according to any one of Claims 28 to 33, wherein

the other terminal group includes a power source terminal including a power-source contact portion that is to come into contact with a corresponding apparatus-side terminal among the plurality of apparatus-side terminals, and

the some contact portions include the power-source contact portion.

[Claim 35]

The board according to Claim 34, wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the power-source contact portion.

[Claim 36]

The board according to Claim 34 or 35, wherein

there is no other contact portion on a virtual line segment connecting the data contact portion and the power-source contact portion.

[Claim 37]

The board according to any one of Claims 34 to 36, wherein

a voltage supplied to the power source terminal is used to drive the device.

[Claim 38]

The board according to any one of Claims 28 to 37, wherein

at least one of a contact portion of a terminal other than the data terminal among the other terminal group is arranged to be projected between a projection position of the data contact portion and a projection position of the ground contact portion.

[Claim 39]

The board according to any one of Claims 28 to 38, wherein

when a gap of a contact portion projected at a position farthest from a projection position of the ground contact portion when projection onto the second virtual line is performed, among contact portions for the other terminal group in the first region, from the ground contact portion provided in the second region in a direction along the second virtual line is set as Wa,

a gap of a contact portion projected at a position closest to the projection position of the ground contact portion when projection onto the second virtual line is performed, among the contact portions for the other terminal group in the first region, from the ground contact portion provided in the second region in the direction along the second virtual line is equal to or more than Wa/2.

[Claim 40]

The board according to any one of Claims 28 to 39, wherein

there is no other contact portion between a contact portion projected at a position closest to a projection position of the ground contact portion when projection onto the second virtual line is performed, among contact portions for the other terminal group in the first region, and the ground contact portion provided in the second region.

[Claim 41]

The board according to any one of Claims 28 to 40, wherein

when the board is mounted in a direction along a gravity direction,

contact portions for the other terminal group other than the data contact portion are arranged closer in the gravity direction than the data contact portion, and

the contact portions for the other terminal group other than the data contact portion are arranged to be projected between a projection position of the data contact portion and a projection position of the ground contact portion.

[Claim 42]

The board according to any one of Claims 27 to 41, wherein

the second terminal is used to detect whether or not the board is mounted in the printing apparatus.

[Claim 43]

The board according to any one of Claims 27 to 42,

wherein

voltages supplied to the other terminal group are configured to be received by the device.

[Claim 44]

The board according to any one of Claims 27 to 43, wherein

the first virtual line is directed along a direction including a component of a mounting direction in which the board is mounted in the printing apparatus.

[Claim 45]

The board according to any one of Claims 27 to 44, wherein

the device outputs signals indicating that the second terminal does not have a short circuit with the terminal other than the second terminal among the plurality of terminals and that the board is being mounted in the printing apparatus.

[Claim 46]

The board according to any one of Claims 27 to 45, wherein

the device stores information regarding a liquid accommodated in the liquid accommodation container.

[Claim 47]

A board that is mounted in a printing apparatus and is configured to come into contact with a plurality of

apparatus-side terminals, the printing apparatus including a printing head, a liquid introduction portion that introduces a liquid to the printing head, an accommodation section that accommodates a liquid accommodation container provided with the liquid introduction portion, and the plurality of apparatus-side terminals provided at the accommodation section, wherein

the plurality of apparatus-side terminals includes a first apparatus-side terminal, a second apparatus-side terminal, a third apparatus-side terminal, a fourth apparatus-side terminal, and a fifth apparatus-side terminal,

in a plan view,

when two orthogonal straight lines are set as a first virtual line and a second virtual line, and projection positions when a contact portion of the first apparatus-side terminal, a contact portion of the second apparatus-side terminal, a contact portion of the third apparatus-side terminal, a contact portion of the fourth apparatus-side terminal, and a contact portion of the fifth apparatus-side terminal are projected onto the second virtual line are set as a first projection position, a second projection position, a third projection position, a fourth projection position, and a fifth projection position, respectively,

when contact portions of all apparatus-side terminals

are projected onto the second virtual line, the contact portions of all apparatus-side terminals are projected at different positions, and the first virtual line passes through a middle between two projection positions farthest from each other among projection positions of the contact portions of all apparatus-side terminals,

when one region with respect to the first virtual line is set as a first region and the other region is set as a second region,

contact portions of some apparatus-side terminals among all the apparatus-side terminals are arranged in the first region,

contact portions of remaining apparatus-side terminals are arranged in the second region,

the contact portions of the some apparatus-side terminals include the contact portion of the first apparatus-side terminal, the contact portion of the second apparatus-side terminal, the contact portion of the third apparatus-side terminal, and the contact portion of the fourth apparatus-side terminal, and

the contact portions of the remaining apparatus-side terminals include the contact portion of the fifth apparatus-side terminal,

the contact portions of the some apparatus-side terminals and the contact portions of the remaining

apparatus-side terminals are asymmetrically arranged with respect to the first virtual line,

the board includes

a base member,

a device provided at the base member, and

a plurality of terminals provided at the base member,

the plurality of terminals include at least a first terminal, a second terminal, a third terminal, a fourth terminal, and a fifth terminal,

the first terminal is coupled to the device and includes a first contact portion that is to come into contact with the first apparatus-side terminal corresponding among the plurality of apparatus-side terminals in the printing apparatus when the board is mounted in the printing apparatus,

the second terminal is coupled to the device and includes a second contact portion that is to come into contact with the second apparatus-side terminal corresponding among the plurality of apparatus-side terminals when the board is mounted in the printing apparatus,

the third terminal is coupled to the device and includes a third contact portion that is to come into contact with the third apparatus-side terminal corresponding

among the plurality of apparatus-side terminals when the board is mounted in the printing apparatus,

the fourth terminal is coupled to the device and includes a fourth contact portion that is to come into contact with the fourth apparatus-side terminal corresponding among the plurality of apparatus-side terminals when the board is mounted in the printing apparatus,

the fifth terminal is coupled to the device and includes a fifth contact portion that is to come into contact with the fifth apparatus-side terminal corresponding among the plurality of apparatus-side terminals when the board is mounted in the printing apparatus, and

the first terminal is used to detect whether or not the first terminal has a short circuit with at least one of the second terminal, the third terminal, and the fourth terminal.

[Claim 48]

The board according to Claim 47, wherein

the contact portion of at least one apparatus-side terminal among the contact portion of the second apparatus-side terminal, the contact portion of the third apparatus-side terminal, and the contact portion of the fourth apparatus-side terminal is arranged to be projected between the first projection position and the fifth projection

position.

[Claim 49]

The board according to Claim 47 or 48, wherein

the contact portions of any two or more apparatus-side terminals among the contact portion of the second apparatus-side terminal, the contact portion of the third apparatus-side terminal, and the contact portion of the fourth apparatus-side terminal are arranged to be projected between the first projection position and the fifth projection position.

[Claim 50]

The board according to any one of Claims 47 to 49, wherein

the contact portion of the first apparatus-side terminal is arranged to be projected between projection positions of the contact portions of any two apparatus-side terminals among the contact portion of the second apparatus-side terminal, the contact portion of the third apparatus-side terminal, and the contact portion of the fourth apparatus-side terminal.

[Claim 51]

The board according to any one of Claims 47 to 50, wherein

the first contact portion is a data contact portion, the first terminal is a data terminal, and the first

apparatus-side terminal is an apparatus-side data terminal,

the second contact portion is a clock contact portion, the second terminal is a clock terminal, and the second apparatus-side terminal is an apparatus-side clock terminal,

the third contact portion is a reset contact portion, the third terminal is a reset terminal, and the third apparatus-side terminal is an apparatus-side reset terminal,

the fourth contact portion is a power-source contact portion, the fourth terminal is a power source terminal, and the fourth apparatus-side terminal is an apparatus-side power source terminal, and

the fifth contact portion is a ground contact portion, the fifth terminal is a ground terminal, and the fifth apparatus-side terminal is an apparatus-side ground terminal.

[Claim 52]

The board according to Claim 51, wherein

any one or both of the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side reset terminal are arranged to be projected between the fourth projection position and the second projection position, and

the contact portion of the apparatus-side reset terminal is arranged to have a projection position that is next to the fourth projection position.

[Claim 53]

The board according to Claim 51 or 52, wherein

the contact portion of the apparatus-side power source terminal is arranged to have a projection position that is next to the first projection position.

[Claim 54]

The board according to any one of Claims 51 to 53, wherein

the contact portion of the apparatus-side clock terminal is arranged to be projected at a position that is farthest from the fifth projection position, and

the contact portion of the apparatus-side data terminal, the contact portion of the apparatus-side power source terminal, and the contact portion of the apparatus-side reset terminal are arranged to be projected in order in a direction from the second projection position toward the fifth projection position on the second virtual line.

[Claim 55]

The board according to any one of Claims 51 to 54, wherein

a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side ground terminal is longer than a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side clock

terminal.

[Claim 56]

The board according to any one of Claims 51 to 55, wherein

a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side ground terminal is longer than a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side reset terminal.

[Claim 57]

The board according to any one of Claims 51 to 56, wherein

a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side ground terminal is longer than a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side power source terminal.

[Claim 58]

The board according to any one of Claims 51 to 57, wherein

when a gap of a contact portion of an apparatus-side terminal, which is projected at a position farthest from the fifth projection position when projection onto the second

virtual line is performed, among the contact portions of the apparatus-side terminals other than the contact portion of the apparatus-side ground terminal in the first region, from the contact portion of the apparatus-side ground terminal provided in the second region in a direction along the second virtual line is set as Wa,

a gap of a contact portion of an apparatus-side terminal, which is projected at a position closest to the fifth projection position when projection onto the second virtual line is performed, among the contact portions of the apparatus-side terminals other than the contact portion of the apparatus-side ground terminal in the first region, from the contact portion of the apparatus-side ground terminal provided in the second region in a direction along the second virtual line is equal to or more than Wa/2.

[Claim 59]

The board according to any one of Claims 51 to 58, wherein

in the first region, there is no contact portion of another apparatus-side terminal between the contact portion of the apparatus-side terminal, which is projected at a position closest to the fifth projection position when projection onto the second virtual line is performed, among the contact portions of the apparatus-side terminals other than the contact portion of the apparatus-side ground

terminal, and the contact portion of the apparatus-side ground terminal provided in the second region.

[Claim 60]

The board according to any one of Claims 51 to 59, wherein

there is no contact portion of another apparatus-side terminal on a virtual line segment connecting the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side clock terminal.

[Claim 61]

The board according to any one of Claims 51 to 60, wherein

there is no contact portion of another apparatus-side terminal on a virtual line segment connecting the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side reset terminal.

[Claim 62]

The board according to any one of Claims 51 to 61, wherein

there is no contact portion of another apparatus-side terminal on a virtual line segment connecting the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side power source terminal.

[Claim 63]

The board according to any one of Claims 51 to 62,

wherein

when the board is mounted in a direction along a gravity direction,

the contact portion of the apparatus-side clock terminal, the contact portion of the apparatus-side power source terminal, and the contact portion of the apparatus-side reset terminal are arranged closer in the gravity direction than the contact portion of the apparatus-side data terminal, and

the contact portion of at least one apparatus-side terminal among the contact portion of the apparatus-side clock terminal, the contact portion of the apparatus-side power source terminal, and the contact portion of the apparatus-side reset terminal is arranged to be projected between the first projection position and the fifth projection position.

[Claim 64]

The board according to any one of Claims 51 to 63, wherein

the contact portion of the apparatus-side clock terminal, the contact portion of the apparatus-side data terminal, the contact portion of the apparatus-side power source terminal, the contact portion of the apparatus-side reset terminal, and the contact portion of the apparatus-side ground terminal are arranged to form a plurality of

rows.

[Claim 65]

The board according to Claim 64, wherein

the plurality of rows includes two rows, and

contact portions of two apparatus-side terminals, which are projected to be next to each other when projection onto the second virtual line is performed, form different rows.

[Claim 66]

The board according to Claim 65, wherein

the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side ground terminal are arranged in different rows, and

the contact portion of any one apparatus-side terminal among the contact portion of the apparatus-side clock terminal, the contact portion of the apparatus-side power source terminal, and the contact portion of the apparatus-side reset terminal is arranged to be projected between the first projection position and the fifth projection position.

[Claim 67]

The board according to any one of Claims 47 to 66, wherein

the first terminal is further used to detect whether or not the board is mounted in the printing apparatus.

[Claim 68]

The board according to any one of Claims 47 to 67,

wherein

the fifth terminal is a ground terminal, and the fifth apparatus-side terminal is an apparatus-side ground terminal, and

voltages supplied to the first terminal, the second terminal, the third terminal, and the fourth terminal are configured to be received by the device.

[Claim 69]

The board according to any one of Claims 47 to 68, wherein

the first virtual line is directed along a direction including a component of a mounting direction in which the board is mounted in the printing apparatus.

[Claim 70]

The board according to any one of Claims 47 to 69, wherein

a voltage supplied to the fourth terminal is used to drive the device.

[Claim 71]

The board according to any one of Claims 47 to 70, wherein

the device outputs signals indicating that the first terminal does not have a short circuit with the terminal other than the first terminal among the plurality of terminals and that the board is being mounted in the

printing apparatus.

[Claim 72]

The board according to any one of Claims 47 to 71, wherein

the device stores information regarding a liquid accommodated in the liquid accommodation container.

[Claim 73]

A liquid accommodation container that is mounted on an accommodation section of a printing apparatus including a printing head, a liquid introduction portion that introduces a liquid to the printing head, the accommodation section provided with the liquid introduction portion, and a plurality of apparatus-side terminals provided at the accommodation section, the liquid accommodation container comprising:

a liquid accommodation body configured to accommodate a liquid;

a liquid supply portion that is mounted at the liquid introduction portion of the printing apparatus and includes a liquid supply port for supplying a liquid to the liquid introduction portion from the liquid accommodation body;

a device; and

a plurality of terminals, wherein

the plurality of terminals include at least a first terminal, a second terminal, a third terminal, a fourth

terminal, and a fifth terminal,

the first terminal is coupled to the device and includes a first contact portion that is to come into contact with a corresponding first apparatus-side terminal among the plurality of apparatus-side terminals,

the second terminal is coupled to the device and includes a second contact portion that is to come into contact with a corresponding second apparatus-side terminal among the plurality of apparatus-side terminals,

the third terminal is coupled to the device and includes a third contact portion that is to come into contact with a corresponding third apparatus-side terminal among the plurality of apparatus-side terminals,

the fourth terminal is coupled to the device and includes a fourth contact portion that is to come into contact with a corresponding fourth apparatus-side terminal among the plurality of apparatus-side terminals,

the fifth terminal is coupled to the device and includes a fifth contact portion that is to come into contact with a corresponding fifth apparatus-side terminal among the plurality of apparatus-side terminals,

the first terminal is used to detect whether or not the first terminal has a short circuit with at least one of the second terminal, the third terminal, and the fourth terminal,

in a plan view,

when two orthogonal straight lines are set as a first virtual line and a second virtual line, and all contact portions of all the terminals provided at the liquid accommodation container are projected onto the second virtual line, all the contact portions are projected at different positions, and the first virtual line passes through a middle between two projection positions that are farthest from each other among projection positions of all the contact portions,

when one region with respect to the first virtual line is set as a first region and the other region is set as a second region, some contact portions among all the contact portions are arranged in the first region, remaining contact portions are arranged in the second region, the some contact portions include the first contact portion, the second contact portion, the third contact portion, and the fourth contact portion, and the remaining contact portions include the fifth contact portion, and

the some contact portions and the remaining contact portions are asymmetrically arranged with respect to the first virtual line.

[Claim 74]

The liquid accommodation container according to Claim 73, wherein

at least one of the second contact portion, the third contact portion, and the fourth contact portion is arranged to be projected between a projection position of the first contact portion and a projection position of the fifth contact portion.

[Claim 75]

The liquid accommodation container according to Claim 73 or 74, wherein

any two or more of the second contact portion, the third contact portion, and the fourth contact portion are arranged to be projected between a projection position of the first contact portion and a projection position of the fifth contact portion.

[Claim 76]

The liquid accommodation container according to any one of Claims 73 to 75, wherein

the first contact portion is arranged to be projected between projection positions of any two contact portions of the second contact portion, the third contact portion, and the fourth contact portion.

[Claim 77]

The liquid accommodation container according to any one of Claims 73 to 76, wherein

the first contact portion is a data contact portion, and the first terminal is a data terminal,

the second contact portion is a clock contact portion, and the second terminal is a clock terminal,

the third contact portion is a reset contact portion, and the third terminal is a reset terminal,

the fourth contact portion is a power-source contact portion, and the fourth terminal is a power source terminal, and

the fifth contact portion is a ground contact portion, and the fifth terminal is a ground terminal.

[Claim 78]

The liquid accommodation container according to Claim 77, wherein

any one or both of the data contact portion and the reset contact portion are arranged to be projected between a projection position of the power-source contact portion and a projection position of the clock contact portion, and

the reset contact portion is arranged to have a projection position that is next to a projection position of the power-source contact portion.

[Claim 79]

The liquid accommodation container according to Claim 77 or 78, wherein

the power-source contact portion is arranged to have a projection position that is next to a projection position of the data contact portion.

[Claim 80]

The liquid accommodation container according to any one of Claims 77 to 79, wherein

the clock contact portion is arranged to be projected at a position that is farthest from a projection position of the ground contact portion, and

the data contact portion, the power-source contact portion, and the reset contact portion are arranged to be projected in order in a direction from a projection position of the clock contact portion toward the projection position of the ground contact portion on the second virtual line.

[Claim 81]

The liquid accommodation container according to any one of Claims 77 to 80, wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the clock contact portion.

[Claim 82]

The liquid accommodation container according to any one of Claims 77 to 81, wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the reset contact portion.

[Claim 83]

The liquid accommodation container according to any one

of Claims 77 to 82, wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the power-source contact portion.

[Claim 84]

The liquid accommodation container according to any one of Claims 77 to 83, wherein

when a gap of a contact portion projected at a position farthest from a projection position of the ground contact portion when projection onto the second virtual line is performed, among the contact portions other than the ground contact portion in the first region, from the ground contact portion provided in the second region in a direction along the second virtual line is set as Wa,

a gap of a contact portion projected at a position closest to the projection position of the ground contact portion when projection onto the second virtual line is performed, among the contact portions other than the ground contact portion in the first region, from the ground contact portion provided in the second region in the direction along the second virtual line is equal to or more than Wa/2.

[Claim 85]

The liquid accommodation container according to any one of Claims 77 to 84, wherein

there is no other contact portion between a contact

portion projected at a position closest to a projection position of the ground contact portion when projection onto the second virtual line is performed, among the contact portions other than the ground contact portion in the first region, and the ground contact portion provided in the second region.

[Claim 86]

The liquid accommodation container according to any one of Claims 77 to 85, wherein

there is no other contact portion on a virtual line segment connecting the data contact portion and the clock contact portion.

[Claim 87]

The liquid accommodation container according to any one of Claims 77 to 86, wherein

there is no other contact portion on a virtual line segment connecting the data contact portion and the reset contact portion.

[Claim 88]

The liquid accommodation container according to any one of Claims 77 to 87, wherein

there is no other contact portion on a virtual line segment connecting the data contact portion and the power-source contact portion.

[Claim 89]

The liquid accommodation container according to any one of Claims 77 to 88, wherein

when the liquid accommodation container is mounted in a direction along a gravity direction,

the clock contact portion, the power-source contact portion, and the reset contact portion are arranged closer in the gravity direction than the data contact portion, and

at least one of the clock contact portion, the power-source contact portion, and the reset contact portion is arranged to be projected between a projection position of the data contact portion and a projection position of the ground contact portion.

[Claim 90]

The liquid accommodation container according to any one of Claims 77 to 89, wherein

the clock contact portion, the data contact portion, the power-source contact portion, the reset contact portion, and the ground contact portion are arranged to form a plurality of rows.

[Claim 91]

The liquid accommodation container according to Claim 90, wherein

the plurality of rows includes two rows, and

two contact portions on the liquid accommodation container, which are projected to be next to each other when

projection onto the second virtual line is performed, form different rows.

[Claim 92]

The liquid accommodation container according to Claim 91, wherein

the data contact portion and the ground contact portion are arranged in different rows, and

any one of the clock contact portion, the power-source contact portion, and the reset contact portion is arranged to be projected between a projection position of the data contact portion and a projection position of the ground contact portion.

[Claim 93]

The liquid accommodation container according to any one of Claims 73 to 92, wherein

the first terminal is further used to detect whether or not the liquid accommodation container is mounted in the printing apparatus.

[Claim 94]

The liquid accommodation container according to any one of Claims 73 to 93, wherein

the fifth terminal is a ground terminal, and

voltages supplied to the first terminal, the second terminal, the third terminal, and the fourth terminal are configured to be received by the device.

[Claim 95]

The liquid accommodation container according to any one of Claims 73 to 94, wherein

the first virtual line is directed along a direction including a component of a mounting direction in which the liquid accommodation container is mounted in the printing apparatus.

[Claim 96]

The liquid accommodation container according to any one of Claims 73 to 95, further comprising:

a board, wherein

the board includes the plurality of terminals and the device.

[Claim 97]

The liquid accommodation container according to any one of Claims 73 to 96, wherein

a voltage supplied to the fourth terminal is used to drive the device.

[Claim 98]

The liquid accommodation container according to any one of Claims 73 to 97, wherein

the device outputs signals indicating that the first terminal does not have a short circuit with the terminal other than the first terminal among the plurality of terminals and that the liquid accommodation container is

being mounted in the printing apparatus.

[Claim 99]

The liquid accommodation container according to any one of Claims 73 to 98, wherein

the device stores information regarding a liquid accommodated in the liquid accommodation container.

[Claim 100]

A liquid accommodation container that is mounted on an accommodation section of a printing apparatus including a printing head, a liquid introduction portion that introduces a liquid to the printing head, the accommodation section provided with the liquid introduction portion, and a plurality of apparatus-side terminals provided at the accommodation section, the liquid accommodation container comprising:

a liquid accommodation body configured to accommodate a liquid;

a liquid supply portion that is mounted at the liquid introduction portion of the printing apparatus and includes a liquid supply port for supplying a liquid to the liquid introduction portion from the liquid accommodation body;

a device; and

a plurality of terminals, wherein

the plurality of terminals include

a first terminal that is coupled to the device and

includes a first contact portion that is to come into contact with a corresponding first apparatus-side terminal among the plurality of apparatus-side terminals in the printing apparatus, and

an other terminal group,

the other terminal group includes at least

a second terminal that is coupled to the device and includes a second contact portion that is to come into contact with a corresponding second apparatus-side terminal among the plurality of apparatus-side terminals, and

a third terminal that is coupled to the device and includes a third contact portion that is to come into contact with a corresponding third apparatus-side terminal among the plurality of apparatus-side terminals,

the second terminal is used to detect whether or not the second terminal has a short circuit with at least one of terminals other than the second terminal in the other terminal group,

in a plan view,

when two orthogonal straight lines are set as a first virtual line and a second virtual line, and all contact portions of all the terminals provided at the liquid accommodation container are projected onto the second virtual line, all the contact portions are projected at different positions, and the first virtual line passes

through a middle between two projection positions that are farthest from each other among projection positions of all the contact portions,

when one region with respect to the first virtual line is set as a first region and the other region is set as a second region, some contact portions among all the contact portions are arranged in the first region, remaining contact portions are arranged in the second region, the some contact portions include the second contact portion and the third contact portion, and the remaining contact portions include the first contact portion, and

the some contact portions and the remaining contact portions are asymmetrically arranged with respect to the first virtual line.

[Claim 101]

The liquid accommodation container according to Claim 100, wherein

the first contact portion is a ground contact portion, and the first terminal is a ground terminal,

the second contact portion is a data contact portion, and the second terminal is a data terminal, and

the third contact portion is a clock contact portion, and the third terminal is a clock terminal.

[Claim 102]

The liquid accommodation container according to Claim

101, wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the clock contact portion.

[Claim 103]

The liquid accommodation container according to Claim 101 or 102, wherein

there is no other contact portion on a virtual line segment connecting the data contact portion and the clock contact portion.

[Claim 104]

The liquid accommodation container according to any one of Claims 101 to 103, wherein

the other terminal group includes a reset terminal including a reset contact portion that is to come into contact with a corresponding apparatus-side terminal among the plurality of apparatus-side terminals, and

the some contact portions include the reset contact portion.

[Claim 105]

The liquid accommodation container according to Claim 104, wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the reset contact portion.

[Claim 106]

The liquid accommodation container according to Claim 104 or 105, wherein

there is no other contact portion on a virtual line segment connecting the data contact portion and the reset contact portion.

[Claim 107]

The liquid accommodation container according to any one of Claims 101 to 106, wherein

the other terminal group includes a power source terminal including a power-source contact portion that is to come into contact with a corresponding apparatus-side terminal among the plurality of apparatus-side terminals, and

the some contact portions include the power-source contact portion.

[Claim 108]

The liquid accommodation container according to Claim 107, wherein

a distance between the data contact portion and the ground contact portion is longer than a distance between the data contact portion and the power-source contact portion.

[Claim 109]

The liquid accommodation container according to Claim 107 or 108, wherein

there is no other contact portion on a virtual line

segment connecting the data contact portion and the power-source contact portion.

[Claim 110]

The liquid accommodation container according to any one of Claims 107 to 109, wherein

a voltage supplied to the power source terminal is used to drive the device.

[Claim 111]

The liquid accommodation container according to any one of Claims 101 to 110, wherein

at least one of a contact portion of a terminal other than the data terminal among the other terminal group is arranged to be projected between a projection position of the data contact portion and a projection position of the ground contact portion.

[Claim 112]

The liquid accommodation container according to any one of Claims 101 to 111, wherein

when a gap of a contact portion projected at a position farthest from a projection position of the ground contact portion when projection onto the second virtual line is performed, among contact portions for the other terminal group in the first region, from the ground contact portion provided in the second region in a direction along the second virtual line is set as Wa,

a gap of a contact portion projected at a position closest to the projection position of the ground contact portion when projection onto the second virtual line is performed, among the contact portions for the other terminal group in the first region, from the ground contact portion provided in the second region in the direction along the second virtual line is equal to or more than Wa/2.

[Claim 113]

The liquid accommodation container according to any one of Claims 101 to 112, wherein

there is no other contact portion between a contact portion projected at a position closest to a projection position of the ground contact portion when projection onto the second virtual line is performed, among contact portions for the other terminal group in the first region, and the ground contact portion provided in the second region.

[Claim 114]

The liquid accommodation container according to any one of Claims 101 to 113, wherein

when the liquid accommodation container is mounted in a direction along a gravity direction,

contact portions for the other terminal group other than the data contact portion are arranged closer in the gravity direction than the data contact portion, and

the contact portions for the other terminal group other

than the data contact portion are arranged to be projected between a projection position of the data contact portion and a projection position of the ground contact portion.

[Claim 115]

The liquid accommodation container according to any one of Claims 100 to 114, wherein

the second terminal is used to detect whether or not the liquid accommodation container is mounted in the printing apparatus.

[Claim 116]

The liquid accommodation container according to any one of Claims 100 to 115, wherein

voltages supplied to the other terminal group are configured to be received by the device.

[Claim 117]

The liquid accommodation container according to any one of Claims 100 to 116, further comprising:

a board, wherein

the board includes the plurality of terminals and the device.

[Claim 118]

The liquid accommodation container according to any one of Claims 100 to 117, wherein

the first virtual line is directed along a direction including a component of a mounting direction in which the

liquid accommodation container is mounted in the printing apparatus.

[Claim 119]

The liquid accommodation container according to any one of Claims 100 to 118, wherein

the device outputs signals indicating that the second terminal does not have a short circuit with the terminal other than the second terminal among the plurality of terminals and that the liquid accommodation container is being mounted in the printing apparatus.

[Claim 120]

The liquid accommodation container according to any one of Claims 100 to 119, wherein

the device stores information regarding a liquid accommodated in the liquid accommodation container.

[Claim 121]

A liquid accommodation container that is mounted on an accommodation section of a printing apparatus including a printing head, a liquid introduction portion that introduces a liquid to the printing head, the accommodation section provided with the liquid introduction portion, and a plurality of apparatus-side terminals provided at the accommodation section, wherein

the plurality of apparatus-side terminals includes a first apparatus-side terminal, a second apparatus-side

terminal, a third apparatus-side terminal, a fourth apparatus-side terminal, and a fifth apparatus-side terminal,

in a plan view,

when two orthogonal straight lines are set as a first virtual line and a second virtual line, and projection positions when a contact portion of the first apparatus-side terminal, a contact portion of the second apparatus-side terminal, a contact portion of the third apparatus-side terminal, a contact portion of the fourth apparatus-side terminal, and a contact portion of the fifth apparatus-side terminal are projected onto the second virtual line are set as a first projection position, a second projection position, a third projection position, a fourth projection position, and a fifth projection position, respectively,

when contact portions of all apparatus-side terminals are projected onto the second virtual line, the contact portions of all apparatus-side terminals are projected at different positions, and the first virtual line passes through a middle between two projection positions farthest from each other among projection positions of the contact portions of all apparatus-side terminals,

when one region with respect to the first virtual line is set as a first region and the other region is set as a second region,

contact portions of some apparatus-side terminals among all the apparatus-side terminals are arranged in the first region,

contact portions of remaining apparatus-side terminals are arranged in the second region,

the contact portions of the some apparatus-side terminals include the contact portion of the first apparatus-side terminal, the contact portion of the second apparatus-side terminal, the contact portion of the third apparatus-side terminal, and the contact portion of the fourth apparatus-side terminal, and

the contact portions of the remaining apparatus-side terminals include the contact portion of the fifth apparatus-side terminal,

the contact portions of the some apparatus-side terminals and the contact portions of the remaining apparatus-side terminals are asymmetrically arranged with respect to the first virtual line,

the liquid accommodation container includes

a liquid accommodation body configured to accommodate a liquid,

a liquid supply portion that is mounted at the liquid introduction portion of the printing apparatus and includes a liquid supply port for supplying a liquid to the liquid introduction portion from the liquid accommodation

body,

a device, and

a plurality of terminals,

the plurality of terminals include at least a first terminal, a second terminal, a third terminal, a fourth terminal, and a fifth terminal,

the first terminal is coupled to the device and includes a first contact portion that is to come into contact with the first apparatus-side terminal corresponding among the plurality of apparatus-side terminals in the printing apparatus when the board is mounted in the printing apparatus,

the second terminal is coupled to the device and includes a second contact portion that is to come into contact with the second apparatus-side terminal corresponding among the plurality of apparatus-side terminals when the board is mounted in the printing apparatus,

the third terminal is coupled to the device and includes a third contact portion that is to come into contact with the third apparatus-side terminal corresponding among the plurality of apparatus-side terminals when the board is mounted in the printing apparatus,

the fourth terminal is coupled to the device and includes a fourth contact portion that is to come into

contact with the fourth apparatus-side terminal corresponding among the plurality of apparatus-side terminals when the board is mounted in the printing apparatus,

the fifth terminal is coupled to the device and includes a fifth contact portion that is to come into contact with the fifth apparatus-side terminal corresponding among the plurality of apparatus-side terminals when the board is mounted in the printing apparatus, and

the first terminal is used to detect whether or not the first terminal has a short circuit with at least one of the second terminal, the third terminal, and the fourth terminal.

[Claim 122]

The liquid accommodation container according to Claim 121, wherein

the contact portion of at least one apparatus-side terminal among the contact portion of the second apparatus-side terminal, the contact portion of the third apparatus-side terminal, and the contact portion of the fourth apparatus-side terminal is arranged to be projected between the first projection position and the fifth projection position.

[Claim 123]

The liquid accommodation container according to Claim

121 or 122, wherein

the contact portions of any two or more apparatus-side terminals among the contact portion of the second apparatus-side terminal, the contact portion of the third apparatus-side terminal, and the contact portion of the fourth apparatus-side terminal are arranged to be projected between the first projection position and the fifth projection position.

[Claim 124]

The liquid accommodation container according to any one of Claims 121 to 123, wherein

the contact portion of the first apparatus-side terminal is arranged to be projected between projection positions of the contact portions of any two apparatus-side terminals among the contact portion of the second apparatus-side terminal, the contact portion of the third apparatus-side terminal, and the contact portion of the fourth apparatus-side terminal.

[Claim 125]

The liquid accommodation container according to any one of Claims 121 to 124, wherein

the first contact portion is a data contact portion, the first terminal is a data terminal, and the first apparatus-side terminal is an apparatus-side data terminal,

the second contact portion is a clock contact portion,

the second terminal is a clock terminal, and the second apparatus-side terminal is an apparatus-side clock terminal,

the third contact portion is a reset contact portion, the third terminal is a reset terminal, and the third apparatus-side terminal is an apparatus-side reset terminal,

the fourth contact portion is a power-source contact portion, the fourth terminal is a power source terminal, and the fourth apparatus-side terminal is an apparatus-side power source terminal, and

the fifth contact portion is a ground contact portion, the fifth terminal is a ground terminal, and the fifth apparatus-side terminal is an apparatus-side ground terminal.

[Claim 126]

The liquid accommodation container according to Claim 125, wherein

any one or both of the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side reset terminal are arranged to be projected between the fourth projection position and the second projection position, and

the contact portion of the apparatus-side reset terminal is arranged to have a projection position that is next to the fourth projection position.

[Claim 127]

The liquid accommodation container according to Claim 125 or 126, wherein

the contact portion of the apparatus-side power source terminal is arranged to have a projection position that is next to the first projection position.

[Claim 128]

The liquid accommodation container according to any one of Claims 125 to 127, wherein

the contact portion of the apparatus-side clock terminal is arranged to be projected at a position that is farthest from the fifth projection position, and

the contact portion of the apparatus-side data terminal, the contact portion of the apparatus-side power source terminal, and the contact portion of the apparatus-side reset terminal are arranged to be projected in order in a direction from the second projection position toward the fifth projection position on the second virtual line.

[Claim 129]

The liquid accommodation container according to any one of Claims 125 to 128, wherein

a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side ground terminal is longer than a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side clock

terminal.

[Claim 130]

The liquid accommodation container according to any one of Claims 125 to 128, wherein

a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side ground terminal is longer than a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side reset terminal.

[Claim 131]

The liquid accommodation container according to any one of Claims 125 to 130, wherein

a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side ground terminal is longer than a distance between the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side power source terminal.

[Claim 132]

The liquid accommodation container according to any one of Claims 125 to 131, wherein

when a gap of a contact portion of an apparatus-side terminal, which is projected at a position farthest from the fifth projection position when projection onto the second

virtual line is performed, among the contact portions of the apparatus-side terminals other than the contact portion of the apparatus-side ground terminal in the first region, from the contact portion of the apparatus-side ground terminal provided in the second region in a direction along the second virtual line is set as Wa,

a gap of a contact portion of an apparatus-side terminal, which is projected at a position closest to the fifth projection position when projection onto the second virtual line is performed, among the contact portions of the apparatus-side terminals other than the contact portion of the apparatus-side ground terminal in the first region, from the contact portion of the apparatus-side ground terminal provided in the second region in a direction along the second virtual line is equal to or more than Wa/2.

[Claim 133]

The liquid accommodation container according to any one of Claims 125 to 132, wherein

in the first region, there is no contact portion of another apparatus-side terminal between the contact portion of the apparatus-side terminal, which is projected at a position closest to the fifth projection position when projection onto the second virtual line is performed, among the contact portions of the apparatus-side terminals other than the contact portion of the apparatus-side ground

terminal, and the contact portion of the apparatus-side ground terminal provided in the second region.

[Claim 134]

The liquid accommodation container according to any one of Claims 125 to 133, wherein

there is no contact portion of another apparatus-side terminal on a virtual line segment connecting the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side clock terminal.

[Claim 135]

The liquid accommodation container according to any one of Claims 125 to 134, wherein

there is no contact portion of another apparatus-side terminal on a virtual line segment connecting the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side reset terminal.

[Claim 136]

The liquid accommodation container according to any one of Claims 125 to 135, wherein

there is no contact portion of another apparatus-side terminal on a virtual line segment connecting the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side power source terminal.

[Claim 137]

The liquid accommodation container according to any one

of Claims 125 to 136, wherein

when the board is mounted in a direction along a gravity direction,

the contact portion of the apparatus-side clock terminal, the contact portion of the apparatus-side power source terminal, and the contact portion of the apparatus-side reset terminal are arranged closer in the gravity direction than the contact portion of the apparatus-side data terminal, and

the contact portion of at least one apparatus-side terminal among the contact portion of the apparatus-side clock terminal, the contact portion of the apparatus-side power source terminal, and the contact portion of the apparatus-side reset terminal is arranged to be projected between the first projection position and the fifth projection position.

[Claim 138]

The liquid accommodation container according to any one of Claims 125 to 137, wherein

the contact portion of the apparatus-side clock terminal, the contact portion of the apparatus-side data terminal, the contact portion of the apparatus-side power source terminal, the contact portion of the apparatus-side reset terminal, and the contact portion of the apparatus-side ground terminal are arranged to form a plurality of rows.

[Claim 139]

The liquid accommodation container according to Claim 138, wherein

the plurality of rows includes two rows, and

contact portions of two apparatus-side terminals, which are projected to be next to each other when projection onto the second virtual line is performed, form different rows.

[Claim 140]

The liquid accommodation container according to Claim 139, wherein

the contact portion of the apparatus-side data terminal and the contact portion of the apparatus-side ground terminal are arranged in different rows, and

the contact portion of any one apparatus-side terminal among the contact portion of the apparatus-side clock terminal, the contact portion of the apparatus-side power source terminal, and the contact portion of the apparatus-side reset terminal is arranged to be projected between the first projection position and the fifth projection position.

[Claim 141]

The liquid accommodation container according to any one of Claims 121 to 140, further comprising:

a board, wherein

the board includes the plurality of terminals and the device.

[Claim 142]

The liquid accommodation container according to any one of Claims 121 to 141, wherein

the first terminal is used to detect whether or not the liquid accommodation container is mounted in the printing apparatus.

[Claim 143]

The liquid accommodation container according to any one of Claims 121 to 142, wherein

the fifth terminal is a ground terminal, and the fifth apparatus-side terminal is an apparatus-side ground terminal, and

voltages supplied to the first terminal, the second terminal, the third terminal, and the fourth terminal are configured to be received by the device.

[Claim 144]

The liquid accommodation container according to any one of Claims 121 to 143, wherein

the first virtual line is directed along a direction including a component of a mounting direction in which the liquid accommodation container is mounted in the printing apparatus.

[Claim 145]

The liquid accommodation container according to any one of Claims 121 to 144, wherein

a voltage supplied to the fourth terminal is used to drive the device.

[Claim 146]

The liquid accommodation container according to any one of Claims 121 to 145, wherein

the device outputs signals indicating that the first terminal does not have a short circuit with the terminal other than the first terminal among the plurality of terminals and that the liquid accommodation container is being mounted in the printing apparatus.

[Claim 147]

The liquid accommodation container according to any one of Claims 121 to 146, wherein

the device stores information regarding a liquid accommodated in the liquid accommodation container.